LAKE KITCHAWAN WASTEWATER STUDY

ENGINEERING REPORT

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COMMITMENT & INTEGRITY DRIVE RESULTS

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0214731.00
Town of Lewisboro
December 2021

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EXECUTIVE SUMMARY

Lake Kitchawan is a 90-acre lake located in the Towns of Lewisboro and Pound Ridge. The lake falls within the Croton Watershed which provides drinking water the New York City. The Croton Watershed is the southernmost watershed that provides over 9 million NYCDEP customers in New York City with their drinking water. Lake Kitchawan is a Class B waterbody under the New York Codes, Rules, and Regulations (6 NYCRR Part 864.6), which means that it is best intended for contact recreation (i.e., swimming and bathing), non-contact recreation (i.e., boating and fishing), aesthetics, and aquatic life. The area surrounding Lake Kitchawan has transitioned from summer cottages to a year-round residential community causing impacts to the water quality of the lake.

The Town of Lewisboro has retained Woodard & Curran, an engineering firm based in Rye Brook, NY, to complete a water quality study on Lake Kitchawan. Woodard & Curran worked to identify existing water quality impacts and environmental concerns that are impacting the water quality of Lake Kitchawan and develop alternatives to address the issues. As part of this wastewater study, previous studies and sampling data were evaluated along with Westchester County records of septic failures. Additionally, six rounds of sampling took place to evaluate current levels of water quality parameters indicative of septic system impacts on the lake. The sampling that took place as part of this study occurred from May 2021 to August 2021. The results of this sampling ultimately showed that high levels of bacteria and nutrients were present throughout the various sample locations, but with exceptionally high concentrations at the two outfalls on Lake Kitchawan Drive and Shore Trail. The fecal coliform and E. coli levels at these outfalls exceed health hazard levels established by NYSDOH. The nutrient levels indicate eutrophic conditions in Lake Kitchawan. These are two common indicators of wastewater system failures; therefore, action should be taken to mitigate these issues.

There are multiple alternatives which could remediate the impacts local septic systems are having on Lake Kitchawan. The No Action alternative would continue the use the existing onsite septic systems, so there would be no cost to the Town of Lewisboro, but the current bacteria and nutrient loading would remain, and the water quality would continue to degrade. The Repair and Replacement Alternative would replace the conventional septic systems with an advanced treatment system at 187 properties located east of the lake which are thought to have the most significant impact on Lake Kitchawan. It is important to focus on these properties since they have small parcel sizes and steep slopes directed toward the lake. This alternative includes the removal of the existing septic tank and installation of a new onsite advanced treatment system which will utilize the existing leaching fields. The estimated capital cost for this alternative is $3,900,000. The Centralized Treatment Alternative would install low-pressure sewers throughout the project area to connect 474 developed parcels within the project area to a newly constructed treatment plant at an estimated capital cost of $50,800,000. The Decentralized Treatment Alternative would break the project area into clusters which would be treated separately on vacant parcels. The entire project area can be split into clusters, but it is expected that the lake water quality may improve with a lower cost by only applying the decentralized treatment to a critical area of 187 parcels. The critical area can be split into three clusters and each cluster would have a low-pressure sewer system conveying flow to the corresponding treatment location. The estimated capital cost for the Decentralized Treatment Alternative treating the critical area is $11,600,000.

All alternatives excluding the No Action Alternative would ultimately reduce nutrient and bacterial loading to the soil, and therefore reduce loading to the surface water and groundwater. If the Town of Lewisboro takes no action, the continued use of high-density septic systems will further degrade the quality of water in Lake Kitchawan and the lake will remain impaired thus limiting its beneficial use as a Class B waterbody. There will also be continued water quality impacts to the Croton Reservoir which impacts over 9 million NYCDEP customers since Lake Kitchawan is part of the Croton Watershed.

Based on the analysis, the Repair and Replacement Alternative is recommended because it addresses the degradation of local surface water quality in a cost-effective manner by leveraging existing infrastructure. This alternative proposes to install the individual onsite advanced treatment system at 187 parcels surrounding the lake which have been identified as having the most significant impact to the water quality based on their close proximity, small parcel size, and steep slope. The Repair and Replacement Alternative will reduce nutrients and coliforms in the lake at a lower cost than the remaining proposed alternatives. The capital cost associated with this project is $3,900,000. This project would include the formation of the Lake Kitchawan Septic District. Once the District is formed, detailed design would be completed. Bidding and construction would follow the completion of the design phase.

1. PROJECT BACKGROUND AND HISTORY

1.1 Site Information

Lake Kitchawan is a 90-acre lake located in Westchester County, approximately 40 miles north of New York City. The lake and its watershed are located within the Towns of Lewisboro and Pound Ridge. The homes surrounding Lake Kitchawan (**Photo 1)** were originally developed as summer vacation homes in the 1920s but have been developed into year-round residential communities with over 600 parcels in the surrounding watershed area. Lake Kitchawan is located within the New York City drinking water watershed, specifically the Croton Watershed. The Croton Watershed is the southernmost watershed that spans over both Putnam and Westchester County. This watershed holds roughly 100 billion gallons of fresh water.

Photo 1: Lake Kitchawan

Geologic Conditions

The soil type varies throughout the project area with predominantly very rocky Charlton-Chatfield complex of 0 to 15 percent slopes. Approximately 28% of the area surrounding Lake Kitchawan is made up of this material. Slopes less than 15% are considered potentially feasible for on-site septic systems. Another 11.1% of the study area is classified as rocky Chatfield-Charlton complex with 15 to 35 percent slopes. Topography with 15 to 35% slopes is generally considered unsuitable for on-site septic systems since steep slopes may allow effluent to flow down the slope instead of into the soil. Charlton and Chatfield materials are both made from coarse-loamy melt-out till derived from granite, gneiss, and/or schist. It is not desirable to have a soil that is too coarse since this allows wastewater to pass too quickly to receive sufficient treatment. The Charlton-Chatfield complex has a poor suitability for septic systems because of the shallow depth to bedrock and steep slopes. Approximately 17.1% of the area is made up of Chatfield-Hollis Rock outcrop complex. Hollis soil is fine sandy loam, which is not ideal for septic systems due to its rapid permeability and low water capacity. Hollis soil also has shallow depth to bedrock which makes it poorly suited for septic tank adsorption fields. There is approximately 12.2% of the project area made up of fine loamy textured soils, which may not be ideal for a conventional septic system and instead require an advanced septic system. Refer to Appendix A for the Geologic Soil Survey for this project area.

Environmental Resources

Lake Kitchawan and its adjacent lagoons are located within the Cross River basin, which is a sub-watershed of the Croton Reservoir Watershed. The lake has an average depth of 5.7 feet with a maximum depth of 14.2 feet. Lake Kitchawan is a Class B waterbody under the New York Codes, Rules, and Regulations (6 NYCRR Part 864.6), with the best intended being contact recreation (i.e., swimming and bathing), non-contact recreation (i.e., boating and fishing), aesthetics, and aquatic life.

With the transition of the Lake Kitchawan surrounding area from summer cottages to a year-round residential community, water quality impacts to the lake have increased. The water quality impacts are due to a variety of sources, including septic system loading and watershed runoff resulting in high phosphorus loading. The 2008 Citizens Statewide Lake Assessment Program (CSLAP) Report classified Lake Kitchawan as a eutrophic lake which is "slightly impaired" for recreational use. The classification of Lake Kitchawan as a eutrophic lake in this report was based on Secchi disk transparency and total phosphorus trophic standards. This report also stated that the lake had high nutrient levels and low water clarity. The 2008 CSLAP Report for Lake Kitchawan is included in Appendix B.

In 2009, the Town of Lewisboro completed the Town-Wide Comprehensive Lakes Management Plan which included documentation of lake water quality and surrounding conditions. The study determined that septic loading contributed the highest percentage of phosphorus for Lake Kitchawan. The phosphorus loading from septic systems was calculated by estimating the population on septic systems by soil suitability within 100-meter buffer of the surface water and assigning each soil suitability class a percent transport. It was estimated in this report that within the 100-meter buffer a phosphorus loading of 94 kg per year enters the lake. The only other source of phosphorus loading in the Town-Wide Comprehensive Lakes Management Plan was watershed land cover which was calculated using the 2001 National Land Cover Data Set (MRLC) and was estimated to input 37 kg of phosphorus into Lake Kitchawan per year. The study includes all the lakes in Lewisboro, but the portions of the Town-Wide Comprehensive Lakes Management Plan dealing with Lake Kitchawan are included in Appendix C.

With the transition of this area to a year-round community with increased residential density, existing septic systems not designed for these current conditions have become stressed. Additionally, shallow bedrock, high groundwater and poor soils in the area are factors that also negatively impact the functioning and treatment of the septic systems surrounding the lake.

Floodplain Considerations

As shown in Figure 1-1, the mapped FEMA Special Flood Hazards within the proposed study area include the waterbody of Lake Kitchawan, as well as some areas north, south, and west of the lake. These areas are Zone A, and without a base flood elevation. The study area to the east of the lake, the Town of Lewisboro portion surrounding the lake is Zone X, an area of minimal flood hazard. This is an important consideration since septic tanks and leach fields are not typically allowed to be placed within 100-year floodplains.

Wetlands

As shown in Figure 1-2, there are New York State regulated wetlands within the project area. This is an important consideration taken to minimize environmental impacts. Construction within regulated wetlands is subject to the regulatory authority of the U.S. Army Corp of Engineers (USACOE). There are also nationally regulated wetlands surrounding Lake Kitchawan as seen in Figure 1-3.

Figure 1-1: Lake Kitchawan FEMA Special Flood Hazards

National Flood Hazard Layer FIRMette

FEMA

73°33'W 41°14'56"N

73°32'23"W 41°14'29"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) *Zone A, V, A99*
		With BFE or Depth *Zone AE, AO, AH, VE, AR*
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
		Future Conditions 1% Annual Chance Flood Hazard *Zone X*
		Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
		Area with Flood Risk due to Levee *Zone D*
OTHER AREAS	NO SCREEN	Area of Minimal Flood Hazard *Zone X*
		Effective LOMRs
		Area of Undetermined Flood Hazard *Zone D*
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES	B 20.2 17.5	Cross Sections with 1% Annual Chance Water Surface Elevation
	8	Coastal Transect
	513	Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/12/2021 at 3:45 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Figure 1-1: Lake Kitchawan FEMA Special Flood Hazards

National Flood Hazard Layer FIRMette

FEMA

73°33'26"W 41°14'41"N

73°32'48"W 41°14'14"N

Feet 0 250 500 1,000 1,500 2,000

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- B 20.2 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

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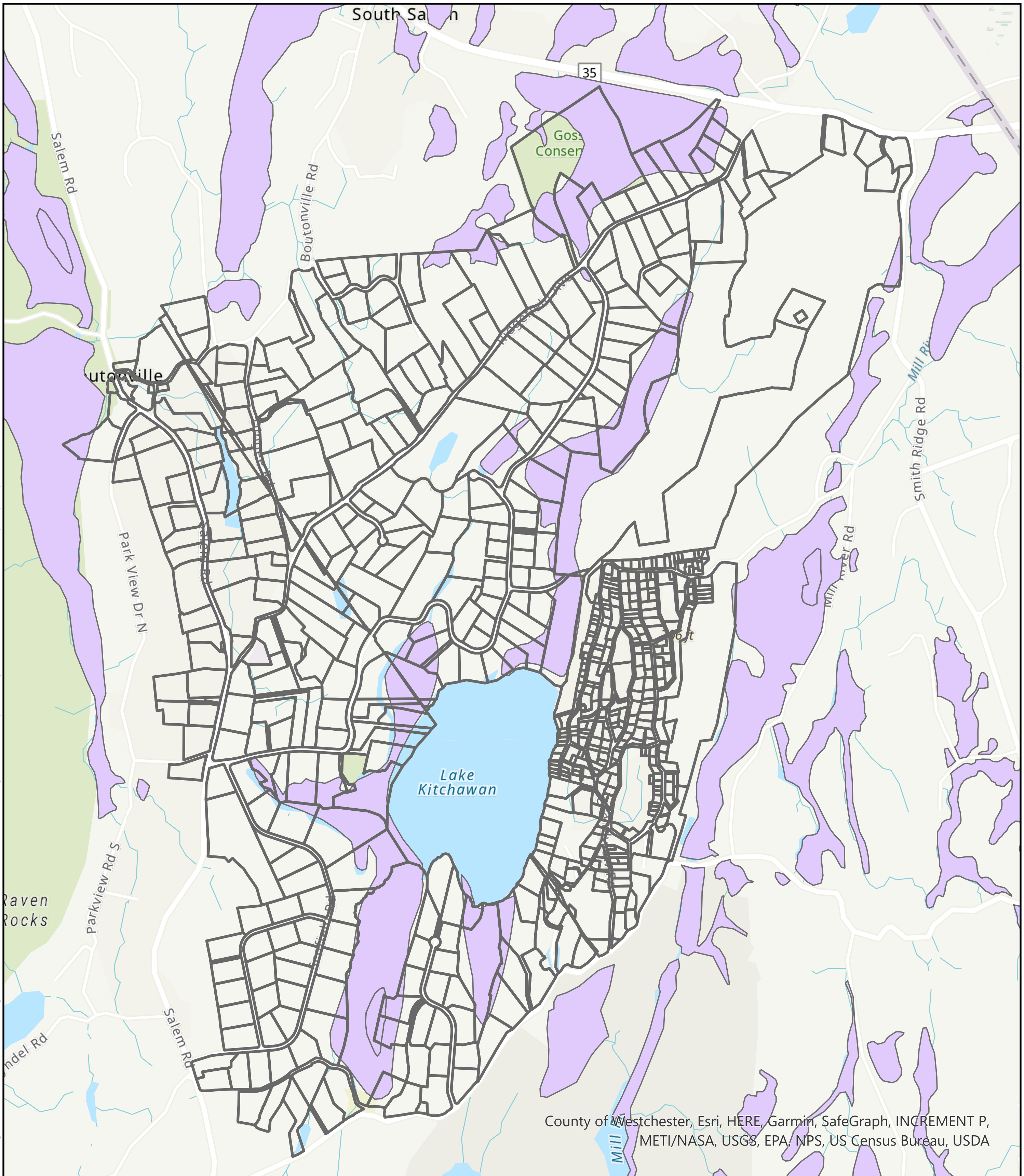


Lake Kitchawan Wastewater Study

Figure 1-2: NYS Regulated Wetlands

Legend

NYS Regluated Wetlands

Lake Kitchawan Study Parcels

N

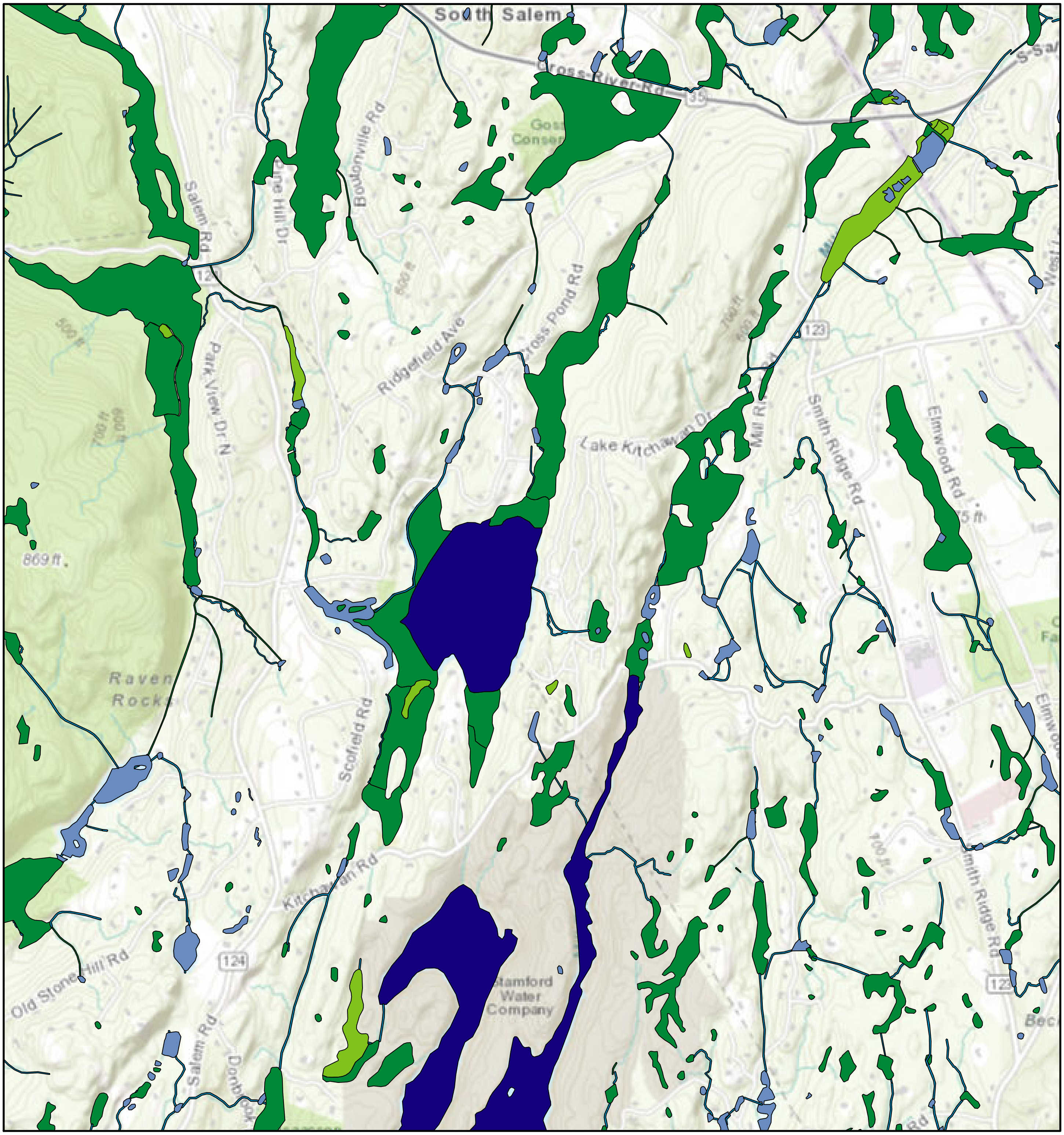
0 500 1,000 2,000 US Feet

WOODARD & CURRAN

Project #: 0214731.00
Map Created: November 2021

Figure Exported: 11/17/2021 By: enealon Using: \\woodardcurran.net\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lewisboro Parcel Size and Steep Slopes.aprx

Figure 1-3: Lake Kitchawan National Wetland Inventory



Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Lake

Other

Riverine

1:36,112

0 0.23 0.45 0.9 mi

0 0.35 0.7 1.4 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Author: Emily Nealon
Not a legal document

1.2 Ownership and Service Area

The watershed area includes 633 parcels covering an area of approximately 1290 acres. It should be noted that the original list provided by NYCDEP included 602 parcels, but an additional 31 parcels were added since it was determined these properties were in close proximity to the lake and adjacent to other parcels included in the study. The watershed includes properties in the Towns of Lewisboro and Pound Ridge. The majority of the parcels are located in Lewisboro with 456 parcels located in the Town of Lewisboro and 177 parcels located within the Town of Pound Ridge.

Of the 633 parcels within the area, 474 of the parcels are developed with structures as summarized in Table 1-1. The average size of the parcels within the project area is shown in Table 1-2. The land classification of the parcels within the project area is shown in Figure 1-4.

Table 1-1: Parcel Counts within Study Area

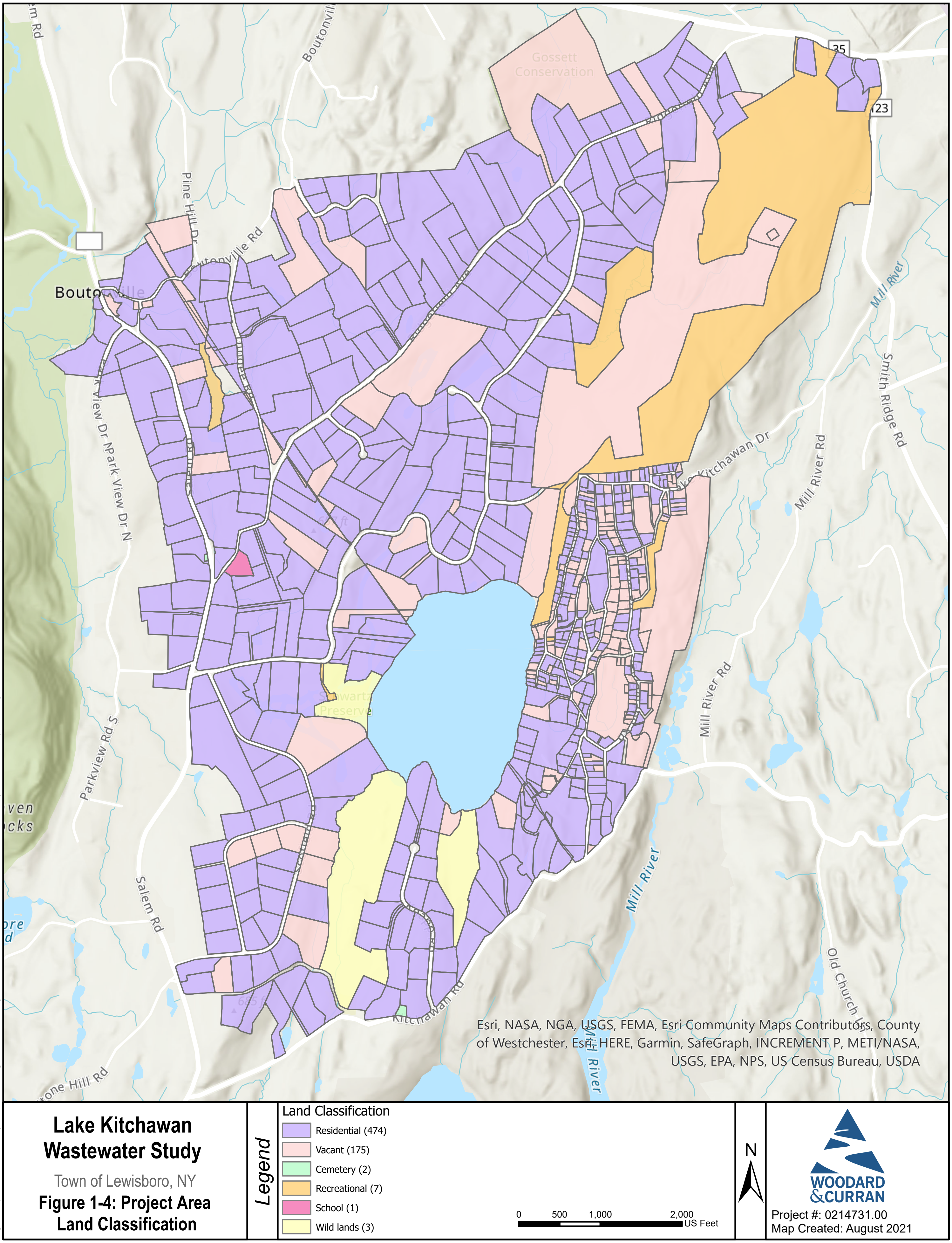
Parcel Count	Vacant/Undeveloped Parcel Count	Developed Parcel Count	% Developed Parcels
633	159	474	75%

Table 1-2: Average Parcel Size

Average Size – All Parcels (Developed and Undeveloped)	Average Size (Developed Parcels Only)
2.04 Acres	1.94 Acres

The population in the Town of Lewisboro has increased from 12,408 in 2010 to 12,522 in 2019. This indicates a 0.9% growth rate. Similarly, the Town of Pound Ridge has had a 0.8% population increase from 5,088 in 2010 to 5,129 in 2019. Although the population is increasing slowly, there are no planned future developments within the proposed sewer district.

There are two organizations that work to help protect Lake Kitchawan, Lake Kitchawan Association (LKA) and Lake Kitchawan Conservation Committee (LKCC). LKA is a homeowner's association that governs majority of the properties surrounding the lake, but not all properties in the Lake Kitchawan study area. LKCC is a non-profit dedicated to the preservation and maintenance of Lake Kitchawan, its lagoon system and surrounding wetlands. LKCC works on behalf of the lake community to address lake and lagoon issues.



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Figure 1-4: Project Area Land Classification

Project #: 0214731.00
Map Created: August 2021

Figure Exported: 8/3/2021 By: enealon Using: \\wclshared\wip\GIS\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lake Kitchawan Land Classification.aprx

1.3 Existing Facilities and Present Condition

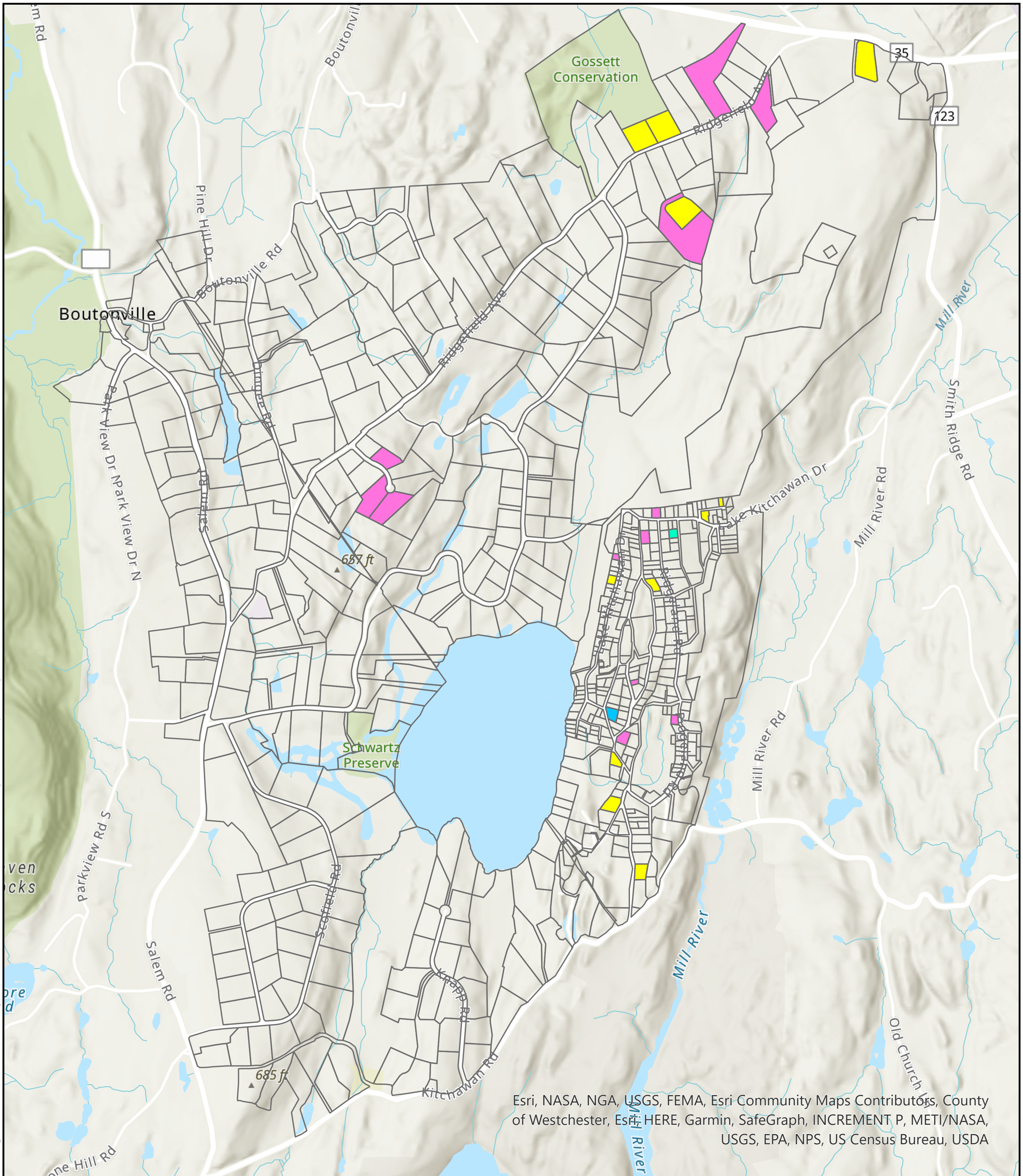
Each property within the study area currently treats wastewater flow through on-site septic treatment systems. These are common systems used in areas where no sewer collection system is available. A standard septic system includes a below grade tank, where wastewater flows to by gravity from the building. Wastewater is treated through an anaerobic process which reduces bacteria, and traps solids. Liquid effluent is then discharged, and most remaining contaminants are absorbed by the surrounding soils. Most septic systems have a typical lifespan of at least 15-20 years.

Many of the homes surrounding Lake Kitchawan were built longer than 20 years ago and it is a possibility that many of these properties have not replaced their septic systems. Through conversations with members of the Lake Kitchawan community it has also been suggested that maintenance of existing septic systems has not been enforced. If septic systems have not been replaced within the last 20 years or have not been properly maintained, there is great concern that the local septic systems could be a cause of water quality degradation. It is important to consider the year residences surrounding the lake were built since it is a possibility that original septic systems are still in the ground. Table 1-3 shows the number of properties built over the past decades.

Table 1-3: Number of Homes Built Per Decade

Decade	Number of Homes Built	Decade	Number of Homes Built
1790 – 1800	3	1910 – 1920	2
1800 – 1810	0	1920 – 1930	44
1810 – 1820	0	1930 – 1940	39
1820 – 1830	0	1940 – 1950	31
1830 – 1840	0	1950 – 1960	57
1840 – 1850	0	1960 – 1970	45
1850 – 1860	4	1970 – 1980	43
1860 – 1870	0	1980 – 1990	30
1870 – 1880	0	1990 – 2000	11
1880 – 1890	0	2000 - 2010	10
1890 – 1900	1	2010 – 2020	4
1900 – 1910	4	Unknown	146

Analysis of existing conditions included the review of Westchester County Septic Pump Out Records from 2017 through 2020. This data was reviewed for properties that showed evidence of septage discharge during pump out. The data for the municipalities of Lewisboro and Pound Ridge are provided in Appendix D. There were no properties within the project area that were noted to show evidence of septage during pump out. Additionally, data was received from Westchester County Department of Health (WCDOH) on septic failures within the Town of Lewisboro. This data showed three properties within the identified project area that have had septic failures in the past ten years. The analysis also included a review of Westchester County septic records showing properties surrounding the lake with a history of septic failure. Please refer to Figure 1-5 which shows the properties surrounding the lake that have had septic repairs since 2008.



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Figure 1-5: WCDOH Record of Septic Repairs

Legend

Year of Septic Repair

- 2008 - 2010
- 2010 - 2015
- 2015 - 2020
- 2020 - Present

0 500 1,000 2,000 US Feet

N

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Project #: 0214731.00
Map Created: November 2021

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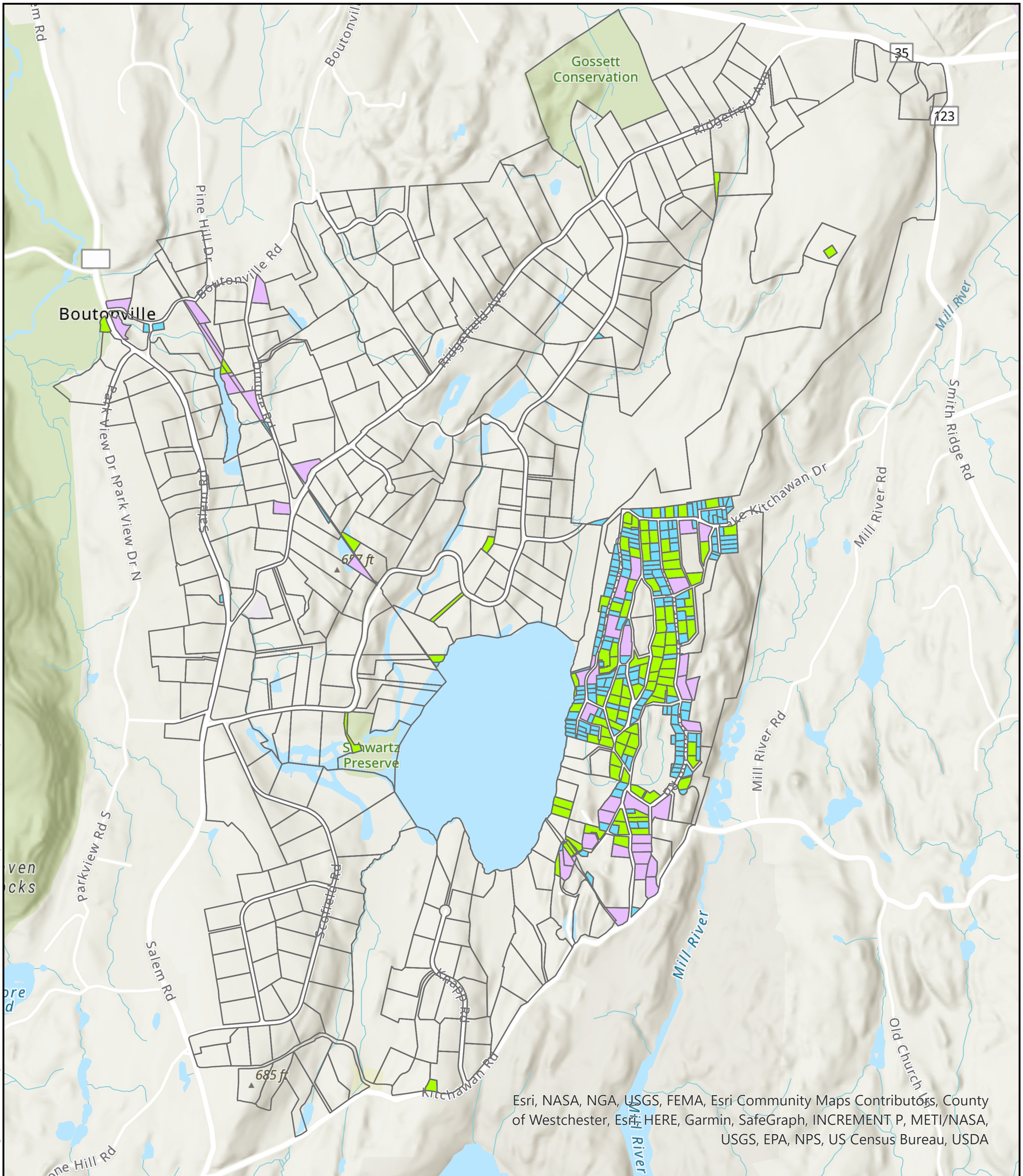
Many of the parcels within the study area have small footprints which is not ideal for conventional septic systems. With small properties, challenges arise regarding adequate property line setbacks, drain field spacing, and other clearances. Small parcel sizes will also lead to higher septic densities as more septic systems are placed in a certain area. Areas with high densities of septic systems have a higher potential for contamination problems. The US Environmental Protection Agency (EPA) has identified septic density as "high" when there ae more than 40 septic systems per square mile. The areas of Lewisboro and Pound Ridge which fall into the study area have septic system densities of 274 and 178 septic systems per square mile, respectively as seen in Table 1-4.

Table 1-4: Septic Density

	Septic Density	EPA Density Designation
Lewisboro	274	40
Pound Ridge	178	40

As seen in Table 1-4, the septic density exceeds the US EPA threshold in Lewisboro and Pound Ridge. The small parcel sizes in the study area correspond to the high septic density. The parcel sizes within the study area are shown in Figure 1-6.



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Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Figure 1-6: Project Area Parcel Sizes

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In addition to having small parcel sizes, the area surrounding Lake Kitchawan also has very steep slopes. There are many points in the area with slopes greater than 15%, but many with slopes greater than 25%. Steep slopes are typically not ideal for areas with septic systems as it may allow the wastewater to flow down the slope. In the case of Lake Kitchawan, this may be problematic as many of the slopes are directed toward the lake. The steep slopes in the project area surrounding Lake Kitchawan are illustrated in Figure 1-7.

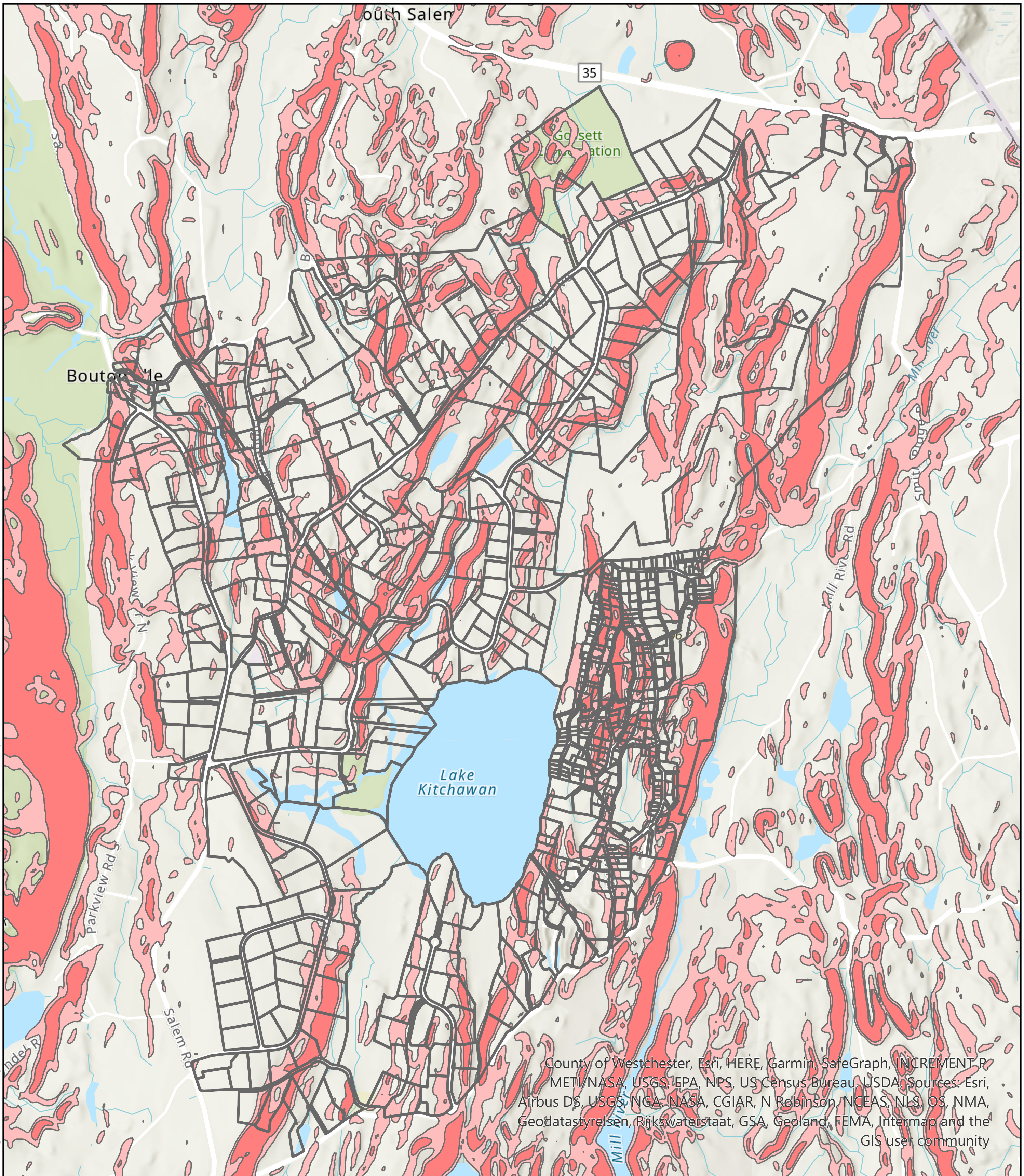

Figure Exported: 11/1/2021 By: enealon Using: \\wc\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lewisboro Parcel Size and Steep Slopes.aprx

Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Figure 1-7: Project Area Steep Slopes

Legend

Lake Kitchawan Study Parcels

Slope

15 to 25%

Over 25%

0 500 1,000 2,000 US Feet

N

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Project #: 0214731.00

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The wastewater study for Lake Kitchawan has included a sampling program to fully understand the current water quality of the lake. Six rounds of sampling took place between May 2021 and August 2021 under different weather conditions to get a more complete understanding of the lake. Dry weather samples were taken in May, June, and July with wet weather samples taken in June, July, and August. The results have shown that Lake Kitchawan is a eutrophic lake with high nutrient conditions. Sampling has also shown that outfalls leading into the lake have high levels of fecal coliform and E. coli, which could indicate issues with septic systems in the local area. Sampling data collected during the study has been used to identify the area east of Lake Kitchawan as a critical area since samples taken in this area had the highest level of impairment. Sampling results are further described in Section 1.4 and the complete results are shown in Appendix E.

Since there is no municipal wastewater infrastructure in Lewisboro or Pound Ridge and all residents receive drinking water from private wells, there is no water usage, wastewater flow, or water quality data. Wastewater flows are estimated based on the methodology discussed in the following sub-section. Based on the predominant single-family residential land use, wastewater is assumed to have average strength for domestic sanitary wastewater characteristics, as defined in the New York State Design Standards for Intermediate Sized Wastewater Treatment Systems, dated March 5, 2014, and included in Table 1-5. The parameters included in Table 1-5 are defined as follows:

Biochemical Oxygen Demand (BOD_5): The quantity of biodegradable organic matter contained in water. This is expressed as the milligrams of oxygen needed to break down the organic matter contained in one liter of water over five days.

Total Suspended Solids (TSS): Suspended particles that are not dissolved and can be trapped by a 2-micron filter.

Fats, Oils, and Grease (FOG): Substances including animal fats, vegetable oils, and petroleum greases that most often comes from kitchen waste.

Total Phosphorus (TP): The measure of all forms of phosphorus, dissolved or particulate, found in water.

Ammonia (NH_4): Parameter found in wastewater which comes from decomposition of proteins in organic waste.

Table 1-5: Typical Influent Concentrations for Residential Wastewater

Parameter	Concentration, mg/L
BOD_5	155-286
TSS	155-330
FOG	70-105
TP	6-12
NH_4	4-13

1.3.1 Design Flow Calculation Methodology

For residential parcels, which represents the majority of the properties, the following formula was used to estimate average daily flows: *Average Household Population x Flow per Capita*

The average household population was taken based on U.S. Census bureau information and is summarized in Table 1-6 below.

Table 1-6: Average Household Population per United Status Census Bureau (Year)

Town	Persons per Household
Lewisboro	2.67
Pound Ridge	2.74

A flow of 75 gallons per day per person was used, which was taken based on United States Geological Survey (USGS) domestic per capita water use, for self-supplied residents, in gallons/person/day for Westchester County, New York.

Vacant land was assigned a flow of zero.

Other types of parcels were individually assessed, and assigned a flow based on the New York State Design Standards for Intermediate Sized Wastewater Treatment Systems, dated March 5, 2014. Parcels outside of residential and vacant land include the Abbott – Scofield Cemetery, the Lake Kitchawan Association Clubhouse, public parks and recreational facilities, and the Montessori School.

The resulting total flow of the study area is 125,000 GPD. A critical area was also identified as discussed later in this report. The critical area has a total flow of 35,000 GPD.

Appendix L includes a table detailing flows by parcel.

1.4 Definition of the Problem

As part of this wastewater study, previous studies were evaluated to use historical data regarding lake quality. The previous studies evaluated include the 2008 CSLAP report, the 2008 ENSR Lake Kitchawan Watershed Management Plan, and the 2009 Town-wide Comprehensive Lakes Management Plan. The properties surrounding Lake Kitchawan have on-site septic systems, which has been identified to be one of the contributing factors degrading the water quality of Lake Kitchawan in the ENSR 2008 Lake Kitchawan Watershed Management Report. This report used hydraulic modeling of the entire Lake Kitchawan watershed to determine various sources of nutrient loading to the lake using the EPA (1980) model. The model used unit loads per acre by land use to estimate nutrient loads to the lake. The model estimates septic system inputs based on per capita loads adjusted for nutrient retention and dilution, as well as loads associated with atmospheric deposition and waterfowl. This previous report used the EPA model to state that septic systems are contributing 105 kg/year (60%) of phosphorus and 691.5 kg/year (37%) of nitrogen to the lake. The 2008 ENSR Lake Kitchawan Watershed Management Plan is included in Appendix F. Sampling was conducted in the area surrounding Lake Kitchawan as part of this study to understand the current impacts the septic systems are having on the lake, as shown in Appendix E.

As mentioned previously, the present condition of the lake was also evaluated through additional sampling to be compared to historical sampling data. Sampling results have indicated a presence of wastewater in the lake, further confirming that aging and failing septic systems are contributing pollutants to the lake. Sample results at the middle of the lake and the outfall on Shore Trail are shown in Table 1-7. The middle of the lake is a critical sample since it serves as a representative sample for the overall lake condition. However, additional locations within the lake were sampled and are included in Appendix E. Table 1-7 compares current sampling results with sampling results from previous studies. Samples at the middle of the lake are compared with 2007 samples from May through July from the 2008 ENSR Lake Kitchawan Watershed Management Plan, as seen in Appendix F. The middle of the lake samples were also compared to a sample from July 2008 which was included in the 2008 CSLAP for Lake Kitchawan, which is located in Appendix B. On the east side of the lake, there is an outfall at the beach on Lake Kitchawan Drive and an outfall further south on Shore Trail. The outfall on Shore Trail had consistently higher levels of fecal coliform and E. coli which indicates failing septic systems along the stream which enters the lake through this outfall could be contributing to the contamination of the lake. Table 1-7 includes current data from the outfall on Shore Trail compared to a sample from November 2007, which is from the 2008 ENSR Lake Kitchawan Watershed Management Plan as seen in Appendix F. Please refer to Appendix E for the sampling data which was obtained as part of this wastewater study.

Table 1-7: Sample Results at the Middle of the Lake and Outfall Locations

Parameter	Acceptable Levels	Location #1 - Middle of Lake May – July 2007	Location #1 - Middle of Lake May 27, 2021	Location #1 - Middle of Lake June 8, 2021	Location #1 - Middle of Lake July 8, 2021	Location #1 - Middle of Lake Aug.26, 2021	Location #2 – Outfall on Shore Trail Nov. 2007	Location #2 – Outfall on Shore Trail May 27, 2021	Location #2 – Outfall on Shore Trail June 8, 2021	Location #2 – Outfall on Shore Trail July 8, 2021
pH	Maintain between 6-9 to support plant and animal life	8.05	7.66	7.98	7.86	7.71		7.58	7.59	7.88
Dissolved Oxygen (mg/L)	Need > 5 mg/L to support aquatic life	8.86	7.72	9.35	10.13	9.20		13.25	12.18	10.12
Specific Conductivity (uS/cm)	Values over 300 uS/cm indicate presence of pollutants from sources such as septic systems	263	313	342	357	359.8		660	700	710
Total Phosphorus as P (mg/L)	Eutrophic conditions when > 0.020 mg/L	0.037	0.037	0.022	0.034	0.016	0.05	0.083	0.037	0.083
Chlorphyll a (ug/L)	Eutrophic conditions when > 8 ug/L Mesotrophic when 2-8 ug/L	3.2	1.7	0.12		2.9		0.66	0.085	<5
Total Suspended Solids (mg/L)	Waters with a TSS concentration < 20 mg/L usually have good clarity	4.2	2.8	< 2.0	1.2	2.0	< 4	4		2
Fecal Coliform (col/100 ml)	Health hazard by NYSDOH above 1,000 col/100 mL	16.7	2	1.8	1.8	1.8	890	5,400	1,600	2,400
E. coli (col/100 ml)	Health hazard by NYSDOH above 235 col/100 mL		4.1	8.5	5.2	3.0		1,553	1,120	2,420

Note: The blank cells indicate parameters that were not analyzed during the corresponding water quality study

Previous studies at Lake Kitchawan have included sampling to characterize the lake. As seen in Table 1-7, the current sample data was compared to previous data for samples in the middle of the lake and at the outfall on Shore Trail. However, there are some parameters that have not been sampled in previous studies so those could not be compared to previous data. The comparison shows that the pH at the middle of the lake has decreased from 2007 since the 2021 average pH is 7.80 and the 2007 value was 8.05. The dissolved oxygen concentration has also generally increased since the average 2021 dissolved oxygen concentration is 9.10 mg/L and the 2007 value was 8.86 mg/L. It has also been found that the specific conductivity increased since 2007. The current average is 343 uS/cm, which may be a concern as values over 300 uS/cm indicate potential presence of pollutants from sources such as septic systems, road salt

, and animal waste. Sampling comparisons have also showed that the total phosphorous concentration in the middle of the lake has decreased. The average total phosphorous concentrations in the middle of the lake from 2021 sampling is 0.037 mg/L, which is equal to the 2007 level. However, the phosphorus concentration at the outfall on Shore Trail has increased from 0.05 mg/L to a 2021 average value of 0.0972 mg/L which is almost twice the 2007 concentration. Fecal coliform levels can also be compared to previous sampling data which showed a decrease at the middle of the lake, but an increase at the Shore Trail outfall. At the middle of the lake the fecal coliform concentration was 16.7 MPN/100 mL in 2007 while the 2021 average is 1.9 MPN/100 mL. At the Shore Trail outfall, the 2007 fecal coliform level was 890 MPN/100 mL while the current 2021 average is approximately 2950 MPN/100 mL.

Through ongoing sampling as part of this study, it was found that both outfalls on the east side of the lake had elevated levels of fecal coliform and E. coli, which could be indicative of lake water quality issues due to the existing septic systems. At the outfall next to the private beach, fecal coliform levels were greater than 2,400 MPN/100 mL on three of the five rounds of sampling. The E. coli levels at this same outfall were greater than 770 MPN/100 mL on three of the five rounds of sampling. At the outfall on Shore Trail, the fecal coliform levels were greater than 1,600 MPN/100 mL for all five rounds of sampling. The E. coli levels at the Shore Trail outfall were greater than 2,400 MPN/100 mL for all five rounds of sampling as well. For fecal coliform, NYSDOH states that levels above 1,000 colonies per 100 mL is a health hazard. NYSDOH considers E. coli levels to be a health hazard when concentrations are greater than 235 colonies per 100 mL. Although the concentrations entering the lake from these two outfalls are diluted once they enter the lake, this still poses a health threat to the community.

It is also important to consider the lake outlet where water leaves the lake on Cross Pond Road. On the July 9, 2021, sampling event, the fecal coliform concentration at this outlet was 1,700 MPN/100 mL and the E. coli concentration was 686.7 MPN/100 mL. The concentrations for previous sampling at this outlet were lower, but this poses a concern since the water leaving the lake is entering the New York City watershed.

At each round of sampling, a drinking water sample was taken from the Lake Kitchawan Association building on Lake Kitchawan Drive. These sample results showed that total coliform was present in the drinking water at three of the five rounds of sampling. E. coli was present in the drinking water for two of the five rounds of sampling. This is especially concerning since the bacteria was found in a potable water sample. The samples were either taken from an outside hose or inside sink, but this is a concern as the water could be used as a drinking water source. In response to these sample results, the Lake Kitchawan Association placed a sign in the clubhouse building stating not to drink this water. These results could ultimately indicate a septic system failure which is causing wastewater to leach into the drinking water well. Septic system failures must be taken seriously in this area since the entire area is on drinking water wells and there is potential for wastewater to enter the drinking water system.

A sample was also taken at the stream entering Lake Kitchawan from the Pound Ridge side of the lake on July 8, 2021, and August 26, 2021. This sample location showed a fecal coliform concentration of 230 MPN/100 mL on both days. The E. coli concentration was 165 MPN/100 mL on July 8 and 410.6 MPN/100 mL on August 26. The E. coli level on August 26, 2021, exceeds the NYSDOH health hazard level of 235 MPN/100 mL.

Samples were also taken from catch basins nearby the lake in the Lewisboro area on the east side of the lake. Three catch basins were sampled which all showed high levels of fecal coliform and E. coli. While elevated levels of fecal coliform and E. coli could be due to animals present in the area, topography indicates that this is likely related to the septic systems in the area. For example, the catch basin that was sampled on Lake Path is the furthest upstream catch basin. This catch basin is located at the bottom of a steep hill, so septic effluent from the residences along that hill may be traveling into the catch basin network.

Sampling results also showed a relationship between phosphorus and coliform levels. It appeared to be an overall trend that high phosphorus concentrations were typically found with elevated total coliform levels. For example, at the outfall on Shore Trail the phosphorus concentration was 0.037 mg/L with a total coliform concentration of 2,400

MPN/100 mL in June. During July sampling, this same location had a phosphorus concentration of 0.24 mg/L with a total coliform concentration greater than 16,000 MPN/100 mL.

1.5 Financial Status

This section summarizes the financial status for the Town of Lewisboro and is based on its most recent audited Financial Statement (2019). The Town maintains six individual governmental funds – the General Fund, Highway Fund, Special Districts Fund, Capital Project Fund, Debt Service Fund, and Special Purpose Fund – and adopts an annual appropriation budget for the General, Highway, and Special Districts funds.

Net Position

The Town's liabilities and deferred inflows of resources exceeded its assets and deferred outflows of resources by $22,908,084 at the close of FY2019; this unrestricted deficit must be financed from future operations and results from a combination of the Town's long-term commitments – repayment of general obligation bonds ($10,360,000), retirement incentives and pension obligations, compensated absences, net pension liability, and other postemployment benefit liabilities. The Net Position also reflects a net investment in capital assets of $1,607,740, and a restricted balance of $60,047.

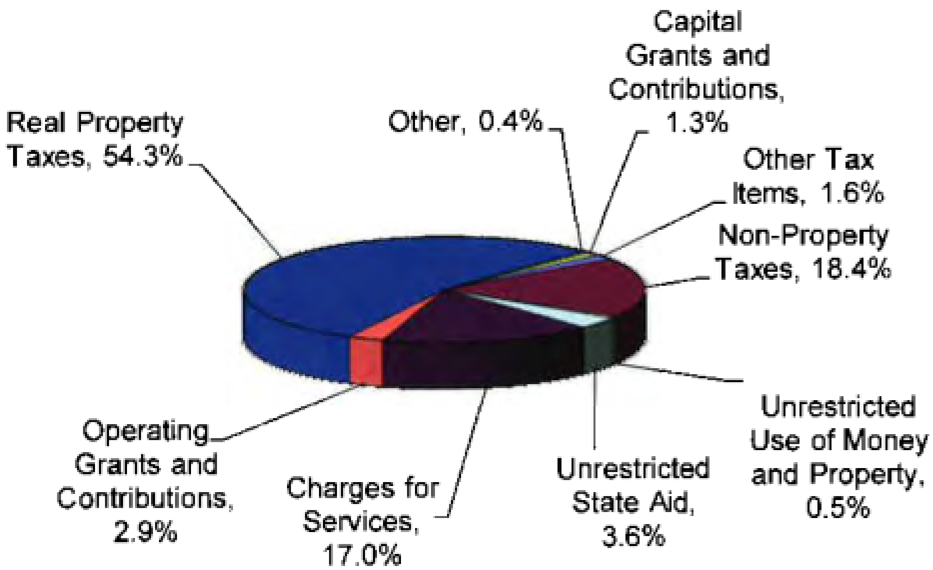
At the close of FY2019, the Town governmental funds reported a combined ending fund balance of $1,615,421, a slight decrease over 2018 due to an increase in capital projects funding. At close of FY2019, due to revenues exceeding the final budget, the General Fund reported a total ending fund balance of $1,137,353, an increase of $427,436 over prior year.

The Town of Lewisboro did not issue any general obligation bonds during FY2019 and retired $1,010,567 of GO debt. The Town's outstanding general obligation bonds payable on December 31, 2019, totaled $10,360,000.

Sources of Revenue

The largest source of revenue for Town governmental activities is real property taxes followed by non-property taxes, charges for services, unrestricted State aid, operating grants and contributions, capital grants and contributions, unrestricted use of money and property, and other tax items (Figure 1).

Figure 1 Sources of Town Revenue, FY2019.



For the year ending December 31, 2019, real property taxes increased by $561,308 over 2018 and other tax items decreased by $293,962. Unrestricted State Aid decreased $113,037 primarily due to a decline in mortgage tax revenue and charges for services increased $63,952, reflecting increased charges for services to other governments.

Financial Analysis of the Town's Funds

The Town uses fund accounting to ensure compliance with finance-related legal requirements. Governmental funds are used to provide information on near-term inflows, outflows, and balances of spendable resources. Such information can be useful in assessing the Town's financing requirements. The unassigned portion of fund balance is a measure of net resources available for spending at the end of the calendar year.

At the end of 2019, the Town's governmental funds reported a combined ending fund balance of the $1,615,421, a decrease of $176,939 from the prior year.

At the end of 2019, the General Fund (the primary operating fund of the Town) showed a positive fund balance of $1,317,353, an overall increase of $427,436 from the prior year. The unassigned fund balance ($780,430) represented 68.6% of total fund balance. Major areas where revenues exceeded budget included non-property tax distribution from Westchester County ($370,857) due to a 1% sales tax increase that went into effect in August 2019, and departmental income from parks and recreation and inspection fees ($197,661).

The Highway Fund balance was $145,276 at close of 2019, an increase of $201,345 over prior year. The Special Districts Fund reflected a combined fund balance of $753,488, an increase of $683,796 over prior year.

Capital Assets and Indebtedness

The Town's investment in capital assets for its governmental activities (land, land improvements, buildings and improvements, machinery and equipment, and infrastructure) as of close of 2019 was $12,448,482 (net of accumulated depreciation). At the end of FY2019, the Town had a total bonded debt outstanding of $10,360,000 backed by the full faith and credit of the Town in accordance with New York State law. The Town issued no new bonds in 2019 and retired $1,010,567 in principle on outstanding obligations.

Short-term capital debt for the Town totaled $2,053,500 as Bond Anticipation Notes.

Bond Rating

In 2017, S&P Global raised the General Obligation Bond rating for the Town of Lewisboro from AA- to AA on improved budget flexibility and noted a stable outlook.

> *"The upgrade is based on our view of the town's improved budgetary flexibility, highlighted by reserve levels that exceed nominal levels, and the town's economic indicators, supported by property wealth and incomes that are significantly stronger than state and national levels.*
>
> *The stable outlook reflects our view of Lewisboro's very strong economic indicators, reinforced by its access to nearby employment hubs, as well as its very strong liquidity. The town's better-than-nominal reserve levels and a manageable debt profile also support our view of the town's stability over the near term. As such, we do not expect to raise or lower the rating during our two-year outlook horizon.*
>
> *If the town were to continue to generate operating surpluses, increasing available reserves to levels we consider very strong, while strengthening management practices and policies to manage performance volatility, holding all other factors equal, we could raise the rating. If Lewisboro's reserve levels were to fall to nominal levels or if economic indicators were to weaken, we could lower the rating."*

The raised rating reflected S&P's view of the Town as having a very strong economy, adequate management, strong budgetary performance, adequate budgetary flexibility, very strong liquidity, very weak debt and contingent liability profile, and a strong institutional framework score.

Outside Funding

The Town has pursued funding for the Oakridge Water/Sewer District as follows:

- 2021 - EPA State and Tribal Assistance Grant (STAG) to install granulated carbon filter and increase the plant size to accommodate the filters (pending).
- 2019 – NYS EFC Water Infrastructure Improvement Act (WIIA) Grant Award - $289,500 – Oakridge Water District Improvements.

2. ALTERNATIVES ANALYSIS

This section describes the potential alternatives to mitigate the water quality impacts of Lake Kitchawan due to wastewater issues in the surrounding area. The following sections are applicable to all alternatives evaluated.

Environmental Impacts and Mitigation Measures

This section describes general impacts to environmental conditions and identifies the regulatory permitting and compliance requirements for construction of proposed potential alternatives. The proposed alternatives discussed further in this section include abandonment of existing septic systems with either the installation of new, advanced wastewater treatment systems and/or installation of sewer mains, installation of grinder pump systems, or a combination thereof. All potential options will require Westchester County Department of Health (WCDOH) approval and permitting. WCDOH has guidelines that will be followed for the decommissioning/abandonment of the existing septic systems.

Best management practices specified in a Storm Water Pollution Prevention Plan (SWPPP) would be required to reduce potential impacts on water quality during the construction and installation of these systems. Other potential construction-related impacts, such as noise, dust, and equipment emissions, will be minimized with standard construction best management practices and mitigation measures.

This work is not subject to additional permitting such as New York State Department of Environmental Conservation, or Army Corp. of Engineers as no regulated wetlands or streams are impacted by this project scope.

Biological resources mapped in the project area also on the NYSDEC Environmental Mapper determined the area to be the location of rare plants and rare animals. According to the USFWS Information for Planning and Consultation (IPaC) mapping tool, the following threatened and endangered mammals and reptiles are known or expected to be present in the vicinity of the proposed project:

- Indiana Bat (*Myotis Sodalis*) – Endangered Species
- Bog Turtle (*Clemmys muhlenbergii*) – Threatened Species

The following migratory birds are known or expected to be present in the project area:

- Bald Eagle (*Haliaeetus leucocephalus*)
- Black-billed Cuckoo (*Coccyzus erythropthalmus*)
- Canada Warbler (*Cardellina canadensis*)
- Prairie Warbler (*Dendroica discolor*)
- Red-headed Woodpecker (*Melanerpes erythrocephalus)*
- Rusty Blackbird (*Euphagus carolinus)*
- Wood Thrush (*Hylocichla mustelina*)

Listed species and their critical habitats are managed by the Ecological Services Program of the U.S Fish and Wildlife Services (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA

Fisheries). Construction activities may result in impacts to migratory birds, eagles, and their habitats are regulated under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

A biological resources study would be required to assess potential construction and operational impacts of this project. Mitigation measures would be identified, in collaboration with the USFWS, to minimize potential adverse impacts. Mitigation measures could include avoiding construction in the nesting bird season, pre-construction clearance surveys, installation of fencing to avoid sensitive habitat areas, and other activities.

Seasonal Limits, Challenges and Requirements

Environmental permitting and potential mitigation pose challenges to this project. For example, the timeframe for permits to be issued can be lengthy and can potentially affect planned construction start dates. Additionally, environmental studies, agency coordination, and implementing permit conditions and mitigation can increase project costs.

Alternative Analysis

In accordance with the "Engineering Report Outline for NYS Wastewater Infrastructure Projects," this Engineering Report addresses the following five alternatives:

1. No Action
2. Green infrastructure
3. Repair and replacement
4. Regional consolidation
5. Centralized vs. decentralized

The project area was created based on an analysis of the drainage area for Lake Kitchawan, which identified an overall study area of 633 parcels. Of those parcels, 456 parcels are located in the Town of Lewisboro, and 177 parcels are located in the Town of Pound Ridge. During the analysis, it was noted that not all alternatives should include all parcels within the drainage area. The number of parcels that make up each alternative will be provided in the subsequent sections, along with their sizes and estimated wastewater flows.

No Action

If the Town of Lewisboro takes no action, the continued use of high-density septic systems will further degrade the quality of water in Lake Kitchawan. The lake will remain impaired thus limiting its beneficial use as a Class B waterbody. Class B waterbody means that this lake is best intended for contact recreation i.e., swimming and bathing), non-contact recreation (i.e., boating and fishing), aesthetics, and aquatic life. If the water quality in Lake Kitchawan continues to degrade, it could impact the Croton System of the New York City water supply, as Lake Kitchawan is a tributary to the Croton Reservoir. The No Action alternative is described in more detail in Section 2.1.

Green Infrastructure

Green infrastructure in combination with gray infrastructure is a cost-effective, resilient approach to managing wet weather impacts of stormwater in conventional piped stormwater systems. However, the extent of this study was focused on existing water quality issues at Lake Kitchawan resulting from the existing septic systems surrounding the lake, so analysis of green infrastructure is not applicable. As described in Section 1.4, the ENSR 2008 Lake Kitchawan Watershed Management Plan, which is included in Appendix F, used the EPA model to estimate that septic systems represent the largest phosphorus load to the lake with 60% of the total load. The model estimated than another 25% of the phosphorus load came from atmospheric deposition, residential land use, and forested lands. Similarly, the septic systems, atmospheric deposition, residential land use, and forested lands make up approximately 78% of the nitrogen load. Considering these percentages, it is not expected that stormwater plays a significant role in the degradation of the water quality in Lake Kitchawan. While green infrastructure is not directly applicable to this sanitary sewer project, implementation of green infrastructure and storm sewer improvements should be considered part of the overall strategy for reducing potential impairments.

Repair and Replacement

The density of existing septic systems is 274 septic systems per square mile for the study area parcels located in Lewisboro and 178 septic systems per square mile for the study area parcels located in Pound Ridge. These density values greatly exceed the EPA threshold of 40 septic systems per square mile. Repairing existing onsite septic systems will not lower the density of septic systems. Repairing existing systems may have minor impact on the water quality of Lake Kitchawan, but this is not feasible as a long-term resolution. The existing systems were initially designed to handle smaller flows associated with summer cottages. Since this area has transformed into a year-round residential community, the existing septic systems are not equipped to handle the associated increased flows and loads. For this reason, the repair of existing systems or replacement with a traditional septic system is not expected to make a significant improvement in water quality.

Although repair of the existing onsite septic systems or replacement with a traditional septic system may not be practical, one potential option is the installation of individual advanced treatment systems on each property to replace the existing traditional septic system. The proposed unit acts as a traditional septic system with a built-in treatment system and no need for a separate septic system. An advanced treatment system would further treat the wastewater before it is dispersed to the soil and the environment. This will help to lower the biological oxygen demand (BOD) and total suspended solids (TSS), as well as remove nutrients before the water seeps into the soil. The installation of advanced treatment systems on each residential property is anticipated to bring wastewater effluent at each property to a level of treatment considered safe for discharge into the soil. Implementing advanced treatment systems for the existing onsite septic systems may reduce the harmful impacts the existing septic systems are currently having on Lake Kitchawan. It should be noted that current code requirements require expansion areas and setbacks from property lines, dwellings, wells, surface water, and groundwater. Therefore, the replacement of existing septic systems to meet all of Westchester County Department of Health requirements may not be feasible for all properties. These types of advanced systems are subject to Westchester County Department of Health approval and are described in Westchester County Ordinance §873.740. The advanced treatment option is described in more detail in Section 2.2.

Regional Consolidation

Regional consolidation could include connection to a nearby existing wastewater treatment plant with capacity, or construction of a new wastewater treatment plant to serve a larger area beyond the immediate Lake Kitchawan vicinity. However, an existing plant is not available in proximity to Lake Kitchawan and construction of a new plant and connection to that plant would be prohibitively expensive, so regional consolidation was found to be not feasible.

Centralized vs. Decentralized

The centralized alternative would create a sewer district in the study area surrounding Lake Kitchawan and would include the decommissioning/abandoning of existing septic systems and installation of a new sanitary sewer system where wastewater would be transported to a newly constructed wastewater treatment plant. This proposed sewer district would include the 474 developed parcels that are part of the current wastewater study. The flow would be collected using a low-pressure force main due to the existing topography of the area. The wastewater would be collected and treated at a new wastewater treatment plant (WWTP) that would be constructed near Lake Kitchawan solely for the Lake Kitchawan community. There are multiple areas of vacant land owned by the Town of Lewisboro which were considered as potential treatment plant locations. The chosen treatment plant location is at the corner of Lake Kitchawan Drive, approximately 1600 feet north of the beach. If the centralized treatment system alternative was selected, flow from the proposed sewer district would be pumped to this section of Lake Kitchawan Drive and treated at the new WWTP. The centralized alternative is described in more detail in Section 2.3.

A decentralized alternative would treat and discharge wastewater locally within the study area. The decentralized alternative is being considered as two separate options. The first decentralized option would break up the entire study area into smaller clusters and treat each cluster separately, on various vacant lots by an advanced treatment system. All clusters would be treated at levels of equal importance and each cluster would contain approximately the same amount of flow. Under this alternative, flow from each designated cluster would be diverted to a common location for advanced treatment.

The second, separate option for a decentralized alternative would include just portions of the study area categorized as critical importance. In this option, only the areas of highest concern would receive localized treatment to improve lake water quality while keeping a lower project cost. The study area has been evaluated to identify the most critical areas which may be causing the most impact to Lake Kitchawan to further define this second decentralized alternative. The critical area was determined based on proximity to Lake Kitchawan, parcel size, and slope. The residences in this critical area are located on small parcels, mostly sized less than 0.5 acres. This area is also made up of steep slopes greater than 15% which direct flow towards the lake. This focuses on properties on which wastewater traveling through the soil has the shortest travel time into the lake, therefore targeting the area that has the largest impact on the lake. The area to the east of Lake Kitchawan located in the Town of Lewisboro has been identified as the focus area and split into four clusters. Under the smaller decentralized treatment alternative, these four clusters would each have a vacant lot containing the advanced treatment system to treat their respective flows. The decentralized alternative is feasible and therefore is described in more detail in Section 2.4.

Summary

As summarized in Table 2-1, there are several feasible alternatives. The remaining alternatives are considered either not applicable, not feasible or equivalent to the alternatives analyzed.

Table 2-1: Alternative Analysis Summary

Alternative	Comment
No Action	Used in analysis (Section 2.1)
Green Infrastructure	Not applicable to sanitary sewer infrastructure
Repair and Replacement	Used in analysis (Section 2.2)
Regional Consolidation	Not feasible
Centralized vs. Decentralized	Centralized used in analysis (Section 2.3) Decentralized used in Analysis (Section 2.4)

It should be noted that a different number of parcels, and therefore different flows, were used for different alternatives. The parcels included in each alternative were chosen based on cost, feasibility, and impact to water quality. Table 2-2 outlines the number of parcels and corresponding flow of each alternative described in this report.

Table 2-2: Alternative Analysis Parcels and Flows

Alternative	Number of Parcels	Flow (GPD)
Repair and Replacement	187	N/A – each parcel treated separately
Centralized	474	125,000
Decentralized (Entire Project Area)	474	125,000
Decentralized (Critical Area)	187	35,000

For two alternatives, a smaller group of parcels was chosen to focus on instead of the entire project area. It is thought that this will still have a significant impact on Lake Kitchawan while reducing project costs. The parcels were chosen strategically as these are thought to have the most significant impact on the lake. The parcels chosen as part of the critical area are all within a half-mile radius of the lake, but many are located within one-quarter mile from the lake. They are all located on the east side of Lake Kitchawan since it was determined these properties have the smallest parcel sizes and steep slopes directed toward the lake. As seen in Figure 1-6, many of the parcels located in this eastern section of the study area are less than one half acre, with some less than one quarter acre. Throughout the rest of the study area, there are only a handful of parcels that are smaller than one acre. Small parcel sizes relate to a high septic system density, so the eastern parcels are likely having more of an impact on Lake Kitchawan than the larger properties located further from the lake. The topography of the area also played a large role in determining the critical area for two of the alternatives. The area surrounding Lake Kitchawan has a lot of rolling hills and roads with steep slopes. As seen in Figure 1-7, there are many residences which fall on parcels with steep slopes of at least 15%, and some slopes over 25%. Typically slopes greater than 15% are not ideal for septic systems since this allows for the wastewater to travel down the slope. In the area immediately surrounding Lake Kitchawan, especially on the eastern side, there are many areas where slopes are greater than 25%. Many of these small properties fall on steep slopes directed toward the lake. Because of the small parcel sizes and steep slopes in the identified critical area, it was determined this area should be focused on because septic system effluent wastewater will have the shortest travel time toward Lake Kitchawan.

2.1 No Action Alternative Description

The No Action alternative would not construct a sewer system and existing onsite septic systems would continue to be used and maintained by individual property owners. An estimated 474 individual septic systems are in the proposed district with high septic densities in Lewisboro and Pound Ridge of 274 and 178 septic systems per square mile, respectively. The high number of septic systems are located on small parcels, with an overall average developed parcel size of 1.94 acres. In the area immediately surrounding the lake, the average parcel size is only 0.35 acres. There would be no cost for the No Action alternative, and no benefit to the water quality of Lake Kitchawan. The ENSR 2008 Lake Kitchawan Watershed Management Plan used hydraulic modeling of the entire watershed to estimate that septic systems are contributing a load of 105 kg of phosphorus per year and 691.5 kg of nitrogen per year to Lake Kitchawan. The assumptions associated with this calculation are described in Section 1.4 and the full report is included in Appendix F. These loads may have increased since 2008 due to the increased age and likelihood of failure of the existing septic systems. With the No Action alternative, the current nutrient loading will continue to enter the lake. Water quality would continue to degrade in the lake, and therefore potentially continue to impact downstream reservoirs and groundwater due to nutrient and bacterial loading.

2.2 Repair and Replacement Project Description

The Repair and Replacement alternative would replace the conventional septic systems at each property with a more advanced treatment system. Innovative and Alternative Septic Systems (I/A) are growing as an efficient and effective technology to stop nitrogen at the source to protect water quality. In many I/A pilot projects have resulted in high levels of nitrogen removal close to levels achieved by a wastewater treatment plant. There have been many successful residential I/A projects in the northeast where advanced septic systems have been installed in high density residential areas to improve water quality of surrounding surface waters.

This alternative would focus on the residences located east of Lake Kitchawan since that has been identified as a critical area for the project based on sampling results. It was decided that this alternative should focus on the residences in closest proximity to the lake to minimize project cost while focusing on the area that has the largest impact on the lake. The residences in this critical area are located on small parcels mostly less than 0.5 acres. This area is also made up of steep slopes greater than 15% which direct flow towards the lake and limit the ability for conventional septic systems to function properly. In addition to parcel size and topographic conditions, there are also some properties in this area that fall along a stream which leads into the lake. Through sampling conducted throughout this wastewater study, high levels of fecal coliform and E. coli have been measured at the outfall of this stream into Lake Kitchawan. There are 187 properties that make up this focus area. As part of the Repair and Replacement Alternative, it is proposed that these 187 properties replace their existing septic systems with the advanced treatment system to reduce the strength of the wastewater entering the soil and ultimately Lake Kitchawan. It should be noted that while it is proposed to have 187 parcels as part of this alternative, this number may decrease as not all parcels will meet requirements for septic system replacement due to current code requirements.

Proposed Preliminary Design

To implement this Repair and Replacement alternative, the Town of Lewisboro would establish a septic system replacement program, which would encompass 65.6 acres of primarily R-2A, R-1/2A, and R-1A zoned parcels within the Lake Kitchawan area. This alternative would include the formation of the Lake Kitchawan Septic District (District) including the 187 properties identified as having the most significant impact on Lake Kitchawan. The septic district would be administered by the Town of Lewisboro. The Town would be responsible for collecting funds from homeowners, although if eligible, grants and state funding will be applied for to help fund this project. The Town will be responsible for and enforce maintenance of the advanced septic systems. Maintenance is expected to include system servicing once each year and any necessary repairs. The Town would also be responsible to administer the Repair and Replacement alternative, which will include the decommissioning and removal of all existing septic tanks. The existing septic tanks will be replaced with an advanced treatment system which is a single unit that combines the septic tank with an advanced water treatment process. The formation of the District operated by the Town of Lewisboro is important because it places less responsibility on the homeowner. Placing funding, installation, operation and maintenance responsibilities on the owner acts as a barrier to the effectiveness of installing these I/A systems. With the Town ensuring proper maintenance of all units, it is more likely that this alternative will have a positive impact on Lake Kitchawan.

This septic replacement program would remove the individual existing septic systems on each property and replace these systems with a more advanced wastewater treatment system on each property. This system would be constructed of fiber reinforced plastic and would be a self-contained, below grade structure. The proposed advanced treatment unit evaluated for this study is the Fuji Clean USA Model CE5. This model can handle a load of 500 gallons per day and has built-in flow equalization. The unit incorporates the septic tank, so no separate septic tank or pre-treatment is required. This advanced treatment system has the smallest footprint and lowest power use versus other systems of similar capabilities.

Th Fuji Clean Model CE5 advanced system is made up of five treatment chambers. The wastewater influent initially enters a sedimentation chamber where solids will settle and grease floats to the top. The wastewater then enters an anaerobic chamber where nitrates are denitrified, and organic matter is decomposed by micro-organisms. This chamber also includes additional settling and filtration to further separate suspended solids. The third chamber is the aerobic contact filtration chamber which is where two types of plastic media work together in an oxygenated environment to remove ammonia nitrogen, organics, and suspended solids. The wastewater then enters a storage chamber which acts as a settling zone before entering the disinfection chamber. The disinfection chamber is the final zone before discharge which has the option for chlorination tablet disinfection before it leaves the treatment unit.

The system also includes two air lift pumps. The recirculating air lift pump sends process water and solids back to the sedimentation chamber. The effluent air lift pump is designed to help equalize flow and discharge treated effluent. The Fuji Clean Model CE5 is powered by the FujiMACRII Series Blowers, which are diaphragm air blowers manufactured by Fuji Clean Co to introduce oxygen into the aerobic contact filtration chamber. These blowers provide approximately 2.8 cubic feet per minute and have a power usage of about 1.2 kWh per day.

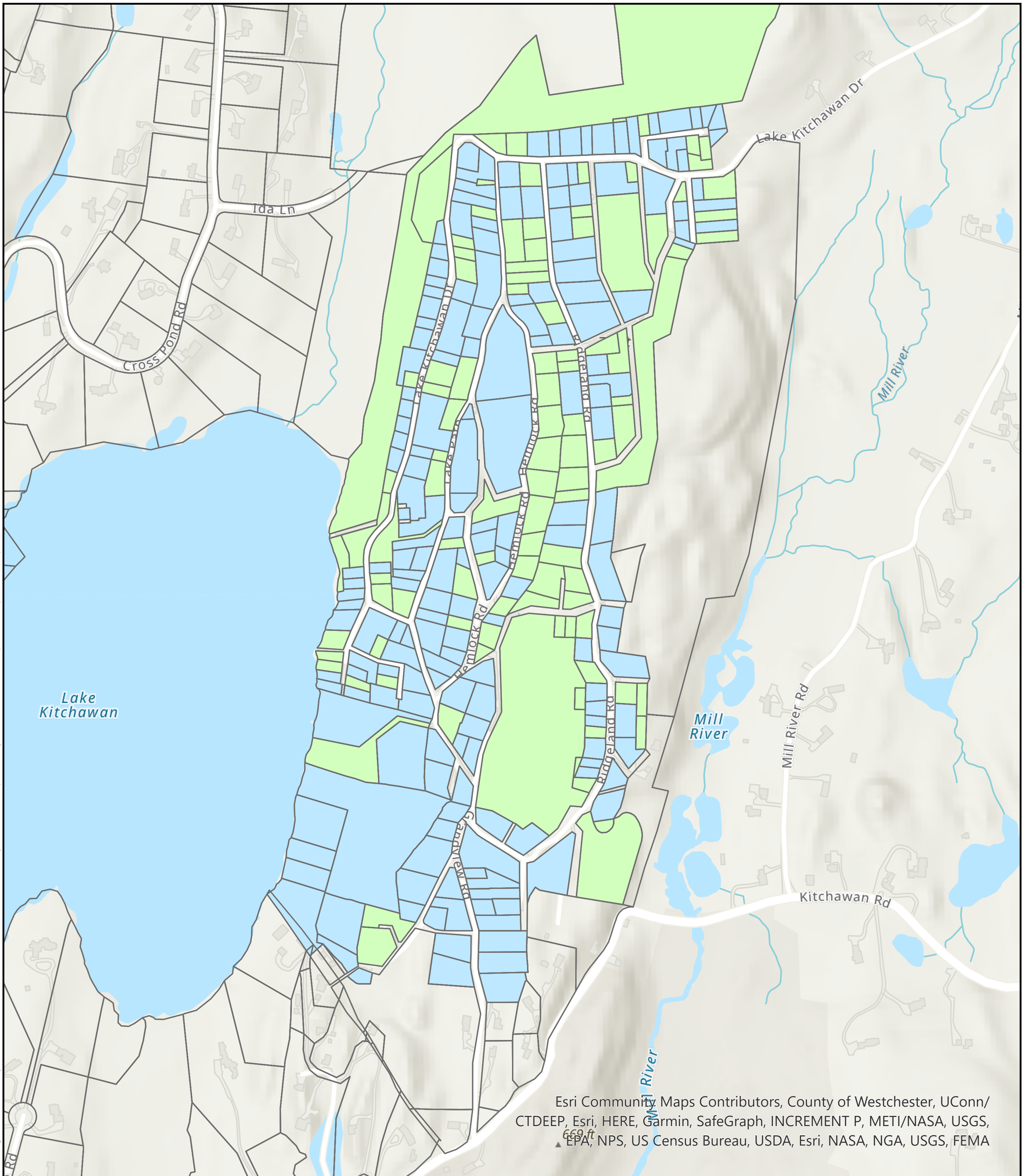
The effluent discharged from the Fuji Clean Model CE5 will have BOD and TSS concentrations ranging from 10 to 20 mg/L. Based on field testing, the total nitrogen concentration of the effluent will also be less than 20 mg/L. For NSF testing of this model, the average effluent nitrogen concentration was 10 mg/L for an average nitrogen removal of 62%. The average phosphorus removal was 22%.

Impact on Existing Facilities

At this time, the impacts to the existing facilities are expected to be minor. This plan includes the removal and/or decommissioning of onsite septic systems. If each site has enough room to leave the existing system in place to be abandoned, the existing tanks will be left in place and decommissioned. This would include pumping, knock-in, puncturing, and backfill of the tank. If space is limited, which most sites do have limited area, the existing septic system will be removed, and this new advanced treatment system will be installed in its place. The Fuji Clean CE5 has a height of 61.8 inches, a length of 85 inches, and a width of 43.7 inches. This is approximately the same size of an average septic tank; therefore, it is expected that this system will be able to replace the existing septic tank at all residences. However, updated code requirements will play a role in the feasibility of this alternative at each property since rules and regulations regarding setbacks and space requirements may be more stringent. Connection work from this new system to the building will be required. Electrical service to power the equipment and control panel will also be required but is anticipated to be a minor electrical load. At $0.12 per kW, this highly efficient system results in a power cost of $4.68 per month.

Location Map and Schematic Drawing

This Repair and Replacement alternative is shown in Figure 2-1.



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Figure 2-1: Repair and Replacement Alternative

Legend

Parcels
- Included in Repair and Replacement Alternative
- Undeveloped
- Not Included in Repair and Replacement Alternative

0 125 250 500 US Feet

N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: July 2021

Design Flow

For the Repair and Replacement alternative it will be ensured that all advanced treatment systems would be sized to adequately treat the estimated flow at the property where they are installed. The 545-gallon tank primary treatment tank is able to treat up to 500 gallons per day, which was calculated to be sufficient for the tributary area since all residential flows have been calculated to be less than 205 gallons per day.

Land Requirements

The Town would not be required to acquire additional property for this alternative; however, private property easements would need to be executed with the Town for this Repair and Replacement alternative. This option would require easements for the replacement work to be completed by the publicly bid and awarded Contractor. Easements would also be required for the Town to access the advanced treatment system since the Town will be responsible for ongoing maintenance of equipment. The enforcement of system maintenance and all associated costs will be the responsibility of the Town.

Discharge Permit Requirements

This alternative does not include any discharge permits but approval of the system would be subject to Westchester County Department of Health.

Water and Efficiency Measures

The Fuji Clean Model CE5 has a smaller size than comparable systems and has been engineered to provide optimal and reliable treatment at a competitive cost and small footprint. The system has low power requirements of 1.2 kWh per day which makes these units highly efficient.

Storm and Flood Resiliency

This alternative will replace existing below ground treatment systems. Storm and flood resiliency is not required as part of this alternative.

Cost Estimate

The cost for this Repair and Replacement alternative was estimated based on capital costs. Capital costs include private property easements, connection fee, facility construction and include an allowance for engineering, fiscal and legal services.

Unit Cost Development

Capital costs are from various sources, including previous similar projects. Costs from previous projects have been adjusted by an estimated inflation rate of 3% per year, to the year 2022.

This plan includes the cost of decommissioning/abandoning each septic system, removal of the septic system, and installation of the advanced treatment system. While this alternative will not utilize the existing septic tank, the existing leach field will remain to make this alternative cost effective. The estimated construction costs associated with the installation of 187 advanced treatment systems is shown in Table 2-3.

Table 2-3: Repair and Replacement Unit Construction Costs

ITEM NO.	ITEM	UNITS	UNIT PRICE	ESTIMATED COST
1	Advanced Treatment Unit	ea	$ 14,000	$ 2,600,000

To account for engineering, legal, and fiscal services needed for the project, as well as project uncertainty, multipliers are applied to the raw construction cost subtotal. To account of engineering, fiscal, and legal fees, a 15% multiplier is added to the subtotal of the raw construction costs. As this is a preliminary planning document, a 30% construction contingency is added to the subtotal of the raw construction costs to account for the degree of uncertainty at this level of project development. Table 2-4 summarizes the total construction cost:

Table 2-4: Repair and Replacement Total Construction Cost

Construction Cost	$2,600,000
Construction Contingency	$780,000
Engineering, Fiscal, Legal	$500,000
Total Capital Cost	$3,900,000

As mentioned previously, the Town will be responsible for operation and maintenance of the advanced treatment units. The homeowners will only be responsible for power costs, which are estimated at a cost of $4.68 per month. Table 2-5 shows the anticipated annual operation and maintenance costs associated with the Repair and Replacement alternative to be paid by the Town.

Table 2-5: Repair and Replacement Annual O&M Cost

Repair and Replacement Annual Operation and Maintenance Cost				
Description	**Quantity**	**Unit Cost**		**Cost ($/yr)**
Labor - Service Visits	187	$ 500	ea	$ 93,500
Spare Parts, Consumables, Tools, etc.	187	$ 100	ea	$ 18,700
	Total Estimated Annual O&M Cost			**$ 112,200**
	Escalation to 2023 based on 3% / year			**$ 119,000**

It is proposed to install an advanced treatment unit as a replacement to the existing septic tank since this will treat influent wastewater prior to discharging to the soil. This reduces the bacteria and nutrient loading to the soil further than a replacement with a standard septic system. Capital costs are also reduced with the installation of an advanced treatment unit since the existing leaching fields will remain in place. The estimated construction costs associated with replacement of 187 septic systems with a standard septic system is shown in Table 2-6.

Table 2-6: Standard Septic Replacement Construction Costs

ITEM NO.	ITEM	UNITS	UNIT PRICE	ESTIMATED COST
1	Standard Septic System Cost	ea	$ 35,000	$ 6,520,000

To account for engineering, legal, and fiscal services needed for the project, as well as project uncertainty, multipliers are applied to the raw construction cost subtotal. To account of engineering, fiscal, and legal fees, a 15% multiplier is added to the subtotal of the raw construction costs. As this is a preliminary planning document, a 30% construction contingency is added to the subtotal of the raw construction costs to account for the degree of uncertainty at this level of project development. Table 2-7 summarizes the total construction cost:

Table 2-7: Standard Septic Replacement Total Construction Cost

Construction Cost	$ 6,520,000.00
Construction Contingency	$ 1,956,000.00
Engineering, Fiscal, Legal	$ 1,300,000.00
Total Construction Cost	$ 9,800,000.00

2.3 Centralized Treatment Project Description

The Centralized Alternative that would create a sewer district and construct both a new sanitary sewer system and wastewater treatment plant is described in detail below and shown in Figure 2-2. The proposed sewer district would include all developed properties in the study area for a total of 474 low pressure connections conveying flow to the newly constructed treatment plant.

Proposed Preliminary Design

To implement the Centralized Alternative, the Town of Lewisboro proposes to establish a new sewer district named Lake Kitchawan Sewer District (District), which would encompass 921 acres of primarily R-2A, R-1/2A, and R-1A zoned parcels within the Town of Lewisboro and the Town of Pound Ridge. The District would be administered by the Town of Lewisboro. The District would be responsible for collecting funds from property owners and administering the centralized alternative project. If eligible, additional state funding and grants will be applied for to assist in funding this project. The project is expected to include the decommissioning and removal of all existing septic systems and the installation of low-pressure sewer services on each parcel to direct wastewater to the treatment plant. The Town will be responsible for maintenance of the sewer system and sewer services on individual properties. It is the responsibility of the District to enforce and cover the cost of all system maintenance.

Table 2-8 lists out the estimated wastewater flows for this District, with a total flow of 125,000 gallons per day.

Table 2-8: Lake Kitchawan Sewer District Wastewater Flows

	Developed Parcels	Average Day Wastewater Flow (gpd)
Lake Kitchawan Sewer District	474	125,000

Existing topography was evaluated to plan a sewage collection system. Due to the existing topography and soil composition of the district, this system is comprised of low-pressure sewer and on-lot grinder pump stations.

Low Pressure Sewer

Low pressure sewers are small diameter pipe buried at a depth shallower than typical gravity systems. They are commonly used to minimize construction costs in areas with adverse terrain or high groundwater tables, like areas that border lakes. In these locations, installation of pressure sewer avoids expensive construction costs from deep trenching, rock excavation, and groundwater dewatering. Low pressure sewers can also be installed using horizontal directional drilling (HDD) which can further limit the amount of excavation.

Low pressure sewer systems use a small pump station located at each residence to move wastewater into the collection system. For this alternative, the existing septic systems will be decommissioned, and a new grinder pump station will be installed on each property. Wastewater flows into the collection tank, which signals the control panel to turn on the grinder pump. The grinder pump macerates and pumps wastewater through the low-pressure network on private property to the low-pressure force main in the public right-of-way. This study assumes that the existing sewer pipe will be connected to a grinder pump installed at each parcel and connected to the low-pressure main. Installation of grinder pumps, piping, and electrical connections are included in this plan. The maintenance of the grinder pump will be the responsibility of the Town while the maintenance for the sewer lateral between the grinder pump and the building will be the responsibility of the homeowner. The power for the control panel will also be the responsibility of the homeowner. The electrical power loading required is expected to be minimal.

Packaged Wastewater Treatment Plant

A packaged wastewater treatment system would be constructed on vacant parcel of land adjacent to the private beach which extends up and behind Lake Kitchawan Drive, currently owned by the Town of Lewisboro. The Aero-Mod Sequox-Plus (or similar system) is an example of a treatment plant option that should be considered for this alternative. This system is an extended aeration activated sludge process in a two-stage aeration basin design. The reactor operates in a plug flow mode providing BOD reduction, nitrification, denitrification, and continuous clarification in a single reactor.

The influent flow enters a selector tank where raw sewage is combined with returned activate sludge (RAS) from the two clarifiers. The average RAS recycle rate is designed for 50%. This mixture flows into the first stage aeration basins for nitrification and denitrification. The flow continues into the second stage aeration tanks for nitrification and denitrification. The second stage aeration tank sequencing is opposite the first stage aeration basins to achieve excellent nitrification and denitrification without having blowers or internal recycle pumps and mixers in separate anoxic tanks. The aeration basins have a retention time of 25 hours and a mean cell residence time of 18 days. The plug flow repeats the cyclical on/off aeration several times before flow enters the clarifier where biomass is settled and returned to the selector tank. The clarifiers have a surface overflow rate of 326 gpd/sf and a solids loading rate of 24.5 lbs/day/sf. The effluent is withdrawn from the reactor and discharged. Solids can be automatically or manually wasted to an aerobic digestor. For this application, it is proposed that the AeroMod packaged treatment plant includes two aerobic digestor tanks which would waste an estimated 168 lbs/day of solids from a waste activated sludge (WAS) loading of 212 lbs/day. The digestors have been designed for a temperature of 10°C and a sludge age of 44 days.

The filtered effluent will be designed to have effluent concentrations as seen in Table 2-9.

Table 2-9: Centralized Treatment Effluent Concentrations

Parameter	Effluent Concentration (mg/L)
BOD_5	5.0
TSS	5.0
Ammonia-N	1.0
Total Nitrogen (as N)	8.0
Total Phosphorus (as P)	0.20

The packaged treatment plant will be 57 feet wide and 48 feet long, so a footprint of approximately 2,800 square feet will be required for this unit. This treatment system will also require a small building on site to house control equipment and emergency generator. It is proposed to have at least 6,000 square feet available to provide adequate room for the control building and generator as well.

Design Flow

For the Centralized Treatment alternative, the total flow was calculated for the 474 developed parcels within the study area surrounding the lake. Section 1.3 discusses how the design wastewater flow were calculated. The resulting total average day wastewater flow for the study area is 125,000 gallons per day for the developed parcels in the area. The proposed packaged WWTP would need to be designed to handle this capacity.

Impact on Existing Facilities

At this time, the impacts to the existing facilities are expected to be minor. This plan includes the removal and/or decommissioning of onsite septic systems. If each site has enough room to leave the existing system in place to be abandoned, the existing tanks will be left in place and decommissioned. This would include pumping, knock-in, puncturing, and backfill of the tank. Restoration of the area will include replacement of disturbed lawn surfaces with topsoil and seed.

The new on-lot grinder pump stations would require electrical power; however, the electrical load is minimal.

Low-pressure sewer main installation would occur in the right-of-way of Town owned roads. Roadways would be restored, and repaved once sewer main installation work is complete.

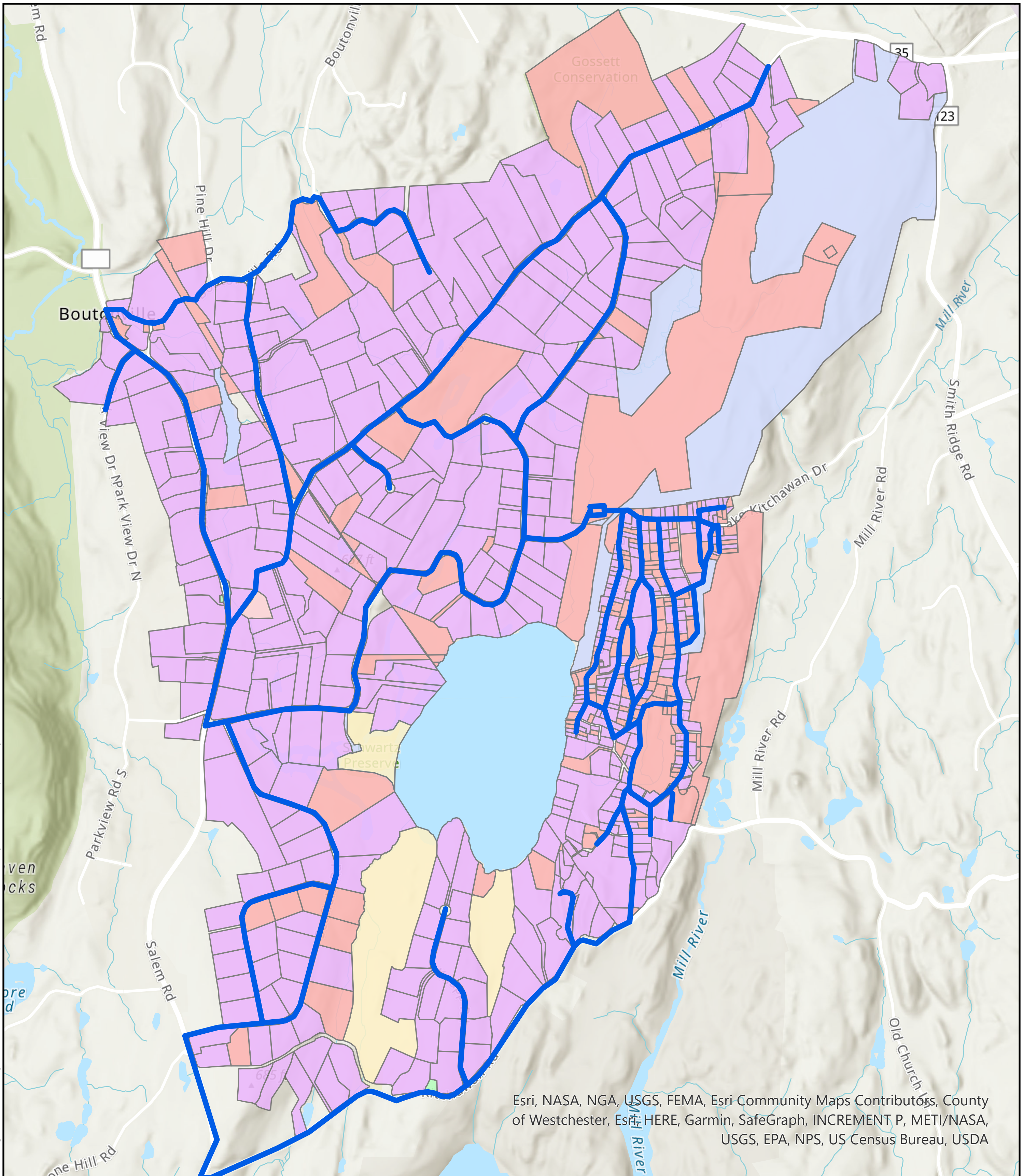
The identified parcel of vacant land where these treatment systems would be placed, include the following:

- Parcel ID 55.1-3-16 – Owned by the Town of Lewisboro

Parcel 55.1-3-16 is located at 1411 Route 35 and is classified as a recreational facility. The total acreage of the property is 133 acres; therefore, sizing is not a concern for using this land as a treatment location. The majority of this parcel is located within a state regulated wetland checkzone which may prevent a large portion of this parcel to not be used a treatment location. There are areas of the parcel that falls outside of the regulated wetland checkzone; therefore, the treatment unit may be able to be placed in that area. There are parts of this parcel that fall along slopes between 15 and 25 percent and parts that have slopes greater than 25 percent. If this land was chosen as a treatment location, the treatment unit should be placed in an area of little to no slope. The packaged treatment plant requires an area of approximately 6,000 square feet for the treatment unit, control building, and generator so an area of this size outside of the wetland checkzone and within a flat area will be determined. It should be noted that the cost associated with the transfer of land has not been accounted for in the cost estimate.

Location Map and Schematic Drawing

This Centralized Treatment alternative is shown in Figure 2-2.



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Figure 2-2: Centralized Treatment Alternative

Legend

Land Classification

- Residential
- Vacant
- Cemetery
- Recreational
- School
- Wild lands

Low-Pressure Force Main

0 500 1,000 2,000 US Feet

N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: June 2021

Figure Exported: 6/21/2021 By: enealon Using: \\wc\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Kitchawan Land Classification.aprx

Land Requirements

The Town would not be required to acquire additional property for this alternative since the proposed treatment location is owned by the Town of Lewisboro; however, private property easements would need to be executed with the Town for this alternative. This option would require easements for the installation work of the on-lot grinder pump stations to be completed by the publicly bid and awarded Contractor. Easements would also be required for the Town to access the on-lot grinder pump station since the Town will be responsible for ongoing maintenance of equipment. The enforcement of system maintenance and all associated costs will be the responsibility of the Town.

Discharge Permit Requirements

This alternative would require a new discharge permit in accordance with the current NYSDEC State Pollutant Discharge Elimination System (SPDES) permit, including a variance from the NYCDEP Rules and Regulations for this newly constructed facility.

Water and Efficiency Measures

The newly constructed wastewater treatment plant would be designed and constructed to operate efficiently. Pumps within the plant would be operated on variable-frequency drives (VFDs) to reduce peak electrical power required.

Storm and Flood Resiliency

Water-tight low-pressure sewer is planned for the entire project, including the low-lying areas surrounding the lakes that could be affected by large storms and floods.

Cost Estimate

The cost for this Centralized Treatment Alternative was estimated based on capital costs. Capital costs include private property easements, grinder pump station, property connection fee, sewer laterals, low-pressure sewer mains, construction of a packaged wastewater treatment plant and an allowance for engineering, fiscal and legal services. It should be noted that transfer of land proposed as the treatment location has not been accounted for in this cost estimate.

Unit Cost Development

Capital costs are from various sources, including previous similar projects. Costs from previous projects have been adjusted by an estimated inflation rate of 3% per year, to the year 2022.

This plan includes the cost of decommissioning/abandoning each septic system, removal of the septic system, and installation of new on-lot grinder pump stations, low pressure sewer service laterals, low pressure sewer main, and cost of construction of a packaged wastewater treatment plant.

Table 2-10: Centralized Treatment Unit Construction Cost

ITEM NO.	ITEM	UNITS	ESTIMATED UNIT PRICE	BID QUANTITY	ESTIMATED COST
1	Mobilization/Demobilization	ls	$ 1,300,000	1	$ 1,300,000
2	2-inch HDPE Low Pressure FM	lf	$ 150	77,302	$ 11,600,000
3	1-1/4-inch HDPE Low Pressure Lateral	ea	$ 2,500	474	$ 1,200,000
4	Force Main Air Release Manhole Complete	ea	$ 15,000	77	$ 1,200,000
5	Force Main Cleanout Vault Complete	ea	$ 10,000	77	$ 800,000
6	Grinder Pump Station	ea	$ 20,000	474	$ 9,500,000
7	Trench Repair and Temporary Pavement	sy	$ 20	48,212	$ 1,000,000
8	Permanent Pavement Top Course	sy	$ 20	48,212	$ 1,000,000
9	Permanent Pavement Binder	sy	$ 30	48,212	$ 1,400,000
10	Packaged Treatment Plant	ea	$ 5,000,000	1	$ 5,000,000
11	Temporary Management of Impacted Existing Septic Systems	ls	$ 30,000		$ 30,000
				Total	**$ 34,000,000**

To account for engineering, legal, and fiscal services needed for the project, as well as project uncertainty, multipliers are applied to the raw construction cost subtotal. To account of engineering, fiscal, and legal fees, a 15% multiplier is added to the subtotal of the raw construction costs. As this is a preliminary planning document, a 30% construction contingency is added to the subtotal of the raw construction costs to account for the degree of uncertainty at this level of project development. Table 2-11 summarizes the estimated total construction cost:

Table 2-11: Centralized Treatment Total Construction Cost

Construction Cost	$34,000,000
Construction Contingency	$10,200,000
Engineering, Fiscal, Legal	$6,600,000
Total Construction Cost	$50,800,000

Table 2-12 shows the anticipated annual operation and maintenance costs associated with the Centralized Treatment alternative collection system to be paid by the Town. Table 2-13 shows the annual operation and maintenance costs associated with the Centralized Treatment Alternative WWTP.

Table 2-12: Centralized Treatment Annual Collection System O&M Cost

Centralized Treatment - Collection System Annual Operation and Maintenance Cost					
Description	**Quantity**		**Unit Cost**		**Cost ($/yr)**
Sewer Maintenance	14.6	miles	$ 1,000	mile	$ 14,000
Power Costs	58000	kw-hr/yr	$ 0.12	kw-hr	$ 6,000
Labor	1050	man-hr/yr	$ 60	hr	$ 53,000
Spare Parts, Consumables, Tools, etc.	1	LS	LS		$ 10,000
		Total Estimated Annual O&M Cost			**$ 83,000**
		Escalation to 2023 based on 3% / year			**$ 88,000**

Table 2-13: Centralized Treatment Annual WWTP O&M Cost

Centralized Treatment - WWTP Annual Operation and Maintenance Cost	
Description	**Cost ($/yr)**
Personnel	$ 132,000
Repair & Maintenance	$ 79,000
Chemicals	$ 20,000
Lab/Safety	$ 7,000
Sludge Hauling	$ 30,000
Utilities	$ 8,000
Administrative	$ 10,000
Maintenance Budget	$ 20,000
Capital Expenditures	$ 32,000
Electrical	$ 24,000
Total Estimated Annual O&M Cost	**$ 362,000**
Escalation to 2023 based on 3% / year	**$ 384,000**

Maintenance of sewer infrastructure on private property will be the responsibility of the property owner. Property owners will be responsible for the cleaning, operation, and maintenance of the low-pressure lateral between the building and the grinder pumps, as well as the electricity for operation of the pumps.

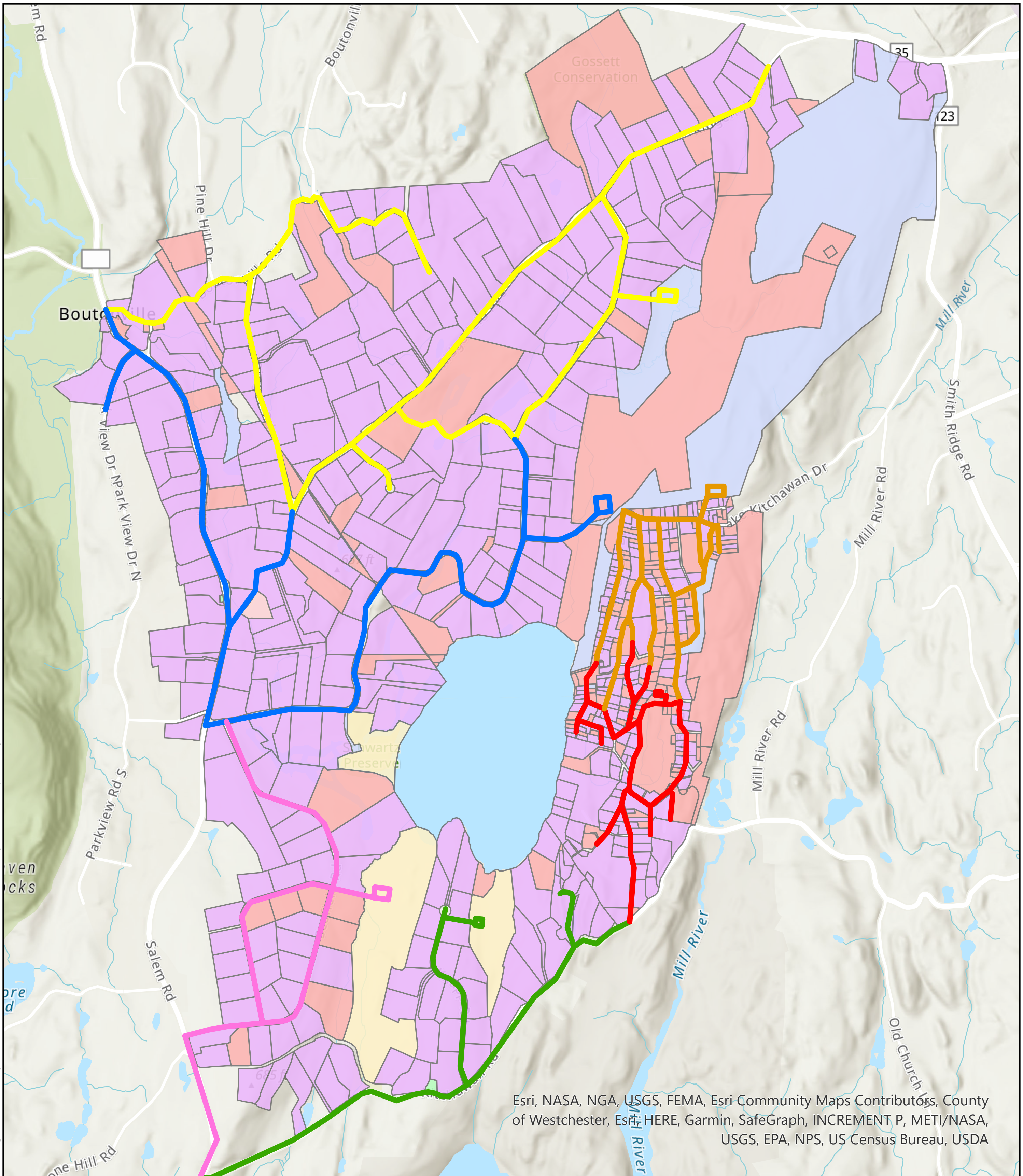
Non-Monetary Factors

Construction of a municipal sewer provides non-monetary benefits by improving the quality of life for residents through an improving the water quality of the drinking water supply, and surface water bodies including lakes and streams.

Municipal sewer services will benefit water quality in local lakes. A municipal sewer also removes the burden of maintaining onsite septic systems from individual property owners

2.4 Decentralized Treatment Project Description

The decentralized treatment option would treat smaller flows at a localized level. To treat the entire study area made up of the initial 474 developed parcels, the study area would be broken up into six smaller clusters, and each cluster would be treated using a local advanced treatment system designed for a small flow. Please refer to Figure 2-3 for this decentralized treatment option for the entire study area, depicting six cluster areas of treatment. This alternative is effective to treat the entire study area, although it may not be necessary to treat these many parcels. The Lake Kitchawan area would be able to support a system such as this, due to the various vacant properties located throughout the community, that could be potential treatment sites. This would require the formation of a sewer district including the 474 developed parcels within the entire study area.



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Figure 2-3: Decentralized Treatment (Whole Study Area)

Legend

Land Classification	Cluster
Residential	A
Vacant	B
Cemetery	C
Recreational	D
School	E
Wild lands	F

0 500 1,000 2,000 US Feet

N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: June 2021

Figure Exported: 6/21/2021 By: enealon Using: \\wc\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Kitchawan Land Classification.aprx

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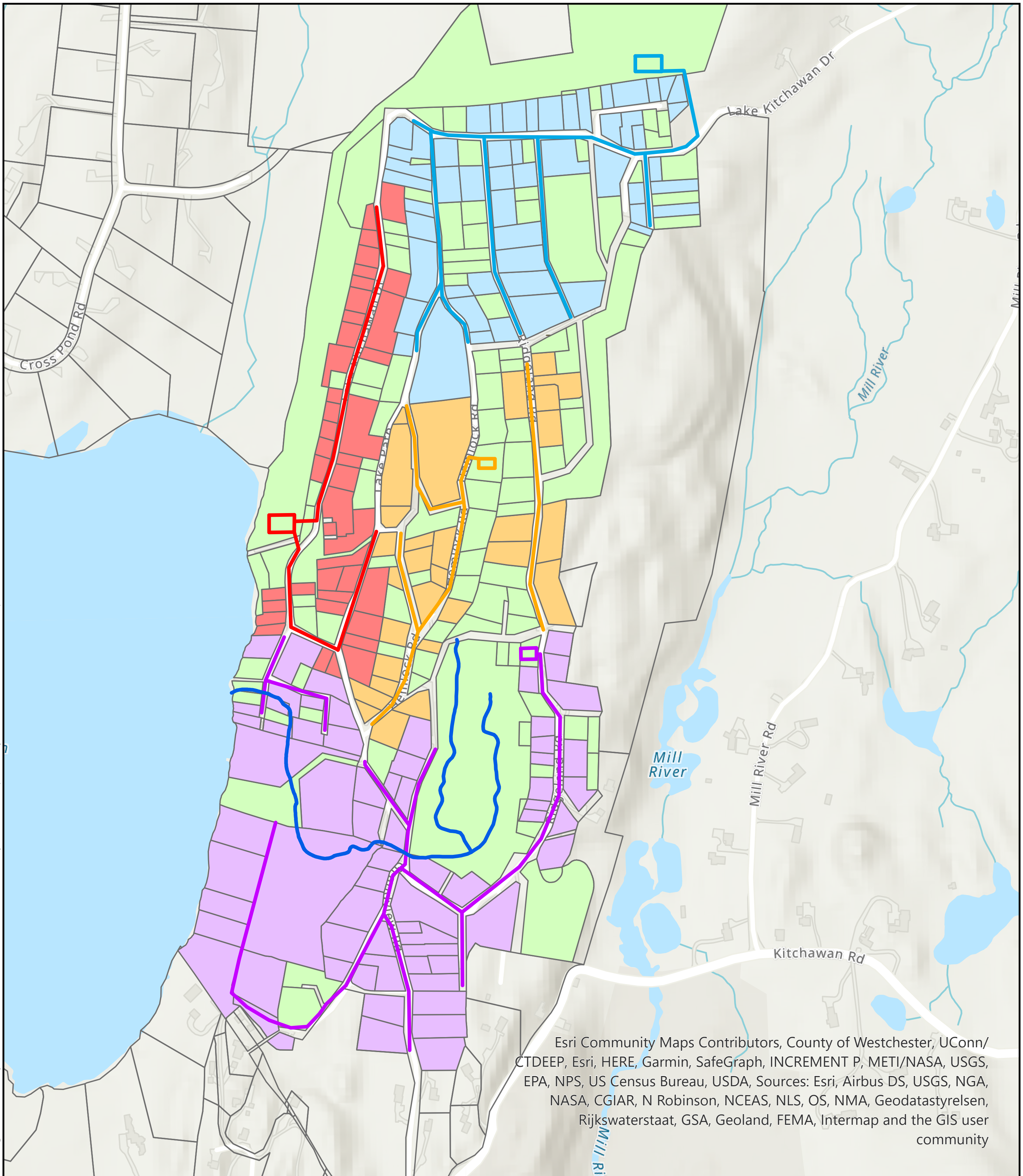
To reduce cost, it may be sufficient to focus on critical areas that are causing the highest amount of wastewater contributions to the lake. If the smaller decentralized treatment alternative was chosen, the water quality of Lake Kitchawan may improve without having to treat flow from the entire 474 developed parcels within the study area. The lake may still see benefits with the treatment of only properties within what has been identified as the critical area. For this reason, it may also be an option to create three clusters within areas identified in the wastewater study as having the highest importance. For Lake Kitchawan, the areas of highest importance were determined based on evaluation of parcel size and slope and current sampling data. Most properties to the east of Lake Kitchawan are less than 0.5 acres and fall on land which has slopes greater than 15%. Sampling data that was measured as part of this study indicated high levels of E. coli and fecal coliform at the outfall leading into the lake from the stream perpendicular to Shore Trail. This stream is depicted in Figure 2-4, which also shows the four critical clusters. The properties in close proximity to that stream are of high priority for a treatment method since these properties are likely contributing to the poor water quality of the lake. A focus area was created and includes a total of 187 properties. This area includes small parcels located on steep slopes surrounding the lake. This focus area has been split into four clusters which will be treated at four separate local treatment sites.

Table 2-14: Decentralized Cluster Descriptions

Cluster #	Cluster Location	Length of Force Main (LF)	Number of Parcels
1	Properties along the stream connected to the outfall on Shore Trail	6,000	66
2	Properties upstream of the beach on Lake Kitchawan Drive	2,610	40
3	Properties on Hemlock Road, Ridgeland Road, and Lake Path	3,430	29
4	Properties on the northern side of Lake Kitchawan Drive, Hemlock Road, and Ridgeland Ave	4,800	52

Please refer to Figure 2-4 for this decentralized treatment option for the most critical areas, depicting four cluster areas in highest need of treatment.



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Figure 2-4: Decentralized Treatment (Critical Area)

Legend

Cluster
- 1
- 2
- 3
- 4
- Undeveloped
- Not included in clusters

Streams

0 200 400 800 US Feet

N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: June 2021

Figure Exported: 6/30/2021 By: enealon Using: \\we\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lake Kitchawan Alternatives.aprx

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Proposed Preliminary Design

To implement either of the proposed Decentralized Options, the Town of Lewisboro would establish Lake Kitchawan Sewer District (District) for localized treatment. The District would be administered by the Town of Lewisboro. The Town would be responsible for collecting funds from property owners and administering the decentralized alternative project. If eligible, additional state funding and grants will be applied for to assist in funding this project. The project is expected to include the decommissioning and removal of all existing septic systems and the installation of low-pressure sewer services on each parcel to direct wastewater to the respective treatment location. The Town will be responsible for maintenance of the sewer system and sewer services on individual properties up to and including the grinder pump. It is the responsibility of the Town of enforce and cover the cost of all system maintenance.

To include the entire project area in the decentralized treatment alternative, this would encompass approximately 921 acres of primarily residential zoned properties if the entire study area was treated in this decentralized treatment alternative. The 474 parcels included in this option would result in a total estimated wastewater flow of 125,000 gallons per day.

If only the four critical clusters were chosen, the proposed Lake Kitchawan Sewer District would include approximately 66 acres of developed parcels within the Town of Lewisboro. The 187 parcels included in this option would result in an estimated total wastewater flow of 35,000 gallons per day.

The properties within the identified cluster areas would be required to decommission and/or abandon their existing septic system. These properties would be provided with a grinder pump station, where their sanitary wastewater flow, would be pumped via low-pressure sewer, to a nearby treatment system.

Existing topography was evaluated to plan a sewage collection system for these clustered areas. Due to the existing topography and soil composition of the district, this system is comprised of low-pressure sewer and on-lot grinder pump stations.

Low Pressure Sewer

Low pressure sewers are small diameter pipe buried at a depth shallower than typical gravity systems. They are commonly used to minimize construction costs in areas with adverse terrain or high groundwater tables, like areas that border lakes. In these locations, installation of pressure sewer avoids expensive construction costs from deep trenching, rock excavation, and groundwater dewatering. Low pressure sewers can also be installed using horizontal directional drilling (HDD) which can further limit the amount of excavation.

Low pressure sewer systems use a small pump station located at each residence to move wastewater into the collection system. Wastewater flows into the collection tank, which signals the control panel to turn on the grinder pump. The grinder pump macerates and pumps wastewater through the low-pressure network on private property to the low-pressure force main in the public right-of-way. This study assumes that the existing sewer pipe will be connected to a grinder pump installed at each parcel and connected to the low-pressure main. Installation of grinder pumps, piping, and electrical connections are included in this plan. The maintenance of the grinder pump will be the responsibility of the Town while the power for the control panel will be the responsibility of the homeowner. The electrical power loading required is expected to be minimal.

Localized Wastewater Treatment Systems

The localized treatment systems would be placed at vacant lots within the proposed sewer district. The proposed treatment system to be used for the localized advanced treatment is the Fuji Clean USA Model CE6KG, which is a larger version of the Fuji Clean USA Model CE5 described previously. This system would be constructed of fiber reinforced plastic and would be a self-contained, below grade structure. The proposed advanced treatment unit to be installed at each of the four localized treatment locations is the Fuji Clean USA Model CE6KG. This model can handle a load of 6,000 gallons per day and has built-in flow equalization. The unit incorporates the septic tank, so no separate septic tank or pre-treatment is required. This advanced treatment system has the smallest footprint and lowest power use versus similar localized treatment systems.

The Fuji Clean Model CE6GK is made up five treatment chambers. The wastewater influent initially enters a sedimentation chamber where solids will settle and grease floats to the top. The wastewater then enters an anaerobic chamber where nitrates are denitrified, and organic matter is decomposed by micro-organisms. This chamber also includes additional settling and filtration to further separate suspended solids. The third chamber is the aerobic contact filtration chamber which is where two types of plastic media work together in an oxygenated environment to remove ammonia nitrogen, organics, and suspended solids. The wastewater then enters a storage chamber which acts as a settling zone before entering the disinfection chamber. The disinfection chamber is the final zone before discharge which has the option for chlorination tablet disinfection before it leaves the treatment unit.

Each localized treatment system will also include two air lift pumps. The recirculating air lift pump sends process water and solids back to the sedimentation chamber. The effluent air lift pump is designed to help equalize flow and discharge treated effluent. The Fuji Clean Model CE6KG is powered by four Fuji Clean Co blowers to add oxygen to the aerobic contact filtration chamber. To obtain proper aeration, four FujiMACRII Model 200RII blowers will need to be installed for each advanced treatment system. These blowers provide approximately 28.0 cubic feet per minute and have a power usage of about 14.8 kWh per day.

The effluent discharged from the Fuji Clean Model CE6KG will have BOD and TSS concentrations ranging from 10 to 20 mg/L. Based on field testing, the total nitrogen concentration of the effluent will also be less than 20 mg/L.

Design Flow

For the Decentralized Treatment alternative encompassing the entire study area, the total flow was calculated for the 474 developed parcels within the study area surrounding the lake since all properties would be included in one of six clusters. Section 1.3 discusses how the design wastewater flow were calculated. The resulting total flow for the study area is 125,000 gallons per day. To treat this flow using the decentralized alternative with the Fuji Clean Model CE6KG, 21 advanced treatment units will be needed since each unit is capable of treating 6,000 gallons per day.

For the four critical clusters, the design flow was estimated based on the number of parcels that would be included in that specific cluster. For these flow calculations it was assumed that all of the serviced parcels were single family residences, so they were given a design flow of 200 gallons per day per residence in accordance with the flows methodology described earlier in this report. Table 2-15 shows the estimated wastewater flow for each of the four clusters.

Table 2-15: Estimated Wastewater Flows

Cluster	Number of Parcels	Wastewater Flow (gpd)
1	66	13,250
2	40	7,600
3	29	5,200
4	52	8,600

As seen in Table 2-15, some clusters have an estimated wastewater flow larger than can be treated by the Fuji Clean CE6KG, which has a capacity of 6,000 gallons per day. For clusters where this is the case, an additional Fuji Clean unit will be installed, and flow will be split evenly between the two units.

Impact on Existing Facilities

At this time, the impacts to the existing facilities are expected to be minor. This plan includes the removal and/or decommissioning of onsite septic systems. If each site has enough room to leave the existing system in place to be abandoned, the existing tanks will be left in place and decommissioned. This would include pumping, knock-in, puncturing, and backfill of the tank. Each system will need to be connected to the force main which conveys flow from each residential property. Restoration of the area will include replacement of disturbed lawn surfaces with topsoil and seed.

The on-lot grinder pump stations would require electrical power; however, the electrical load is anticipated to be minimal.

Low-pressure sewer main installation would occur in the right-of-way of Town owned roads. Roadways would be restored, and repaved once sewer main installation work is complete.

The Fuji Clean CE6KG would be installed on parcels of vacant land for localized treatment. This advanced treatment unit has a height of 7.3 feet, length of 36.2 feet, and width of 9.6 feet. The Fuji Clean treatment units can provide treatment of wastewater under a small footprint; therefore, space is not anticipated to be a concern when deciding treatment location for equipment placement. Disposal will be a challenge as per Westchester County septic guidelines, a disposal area can be calculated based on percolation rate. Table 3 in the *Westchester County Rules and Regulations for the Design and Construction of Residential Subsurface Sewage Treatment Systems and Drilled Wells* (dated January 2002), requires 375 feet of trench for 1,000 gpd, at a mid-range percolation rate of 11-15 min/inch for a typical 3-bedroom residence. The total footprint requirement for one FujiClean CE6KG unit would include 350 square feet for the unit, plus an additional 750 square feet for an adsorption trench 375 feet long and 2 feet wide. There may be additional spacing requirements so FujiClean CE6KG locations should have a usable space of at least 1,500 square feet.

The identified parcels of vacant land where these treatment systems would be placed for the localized treatment alternative consisting of the entire project area, include the following:

- Parcel ID 65.8-3-15 – Owned by the Town of Lewisboro
- Parcel ID 55.1-3-16 – Owned by the Town of Lewisboro
- Parcel ID 54.4-3-4 – Owned by the Town of Lewisboro
- Parcel ID 10263-11.22 – Owned by the Pound Ridge Land Conservancy
- Parcel ID 54.4-3-5 – Owned by the Town of Lewisboro
- Parcel ID 10263-11.21 – Owned by the Pound Ridge Land Conservancy

Parcel 65.8-3-15 is located on Woodland Trail and is classified as residential vacant land. The total acreage of the property is 0.47 acres; therefore, the parcel size could be a potential barrier to using this property as a treatment location. This parcel does not fall within an area of regulated freshwater wetlands which makes it feasible for use as a treatment location. However, this parcel has a slope between 15 and 25 percent which may impact construction of this system. It should be noted that costs associated with transfer of this land to be used as a treatment location has not been included in the cost estimate.

Parcel 55.1-3-16 is located at 1411 Route 35 and is classified as a recreational facility. The total acreage of the property is 133 acres; therefore, sizing is not a concern for utilizing this land as a treatment location. The majority of this parcel is located within a state regulated wetland checkzone, however there are portions of the parcel that falls outside of the regulated wetland checkzone resulting in the placement of the treatment unit in this area. There are parts of this parcel that fall along slopes between 15 and 25 percent and parts that have slopes greater than 25 percent. If this land was chosen as a treatment location, the treatment unit should be placed in an area of little to no slope. It should be noted that costs associated with transfer of this land to be used as a treatment location has not been included in the cost estimate.

Parcel 54.4-3-4 is located on Cross Pond Road and is classified as a recreational facility. The total acreage of the property is 14.75 acres; therefore, sizing is not a concern for using this land as a treatment location. This parcel is located within a state regulated freshwater wetland which may prevent the use of this parcel as a treatment location. This parcel does not have a steep slope which may make it more feasible for use as a treatment location. It should be noted that costs associated with transfer of this land to be used as a treatment location has not been included in the cost estimate.

Parcel 10263-11.22 is located on Kitchawan Road and is classified as wild lands. The total acreage of the property is 11.65 acres; therefore, sizing is not a concern for using this land as a treatment location. This parcel is located within a state regulated freshwater wetland which may prevent the use of this parcel as a treatment location. This parcel does not have a steep slope which may make it more feasible for use as a treatment location. It should be noted that costs associated with purchasing this land from the Pound Ridge Land Conservancy have not been included in the cost estimate.

Parcel 54.4-3-5 is located north of Lake Kitchawan Drive and is classified as vacant land. This property has a total acreage of 84.6 acres; therefore, sizing is not a concern for using this land as a treatment location. Portions of this parcel are located within a state regulated wetland checkzone which may prevent the use of this parcel as a treatment location. However, there are parts of this parcel not located within the regulated checkzone, so those areas may be feasible as a treatment location. There are parts of this parcel that fall along slopes between 15 and 25 percent and parts that have slopes greater than 25 percent. If this land was chosen as a treatment location, the treatment unit should be placed in an area of little to no slope. It should be noted that costs associated with transfer of this land to be used as a treatment location has not been included in the cost estimate.

Parcel 10263-11.21 is located on Kitchawan Road and is classified as wild lands. This property has a total acreage of 37.14 acres; therefore, sizing is not a concern for using this land as a treatment location. This parcel is located within a state regulated freshwater wetland which may prevent the use of this parcel as a treatment location. This parcel does not have a steep slope which may make it more feasible for use as a treatment location. It should be noted that costs associated with purchasing this land from the Pound Ridge Land Conservancy have not been included in the cost estimate.

For the second option of focusing on the more critical area, the identified parcels of vacant land where these treatment systems would be placed, include the following:

- Parcel ID 65.8-4-4 – Owned by the Town of Lewisboro
- Parcel ID 55.1-3-16 – Owned by the Town of Lewisboro
    - Note that this parcel is the proposed treatment location for two clusters since it has a large area.
- Parcel ID 54.20-10-15 – Owned by the Town of Lewisboro

Parcel 65.8-4-4 is located on Ridgeland Trail and is classified as residential vacant land. This property has a total acreage of 0.21 acres; therefore, it is possible that sizing could be a concern for using this land as a treatment location. This property is adjacent to another vacant lot owned by the Town of Lewisboro, so it may be possible that the parcels could be used together as a treatment location. This parcel does not fall within an area of regulated freshwater wetlands which makes it feasible for use as a treatment location. It should be noted that costs associated with transfer of this land to be used as a treatment location has not been included in the cost estimate.

Parcel 55.1-3-16 is located at 1411 Route 35 and is classified as a recreational facility. The total acreage of the property is 133 acres; therefore, sizing is not a concern for using this land as a treatment location. It should be noted that since this has such a large area, this is the proposed treatment location for two separate clusters. The majority of this parcel is located within a state regulated wetland checkzone, however there are portions of the parcel that falls outside of the regulated wetland checkzone. These portions would be feasible locations for treatment units. There are parts of this parcel that fall along slopes between 15 and 25 percent and parts that have slopes greater than 25 percent. If this land was chosen as a treatment location, the treatment unit should be placed in an area of little to no slope. It should be noted that costs associated with transfer of this land to be used as a treatment location has not been included in the cost estimate.

Parcel 54.20-10-15 is located on Hemlock Road and is classified as residential vacant land. This property has a total acreage of 0.48 acres; therefore, sizing could be a concern for using this land as a treatment location. However, this property is adjacent to another vacant lot owned by the Town of Lewisboro, so it is possible that the parcels could be used together as a treatment location. This parcel does not fall within an area of regulated freshwater wetlands which makes it feasible for use as a treatment location. Construction of a treatment system may be difficult on this parcel due the existing slope of the property being between 15 and 25 percent. It should be noted that costs associated with transfer of this land to be used as a treatment location has not been included in the cost estimate.

Location Map and Schematic Drawing

The two decentralized treatment alternatives discussed in this section are shown in Figure 2-3 and Figure 2-4.

Land Requirements

For the decentralized alternative including parcels in the entire study area The Town would need to coordinate with the Pound Ridge Land Conservancy to determine feasibility of using two parcels of land which they own. The remaining four treatment locations are proposed to be location on land owned by the Town of Lewisboro, so purchase of land is not required. Additionally, private property easements would need to be executed with the Town, for this Decentralized Treatment alternative. This option would require easements for the work on each private property to be complete by the publicly bid and awarded Town Contractor. Easements would also be required for the Town to access the on-lot grinder pump station since the Town will be responsible for ongoing maintenance of equipment. The enforcement of system maintenance and all associated costs will be the responsibility of the Town.

For the decentralized alternative including parcels only in the critical area, the Town would not need to coordinate with any outside agencies since all four treatment locations are proposed to be placed on property owned by the Town of Lewisboro. Additionally, private property easements would need to be executed with the Town, for this Decentralized Treatment alternative. This option would require easements for the work to be complete by the publicly bid and awarded Town Contractor. Easements would also be required for the Town to access the on-lot grinder pump station since the Town will be responsible for ongoing maintenance of equipment. The enforcement of system maintenance and all associated costs will be the responsibility of the Town.

Discharge Permit Requirements

The Fuji Clean Model CE6KG acts as a large septic system, so there will be no discharge permit required. Effluent from the advanced treatment unit will enter a newly installed septic leach field.

Water and Efficiency Measures

The Fuji Clean Model CE6KG has a smaller size than comparable localized advanced treatment systems and has been engineered to provide optimal and reliable treatment at a competitive cost and small footprint. The system has low power requirements of 14.8 kWh per day which makes these units highly efficient.

Storm and Flood Resiliency

This alternative will replace existing below ground treatment systems. Storm and flood resiliency is not required as part of this alternative.

Cost Estimate

The cost for this Decentralized Treatment Alternative was estimated based on capital costs. Capital costs include private property easements, grinder pump station, property connection fee, sewer laterals, low-pressure sewer mains, construction of Fuji Clean Model CE6KG wastewater treatment systems, and an allowance for engineering, fiscal and legal services. It should be noted that costs have not been included for transfer of land from the Town of Lewisboro or purchasing land from the Pound Ridge Land Conservancy.

Unit Cost Development

Capital costs are from various sources, including previous similar projects. Costs from previous projects have been adjusted by an estimated inflation rate of 3% per year, to the year 2022.

This plan includes the cost of decommissioning/abandoning each septic system, removal of the septic system, and installation of these various advanced wastewater treatment system. It also includes connection costs from the building to this new system.

Table 2-16: Decentralized Treatment Unit Construction Cost – Entire Area

ITEM NO.	ITEM	UNITS	ESTIMATED UNIT PRICE	BID QUANTITY	ESTIMATED COST
1	Mobilization/Demobilization	ls	$ 1,060,000.00	1	$ 1,100,000
2	2-inch HDPE Low Pressure FM	lf	$ 150.00	81,316	$ 12,200,000
3	1-1/4-inch HDPE Low Pressure Lateral	ea	$ 2,500.00	474	$ 1,200,000
4	Grinder Pump Station	ea	$ 20,000.00	474	$ 9,500,000
5	Trench Repair and Temporary Pavement	sy	$ 20.00	50,442	$ 1,000,000
6	Permanent Pavement Top Course	sy	$ 20.00	50,442	$ 1,000,000
7	Permanent Pavement Binder	sy	$ 30.00	50,442	$ 1,500,000
8	Packaged Treatment Plant	ea	$ 30,000.00	6	$ 200,000
9	Miscellaneous Additional Work	ls	$ 200,000.00	1	$ 200,000
				Total	**$ 27,900,000**

To account for engineering, legal, and fiscal services needed for the project, as well as project uncertainty, multipliers are applied to the raw construction cost subtotal. To account of engineering, fiscal, and legal fees, a 15% multiplier is added to the subtotal of the raw construction costs. As this is a preliminary planning document, a 30% construction contingency is added to the subtotal of the raw construction costs to account for the degree of uncertainty at this level of project development. Table 2-17 summarizes the multiplier values.

Table 2-17: Decentralized Treatment Total Construction Cost – Entire Project Area

Construction Cost	$27,900,000
Construction Contingency	$8,370,000
Engineering, Fiscal, Legal	$5,440,000
Total Construction Cost	$41,710,000

Table 2-18 shows the anticipated annual operation and maintenance costs to be paid by the Town associated with the Decentralized Treatment alternative including the entire project area.

Table 2-18: Decentralized Treatment Annual O&M Cost – Entire Project Area

Decentralized Treatment (Entire Area) - Collection System Annual Operation and Maintenance Cost					
Description	**Quantity**		**Unit Cost**		**Cost ($/yr)**
Sewer Maintenance	15.4	miles	$ 1,000	mile	$ 14,000
Power Costs	32400	kw-hr/yr	$ 0.12	kw-hr	$ 1,000
Labor	52	man-hr/yr	$ 60	hr	$ 3,000
Spare Parts, Consumables, Tools, etc.	1	LS	LS		$ 10,000
		Total Estimated Annual O&M Cost			**$ 28,000**
		Escalation to 2023 based on 3% / year			**$ 30,000**

However, the water quality in Lake Kitchawan may improve by only utilizing decentralized treatment within the critical areas. This would include less properties, therefore reducing the construction costs. The decentralized treatment cost for the critical area is shown in Table 2-19.

Table 2-19: Decentralized Treatment Unit Construction Cost – Critical Areas

ITEM NO.	ITEM	UNITS	ESTIMATED UNIT PRICE	BID QUANTITY	ESTIMATED COST
1	Mobilization/Demobilization	ls	$ 300,000	1	$ 300,000
2	2-inch HDPE Low Pressure FM	lf	$ 150	16,845	$ 2,500,000
3	1-1/4-inch HDPE Low Pressure Lateral	ea	$ 2,500	187	$ 500,000
4	Grinder Pump Station	ea	$ 20,000	187	$ 3,700,000
5	Trench Repair and Temporary Pavement	sy	$ 20	11,436	$ 200,000
6	Permanent Pavement Top Course	sy	$ 20	11,436	$ 200,000
7	Permanent Pavement Binder	sy	$ 30	11,436	$ 300,000
8	Packaged Treatment Plant	ea	$ 30,000	4	$ 100,000
9	Temporary Management of Impacted Existing Septic Systems	ls	$ 30,000	1	$ 30,000
				Total	**$ 7,830,000**

To account for engineering, legal, and fiscal services needed for the project, as well as project uncertainty, multipliers are applied to the raw construction cost subtotal. To account of engineering, fiscal, and legal fees, a 15% multiplier is added to the subtotal of the raw construction costs. As this is a preliminary planning document, a 30% construction contingency is added to the subtotal of the raw construction costs to account for the degree of uncertainty at this level of project development. Table 2-20 summarizes the estimated total construction cost.

Table 2-20: Decentralized Treatment Total Construction Cost – Critical Areas

Construction Cost	$7,830,000
Construction Contingency	$2,300,000
Engineering, Fiscal, Legal	$1,500,000
Total Capital Cost	$11,630,000

Table 2-21 shows the anticipated annual operation and maintenance costs to be paid by the Town associated with the Decentralized Treatment alternative including only the critical area.

Table 2-21: Decentralized Treatment Annual O&M Cost – Critical Areas

Decentralized Treatment (Critical Area) - Collection System Annual Operation and Maintenance Cost					
Description	**Quantity**		**Unit Cost**		**Cost ($/yr)**
Sewer Maintenance	3.2	miles	$ 1,000	mile	$ 3,000
Power Costs	21600	kw-hr/yr	$ 0.12	kw-hr	$ 2,000
Labor	52	man-hr/yr	$ 60	hr	$ 3,000
Spare Parts, Consumables, Tools, etc.	1	LS	LS		$ 10,000
		Total Estimated Annual O&M Cost			**$ 18,000**
		Escalation to 2023 based on 3% / year			**$ 19,000**

3. SUMMARY AND COMARISON OF ALTERNATIVES

If the Town of Lewisboro takes no action, the continued use of high-density septic systems will further degrade the quality of water in Lake Kitchawan. The lake will remain impaired thus limiting its beneficial use as a Class B waterbody. Water quality impacts to the Croton Reservoir would impact over 9 million NYCDEP consumers.

The below table provides a summary of estimated capital cost for each alternative discussed in this evaluation.

Table 3-1: Comparison of Alternatives

Alternative	Estimated Capital Construction Cost	Consequences
No Action	$0	Very high density of septic systems would continue to impair water quality in lakes, reservoirs, and groundwater with impacts to recreation and drinking water supplies.
Repair and Replacement	$3,900,000	The current density of septic systems would remain, but advanced treatment systems would reduce nutrient and bacterial loading to the soil and therefore reduce loading to the lake.
Centralized Treatment	$50,800,000	Wastewater would be treated and discharged, thus reducing nitrate, phosphorus, and bacterial loading to surface water and groundwater.
Decentralized Treatment with Entire Project Area	$41,400,000	Wastewater would be treated locally using an advanced treatment system thus reducing nutrient and bacterial loading to surface water and groundwater.
Decentralized Treatment with only Critical Area	$11,600,000	Wastewater would be treated locally using an advanced treatment system thus reducing nutrient and bacterial loading to surface water and groundwater.

4. RECOMMENDED ALTERNATIVE

Based on the analysis, Repair and Replacement is the recommended alternative as it addresses the degradation of local surface water quality in a cost-effective manner by leveraging existing infrastructure.

Failures of privately-owned aging septic systems, seepage pits, and cesspools are contributing to the degradation of local surface water quality. Degraded water quality is apparent in the lakes by frequent algae blooms accompanied by high coliform bacteria and high nutrient loading in the lakes from an estimated 474 onsite wastewater treatment systems. The Repair and Replacement alternative proposes to form the Lake Kitchawan Septic District to include 187 parcels surrounding the lake identified as having the most significant impact to the water quality. Treatment of the most critical 187 parcels allows for an improvement in water quality at a reduced cost since it is not thought to be necessary to treat the entire study area to see a difference in lake water quality.

Water quality impairments stem from the inflow of stormwater and failing onsite wastewater treatment systems. The lake is also classified as eutrophic based on current sampling results for Lake Kitchawan.

Degraded surface water quality in local lake has regional impacts. The lake is within the Croton Watershed of the NYCEP Reservoir System, which provides daily water needs to over 9 million customers throughout New York State.

The Repair and Replacement alternative will reduce nutrients and coliforms in the lake at a lower cost than the remaining proposed alternatives. The capital cost associated with this project is provided in Table 2-3. The construction schedule is presented in Table 4-1.

Table 4-1: Anticipated Construction Schedule

Event	Anticipated Timeframe
Design	June 2022 – December 2022
Bidding	December 2022 – January 2023
Award Contract	February 2023
Construction	March 2023 – December 2023

Once the Septic District is formed, detailed design would be completed. Concurrent with design would be permitting as required through Westchester County Department of Health, NYSDEC, and NYSDEP. This will include assessment of the properties included in this alternative to determine if advanced treatment systems can be installed with current code requirements. Bidding and construction would follow completion of the design phase.

5. MAPS AND FIGURES

Figure 1-1: Lake Kitchawan FEMA Special Flood Hazards

National Flood Hazard Layer FIRMette

FEMA

73°33'W 41°14'56"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

73°32'23"W 41°14'29"N

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- B 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/12/2021 at 3:45 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Figure 1-1: Lake Kitchawan FEMA Special Flood Hazards

National Flood Hazard Layer FIRMette

FEMA

73°33'26"W 41°14'41"N

73°32'48"W 41°14'14"N

Feet 0 250 500 1,000 1,500 2,000

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- B 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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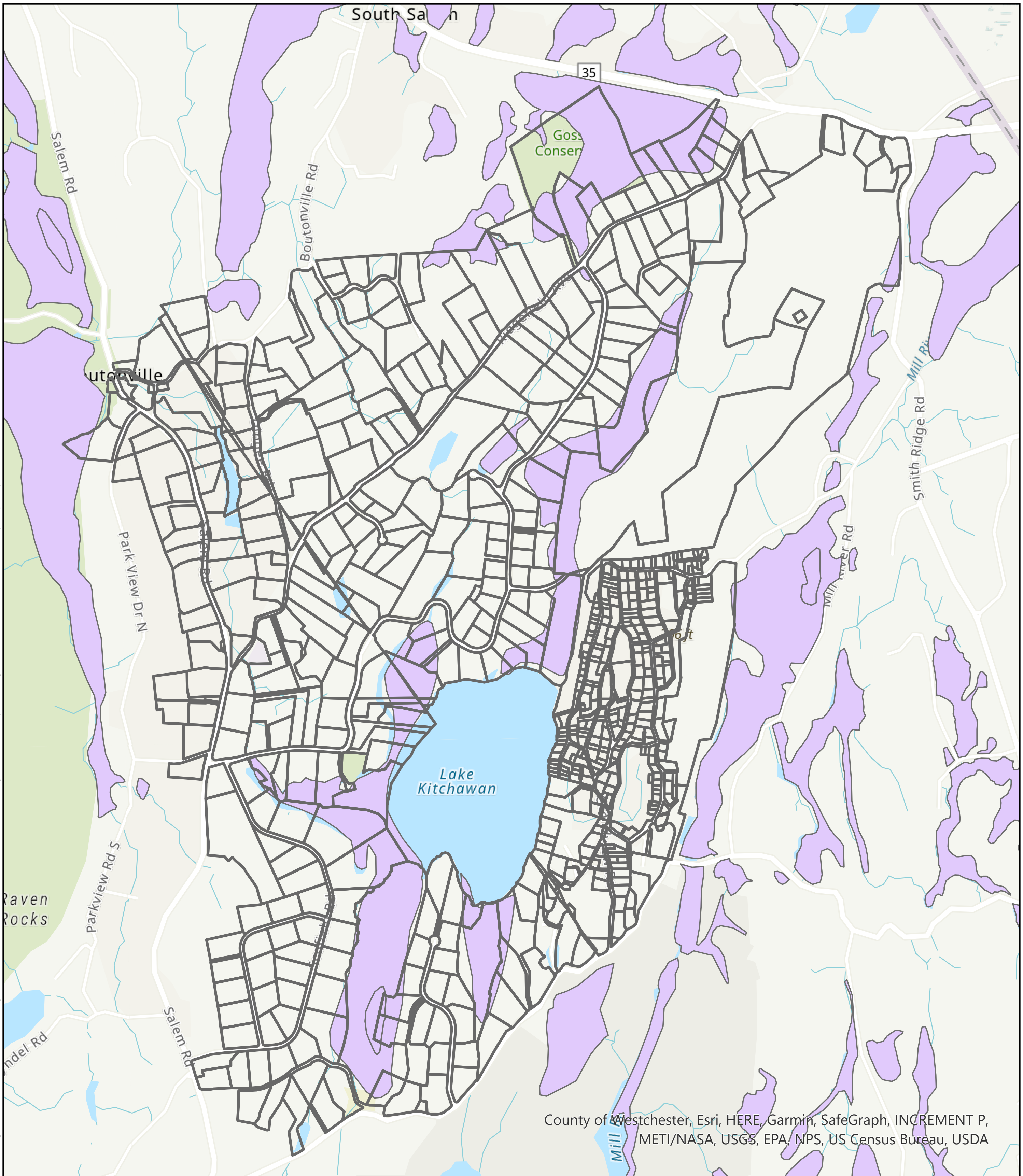
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/12/2021 at 3:50 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



Lake Kitchawan Wastewater Study

Figure 1-2: NYS Regulated Wetlands

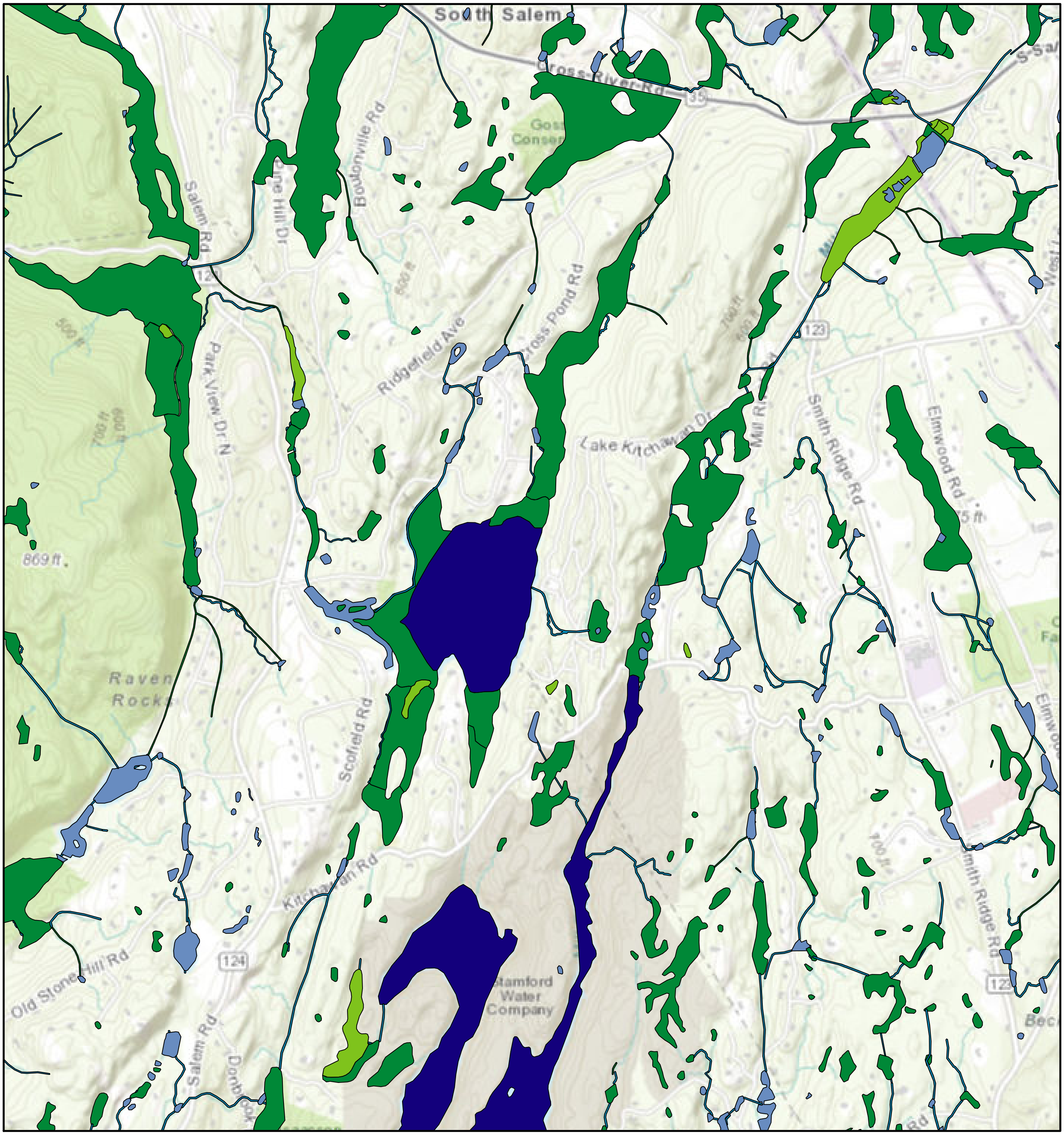
WOODARD & CURRAN

Project #: 0214731.00
Map Created: November 2021

Figure Exported: 11/17/2021 By: enealon Using: \\woodardcurran.net\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lewisboro Parcel Size and Steep Slopes.aprx

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**

Figure 1-3: Lake Kitchawan National Wetland Inventory



Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Lake

Other

Riverine

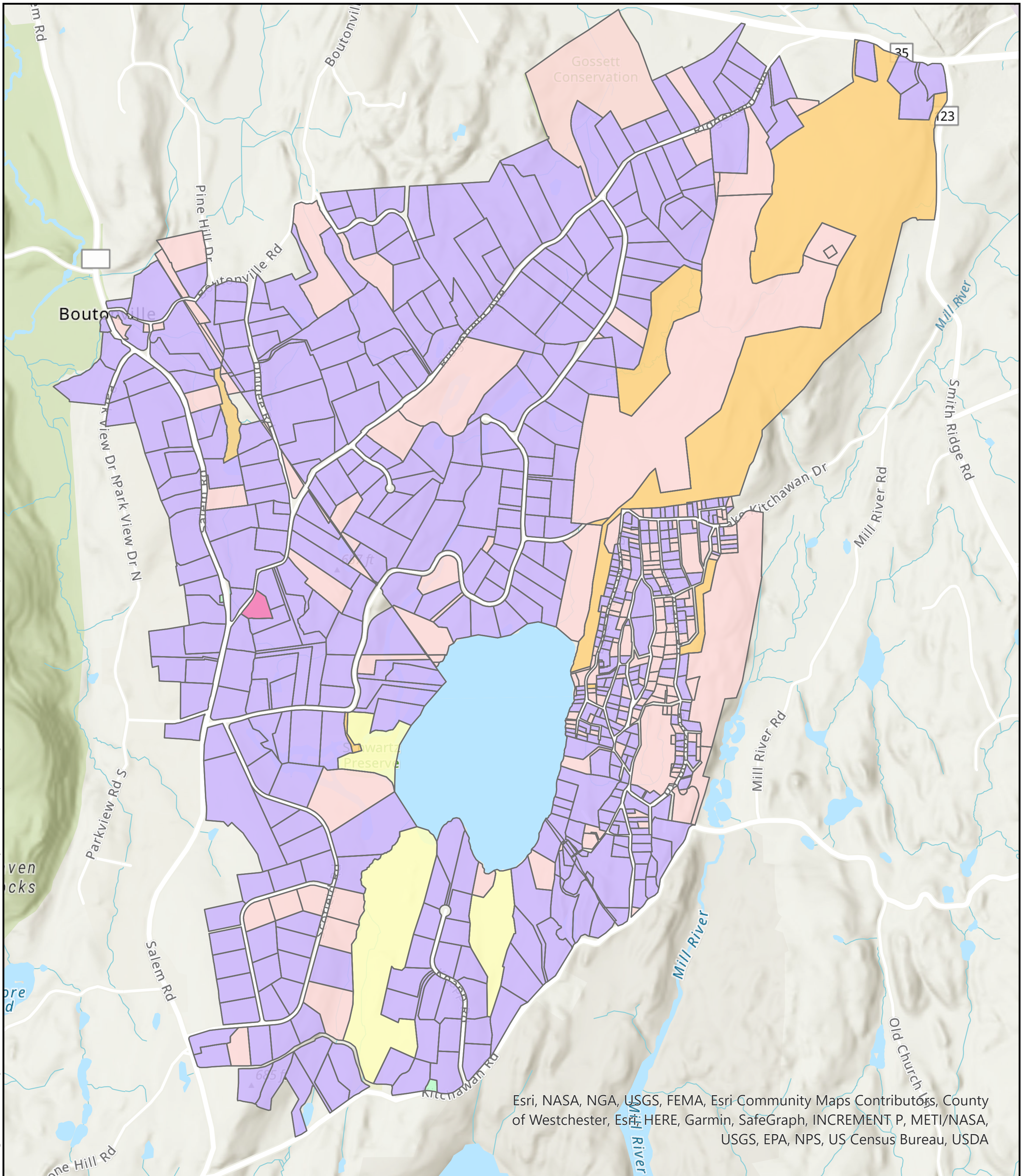
1:36,112

0 0.23 0.45 0.9 mi

0 0.35 0.7 1.4 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Author: Emily Nealon
Not a legal document



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Figure 1-4: Project Area Land Classification

Legend

Land Classification

- Residential (474)
- Vacant (175)
- Cemetery (2)
- Recreational (7)
- School (1)
- Wild lands (3)

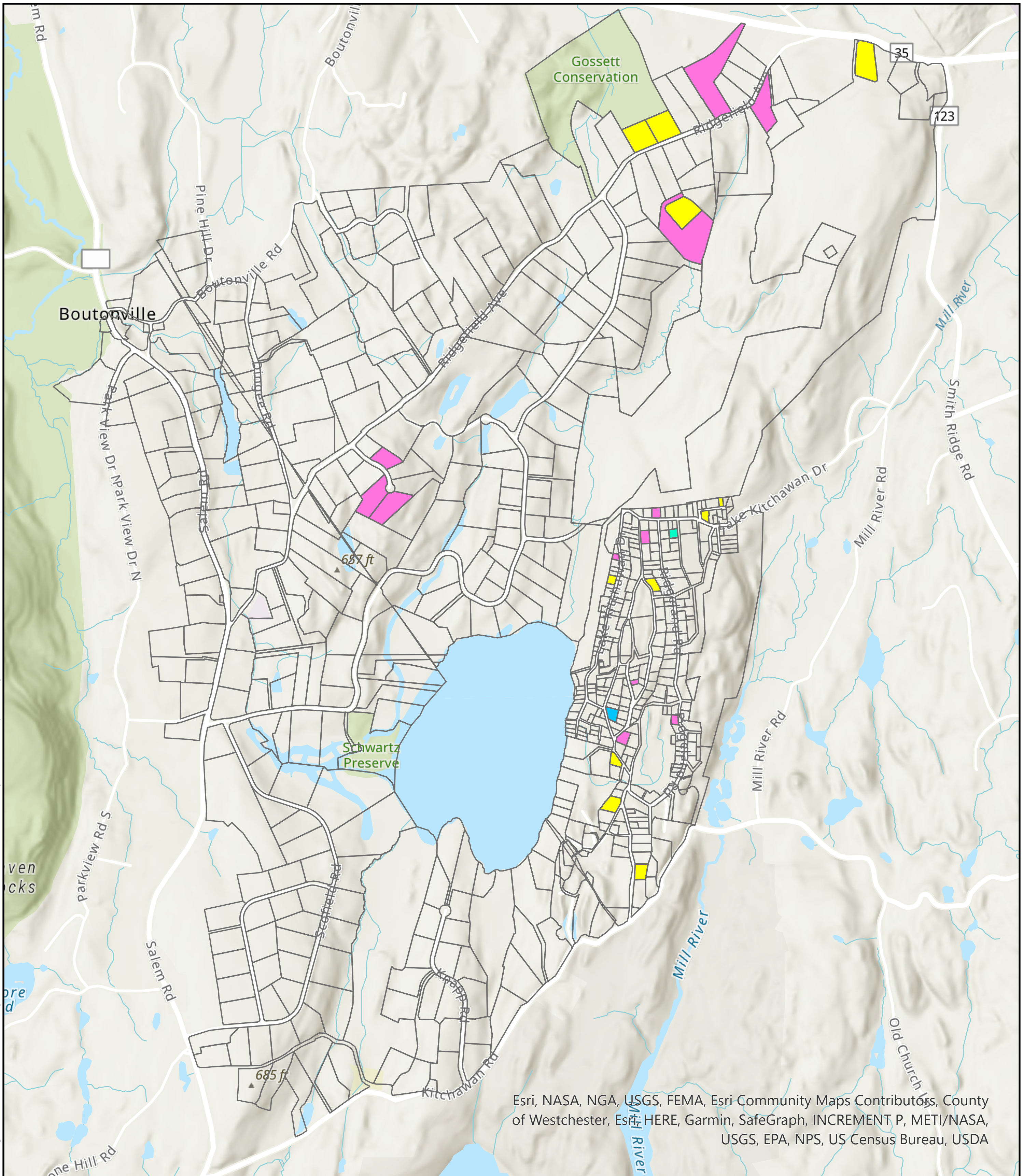
0 500 1,000 2,000 US Feet

N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: August 2021

Figure Exported: 8/3/2021 By: enealon Using: \\wclshared\wip\GIS\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lake Kitchawan Land Classification.aprx



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Figure 1-5: WCDOH Record of Septic Repairs

Legend

Year of Septic Repair

- 2008 - 2010
- 2010 - 2015
- 2015 - 2020
- 2020 - Present

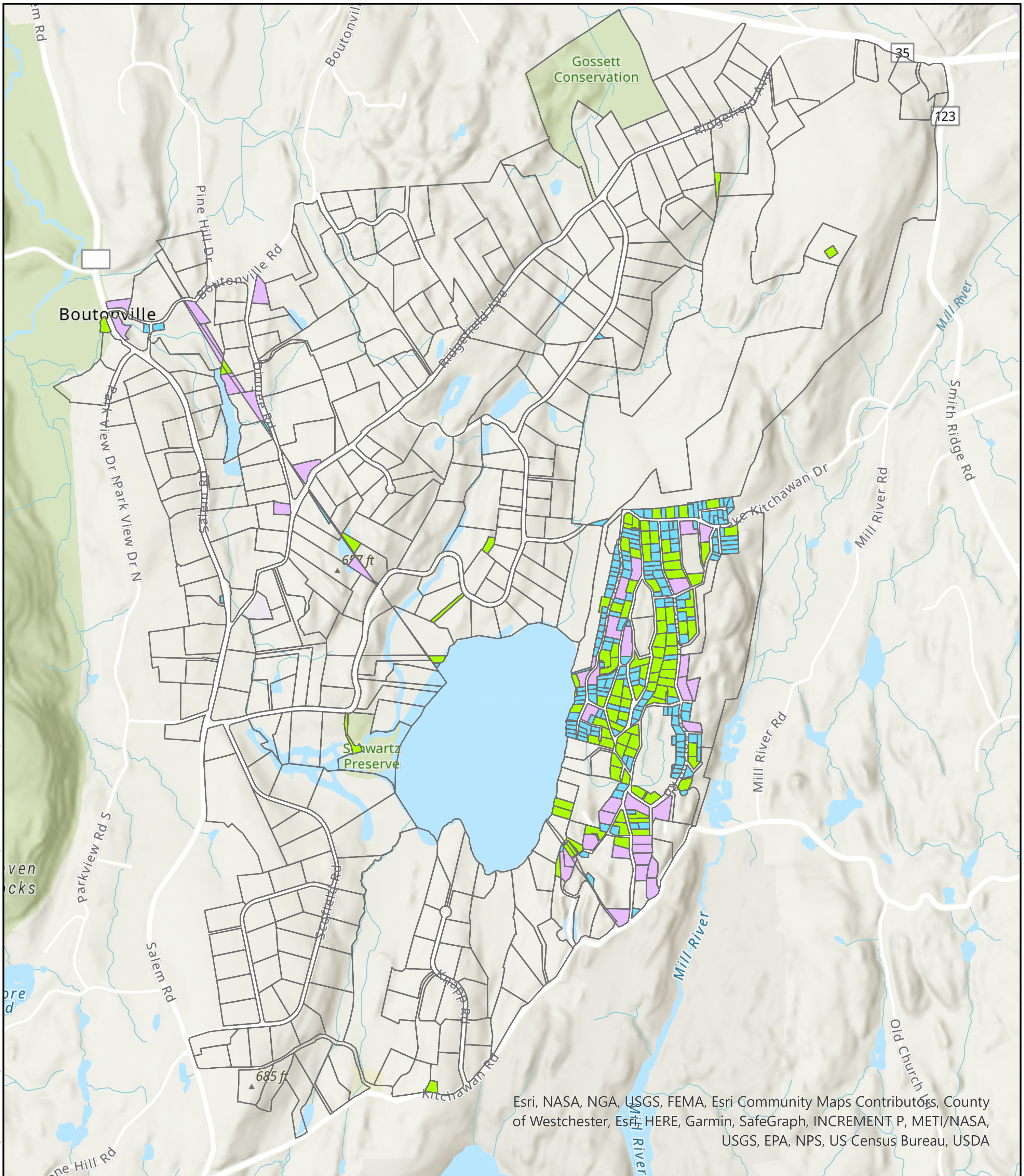
0 500 1,000 2,000 US Feet

N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: November 2021

Figure Exported: 11/1/2021 By: enealon Using: \\woodardcurran.net\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lake Kitchawan Land Classification.aprx



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Figure 1-6: Project Area Parcel Sizes

Project #: 0214731.00
Map Created: November 2021

Figure Exported: 11/1/2021 By: enealon Using: \\wc\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lake Kitchawan Land Classification.aprx

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**

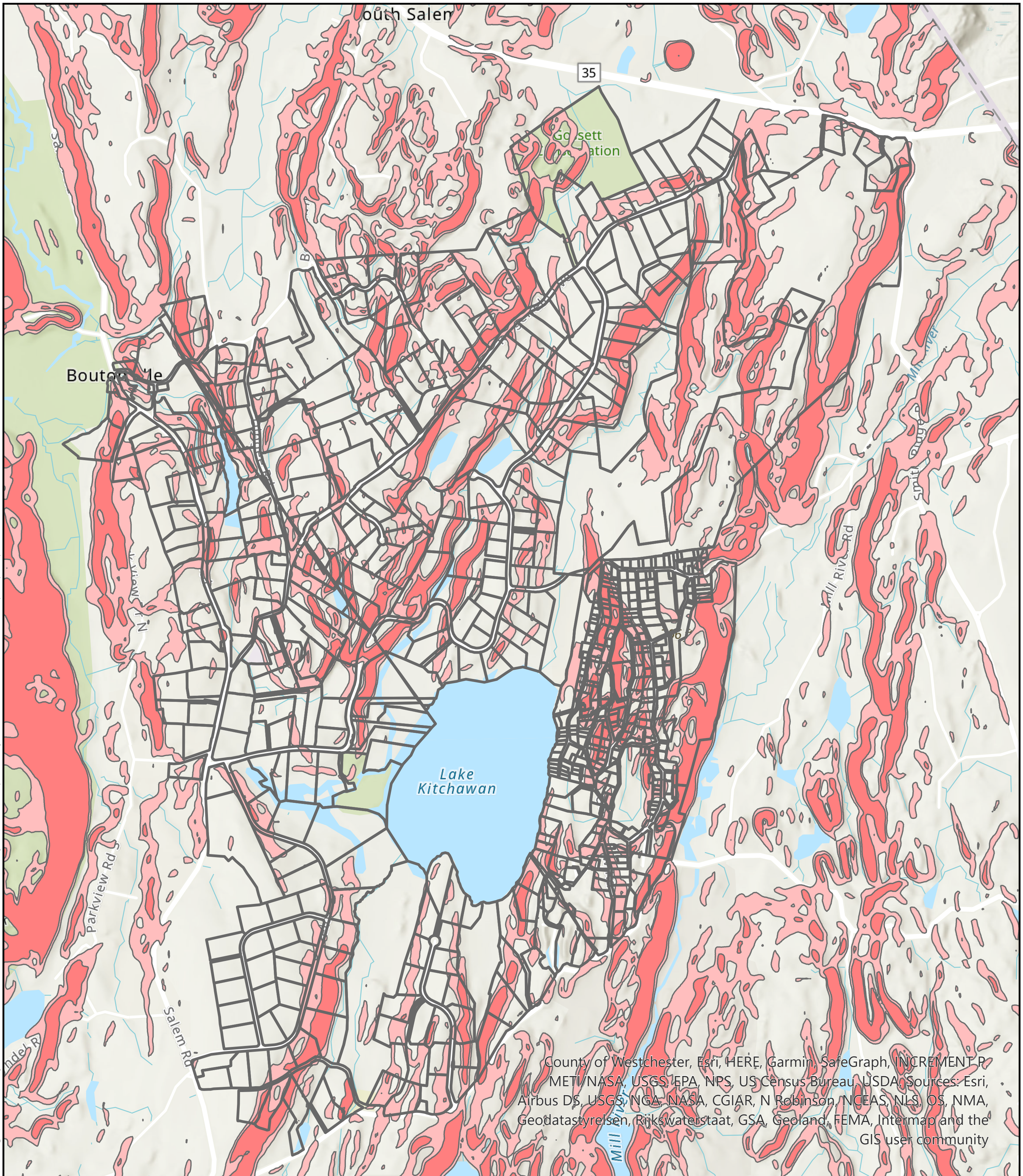


Figure Exported: 11/1/2021 By: enealon Using: \\wc\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lewisboro Parcel Size and Steep Slopes.aprx

Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Figure 1-7: Project Area Steep Slopes

Legend

Lake Kitchawan Study Parcels

Slope

15 to 25%

Over 25%

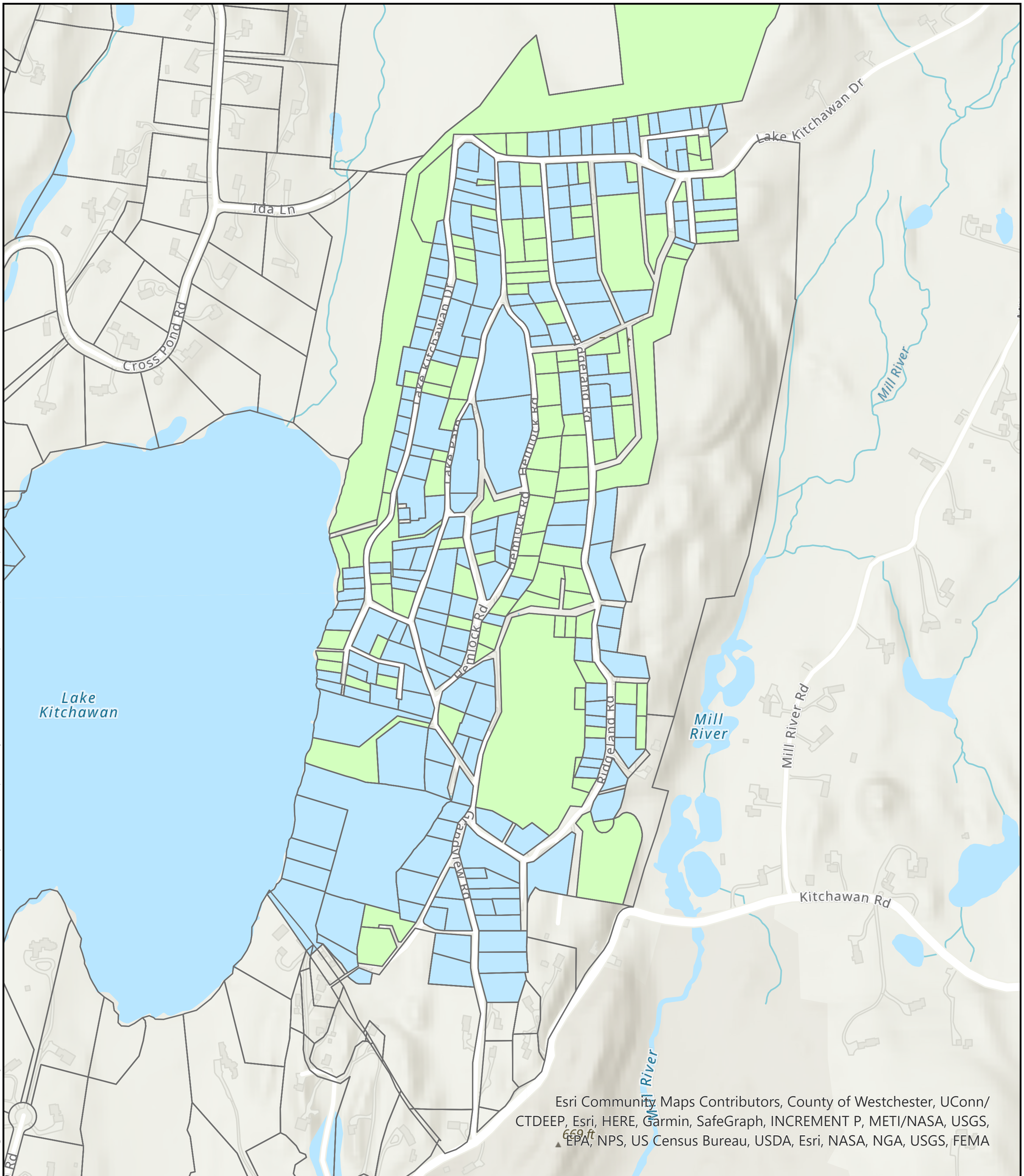
0 500 1,000 2,000 US Feet

N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: November 2021

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Figure 2-1: Repair and Replacement Alternative

Legend

Parcels

- Included in Repair and Replacement Alternative
- Undeveloped
- Not Included in Repair and Replacement Alternative

0 125 250 500 US Feet

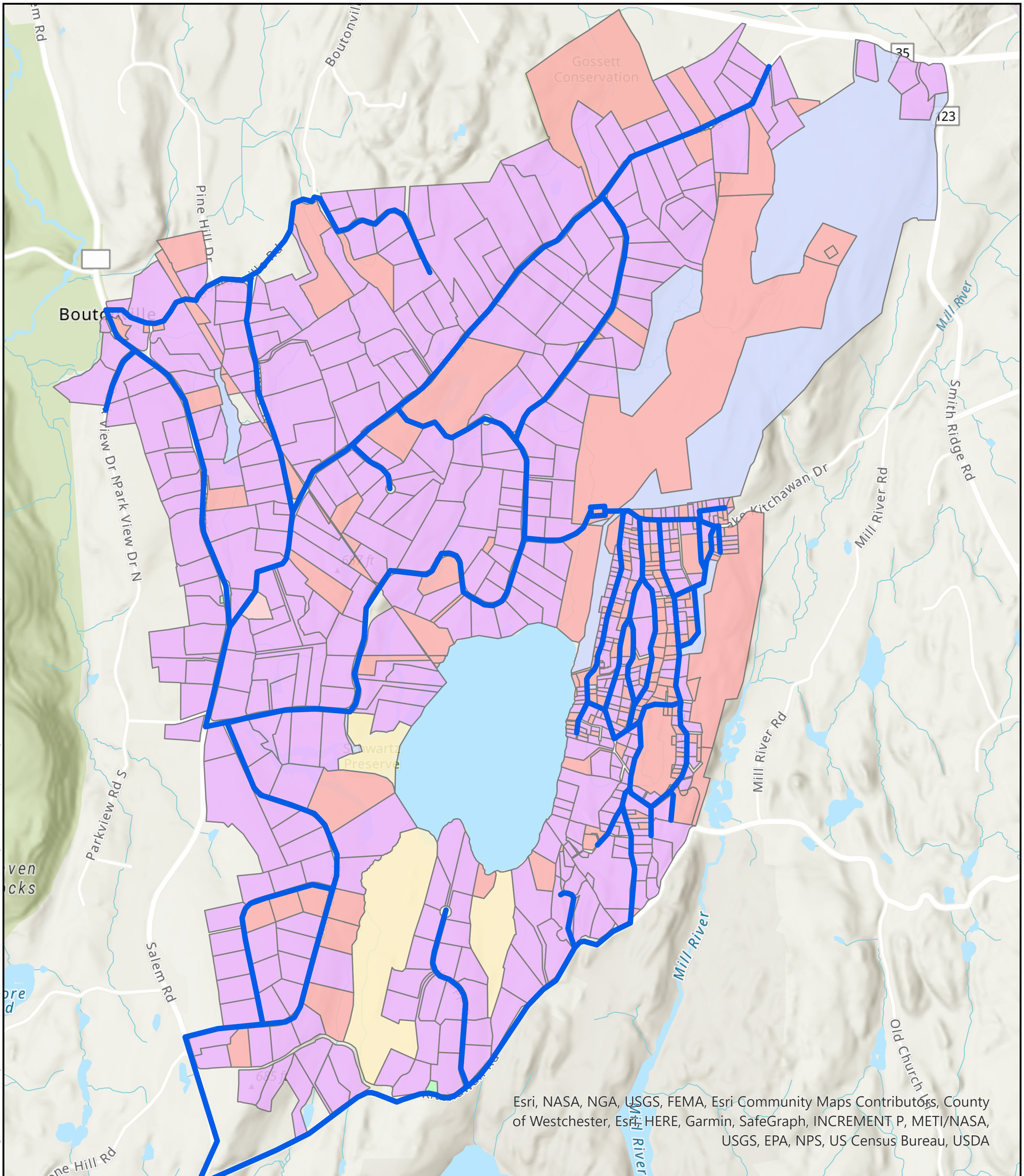
N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: July 2021

Figure Exported: 7/22/2021 By: enealon Using: \\wc\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lake Kitchawan Repair and Replacement.aprx

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Figure 2-2: Centralized Treatment Alternative

Legend

Land Classification — Low-Pressure Force Main

- Residential
- Vacant
- Cemetery
- Recreational
- School
- Wild lands

0 500 1,000 2,000 US Feet

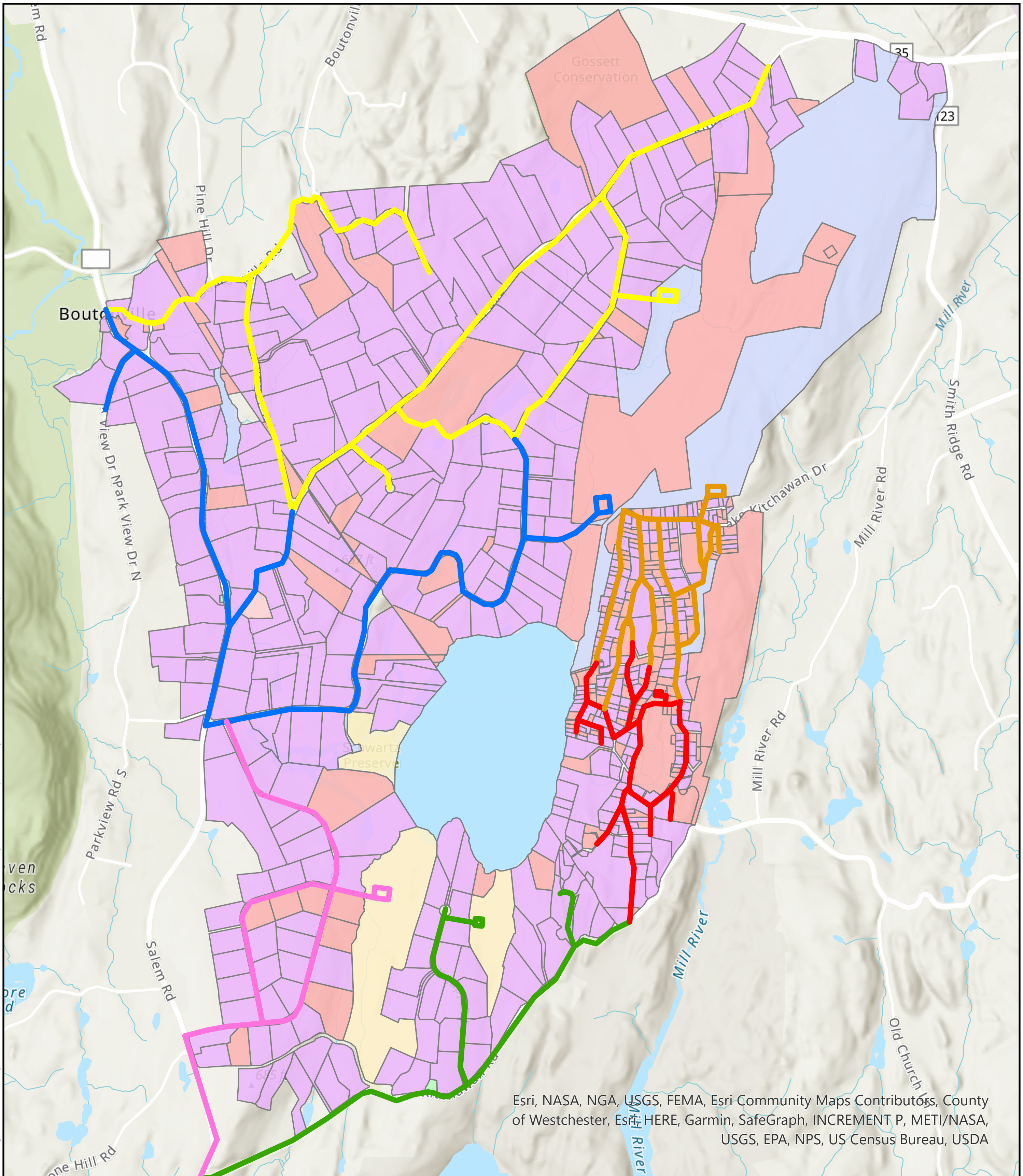
N

WOODARD & CURRAN

Project #: 0214731.00

Map Created: June 2021

Figure Exported: 6/21/2021 By: enealon Using: \\wc\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Kitchawan Land Classification.aprx



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Figure 2-3: Decentralized Treatment (Whole Study Area)

Legend

Land Classification	Cluster
Residential	A
Vacant	B
Cemetery	C
Recreational	D
School	E
Wild lands	F

0 500 1,000 2,000 US Feet

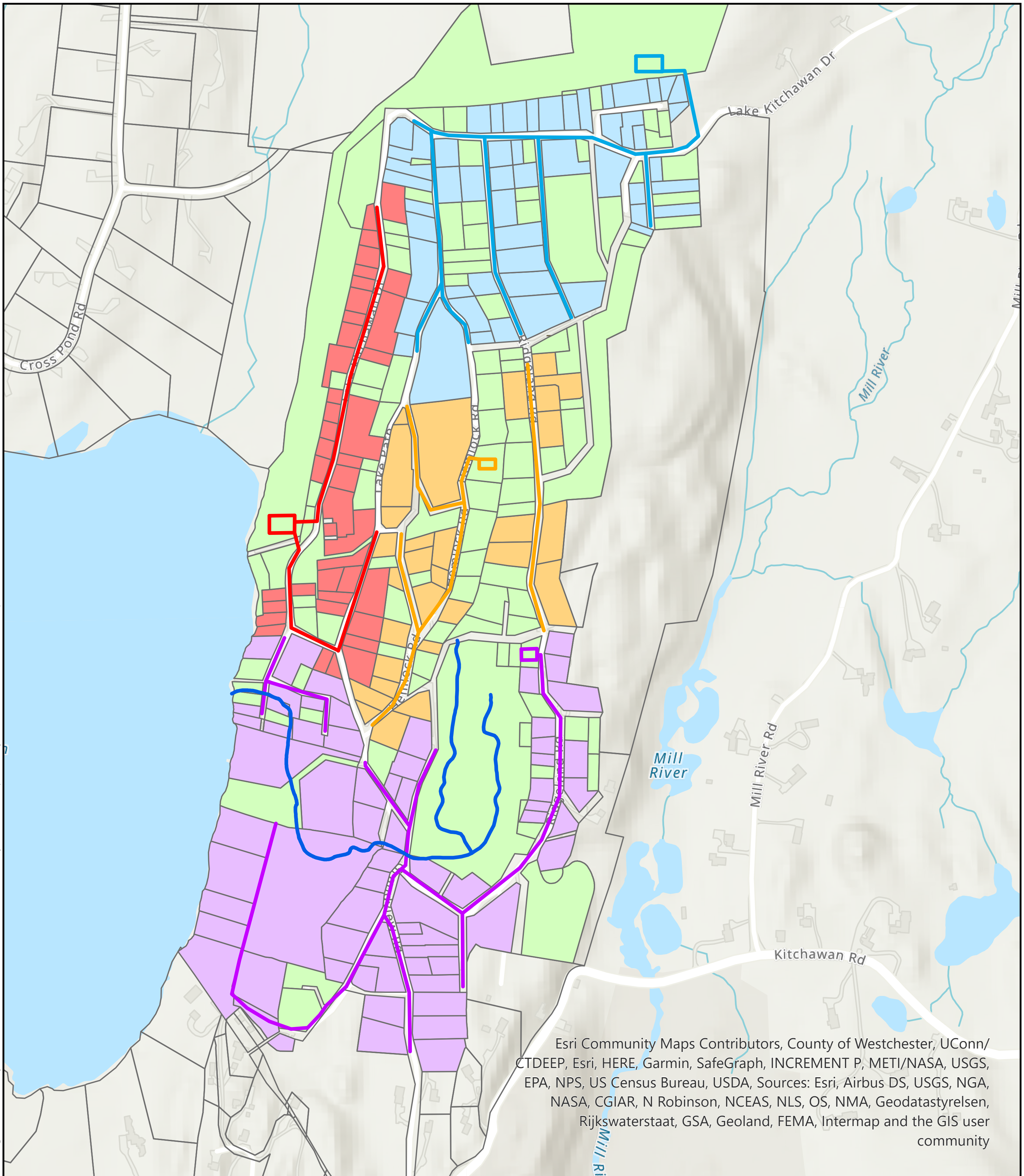
N

WOODARD & CURRAN

Project #: 0214731.00

Map Created: June 2021

Figure Exported: 6/21/2021 By: enealon Using: \\wc\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Kitchawan Land Classification.aprx



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Figure 2-4: Decentralized Treatment (Critical Area)

Legend

Cluster
- 1
- 2
- 3
- 4
- Undeveloped
- Not included in clusters

Streams

0 200 400 800 US Feet

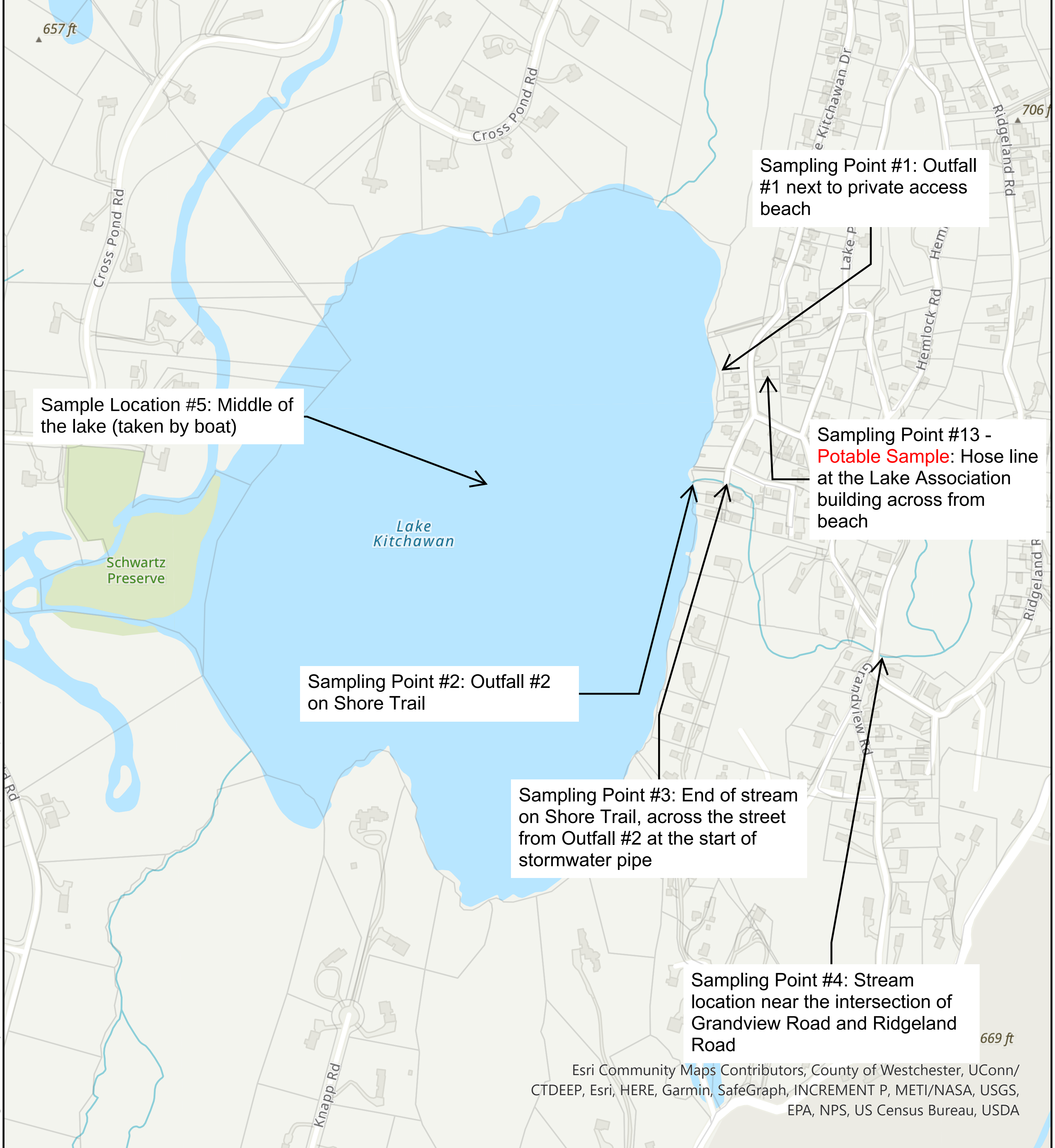
N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: June 2021

Figure Exported: 6/30/2021 By: enealon Using: \\we\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lake Kitchawan Alternatives.aprx

Figure 3-1: Lake Kitchawan Sampling Locations
5/27/21 Sample Locations



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Sampling Plan

Legend

Lake Kitchawan Study Parcels

0 125 250 500 US Feet

N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: May 2021

Figure Exported: 5/28/2021 By: enealon Using: \\wc\shared\wip\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lewisboro Parcel Figure.aprx

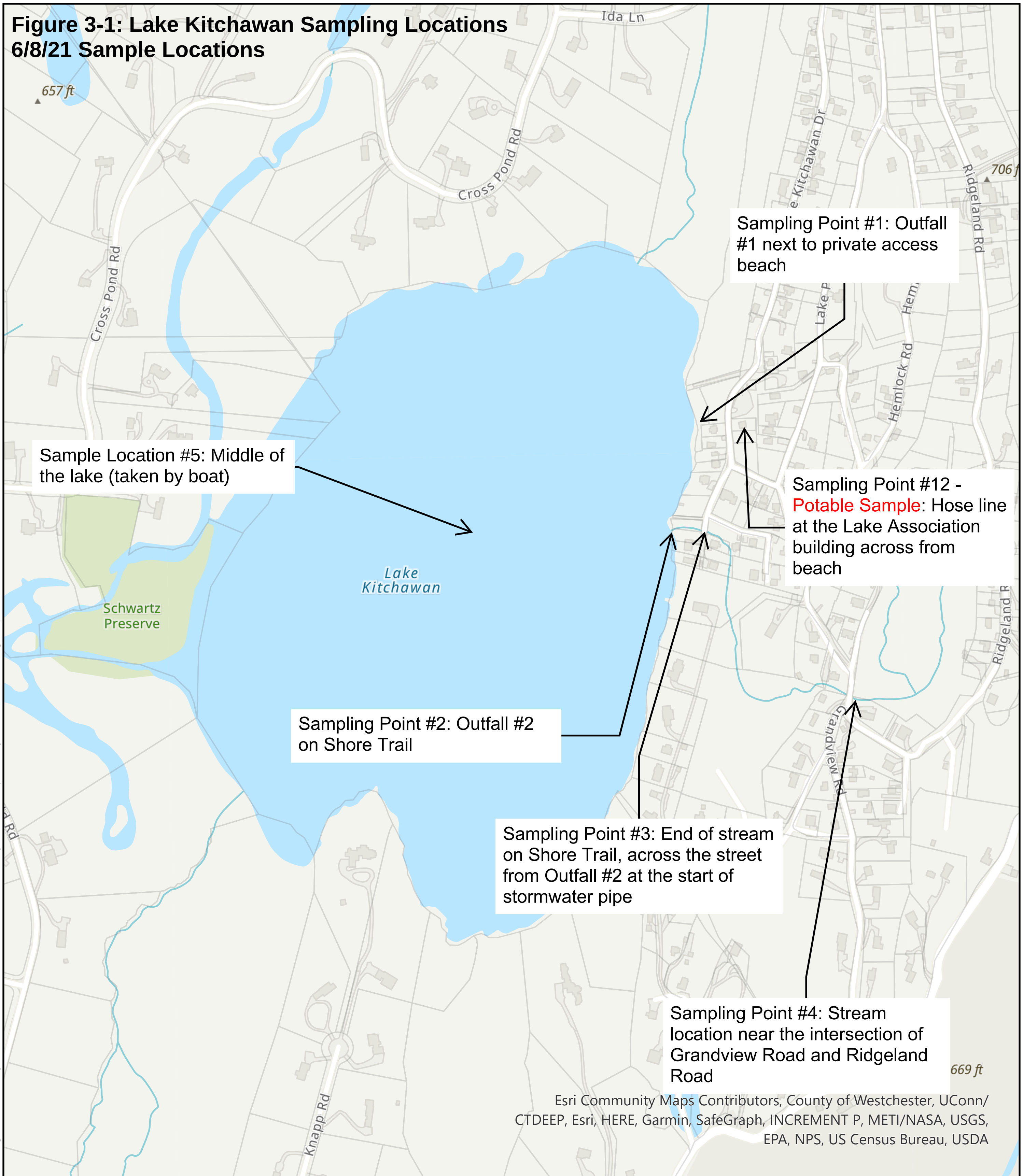


Figure Exported: 5/28/2021 By: enealon Using: \\wc\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lewisboro Parcel Figure.aprx

Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Sampling Plan

Legend

Lake Kitchawan Study Parcels

0 125 250 500 US Feet

N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: May 2021

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**

Figure 3-1: Lake Kitchawan Sampling Locations
6/9/21 Sample Locations

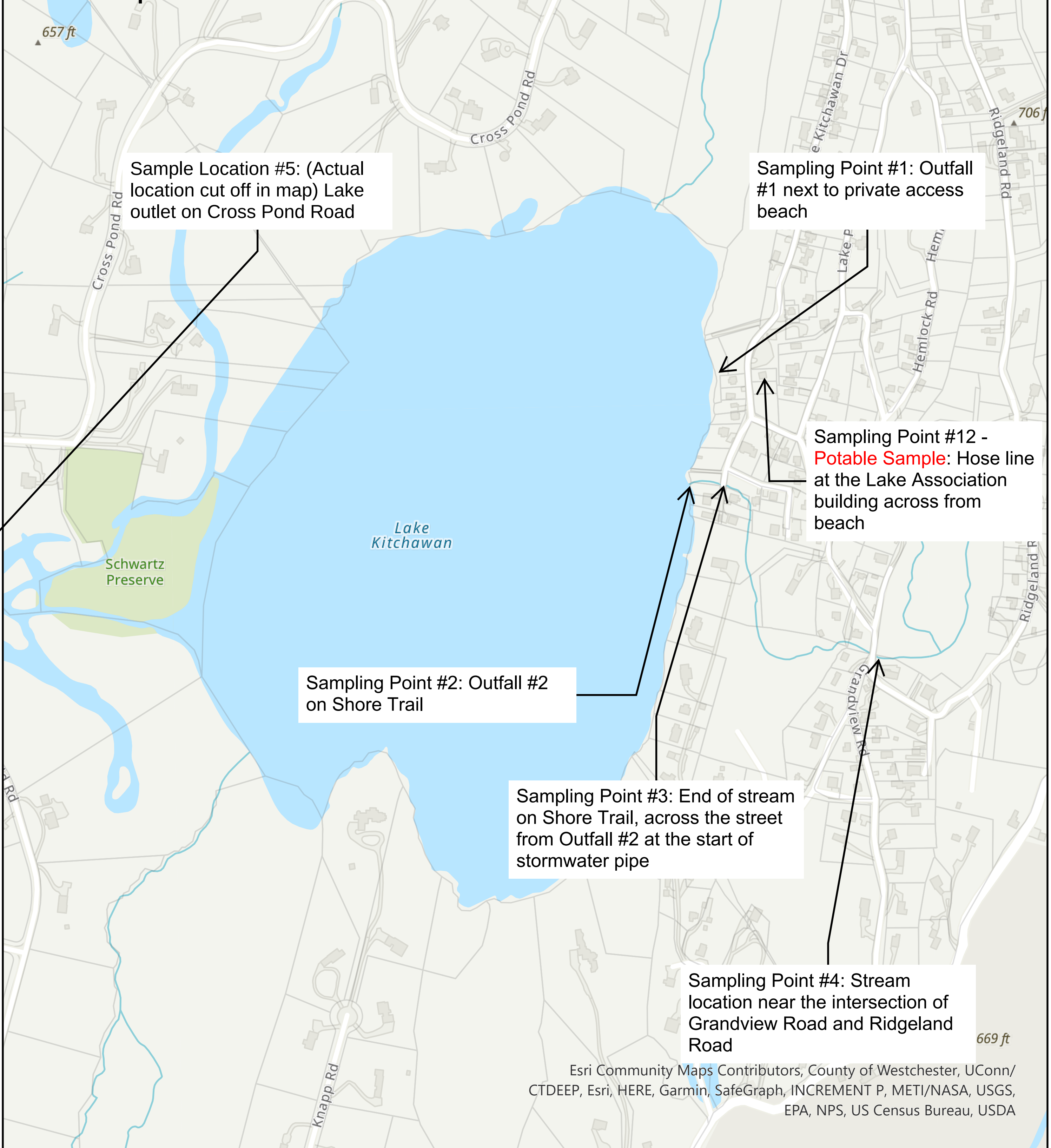


Figure Exported: 5/28/2021 By: enealon Using: \\wc\shared\wip\GIS\Project\Lewisboro Parcel Figure.aprx \\wc\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lewisboro Parcel Figure.aprx

Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Sampling Plan

Legend

Lake Kitchawan Study Parcels

0 125 250 500 US Feet

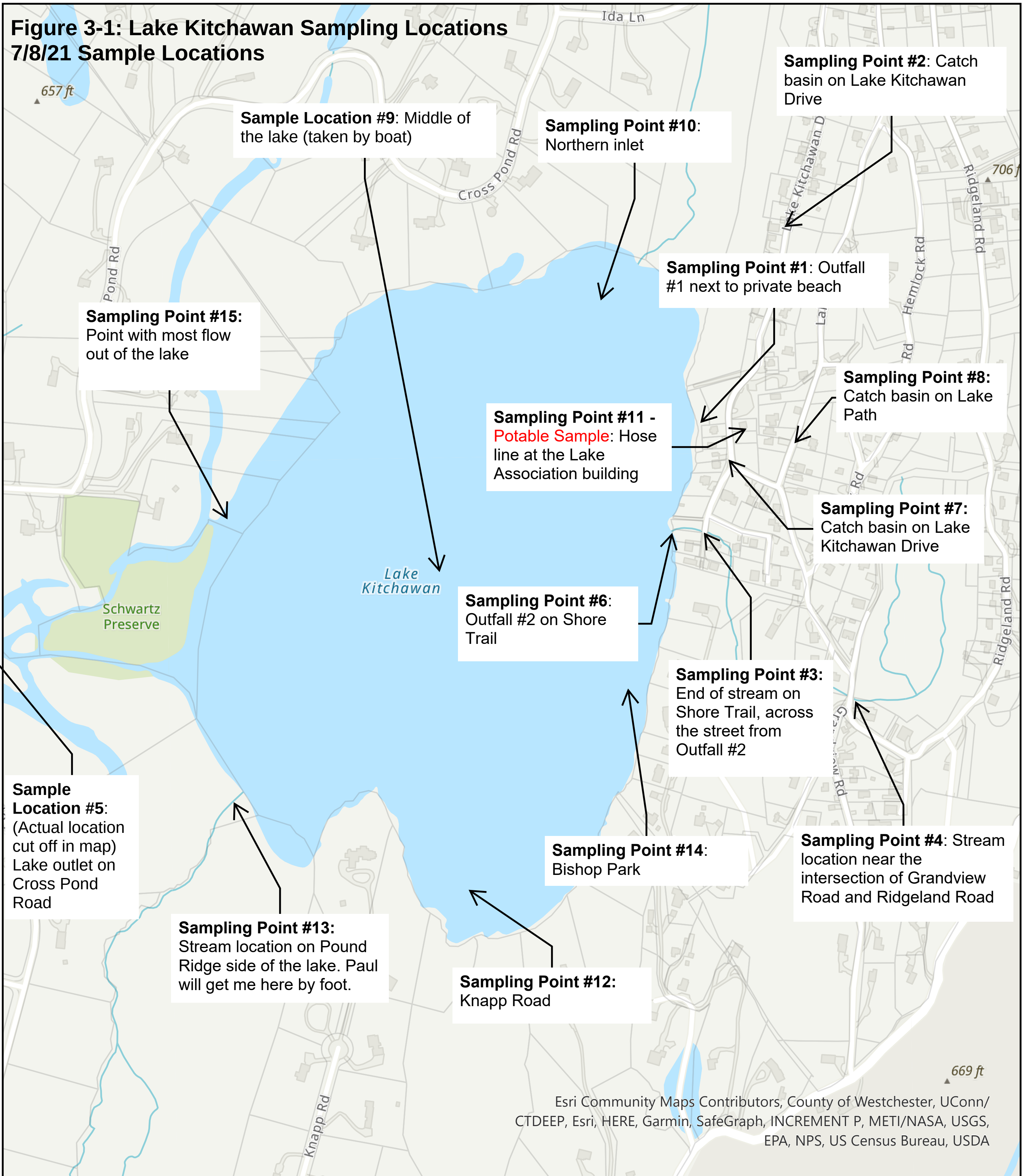
N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: May 2021

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**

Figure 3-1: Lake Kitchawan Sampling Locations
7/8/21 Sample Locations



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Sampling Plan

Legend

Lake Kitchawan Study Parcels

N

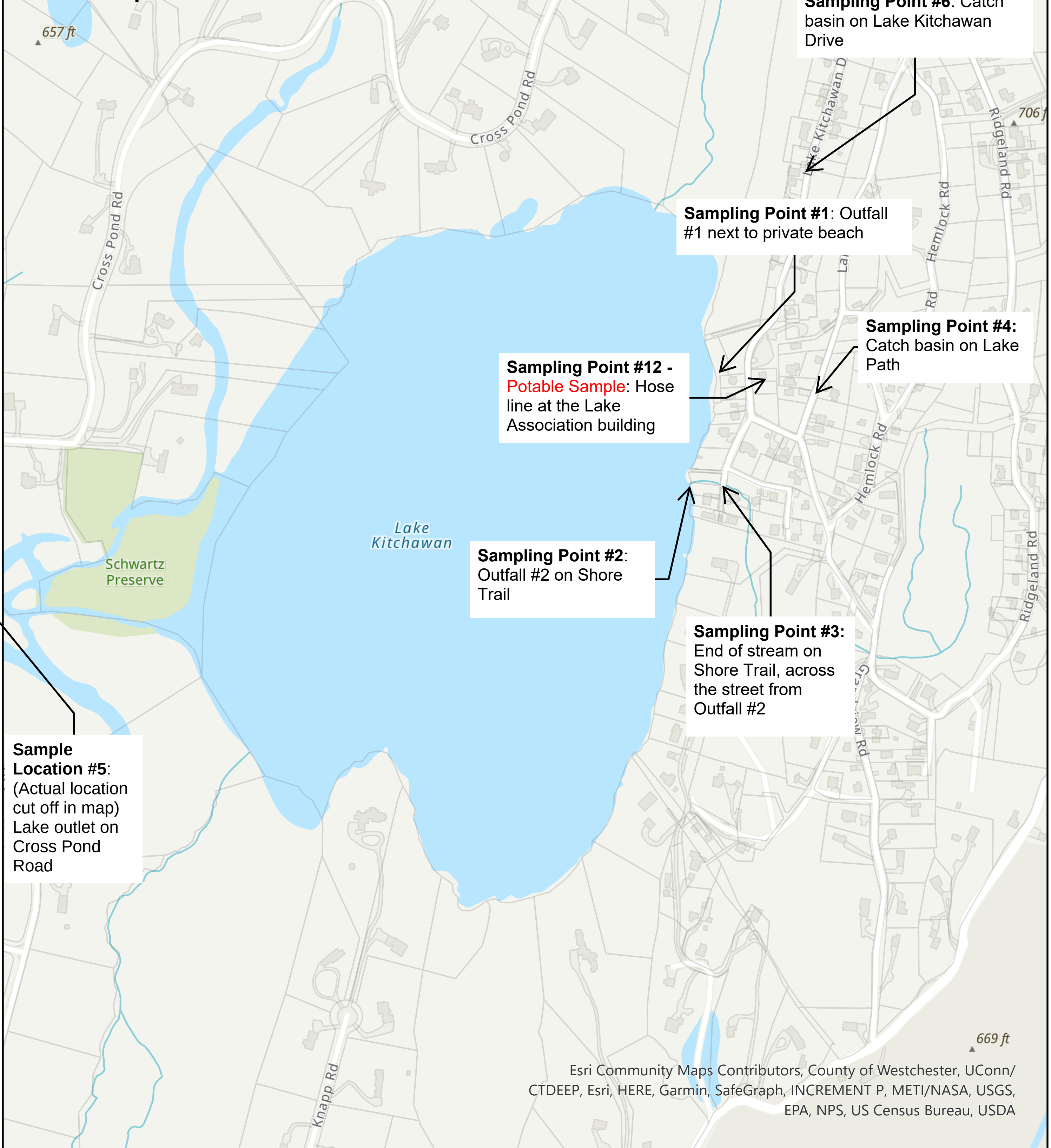
0 125 250 500 US Feet

WOODARD & CURRAN

Project #: 0214731.00
Map Created: May 2021

Figure Exported: 5/28/2021 By: enealon Using: \\wc\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lewisboro Parcel Figure.aprx

Figure 3-1: Lake Kitchawan Sampling Locations
7/9/21 Sample Locations



Lake Kitchawan Wastewater Study
Town of Lewisboro, NY
Sampling Plan

Legend
Lake Kitchawan Study Parcels

0 125 250 500 US Feet

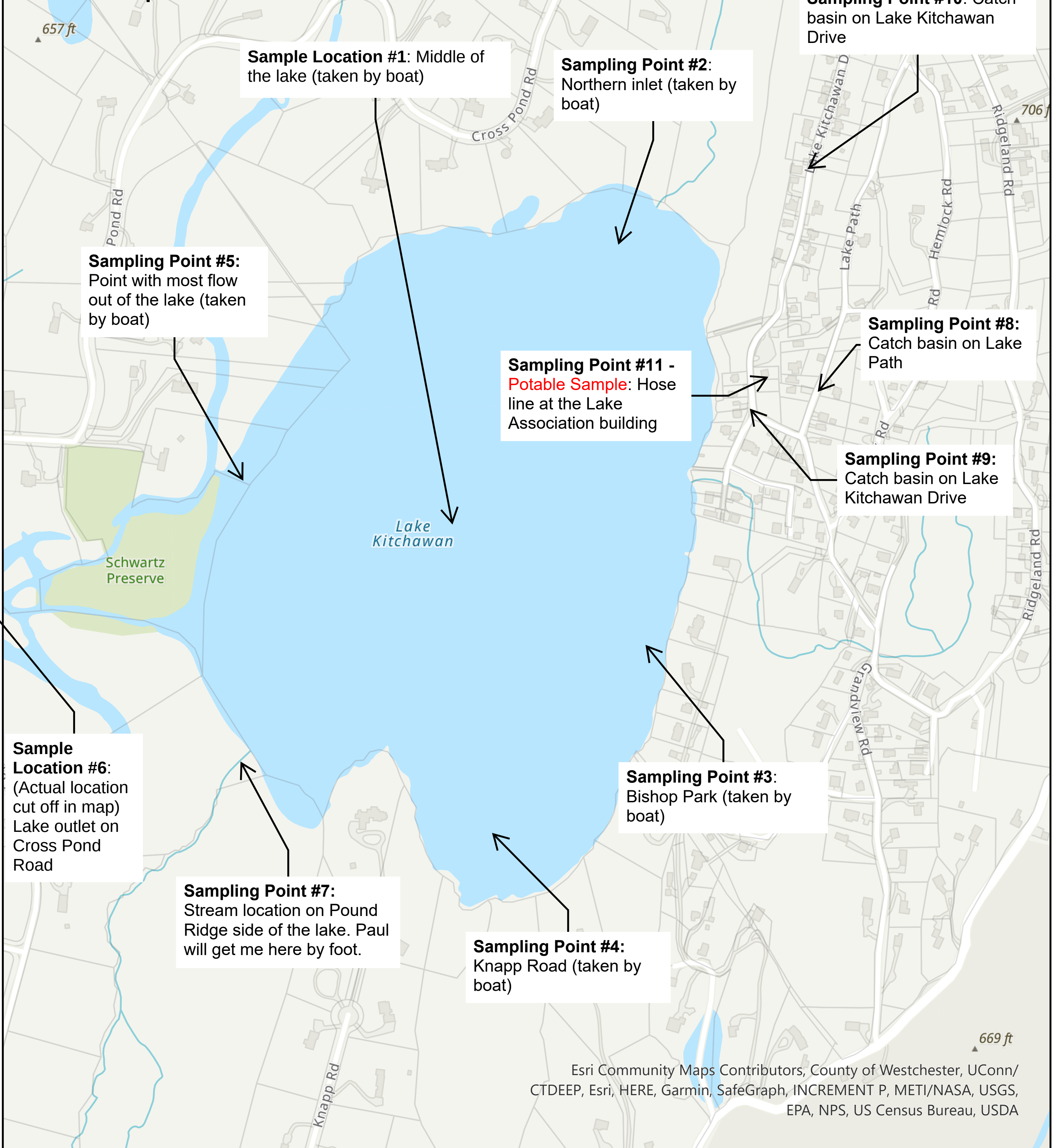
N

WOODARD & CURRAN
Project #: 0214731.00
Map Created: May 2021

Figure Exported: 5/28/2021 By: enealon Using: \\wcl\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lewisboro Parcel Figure.aprx

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**

Figure 3-1: Lake Kitchawan Sampling Locations
8/26/21 Sample Locations



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Sampling Plan

Legend

Lake Kitchawan Study Parcels

0 125 250 500 US Feet

N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: May 2021

APPENDIX A: PROJECT AREA GEOLOGIC SOIL SURVEY

Map Scale: 1:17,200 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 250 500 1000 1500

Feet: 0 500 1000 2000 3000

N

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Westchester County, New York
Survey Area Data: Version 16, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Oct 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ce	Catden muck, 0 to 2 percent slopes	104.7	8.2%
ChB	Charlton fine sandy loam, 3 to 8 percent slopes	8.3	0.7%
ChC	Charlton fine sandy loam, 8 to 15 percent slopes	31.4	2.5%
ChD	Charlton fine sandy loam, 15 to 25 percent slopes	29.2	2.3%
ChE	Charlton loam, 25 to 35 percent slopes	4.3	0.3%
ClC	Charlton fine sandy loam, 8 to 15 percent slopes, very stony	4.4	0.3%
ClD	Charlton loam, 15 to 25 percent slopes, very stony	0.1	0.0%
ClE	Charlton loam, 25 to 35 percent slopes, very stony	6.3	0.5%
CrC	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	354.9	27.9%
CsD	Chatfield-Charlton complex, 15 to 35 percent slopes, very rocky	140.9	11.1%
CtC	Chatfield-Hollis-Rock outcrop complex, 0 to 15 percent slopes	106.0	8.3%
CuD	Chatfield-Hollis-Rock outcrop complex, 15 to 35 percent slopes	57.3	4.5%
HrF	Hollis-Rock outcrop complex, 35 to 60 percent slopes	54.7	4.3%
LcA	Leicester loam, 0 to 3 percent slopes, stony	4.6	0.4%
LcB	Leicester loam, 3 to 8 percent slopes, stony	19.0	1.5%
LeB	Leicester loam, 2 to 8 percent slopes, very stony	23.6	1.9%
NcA	Natchaug muck, 0 to 2 percent slopes	53.5	4.2%
NdA	Natchaug and Catden mucks, ponded, 0 to 2 percent slopes	5.4	0.4%
PnB	Paxton fine sandy loam, 3 to 8 percent slopes	39.2	3.1%
PnC	Paxton fine sandy loam, 8 to 15 percent slopes	32.2	2.5%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PnD	Paxton fine sandy loam, 15 to 25 percent slopes	10.4	0.8%
RdB	Ridgebury complex, 3 to 8 percent slopes	4.7	0.4%
Sh	Sun loam	26.1	2.0%
Sm	Sun loam, extremely stony	0.7	0.1%
SuB	Sutton loam, 3 to 8 percent slopes	19.2	1.5%
W	Water	116.9	9.2%
WdB	Woodbridge loam, 3 to 8 percent slopes	11.1	0.9%
WdC	Woodbridge loam, 8 to 15 percent slopes	3.0	0.2%
Totals for Area of Interest		**1,272.3**	**100.0%**

APPENDIX B: CITIZENS STATEWIDE LAKE ASSESSMENT PROGRAM (CSLAP) LAKE KITCHAWAN (2008)

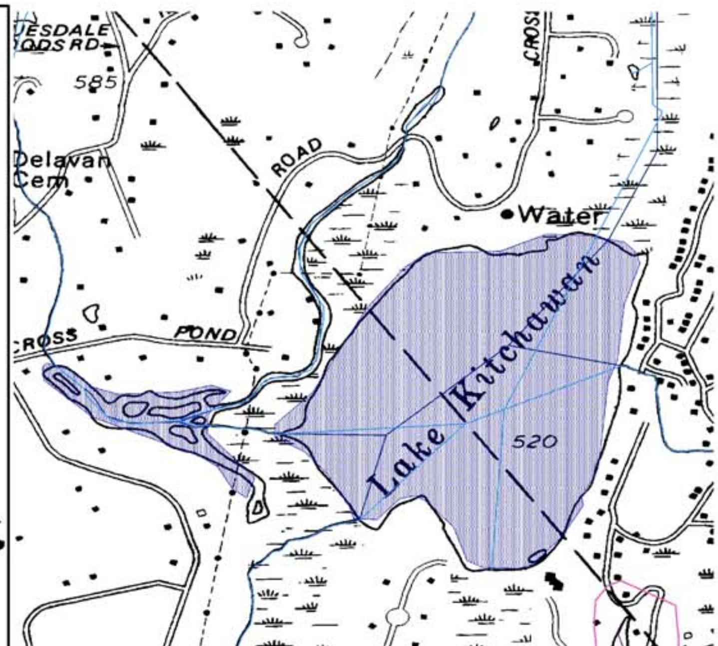
New York State Department of Environmental Conservation

Division of Water

New York
Citizens Statewide Lake Assessment Program
(CSLAP)

2008 Annual Report- Lake Kitchawan

December, 2008



New York State Department of Environmental Conservation

2008 INTERPRETIVE SUMMARY

NEW YORK
CITIZENS STATEWIDE
LAKE ASSESSMENT PROGRAM
(CSLAP)

LAKE KITCHAWAN

Scott A. Kishbaugh, PE

NYS Department of Environmental Conservation
NY Federation of Lake Associations

December, 2008

Table of Contents

BACKGROUND AND ACKNOWLEDGMENT

The Citizens Statewide Lake Assessment Program (CSLAP) is a volunteer lake monitoring program conducted by the NYS Department of Environmental Conservation (NYSDEC) and the NYS Federation of Lake Associations (FOLA). Founded in 1986 with 25 pilot lakes, the program has involved more than 230 lakes, ponds, and reservoirs and 1,500 volunteers from eastern Long Island to the northern Adirondacks to the western-most lake in New York, and from 10-acre ponds to several Finger Lakes, Lake Ontario, Lake George, and lakes within state parks. In this program, lay volunteers trained by the NYSDEC and FOLA collect water samples, observations, and perception data every other week in a 15 week interval between May and October. Water samples are analyzed by certified laboratories. Analytical results are interpreted by the NYSDEC and FOLA and utilized for a variety of purposes by the State of New York, local governments, researchers, and, most importantly, participating lake associations. This report summarizes the 2008 sampling results for **Lake Kitchawan**.

Lake Kitchawan is a 90 acre, class B lake found in the Town of Pound Ridge in Westchester County, just north of New York City. It was first sampled as part of CSLAP in 2008. The following volunteers have participated in CSLAP, and deserve most of the credit for the success of this program at **Lake Kitchawan**: **Paul Gallagher and Larry Grant.**

In addition, the authors wish to acknowledge the following individuals, without whom this project and report would never have been completed:

From the Department of Environmental Conservation, Dick Draper, and Margaret Novak for on-going support of the program; Jay Bloomfield and James Sutherland, for their work in developing and implementing the program, and the technical staff from the Lake Services Section and the Statewide Water Monitoring Section, for continued technical review of program design.

From the Federation of Lake Associations, Anne Saltman, Dr. John Colgan, Don Keppel, Nancy Mueller and the Board of Directors, for their continued strong support of CSLAP.

The New York State Department of Health (prior to 2002) and Upstate Freshwater Institute (since 2002), particularly Steve Effler, MaryGail Perkins, and Elizabeth Miller, provided laboratory materials and all analytical services, reviewed the raw data, and implemented the quality assurance/quality control program.

Finally, but most importantly, the authors would like to thank the more than 1,500 volunteers who have made CSLAP a model for lay monitoring programs throughout the country and the recipient of a national environmental achievement award. Their time and effort have served to greatly expand the efforts of the state and the public to protect and enhance the magnificent water resources of New York State.

WHAT'S NEW IN THE 2008 CSLAP REPORT?

In a never ending quest to make the CSLAP reports more useful and comprehensive, or at least more interesting and worthy of a cover-to-cover read, the NYSDEC makes small changes in the CSLAP report each year. Some of these changes are small and include fixing previous errors, based on corrections provided by readers or re-editing. Others are more substantial and reflect improvements in technology (better graphics or layout capabilities) or information about the lake or its watershed. For example, the 2005 CSLAP report included information about regulated activities in the area around the lake and a compendium of other state water quality data for the lake. The 2006 report included fish stocking, fisheries regulations, and fish consumption advisory information for the first time, as well as site location maps, information about rare, threatened, or endangered plant species in lake, and detailed discussions about lake use impacts and their implications for the state Priority Waterbody List. The 2007 report included RIBS water quality monitoring data, more detailed discussions about weather patterns and the implications of these patterns for water quality conditions in NYS lakes, historical aquatic plant identifications, more detailed discussions of nitrogen trends, expanded exotic plant distribution maps, and a "So What Have We Learned Through CSLAP" discussion.

The 2008 CSLAP report has been improved by the following new information:

- An expansion of the exotic plant distribution maps to include brittle naiad (*Najas minor*) hydrilla (*Hydrilla verticillatum*), the latter of which was found for the first time in New York State in 2008.

- More detailed discussions about the connection between precipitation and water quality in CSLAP, and greater discussion about changes in water temperature and the potential connection between these findings and larger global climate change.

- An expanded discussion of most of the CSLAP sampling parameters, focusing on an "outstanding" question associated with each (usually in response to findings within the last few years)

- An expanded "So What Have We Learned Through CSLAP" section.

We hope this report satisfies the needs of lake associations and CSLAP participants, and we continue to welcome suggestions for improving the program, reporting, and other avenues for gaining greater knowledge about the lakes of New York State.

FINDINGS AND EXECUTIVE SUMMARY

Lake Kitchawan was sampled as part of the New York Citizens Statewide Lake Assessment Program in 2008. For all program waters, water-quality conditions and public perception of the lake each year and historically have been evaluated within annual reports issued after each sampling season. This report attempts to summarize both the 2008 CSLAP data and an historical comparison of the data collected within the 2008 sampling season and data collected at Lake Kitchawan prior to 2008.

The majority of the short- and long-term analyses of the water quality conditions in Lake Kitchawan are summarized in Table 2, divided into assessments of eutrophication indicators, other water quality indicators, and lake perception indicators. It is not yet known if the 2008 CSLAP data are representative of normal conditions in Lake Kitchawan. The CSLAP dataset includes only one sample from Lake Kitchawan in 2008. This single sample is insufficient to characterize the lake. A preliminary assessment indicates that the lake can best be described as *eutrophic* (highly productive). Water transparency and phosphorus readings were "internally consistent"; both of these indicators exhibit conditions typical of highly productive lakes. Algae levels (measured by chlorophyll *a*) were much lower than expected, but were probably not representative of normal conditions at the lake. Seasonal trends in lake productivity cannot be evaluated with a single sample, although it is likely that productivity increases during the summer, as in most other shallow, eutrophic lakes. The nitrogen to phosphorus ratios do not clear indicate whether phosphorus or nitrogen limits algae levels in Lake Kitchawan. However, it is likely that phosphorus loading to the lake must be minimized to improve the existing water clarity in the lake, by reducing algae growth in the lake. The single phosphorus reading in the lake easily exceeded the state phosphorus guidance value in Lake Kitchawan, and the sole water transparency readings did not reach the minimum recommended water clarity for swimming beaches.

Lake Kitchawan appears to be moderately to highly colored, probably reflecting the "natural" background levels of dissolved organic matter in the lake. Color readings may be high enough to exert limits on the water transparency, but only when algae levels are very low, and water clarity may ultimately be limited by the shallow maximum depth of the lake. The lake appears to have water of intermediate hardness, alkaline (above neutral) pH readings, and low nitrate and ammonia levels. pH readings exceeded the state water quality standards, typical of green lakes, but should be adequate to support most aquatic organisms. Nitrate and ammonia levels do not appear to warrant a threat to the lake. It is likely that the primary component of nitrogen is organic (bound within algal cells). Calcium levels are clearly high enough to support zebra mussel populations, but these organisms have not been found in the lake.

Lake Kitchawan was described as "slightly impaired" for most recreational uses during the single sampling session, slightly more favorable than in other lakes with similar water quality conditions and invasive weed problems. The lake was described as having "definite algal greenness," also more favorable than in other lakes with similar water clarity and color readings. Aquatic plants grew densely at the lake surface, and "excessive weed growth" was implicated in recreational problems at that time. Seasonal or long-term trends cannot be gauged against a single sample collected in 2008.

The 2002 NYSDEC Priority Waterbody Listings (PWL) for the Lower Hudson River basin indicate that *recreation* and *potable water supply* are *stressed* by excessive weeds. The CSLAP datasets cannot evaluate this assessment with a single datapoint, but preliminary data suggest *recreation* may be *impaired* by poor clarity and excessive nutrients and *stressed* by weeds, while *aquatic life* may be *threatened* by high pH. The next PWL listing review for this basin will probably occur in 2009 or 2010.

General Comments and Questions:

- ***What is the condition of Lake Kitchawan?***

Water quality conditions in Lake Kitchawan cannot be evaluated with a single data point, although the single sample collected in 2008 suggests that the lake can best be characterized as highly productive, with high nutrient levels and low water clarity. Recreational assessments of the lake were not favorable at this time, as expected given the water quality conditions of the lake, although recreational use impacts are also affected by excessive weed growth. Additional data will be needed to verify these conditions.

- ***What about the dark and murky bottom waters of the lake?***

Deepwater samples were not collected in Lake Kitchawan and other first year CSLAP lakes in 2008, and the lake is not deep enough to warrant deepwater sampling. It is likely that water quality conditions are comparable from top to bottom, given the mixing associated with shallow lakes.

- ***How does this condition change from spring showers thru changing of the leaves?***

Seasonal trends in trophic condition, water quality indicators or recreational and water quality assessments cannot be evaluated by a single sample. It is likely that lake productivity increases (water clarity decreases while nutrient and algae levels increase) during the summer, as in other shallow eutrophic lakes, but this needs to be verified with additional seasonal data.

- ***How has the condition changed since CSLAP sampling began on the lake and/or relative to historical values?***

Since 2008 was the first year of CSLAP sampling at Lake Kitchawan, the water quality conditions cannot be compared to historical records.

- ***How does Lake Kitchawan compare to other similar lakes (nearby lakes,….)?***

Lake Kitchawan appears to be more productive (exhibits lower water clarity, and higher nutrient and probably higher algae levels) than other nearby (Lower Hudson River basin) lakes, other lakes used for contact recreation (Class B lakes), and other NYS lakes. Recreational assessments were less favorable than in the typical lake in each of these classes of waterbodies, due in part to water quality problems and in part due to impacts from invasive weed problems.

- ***Based on these data, what should be done to improve or maintain Lake Kitchawan?***

Water quality and recreational assessments in Lake Kitchawan appear to be mostly unfavorable, and algal production is probably high, so lake management activities should focus on reducing nutrient loading to the lake through stormwater runoff, erosion, and wastewater inputs. The lake community should also focus on preventing the introduction of exotic plants and animals to the lakes via education, surveillance of boat launch sites (common and private), and discouraging waterfowl congregation on the lake. This is particularly important since invasive exotic weeds have been found in many nearby lakes.

Context and Qualifiers

The NY Citizens Statewide Lake Assessment Program (CSLAP) is intended to be a long-term, standardized, trophic-based, water-quality monitoring program to facilitate comparison of water-quality data from season to season, year to year, and from lake to lake. The data and information collected through CSLAP can be utilized to identify water-quality problems, detect seasonal and long-term patterns, and educate sampling volunteers and lake residents about water-quality conditions and stressors at their lakes. It is particularly useful in evaluating the over-enrichment of aquatic plant (algae and rooted plant) communities in a lake, and the response of the lake to these trophic stressors.

Shorefront residents, lake managers, and government agencies are increasingly tasked to better assess and evaluate water-quality conditions and lake uses in NYS lakes, including those sampled through CSLAP, whether to address localized problems, meet water-quality standards, satisfy state and federal environmental reporting requirements, or enhance and balance a suite of lake uses. CSLAP data should be a part of this process, but only a part. For some lakes, particularly small lakes and ponds with limited public access by those who don't reside on the lake shore, CSLAP may be the sole source of data used to assess lake conditions. In addition, studies conducted through CSLAP find strong similarities between sampling sites in many, but not all, large lakes, and generally find a strong convergence of perceptions about lake and recreational use conditions within most lakes, based on a local familiarity with "normal" conditions and factors that might affect lake use. For the purpose of broad water-quality evaluations and understanding the connection between measured water-quality indicators and the support of broadly based recreational uses of the lake, CSLAP can be a singularly effective tool for standardizing the lake-assessment process. CSLAP volunteers, lake associations, and others engaged in lake assessment and management should continue to utilize CSLAP in this context.

However, for large, multi-use lakes, or those lakes that are threatened by pollutants not captured in eutrophication-based monitoring programs, CSLAP becomes a less effective primary tool for assessing lake condition and use impairments. For example, CSLAP data have only limited utility in evaluating the following:

(a) contamination from bacteria or other biological toxins, particularly related to the safety of water use for potable intake or swimming
(b) contamination from inorganic (e.g., metals) and organic (e.g., PCBs, DDT) compounds
(c) portions of a lake not well mixed with the "open water" or otherwise distant from the primary sampling site(s), including the shoreline, bottom sediment and isolated coves
(d) rooted aquatic plant impacts in areas of the lake not evaluated by the sampling volunteers
(e) diverging perceptions of recreational-use impacts, particularly in lakes with shorelines or isolated coves exhibiting conditions very different from those sampled or evaluated by the sampling volunteers
(f) impacts to fish or other fauna due to factors unrelated to eutrophication
(g) PWL or 303(d) listings for other pollutants or portions of the lake not sampled through CSLAP

For these waterbodies, CSLAP can and should continue to be part of an extensive database used to comprehensively evaluate the entirety of the lake and its uses, but absent a more complete dataset, CSLAP data should be used with caution as a sole means for evaluating the lake. Water-quality evaluations, recommended PWL listings, and other extrapolations of the data and analyses should be utilized in this context and by no means should be considered "the last word" on the lake.

I. INTRODUCTION: CSLAP DATA AND YOUR LAKE

Lakes are dynamic and complex ecosystems. They contain a variety of aquatic plants and animals that interact and live with each other in their aquatic setting. As water-quality changes, so too will the plants and animals that live there, and these changes in the food web also may affect water-quality. Water-quality monitoring provides a window into the numerous and complex interactions of lakes. Even the most extensive and expensive monitoring program **cannot completely assess** the water-quality of a lake. However, by looking at some basic chemical, physical, and biological properties, it is possible to gain a greater understanding of the general condition of lakes. CSLAP monitoring is a basic step in overall water-quality monitoring.

Understanding Trophic States

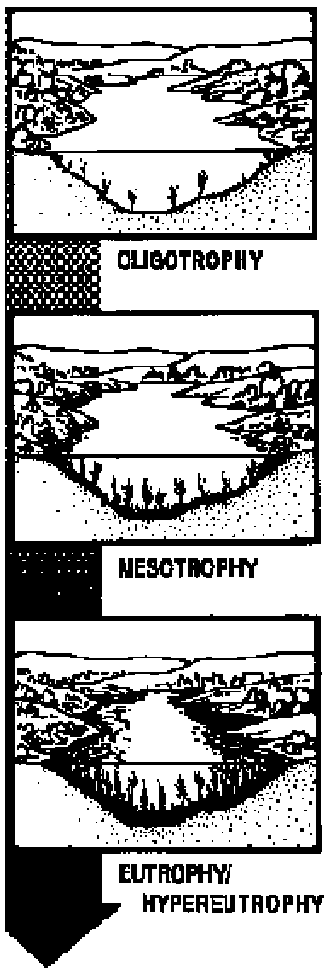


Figure 1- Eutrophication and Lake Succession

All lakes and ponds undergo **eutrophication,** an aging process, which involves stages of succession in biological productivity and water-quality (Figure 1). **Limnologists** (scientists who study freshwater systems) divide these stages into **trophic** states. Each trophic state can represent a wide range of biological, physical, and chemical characteristics and any lake may "naturally" be categorized within any of these trophic states. In general, the increase in productivity and decrease in clarity corresponds to an enrichment of nutrients, plant and animal life. Lakes with low biological productivity and high clarity are considered **oligotrophic**. Highly productive lakes with low clarity are considered **eutrophic**. Lakes that are **mesotrophic** have intermediate or moderate productivity and clarity. It is important to remember that eutrophication is a natural process and is not necessarily indicative of man-made pollution.

In fact, some lakes are thought to be "naturally" productive. Trophic classifications are not interchangeable with assessments of water-quality. Water-quality degradation from the perspective of one user may contrast with the perception of favorable conditions by a different lake user. For example, a eutrophic lake may support an excellent warm-water fishery because it is nutrient rich, but a swimmer may describe that same lake as polluted. A lake's trophic state is still important because it provides lake managers with a reference point to view changes in a lake's water-quality and they begin to understand how these changes may cause **use impairments** (threaten the use of a lake or swimming, drinking water or fishing)**.**

When human activities accelerate lake eutrophication, it is referred to as **cultural eutrophication**. Cultural eutrophication may result from shoreline erosion, agricultural and urban runoff, wastewater discharges or septic seepage, and other non-point source pollution sources. These can greatly accelerate the natural aging process of lakes, cause successional changes in the plant and animal life within the lake, shoreline and surrounding watershed, and impair the water-quality and value of a lake. They may ultimately extend aquatic plants and emergent vegetation throughout the lake, resulting in the transformation of the lake into a marsh, prairie, and forest. The extent of cultural eutrophication and the corresponding pollution problems can be signaled by significant changes in the trophic state over a short period.

Why is this important? New York State lakes can be affected by a variety of stressors, from acid rain to zebra mussels and almost everything in between. In any given part of the state, some of these stressors are more important than others. For example, there are probably more lakes affected by acid rain than any other pollutant, but these impacts are typically associated with a particular region (the

Adirondacks and Catskills) and particular type of lake (small, high-elevation lakes in basins with thin soils and little buffering capacity). But for most lakes in New York, cultural eutrophication represents the most significant source of pollutants and threat to water-quality. As a result, water-quality indicators related to eutrophication comprise the foundation of most water-quality monitoring programs.

II. CSLAP SAMPLING PARAMETERS

CSLAP monitors several parameters related to the trophic state of a lake, including the clarity of the water, the amount of nutrients in the water, and the amount of algae resulting from those nutrients. Three parameters are the most important measures of eutrophication in most New York lakes: **total phosphorus, chlorophyll *a*** (estimating the amount of algae), and **Secchi disk transparency**. Because these parameters are closely linked to the growth of weeds and algae, they provide insight into "how the lake looks" and its suitability for recreation and aesthetics. Other CSLAP parameters help characterize water-quality at the lake. Each of these sampling parameters is outlined in Figure 3. In addition, CSLAP also uses the responses on the Field Observation Forms to gauge volunteer perceptions of lake water-quality. Most water-quality "problems" arise from impairment of accepted or desired lake uses, or the perception that such uses are somehow degraded. As such, any water-quality monitoring program should attempt to understand the link between perception and measurable quality.

The parameters analyzed in CSLAP provide valuable information for characterizing lakes. By adhering to a consistent sampling protocol provided in the CSLAP Sampling Protocol sampling volunteers collect and use data to assess both seasonal and yearly fluctuations in these parameters and to evaluate the water-quality conditions in their lake. By comparing a specific year's data to historical water-quality information, lake managers can pinpoint trends and determine whether water-quality is improving, degrading or remaining stable. Such a determination answers a first critical question posed in the lake-management process.

Ranges for Parameters Assessing Trophic Status and Lake Kitchawan

The relationship between phosphorus, chlorophyll *a*, and Secchi disk transparency has been explored by many researchers, to assess the trophic status (the degree of eutrophication) of lakes. Figure 2 shows the ranges for phosphorus, chlorophyll a, and Secchi disk transparency (summer median) that are representative for the major trophic classifications:

Figure 2. Trophic Status Indicators

Parameter	Eutrophic	Mesotrophic	Oligotrophic	Lake Kitchawan
Phosphorus (mg/l)	> 0.020	0.010 - 0.020	< 0.010	**0.076**
Chlorophyll a (μg/l)	> 8	2- 8	< 2	**0.3**
Secchi Disk Clarity (m)	< 2	2- 5	> 5	**0.7**

These classifications are valid for clear-water lakes only (with less than 30 platinum color units). Some humic or "tea color" lakes, for example, naturally have high levels of dissolved organic material, resulting in color readings that exceed 30 color units. This will cause the water transparency to be lower than expected, given low phosphorus and chlorophyll *a* levels in the lake. Water transparency can also be unexpectedly lower in shallow lakes due to influences from the bottom (or the inability to measure the maximum water clarity due to the visibility of the Secchi disk on the lake bottom). Even shallow lakes with high water clarity, low nutrient concentrations, and little algal growth may also have significant weed growth due to shallow water conditions. While such a lake may be considered unproductive by most water-quality standards, that same lake may experience severe aesthetic problems and recreational impairment related to weeds, not trophic state. Generally, however, the trophic relationships described above can be used as an accurate "first" gauge of productivity and overall water-quality.

Figure 3. CSLAP Parameters

PARAMETER	SIGNIFICANCE
Water Temperature (°C)	Water temperature affects many lake activities, including the rate of biological growth and the amount of dissolved oxygen. It also affects the length of the recreational season.
Secchi Disk Transparency (m)	Determined by measuring the depth at which a black and white disk disappears from sight, the Secchi disk transparency estimates the clarity of the water. In lakes with low color and rooted macrophyte ("weed") levels, it is related to algal productivity.
Conductivity (μmho/cm)	Specific conductance measures the electrical current that passes through water, and is used to estimate the number of ions (charged particles). It is somewhat related to both the hardness and alkalinity (acid-buffering capacity) of the water and may influence the degree to which nutrients remain in the water. Generally, lakes with conductivity of <100 μmho/cm are considered softwater, while conductivity readings >300 μmho/cm are found in hardwater lakes.
pH	pH is a measure of the (free) hydrogen ion concentration in solution. Most clearwater lakes must maintain a pH between 6 and 9 to support most types of plant and animal life. Low pH waters (<7) are acidic, while high pH waters (>7) are basic.
Color (true) (platinum color units)	The color of dissolved materials in water usually consists of organic matter, such as decaying macrophytes or other vegetation. It is not necessarily indicative of water-quality but may significantly influence water transparency or algae growth. Color in excess of 30 ptu indicates sufficient quantities of dissolved organic matter to affect clarity by imparting a tannic color to the water.
Phosphorus (total, mg/l)	Phosphorus is one of the major nutrients needed for plant growth. It is often considered the "limiting" nutrient in NYS lakes, for biological productivity is often limited if phosphorus inputs are limited. Nitrogen-to-phosphorus ratios of >25 generally indicate phosphorus limitation. Many lake management plans are centered on phosphorus controls. Phosphorus is reported as total phosphorus (TP)
Nitrogen (nitrate, ammonia, and total (dissolved), mg/l)	Nitrogen is another nutrient necessary for plant growth and can act as a limiting nutrient in some lakes, particularly in the spring and early summer. Nitrogen to phosphorus ratios <10 generally indicate nitrogen limitation (for algae growth). For much of the sampling season, many CSLAP lakes have very low or undetectable levels of one or more forms of nitrogen. It is measured in CSLAP in three forms_ nitrate/nitrite (NO_x) ammonia ($NH_{3/4}$), and total nitrogen (TN or TDN).
Chlorophyll *a* (μg/l)	The measurement of chlorophyll *a*, the primary photosynthetic pigment found in green plants, provides an estimate of phytoplankton (algal) productivity, which may be strongly influenced by phosphorus.
Calcium (mg/l)	Calcium is a required nutrient for most aquatic fauna and is required for the shell growth for zebra mussels (at least 8-10 mg/l) and other aquatic organisms. It is naturally contributed to lakes from limestone deposits and is often strongly correlated with lake buffering capacity and conductivity.

By the Secchi disk transparency and total phosphorus trophic standards described above, Lake Kitchawan would be considered to be a *eutrophic***,** or highly productive, lake, while by the chlorophyll *a* criteria listed above, the lake would be considered *oligotrophic*, or highly unproductive. It is likely that this (single) chlorophyll *a* reading is not representative of normal conditions the lake. The most appropriate trophic classification for Lake Kitchawan is probably *eutrophic*. The trophic condition of Lake Kitchawan will be discussed in greater detail later in this report.

III. CSLAP LAKES

CSLAP sampling began in 1986 on 25 lakes generally distributed throughout the state, and in the following 23 years has expanded to more than 220 lakes. The program was developed primarily to identify water-quality problems, develop long-term databases, and educate lakefront property owners on small lakes with little historical information and few other contemporary studies. However, the program has been utilized by lake residents, lake associations and managers, municipalities, state and federal government and environmental organizations to gain insights about small ponds, large high-profile lakes and multi-use reservoirs from eastern Long Island to the northern Adirondacks, to the western border of New York State. A map showing each of the lakes sampled through CSLAP since 1986 is shown in Figure 4. The distribution of lakes roughly matches the distribution of lake associations in the state (or at least those affiliated with the NY Federation of Lake Associations, the largest lake association organization in the state). The relative paucity of CSLAP lakes in the Finger Lakes region reflects the small number of lakes in a region dominated by very large lakes, while the small number of lakes sampled in the Catskills, Long Island, and western NY reflects the shortage of organized lake associations in those areas.

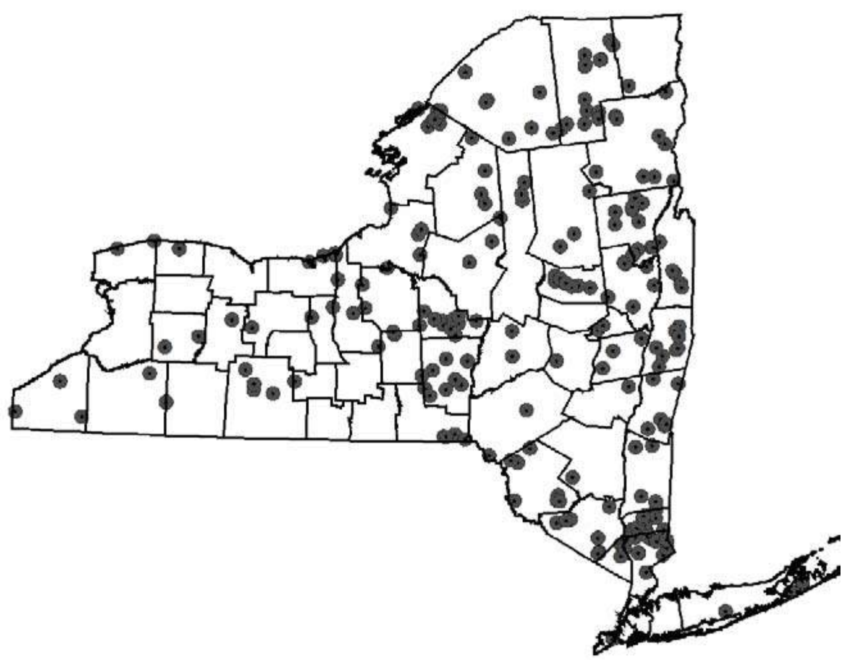


Figure 4: CSLAP Sampling Sites, 1986-2008

CSLAP lakes have ranged from the very small (three acre Black Pond in the Greenbelt region of Long Island) to the great (two state park beaches on Lake Ontario). It has included perhaps the clearest lake in New York State (Skaneateles Lake, one of the Finger Lakes, with as much as 50 feet of water transparency) and several lakes with clarity as low as one foot. There are a large number of lakes used for potable water, as well as those classified only for fishing and non-contact recreation. Some lakes (those on Long Island) sit just above sea level, while others are perched high in the clouds, including Summit Lake in central NY and Twitchell Lake in the Adirondacks, more than 2,000 feet above sea level.

Figures 5a and 5b summarize the variety of lakes sampled through CSLAP. In short, these lakes constitute a reprehensive cross-section of the lake conditions, uses, and settings encountered in New York State.

The typical CSLAP lake is slightly larger than the typical New York State lake and is more likely to be found in the Adirondacks, downstate, and central New York (generally the region bound by the Adirondacks, Finger Lakes, and the downstate region). Specifically, the “average” CSLAP lake is about 125 acres in size, at an elevation of about 1000 feet (300 meters), and can be found in Otsego County in the Leatherstocking region of New York State, the approximate geographic center of the CSLAP lake population. The typical New York state lake, on the other hand, would be in Fulton County in the southern Adirondacks, and would be about 20 acres in size and perched at an elevation of about 1700 feet (530 meters). The vast majority of lakes in New York state are small, and an inordinate number of lakes are found in the Adirondacks, although there are many other lake-rich regions in the state.

However, this CSLAP profile, as well as the preponderance toward "mid-elevation" regions, is probably more typical of the "lake community" regions of the state. This corresponds to those regions in which large numbers of lakes are heavily populated, which in turn represents lower elevation waterbodies that support siting septic systems and have close proximity to roads and other non-lake communities (comprised of visitors and seasonal lake residents). The relatively higher percentage of Class B lakes in CSLAP and Class C lakes in the rest of the state reflects the large number of uninhabited Class C lakes in the Adirondacks. These lakes have been classified as Class C lakes, often by default, due in part to the lack of information about historical or contemporary lake uses and water-quality conditions. On the other hand, most of the more densely populated lakes closer to the major population centers of the state have been designated as Class B lakes, owing to their long-standing use for contact recreation. As noted in the individual summary reports for many of the Class C lakes, it is likely that these lakes actively support swimming and other contact recreation, and the state classification system will eventually "catch up" to these recreational uses.

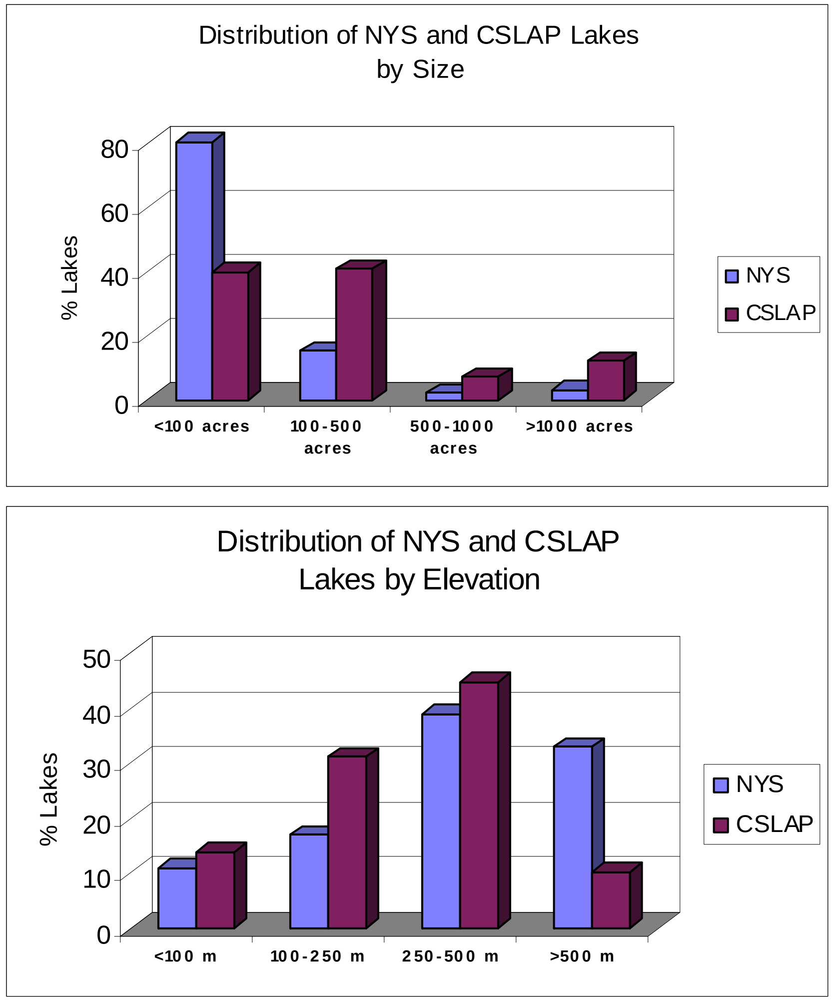
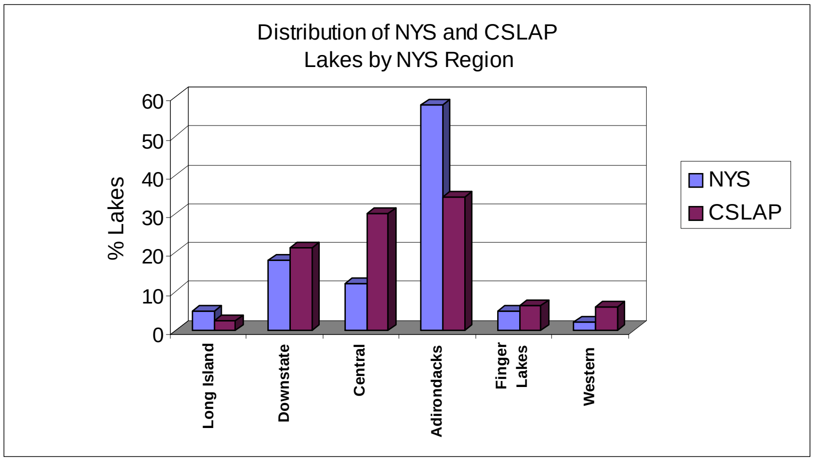


Figure 5a- Comparison of CSLAP and New York State Lakes by Size and Elevation



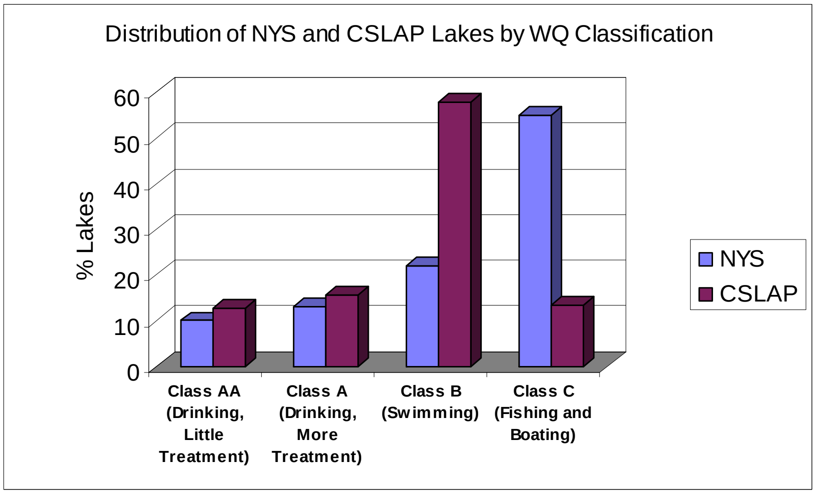


Figure 5b- Comparison of CSLAP and New York State Lakes by New York State Region and Water Quality Classification

However, many of the lake distribution categories displayed in Figures 5a and 5b indicate similar cross-sections of lakes. There are relatively few lakes in Long Island, Western New York and the Finger Lakes region, whether looking at the entirety of New York state or just those lakes in CSLAP. There are also few Class AA and A lakes—those used for potable water intake—in New York state or within the CSLAP database.

The distribution of lakes in these categories does suggest that CSLAP lakes are mostly comparable to other New York State lakes, and that an evaluation of CSLAP data may serve as a reasonable surrogate for statewide water-quality evaluations, particularly since CSLAP serves as the primary long-term database maintained and supported by New York State.

IV: LAKE KITCHAWAN- BACKGROUND INFORMATION

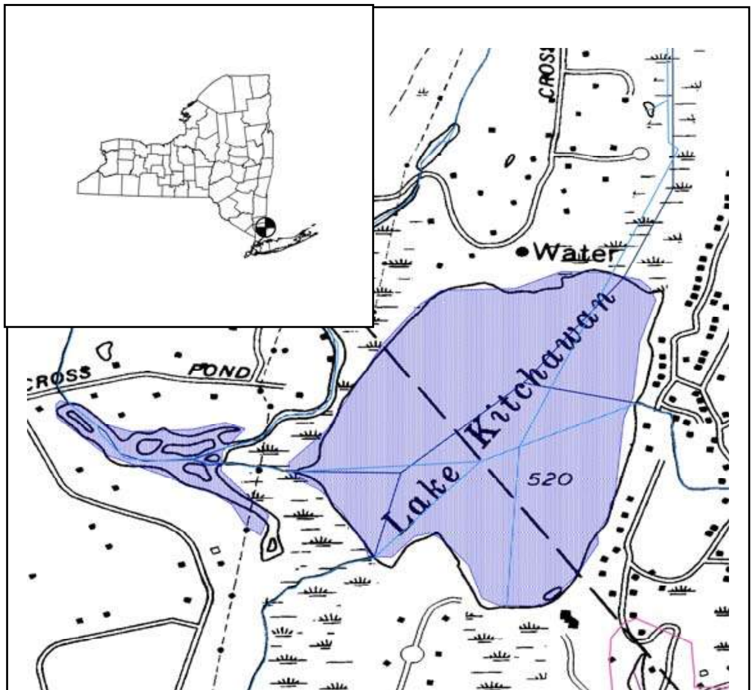


Figure 6- Location of Lake Kitchawan

Lake Kitchawan is a 90 acre, class B lake found in the Town of Pound Ridge in Westchester County, just north of New York City. The lake was first sampled as part of CSLAP in 2008. Figure 6 shows the location of Lake Kitchawan. It is one of 16 CSLAP lakes among the >100 lakes found in Westchester County, and one of 42 CSLAP lakes among the >360 lakes and ponds in the Lower Hudson River drainage basin. Lake Kitchawan is a Class B lake; this means that the best intended use for the lake is for contact recreation—swimming and bathing, and non-contact recreation—boating and aesthetics. These "categories" will be used to evaluate water-quality conditions later in the report.

CSLAP samples have been collected from the deepest part of the lake, but the CSLAP volunteers did not identify the depth of the deepest part of the lake during the single CSLAP sampling session conducted in 2008.

Historical Water-Quality Information for Lake Kitchawan

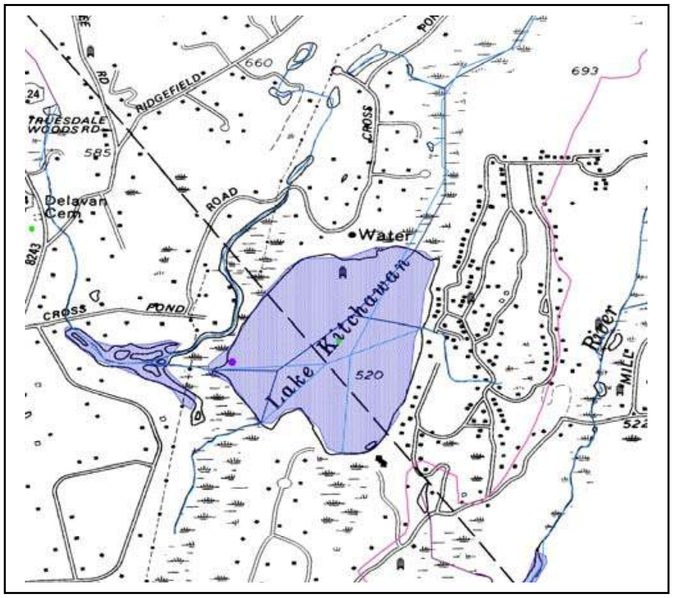
Lake Kitchawan has not been sampled through any previous NYSDEC monitoring program. It is not known if any private monitoring has been done to support fish stocking or resource management.

There are no NYSDEC RIBS monitoring sites near Lake Kitchawan, and there are no permanent named tributaries to the lake.

Historical Fisheries Information for Lake Kitchawan

It is not believed (by the report authors) that Lake Kitchawan has been stocked through any state fisheries stocking programs, but it is not known if any private stocking has occurred.

General statewide fishing regulations are applicable in Lake Kitchawan.



Permitted Facilities Associated with Lake Kitchawan

The map to the left shows the only activities on Lake Kitchawan that require permits or are otherwise regulated by the NYSDEC, represented by a "derrick" symbol. These permits are associated with a driveway extension and a hydroraking project. The circle on the western shore corresponds to the location of a protected damselfly species (the New England bluet).

V. NEW YORK STATE, CSLAP AND LAKE KITCHAWAN WATER-QUALITY DATA: 1986-2007

Overall Summary:

Although water-quality conditions at each CSLAP lake have varied each year since 1986, and although detailed statistical analyses of the entire CSLAP dataset has not yet been conducted, general water-quality trends can be evaluated after 5-22 years' worth of CSLAP data from these lakes. Overall (regional and statewide) water-quality conditions and trends can be evaluated by a variety of different means. Each of the tested parameters ("analytes") can be evaluated by looking at how the analyte varies from year to year from the long-term average ("normal") condition for each lake, and by comparing these parameters across a variety of categories, such as across regions of the state, across seasons (or months within a few seasons), and across designated best uses for these lakes. Such evaluations are provided in the second part of this summary, via figures 7 through 17. The annual variability is expressed as the difference in the annual average (mean) from both the long-term average and the normal variability expected from this long-term average. The latter can be presented as the "standard error" (SE, calculated here within the 95% confidence interval)—one standard error away from the long-term average can be considered a "moderate" change from "normal," with a deviation of two or more standard errors considered to be a "significant" change. For each of these parameters, the percentage of lakes with annual data falling within one standard error from the long-term average are considered to exhibit "no change," with the percentage of lakes demonstrating moderate to significant changes also displayed on these graphs (figures 7a through 17a). Annual changes in these lakes can also be evaluated by standard linear regressions- annual means over time, with moderate correlation defined as $R^2 > 0.33$, and significant correlation defined as $R^2 > 0.5$. These methods are described in greater detail in Appendix D. Assessments of weather patterns—whether a given year was wetter or drier than usual—accounts for broad statewide patterns, not weather conditions at any particular CSLAP lake. As such, weather may have very different impacts at some (but not most) CSLAP lakes in some of these years.

Long-term trends can also be evaluated by looking at the summary findings of individual lakes and attempting to extrapolate consistent findings to the rest of the lakes. Given the (non-Gaussian) distribution of many of the water-quality parameters evaluated in this report, non-parametric tools may be the most effective means for assessing the presence of a water-quality trend. However, these tools do not indicate the magnitude of the trend. As such, a combination of parametric and non-parametric tools is employed here to evaluate trends. The Kendall tau ranking coefficient has been utilized by several researchers and state water-quality agencies to evaluate water-quality trends via non-parametric analyses and is utilized here. For parametric analyses, best-fit analysis of summer (June 15 through September 15) averages for each of the eutrophication indicators can be evaluated, with trends attributable to instances in which deviations in annual means exceed the deviations found in the calculation of any single annual mean. "Moderate" change is defined as $\tau > 0.33$, and "significant" change is defined as $\tau > 0.5$. It has been demonstrated in many of these programs that long-term trend analyses cannot be utilized to evaluate lake datasets until at least five years' worth of data have been collected.

As of 2008, there were 159 CSLAP lakes that have been sampled for at least five years; of these, 115 were sampled within the last five years. The change in these lakes is demonstrated in figures 7 and 8; figures 7a through 7l indicate "moderate" long-term change, while figures 8a through 8l indicate "significant" long-term change**.** When these lakes are analyzed by this combination of parametric and non-parametric analyses, these data suggest that while most NYS lakes have not demonstrated a significant change (either τ or $R^2 > 0.5$) or even a moderate changes (τ or $R^2 > 0.33$).

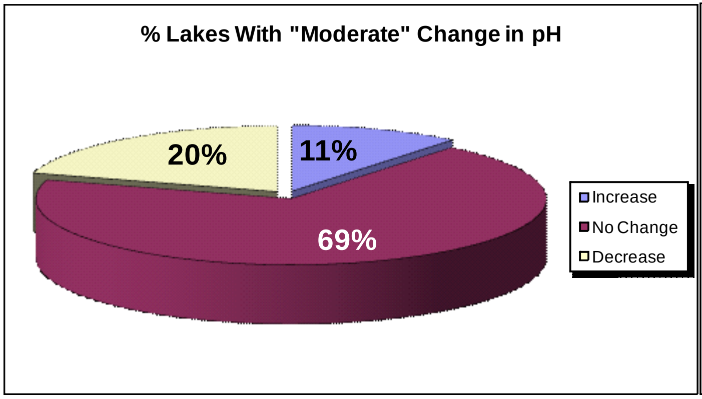


Figure 7a. %CSLAP Lakes Exhibiting Moderate Long-Term Change in pH

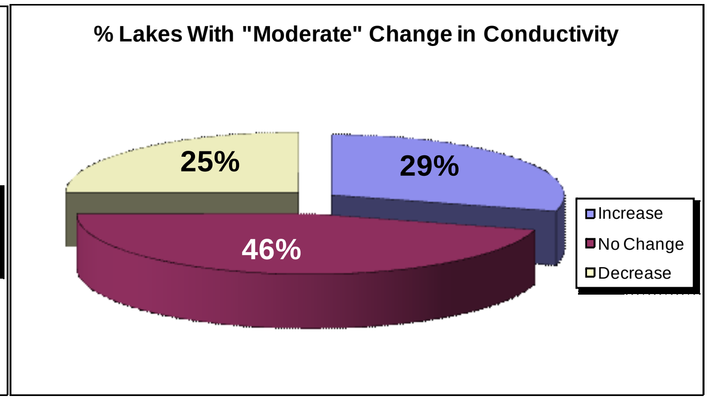


Figure 7b. %CSLAP Lakes Exhibiting Moderate Long-Term Change in Conductivity

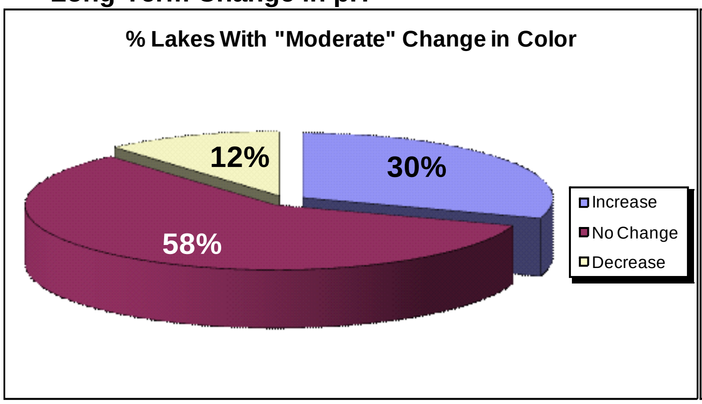


Figure 7c. %CSLAP Lakes Exhibiting Moderate Long-Term Change in Color

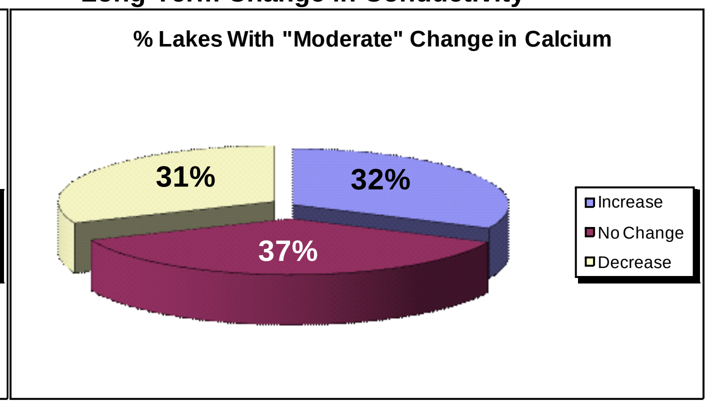


Figure 7d. %CSLAP Lakes Exhibiting Moderate Long-Term Change in Calcium

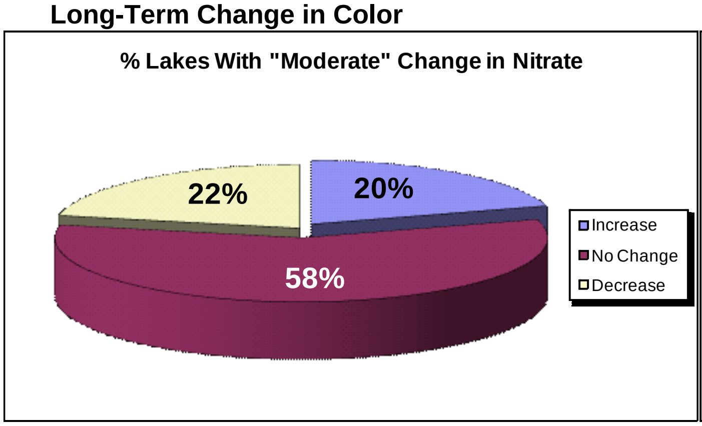


Figure 7e. %CSLAP Lakes Exhibiting Moderate Long-Term Change in Nitrate

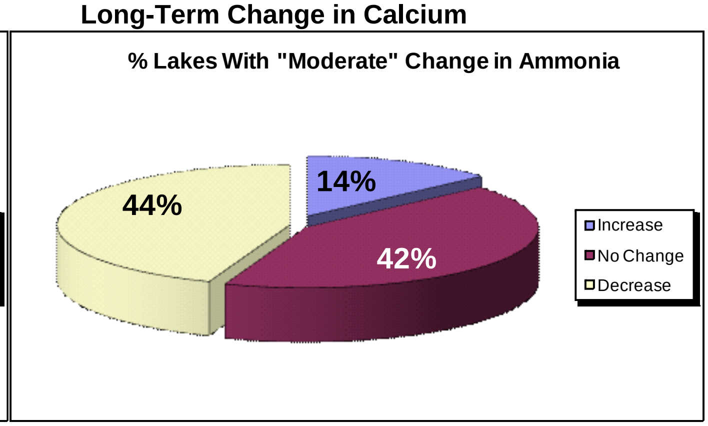


Figure 7f. %CSLAP Lakes Exhibiting Moderate Long-Term Changes in Ammonia

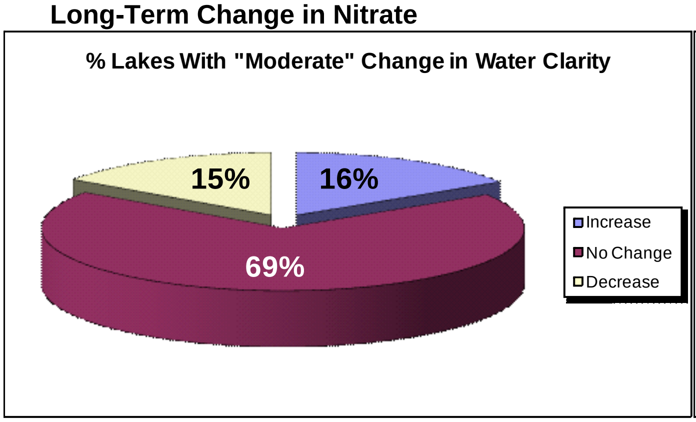


Figure 7g. %CSLAP Lakes Exhibiting Moderate Long-Term Change in Water Clarity

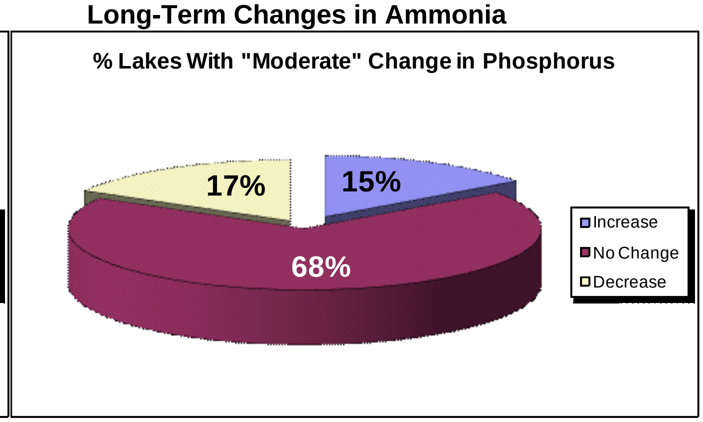


Figure 7h. %CSLAP Lakes Exhibiting Moderate Long-Term Changes in Phosphorus

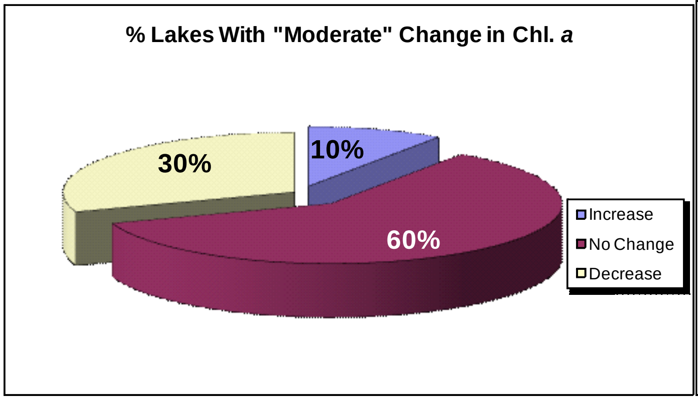


Figure 7i. %CSLAP Lakes Exhibiting Moderate Long-Term Change in Chlorophyll *a*

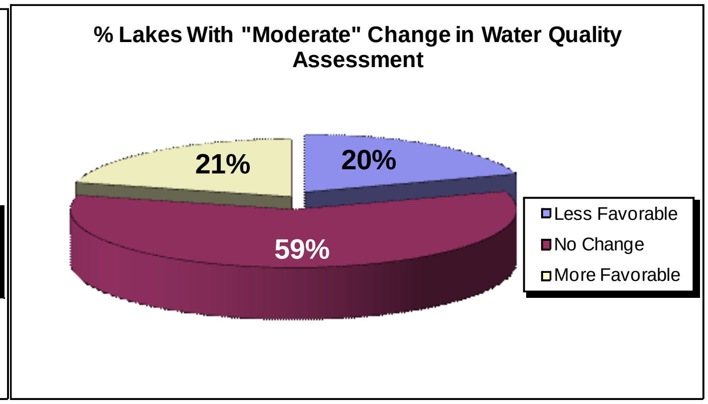


Figure 7j. %CSLAP Lakes Exhibiting Moderate Long-Term Change in Water-quality Assessment

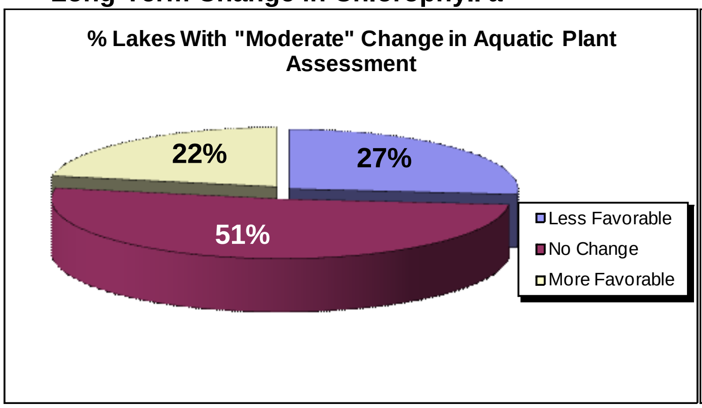


Figure 7k. %CSLAP Lakes Exhibiting Moderate Long-Term Change in Aquatic Plant Assessment

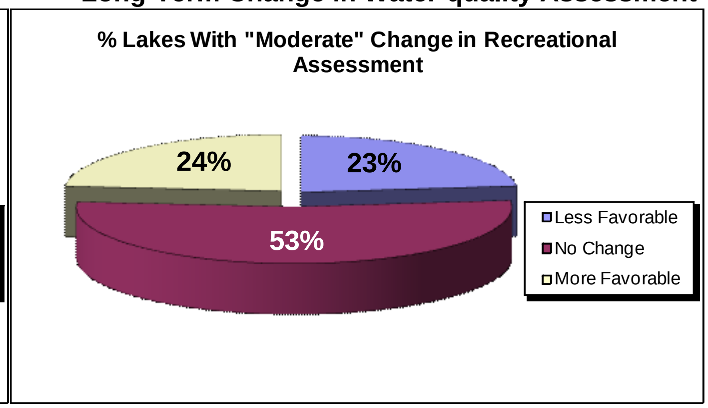


Figure 7l. %CSLAP Lakes Exhibiting Moderate Long-Term Change in Recreational Assessment

Some of the lakes sampling through CSLAP have demonstrated a moderate change since CSLAP sampling began in 1986, at least for some of the sampling parameters measured through CSLAP. In general, between 50% and 65% of the CSLAP lakes have not exhibited even moderate changes. Some of the parameters that have exhibited moderate changes may not reflect actual water-quality change. For example, it appears that the increase in color (Figure 7c) could be due to the shift in laboratories, even though the analytical methods are comparable. However, in most parts of the state, more precipitation fell in the last 10-12 years than in the previous 10-12 years. For some CSLAP lakes, this may have triggered an increase in runoff in organic soils. The decrease in pH (Figure 7a) is probably a real phenomenon—this decrease was evident to some degree prior to the shift in laboratories, and both are largely predictable. The differences in the other indicators do not appear to be important and probably indicates random variability.

Figures 8a through 8l indicate that, not surprisingly, “substantial” change is less common. Substantial change follows the same patterns as discussed above with the evaluation of “moderate” change in CSLAP lakes, except that the percentage of CSLAP lakes not exhibiting significant change is much higher, rising to about 65-85% of these lakes. For those CSLAP lakes exhibiting substantial change, it is most apparent in the same parameters described above. About 20% of the CSLAP lakes have exhibited a substantial increase in water color, consistent with a broad (and expected) successional pattern, in which lakes generally concentrate materials washed in from the surrounding watershed (and as the runoff itself concentrates organic materials as these watersheds move from forested to more urbanized, whether via residential development or other uses. The comparison between figures 8b and 8e through 8h indicate that this has not (yet) translated into higher nutrient loading into lakes.

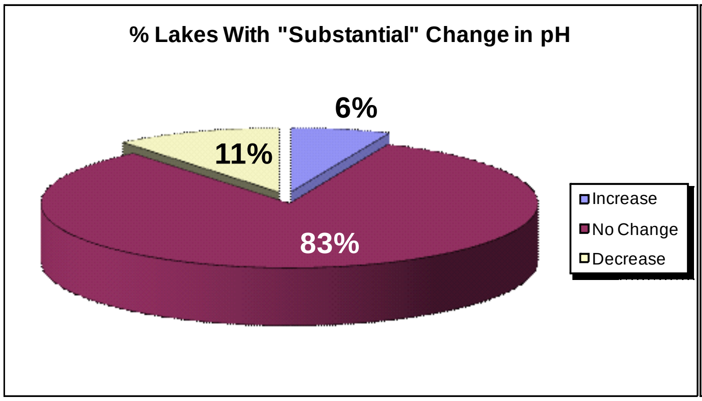


Figure 8a. %CSLAP Lakes Exhibiting Substantial Long-Term Change in pH

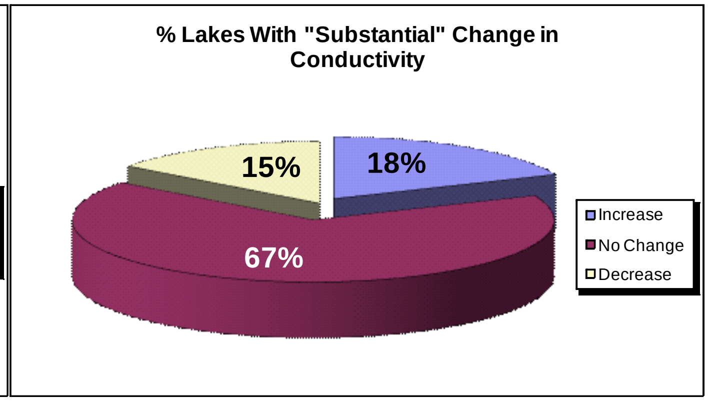


Figure 8b. %CSLAP Lakes Exhibiting Substantial Long-Term Change in Conductivity

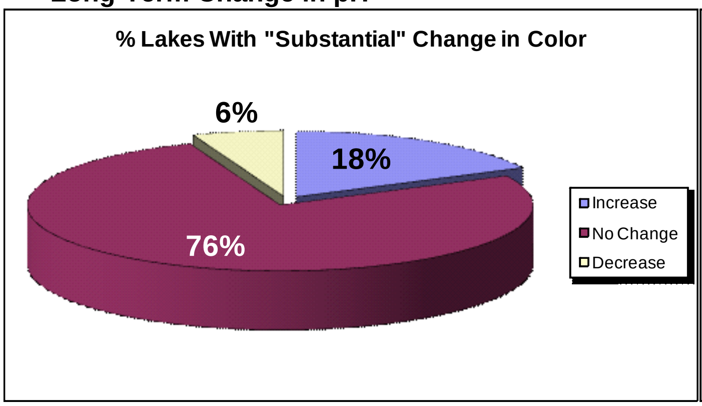


Figure 8c. %CSLAP Lakes Exhibiting Substantial Long-Term Change in Color

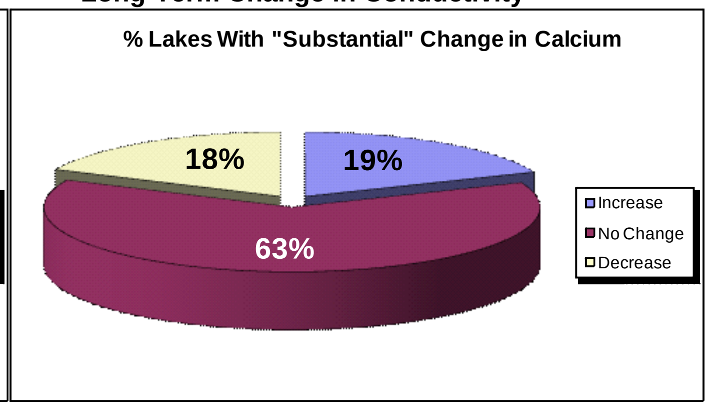


Figure 8d. %CSLAP Lakes Exhibiting Substantial Long-Term Change in Calcium

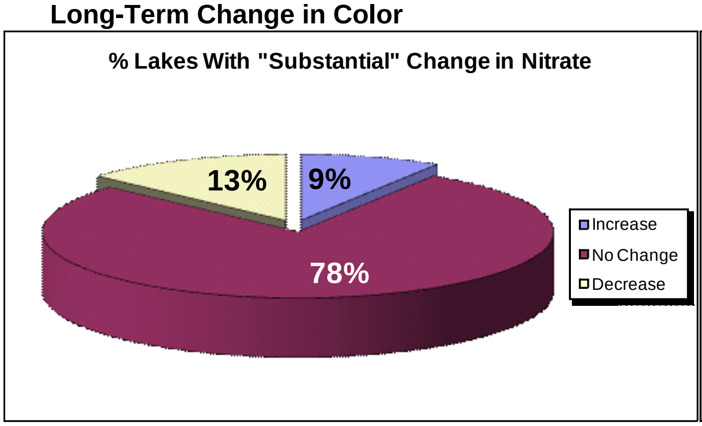


Figure 8e. %CSLAP Lakes Exhibiting Substantial Long-Term Change in Nitrate

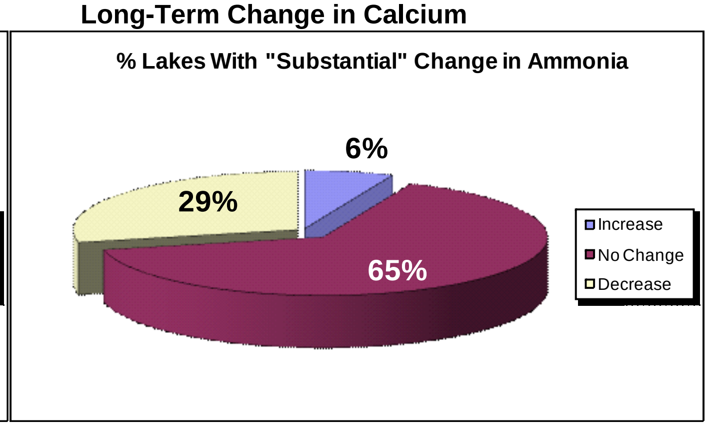


Figure 8f. %CSLAP Lakes Exhibiting Substantial Long-Term Changes in Ammonia

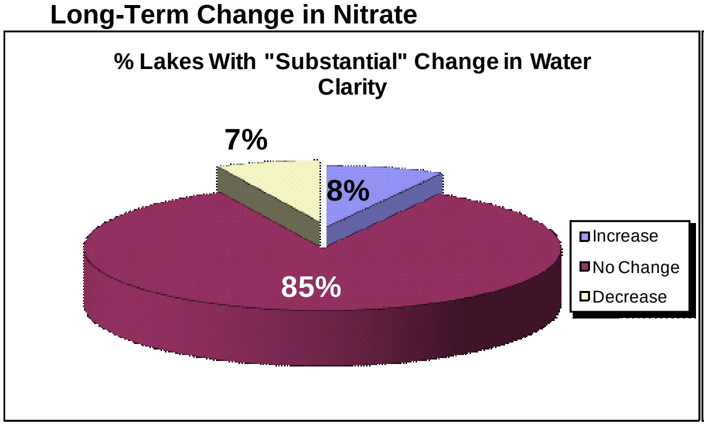


Figure 8g. %CSLAP Lakes Exhibiting Substantial Long-Term Change in Water Clarity

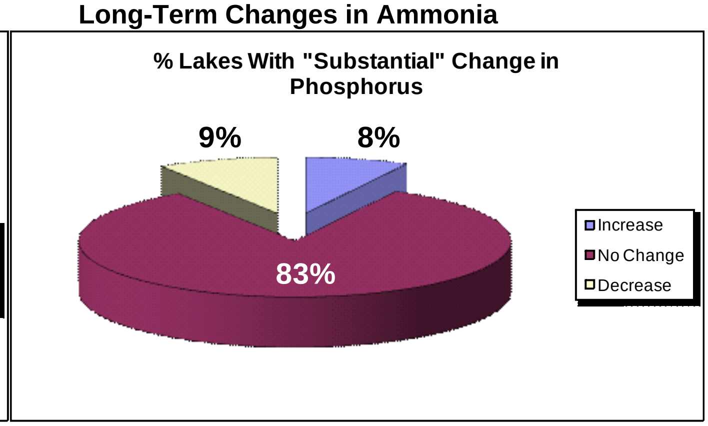
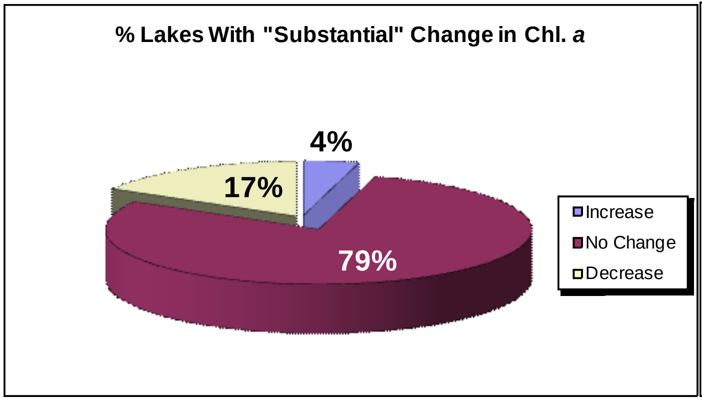


Figure 8h. %CSLAP Lakes Exhibiting Substantial Long-Term Changes in Phosphorus



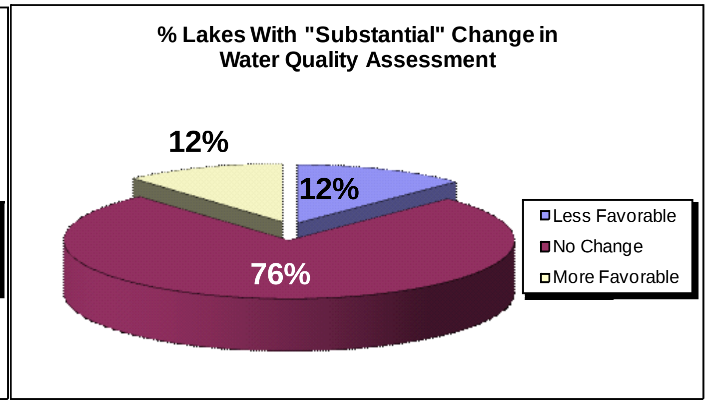
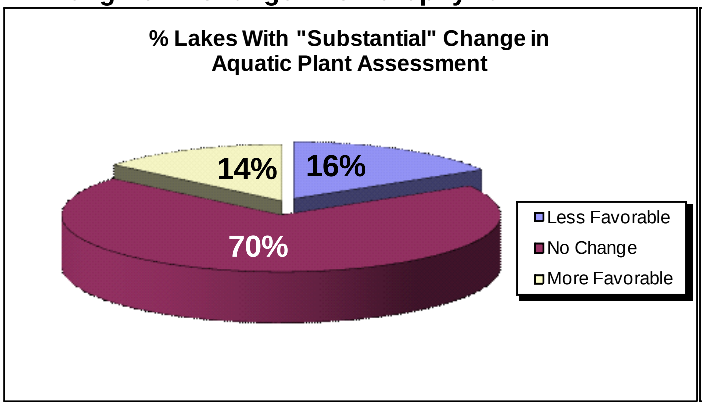


Figure 8i. %CSLAP Lakes Exhibiting Substantial Long-Term Change in Chlorophyll *a*

Figure 8j. %CSLAP Lakes Exhibiting Substantial Long-Term Change in Water-quality Assessment



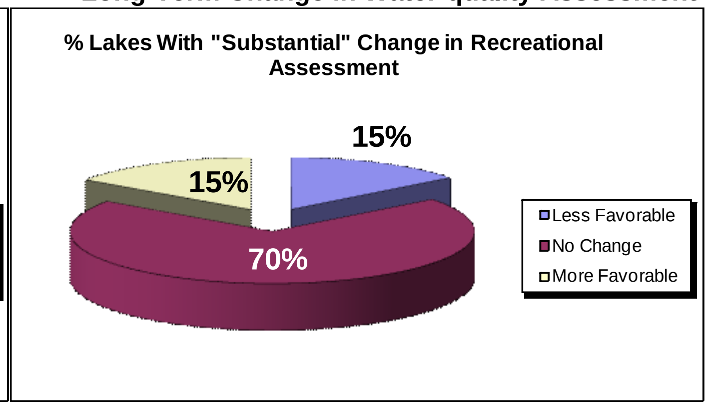


Figure 8k. %CSLAP Lakes Exhibiting Substantial Long-Term Change in Aquatic Plant Assessment

Figure 8l. %CSLAP Lakes Exhibiting Substantial Long-Term Change in Recreational Assessment

As noted above, there does not appear to be any clear pattern between weather and water-quality changes, although some connection between changes in precipitation and changes in some water-quality indicators is at least alluded to in some cases. However, all of these lakes may be the long-term beneficiaries of the ban on phosphorus in detergents in the early 1970s, which, with other local circumstances (perhaps locally more “favorable” weather, local stormwater or septic management, etc.), has resulted in less productive conditions. Without these circumstances, water-quality conditions in many of these lakes might otherwise be more productive in the creeping march toward aging, eutrophication, and succession (as suggested from the steady rise in conductivity). In other words, the higher materials loading into these lakes may be largely balanced by a reduction in nutrients within the corresponding runoff.

The drop in pH in NYS lakes has been studied at length within the Adirondacks and may continue to be attributable on a statewide basis to acid rain, which continues to fall throughout the state. The CSLAP dataset is not adequate to evaluate any ecological changes associated with higher lake acidity, and it is certainly worth noting that the slight drop in pH in most CSLAP lakes does not bring these lakes into an acidic status (these lakes have, at worse, become slightly less basic). In addition, for lakes most susceptible to acidification, laboratory pH is only an approximation of actual pH. Fully accurate pH readings require field measurements using very specialized equipment, although for most lakes with even modest buffering capacity, laboratory pH is a good estimate of *in situ* pH readings. So while the decrease in pH in some CSLAP lakes should continue to be watched, it does not appear to be a cause for concern, at least relative to the low pH in small, undeveloped, high-elevation lakes within the Adirondack Park.

Lake perception has changed more significantly than water-quality (except conductivity). None of the lake perception indicators—water-quality, weeds, or recreation—have varied in a consistent manner, although variability is more common in each of these indicators. The largest change is in recreational assessments, with about one third of all lakes exhibiting substantial change and nearly half demonstrating moderate change. A more detailed analysis of these assessments (not presented here) indicates that the Adirondacks have demonstrated more "positive" change than other regions of the state, due to the perception that aquatic weed densities have not increased as significantly (and water-quality conditions have improved in some cases). However, the rapid spread of *Myriophyllum spicatum* into the interior Adirondacks will likely reverse this "trend" in coming years, and it is not clear if these "findings" can be extrapolated to other lakes within the Adirondack Park.

Figure 9- NOAA Weather Zones in New York State

Larger trends and observations about each of the CSLAP sampling parameters are presented below in figures 10 through 21. Information about general precipitation and runoff patterns—whether a particular year was wet or dry—is reported to provide a basis for understanding the connection between weather and water quality for lakes in New York state. It is clear that weather patterns are highly variable within the state. While this is also apparent down at the individual lake scale—storms can fall at a lake but not a neighboring lake—the National Oceanographic and Atmospheric Administration (NOAA) has established ten weather zones in New York state corresponding to regions exhibiting similar weather patterns. Weather data for the state can be summarized by each of these zones, in an attempt to fine-tune individual lake analyses to local weather data. This would be even more accurate with individual NOAA station weather data, but these are not consistently available in much of the state.

The individual parameter summaries provided in figures 10-20 correspond to the predominant weather patterns found from 1986 to 2007 in the state. A code can be located above the columns for each year; a "↑" corresponds to wetter (>50%) than normal weather, while "↓" corresponds to drier (<50%) than normal weather, and "0" corresponds to normal weather. In this code, the first symbol corresponds to the winter and spring precipitation, and the second symbol corresponds to summer precipitation. So, for example, a code of "↑↓" corresponds to a wet spring and dry summer, while "00" corresponds to normal spring and summer precipitation. While ideally the individual parameter summaries and weather summaries could be delineated by weather zone, the CSLAP lake dataset is not sufficient large for most of these weather zones to generate statistically meaningful data summaries. However, these weather zone data are used in the individual lake data summaries in **Section IV: Detailed Lake Kitchawan Water Quality Summary.**

Lake Kitchawan is in NOAA weather zone 5, the Hudson Valley region. The precipitation patterns for this zone are summarized below.

Statewide and Lake Kitchawan Regional Weather Patterns

Weather patterns in New York state have varied significantly from year to year since at least 1986. This may be a response to global climatic change, since greater weather variance has been observed by both climatologists and casual observers.

Using the criteria above (wetter = >50% more precipitation than the long-term average, drier = >50% less precipitation than normal) and equally weighing each of the 10 NOAA weather zones in New York state, Table 1 shows the winter (January through March) and spring (April through June) precipitation and "summer" (June through September) precipitation patterns for New York state and the NOAA zone corresponding to Lake Kitchawan. Summer was defined here to overlap with spring to include the entirety of the sampling season for most CSLAP lakes.

Year	Statewide Avg: Winter-Spring / Summer	NOAA Zone 5 Avg: Winter-Spring / Summer
1986	Normal / Wet	Normal / Normal
1987	Dry / Normal	Normal / Wet
1988	Very Dry / Normal	Very Dry / Normal
1989	Wet / Normal	Wet / Normal
1990	Very Wet / Normal	Very Wet / Normal
1991	Normal / Normal	Dry / Normal
1992	Normal / Wet	Dry / Normal
1993	Wet / Normal	Normal / Normal
1994	Wet / Normal	Very Wet / Wet
1995	Very Dry / Normal	Very Dry / Normal
1996	Very Wet / Normal	Very Wet / Very Wet
1997	Normal / Normal	Dry / Normal
1998	Very Wet / Normal	Very Wet / Dry
1999	Normal / Normal	Wet / Wet
2000	Very Wet / Normal	Very Wet / Normal
2001	Normal / Normal	Normal / Normal
2002	Very Wet / Dry	Normal / Normal
2003	Normal / Wet	Normal / Very Wet
2004	Dry / Very Wet	Very Dry / Very Wet
2005	Normal / Normal	Wet / Normal
2006	Wet / Wet	Very Wet / Normal
2007	Normal / Normal	Wet / Normal

Table 1: Statewide and NOAA Zone 5 Weather Patterns

The weather data in Table 1 shows that wetter than normal summers have occurred in three of the last four years, although more variable weather patterns have occurred in the winter and spring. The wettest years have been 1990, 1996, 1998, 2004 and 2006, while the driest years were 1988 and 1995. The only dry seasons since 1995 were the winter of 2004 and the summer of 2002.

Data from the Hudson Valley region—which includes Lake Kitchawan—have indicated variable conditions over most of the last twenty years. The wettest years have been 1996, 1994, 1990, 2006, 2000, and 1999, while the driest years were 1995 and 1988. There has been one dry winter (2004) and one dry summer (1998) in the last ten years in this region. With only one sample collected in 2008, it is impossible to determine if conditions were wet or dry during the normal sampling season at Lake Kitchawan.

pH

Annual Variability:

The pH of most CSLAP lakes has consistently been well within acceptable ranges for most aquatic organisms during each sampling season. The average pH has not varied significantly from one sampling season to the next, although pH was highest in 1988 (one of the driest years), 1992, 2006 and 2007 and lowest in 1987 and 2004. pH readings were slightly lower than normal in 1996 but higher than normal in 2006, the two wettest years, and were not significantly different than normal in 1995, perhaps the driest year. There do not appear to be any significant annual pH trends in the CSLAP dataset, at least as evaluated in Figure 10a. 90% of all samples had pH between 6.5 and 8.5 (the state water-quality standards); 6% of samples have pH > 8.5, and 4% have pH < 6.5.

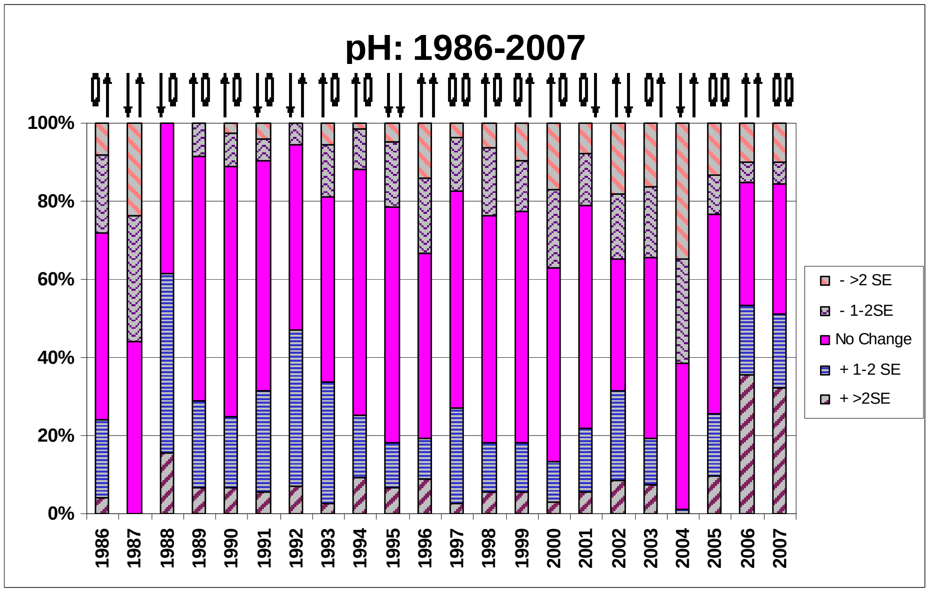


Figure 10a. *Annual Change from "Normal" pH in CSLAP Lakes (SE = Standard Error)*

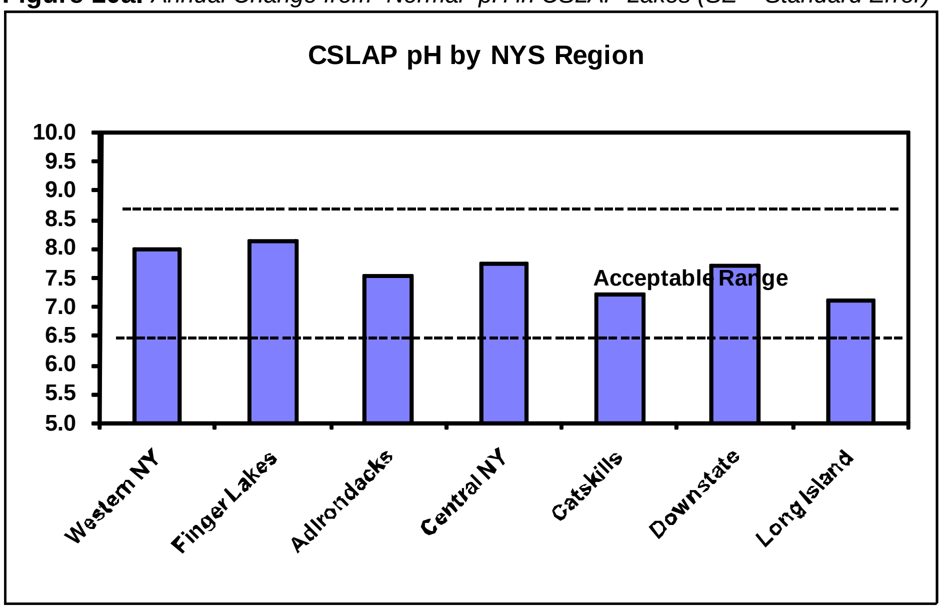


Figure 10b. *pH in CSLAP Lakes by NYS Region*

What Was Expected in 2008?

2008 was a relatively wet year, at least in most of the state during the spring to early summer. There is not a strong correlation between weather and pH during most of the CSLAP sampling seasons. However, pH readings have slightly higher in the last few years, perhaps due to phenomena unrelated to weather. This suggests that pH readings may be slightly higher than normal in 2008, though probably lower than in 2006 and 2007.

What Happened at Lake Kitchawan in 2008?

pH readings in Lake Kitchawan were collected for the first time in 2008, so it is not known if the pH readings recorded were within the normal range for the lake.

Statewide Variability:

As expected, pH readings are lowest in the high-elevation regions (Adirondacks and Catskills) or Long Island, which has primarily shallow and slightly colored lakes, and the highest in regions with relatively high conductivity (western NY and the Finger Lakes region). All of these readings are consistently within the acceptable range for most aquatic organisms. However, the CSLAP dataset does not reflect the low pH found in many high elevation NYS lakes overlying granite and poorly buffered soils, because the typical CSLAP lake resides in geological settings (primarily limestone) that allow for residential development. In other words, pH is one of the few CSLAP sampling parameters that do not yield comparable results when comparing CSLAP results to overall NYS results, because CSLAP lakes are not really representative of the typical NYS lake as related to pH.

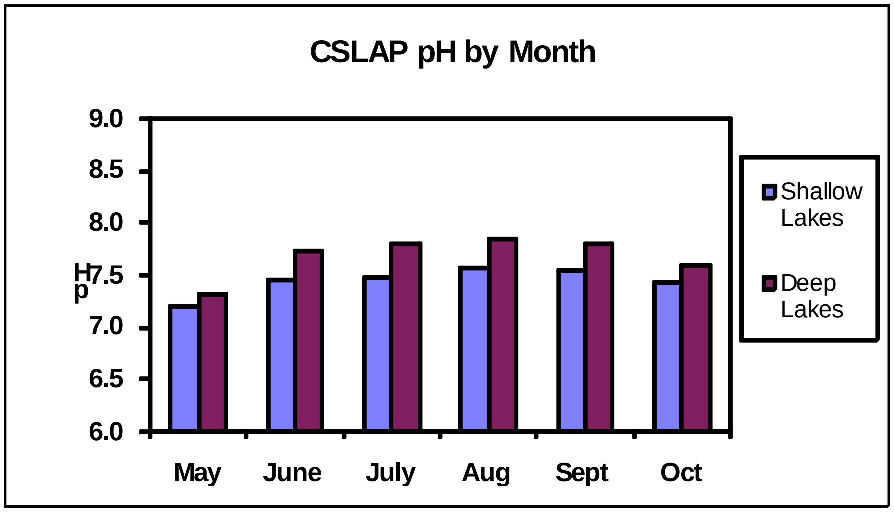


Figure 10c. *pH in Shallow (<20ft deep) and Deep CSLAP Lakes by Month*

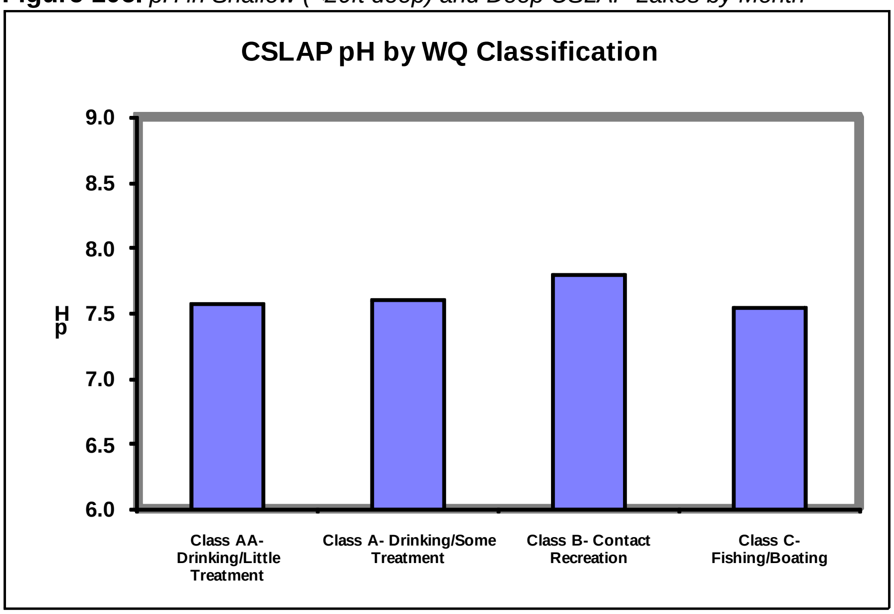


Figure 10d. *pH in CSLAP Lakes by Lake Use*

Seasonal Variability:

pH readings tend to increase slightly during the course of the summer, due largely to increasing algal photosynthesis (which consumes CO_2 and drives pH upward), although these seasonal changes are probably not significant. Low pH depressions are most common early in the sampling season (due to lingering effects from snowpack runoff), and high pH spikes occur mostly in mid- to late summer.

Lake-Use Variability:

pH does not vary significantly from one lake use to another, although in general, pH readings are slightly higher for lakes used primarily for contact recreation (Class B). However, this is probably more reflective of geographical differences (there are relatively more Class B CSLAP lakes in higher pH regions, and more Class A lakes in lower pH regions) than any inherent link between pH and lake usage.

Detailed Discussion #1- pH

Why was pH higher than normal in the last two years (2006 and 2007)?

Discussion:

Figure 10a shows that pH readings in more than 30% of the CSLAP lakes were much higher than normal in either 2006 or 2007. The lakes with the higher increase in pH were not confined to a particular geographic area, size range, or trophic status. These lakes do not share any other common water quality or morphometric characteristics—the higher pH lakes ranged from softwater to hardwater, high elevation to near sea level, Adirondack to downstate, and deep to shallow. It is also worth noting that nearly all of these lakes had pH readings well within the state water quality standards.

Given the connection between pH and conductivity, and between pH and chlorophyll *a* (both usually fall and rise together), it might be reasonable to expect that the lakes with the most significant rise in pH in 2007 would see a rise in either of these related indicators. However, looking at the 20 lakes for which pH rose most significantly (>250% more than expected given the normal variability from year to year) in 2007, fewer than 10% of these lakes also saw a comparable rise in either conductivity or chlorophyll *a* in 2007. In fact, a slightly larger percentage of these lakes saw a small decrease in either conductivity or chlorophyll *a* in 2007, suggesting that the increase in pH was not triggered by heavier runoff (of inorganic sediment) or higher algae growth. For some of these lakes, an isolated rise in pH was associated with higher than normal chlorophyll *a* readings, but for most of the lakes with consistently higher pH in 2007, neither conductivity nor chlorophyll *a* exhibited similar increases over the same sampling period. None of the other water quality indicators measured through CSLAP exhibited similar changes in 2007.

The lack of correlation between pH and the other CSLAP water quality indicators in 2007 suggests that the increase in pH in 2006 and 2007 represents normal variability, notwithstanding the magnitude of the increase in some of these lakes. However, more than 50% of the lakes with substantially higher than normal pH in 2006 also had substantially higher pH in 2007, a higher percentage than expected if this phenomena represented normal variability. This phenomenon was probably not related to precipitation or water level—while most of these lakes had higher pH readings coincident with wetter weather, others exhibited their highest pH during significant drought (with water level reported the lowest in more than 40 years at one lake). No other common factors are apparent in each of the lakes with consistently higher pH readings in both 2006 and 2007.

So for now, the underlying cause for the pH change in some of these CSLAP lakes is not yet apparent, but will continue to be evaluated.

Conductivity

Annual Variability:

There appeared to be a clear trend toward increasing lake conductivity from 1986 through 2004. While conductivity often increased after storm events, the highest conductivity occurred in drier years, since as 1995, with lower readings occurring in wetter years, such as 1996 and 1998. This suggests that other factors may have influenced the rise in conductivity over this period. However, conductivity was much lower than usual in 2006, a wet year, and in 2007, a year with normal precipitation, with nearly half of the CSLAP lakes exhibiting conductivity readings at least one standard error lower than usual in both years.

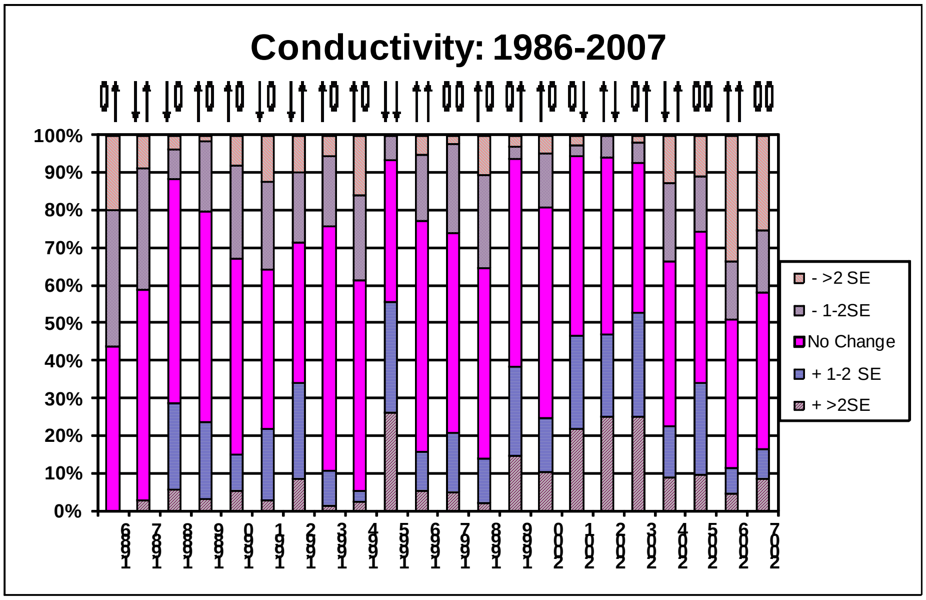


Figure 11a. *Annual Change from "Normal" Conductivity in CSLAP Lakes (SE = Standard Error)*

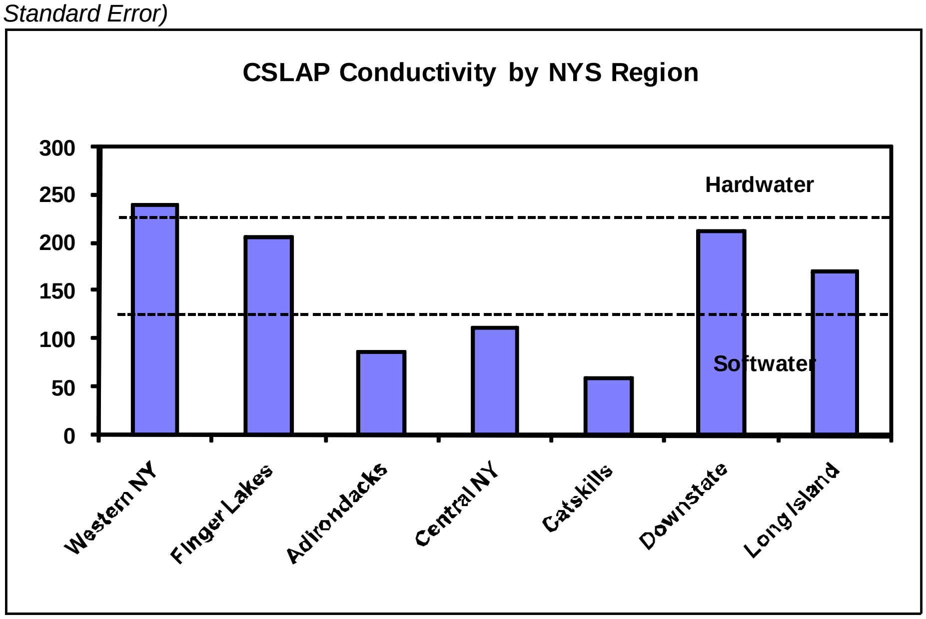


Figure 11b. *Conductivity in CSLAP Lakes by NYS Region*

What Was Expected in 2008?

2008 was a relatively wet year, at least in most of the state during much of the spring to early summer sampling season. The relationship between conductivity and precipitation is not consistent, although as noted below, wet winters appear to have triggered a decrease in summer conductivity. Therefore, it is anticipated that conductivity readings may again be lower than normal, since the winter of 2008 was wetter than normal in much of the state.

What Happened at Lake Kitchawan in 2008?

Conductivity readings in Lake Kitchawan were collected for the first time in 2008, so it is not known if the conductivity readings recorded were within the normal range for the lake.

Statewide Variability:

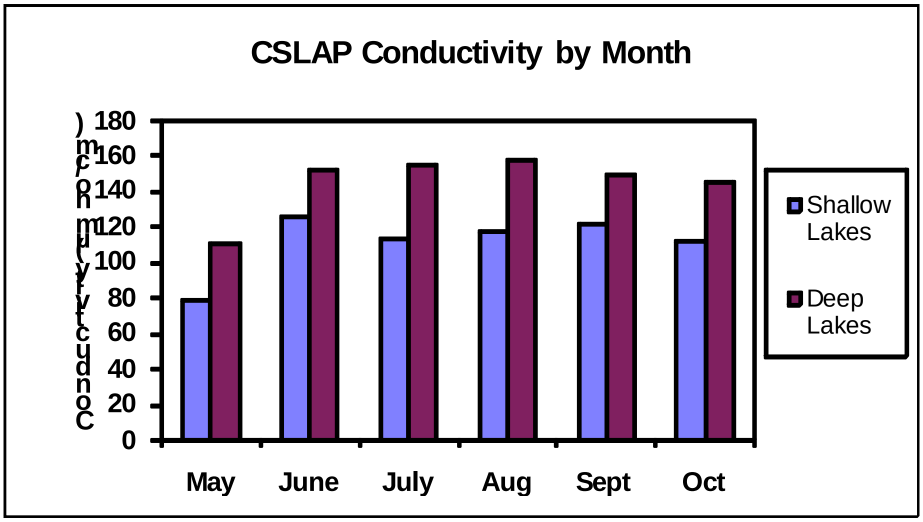


Figure 11c. *Conductivity in Shallow (<20ft deep) and Deep CSLAP Lakes by Month*

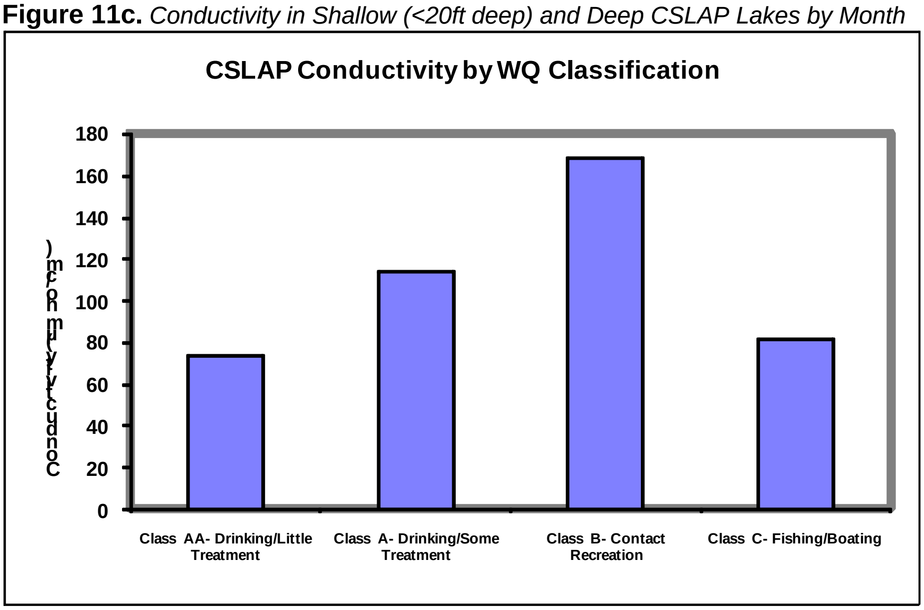


Figure 11d. *Conductivity in CSLAP Lakes by Lake Use*

Although "hardwater" and "softwater" are not consistently defined by conductivity, in general lakes in the Adirondacks and Catskills have lower conductivity (softer water), and lakes downstate, in western NY, and in the Finger Lakes region have higher conductivity (harder water). These regional differences are due primarily to surficial geology and "natural" conditions in these areas. However, within each of these broad geographical areas, there are usually some lakes with higher conductivity and some lakes with lower conductivity readings.

Seasonal Variability:

Conductivity readings are higher in the summer than in the late spring in many CSLAP lakes. These readings decreased in deep lakes in the late summer and fall but remained fairly steady in shallow lakes during this period (actual readings within specific lakes, however, may often vary significantly from week to week). Although lake destratification (turnover) brings bottom waters with higher conductivity to the lake surface in deeper lakes, conductivity readings dropped in the fall. It is possible that fully mixed conditions may be missed in some NYS lakes by discontinuing sampling after the end of October. Conductivity readings overall were higher in deep lakes, although this may be an artifact of the sampling set (there are more CSLAP deep lakes in areas that "naturally" have harder water).

Lake-Use Variability:

Conductivity readings are substantially higher for lakes used primarily for contact recreation (Class B) and are somewhat higher for lakes used for drinking water with some treatment (Class A). However, this is probably more reflective of geographical differences (there are relatively more softwater CSLAP lakes in the Adirondacks, which tend to have more Class A or Class AA lakes, at least in CSLAP, and more Class B lakes are found in hardwater regions) than any *de facto* connection between conductivity and lake usage.

Detailed Discussion #2- Specific conductance

Why was conductivity lower than normal in the last two years (2006 and 2007)?

Discussion:

Figure 11a shows that conductivity readings in more than 30% of the CSLAP lakes were much lower than normal in either 2006 or 2007, and less than 10% of the CSLAP lakes had much higher than normal readings in these two years. This can be explained in part by pH—although the rise in pH did not appear to be triggered by a rise in conductivity, the reverse phenomenon occurs more commonly. About 40% of the lakes with much lower conductivity readings in 2007 also exhibited much lower pH. An even stronger correlation exists with color; about half of the lakes with significantly lower conductivity in 2007 also had much higher than normal color readings. This makes up an inordinately high percentage of the lakes with higher color readings, and suggests that an increasing load (migration) of organic matter to these lakes may have triggered both a rise in color (which is usually associated with dissolved organic matter) and a drop in conductivity (since these organic compounds may contain “neutral” ions and thus do not contribute to conductivity measurements).

The majority of the lakes with relatively lower conductivity were in the “central” region of the state, particularly concentrated in a band between east of the Finger Lakes region (generally starting with Madison County) and the Capital District region, with few lakes north of the Mohawk River and south of the Catskills. The majority of this band corresponds to NOAA Division 2 (the “Eastern Plateau” region shown in Figure 9), which had the wettest spring runoff conditions of any region of the state in 2007. This pattern was also apparent in other recent years with wet winters. More than 50% of the lakes in the Eastern Plateau region exhibited much lower than normal conductivity readings in each of 2005, 2006 and 2007, when winter to spring precipitation and runoff were much higher than normal. The inverse trend was apparent in 1995, corresponding to a very dry winter and spring, in which nearly 90% of the lakes in this region exhibited significant increases in conductivity. This trend was not apparent in every year—for example, wet winters and springs in 2002 and 2003 corresponded to higher summer conductivity readings in about half of the lake—but it has been consistent in the last three years. This trend was also apparent in other regions of the state. In the “Hudson Valley” region (see Figure 9), for example, wetter than normal winters and springs led to lower than normal conductivity in 2006, 2000, and 1996, and higher than normal conductivity in 1995, corresponding to a drier year.

In summary, at least part of the decrease in conductivity in many CSLAP lakes in the last two years appears to be in response to wetter winter and spring conditions, and presumably more runoff, in both of these years.

Color

Annual Variability:

Color readings in many CSLAP lakes have increased in recent years. One of the years with the lowest color readings, 1995, was the driest of the CSLAP sampling seasons, while the highest color occurred in two of the wettest years (2004 and 2006). Most lake samples (88%) correspond to water-color readings too low (< 30 ptu) to significantly influence water clarity, although nearly 30% of the samples in 2006 and 20% of the samples in 2007 corresponded to color readings exceeding this threshold. Color readings were much higher in 2006 than in any other CSLAP sampling season. Given that color readings were also highest in four of the last five years, the increase in color may be attributable in part to the shift in laboratories, which occurred prior to the 2003 sampling season. The higher color has also been coincident with wet summers and/or wet winters during most of these years (the lower color in 2005 may have been due to more normal weather patterns).

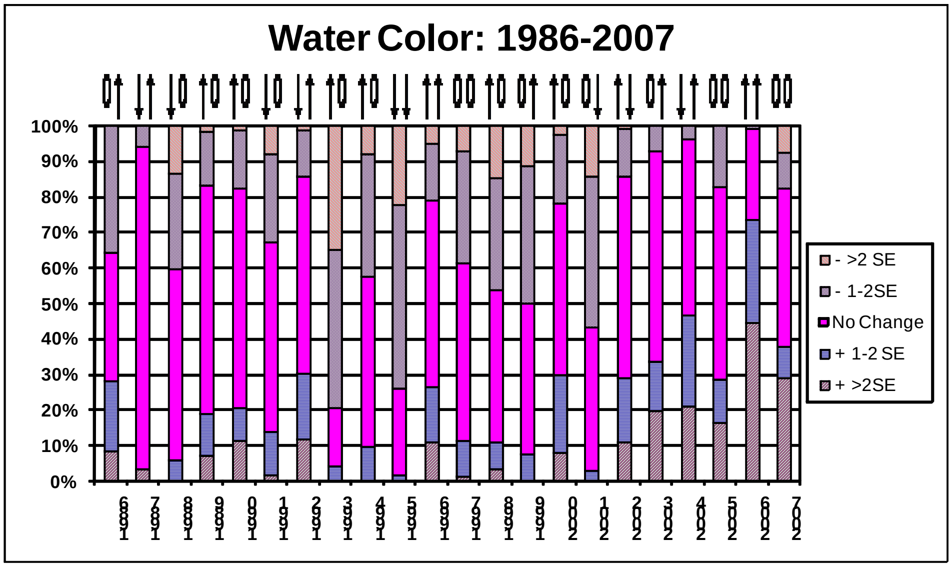


Figure 12a. *Annual Change from "Normal" Color in CSLAP Lakes (SE = Standard Error)*

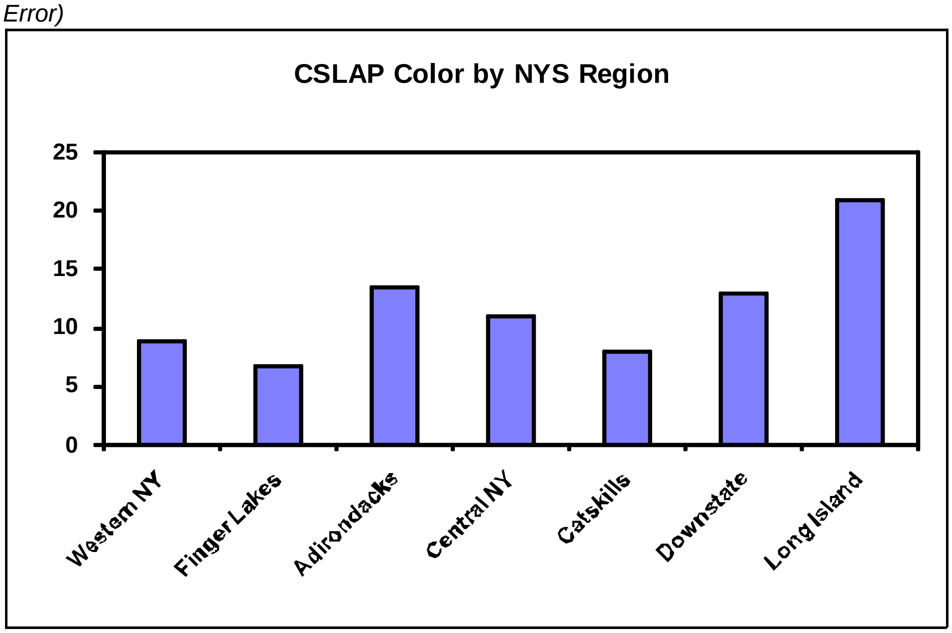


Figure 12b. *Color in CSLAP Lakes by NYS Region*

What Was Expected in 2008?

As noted above, color readings have generally been higher during wet years, and readings have been higher in most of the last six years, perhaps due in part to slightly different analytical methodology. Since 2008 generally corresponded to a wet year, it was expected that color readings in 2008 would at least be higher than the long-term average.

What Happened at Lake Kitchawan in 2008?

Color readings in Lake Kitchawan were collected for the first time in 2008, so it is not known if the color readings recorded were within the normal range for the lake.

Statewide Variability:

Water color is highest in Long Island and the Adirondacks, and lowest in the Finger Lakes, Catskill and western NY regions. This is mostly coincident with the statewide conductivity distribution (with softwater lakes more likely to be colored). The CSLAP dataset may be a representative cross-section of NYS lakes as related to color.

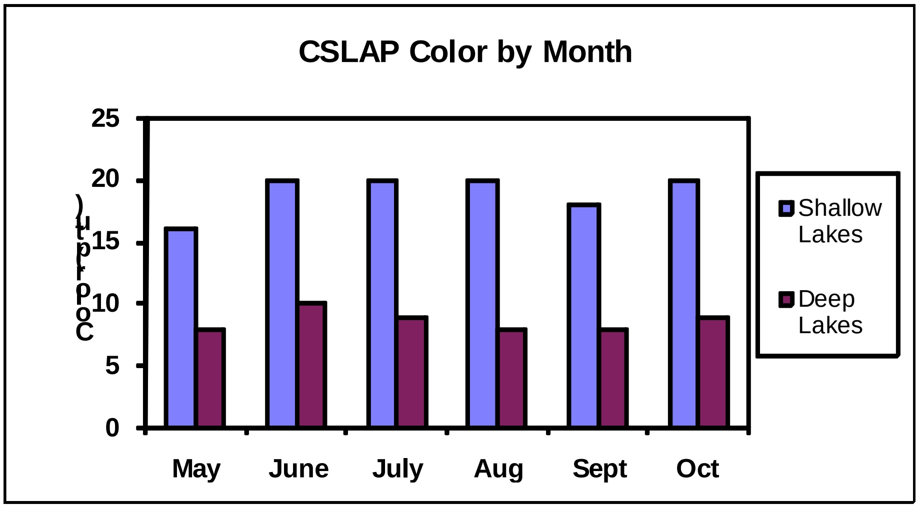


Figure 12c. *Color in Shallow (<20ft deep) and Deep CSLAP Lakes by Month*

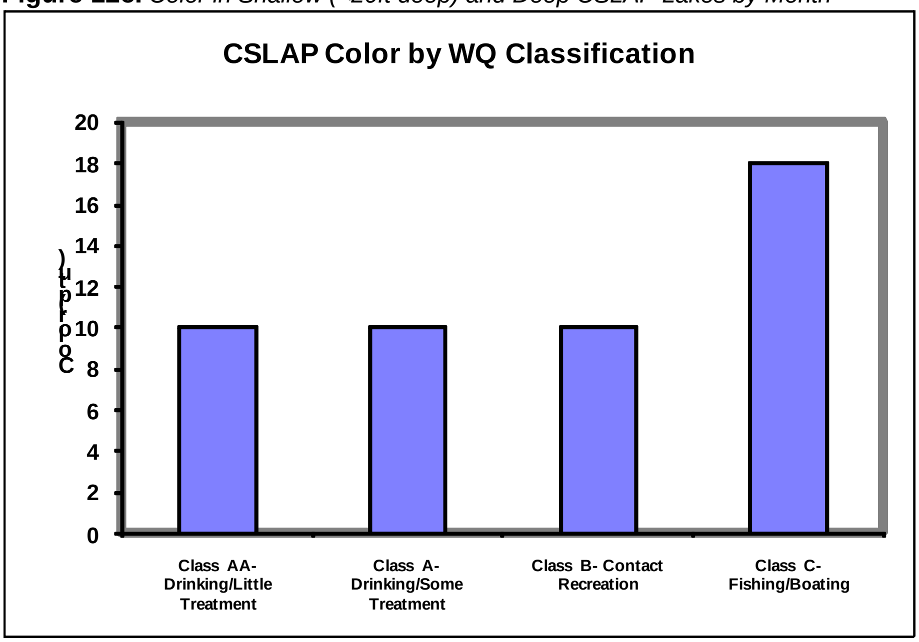


Figure 12d. *Color in CSLAP Lakes by Lake Use*

Seasonal Variability:

Color readings are significantly higher in shallow lakes than in deepwater lakes; these readings increase from spring to summer in these shallower lakes (perhaps due to dissolution of organic material, including algae, and wind-induced mixing during the summer) and then drop off again in late summer into the fall. Color generally follows the opposite trend in deeper lakes, with slightly decreasing color readings perhaps due to more particle setting in the summer and remixing in the fall, although the seasonal trend in the deeper lakes is not as pronounced as in shallow lakes.

Lake-Use Variability:

Color readings are substantially higher for lakes used primarily for non-contact recreation (Class C), but this is probably more reflective of morphometric differences, for Class C lakes tend to be shallow lakes (mean depth = 4 meters), while the other classes tend to be deeper lakes (mean depth = 9 meters). However, the elevated color readings correspond to elevated levels of dissolved organic matter and may also reflect impediments (via economically viable water treatment, aesthetics, and potential formation of hazardous compounds during chlorination) to the use of these waters for drinking.

Detailed Discussion #3- Water color

Why have color readings increased since 2002?

Discussion:

Figure 12a shows that color readings have been higher than normal in the last six years, with 30-70% of the CSLAP lakes exhibited higher color readings in each of these years. This pattern was most pronounced in 2006, when nearly half of the sampled lakes exhibited color readings that were substantially higher than normal.

This shift occurred starting in 2002 and especially in 2003, which corresponded to a shift in laboratories from the NYSDOH to Upstate Freshwater Institute. More so than any of the other sampling parameters, color measurements are not automated; they involve a visual comparison of a filtered water sample against a scaled order of known (brown) color solutions created from platinum-cobalt standards.

An analysis of the color and water clarity data indicates that the rise in color is, at least in part, a real phenomenon. Of the 30 lakes in 2006 in which color rose most significantly, more than half exhibited a significant decrease in water clarity, although nearly 30% of these lakes also showed a slight rise in algae levels (as measured by chlorophyll *a*). The same pattern was observed in 2007, when the more colored lakes were 4x more likely to exhibit a decrease in water clarity than an increase in transparency (despite no significant changes in chlorophyll *a* readings), and in 2003, when water clarity remained fairly stable despite a substantial decrease in algae levels in these more colored lakes. This pattern also occurred in other years when samples were analyzed at the NYSDOH.

The basis for this increase in color also seems to be related to precipitation. The most significant increase in water color occurred in 2006. In the Eastern Plateau and Hudson Valley regions of New York state, water color readings increased significantly in 70-85% of the lakes, due to much wetter than normal weather throughout the spring runoff and summer sampling season. In 2005 and 2007, corresponding to precipitation and runoff patterns in these regions much closer to normal, the percentage of lakes in which water color increased was only slightly higher than the percentage of lakes in which color decreased, suggesting normal variability. In the “Northern Plateau” (Adirondacks), water color readings were higher than normal in nearly 70% of the lakes in 2006, corresponding to the only wet year since 2002. In other recent years, when either winters or summers were normal to dry, water color readings increased in fewer than 25% of the lakes, about the same percentage in which color readings decreased over the same period.

Calcium

Annual Variability:

Calcium was analyzed for the first time in 2002, so long-term analyses are limited by the relative lack of data. Readings were highest in 2004 and lowest in 2002; the latter corresponded to a year in which calcium was analyzed by a different laboratory. While 2004 was the only year since 2001 with a relatively dry winter, it is not known if there is a connection between winter and spring weather and summer calcium readings. Likewise, it is also not known if the drier summer in 2002 triggered the lower calcium readings. Additional data will help to determine if calcium levels are changing, but these data suggest that a significant long-term trend is not apparent.

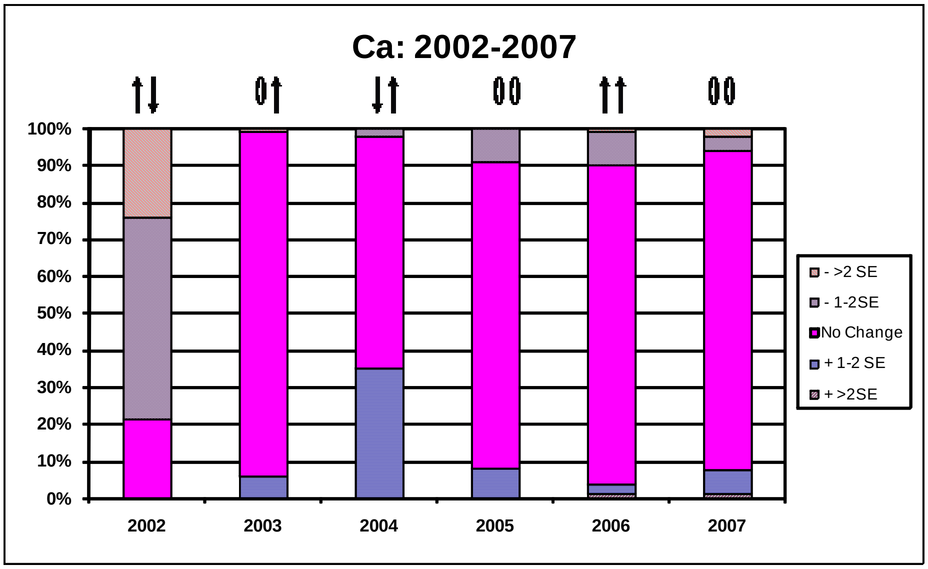


Figure 13a. *Annual Change from "Normal" Calcium in CSLAP Lakes (SE = Standard Error)*

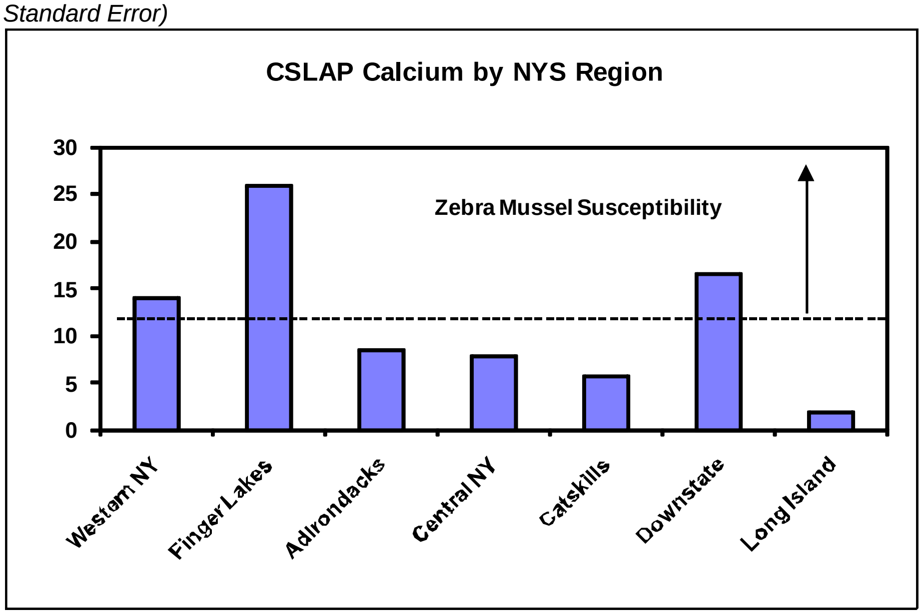


Figure 13b. *Calcium in CSLAP Lakes by NYS Region*

What Was Expected in 2008?

There did not appear to be a strong predictive connection between weather and calcium levels in the lake, notwithstanding the observations about spring and summer precipitation levels in 2002 and 2004. So the calcium readings in 2008 were expected to be "unexpected".

What Happened at Lake Kitchawan in 2008?

Calcium readings in Lake Kitchawan were collected for the first time in 2008, so it is not known if the calcium readings recorded were within the normal range for the lake.

Statewide Variability:

Calcium readings are highest in the Finger Lakes, western, and downstate New York regions. This is mostly coincident with the statewide conductivity distribution (since the ions that contribute to conductivity are often found in the same proportions as calcium). While the former two regions are already populated by zebra mussel-infested lakes, the downstate region at present does not possess many lakes with these exotic organisms. The data in Figure 13b suggest many of the downstate lakes may be susceptible to zebra mussels, while some lakes in many of the other regions may have already crossed the susceptibility threshold. The CSLAP dataset is most likely a reasonably representative cross-section of NYS lakes as related to calcium.

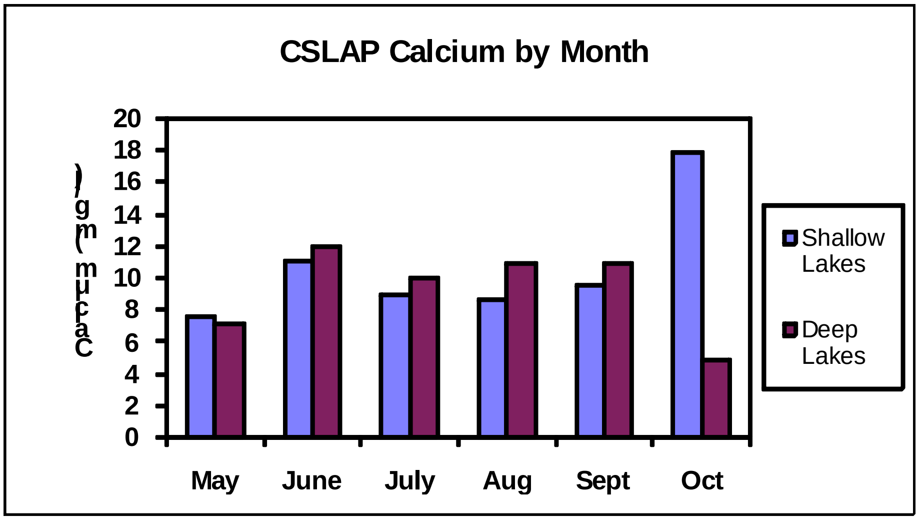


Figure 13c. *Color in Shallow (<20ft deep) and Deep CSLAP Lakes by Month*

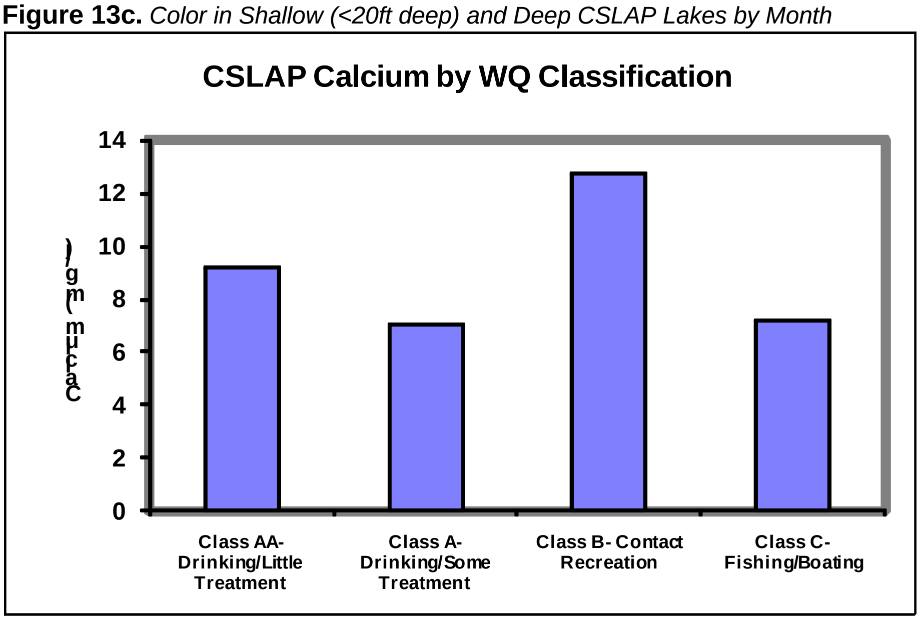


Figure 13d. *Color in CSLAP Lakes by Lake Use*

Seasonal Variability:

Calcium readings appear to increase during the sampling season at many shallow CSLAP lakes, with the highest readings occurring in the fall. The opposite appears to occur with deeper lakes, but it is more likely that the seasonal distribution noted in Figure 13c reflects a relatively larger number of low calcium lakes sampled in the fall rather than an actual fall decrease in calcium levels in these lakes.

Lake-Use Variability:

Calcium readings are substantially higher for lakes used primarily for contact recreation (Class B), but this is probably more reflective of regional differences, for Class B lakes are more likely to be found in the regions with higher conductivity and calcium readings, such as the Finger Lakes region, downstate, and western New York. As noted earlier, many of the Class C lakes in CSLAP are found in the Adirondacks, where calcium readings are lower.

Detailed Discussion #4- Calcium

What is the calcium threshold for zebra mussel colonization?

Discussion:

This continues to be a topic of discussion and debate among scientists. Most of the recent data in the scientific literature indicates that zebra mussel (and presumably quagga mussel) shell formation requires at least 20-25 mg/l of calcium, based on research conducted by the San Francisco Estuary Institute and others. However, there are a number of lakes in New York State supporting zebra mussel populations in which open water calcium levels are well below this threshold. In some cases, baseline calcium levels are closer to 8-10 mg/l in these lakes.

For each of these lakes, it is likely that a shoreline or localized source of calcium is sufficiently increasing the "microclimate" calcium levels to allow zebra mussel colonization, albeit at low and perhaps stunted population levels. The CSLAP dataset can be used to identify the range of open water calcium levels corresponding to at least susceptibility to zebra mussel infestations, assuming that (1) the low calcium CSLAP lakes supporting zebra mussels are probably representative of other NYS lakes and (2) lakes with sub-threshold calcium levels either do not possess natural calcium sources in the watershed or are sufficiently well mixed to support some calcium inputs (from concrete barriers) without reaching this threshold.

The CSLAP dataset includes about 1/3 of the known zebra mussel sites have been monitored. Within this dataset, there is a single lake in which calcium levels in close to 15 sites monitored throughout the (open water portion of the) lake average 8-12 mg/l. 29 other CSLAP lakes possess calcium levels between 8 and 15 mg/l. There are two other zebra mussel lakes monitored through CSLAP in which average calcium levels are between 15 and 20 mg/l; 11 other CSLAP lakes with no evidence of zebra mussel populations exhibit calcium levels in this range. One other zebra mussel-infested CSLAP lake and 14 uninfected CSLAP lakes had calcium levels between 20 and 25 mg/l. The typical calcium levels for all of the other "infected" CSLAP lakes exceeded 25 mg/l. There are also 19 other CSLAP lakes with high calcium levels that at present have not been identified as colonized by zebra mussels.

These data indicate that, although calcium levels in the waters immediately surrounding zebra mussel veligers (the larval form of this exotic mussel) may need to exceed 20-25 mg/l to produce an adult shell, there are a number of NYS lakes and at least 70 CSLAP lakes that may be susceptible to zebra mussel infestations with open water calcium levels below this threshold.

Nitrate

Annual Variability:

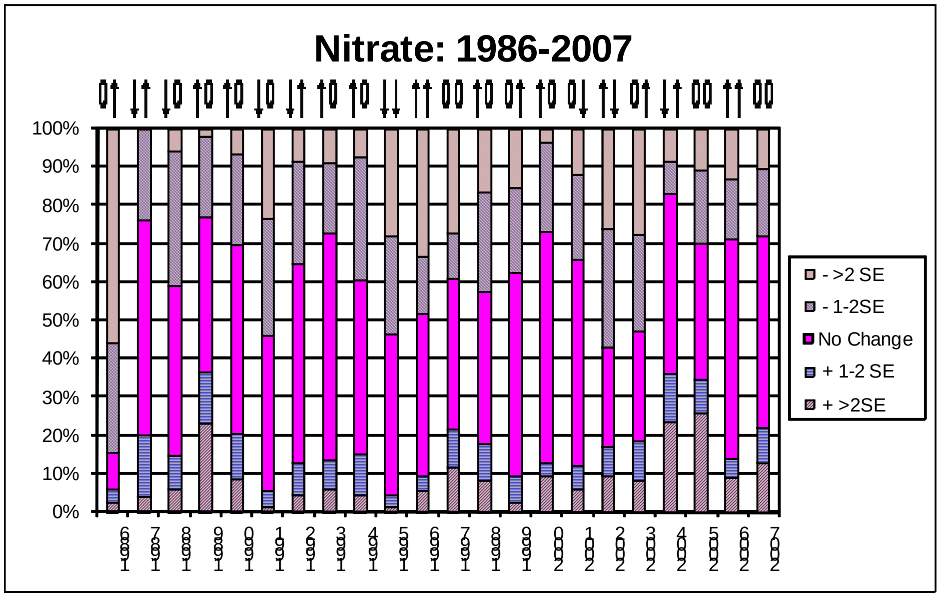


Figure 14a. *Annual Change from "Normal" Nitrate in CSLAP Lakes (SE = Standard Error)*

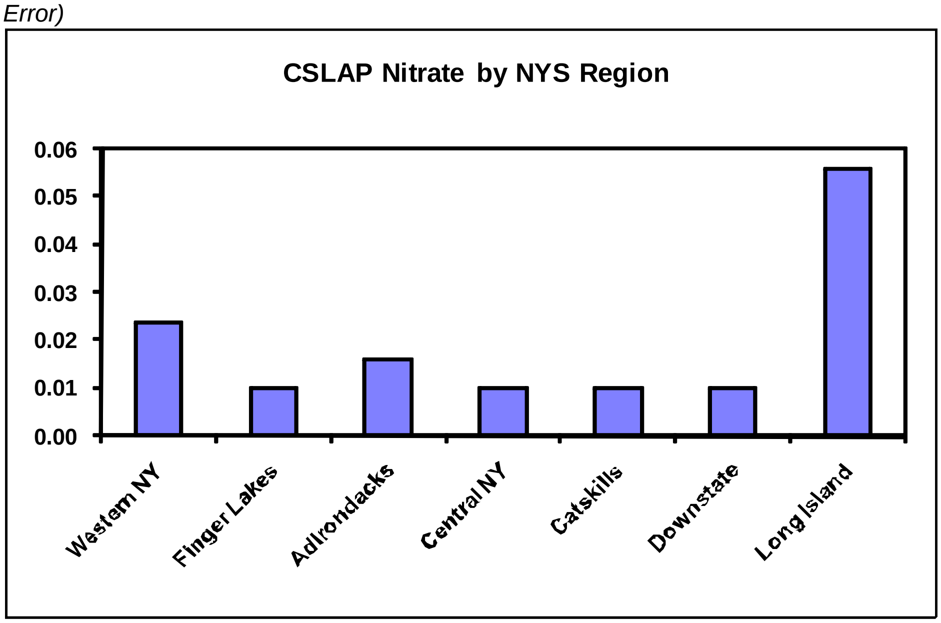


Figure 14b. *Nitrate in CSLAP Lakes by NYS Region*

Evaluating nitrate in CSLAP lakes is confounded by the relative lack of nitrate data for many sampling seasons (it was analyzed in water samples at a lower frequency, or not at all, for many years), the high number of undetectable nitrate readings, and some changes in detection levels. The limited data indicated that nitrate was highest in 1986 and 1989, two early CSLAP years in which nitrate was analyzed more frequently (including a relatively large number of early season samples), and in 2004 and 2005, which corresponded to the use of a new analytical tool. Readings were lowest in 1995, 2002 and 2003. Although nitrate levels are probably closely related to winter and spring precipitation levels (due to the higher nitrate readings in snowpacks), this is not apparent from Figure 14a. There was not a predictable relationship between either winter runoff or summer rains and nitrate levels. No readings have approached the state water-quality standard (= 10 mg/l) in any CSLAP sample.

What Was Expected in 2008?

Nitrate readings have been very unpredictable, although at nearly all times, nitrate readings have been low. Given the higher readings found in 2004 and lower readings found in 2006, nitrate levels cannot be easily predicted in 2008.

What Happened at Lake Kitchawan in 2008?

Nitrate readings in Lake Kitchawan were collected for the first time in 2008, so it is not known if the nitrate readings recorded were within the normal range for the lake.

Statewide Variability:

Nitrate levels are highest in Long Island, western NY, and the Adirondacks, and lowest in the other NYS regions. However, none of these regions demonstrate readings that are particularly high. Readings from individual lakes in Long Island, Madison County, and the Adirondacks (spring only) are often elevated, although still well below water-quality standards.

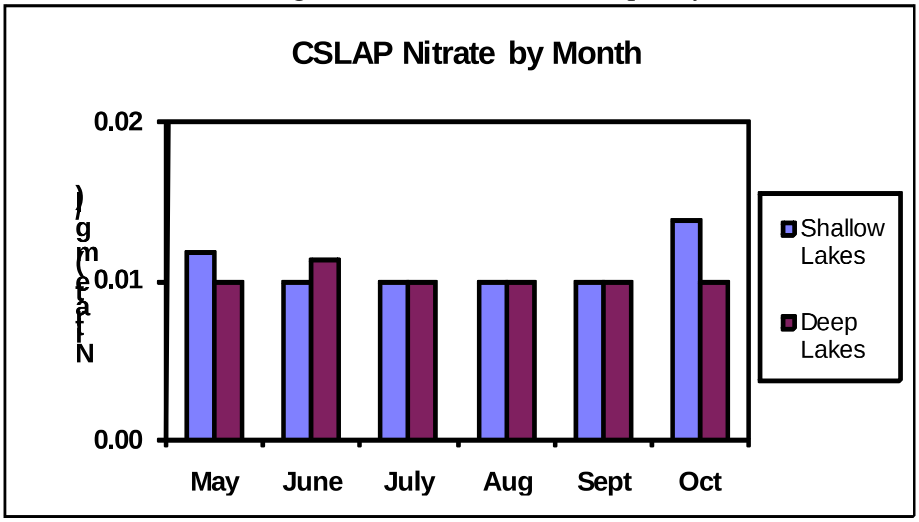


Figure 14c. *Nitrate in Shallow (<20ft deep) and Deep CSLAP Lakes by Month*

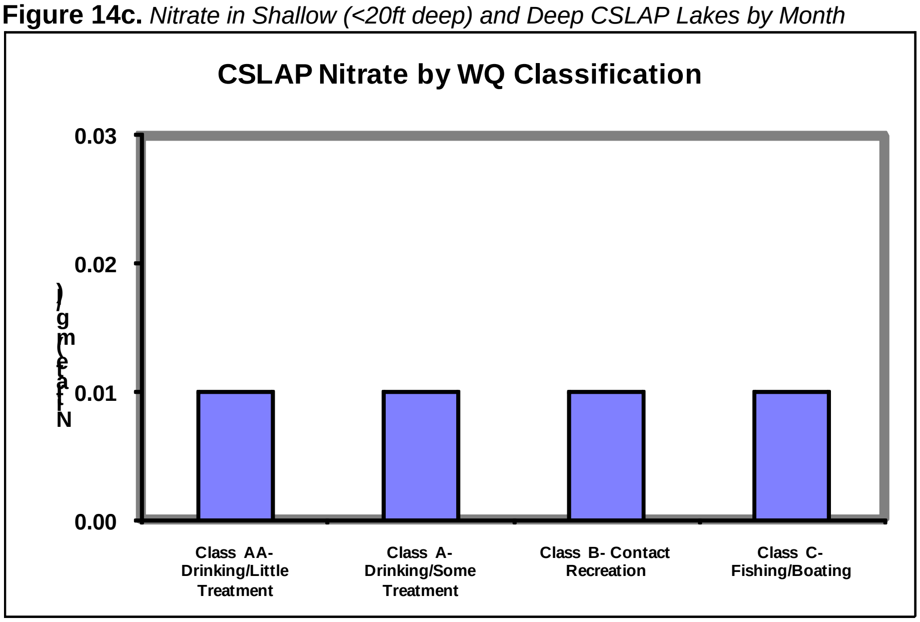


Figure 14d. *Nitrate in CSLAP Lakes by Lake Use*

Seasonal Variability:

Nitrate readings are not seasonally variable on a program-wide basis, as indicated in Figure 14c. However, in some individual lakes, in the regions listed above, nitrate is often detectable until early summer and then undetectable through the rest of the sampling season (the large number of lakes with undetectable nitrate levels throughout the year overwhelms the statistics in Figure 14c). Nitrate levels in shallow lakes were slightly higher in October, but the difference between September and October nitrate readings is probably within the rounding error for these analyses.

Lake-Use Variability:

Nitrate readings appeared to be identical for all classes of lake uses, as indicated in Figure 14d. Higher early-season nitrate readings are found in some lakes influenced by the melting of large winter snowpacks, such as some Class AA and A lakes in the Adirondacks, but these statistics cannot be easily teased from datasets strongly influenced by the large number of lakes with undetectable nitrate readings.

Detailed Discussion #5- Nitrate

Why are nitrate levels higher in the fall and on Long Island?

Discussion:

Figure 14c shows that nitrate readings are fairly stable most of the summer in shallow lakes, but increase in the fall. This does not appear to be a phenomenon related to lake turnover, since the fall nitrate increase does not seem to occur in deeper lakes. It is probably unrelated to the higher nitrate readings in shallow lakes in May; this is likely the result of nitrate-enriched snowpack meltwater entering the lake. Nitrate levels are no doubt even higher in March and April, when the bulk of this meltwater enters these lakes, but CSLAP sampling is not conducted at that time. This phenomenon is also not mirrored by late season changes in most of the other water quality indicators. Calcium levels are also higher in the fall, but this is probably due to the influence of a few measurements on a very small dataset (since calcium is usually measured on in the first and fifth samples, corresponding to early and mid year, and since it has only been analyzed since 2002).

However, in most parts of the state, nitrate readings in the fall are very similar to those measured earlier in the sampling season. The higher fall readings occur in the region referred to as nutrient ecoregion 83, or the "mostly glaciated dairy region" that encompasses most of northern NY outside the Adirondacks, Tug Hill and the Catskills. This is the region, outside of Long Island, with the highest ambient nitrate levels in the state, and the higher fall nitrate readings may reflect the residual from applied nitrogen fertilizers during the summer on the agricultural fields that dominate the landscape in this part of the state. The same trend is apparent with ammonia in both shallow and deep lakes, as noted in Figure 15c, though not with total nitrogen (Figure 16c)

As noted in Figure 14b, nitrate levels are substantially higher in Long Island than in other regions of the state. It is not known if this is an artifact of small sample size—there are only a few Long Island lakes in CSLAP, and the very high nitrate levels in one of these lakes may dominate the "typical lake" records measured in Figure 14b. In fact, the larger NYS datasets do not show a significant discrepancy between nitrate readings in Long Island and in other regions of the state. As with pH, this is another area in which the CSLAP dataset for a region is not representative of the typical lake. In the case of pH, it is due to the CSLAP site selection process, in which sampling is limited to lakes with lake associations, and thus lakes that support development, septic systems, and access to major roads. The typical Adirondack lake is smaller and more isolated than the typical CSLAP lake, resulting in lower pH readings.

Ammonia

Annual Variability:

Ammonia was analyzed for the first time in 2002, so long-term analyses are limited by the relative lack of data. The limited data indicated that ammonia was highest in 2002, 2006 and 2007, and lowest in 2005. 2006 was a wet year, and 2005 was dry, and while 2002 was not a wet year, these data suggest that ammonia increases with precipitation and decreases in dry conditions. It is more likely that the higher ammonia readings were associated with wet winter and spring conditions, as were apparent in both 2002 and 2006. No surface readings have approached the state water-quality standard (= 2 mg/l) in any CSLAP sample, although this threshold has been reached in some anoxic (oxygen-depleted) deepwater samples.

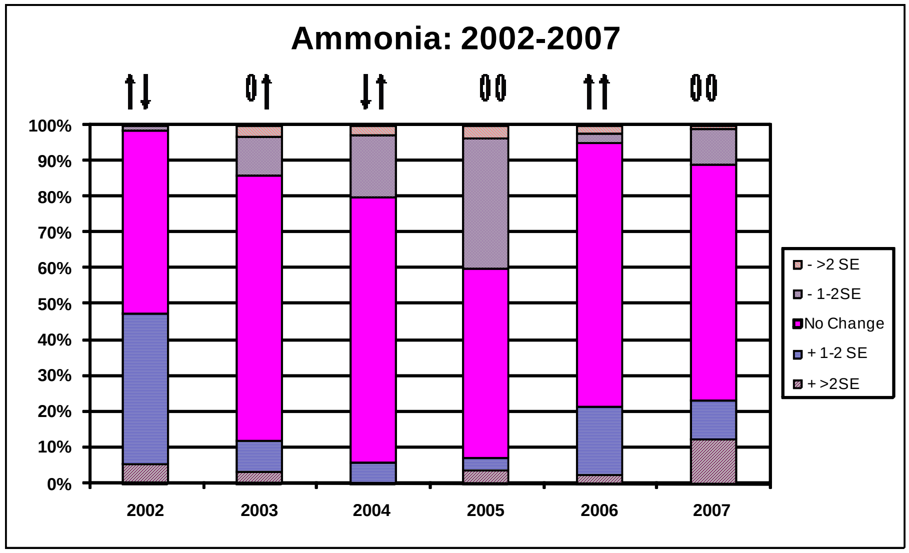


Figure 15a. *Annual Change from "Normal" Ammonia in CSLAP Lakes (SE = Standard Error)*

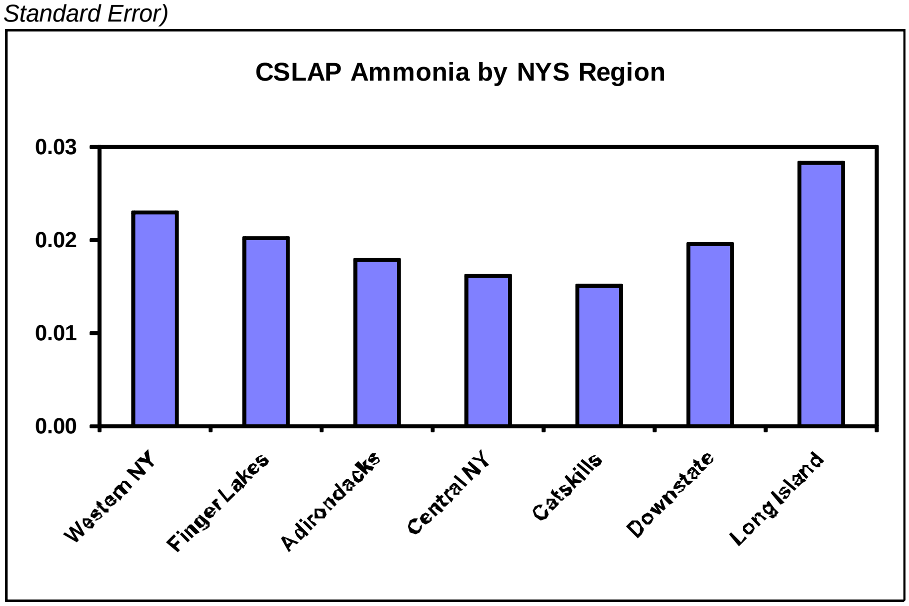


Figure 15b. *Ammonia in CSLAP Lakes by NYS Region*

What Was Expected in 2008?

As noted above, ammonia readings were higher when winter and spring runoff was heaviest, and lowest when spring and summer precipitation was lower. Given the higher than normal winter and spring precipitation levels in 2008, ammonia readings were expected to increase in 2008.

What Happened at Lake Kitchawan in 2008?

Ammonia readings in Lake Kitchawan were collected for the first time in 2008, so it is not known if the ammonia readings recorded were within the normal range for the lake.

Statewide Variability:

Ammonia levels are highest in Long Island, western NY, and the Finger Lakes, and lowest in Central New York and the Catskills. However, none of these regions demonstrate readings that are particularly high.

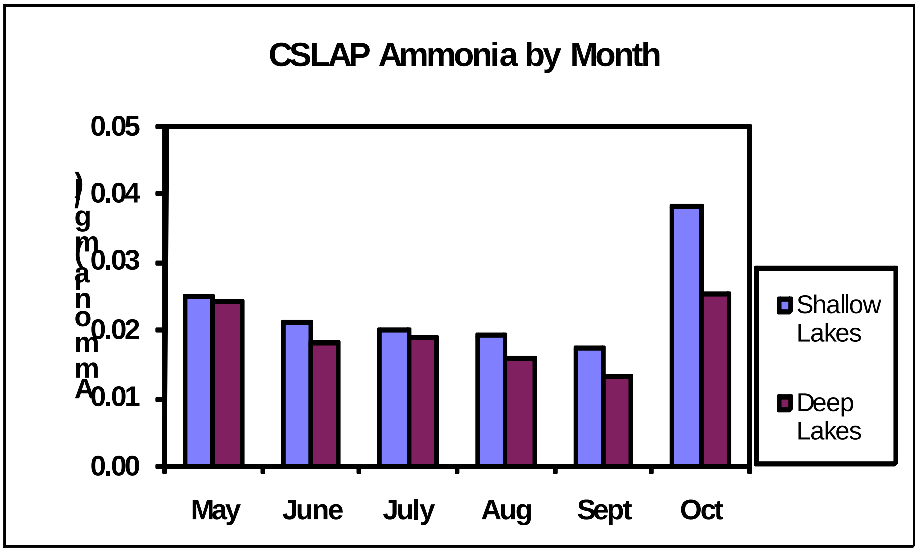


Figure 15c. *Ammonia in Shallow (<20ft deep) and Deep CSLAP Lakes by Month*

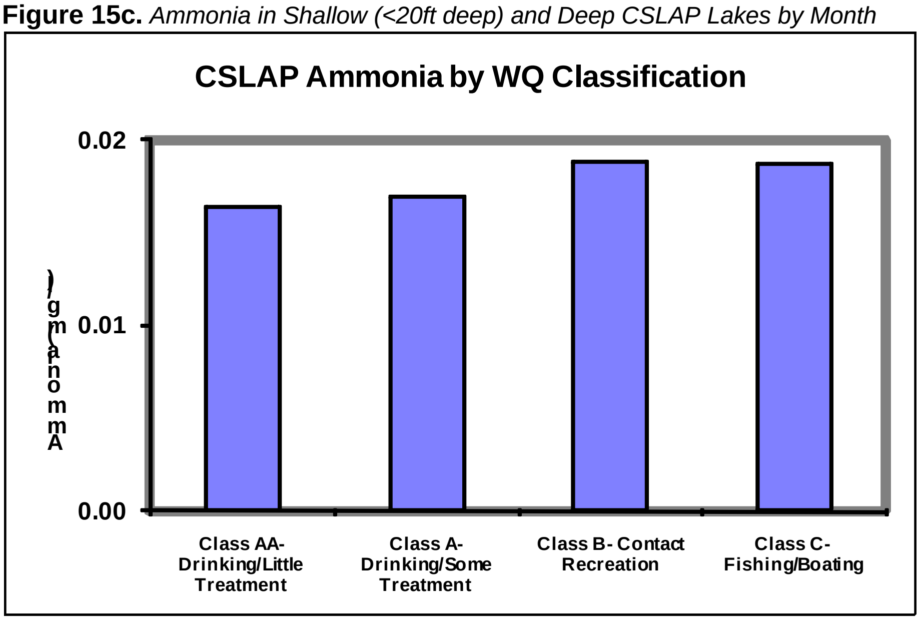


Figure 15d. *Ammonia in CSLAP Lakes by Lake Use*

Seasonal Variability:

Ammonia readings appear to decrease during the summer, and then increase in the fall, as indicated in Figure 15c. For the deeper lakes, this may be due to the migration of deepwater ammonia levels (which may have risen in response to deepwater anoxia) to the surface after the lake has been destratified. However, the rise in ammonia levels was greater for shallow lakes, suggesting other factors may also be in play.

Lake-Use Variability:

Ammonia readings appeared to be identical for all classes of lake uses, as indicated in Figure 15d. In nearly all classes of lakes, ammonia levels are close to the analytical detection limit, and far below the state water quality standard (= 2.0 mg/l).

Total (Dissolved) Nitrogen

Annual Variability:

Total dissolved nitrogen (TDN) was analyzed for the first time in 2002, so long-term analyses are limited by the relative lack of data. The limited data indicated that TDN was highest in 2006, when the winter/spring and summer precipitation levels were higher than normal, and in 2007. TDN data were lowest in 2005, which was perhaps drier than any other CSLAP sampling season since 2002, at least on a statewide basis. These patterns generally follow the trends observed with the ammonia data, but were inconsistent with the nitrate data.

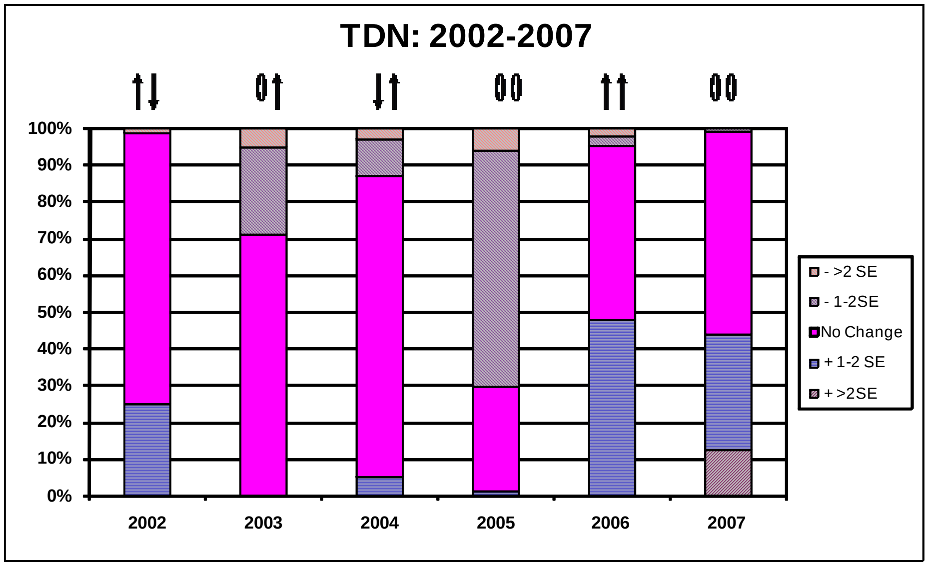


Figure 16a. *Annual Change from "Normal" TDN in CSLAP Lakes (SE = Standard Error)*

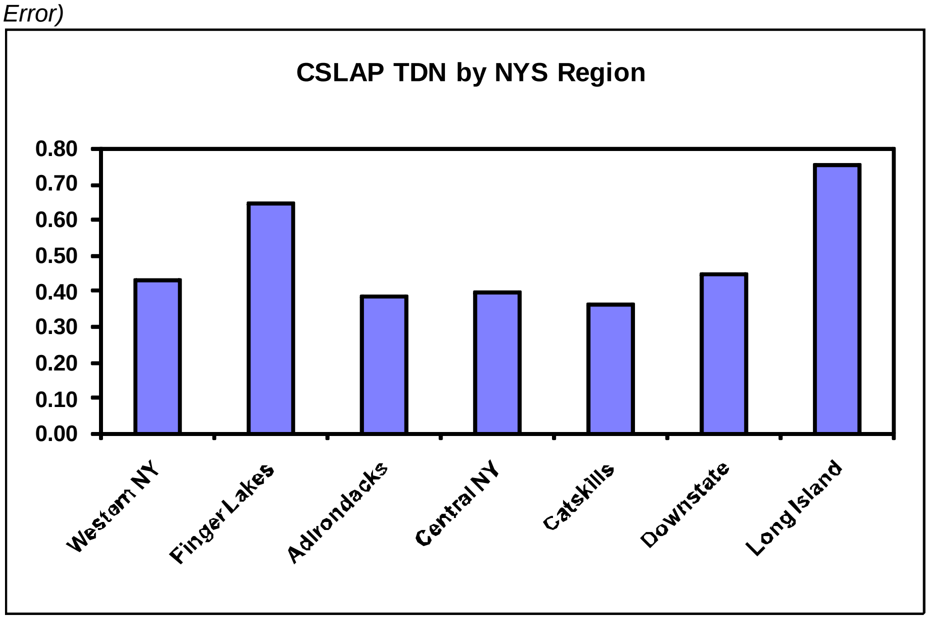


Figure 16b. *TDN in CSLAP Lakes by NYS Region*

What Was Expected in 2008?

Given the apparent connection between total nitrogen and precipitation noted in Figure 16a (readings highest in wet weather and lowest in dry weather), total nitrogen readings could be expected to be higher than normal in 2008, since precipitation levels were higher in most parts of the state.

What Happened at Lake Kitchawan in 2008?

TDN readings in Lake Kitchawan were collected for the first time in 2008, so it is not known if the TDN readings recorded were within the normal range for the lake.

Statewide Variability:

Total dissolved nitrogen levels are highest in Long Island and the Finger Lakes, and consistently lower everywhere else. The higher readings from both regions are probably associated with dissolved organic nitrogen, since nitrate and ammonia readings are much lower than total nitrogen. This does not appear to have translated into higher algae levels in these regions (see the discussion below re: chlorophyll *a*).

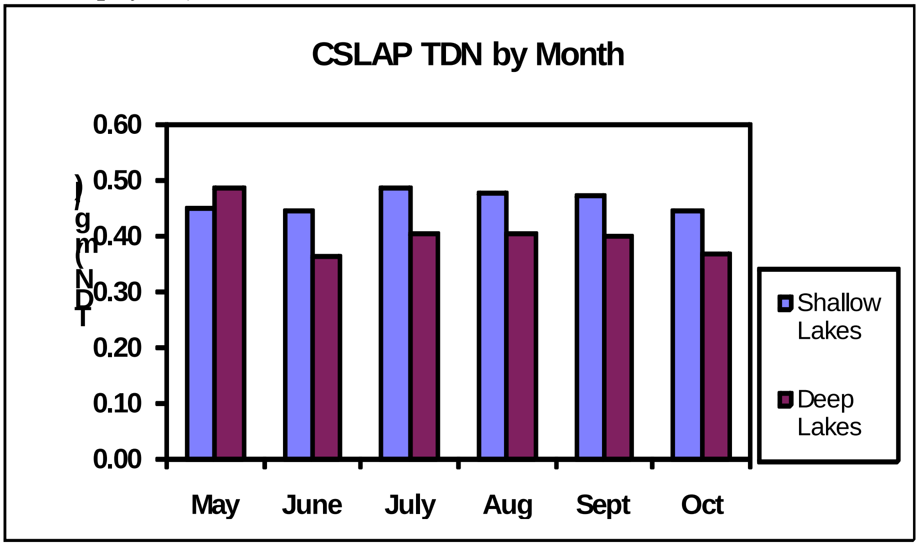


Figure 16c. *TDN in Shallow (<20ft deep) and Deep CSLAP Lakes by Month*

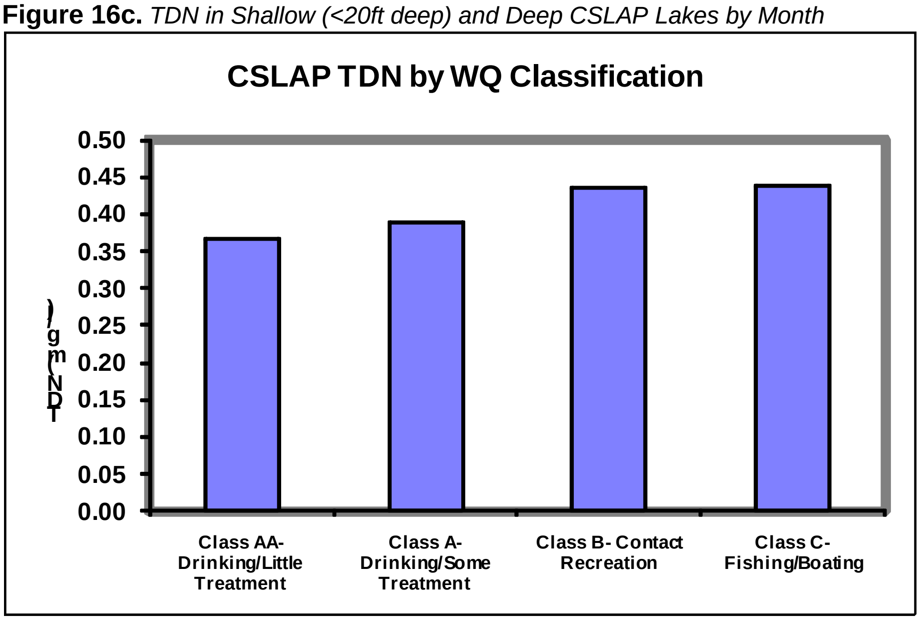


Figure 16d. *TDN in CSLAP Lakes by Lake Use*

Seasonal Variability:

Total dissolved nitrogen readings are not seasonally variable, particularly in shallow lakes, as indicated in Figure 16c. TDN readings in deeper lakes were higher in May than in any subsequent sampling month, although this is probably due to more May sampling of deep lakes with "normally" high dissolved nitrogen readings rather than higher early season readings in all deep lakes. Shallow lake TDN readings were fairly stable throughout the summer, and at nearly all times were higher than deep lake TDN levels.

Lake-Use Variability:

Total dissolved nitrogen readings were higher in Class B and Class C lakes than in Class AA or Class A lakes, as can be seen in Figure 16d. This "finding" cannot be easily explained, but additional data in the coming years may help to determine if the pattern shown in Figure 16d represents a real phenomenon or one influenced by relatively small datasets.

Trophic Indicators:
Water Clarity
Annual Variability:

Water clarity (transparency) has varied annually in most CSLAP lakes. There does not appears to be much of a correlation between clarity and precipitation—the highest clarity occurred in 1995, 1997, and 1999, which corresponded to normal precipitation (statewide), although the lowest clarity occurred during three wet years (1996, 2000, and 2006). There are no significant broad statewide water clarity trends, although (as described in other portions of this report), clear trends do exist on some lakes. The majority of water clarity readings in CSLAP lakes (59%) correspond to *mesotrophic* conditions (clarity between 2 and 5 meters), with 26% corresponding to *eutrophic* conditions (Zsd < 2) and 15% corresponding to *oligotrophic* conditions (Zsd > 5).

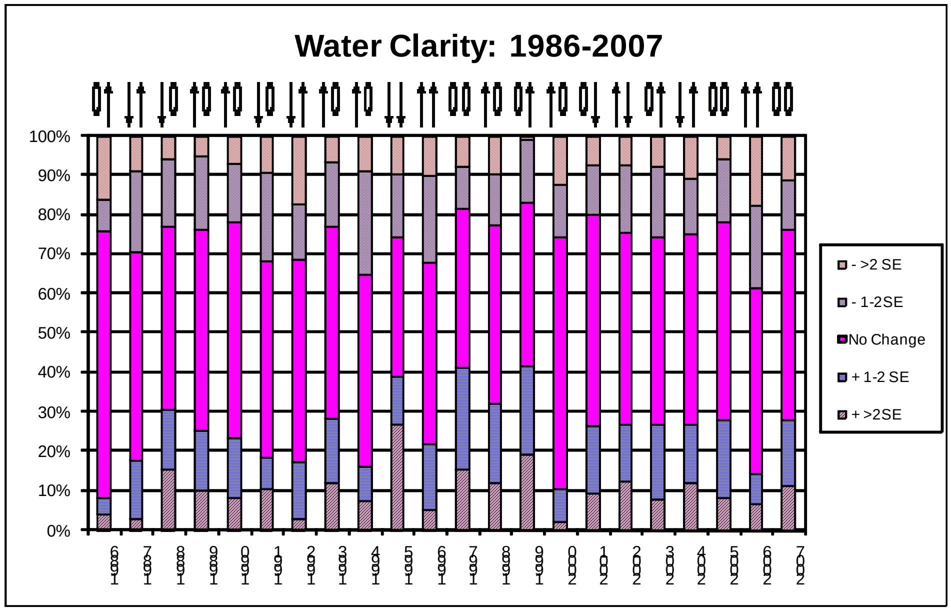


Figure 17a. *Change from "Normal" Water Clarity in CSLAP Lakes (SE = Standard Error)*

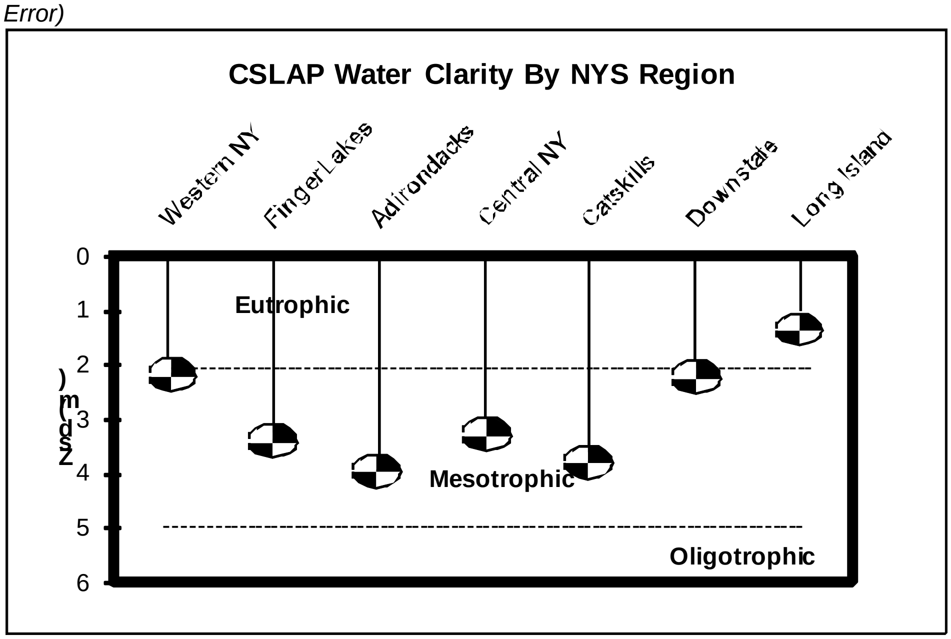


Figure 17b. *Water Clarity in CSLAP Lakes by NYS Region*

What Was Expected in 2008?

While water transparency readings do not appear to strongly affected by dry weather, water clarity seems to be lowest during wet years. Since 2008 was a wet year in much of the state, it is likely that more lakes would exhibit slightly lower water transparency readings in 2008.

What Happened at Lake Kitchawan in 2008?

Water clarity readings in Lake Kitchawan were collected for the first time in 2008, so it is not known if the water clarity readings recorded were within the normal range for the lake.

Statewide Variability:

As expected, water clarity is highest in the Adirondacks, Catskills, and Finger Lakes regions, and lowest in Long Island, downstate, and western NY. The differences are more pronounced (at least for the Adirondacks) when “naturally” colored lakes are not considered. However, except for Long Island (for which water clarity is at least partially limited by the shallow water depth), the “typical” lake in each of these regions would be classified as *mesotrophic*.

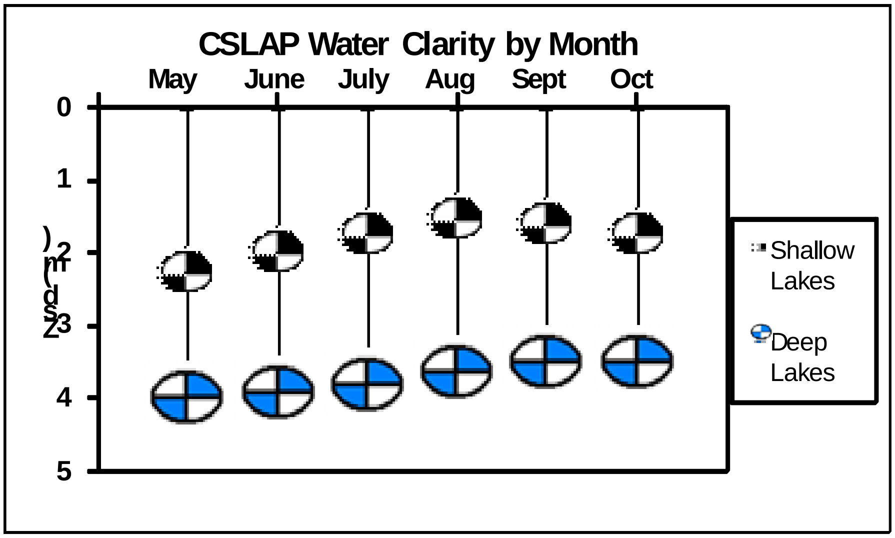


Figure 17c. *Water Clarity in Shallow (<20ft deep) and Deep CSLAP Lakes by Month*

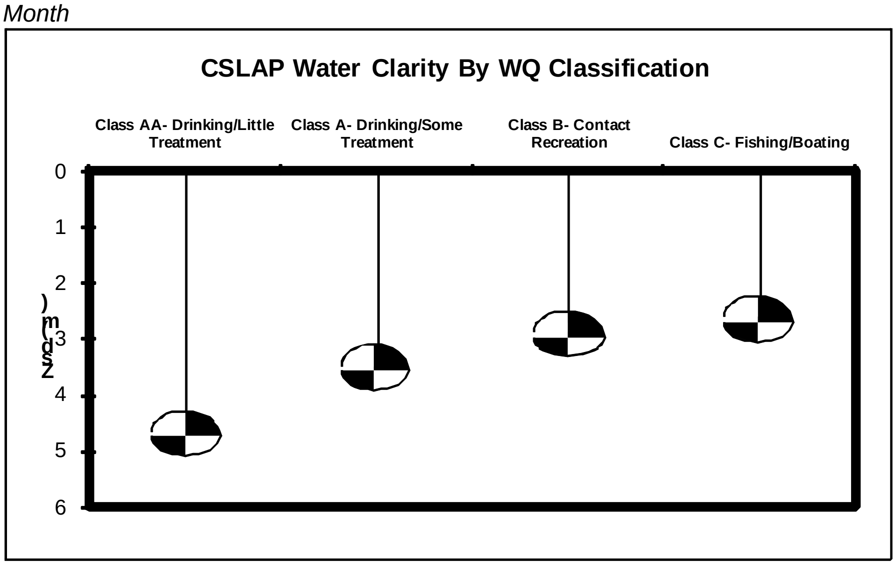


Figure 17d. *Water Clarity in CSLAP Lakes by Lake Use*

Seasonal Variability:

Water clarity readings are lower, as expected, in shallow lakes, even when water depth does not physically limit a water clarity measurement. Transparency decreases in both shallow and deep lakes during the course of the sampling season (the drop in clarity in shallower lakes is somewhat more significant), although clarity readings increase from spring to early summer in deeper CSLAP lakes. Water transparency rebounds slightly in shallower lakes in the fall, probably due to a drop in nutrient levels. The lack of “rebound” in deeper lakes may be due to occasional fall algal blooms in response to surface nutrient enrichment after lake turnover (see below).

Lake-Use Variability:

Water transparency decreases as the “sensitivity” of the lake use decreases, with higher clarity found in lakes used for potable water (Class AA), and lower clarity found in lakes used primarily for contact and non-contact (fishing and boating) recreation. As with many of the other water-quality indicators, this is due to both geographical and morphometric (depth) differences, although the original designation of these uses may also reflect these measurable and visually apparent water-quality differences.

Detailed Discussion #6- Water clarity

What is the connection between precipitation and water clarity?

Discussion:

Figures 7g, 8a, and 17a do not show any clear long-term trends in water transparency readings in the lakes sampled through CSLAP, and presumably throughout the rest of the state. However, a close inspection of Figure 17a shows a strong correlation, even on a statewide basis, between precipitation and water clarity. Specifically, heavy rain triggers increased runoff into lakes, resulting in higher turbidity (from algae and suspended sediment) and higher water color, and ultimately a decrease in water clarity.

There seems to be a distinction between lakes with long retention times (generally deeper lakes with relatively small watersheds) and short retention times (shallower lakes with relatively large watersheds). In 2006, 50% of the lakes with short retention time had significantly lower water clarity than normal, particularly those in regions with heavy rainfall. However, lakes with longer retention time were more likely to exhibit higher than normal water clarity when rainfall was heavier than normal.

In years with drier conditions, such as 1995, short retention time lakes were more likely to have higher than normal water clarity readings, although long retention time lakes were also clearer than normal. These data suggest that short retention time lakes are more susceptible to changes in water clarity in response to changes in precipitation, a finding consistent with expectations (since these lakes tend to respond more quickly to changes in nutrient and materials loading). The retention time for each lake, if known, is provided in Appendix A. The cutoff between short- and long-retention time lakes, for the purposes of this evaluation, is on the order of one year.

The connection between precipitation and water clarity was apparent in all regions of the state except the Delaware River basin in 2006 (where heavy rains did not trigger consistent decreases in clarity), and in the Allegheny River/Chemung River basin in 2000. It is likely in these regions that the same correlation exists, but that the local weather conditions in these basins were significantly different (drier) than represented in the NOAA basin.

Trophic Indicators: Phosphorus (TP)

Annual Variability:

Total phosphorus (TP) has varied annually in most CSLAP lakes. The highest phosphorus readings occurred during 1991, 1996, 1998, 2000, and 2003, the latter four of which corresponded to wet years. However, of the years with the lowest readings, only 1995 (and not 1989, 1997, and 2002) corresponded to dry years, and 2004 was a fairly wet year. The majority of phosphorus readings in CSLAP lakes (40%) correspond to *mesotrophic* conditions (clarity of 2 to 5m), with 30% corresponding to *eutrophic* conditions (< 2m clarity) and 30% corresponding to *oligotrophic* conditions (> 5m clarity); the latter is a much higher percentage than the trophic designation for water clarity.

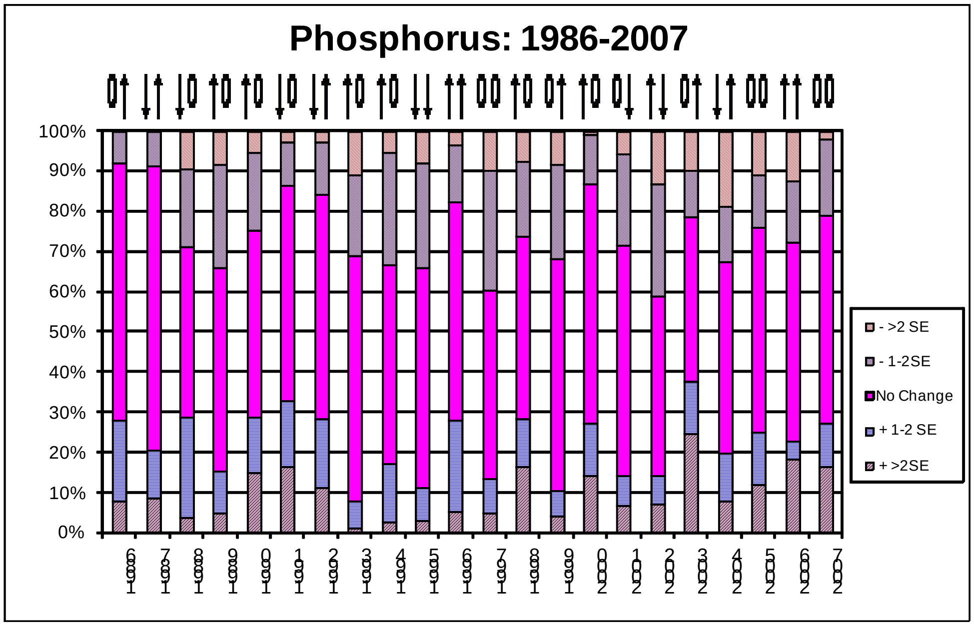


Figure 18a. *Annual Change from "Normal" TP in CSLAP Lakes (SE = Standard Error)*

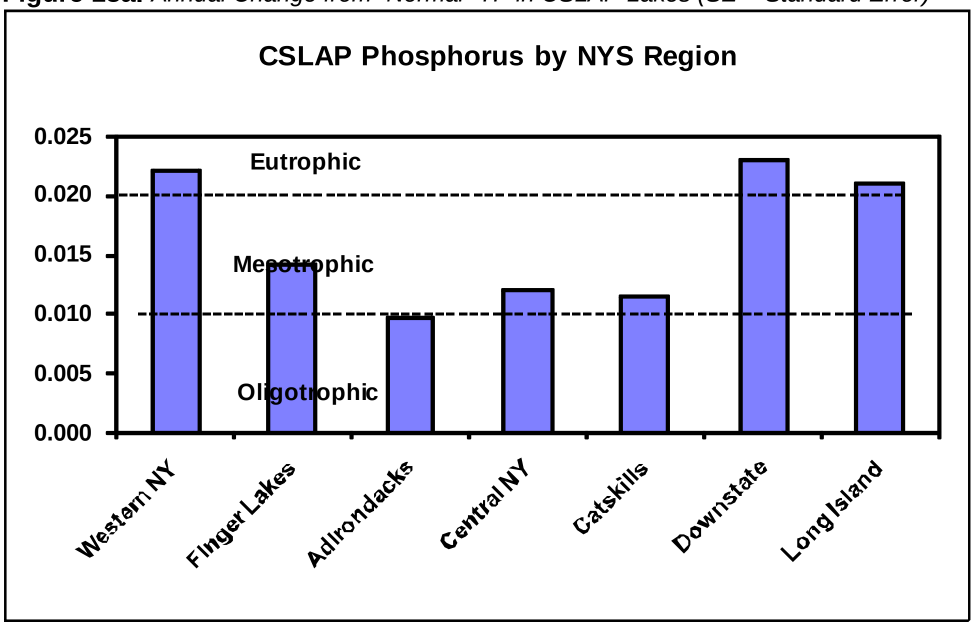


Figure 18b. *TP in CSLAP Lakes by NYS Region*

What Was Expected in 2008?

As noted above, there is not a strong correlation between weather and total phosphorus, and there does not appear to be a consistent long-term pattern in the total phosphorus data. The data also does not appear to be significantly laboratory-dependent, at least as apparent in Figure 18a. As such, it is difficult to predict whether phosphorus levels might be expected to be higher or lower in most CSLAP lakes in 2008.

What Happened at Lake Kitchawan in 2008?

Phosphorus readings in Lake Kitchawan were collected for the first time in 2008, so it is not known if the phosphorus readings recorded were within the normal range for the lake.

Statewide Variability:

As expected, nutrient levels are lowest in the Adirondacks, Catskills, and Central New York (where clarity is highest). Nutrient concentrations were highest in Long Island, downstate, and western NY, where water transparency is lowest. In the latter three regions, the "typical" lake in each of these regions would be classified as *eutrophic,* while only in the Adirondacks could most lakes be described as *oligotrophic*, based on nutrients.

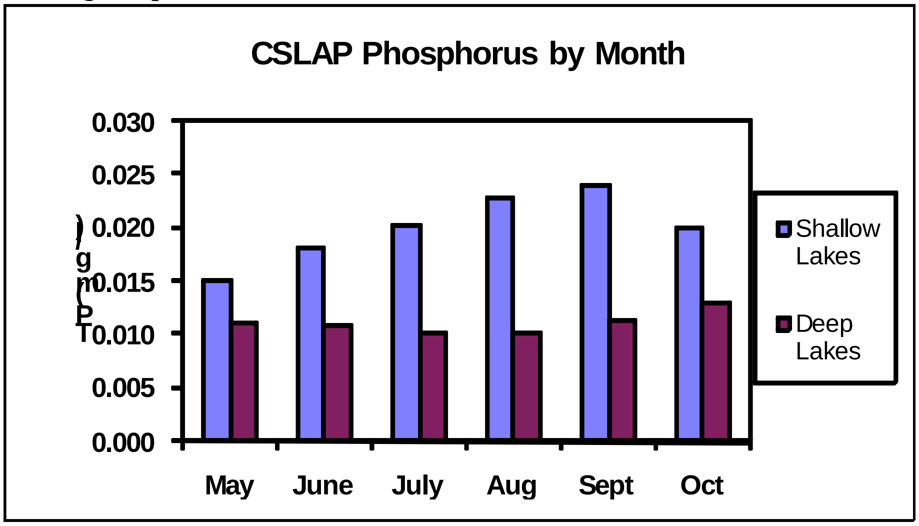


Figure 18c. *TP in Shallow (<20ft deep) and Deep CSLAP Lakes by Month*

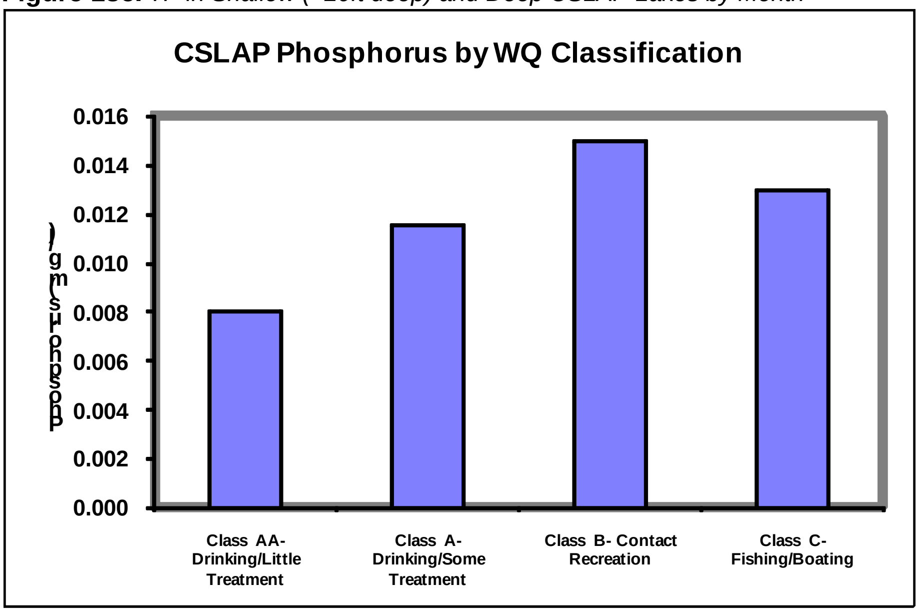


Figure 18d. *TP in CSLAP Lakes by Lake Use*

Seasonal Variability:

Nutrient levels are higher, as expected, in shallow lakes, and phosphorus levels increase in shallow lakes during the course of the sampling season, until dropping in the fall. However, phosphorus levels in deeper lakes are lower and decrease slightly through July, then increase into the fall. The latter phenomenon is due to surface nutrient enrichment after lake turnover (high nutrient water from the lake bottom, due to release of nutrients from poorly oxygenated lake sediments in the summer, migrates to the lake surface when the lake destratifies).

Lake-Use Variability

Phosphorus readings are lower in lakes used for minimally treated potable water intakes (Class AA) and are higher for other lake uses. Although Class B waters are utilized for a "higher" lake use than Class C lakes (contact recreation versus non-contact recreation), these lakes actually have higher nutrient levels, perhaps reflecting the influence of deepwater nutrient enrichments (these lakes are typically deeper) and the "unofficial" use of Class C waters for bathing and contact recreation.

Detailed Discussion #7- Phosphorus

What drives the seasonal increase in phosphorus in shallow lakes?

Discussion:

Figure 18c shows a steady seasonal increase in phosphorus concentrations in shallow lakes. Phosphorus readings decrease slightly through mid summer, then increase in the fall in deeper lakes. The latter observation is probably due to two different phenomena. The higher spring phosphorus readings in deeper lakes are influenced by the movement of erodible materials into lakes during the snowpack melt in late spring. This may be less significant in shallower lakes due to the shorter retention time found in many shallow lakes—these nutrients may be washed into and out of the lake more quickly in these lakes. The increased fall phosphorus readings in deeper lakes are probably associated with the migration of nutrients from bottom waters to the surface waters during and after lake destratification. These nutrients build up in the hypolimnetic waters of lakes under anoxic (no oxygen) conditions and are brought to the lake surface as the thermocline drops during late summer and as the lake mixes after destratification later in the fall. But since the latter phenomenon does not occur in shallower lakes, why do phosphorus readings increase during the summer and into the fall?

There are several factors at play. Increased use of the lake occurs during the summer, taxing the septic systems and creating a more significant hydraulic and nutrient load to the leach field and ultimately the lake. This is consistent with a seasonal increase in conductivity (see Figure 11c), a pattern generally not observed in deeper lakes. Both shallow and deep lakes exhibit aerobic sediment release, a lesser phenomenon than nutrient release under anoxic conditions, but more substantial in shallow lakes with few if any zones of poorly oxygenated water. Nutrients and nearly all other materials in lakes are concentrated by evaporation, which increases substantially during the summer. For many lakes, the senescence of macrophytes occurs in early to mid summer, particularly when plant communities are dominated by *Potamogeton crispus* (curly-leafed pondweed). This early season macrophyte will usually die out by early July, resulting in a release of nutrients into the water. It should be noted that most of the nutrients encompassed in the plant stems and leaves comes from the sediments, not the water column, and these nutrients usually go back into the sediments later in the year.

This seasonal increase in phosphorus in shallow lakes appears to be the primary cause of the seasonal increase in algae levels in these shallow lakes (as is apparent in Figure 19c), and as discussed below.

Trophic Indicators:
Chlorophyll *a* (Chl.a)
Annual Variability:

Chlorophyll *a* (chl.*a*) has varied in most CSLAP lakes more significantly than the other trophic indicators, as is typical of biological indicators, which tend to grow “patchy”. With the exception of the very high readings in 1987 (probably due to a lab problem), the highest chlorophyll *a* levels occurred during 1990, 1991, 1994, and 1996, with all but 1991 corresponding to higher spring rainfall. However, the lowest readings were in 1986, 2002, 2005, and 2007; none of these years corresponded to a particularly dry year. The consistently lower chlorophyll readings in the last six years may also correspond to the shift in laboratories, although both labs use the same analytical methodology and chlorophyll readings were also low in the last few years before changing laboratories. The near majority of chlorophyll readings in CSLAP lakes (53%) correspond to *mesotrophic* conditions (chlorophyll *a* readings between 2 and 8 µg/l), with 37% corresponding to *eutrophic* conditions (chl.*a* > 8 µg/l) and 10% corresponding to *oligotrophic* conditions (chl.*a* < 2 µg/l); these percentages are more like those for water clarity rather than those for phosphorus.

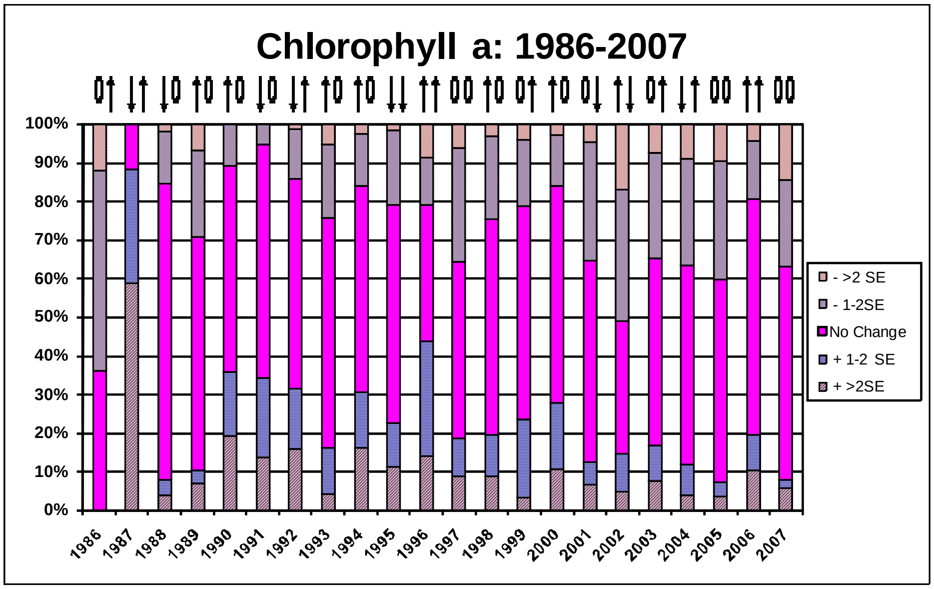


Figure 19a. *Annual Change from “Normal” Chlorophyll a in CSLAP Lakes (SE = Standard Error)*

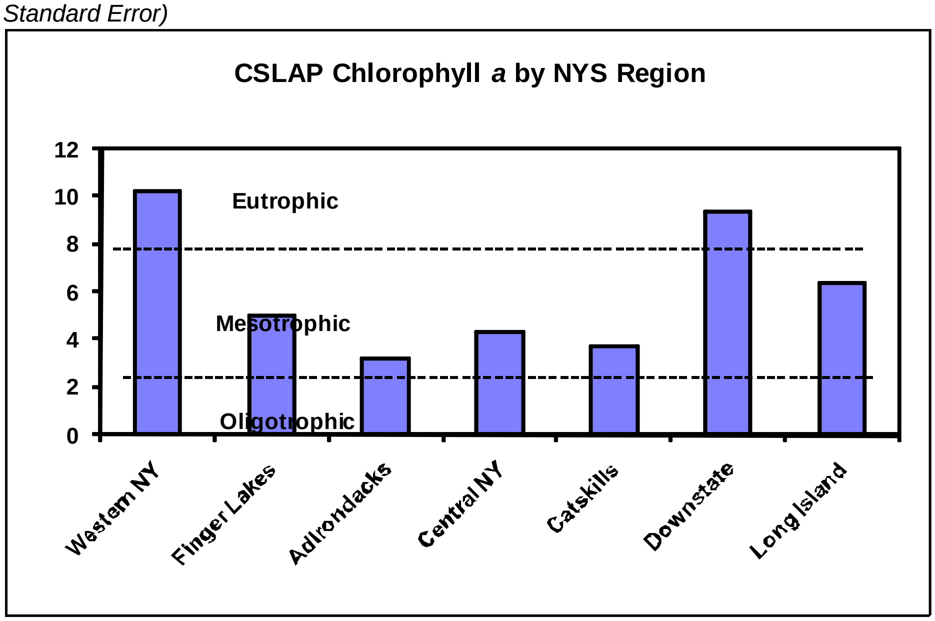


Figure 19b. *Chlorophyll a in CSLAP Lakes by NYS Region*

What Was Expected in 2008?

Chlorophyll *a* levels cannot be well predicted in dry years, as observed in Figure 19a. However, chlorophyll *a* readings are occasionally higher than normal during wet years. Since at least the winter and spring of 2008 was wet in most of the state, algae levels in New York state could be expected to be higher than normal.

What Happened at Lake Kitchawan in 2008?

Chlorophyll *a* readings in Lake Kitchawan were collected for the first time in 2008, so it is not known if the chlorophyll *a* readings recorded were within the normal range for the lake.

Statewide Variability:

As with phosphorus, chlorophyll levels are lowest in the Adirondacks, Central New York, and the Catskills (where clarity is highest) and highest in Long Island, downstate, and western NY, where water transparency is lowest. In the latter two regions, the "typical" lake in each of these regions would be classified as *eutrophic,* while lakes in the other regions would be described as *mesotrophic*, based on assessments from chlorophyll *a* readings.

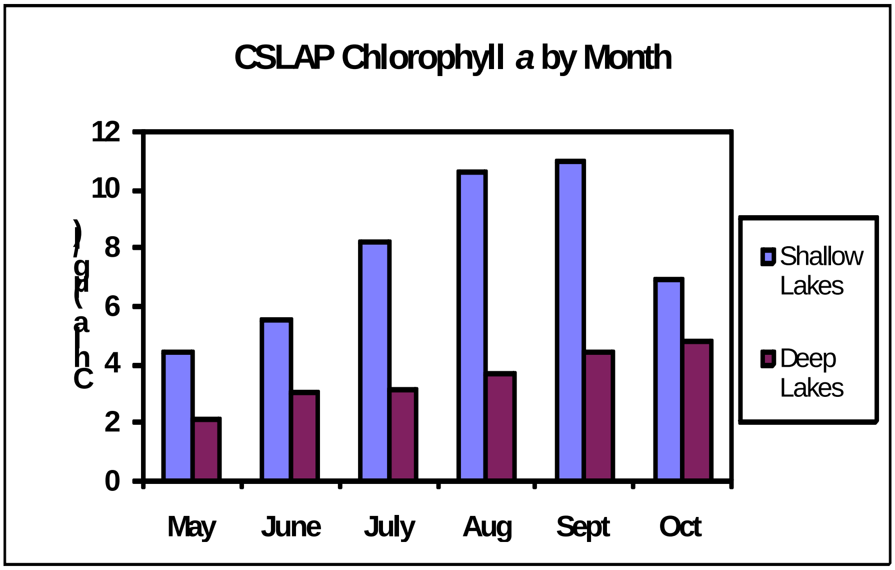


Figure 19c. *Chlorophyll a in Shallow (<20ft deep) and Deep CSLAP Lakes by Month*

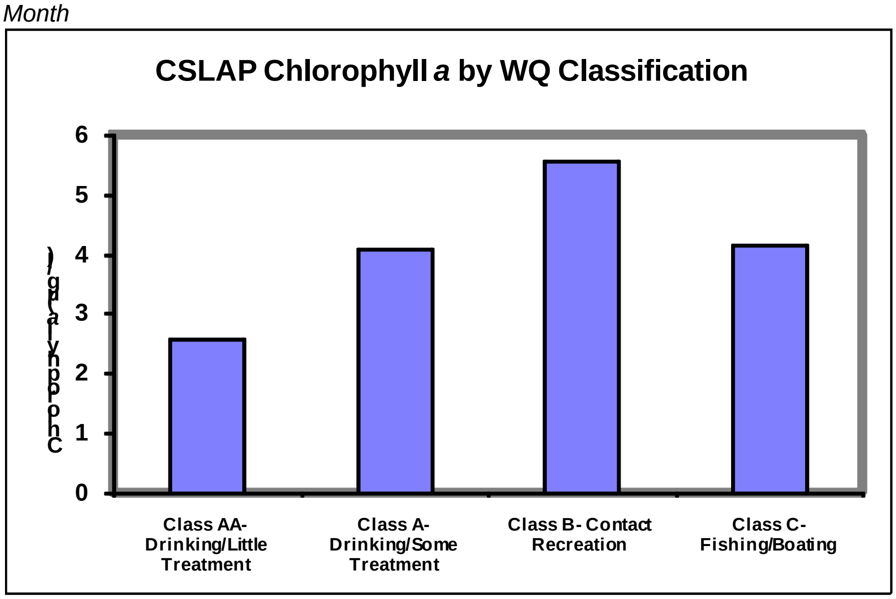


Figure 19d. *Chlorophyll a in CSLAP Lakes by Lake Use*

Seasonal Variability:

Chlorophyll levels are higher, as expected, in shallow lakes, and increase in both shallow and deep lakes during the course of the sampling season, with chlorophyll readings dropping in shallow lakes in the fall. The steady increase in chlorophyll in both shallow and (to a lesser extent) deep lakes is consistent with the change in phosphorus over the same period, due to steady migration of nutrients released from poorly oxygenated lake sediments during the summer and especially in the fall (as well as drier weather, increased lake use, and other factors).

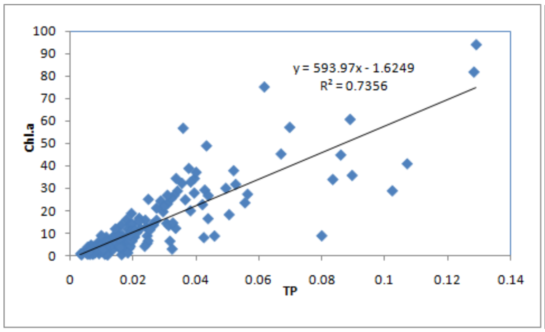
Lake-Use Variability:

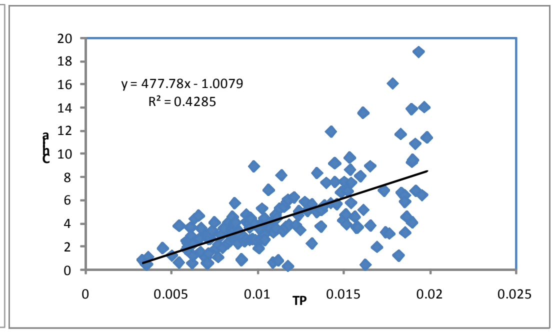
Chlorophyll readings are lower in lakes used for minimally treated potable water intakes (Class AA) and are higher for other lake uses. Although Class B waters are utilized for a "higher" lake use than Class C lakes (contact recreation versus non-contact recreation), these lakes actually have similar levels, perhaps reflecting the influence of deepwater nutrient enrichments (these lakes are typically deeper) and the "unofficial" use of Class C waters for bathing and contact recreation. This is similar to the use pattern for phosphorus.

Detailed Discussion #8- Chlorophyll *a*

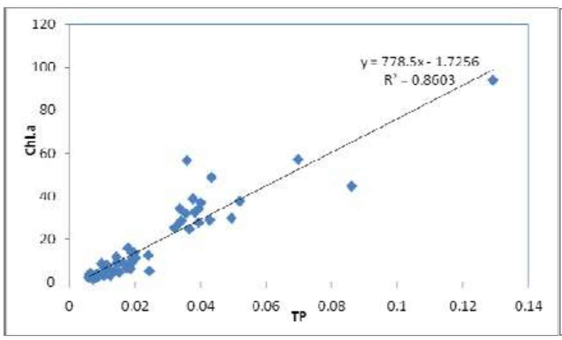
How closely connected are phosphorus and chlorophyll a?

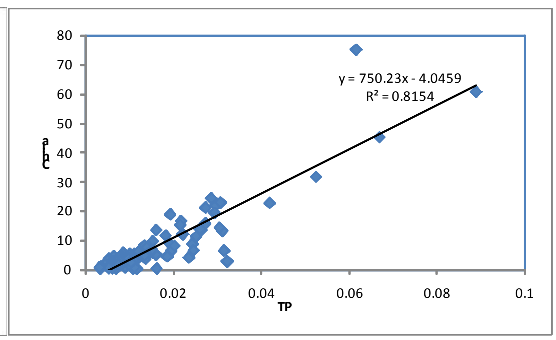
Discussion:





As is apparent from the plot on the upper left, which shows the average chlorophyll *a* (Chl.a) reading for each CSLAP lake plotted against the average total phosphorus (TP) levels for the lake, there is a strong correlation between phosphorus and chlorophyll *a*. This plot shows that nearly 75% of the variability in chlorophyll *a* readings is explained by changes in phosphorus concentrations. This relationship is less clear when considering only lakes with slightly lower phosphorus concentrations, as seen in the plot to the upper right. This plot shows that phosphorus levels below about 2 ppb (=0.002 mg/l) are insufficient to produce measureable algae levels. This corresponds to the lower analytical detection limit for phosphorus.





The relationship between algae and phosphorus improves when lakes are distinguished by residence time, or the amount of time any drop of water stays in the lake. The plot on the left includes only lakes with low residence time, defined here as less than 0.5 years (equivalent to the lake water being completely replaced twice per year). The plot on the right corresponds to lakes with residence time greater than 0.5 years. The slopes of these plots are also similar, suggesting that the "buildout" of algae in response to additions of nutrients does not depend on the amount of time (residence time) the algae are exposed to the nutrients. The same relationship and similar scope occurs even when considering only lakes with residence time less than 0.2 years (2-3 months), although the slope does flatten when considering only lakes with a residence time less than 0.1 year (about 5 weeks), probably corresponding to a minimum period of time needed for algae to be exposed to nutrients (even though algal uptake of nutrients is usually rapid).

Water-quality Assessment (QA on the Perception Form)

Annual Variability

Water-quality assessments (the perceived physical condition of the lake or QA on the use-impairment surveys) were least favorable in wet (2000 and 2006) years, but were highly variable in very dry (1995) years, suggesting the lack of correlation between weather and perceived water-quality. These assessments were most favorable in 1992, 1997, and 1999. There is a strong connection between measured and perceived water clarity in most CSLAP lakes, and a comparison of Figures 17a and 20a shows that the most favorable water quality assessments usually occurred in the years with the highest measured water transparency. This occurs despite the lack of a strong connection between water quality assessments and precipitation patterns.

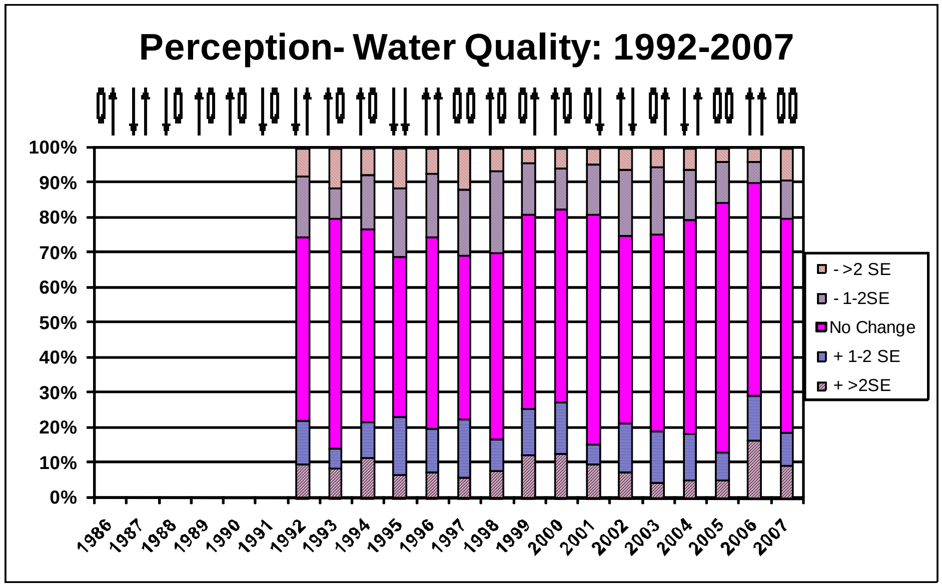


Figure 20a. *Annual Change from "Normal" Water-Quality Assessment in CSLAP Lakes (SE = Standard Error)*

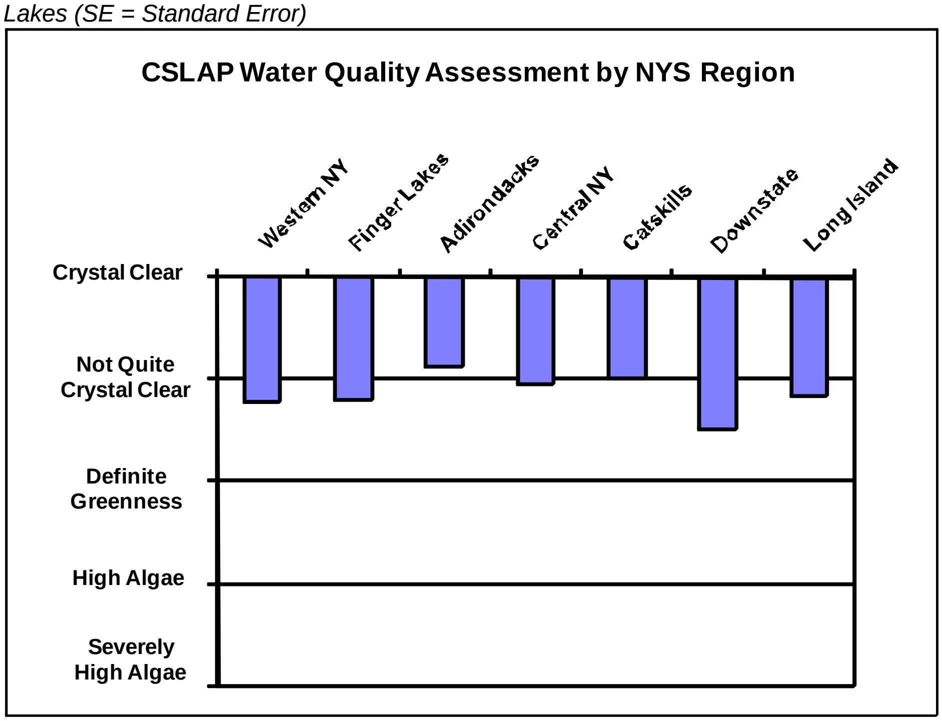


Figure 20b. *Water-Quality Assessment in CSLAP Lakes by NYS Region*

What Was Expected in 2008?

There was not a strong connection between precipitation and perceived water-quality. It is difficult to predict expected conditions in 2008, although water clarity readings were expected to be slightly lower than normal in response to wetter weather in much of the state in 2008.

What Happened at Lake Kitchawan in 2008?

Water-quality assessments in Lake Kitchawan were collected for the first time in 2008, so it is not known if these assessments were within the normal range for the lake.

Statewide Variability:

The most favorable water-quality assessments (at least in support of contact recreation) occurred in the Adirondacks, Catskills, and central New York, as expected, and water-quality assessments were slightly less favorable downstate, in western NY, and on Long Island. This is mostly consistent with the water clarity readings in these regions. However, since the difference between the most favorable (Adirondacks) and least favorable (downstate) assessments is smaller than the measured water transparency differences, this suggests that the relatively low water clarity in the latter regions may often be considered "normal" by lake residents.

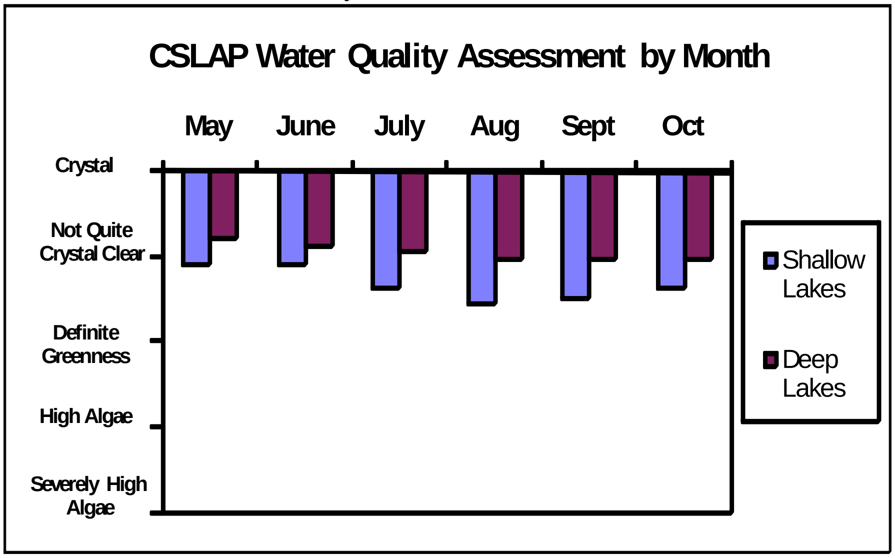


Figure 20c. *Water-Quality Assessment in Shallow (<20ft deep) and Deep CSLAP Lakes by Month*

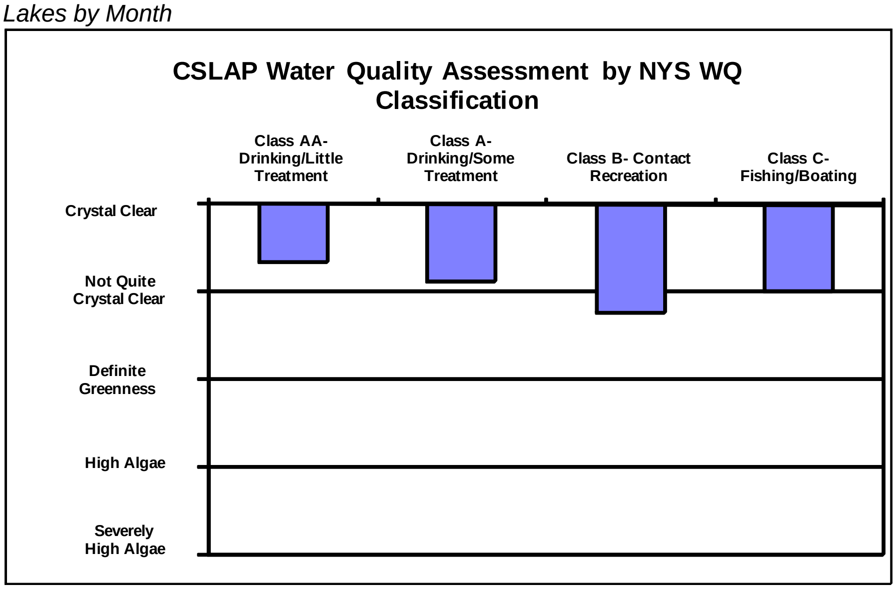


Figure 20d. *Water-Quality Assessment in CSLAP Lakes by Lake Use*

Seasonal Variability:

Water-quality assessments become less favorable as the summer progresses in both deep and (especially) shallow lakes, coincident with similar patterns for the trophic indicators. However, the seasonal changes in these assessments are not very large. These assessments become slightly more favorable in shallow lakes in the fall, consistent with the improved (measured) water clarity, although overall water-quality assessments are less favorable all year in shallow lakes.

Lake Use Variability:

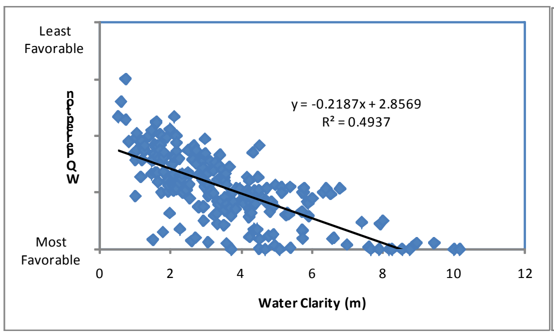
Water-quality assessments are more favorable in lakes used for potable water intakes (Class AA and Class A) and less favorable for other lake uses. Although Class B waters are utilized for a "higher" lake use than Class C lakes (contact recreation versus non-contact recreation), these lakes actually have similar water-quality assessments, perhaps reflecting the influence of deepwater nutrient enrichments (these lakes are typically deeper) and the "unofficial" use of Class C waters for bathing and contact recreation. This is similar to the pattern seen for the trophic indicators.

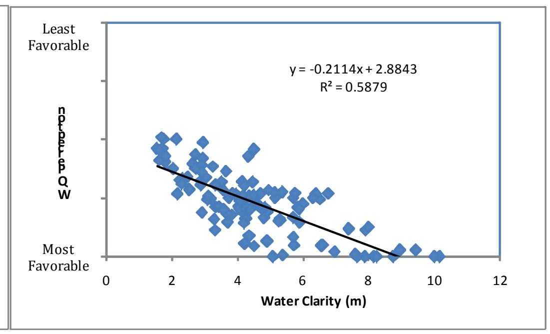
Detailed Discussion #9- Water quality assessments

How closely connected are water quality assessments and water clarity readings?

Discussion:

Water quality perceptions (QA on the field perception form) evaluates the "physical condition" of the lake on a five point scale, with "1" corresponding to "crystal clear" and "5" corresponding to "severely high algae levels". These qualitative assessments may be akin to a narrative interpretation of a water clarity measurement, although these assessments are evaluated before any water quality measurements occur. How closely related are measured water transparency and these qualitative assessments?





The figure on the left shows the relationship between the typical (average) water quality assessment for each CSLAP lake, and the corresponding typical water clarity measurement. The correlation coefficient (R^2) in the figure shows that about half of the change in water quality perception can be explained by changes in measured water clarity. This relationship improves when the two most prominent "interferences" are removed from the plot. The figure on the right shows only those "clearwater" CSLAP lakes that are deep enough to remove the impact of water depth on water clarity measurements. "Clearwater" refers to lakes with average water color measurements less than 15 ptu, which generally eliminates from consideration those samples in which water transparency is limited by the brownness of the water. The water quality conditions in many CSLAP lakes are perceived favorably even if water clarity is limited by "natural" color, presumably because these water clarity limits are not associated with excessive algae and do not impede recreational uses of the lake.

The plot on the left, however, does show that very poor water quality assessments are probably associated with shallow lakes, even if water clarity readings are as influenced by water depth as by excessive algae. The plot on the right shows that the most favorable water quality assessments in relatively deep, uncolored lakes require water clarity measurements of about 5 meters. Perhaps not coincidentally, this corresponds to the boundary between *mesotrophic*, or moderately productive lakes, and *oligotrophic*, or biologically unproductive lakes, as shown in Figure 2.

Aquatic Plant (Weed) Assessment (QB)

Annual Variability:

Aquatic-plant assessments (the perceived extent of weed growth in the lake or QB on the use impairment surveys) indicated that weed coverage was greatest in 1992, 1998, 2000, 2002, and 2005 with only 1998 associated with wet weather. Weed growth was less extensive in 1997 and 2003, neither of which exhibited significant changes in precipitation, suggesting the lack of correlation between weather and weed densities. The highest weed growth occurred when the perceived physical condition (clarity) of the lake was also least favorable, such as in 1995 and 2000. These conditions may offer a selective advantage to invasive or exotic weeds (such as *Myriophyllum spicatum*) which can create surface canopies. Despite continuing concerns about increased invasion from exotic weeds, Figure 21a suggests that no long-term trend toward greater aquatic plant coverage is apparent.

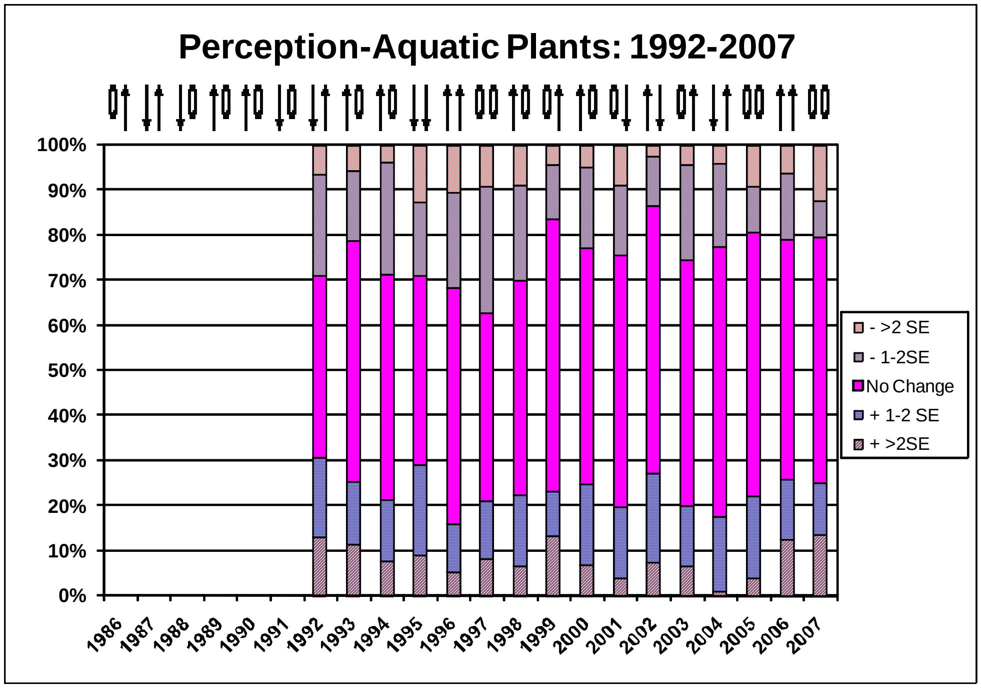


Figure 21a. *Annual Change from "Normal" Weed Assessment in CSLAP Lakes (SE = Standard Error)*

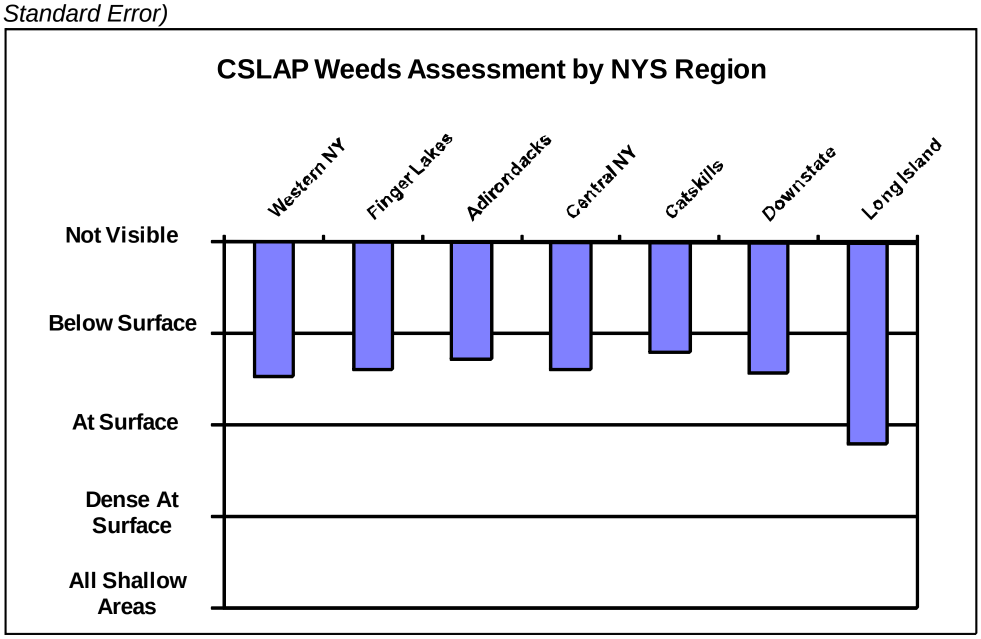


Figure 21b. *Weed Assessment in CSLAP Lakes by NYS Region*

What Was Expected in 2008?

There was not a strong connection between precipitation and extent of weed growth, at least as measurable through CSLAP. This makes it difficult to identify expected conditions in 2008. However, aquatic plant densities are often greater when water clarity is lowest (particularly in lakes with exotic weeds), so lower water transparency in 2008 may trigger an increase in weed densities.

And What Happened at Lake Kitchawan in 2008?

Aquatic plant coverage in Lake Kitchawan were collected for the first time in 2008, so it is not known if the extent of aquatic plant growth was within the normal range for the lake.

Statewide Variability:

Aquatic plant growth was most significant in Long Island (and to a lesser extent downstate and in western NY) and least significant in the Catskills and Adirondacks. The former may have a larger concentration of shallow lakes (Long Island) or preponderance of exotic weeds (downstate and western NY), while the latter may correspond to deeper lakes or fewer instances of these invasive weeds, although it is also likely that invasive-weed growth may be increasing in many lakes within these "less impacted" areas.

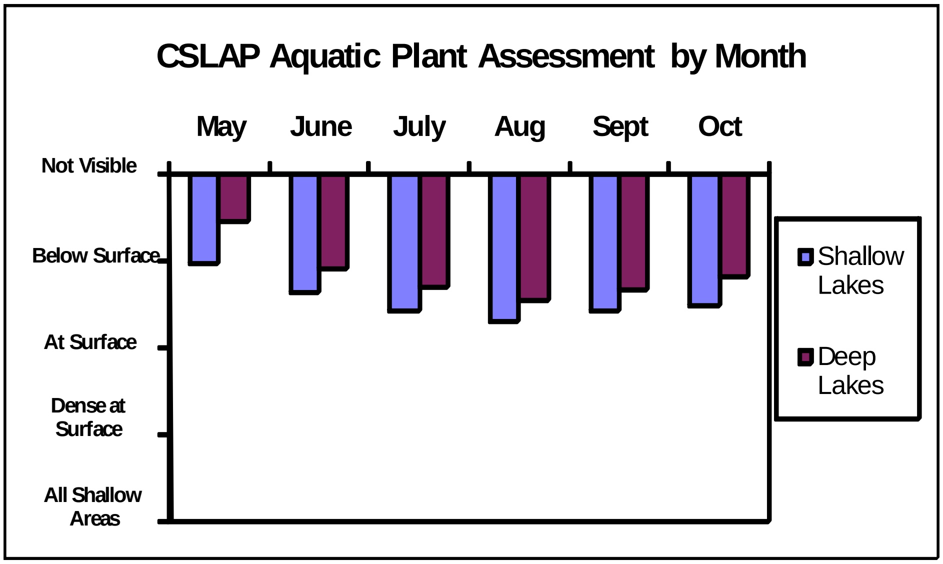


Figure 21c. *Weed Assessment in Shallow (<20ft deep) and Deep CSLAP Lakes by Month*

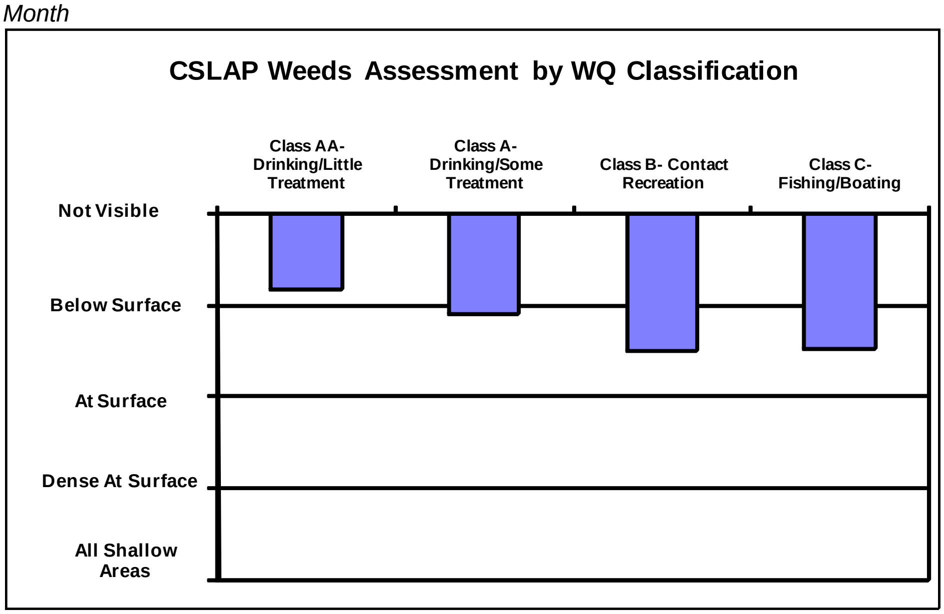


Figure 21d. *Weed Assessment in CSLAP Lakes by Lake Use*

Seasonal Variability:

As expected, aquatic-plant densities and coverage increase seasonally (through late summer) in both shallow and deep lakes, with greater aquatic-plant coverage and densities found in shallow lakes. Peak aquatic-plant densities tend to occur in late summer in both deep and shallow lakes. The variability from one lake to another (from very little growth to dense growth at the lake surface) is more pronounced later in the summer. Despite higher clarity in shallow lakes in the fall, aquatic-plant coverage decreases, while the drop in fall plant coverage in deeper lakes is less pronounced.

Lake Use Variability:

Aquatic-plant coverage was more significant in Class B and Class C lakes than in other lakes, but this (again) is probably a greater reflection of geography or lake size and depth (Class B lakes tend to be found outside the high elevation areas in the Catskills and Adirondacks, and Class C lakes tend to be shallower than Class AA or Class A lakes).

Does the introduction of exotic plants usually lead to an increase in weed coverage?

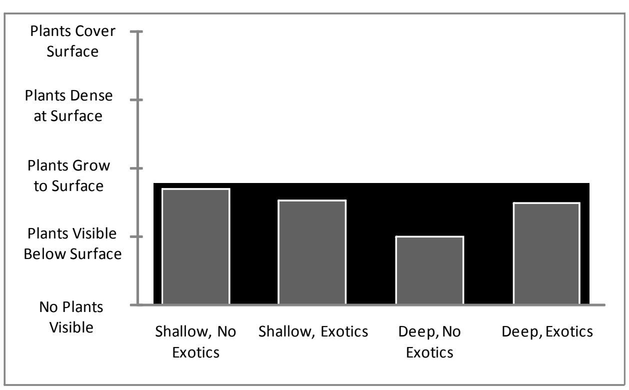
Discussion:

Aquatic plant densities and coverage are evaluated through the CSLAP perception survey. Question B evaluates aquatic plant communities on a five point scale, ranging from “no plants visible” (=#1) to “dense plant growth covering the lake surface…” (=#5). Although a single assessment for any given lake cannot be used to evaluate plant communities throughout a lake, this tool can provide some insights into aquatic plant coverage in these lakes.

Evaluating the effect of exotic plant introductions on changes in plant coverage is greatly compromised by the lack of data on the year of introduction. In addition, for most CSLAP lakes (and nearly all NYS lakes), there are no plant abundance data before and after the introduction of exotic plants, even though exotic plants have been confirmed in at least 55% of the CSLAP lakes. This further impacts an evaluation of these data.

The CSLAP dataset shows that the perception survey results were comparable for lakes with exotic plants and lakes with only native plants—both sets of lakes typically are described as having plants varying between visible below the lake surface and growing to the lake surface (the average “response” for both sets of lakes was about 2.4). But this appraisal is confounded by the large number of shallow lakes for which all aquatic plants are likely to grow to the lake surface.

In deep lakes without exotic plants, aquatic plants are most frequency described as “visible below the lake surface” (average response = 2.0), but plants in deep lakes in which exotic plants are located are described as between “visible below the lake surface” and “growing to the lake surface” (average response = 2.5). Native plant coverage in shallow lakes is much more extensive than in deep lakes (average response = 2.7), but the presence of exotic plants actually reduces the extent of plant coverage (average response = 2.5). These distributions are plotted below. It is not likely that this represents a real phenomenon, although the native plant coverage in shallow lakes may be associated with floating leaf plants (such as lilies) or even emergent plants.



Recreational Assessment (QC)

Annual Variability:

Recreational assessments (the perceived recreational suitability of the lake or QC on the use-impairment surveys) have varied from year to year, with no clear long-term pattern. The most favorable assessments were in 1995, 1997, and 1998. 1997 corresponded to a year with low aquatic-plant (weed) coverage and favorable water quality. This suggests that recreational assessments are influenced by both water-quality conditions and aquatic plant densities. Less favorable assessments occurred in 1992, 2000, and 2006. Extensive weed growth was reported in 1992 and 2000, and poor water quality was more common in 2000 and 2006. The extent of "normal" conditions (the middle bar in Figure 22a) has generally not changed significantly since perception surveys were first conducted in 1992.

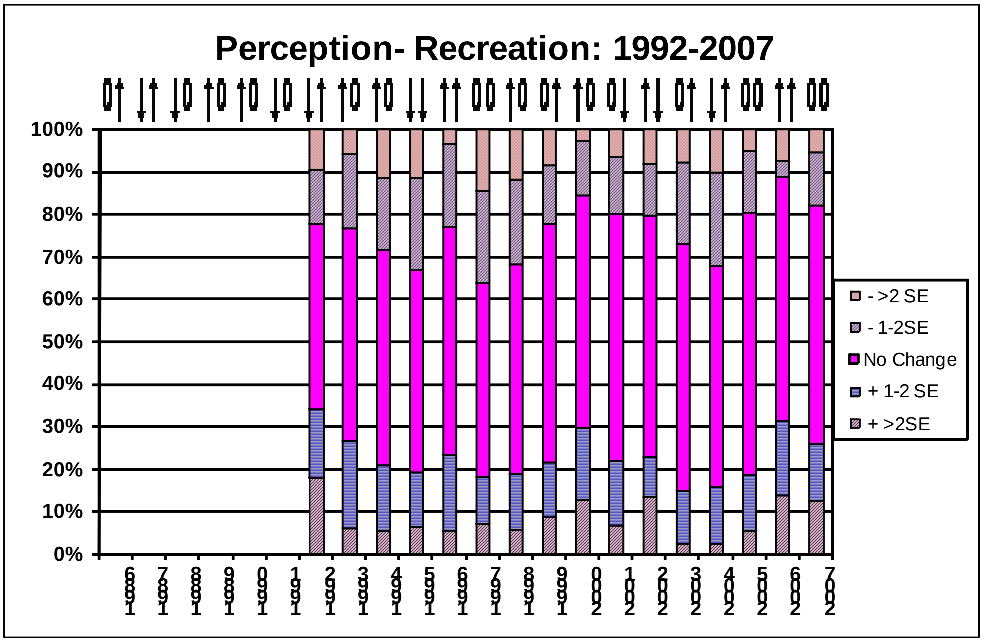


Figure 22a. *Annual Change from "Normal" Recreational Assessment in CSLAP Lakes (SE = Standard Error)*

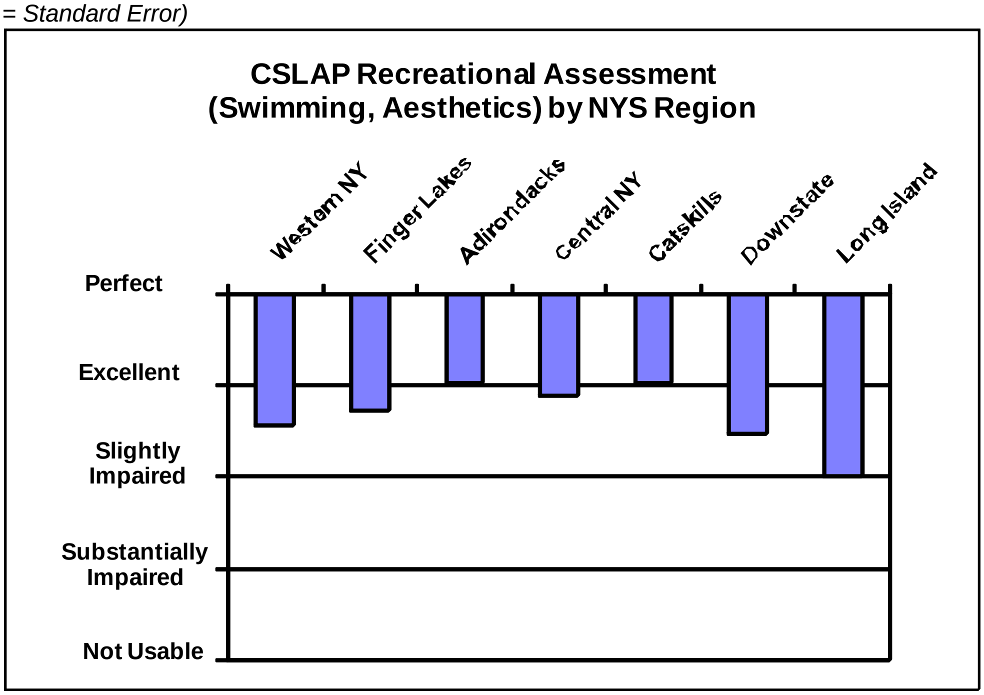


Figure 22b. *Recreational Assessment in CSLAP Lakes by NYS Region*

What Was Expected in 2008?

There is not a strong connection between precipitation and perceived recreational conditions. While it is reasonable to assume that recreational assessments will be less favorable if either water quality perceptions are unfavorable or aquatic plant coverage increases, changes in water quality or plant coverage is difficult to predict. As noted above, given the 2008 weather patterns and their expected impact on water transparency and weeds, it is more likely that recreational assessments will be less favorable than more favorable.

What Happened at Lake Kitchawan in 2008?

Recreational assessments in Lake Kitchawan were collected for the first time in 2008, so it is not known if these assessments were within the normal range for the lake.

Statewide Variability:

Recreational assessments are most favorable in the Adirondacks and Catskills, and less favorable in Long Island and (to a lesser extent) downstate and in western New York. This appears to be in response to less favorable assessments of water-quality and aquatic plant growth, respectively. Except for (the assessments in the small number of CSLAP lakes in) Long Island, overall recreational assessments in all regions are, in general, highly favorable.

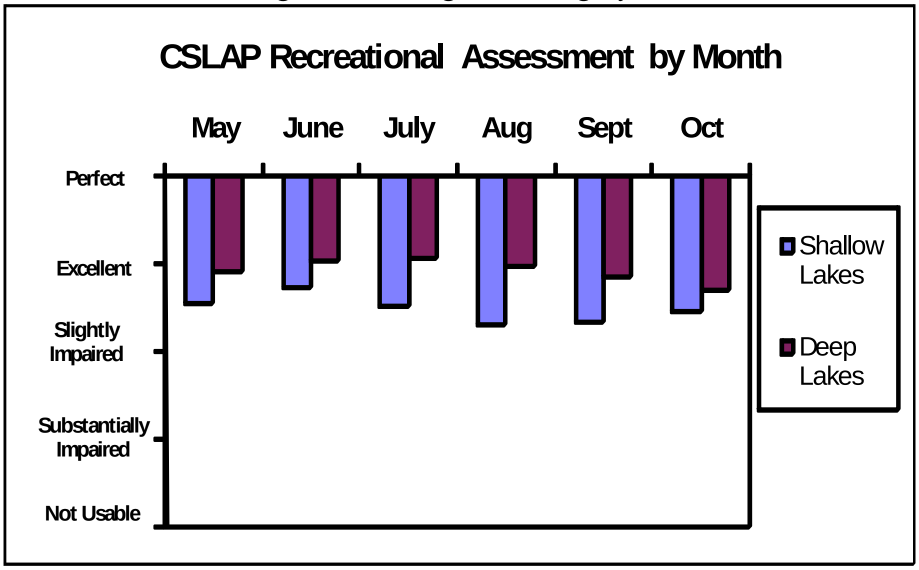


Figure 22c. *Recreational Assessment in Shallow (<20ft deep) and Deep CSLAP Lakes by Month*

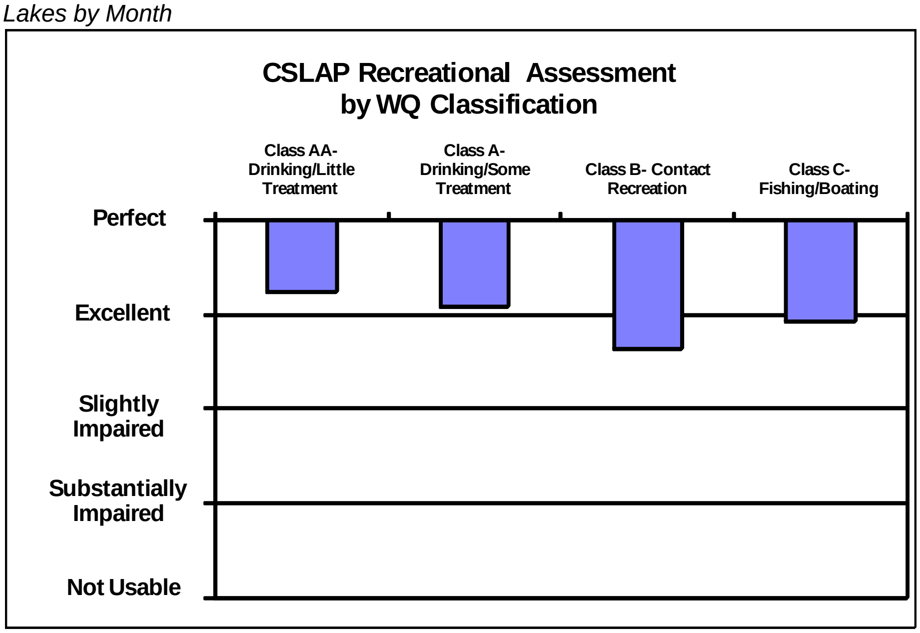


Figure 22d. *Recreational Assessment in CSLAP Lakes by Lake Use*

Seasonal Variability:

Recreational assessment in both shallow and deep lakes tends to improve from spring to early summer and then degrade through the summer, improving in shallow lakes in the fall. As expected, this generally corresponds to seasonal increases in aquatic plant coverage in deep lakes and also to seasonally degrading water-quality in shallow lakes. Overall recreational assessments are more favorable in deep lakes every month of the sampling season, although the differences are less pronounced in late spring and early fall (and winter, when every lake looks nice!).

Lake Use Variability:

Recreational assessment becomes less favorable as the designated lake use becomes less sensitive (drinking water to contact recreation), although recreational assessments of Class B and C lakes are only slightly less favorable than in Class AA and A lakes. This may be considered a validation of these classifications (recognizing, again, that many Class C lakes continue to fully support contact recreation and perhaps even potable-water use).

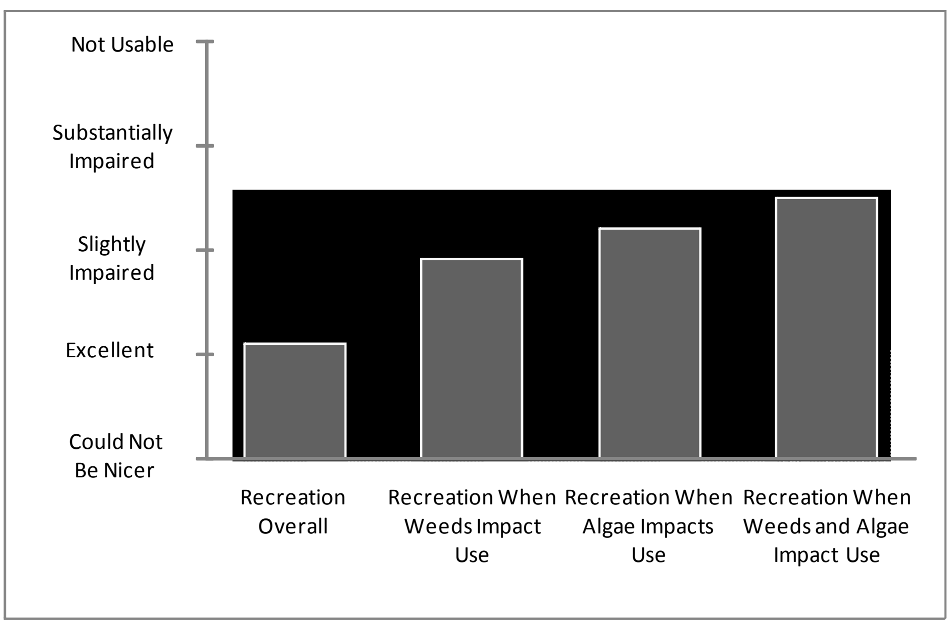
Detailed Discussion #11- Recreational assessments

Are lakes with both invasive plants and excessive algae usually viewed less favorably than lakes with problems with either weeds or algae (but not both)?

Discussion:

The CSLAP perception survey provides a five point scale for evaluating recreational suitability, ranging from “could not be nicer” (= #1) to “lake not usable” (= #5). As is apparent from the plot below, the typical response for CSLAP lakes is “excellent” for most recreational uses, corresponding to #2 on this scale. The relative impact of aquatic plants and water quality conditions can be evaluated for each recreational use response. The typical response to this question is less favorable when “excessive weed growth” is reported as impacting recreational use, and is even less favorable when “poor water clarity” or “excessive algae growth” are implicated in recreational use impacts. These lakes are most frequently described as being “slightly impaired”. The greater impacts from excessive algae may reflect the nature of this recreational use survey, which directs respondents to evaluate impacts to “swimming and aesthetic enjoyment”. Surveys geared toward evaluating non-contact recreation, such as boating, would no doubt yield different results.

It is clear from the plot below that the combination of excessive algae and excessive weeds create more problems than either factor alone, even though each factor may ultimately limit the other. For example, very dense weed growth may outcompete algae for available nutrients, even though most rooted aquatic plants in NYS uptake nutrients primarily from the water. Likewide, dense algal blooms may limit sunlight transmission to the bottom of the lake, thus limiting weed growth to only the very shallow shoreline areas. These findings may better reflect the influence of Eurasian watermilfoil, which can grow very densely in highly turbid water.



So What Have We Learned Through CSLAP?

After more than twenty years and more than 15,000 samples collected from more than 220 lakes throughout New York State, we have learned a lot about the lakes of New York State as a direct result of the work of nearly 1,500 volunteers through CSLAP. Some of these findings have been summarized in other places in this report, but these and other findings can be distilled here:

- Water quality conditions in most CSLAP lakes have not changed significantly in the last twenty years. While there have been some water quality trends, as discussed below, the majority of the changes observed in these lakes appear to be within the normal range of variability expected in most lakes. This is not to discount the important work done by many NYSFOLA lake associations— improvements in septic management, reductions in lawn fertilization, erosion and stormwater management, and invasive species prevention may have minimized or at least slowed down the steady progression toward lake succession and the continued onslaught of overdevelopment and global climate change. Unfortunately, it is not yet known if these findings can be extrapolated to the entirety of New York State lakes, even though the typical CSLAP lake is similar to the typical New York State lake (in the "developed" portions of the state).
- For those lakes that exhibited significant change, there was no clear pattern of change for most water quality indicators measured through CSLAP. However, there were some exceptions:
  - Conductivity changed more than any of the other CSLAP water quality indicators measured over the last 23 years, although about an equal number of lakes exhibited increasing conductivity as exhibited decreasing conductivity. It was reported in 2007 that more lakes had shown an increase in conductivity, but this "trend" may have disappeared due to wetter weather in recent years.
  - Water color increased in 15-20% of these lakes, with the majority of the increase occurring in the last six years. As discussed in detail above, this may have reflected both an increase in association with wetter weather and the change in laboratories in 2002. However, the increase in water color and corresponding decrease in water transparency did not appear to affect recreational assessments of the lake or any of the other measured water quality indicators.
  - pH has decreased in twice as many lakes than it has increased, although this decrease occurred in only about 10% of the CSLAP lakes. This indicates that acid rain continues to fall, although it is important to note that pH has increased in 30-50% of these lakes in last two years. This suggests that the increase in pH apparent in many Adirondack lakes as a consequence of federal Clean Air Act emission reductions and cap and trade programs may have been realized in other NYS lakes as well. It should be noted that the drop in pH over the last twenty years, and increase in the last two years, has not resulted in any significant change in the frequency of water quality standards violations in these lakes. It should also be noted that there are few CSLAP lakes in the most acid-sensitive class of lakes (high elevation, small, undeveloped lakes), and thus the very significant change in lake ecology found in some of these sensitive lakes would not be apparent in these affected CSLAP lakes.
  - Water temperature readings have increased in 10-15% of the CSLAP lakes that have been sampled for more than 5 years. More precisely, water temperature readings have increased in about 20-30% of the lakes in a statistically significant manner, and have decreased in 10-15% of the lakes. While a similar change was not apparent with the air temperature data, the latter reflects an instantaneous measurement that might not reflect larger scale changes. The overall change in any of these lakes is probably less than 2ºC, and given the lack of sensitivity in the

pocket thermometers used in CSLAP, it is not clear if this change is outside the normal variability for the lake. But if this increase has occurred, the implications may be significant. The increase in water temperature will effectively increase the growing season in these lakes. This may trigger an increase in the growth and duration of algae and rooted aquatic vegetation. The increasing suitability of New York lakes for more traditionally southern exotic plants, such as *Hydrilla verticillatum* (hydrilla) and *Egeria densa* (Brazilian elodea), will make these lakes more susceptible to invasive growth of these exotics. There is at least some antidotal evidence from several CSLAP lakes that the end of the growing season for *Potamogeton crispus* (curly-leafed pondweed) has shifted from late June until at least mid July, with an increasing number of lakes reported persistent curly-leafed pondweed populations lasting well into late summer. In addition, several New York State lakes have reported as much as a 20 day decrease in the ice cover season over the last 100 years. The implications for plant growing seasons, spring runoff patterns, winter recreation, and ice damage to docks could be significant, but at present are not known.

- The frequency of phosphorus readings exceeding 20 parts per billion (or µg/l) is very similar to the frequency of water clarity readings below 2 meters. Since the former corresponds to the state guidance value for Class B (swimming) lakes, this suggests that water clarity readings may be a useful surrogate for evaluating potential impacts of excessive algae to swimming and contact recreation.
- For many CSLAP lakes, there appears to be a strong correlation between water transparency and precipitation—lower water clarity readings occur in response to heavy rainfall and/or runoff. While phosphorus readings and algae levels also increase as a result of higher precipitation, the correlation is not as strong, probably due to increasing turbidity and lower transmission of light into the water, less sunlight, and the impact of water color on water transparency. A more detailed analysis will require truly local precipitation data—rather than aggregate data from large regions of the state as presented in this report—and its impact on runoff, lake water level, and even water temperature readings.
- There is a strong correlation between water quality perception and standard eutrophication indicators—water clarity, chlorophyll *a*, and total phosphorus. This has significant implications for developing water quality standards or criteria for these water quality indicators, since poor water quality perception is closely connected to recreational and aesthetic impacts and provides an impetus for managing these resources. These data will continue to be used by the state of New York to develop recreation-based water quality criteria to protect lakes and ponds from over-enrichment from excessive phosphorus and algae levels. Since perception data are also closely related to justification (or providing an impetus) for lake management actions, these perception data can only be collected by lake residents or others intimately familiar with the ebb and flow of “normal” conditions in lakes.

VI. DETAILED LAKE KITCHAWAN WATER-QUALITY SUMMARY

CSLAP is intended to provide a database to help lake associations understand lake conditions and foster sound lake protection and pollution prevention decisions. This individual lake summary for 2008 contains two forms of information. The raw data and graphs present a snapshot or glimpse of water-quality conditions at each lake. They are based on (at most) eight or nine sampling events during the summer. As lakes are sampled through CSLAP for a number of years, the database for each lake will expand, and assessments of lake conditions and water-quality data become more accurate. For this reason, lakes new to CSLAP for only one year will not have information about annual trends.

Raw Data

Two **"**data sets**"** are provided below. The data presented in Table 2 include an annual summary of the minimum, maximum, and average for each of the CSLAP sampling parameters, including data from other sources for which sufficient quality-assurance/quality-control documentation is available for assessing the validity of the results. This data may be useful for comparing a particular data point for the current sampling year with historical data or information. Tables 3 through 5 includes more detailed summaries of the 2008 and historical data sets, including some evaluation of water-quality trends, comparison against existing water-quality standards, and whether 2008 represented a typical year.

Graphs

The second form of data analysis for your lake is presented in the form of graphs. These graphs are based on the raw data sets to represent a snapshot of water-quality conditions at your lake. The more sampling that has been done on a particular lake, the more information that can be presented on the graph, and the more information you have to identify annual trends for your lake. For example, a lake that has been doing CSLAP monitoring consistently for five years will have a graph depicting five years' worth of data, whereas a lake that has been doing CSLAP sampling for only one year will only have one. Therefore, it is important to consider the number of sampling years of information in addition to where the data points fall on a graph when trying to draw conclusions about annual trends. There are certain factors not accounted for in this report that lake managers should consider:

- **Local weather conditions** (high or low temperatures, rainfall, droughts or hurricanes). Due to delays in receiving meteorological data from NOAA stations within NYS, weather data from individual weather stations or the present sampling season are not included in these reports. Some of the variability reported below can be attributed more to weather patterns than to a "real" water trend or change. However, it is presumed that much of the sampling "noise" associated with weather is dampened over multiple years of data collection and thus should not significantly influence the limited trend analyses provided for CSLAP lakes with longer and larger databases.

- **Sampling season and parameter limitations**. Because sampling is generally confined to June-September, this report does not look at CSLAP parameters during the winter and other seasons. Winter conditions can impact the usability and water-quality of a lake. In addition, there are other sampling parameters (fecal coliform, dissolved oxygen, etc.) that may be responsible for chemical and biological processes and changes in physical measurements (such as water clarity) and the perceived conditions in the lake. *The 2008 CSLAP report attempts to standardize some comparisons by limiting the evaluation to the summer recreational season and the most common sampling periods (mid-June through mid-September), in the event that samples are collected at other times of the year (such as May or October) during only some sampling seasons.*

TABLE 2: CSLAP Data Summary for Lake Kitchawan

Year	Min	Avg	Max	N	Parameter
2008-08	**0.65**	**0.65**	**0.65**	**1**	**CSLAP Zsd**
2008	0.65	0.65	0.65	1	CSLAP Zsd
Year	Min	Avg	Max	N	Parameter
2008-08	**0.074**	**0.074**	**0.074**	**1**	**CSLAP Tot.P**
2008	0.074	0.074	0.074	1	CSLAP Tot.P
Year	Min	Avg	Max	N	Parameter
2008-08	**0.02**	**0.02**	**0.02**	**1**	**CSLAP NO3**
2008	0.02	0.02	0.02	1	CSLAP NO3
Year	Min	Avg	Max	N	Parameter
2008-08	**0.04**	**0.04**	**0.04**	**1**	**CSLAP NH4**
2008	0.04	0.04	0.04	1	CSLAP NH4
Year	Min	Avg	Max	N	Parameter
2008-08	**0.48**	**0.48**	**0.48**	**1**	**CSLAP TDN**
2008	0.48	0.48	0.48	1	CSLAP TDN
Year	Min	Avg	Max	N	Parameter
2008-08	**14.43**	**14.43**	**14.43**	**1**	**CSLAP TN/TP**
2008	14.43	14.43	14.43	1	CSLAP TN/TP
Year	Min	Avg	Max	N	Parameter
2008-08	**37**	**37**	**37**	**1**	**CSLAP Tcolor**
2008	37	37	37	1	CSLAP Tcolor
Year	Min	Avg	Max	N	Parameter
2008-08	**8.79**	**8.79**	**8.79**	**1**	**CSLAP pH**
2008	8.79	8.79	8.79	1	CSLAP pH
Year	Min	Avg	Max	N	Parameter
2008-08	**168**	**168**	**168**	**1**	**CSLAP Cond25**
2008	168	168	168	1	CSLAP Cond25
Year	Min	Avg	Max	N	Parameter
2008-08	**25.8**	**25.8**	**25.8**	**1**	**CSLAP Ca**
2008	25.8	25.8	25.8	1	CSLAP Ca
Year	Min	Avg	Max	N	Parameter
2008-08	**0.31**	**0.31**	**0.31**	**1**	**CSLAP Chl.a**
2008	0.31	0.31	0.31	1	CSLAP Chl.a
Year	Min	Avg	Max	N	Parameter
2008-08	**3**	**3.0**	**3**	**1**	**CSLAP QA**
2008	3	3.0	3	1	CSLAP QA

DATA SOURCE KEY

CSLAP	New York Citizens Statewide Lake Assessment Program
LCI	the NYSDEC Lake Classification and Inventory Survey conducted during the 1980s and again beginning in 1996 on select sets of lakes, typically 1 to 4x per year
DEC	other water-quality data collected by the NYSDEC Divisions of Water and Fish and Wildlife, typically 1 to 2x in any give year
ALSC	the NYSDEC (and other partners) Adirondack Lake Survey Corporation study of more than 1500 Adirondack and Catskill lakes during the mid 1980s, typically 1 to 2x
ELS	USEPA's Eastern Lakes Survey, conducted in the fall of 1982, 1x
NES	USEPA's National Eutrophication Survey, conducted in 1972, 2 to 10x
EMAP	USEPA and US Dept. of Interior's Environmental Monitoring and Assessment Program conducted from 1990 to present, 1 to 2x in four year cycles

Additional data source codes are provided in the individual lake reports

CSLAP DATA KEY:

The following key defines column headings and parameter results for each sampling season:

Min	Minimum reading for the parameter
Avg	Geometric average (mean) reading for the parameter
Max	Maximum reading for the parameter
N	Number of samples collected
Zsd	Secchi disk transparency, meters
Tot.P	Total Phosphorus as P, in mg/l (Hypo = bottom sample)
NO3	Nitrate + Nitrite nitrogen as N, in mg/l
NH_4	Ammonia as N, in mg/l
TDN	Total Dissolved Nitrogen as N, in mg/l
TN	Total Nitrogen as N, in mg/l
TP/TN	Phosphorus/Nitrogen ratios, unitless (calculated from TDN)
Ca	Calcium, in mg/l
Tcolor	True color, as platinum color units
pH	(negative logarithm of hydrogen ion concentration), standard pH
Cond25	Specific conductance corrected to 25°C, in µmho/cm
Chl.a	Chlorophyll *a*, in µg/l
QA	Survey question re: physical condition of lake: (1) crystal clear; (2) not quite crystal clear; (3) definite algae greenness; (4) high algae levels; and (5) severely high algae levels
QB	Survey question re: aquatic plant populations of lake: (1) none visible; (2) visible underwater; (3) visible at lake surface; (4) dense growth at lake surface; (5) dense growth completely covering the nearshore lake surface
QC	Survey question re: recreational suitability of lake: (1) couldn't be nicer; (2) very minor aesthetic problems but excellent for overall use; (3) slightly impaired; (4) substantially impaired, although lake can be used; (5) recreation impossible
QD	Survey question re: factors affecting answer QC: (1) poor water clarity; (2) excessive weeds; (3) too much algae/odor; (4) lake looks bad; (5) poor weather; (6) litter, surface debris, beached/floating material; (7) too many lake users (boats, PWCs, etc); (8) other

TABLE 2: CSLAP Data Summary for Lake Kitchawan (cont)

Year	Min	Avg	Max	N	Parameter
2008-08	**4**	**4.0**	**4**	**1**	**CSLAP QB**
2008	4	4.0	4	1	CSLAP QB
Year	Min	Avg	Max	N	Parameter
2008-08	**3**	**3.0**	**3**	**1**	**CSLAP QC**
2008	3	3.0	3	1	CSLAP QC

- **Statistical analyses**. True assessments of water-quality trends and comparison to other lakes involve rigid statistical analyses. Such analyses are generally beyond the scope of this program, in part due to limitations on the time available to summarize data from more than 100 lakes in the five months from data receipt to the next sampling season. This may be due in part to the inevitable inter-lake inconsistencies in sampling dates from year to year and in part to the limited scope of monitoring. Where appropriate, some statistical summaries, utilizing both parametric and non-parametric statistics, have been provided within the report (primarily in Table 2).

- **Mean versus Median.** Much of the water-quality summary data presented in this report is reported as the mean, or the average of all of the readings in the period in question (summer, annual, year to year). However, while mean remains one of the most useful, and often most powerful, ways to estimate the most typical reading for many of the measured water-quality indicators, it is a less useful and perhaps misleading estimate when the data are not "normally" distributed (most common readings in the middle of the range of all readings, with readings less common toward the end of the range).

  In particular, comparisons of one lake to another, such as comparisons within a particular basin, can be greatly affected by the spread of the data across the range of all readings. For example, the average phosphorus level of nine lakes with very low readings (say 10 µg/l) and one lake with very high readings (say 110 µg/l) could be much higher (in this case, 20 µg/l) than in the "typical lake" in this set of lakes (much closer to 10 µg/l). In this case, median, or the middle reading in the range, is probably the most accurate representation of "typical".

  This report will include the use of both mean and median to evaluate "central tendency," or the most typical reading, for the indicator in question. In most cases, "mean" is used most often to estimate central tendency. However, where noted, "median" may also be used.

TABLE 3- Current and Historical Data Summaries for Lake Kitchawan
Eutrophication Indicators

Parameter	Year	Minimum	Average	Maximum
Zsd	2008	0.65	0.65	0.65
(meters)	All Years	0.65	0.65	0.65
Parameter	**Year**	**Minimum**	**Average**	**Maximum**
Phosphorus	2008	0.074	0.074	0.074
(mg/l)	All Years	0.074	0.074	0.074
Parameter	**Year**	**Minimum**	**Average**	**Maximum**
Chl.a	2008	0.31	0.31	0.31
(µg/l)	All Years	0.31	0.31	0.31

Parameter	Year	Was 2008 Clarity the Highest or Lowest on Record?	Was 2008 a Typical Year?	Trophic Category	Zsd Changing?	% Samples Violating DOH Beach Std?+
Zsd	2008	Not yet known	Not yet known	Eutrophic	Not yet known	100
(meters)	All Years			Eutrophic		100
Parameter	**Year**	**Was 2008 TP the Highest or Lowest on Record?**	**Was 2008 a Typical Year?**	**Trophic Category**	**TP Changing?**	**% Samples Exceeding TP Guidance Value**
Phosphorus	2008	Not yet known	Not yet known	Eutrophic	Not yet known	100
(mg/l)	All Years			Eutrophic		100
Parameter	**Year**	**Was 2008 Algae the Highest or Lowest on Record?**	**Was 2008 a Typical Year?**	**Trophic Category**	**Chl.a Changing?**	
Chl.a	2008	Not yet known	Not yet known	Oligotrophic	Not yet known	
(µg/l)	All Years			Oligotrophic		

Minimum allowable water clarity for siting a new NYS swimming beach = 1.2 meters
NYS Total Phosphorus Guidance Value for Class B and Higher Lakes = 0.020 mg/l

The CSLAP dataset includes only one sample from Lake Kitchawan in 2008. This single sample is insufficient to characterize the lake. A preliminary assessment indicates that Lake Kitchawan is a *eutrophic*, or highly productive, lake, based on the sole phosphorus and Secchi disk transparency reading. The single chlorophyll *a* reading indicates much lower lake productivity, but this is inconsistent with the readings from the other trophic indicators and is probably not accurate or representative of the lake. It is not yet known if these trophic assessments represent normal conditions for Lake Kitchawan. Correlation between changes in clarity and algae, and between changes in phosphorus and algae, cannot be evaluated with only a single datapoint, although the phosphorus and water clarity readings are "internally consistent". It is likely that improving water transparency will require controlling nutrient loading to and algae levels in the lake. Seasonal changes cannot be evaluated, although it is expected that lake productivity increases during the summer, as in most shallow, eutrophic lakes. Additional data will determine if this trend occurs during most sampling seasons. The single phosphorus reading exceeded the state guidance value for lakes used for contact recreation (swimming), and the sole Secchi disk transparency reading failed to reach the minimum recommended water clarity for swimming beaches (= 1.2 meters) in 2008. In short, Lake Kitchawan appears to exhibit characteristics of a *eutrophic* lake, although additional data will be needed to evaluate seasonal and long-term trends.

TABLE 4- Current and Historical Data Summaries for Lake Kitchawan (cont.)
Other Water-Quality Indicators

Parameter	Year	Minimum	Average	Maximum
Nitrate	2008	0.02	0.02	0.02
(mg/l)	All Years	0.02	0.02	0.02
Parameter	**Year**	**Minimum**	**Average**	**Maximum**
NH4	2008	0.04	0.04	0.04
(mg/l)	All Years	0.04	0.04	0.04
Parameter	**Year**	**Minimum**	**Average**	**Maximum**
TDN	2008	0.48	0.48	0.48
(mg/l)	All Years	0.48	0.48	0.48
Parameter	**Year**	**Minimum**	**Average**	**Maximum**
True Color	2008	37	37	37
(ptu)	All Years	37	37	37
Parameter	**Year**	**Minimum**	**Average**	**Maximum**
pH	2008	8.79	8.79	8.79
(std units)	All Years	8.79	8.79	8.79
Parameter	**Year**	**Minimum**	**Average**	**Maximum**
Conductivity	2008	168	168	168
(µmho/cm)	All Years	168	168	168
Parameter	**Year**	**Minimum**	**Average**	**Maximum**
Calcium	2008	25.8	25.8	25.8
(mg/l)	All Years	25.8	25.8	25.8

The CSLAP dataset includes only one sample from Lake Kitchawan in 2008. This single sample is insufficient to characterize the lake. A preliminary assessment indicates Lake Kitchawan is a moderately colored, highly alkaline (above neutral pH) lake with low nitrate and ammonia levels, and water of intermediate hardness. Water transparency readings are more influenced by algae than by water color, although water color readings may be high enough to limit water clarity when algae levels are very low (it is not known if measured water clarity is ultimately limited by water depth). Nitrate and ammonia readings were low, and suggest that neither nitrate nor ammonia appears to represent a threat to water-quality. The nitrogen-to-phosphorus ratios do not clearly indicate if algae growth is limited by phosphorus or nitrogen. pH readings are above the state water quality standard, and are more typical of lakes with much higher algae levels (than were measured via chlorophyll *a*). Conductivity readings are indicative of lakes with intermediate hardness. Calcium levels are well above the threshold found to support zebra mussels, but it is not believed that these exotic animals have been in Lake Kitchawan. It is premature to evaluate any water quality trends in these data, or even to verify that the numbers from the single sample in 2008 are indicative of normal conditions in Lake Kitchawan.

TABLE 4- Current and Historical Data Summaries for Lake Kitchawan (cont.)
Other Water-Quality Indicators (cont)

Parameter	**Year**	**Was 2008 Nitrate the Highest or Lowest on Record?**	**Was 2008 a Typical Year?**	**Nitrate High?**	**Nitrate Changing?**	**% Samples Exceeding NO3 Standard**	
Nitrate	2008	Not yet known	Not yet known	No	Not yet known	0	
(mg/l)	All Years			No		0	
Parameter	**Year**	**Was 2008 Ammonia the Highest or Lowest on Record?**	**Was 2008 a Typical Year?**	**Ammonia High?**	**Ammonia Changing?**	**% Samples Exceeding TKN Standard**	
NH4	2008	Not yet known	Not yet known	No	Not yet known	0	
(mg/l)	All Years			No		0	
Parameter	**Year**	**Was 2008 TDN the Highest or Lowest on Record?**	**Was 2008 a Typical Year?**	**TDN High?**	**TDN Changing?**	**Ratios of TN/TP Indicate P or N Limitation?**	
TDN	2008	Not yet known	Not yet known	No	Not yet known	N Limitation	
(mg/l)	All Years			No		N Limitation	
Parameter	**Year**	**Was 2008 Color the Highest or Lowest on Record?**	**Was 2008 a Typical Year?**	**Colored Lake?**	**Color Changing?**		
True Color	2008	Not yet known	Not yet known	No	Not yet known		
(ptu)	All Years			No			
Parameter	**Year**	**Was 2008 pH the Highest or Lowest on Record?**	**Was 2008 a Typical Year?**	**Acceptable Range?**	**pH Changing?**	**% Samples > Upper pH Standard**	**% Samples < Lower pH Standard**
pH	2008	Not yet known	Not yet known	Elevated	Not yet known	100	0
(std units)	All Years			Elevated		100	0
Parameter	**Year**	**Was 2008 Conductivity Highest or Lowest on Record?**	**Was 2008 a Typical Year?**	**Relative Hardness**	**Conductivity Changing?**		
Conductivity	2008	Not yet known	Not yet known	Intermediate	Not yet known		
(μmho/cm)	All Years			Intermediate			
Parameter	**Year**	**Was 2008 Calcium Highest or Lowest on Record?**	**Was 2008 a Typical Year?**	**Support Zebra Mussels?**	**Calcium Changing?**		
Calcium	2008	Not yet known	Not yet known	No	Not yet known		
(mg/l)	All Years			No			

NYS Nitrate standard = 10 mg/l
NYS Ammonia standard = 2 mg/l (as NH_3-NH_4)
NYS pH standard- 6.5 < acceptable pH < 8.5

TABLE 5- Current and Historical Data Summaries for Lake Kitchawan

Lake Perception Indicators (1= most favorable, 5= least favorable)

Parameter	Year	Minimum	Average	Maximum
QA	2008	3	3.0	3
(Clarity)	All Years	3	3.0	3
Parameter	**Year**	**Minimum**	**Average**	**Maximum**
QB	2008	4	4.0	4
(Plants)	All Years	4	4.0	4
Parameter	**Year**	**Minimum**	**Average**	**Maximum**
QC	2008	3	3.0	3
(Recreation)	All Years	3	3.0	3

Parameter	Year	Was 2008 Clarity the Highest or Lowest on Record?	Was 2008 a Typical Year?	Clarity Changed?	%Frequency 'Definite Algae Greenness'	%Frequency 'Severe Algae Levels'	%Frequency 'Slightly Impaired' Due to Algae	%Frequency 'Substantially Impaired' Due to Algae
QA	2008	Not yet known	Not yet known	Not yet known	100	0	0	0
(Clarity)	All Years				100	0	0	0
Parameter	**Year**	**Was 2008 Weed Growth the Heaviest on Record?**	**Was 2008 a Typical Year?**	**Weeds Changed?**	**%Frequency Surface Weeds**	**%Frequency Dense Weeds**	**%Frequency 'Slightly Impaired' Due to Weeds**	**%Frequency 'Substantially Impaired' Due to Weeds**
QB	2008	Not yet known	Not yet known	Not yet known	100	100	100	0
(Plants)	All Years				100	100	100	0
Parameter	**Year**	**Was 2008 Recreation the Best or Worst on Record?**	**Was 2008 a Typical Year?**	**Recreation Changed?**	**%Frequency Slightly Impaired**	**%Frequency Substantially Impaired**		
QC	2008	Not yet known	Not yet known	Not yet known	100	0		
(Recreation)	All Years				100	0		

The CSLAP dataset includes only one sample from Lake Kitchawan in 2008. This single sample is insufficient to characterize the lake. A preliminary assessment indicates recreational and water-quality conditions in Lake Kitchawan were unfavorable, but better than expected given the water quality conditions in the lake. Lake Kitchawan was described in 2008 as having “definite algae greenness,” assessments more favorable than in other lakes with similar water quality conditions and water color. The “slightly impaired” recreational conditions were also more favorable than in other similar lakes, particularly in light of the “excessive weed growth” that triggered the slightly unfavorable recreational assessment. Aquatic plants grew densely at the lake surface, and it is presumed that the invasive plant growth was associated with Eurasian watermilfoil. Seasonal trends in water quality, aquatic plant, and recreational assessments cannot be evaluated with a single sample in 2008.

Lake Kitchawan was described by the CSLAP sampling volunteers as “slightly”, but not “substantially” impaired. Slightly impaired conditions were associated with “excessive algae growth” rather than poor water clarity, despite the low Secchi disk transparency reading in the lake.

How Do the 2008 Data Compare to Historical Data from Lake Kitchawan?

Seasonal Comparison of Eutrophication, Other Water-quality, and Lake-Perception Indicators–2008 Sampling Season and in the Typical or Previous Sampling Seasons at Lake Kitchawan

Figures 23 and 24 compare data for the measured eutrophication parameters for Lake Kitchawan in 2008 and since CSLAP sampling began at Lake Kitchawan. Figures 25 and 26 compare nitrogen to phosphorus ratios, figures 27 through 34 compare other sampling indicators, and figures 35 and 36 compare volunteer perception responses during the same periods.

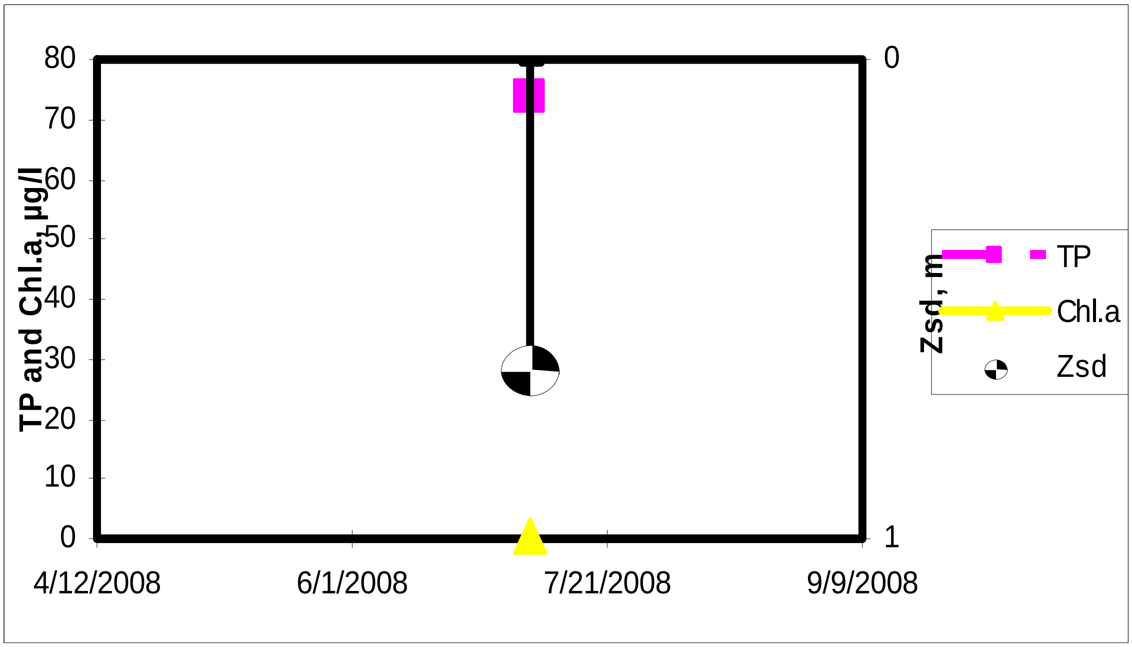


Figure 23. 2008 Eutrophication Data for Lake Kitchawan

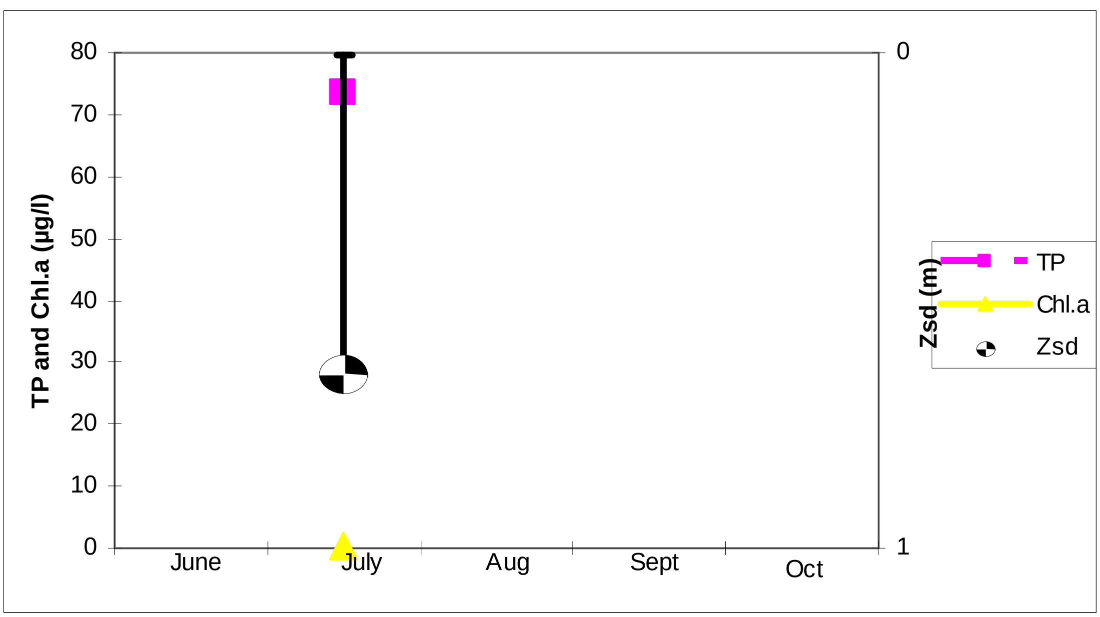


Figure 24- Eutrophication Data in a Typical (Monthly Mean) Year for Lake Kitchawan

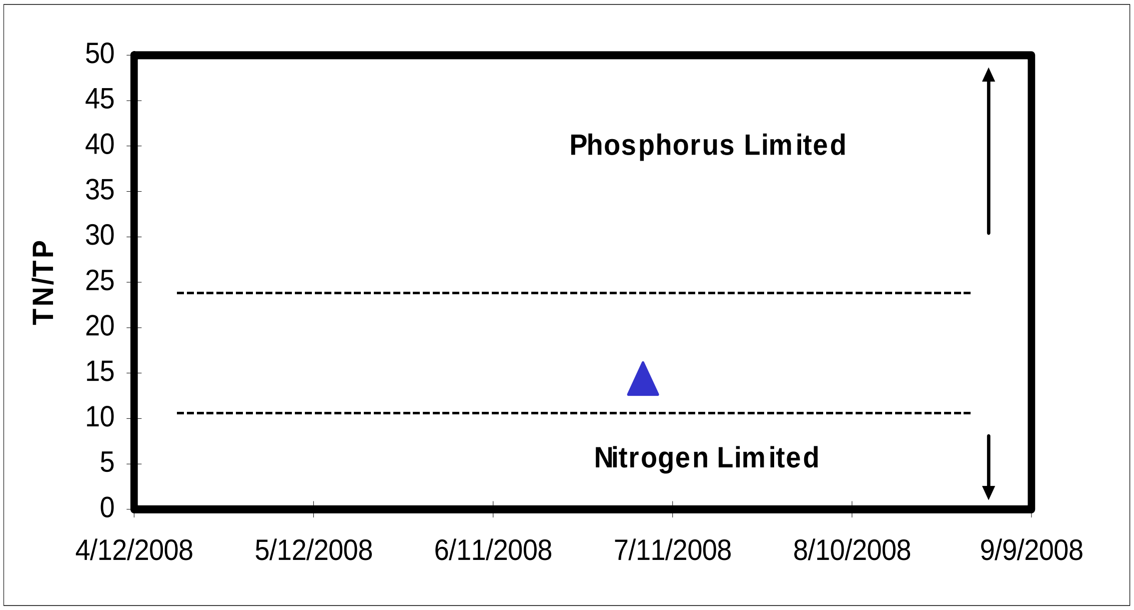


Figure 25. 2008 Nitrogen-to-Phosphorus Ratios for Lake Kitchawan

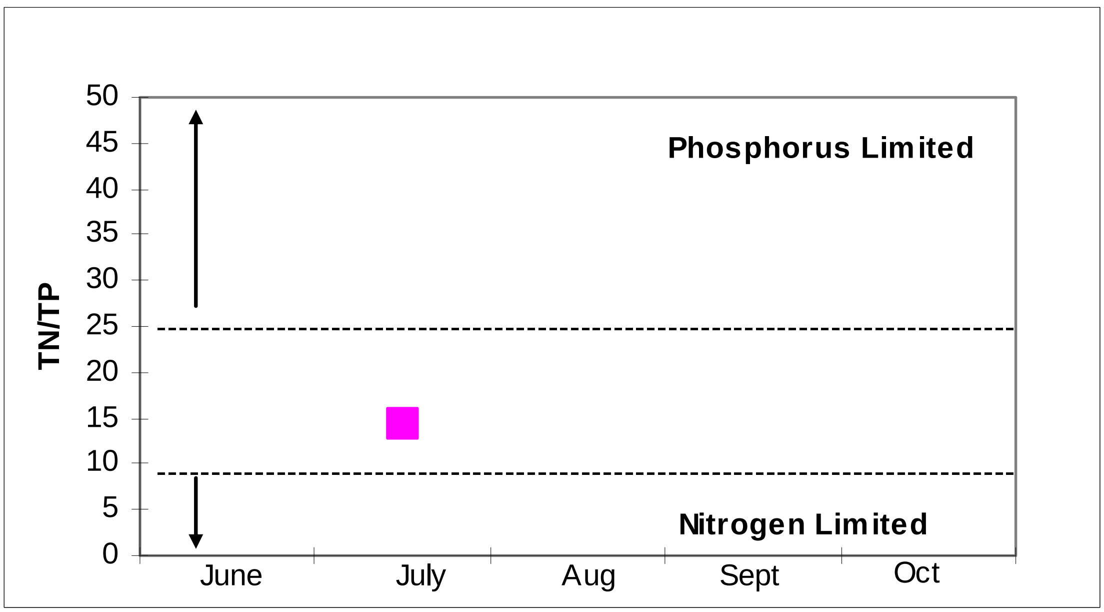


Figure 26- Nitrogen–to-Phosphorus Ratios in a Typical (Monthly Mean) Year for Lake Kitchawan

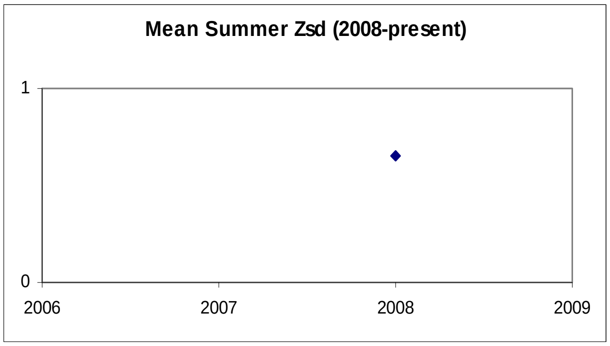


Figure 27. Annual Average Summer Water Clarity for Lake Kitchawan

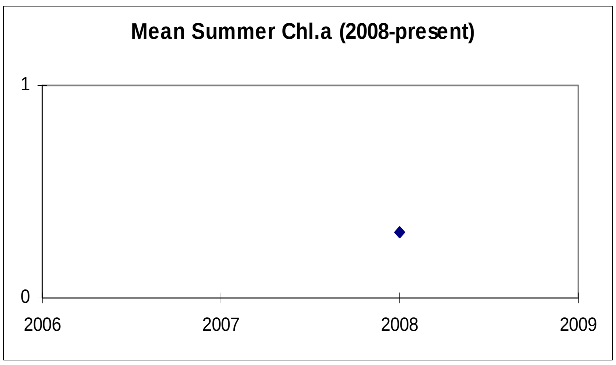


Figure 28. Annual Average Summer Chlorophyll a for Lake Kitchawan

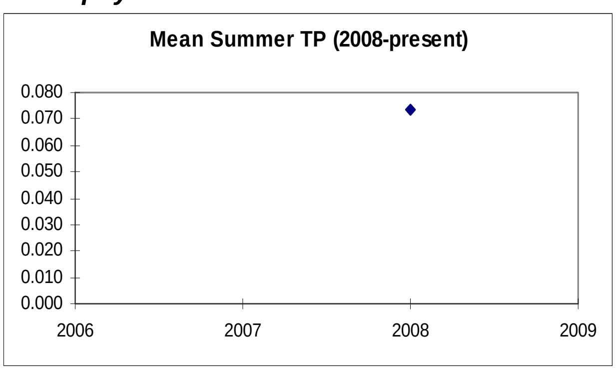


Figure 29. Annual Average Summer Total Phosphorus for Lake Kitchawan

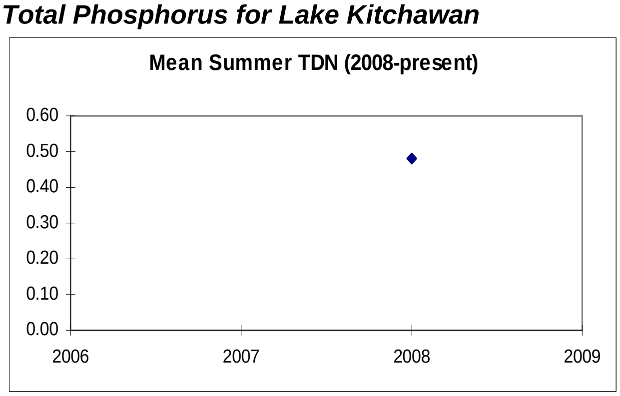


Figure 30. Annual Average Summer Total Nitrogen for Lake Kitchawan

Annual Averages, 2008-2008

Wettest Years: only sampled in 2008
Driest Years: only sampled in 2008
Highest Clarity: only sampled in 2008
Lowest Clarity: only sampled in 2008
Long Term Trend?: Too early to tell
Discussion: Water transparency readings have only been collected during one CSLAP sampling season (2008), so long-term trends are not yet apparent.

Wettest Years: only sampled in 2008
Driest Years: only sampled in 2008
Highest Chl.a: only sampled in 2008
Lowest Chl.a: only sampled in 2008
Long Term Trend?: Too early to tell
Discussion: Chlorophyll readings have only been collected during one CSLAP sampling season (2008), so long-term trends are not yet apparent.

Wettest Years: only sampled in 2008
Driest Years: only sampled in 2008
Highest TP: only sampled in 2008
Lowest TP: only sampled in 2008
Long Term Trend?: Too early to tell
Discussion: Phosphorus readings have only been collected during one CSLAP sampling season (2008), so long-term trends are not yet apparent.

Wettest Years: only sampled in 2008
Driest Years: only sampled in 2008
Highest Total N: only sampled in 2008
Lowest Total N: only sampled in 2008
Long Term Trend?: Too early to tell
Discussion: Total nitrogen readings have only been collected during one CSLAP sampling season (2008), so long-term trends are not yet apparent

Annual Averages, 2008-2008

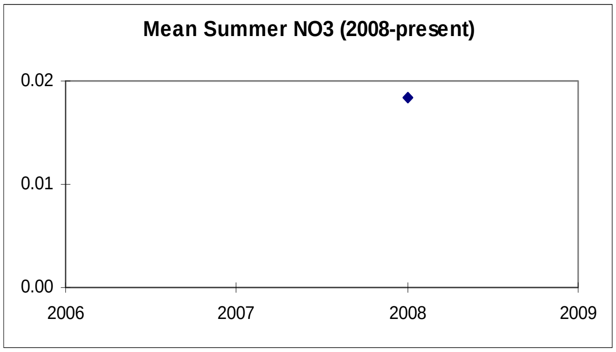


Figure 31. Annual Average Summer Nitrate for Lake Kitchawan

Wettest Years: only sampled in 2008
Driest Years: only sampled in 2008
Highest Nitrate: only sampled in 2008
Lowest Nitrate: only sampled in 2008
Long Term Trend?: Too early to tell
Discussion: Nitrate readings have only been collected during one CSLAP sampling season (2008), so long-term trends are not yet apparent.

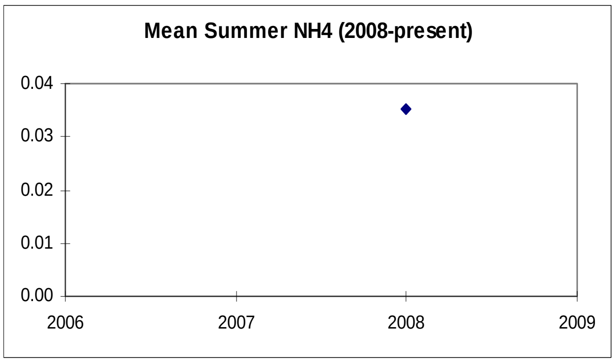


Figure 32. Annual Average Summer Ammonia for Lake Kitchawan

Wettest Years: only sampled in 2008
Driest Years: only sampled in 2008
Highest Ammonia: only sampled in 2008
Lowest Ammonia: only sampled in 2008
Long Term Trend?: Too early to tell
Discussion: Ammonia readings have only been collected during one CSLAP sampling season (2008), so long-term trends are not yet apparent.

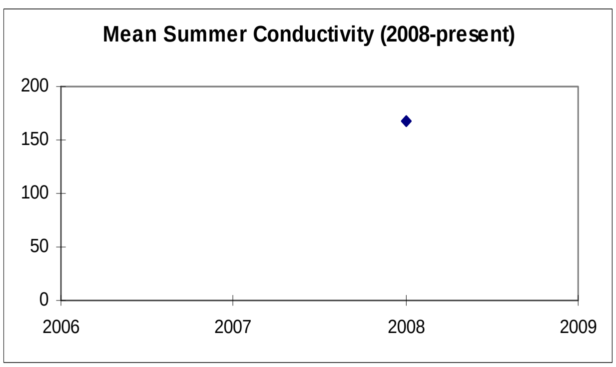


Figure 33. Annual Average Summer Conductivity for Lake Kitchawan

Wettest Years: only sampled in 2008
Driest Years: only sampled in 2008
Highest Cond.: only sampled in 2008
Lowest Cond.: only sampled in 2008
Long Term Trend?: Too early to tell
Discussion: Conductivity readings have only been collected during one CSLAP sampling season (2008), so long-term trends are not yet apparent.

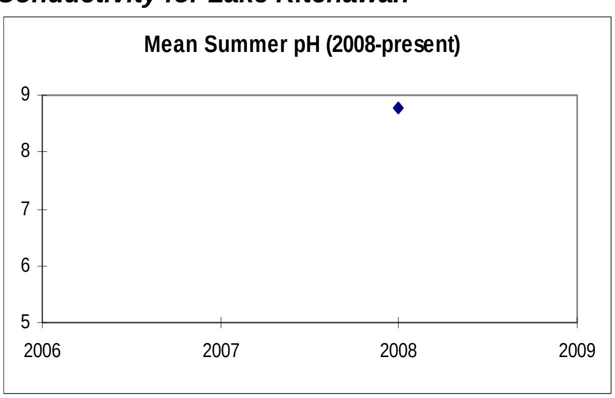


Figure 34. Annual Average Summer pH for Lake Kitchawan

Wettest Years: only sampled in 2008
Driest Years: only sampled in 2008
Highest pH: only sampled in 2008
Lowest pH: only sampled in 2008
Long Term Trend?: Too early to tell
Discussion: pH readings have only been collected during one CSLAP sampling season (2008), so long-term trends are not yet apparent.

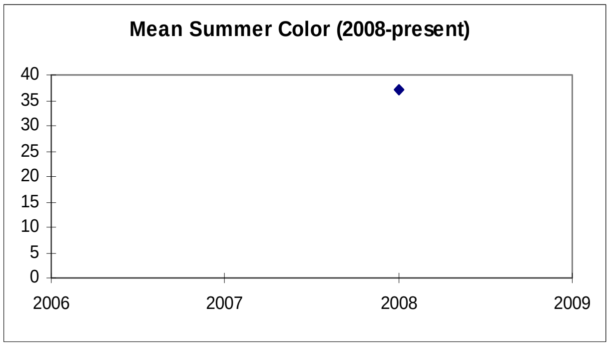


Figure 35. Annual Average Summer Color for Lake Kitchawan

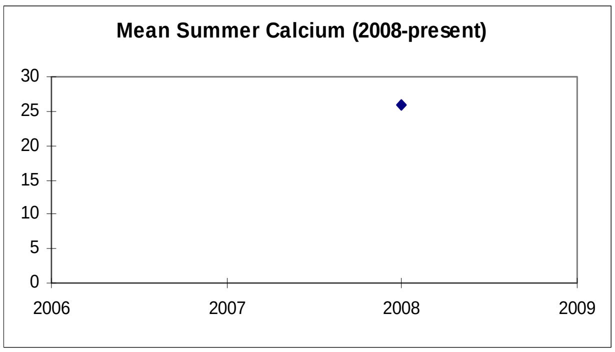


Figure 36. Annual Average Summer Calcium for Lake Kitchawan

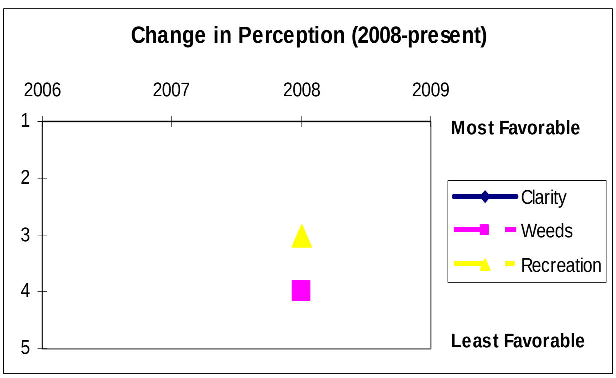


Figure 37. Annual Average Summer Lake Perception for Lake Kitchawan

(QA = clarity, ranging from (1) crystal clear to (3) definite algae greenness to (5) severely high algae levels;
QB = weeds, ranging from (1) not visible to (3) growing to the surface to (5) dense growth covers lake;
QC = recreation, ranging from (1) could not be nicer to (3) slightly impaired to (5) lake not usable)

Annual Averages, 2008-2008

Wettest Years: only sampled in 2008
Driest Years: only sampled in 2008
Highest Color: only sampled in 2008
Lowest Color: only sampled in 2008
Long Term Trend?: Too early to tell
Discussion: Water color readings have only been collected during one CSLAP sampling season (2008), so long-term trends are not yet apparent.

Wettest Years: only sampled in 2008
Driest Years: only sampled in 2008
Highest Calcium: only sampled in 2008
Lowest Calcium: only sampled in 2008
Long Term Trend?: Too early to tell
Discussion: Calcium readings have only been collected during one CSLAP sampling season (2008), so long-term trends are not yet apparent.

Wettest Years: only sampled in 2008
Driest Years: only sampled in 2008
Most Favorable WQ: only sampled in 2008
Least Favorable WQ: only sampled in 2008
Highest Weed Cov. only sampled in 2008
Lowest Weed Cov. only sampled in 2008
Most Favorable Rec. only sampled in 2008
Least Favorable Rec. only sampled in 2008
Long Term Trend?: Too early to tell
Discussion: Recreational, aquatic plant and water quality assessments have only been collected during one CSLAP sampling season (2008), so long-term trends are not yet apparent.

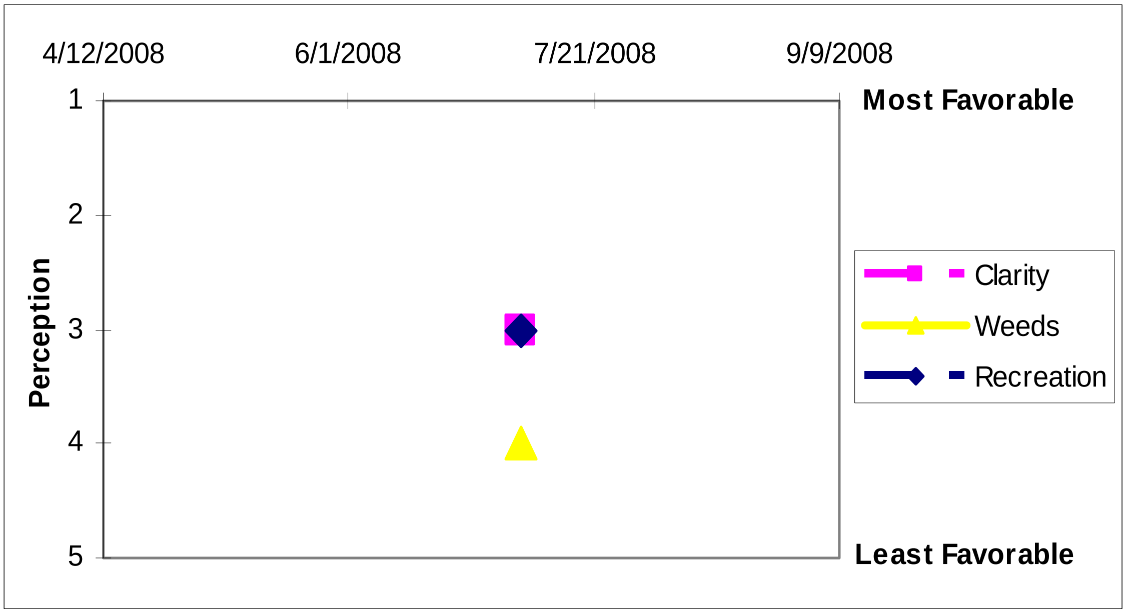


Figure 38. 2008 Lake Perception Data for Lake Kitchawan

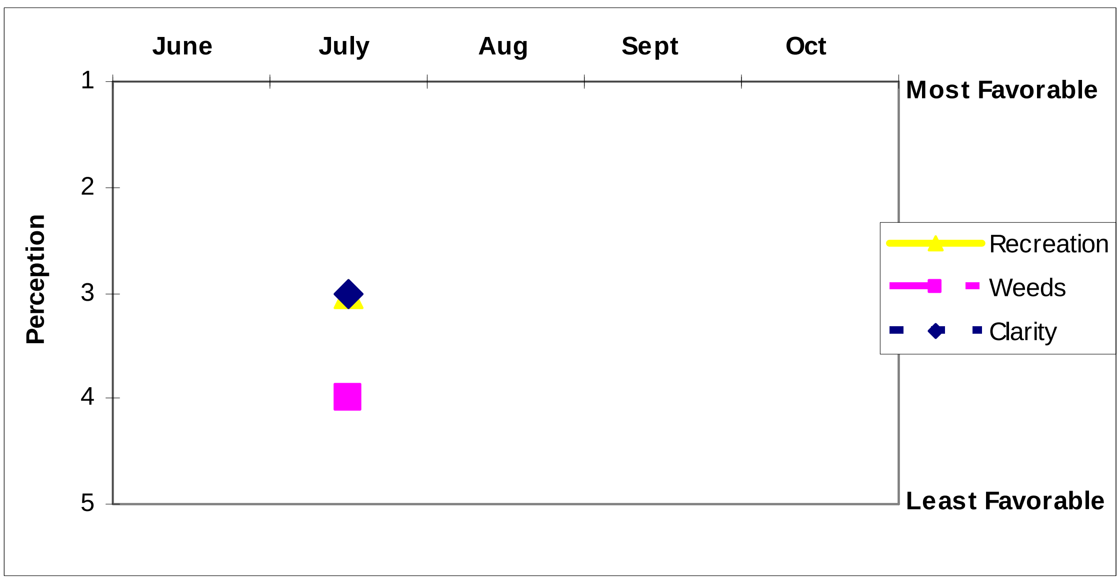


Figure 39- Lake Perception Data in a Typical (Monthly Mean) Year for Lake Kitchawan

How does Lake Kitchawan compare to other lakes?

Annual Comparison of Median Readings for Eutrophication Parameters and Recreational Assessment For Lake Kitchawan in 2008 to Historical Data for Lake Kitchawan, Neighboring Lakes, Lakes with the Same Lake Classification, and Other CSLAP Lakes

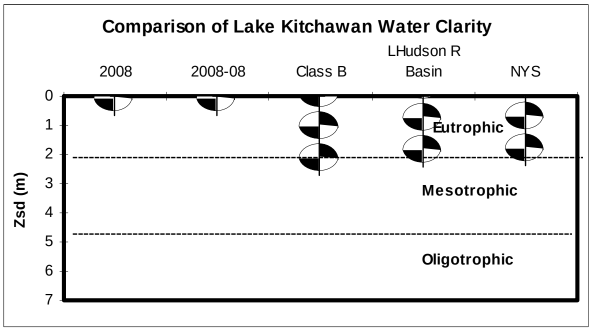


Figure 40. *Comparison of 2008 Secchi Disk Transparency to Lakes With the Same Water-Quality Classification, Neighboring Lakes, and Other CSLAP Lakes*

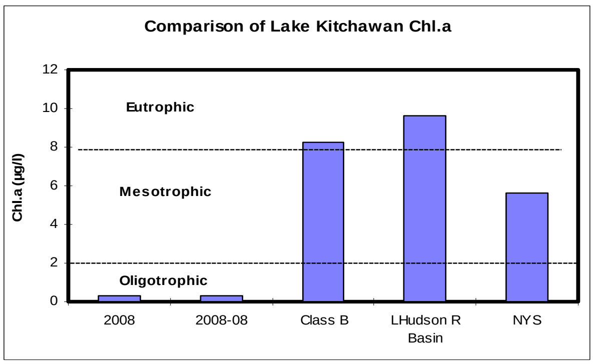


Figure 41. *Comparison of 2008 Chlorophyll a to Lakes with the Same Water-Quality Classification, Neighboring Lakes, and Other CSLAP Lakes*

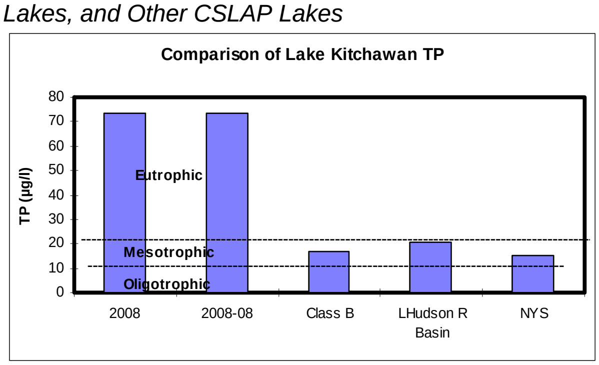


Figure 42. *Comparison of 2008 Total Phosphorus to Lakes With the Same Water-Quality Classification, Neighboring Lakes, and Other CSLAP Lakes*

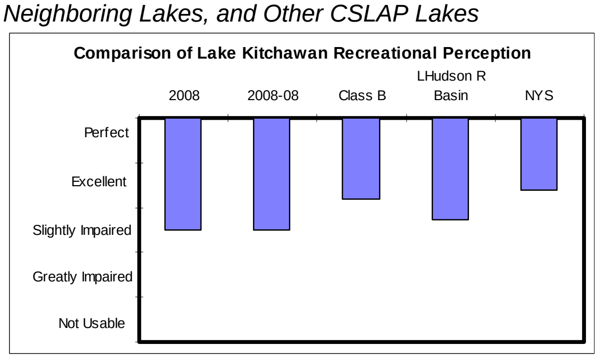
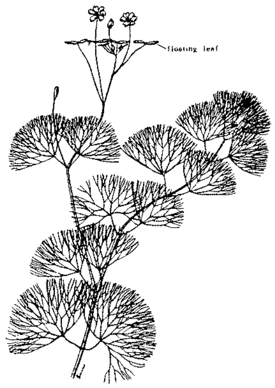


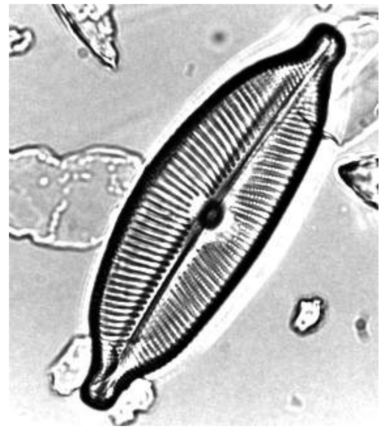
Figure 43. *Comparison of 2008 Recreational Perception to Lakes With the Same Water-Quality Classification, Neighboring Lakes, and Other CSLAP Lakes*

The graphs to the left illustrate comparisons of each eutrophication parameter and recreational perception at Lake Kitchawan—in 2008, other lakes in the same drainage basin, lakes with the same water-quality classification (each classification is summarized in Appendix B), and all of CSLAP. Readers should note that differences in watershed types, activities, lake history and other factors may result in differing water-quality conditions at your lake relative to other nearby lakes. In addition, the limited database for some regions of the state precludes a comprehensive comparison to neighboring lakes.

Based on these graphs, the following conclusions can be made about Lake Kitchawan in 2008:

a) Using water clarity as an indicator, Lake Kitchawan is more productive than other NYS lakes, other Class B lakes, and other Lower Hudson River basin lakes.
b) Using chlorophyll *a* concentrations as an indicator, Lake Kitchawan is less productive than other NYS lakes, other Class B lakes, and other Lower Hudson River basin lakes.
c) Using total phosphorus concentrations as an indicator, Lake Kitchawan is more productive than other NYS lakes, other Class B lakes, and other Lower Hudson River basin lakes.
d) Using QC on the field-observations form as an indicator, Lake Kitchawan is less suitable for recreation than other Class B lakes, other Lower Hudson River basin lakes, and other NYS lakes.





VII. AQUATIC PLANTS

a. Macrophytes:

Aquatic plants should be recognized for their contributions to lake beauty as well as for providing food and shelter for other life in the lake. Emergent and floating plants such as water lilies floating on the lake surface may provide aesthetic appeal with their colorful flowers; sedges and cattails help to prevent shoreline erosion and may provide food and cover for birds. Submergent plants like pondweeds and leafy waterweed harbor insects, provide nurseries for amphibians and fish, and provide food for birds and other animals. Those who enjoy fishing at the lake appreciate a diverse plant population. Aquatic plants can be found throughout the *littoral zone*, the near-shore areas in which sufficient light reaches the lake bottom to promote photosynthesis. Plant growth in any particular part of the lake is a function of available light, nutrition and space, bottom substrate, wave action, and other factors, and extensive plant growth can occur in both “clean” and “polluted” lakes. A large portion of aquatic vegetation consists of the microscopic algae referred to as phytoplankton; the other portion consists of the larger rooted plants called macrophytes**.**

As invasive plants colonize and spread into a lake, native plant species can be threatened or even eliminated from aquatic plant communities. The most susceptible of these are those that reside in marginal regions, limited by water depth, sediment type, or inability to compete for space. As a result, many plants identified as *rare, threatened* or *endangered (RTE) species* are protected under New York State law. *The New York State Natural Heritage Program has not identified any RTE plant species in Lake Kitchawan.*

Of particular concern to many lakefront residents and recreational users are the *non-indigenous macrophytes* that can frequently dominate native aquatic plants and crowd out more beneficial plant species. The invasive plant species may be introduced to a lake by waterfowl, but in most cases they are introduced by fragments or seedlings that remain on watercraft from already-infested lakes. Once introduced, these species have tenacious survival skills, crowding out, dominating and eventually aggressively overtaking the indigenous (native) plant communities in a variety of water-quality conditions. When this occurs, they interfere with recreational activities such as fishing, swimming or water skiing. These species need to be properly identified to be effectively managed.

Non-native Invasive Macrophyte Species

For many years, four common non-native invasive species were considered the most important exotic aquatic plant species in New York lakes and ponds:

- **Eurasian watermilfoil** *(Myriophyllum spicatum)*
- **Curly-leaf pondweed** *(Potamogeton crispus)*
- **Eurasian water chestnut** *(Trapa natans)*
- **Fanwort** *(Cabomba caroliniana)*

If these plants are not present, efforts should be made to continue protecting the lake from the introduction of these species.

In addition, there are a number of other submergent or floating non-native invasive species that are becoming increasingly problematic in New York, particularly in Long Island and in lakes in other moderate climates:

- **Parrotfeather** (*Myriophyllum aquaticum*)
- **Variable watermilfoil** (*Myriophyllum heterophyllum*)
- **Brazilian elodea** *(Egeria densa)*
- **Hydrilla** (*Hydrilla verticillatum*)
- **European frogbit** *(Hydrocharis morsus-ranae*)
- **Brittle naiad** (*Najas minor*)

Hydrilla was found in New York State for the first time in at least five locations in 2008. This exotic plant has been identified as the most invasive aquatic plant in North America.

Whether the role of the lake manager is to better understand the lake ecosystem or better manage the aquatic plant community, knowledge of plant distribution is paramount to the management process. There are many procedures available for assessing and monitoring aquatic vegetation. The CSLAP Sampling Protocol contains procedures for a "semi-quantitative" plant-monitoring program. Volunteers collect plant specimens and provide field information and qualitative abundance estimates for an assessment of the macrophyte communities within critical areas of the lake. While these techniques are no substitute for professional plant surveys, they can help provide better information for lake managers. Lake associations planning to devote significant time and expenditures toward a plant-management program are advised to pursue more extensive plant surveying activities.

Formal and informal survey work has been effective in developing statewide distribution maps of each of the major submergent exotic species, and CSLAP data has figured prominently in this process. As of 2008, the statewide distribution maps of confirmed identifications are shown on Figures 44a to 44j.

Figure 44a. Myriophyllum spicatum distribution in New York State

Figure 44b. Potamogeton crispus distribution in New York State

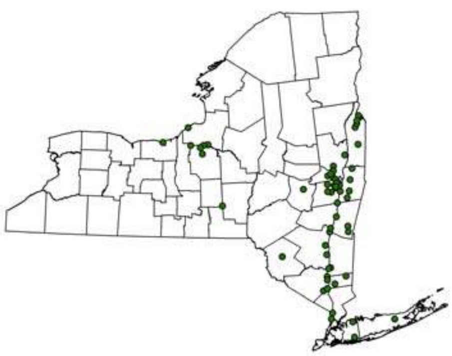


Figure 44c. Trapa natans distribution in New York State

Figure 44d. Cabomba caroliniana distribution in New York State

Figure 44e. Myriophyllum aquaticum distribution in New York State

Figure 44f. Myriophyllum heterophyllum distribution in New York State

Figure 44g. Egeria densa distribution in New York State

Figure 44h. Hydrilla verticillatum distribution in New York State

Figure 44i. Hydrocharis morsus-ranae distribution in New York State

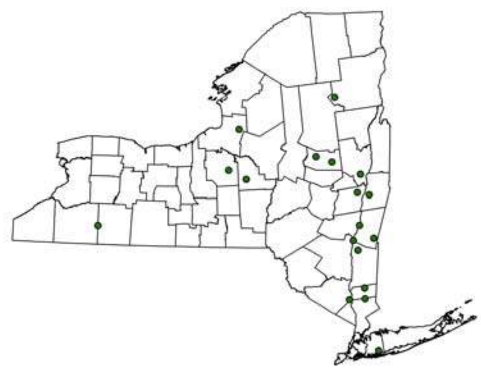


Figure 44j. Najas minor distribution in New York State

Aquatic plant surveys have not been conducted through CSLAP at Lake Kitchawan, although Eurasian watermilfoil (Myriophyllum spicatum) has been reported by the lake association.

b. Algae

Microscopic algae referred to as phytoplankton make up much of aquatic vegetation found in lakes. For this reason, and because phytoplankton are the primary producers of food (through photosynthesis) in lakes, they are the most important component of the complex food web that governs ecological interactions in lakes.

In a lake, phytoplankton communities are usually very diverse and are comprised of hundreds of species having different requirements for nutrients, temperature and light. In many lakes, including those of New York, diatom populations are greatest in the spring, due to a competitive advantage in cooler water and relatively high levels of silica. In most lakes, however, diatom densities rarely reach nuisance portions in the spring. By the summer, green algae take advantage of warmer temperatures and greater amounts of nutrients (particularly nitrogen) in the warm water and often increase in density. These alga often grow in higher densities than do diatoms or most other species, although they are often not the types of algae most frequently implicated in noxious algae blooms. Later in the summer and in the early fall, blue-green algae, which possess the ability to utilize atmospheric nitrogen to provide this required nutrient, increase in response to higher phosphorus concentrations. This often happens right before turnover or destratification in the fall. These alga are most often associated with taste and odor problems, bloom conditions, and the "spilled paint" slick that prompts the most complaints about algae. Each lake possesses a unique blend of algal communities, often varying in population size from year to year and with differing species proportional in the entire population. The most common types range from the mentioned diatoms, green, and blue-green algae, to golden-brown algae to dinoflagellates and many others, dominating each lake community.

So how can this be evaluated through CSLAP? CSLAP does assess algal biomass through the chlorophyll *a* measurement. While algal differentiation is important, many CSLAP lake associations are primarily interested in "how much?," not "what kind?," and this is assessed through the chlorophyll *a* measurement. Phytoplankton communities have not been regularly identified and monitored through CSLAP, in part due to the cost and difficulty in analyzing samples and in part due to the difficulty in using a one-time sample to assess long-term variability in lake conditions. A phytoplankton analysis may reflect a temporary, highly unstable and dynamic water-quality condition.

Prior to 1998, nearly all CSLAP lakes were sampled once for phytoplankton identification, but since then, phytoplankton sampling has not been a regular part of CSLAP. For these sampled lakes, a summary of the most abundant phytoplankton species is included below. Algal species frequently associated with taste and odor problems are specifically noted in this table, although it should be mentioned that these samples, like all other water samples collected through CSLAP, come from near the center of the lake, a location not usually near water intakes or swimming beaches. Since algal communities can also be spatially quite variable, even a preponderance of taste- and odor-causing species in the water samples might not necessarily translate to potable-water-intake or aesthetic impairments, although the threat of such an impairment might be duly noted in the "Considerations" section below.

Phytoplankton surveys have not been conducted through CSLAP at Lake Kitchawan.

VIII: PRIORITY WATERBODY LISTS AND IMPACTS TO LAKE USE

The Priority Waterbody List (PWL) is presently an inventory of all waters in New York State (lakes, ponds, reservoirs, rivers, streams, and estuaries) known to have designated water uses with some degree of impairment, or those threatened by potential impairment. However, the PWL is slowly evolving into an inventory of all waterbodies for which sufficient information is available to assess the condition and/or usability of the waterbody. PWL waterbodies are identified through a broad network of county and state agencies, with significant public outreach and input, and the list is maintained and compiled by the NYSDEC Division of Water. Monitoring data from a variety of sources, including CSLAP, have been utilized by state agencies to evaluate lakes for inclusion on the PWL, and the process for incorporating lakes data has become more standardized.

Specific numeric criteria have recently been developed to characterize sampled lakes in the available use-based PWL categories (*precluded*, *impaired*, *stressed*, or *threatened*). Evaluations utilize the NYS phosphorus guidance value, water-quality standards, criteria utilized by other states, and the trophic ranges described earlier to supplement the other more antidotal inputs to the listing. The procedures by which waterbodies are evaluated are known as the Consolidated Assessment and Listing Methodology (CALM) process. This process is undertaken on an annual rotating basin, with waterbodies in several drainage basins evaluated each year. Each of the 17 drainage basins in the state is assessed within every 5 years. In general, waterbodies that violate pertinent water-quality standards (such as those listed in Table 6) at a frequency of greater than 25% are identified as *impaired*, at a frequency of 10-25% are identified as *stressed*, and at a frequency of 0-10% are identified as *threatened*, although some evidence of use impairment (including through CSLAP lake-perception surveys) might also be required. Mean (average) phosphorus levels are evaluated against the state guidance value. Evidence of use prohibitions (via beach closures, etc.) is often required to identify a waterbody as *precluded*, while evidence of actual use restrictions or necessary management must accompany an *impaired* listing, at least for lakes evaluated in recent years.

Lakes that have been identified as *precluded* or *impaired* on the PWL are likely candidates for the federal 303(d) list, an “Impaired Waters” designation mandated by the federal Clean Water Act. Lakes on this list must be closely evaluated for the causes and sources of these problems. Remedial measures must be undertaken, under a defined schedule, to solve these water-quality problems. This entire evaluation and remediation process is known as the “TMDL” process, which refers to the Total Maximum Daily Load calculations necessary to determine how much (pollution that causes the water-quality problems) is too much.

Lake Kitchawan is presently listed on the Lower Hudson River PWL (last issued in 2002). Recreation and water supply are identified as stressed due to excessive aquatic vegetation. The specific PWL narrative is as follows:

“Overview
Water supply and recreational uses in Lake Kitchawan may experience minor impacts due to elevated nutrient concentrations from urban runoff and other nonpoint sources. Due to the lack of any current information, conditions in the lake need to be verified.

New York City Watershed
Lake Kitchawan is a control lake that is a part of the Croton System of New York City water supply reservoirs (see New Croton Reservoir, Segment 1302-0010). A Watershed Agreement is in place between NYCDEP and the Croton Watershed communities which sets forth programs

and funding for watershed protection. In addition, NYCDEP has developed a phosphorus TMDL for the entire Croton System Watershed to aid in the management of nutrients. An Implementation Plan for this TMDL is being developed. (NYCDEP, July 2006)

Previous Assessment
The recreational use (swimming) and aesthetics in Lake Kitchawan were thought to be limited by algal blooms and excessive aquatic vegetation in the lake. Failing and/or inadequate on-site septic systems serving homes along the lake shore and other runoff from urban/suburban development in the watershed are considered likely sources of pollutants. (Westchester County WQCC, 1996)"

TABLE 6- Water-Quality Standards Associated With Class B and Higher Lakes

Parameter	Acceptable Level	To Protect…..
Secchi Disk Transparency	> 1.2 meters*	Swimming
Total Phosphorus	< 0.020 mg/L and Narrative*	Swimming
Chlorophyll a	none	NA
Nitrate Nitrogen	< 10 mg/L and Narrative*	Drinking Water
Ammonia Nitrogen	2 mg/L*	Drinking Water
True Color	Narrative*	Swimming
pH	< 8.5 and > 6.5*	Aquatic Life
Conductivity	None	NA

Narrative Standards and Notes:
Secchi Disk Transparency: The 1.2 meter (4 feet) guidance is applied for safety reasons (to see submerged swimmers or bottom debris) and strictly applies only to citing new swimming beaches, but may be appropriate for all waterbodies used for contact recreation (swimming).
Phosphorus and Nitrogen: "None in amounts that will result in the growths of algae, weeds and slimes that will impair the waters for their best usages" (Class B= swimming)

-The 0.020 mg/l threshold for TP corresponds to a guidance value, not a standard; it strictly applies to Class B and higher waters but may be appropriate for other waterbodies used for contact recreation (swimming). NYS (and other states) is in the process of identifying numerical nutrient (phosphorus and perhaps Secchi disk transparency, chlorophyll *a*, and nitrogen) standards, but this is unlikely to be finalized within the next several years.

-The 10 mg/L Nitrate standard strictly applies to only Class A or higher waters, but is included here because some Class B lakes are informally used for potable-water intake.

-For the form of ammonia ($NH3+NH4$) analyzed, a 2 mg/l human health standard applies to Class A or higher waters. Lower un-ionized ammonia standards apply to all classes of NYS lakes, this form is not analyzed through CSLAP.

Color: "None in amounts that will adversely affect the color or impair the waters for their best usages" (for Class B waters, this is swimming).
pH: The standard applies to all classes of waterbodies

1. Water-quality Standards Evaluation on Lake Kitchawan:

pH readings exceeded the NYS water-quality standards (=6.5 to 8.5) during the one CSLAP sampling session at Lake Kitchawan. Phosphorus levels at Lake Kitchawan exceeded the phosphorus guidance value for NYS lakes (=0.020 mg/l) during the one CSLAP sampling session, and water transparency readings failed to reach the minimum recommended water clarity for swimming beaches (= 1.2 meters) during this CSLAP sampling session. It is not known whether any of the narrative water-quality standards listed in Table 3 have been violated at Lake Kitchawan; none of the other numeric standards summarized in Table 3 have been violated.

2. Lake Uses:

Water-quality monitoring programs are devised to evaluate lake conditions as they relate to a variety of lake indicators, from water-quality standards to trophic conditions to invasive species to other measures of the physical, chemical, and biological integrity of these ecological systems. One of these indicators is intended to be lake uses—whether these lakes and ponds can be used for potable water, swimming and bathing, fishing and use of the water by aquatic life, and aesthetics. This is consistent with the broad goals of the 1972 federal Clean Water Act, the governing legislation for federal and state management of lakes and ponds, which states that a fundamental goal of environmental management was to make all waterbodies "fishable and swimmable" by 1983.

The "fishability" of a lake or pond is a function of water-quality (are there pollutants that will kill the fish or render them inedible?); substrate and habitat (is there enough cold water and high oxygen for coldwater fish?; is there enough food for the fish? is there enough cover from predators or structure for fishermen?); space (is there enough flowing water for survival or reproduction?; is there enough room to support all of the various fish species in the lake?), and even access (can anglers get to the areas where the fish can be found?).

Likewise, the "swimmability" of a lake or pond also depends on water-quality (will I get sick due to bacterial contamination from sewage, stormwater or waterfowl?); safety (can swimmers or bottom debris be seen in deeper water?); aesthetics (is the water too green, too weedy, or too cold?; is the bottom too mucky?); user conflicts (can I swim where people use PWCs?); the physical characteristics of the lake and shoreline (how quickly does the lake get too deep? is the shoreline flat enough for a beach?); legal considerations (will the threat of litigation prevent a lake community from establishing public beaches?), and also access (can swimmers from less hospitable parts of the lake or from the outside swim at a beach?).

Although other designated lake uses are not identified as primary goals of the Clean Water Act, they should be evaluated as part of the lake-assessment process. These include potable water, non-contact recreational uses such as boating, aquatic life support unrelated to fishing, and aesthetics. Similar questions could be posed about the suitability of a particular lake or pond for this use, although many of the concerns addressed in evaluating the fishability or swimmability of a waterbody are pertinent to evaluating drinking-water quality, the ability of a lake to support power boating or sailing, or the adequacy of the lake bottom for salamanders, frogs, and other valued biota.

CSLAP is not really designated to answer many of these questions, at least directly. Some of these issues relate to the physical characteristics of the entire shoreline and bottom of the lake or pond and cannot be easily evaluated in simple water-quality surveys. Other important water-quality indicators, such as bacteria, cannot be sampled at the frequency needed to compare lake conditions to existing water-quality standards or are limited by logistic considerations. Other indicators, such as sediment toxins, are too expensive to be included in standard water-quality monitoring programs. It is anticipated that future generations of CSLAP will look to better address some of these questions through expanded monitoring and partnerships with other monitoring agencies, academic institutions, lake residents, and other parties invested in the lake-assessment and management process. It is also anticipated that data from other sources will be more completely included in the lake- and pond-assessment process in the future. Until that time, however, it should again be stated that these assessments are both preliminary and incomplete, based on data presently collectable through the monitoring programs summarized in this report.

Lake Kitchawan is a Class B lake, which means it is designated for support of contact recreation (such as swimming and boating), non-contact recreation (such as boating) and aesthetics. As such, Lake Kitchawan should be evaluated for its best intended uses—support of swimming, aquatic life, non-contact recreation, and aesthetics.

a. Potable Water

Lake Kitchawan is not classified for potable water use, and it does not presently sustain this use.

b. Swimming/Contact Recreation

It is presumed that Lake Kitchawan could be used for swimming, bathing, or other forms of contact recreation, although the frequency of and opportunities for swimming are not evaluated through CSLAP.

A number of water-quality indicators are measured in CSLAP that relate to the suitability of lake for swimming and contact recreation. Water clarity measurements can be used to evaluate the lake against the NYS Department of Health guidelines for siting new swimming beaches (= 4 feet). Public-perception data collected through CSLAP assess swimming conditions, and regional or statewide criteria connecting water transparency readings (or nutrient and algae levels) to recreational-use impacts will likely be developed in the near future. However, there remains a relatively strong correlation between contact recreational conditions and phosphorus readings, with recreational-use impacts generally corresponding to the state guidance value for phosphorus (= 20 parts per billion total phosphorus). Algae levels are measured as chlorophyll *a*, while rooted aquatic-plant populations are broadly quantified through CSLAP, and are linked to potential impacts on swimming and aesthetics. These water-quality-based and perception-based evaluations of swimming conditions are outlined below.

1. Water-quality Evaluation of Swimming/Contact Recreation

These data showed that the sole Lake Kitchawan sample possessed total phosphorus readings exceeding 20 parts per billion (=µg/l), which corresponds to the state phosphorus guidance value. Water transparency readings were less than 2 meters during the one CSLAP sampling session. This roughly corresponds to the distinction between *eutrophic* and *mesotrophic* lakes and a water clarity reading that would roughly be equivalent to the state phosphorus guidance value. Perhaps more importantly, this may correspond to the saddle point between high-quality and reduced-quality swimming, based on lake perception data (see below).

Although there is no state water-quality standard for chlorophyll *a*, readings exceeding 8 µg/l generally correspond to water clarity readings lower than 2 meters and total phosphorus readings in excess of 20 µg/l—each of these indicator thresholds marks the distinction between *mesotrophic* and *eutrophic* lake. The single Lake Kitchawan sample corresponded to chlorophyll *a* readings < 8 µg/l.

Bacteria data have not been collected through CSLAP on Lake Kitchawan or (if collected by the lake association or local community) have not been forwarded to the NYSDEC for evaluation.

2. Lake Perception Evaluation

Lake perception data from CSLAP provide insights into recreational (swimming) conditions, perceptions of water clarity, and the density and coverage of aquatic plants. Recreational assessments indicating "beautiful, could not be nicer" and "..excellent for swimming, boating, and overall enjoyment" conditions suggest no limits to recreational use. The frequency of "slightly" to "substantially" impaired conditions may be closely related to the need to implement lake-management actions. These surveys also assess the extent to which these impacts are influenced by excessive weed growth, nuisance algae or poor water clarity.

The evaluation of these survey results, and the extrapolation of these results to a lake-wide assessment, is restricted by the small sample size and the potential for responses that are not representative of the responses from the typical lake resident, whether due to the impact of local conditions or different goals for different lake users. However, these assessments may serve as an instructive starting point for evaluating impacts on lake uses.

The CSLAP volunteers reported that Lake Kitchawan was described as "slightly" impaired during the CSLAP sampling session, but the lake was not described as "substantially" impaired.

3. Overall Evaluation- Swimming and Contact Recreation

The CSLAP dataset at Lake Kitchawan, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggests that swimming and contact recreation may be impaired by excessive algae and poor water clarity, and stressed by excessive weed growth, although additional data will be required to verify this assessment.

c. Aquatic Life/Non-Contact Recreation

Lake Kitchawan supports fishing and other forms of non-contact recreation. Other forms of non-contact recreation, such as boating, may be a function of access points, whether the lake shoreline is inhabited, and water depth, but it is also presumed that Lake Kitchawan may be used for boating.

While water-quality plays a role in evaluating non-contact recreation, particularly cold-water fisheries, the information needed to properly evaluate fishing quality, angler success, and boating enjoyment and viability are not collected in most routine monitoring programs. It is anticipated that future generations of the CSLAP report will include more comprehensive evaluations of non-contact recreational conditions in lakes and ponds, as databases containing this information become more readily available, but until that time, only ancillary measures can be evaluated.

The primary indicators from these monitoring programs used to evaluate fisheries, aquatic life, and non-contact recreation (boating, etc.) include lake perception surveys, aquatic plant densities (and the presence of invasive exotic plants), and water-quality indicators related to fish habitat and survival, such as pH and ammonia. While other water-quality indicators, such as other forms of nitrogen, can also be used to evaluate water-quality impacts to aquatic life, these indicators are generally found at low enough levels to minimize their utility in evaluating lake conditions. Dissolved oxygen can be very useful in evaluating habitat, but temperature and oxygen profiles are not collected through CSLAP. These datasets can provide at least some insights into the ability of lakes and ponds to support these uses.

1. Fisheries and Aquatic Life Evaluation

pH data are collected through CSLAP. Fish consumption advisories are issued by the NYS Department of Health, and fishing regulations are instituted by the NYSDEC. Lake recreational perception data related to non-contact recreation (fishing and boating) and aesthetics are also collected through CSLAP, and these can be used to evaluate fisheries and aquatic life impacts to Lake Kitchawan.

These data indicate that the single pH reading in the Lake Kitchawan samples exceeded the state water-quality standards (= 6.5 to 8.5). While laboratory pH is not as accurate as field pH for evaluating lake acidity, these data suggest that fisheries or aquatic life impacts may occur as a result of elevated pH.

It is not known if fishing regulations result in any impact to the use of Lake Kitchawan for fishing. The lake probably does not possess coldwater fish species susceptible to low oxygen levels in coldwater habitats (deepwater conditions during the summer, and throughout the water column during other times of the year), although Lake Kitchawan is probably too shallow to exhibit deepwater anoxia (or oxygen deficits at any depth in the lake).

2. Boating (Recreation) and Aesthetics Evaluation

Impacts to non-contact recreation, such as boating and aesthetics, can only be peripherally evaluated through CSLAP. Sampling volunteers can report that the lake “looks bad,” as a direct measure of impacts to lake aesthetics, while “poor water clarity,” “excessive algae growth,” and “excessive weed growth” may be indirect measures of these impacts.

The CSLAP volunteers did not report that Lake Kitchawan "looks bad" during the single CSLAP sampling session. Dense surface weed growth was reported during this CSLAP sampling session.

3. Overall Evaluation- Aquatic Life and Non-Contact Recreation

The CSLAP dataset on Lake Kitchawan, including water chemistry data, physical measurements, and volunteer samplers' perception data, suggest that aesthetics and non-contact recreation may be stressed by excessive weed growth. Aquatic life may be stressed by elevated pH.

IX: CONSIDERATIONS FOR LAKE MANAGEMENT

CSLAP is intended for a variety of uses, such as collecting needed information for comprehensive lake management, although it is not capable of collecting all the needed information. To this end, this section includes a broad summary of the major lake problems and "considerations" for lake management. These include only those lake problems that may have been defined by CSLAP sampling, such as physical condition (algae and water clarity), aquatic plant coverage (type and extent of weed populations), and recreational suitability of the lake, as related to contact recreation. These broad categories may not encompass the most pressing issue at a particular time at any given CSLAP lake, for example, local concerns about filamentous algae or concerns about other parameters not analyzed in the CSLAP sampling. While there is some opportunity for CLSAP-trained volunteers to report and assess some site-specific conditions or concerns on the CSLAP Field Observations Form, such as algae blooms or shoreline vegetation, this section is limited to the confines of this program. The categories represent the most common, broadest issues within the lake management as reported through CSLAP.

Each summarized management strategy is more extensively outlined in *Diet for a Small Lake*, and this joint NYSDEC-NYSFLA publication should be consulted for more details and for a broader context of in-lake- or watershed- management techniques. These "considerations" should not be construed as "recommendations," because there is insufficient information available through CSLAP to assess whether or how a lake should be managed. Issues associated with local environmental sensitivity, permits, and broad community-management objectives also cannot be addressed here. Rather, the following section should be considered as "tips" or a compilation of suggestions for a lake association to manage problems defined by CSLAP water-quality data or articulated by perception data. When appropriate, lake-specific management information, and other lake-specific or local "data" (such as the presence of a controllable outlet structure) is reported in ***bold*** in this "considerations" section.

The primary focus of CSLAP monitoring is to evaluate lake condition and impacts associated with lake eutrophication. Because lake eutrophication is often manifested in excessive plant growth, whether algae or aquatic macrophytes (weeds), it is likely that lake-management activities, whether promulgated to reduce algae or weed growth or to maintain water clarity and the existing makeup and density of aquatic plants in the lake, will need to address watershed inputs of nutrients and sediment to the lake, because both can contribute to either algal blooms or excessive weed growth. A core group of nutrient and sediment control activities will likely serve as the foundation for most comprehensive lake-management plans and activities and can be summarized below.

a. GENERAL CONSIDERATIONS FOR ALL CSLAP LAKES

Nutrient controls can take several forms, depending on the original source of the nutrients:

- Septic systems can be regularly pumped or upgraded to reduce the stress on the leach fields which can be replaced with new soil or moving the discharge from the septic tank to a new field). Pumpout programs are usually quite inexpensive, particularly when lakefront residents negotiate a bulk rate discount with local pumping companies. Upgrading systems can be expensive, but may be necessary to handle the increased loading from camp expansion or conversion to year-round residency. Replacing leach fields alone can be expensive and limited by local soil or slope conditions, but may be the only way to reduce actual nutrient loading from septic systems to the lake. It should be noted that upgrading or replacing the leach field may do little to change any bacterial loading to the lake, since bacteria are controlled primarily within the septic tank, not the leach field.
- Stormwater runoff control plans include street cleaning, artificial marshes, sedimentation basins, runoff conveyance systems, and other strategies aimed at minimizing or intercepting pollutant discharge from impervious surfaces. The NYSDEC has developed a guide called Reducing the Impacts of Stormwater Runoff to provide more detailed information about developing a stormwater management plan. This is a strategy that cannot generally be tackled by an individual homeowner, but rather requires the effort and cooperation of lake residents and municipal officials.
- There are numerous agriculture management practices such as fertilizer controls, soil erosion practices, and control of animal wastes, which either reduce nutrient export or retain particles lost from agricultural fields. These practices are frequently employed in cooperation with county Soil and Water Conservation District offices, and are described in greater detail in the NYSDEC's Controlling Agricultural Nonpoint Source Water Pollution in New York State. Like stormwater controls, these require the cooperation of many watershed partners, including farmers.
- Streambank erosion can be caused by increased flow due to poorly managed urban areas, agricultural fields, construction sites, and deforested areas, or it may simply come from repetitive flow over disturbed streambanks. Control strategies may involve streambank stabilization, detention basins, revegetation, and water diversion.

Land use restrictions development and zoning tools such as floodplain management, master planning to allow for development clusters in more tolerant areas in the watershed and protection of more sensitive areas, deed or contracts which limit access to the lake, and cutting restrictions can be used to reduce pollutant loading to lakes. This approach varies greatly from one community to the next and frequently involves balancing lake-use protection with land-use restrictions. State law gives great latitude to local government in developing land-use plans.

Lawn fertilizers frequently contain phosphorus, even though nitrogen is more likely to be the limiting nutrient for grasses and other terrestrial plants. By using lawn fertilizers with little or no phosphorus, eliminating lawn fertilizers or using lake water as a “fertilizer” on shoreline properties, fewer nutrients may enter the lake. Retaining the original flora as much as possible, or planting a buffer strip (trees, bushes, shrubs) along the shoreline, can reduce the nutrient load leaving a residential lawn.

Waterfowl introduce nutrients, plant fragments, and bacteria to the lake water through their feces. Feeding the waterfowl encourages congregation which in turn concentrates and increases this nutrient source and will increase the likelihood that plant fragments, particularly from Eurasian watermilfoil and other plants that easily fragment and reproduce through small fragments, can be introduced to a previously uncolonized lake.

Although not really a “watershed control strategy”, establishing **no-wake zones** can reduce shoreline erosion and local turbidity. Wave action, which can disturb flocculent bottom sediments and unconsolidated shoreline terrain is ultimately reduced, minimizing the spread of fertile soils to susceptible portions of the lake. *Only electric motors are allowed on Lake Kitchawan.*

Do not discard or introduce plants from one water source to another or deliberately introduce a "new" species from a catalogue or vendor. For example, do not empty bilge or bait bucket water from another lake upon arrival at another lake, for this may contain traces of exotic plants or animals. Do not empty aquaria wastewater or plants in the lake.

Boat propellers are a major mode of transport to uncolonized lakes. Propellers, hitches, and trailers frequently get entangled by weeds and weed fragments. Boats not cleaned of fragments after leaving a colonized lake may introduce plant fragments to another location. New introductions of plants are often found near public access sites.

b. SPECIFIC CONSIDERATIONS FOR LAKE KITCHAWAN

Management Focus: **Water Clarity/Algae/Physical Condition/Recreational Condition**

Problem	Probable cause	Probable source
Poor water clarity	Excessive algae	**Excessive phosphorus loading** from septics, watershed runoff (stormwater, construction sites, agriculture, ...)

Discussion:
The water sampling results indicate that recreational impairments in this lake are related to lower-than-desired water transparency, or, more specifically, the perception that the “physical condition” of the lake suffers from definite algal greenness. These data suggest that planktonic algae may affect water clarity**.** A management focus to improve water clarity involves reducing algae levels, which is linked to reducing nutrient concentrations in the lake and within the watershed. These considerations do not constitute recommendations, since it is not known if the lake association is attempting to improve water clarity, but these considerations are a discussion

of some management alternatives which may have varying levels of success addressing these problems.

POTENTIAL IN-LAKE CONTROLS

The strategies outlined below primarily address the cause, but not the ultimate source, of problems related to poor water clarity. As such, their effectiveness is necessarily short-term, but perhaps more immediately realized, relative to strategies that control the source of the problem. The problems may continue or worsen if the source of the problem, excessive nutrients, is not addressed, using strategies such as those described under Watershed Controls below. In-lake controls are listed in order of frequency of use in the "typical" NYS lake: *copper sulfate, precipitation/inactivation, hypolimnetic withdrawal, aeration, dilution/flushing, artificial circulation,* and *food web manipulation*.

- *Copper sulfate* is an algacide that is frequently used to control nuisance levels of planktonic algae (dots of algae throughout the water column) or filamentous algae (mats of algae on the lake surface, weeds, or rocks) throughout the lake. It is usually applied 1-3x per summer in granular or liquid form, usually by a licensed applicator. Many people feel that it is effective at reducing algae levels to below nuisance conditions, others feel it only "flattens the peak" of the worst blooms, and still others think it is merely a placebo, given the short–lived dominance of some phytoplankton species. There are concerns about the long-term affect of copper on the lake bottom, including the effects on bottom macroinvertebrate communities, and implications of increasing the concentrations of copper as a component of bottom sediments. Another concern is a possible deleterious affect of copper on the zooplankton (microscopic animals that feed on algae) community, which could, in some lakes, ultimately cause a "bounce-back" algae bloom that is worse than the original bloom. *It is not known to what extent copper products have been used for algae control at Lake Kitchawan.*

- *Precipitation/Inactivation* involves adding a chemical binding agent, usually alum, to bind and precipitate phosphorus, removing it from the water column, and to seal bound phosphorus in the sediment, rendering it inactive for release to the overlying water (as often occurs in stratified lakes with low oxygen levels). It has a mixed rate of success in NYS, although when successful it usually provides long-term control of nutrient release from bottom sediments (it is only a short-term method for removing existing phosphorus from the water column). It is not recommended for lakes with low pH or buffering capacity (like most small NYS lakes at high elevation), for at low pH, aluminum can be toxic to fish. Since CSLAP does not conduct extensive deepwater monitoring, or any sediment release rate studies, the efficacy of this strategy, based on CSLAP data, is not known. *Lake Kitchawan is not sufficiently deep to consider using this method.*

- *Hypolimnetic withdrawal* takes deoxygenated, high nutrient water from the lake bottom and discharges the water downstream from the lake. This strategy is sort of a hybrid of aeration and dilution/flushing, and is usually limited to lakes in which control structure (such as a dam) exists where the release valve is located below the thermocline. It has been quite successful and usually inexpensive when applied properly, but must only be employed when downstream waterbodies will not be adversely impacted by the pulse of low oxygen water (which may include elevated levels of hydrogen sulfide, ammonia, and iron). *Lake Kitchawan is probably not deep enough to utilize this technique.*

- *Aeration* involves pumping or lifting water from the lake bottom (hypolimnion) for exposure to the atmosphere, with the oxygenated waters returning to the lake bottom. The airlift device is usually quite expensive, and operating costs can be quite high. There is also a risk of breaking down the thermocline, which can result in an increase in algae levels and loss of fish habitat for many cold-water species. However, most of the limited number of aeration projects have been quite successful. Since CSLAP does not collect dissolved oxygen data for most program lakes, it is not definitively known whether aeration (or hypolimnetic withdrawal) would benefit this lake. *Artificial circulation* is the process by which air is injected into the hypolimnion to eliminate thermal stratification- it is aeration by circulation.

- *Dilution/flushing* involves using high quality dilution water to reduce the concentration of limiting nutrients and increase the rate at which these nutrients are flushed through the lake. This strategy requires the availability of high quality dilution water and works best when the lake is small, eutrophic, and no downstream waterbodies that may be affected by the pulse of nutrients leaving the lake. For these lakes, high quality dilution water is probably not available from the surrounding watershed, because such an input would already be flushing the lake.

- *Food web manipulation* involves altering the population of one component within the food web, most frequently algae, by altering the populations of other components in the same web. For algae control, this would most frequently involve stocking the lake with herbivorous (algae-eating) fish, but this may be at the expense of other native fish. While this procedure has worked in some situations, as with most attempts at biomanipulation, altering the food chain may be risky to the whole ecosystem, and not recommended at lakes in which the native fisheries serve as a valuable local resource.

Management Focus: **The Impact of Weeds on Recreational Condition**

Problem	Probable Cause	Probable Source
Moderate to Excessive weed growth	Shallow water depth, excessive nutrients and sediment	Excessive pollutant loading from watershed runoff (stormwater, construction sites, agriculture, etc.), septics, bottom disturbance,...

Discussion:
Perception data indicate that aquatic weed growth is perceived to inhibit recreational use of this lake, at least in some parts of the lake or during certain times of the year. Nuisance weed growth in lakes is influenced by a variety of factors- water clarity, sediment characteristics, wave action,

competition between individual plant species, sediment nutrient levels, etc. In most cases, excessive weed growth is associated with the presence of exotic, (non-native) submergent plant species such as Eurasian watermilfoil (*Myriophyllum spicatum*), although some lakes are inhibited by dense growth of native species. Some of these factors cannot be controlled by lake association activities, while others can only be addressed peripherally. For example, sediment characteristics can be influenced by the solids loading to the lake. With the exception of some hand harvesting activities, aquatic plant management should only be undertaken when lake uses (recreational, municipal, economic, etc.) are significantly and regularly threatened or impaired. Management strategies can be costly and controversial, and a variety of factors should be weighed. Aquatic plant management most efficiently involves a mix of immediate, in-lake controls, and long-term measures to address the causes and sources of this excessive weed growth.

It is not known if additional plant management is desired at Lake Kitchawan, although it does appear to be warranted based on the volunteers' perception of the lake. Hydroraking has been performed in the past at the lake.

IN –LAKE CONTROL TECHNIQUES

The following strategies primarily address the cause, but not the ultimate source, of problems related to nuisance aquatic plant growth. As such, their effectiveness is necessarily short-term, but perhaps more immediately realized, than strategies that control the source of the problem. Until the sources of the problem are addressed, however, it is likely that these strategies will need to be continuously employed. Some of these are listed in the *Watershed Controls*, since many of the same pollutants contribute to excessive algae growth as well as nuisance weed growth. Except where noted, most of these in-lake techniques do not require permits in most parts of the state, but, as always, the NYDEC Region 3 Offices should be consulted before undertaking these strategies. These techniques are presented within the context of potential management for the conditions (types of nuisance plants, extent of problem) reported through CSLAP: In-lake control methods include*: physical/mechanical plant management techniques, chemical plant management techniques, and biological plant management techniques*

Physical/mechanical control techniques utilize several modes of operation to remove or reduce the growth of nuisance plants. The most commonly employed procedures are the following:

- *Mechanical harvesters* physically remove rooted aquatic plants by using a mechanical machine to cut and transport plants to the shore for proper storage. Mechanical harvesters are probably the most common "formal" plant management strategy in New York State. While it is essentially akin to "mowing the (lake) lawn", it usually provides access to the lake surface and may remove some lake nutrients if the cut plants are disposed out of the watershed. However, if some shallow areas of the lake are not infested with weeds, they will likely become infested after mechanical harvesting, since fragments frequently wander from cut areas to barren sediment and colonize new plant communities. Harvesters are very expensive, but can be rented or leased. *Rotovators* are rotovating mechanical harvesters, dislodging and removing plants and roots. *Mechanical cutters* cut, but don't remove, vegetation or fragments. Box springs, sickles, cutting bars, boat props, and anchors often serve as mechanical cutters.

- *Hand harvesting* is the fancy term for lake weeding- pulling out weeds and the root structure by hand. It is very labor intensive, but very plant selective (pull the "weeds", leave the "plants"); and can be effective if the entire plant is pulled and if the growth area is small enough to be fully cleared of the plant. *Diver dredging* is like hand harvesting with a vacuum cleaner- in this strategy, scuba divers hand-pull plants and place them into a suction hose for removal into a basket in a floating barge. It is also labor intensive and can be quite expensive, but it can be used in water deeper than about 5ft (the rough limit for hand harvesting). It works best where plant beds are dense, but is not very efficient when plant beds or stems are scattered.
- *Water level manipulation* is the same thing as *drawdown*, in which the lake surface is lowered, usually over the winter, to expose vegetation and sediments to freezing and drying conditions. Over time this affects the growing characteristics of the plants, and in many cases selectively eliminates susceptible plants. This is obviously limited to lakes that have a mechanism (dam structure, controlled culvert, etc.) for manipulating water level. It is usually very inexpensive, but doesn't work on all plants and there is a risk of insufficient lake refill the following spring (causing docks to be orphaned from the waterfront). *It is not believed by the report authors that Lake Kitchawan can be sufficiently drawn down to utilize this technique, or if the "offending" plants are susceptible to draw down.*
- *Bottom barriers* are screens or mats that are placed directly on the lake bottom to prevent the growth of weeds by eliminating sunlight needed for plant survival. The mats are held in place by anchors or stakes, and must be periodically cleaned or removed to detach any surface sediment that may serve as a medium for new growth. The mats, if installed properly, are almost always effective, with relatively few environmental side-effects, but are expensive and do not select for plant control under the mats. It is best used when plant communities are dense but small in area, and is not very efficient for lake-wide control.
- *Sediment removal*, also referred to as dredging, controls aquatic plants by physically removing vegetation and by increasing the depth of the lake so that plant growth is limited by light availability. Dredging projects are usually very successful at increasing depth and controlling vegetation, but they are very expensive, may result in significant side effects (turbidity, algal blooms, potential suspension of toxic materials), and may require significant area for disposal. This procedure usually triggers an extensive permitting process.

Chemical control techniques involve the use of aquatic herbicides to kill undesired aquatic vegetation and prevent future nuisance weed growth. These herbicides come in granular or liquid formulations, and can be applied in spot- or whole-lake treatments. Some herbicides provide plant control by disrupting part of the plants life cycle or ability to produce food, while others have more toxicological effects. Aquatic herbicides are usually effective at controlling plants, but other factors in considering this option include the long term control (longevity), efficiency, and plant selectivity. Effectiveness may also depend on dosage rate, extent of non-target (usually native) plant growth, flushing rate, and other factors. The use of herbicides is often a highly controversial matter frequently influenced by personal philosophies about introducing chemicals to lakes. Some of the more recently registered herbicides appear to be more selective and have fewer side effects than some of the previously utilized chemicals. Chemical control of nuisance plants can be quite expensive, and, with only few exceptions, require permits and licensed applicators.

Biological control techniques presently involve the stocking of sterile grass carp, which are herbivorous fish that feed exclusively on macrophytes (and macroalgae). Grass carp, when stocked at the appropriate rate, have been effective at controlling nuisance weeds in many southern states, although their track record in NYS is relatively short, particularly in lakes with shallow or adjacent wetlands or in larger (>100 acre) lakes. These carp may not prefer the nuisance plant species desired for control (in particular Eurasian watermilfoil), and they are quite efficient at converting macrophyte biomass into nutrients that become available for algae growth. This is, however, one of the less expensive means of plant control.

Naturally occurring biological controls may include native species of *aquatic weevils and moths* which burrow into and ultimately destroy some weeds. These organisms feed on Eurasian watermilfoil, and control nuisance plants in some Finger Lakes and throughout the Northeast. However, they also inhabit other lakes with varied or undocumented effectiveness for the long term. Because these organisms live in the canopy of weed beds and feed primarily on the top of the plants, harvesting may have a severe negative impact on the population. Research continues about their natural occurrence, and their effectiveness both as a natural or deliberately- introduced control mechanism for Eurasian watermilfoil. *It is not known if these herbivorous insects are native to Lake Kitchawan.*

c. SPECIFIC MONITORING CONSIDERATIONS FOR LAKE KITCHAWAN

Discussion:

Lake Kitchawan was sampled through CSLAP for the first time in 2008. More extensive data will help to continue evaluating “normal” conditions on the lake, and to identify water quality or use problems at the lake. However, some additional parameters may be appropriate for evaluation at the lake:

1. *Bacteria*- Lake Kitchawan is classified for use for contact recreation (swimming), and it may actively support swimming. The future use of the lake for swimming and bathing can best be evaluated with bacteriological data. A comparison of sampling results to the state water quality standards requires at least five samples per month. These data cannot be collected through CSLAP.
2. *Algal toxins*- Algal toxins, usually associated with blue-green algae, may affect swimmers and others who ingest small amounts of water (as well as any lake residents who utilize Lake Kitchawan as a potable water supply). These may be analyzed in standard water samples as part of CSLAP in coming years.
3. *Aquatic plants*- Aquatic plant surveys have not been conducted through CSLAP at Lake Kitchawan. CSLAP samplers can collect and submit for identification any plant samples thought to be exotic or otherwise invasive, as well as any rare or unusual plants. Sampling protocols are also available to conduct systematic monitoring of aquatic plants for the purpose of evaluating aquatic plant management actions utilized at the lake.
4. *Temperature and oxygen profiles*- the suitability of the lake for supporting sensitive fish, the susceptibility of the lake to nutrient release from bottom sediments and fall algal blooms, and the environment for aquatic plant growth can be evaluated through temperature and oxygen profiles. These can be created through the use of electronic

meters or through chemical titrations conducted on site, but, at present, neither of these is collected through CSLAP at Lake Kitchawan (*and may not be warranted given the shallow depth of the lake*).

Appendix A. Raw Data for Lake Kitchawan

LNum	PName	Date	Zbot	Zsd	Zsamp	Tot.P	NO3	NH4	TDN	TN/TP	TColor	pH	Cond25	Ca	Chl.a
218	Lake Kitchawan	7/6/2008		0.65		0.074	0.02	0.04	0.48	14.43	37	8.79	167.7	25.8	0.3

LNum	PName	Date	Zbot	Zsd	Zsamp	QaQc	TAir	TH20	QA	QB	QC	QD
218	Lake Kitchawan	7/6/2008		0.65		1	25	22	3	4	3	2

Appendix B. New York State Water-Quality Classifications

Class N:	Enjoyment of water in its natural condition and where compatible, as a source of water for drinking or culinary purposes, bathing, fishing and fish propagation, recreation and any other usages except for the discharge of sewage, industrial wastes or other wastes or any sewage or waste effluent not having filtration resulting from at least 200 feet of lateral travel through unconsolidated earth. These waters should contain no deleterious substances, hydrocarbons or substances that would contribute to eutrophication, nor shall they receive surface runoff containing any such substance.
Class $AA_{special}$:	Source of water supply for drinking, culinary or food-processing purposes; primary and secondary contact recreation, and fishing. These waters shall be suitable for fish propagation and survival and shall contain no floating solids, settleable solids, oils, sludge deposits, toxic wastes, deleterious substances, colored or other wastes or heated liquids attributable to sewage, industrial wastes or other wastes. There shall be no discharge or disposal of sewage, industrial wastes or other wastes into these waters. These waters shall contain no phosphorus and nitrogen in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages.
Class $A_{special}$:	Source of water supply for drinking, culinary or food-processing purposes; primary and secondary contact recreation; and fishing. These waters shall be suitable for fish propagation and survival. These international boundary waters, if subjected to approved treatment equal to coagulation, sedimentation, filtration and disinfection, with additional treatment if necessary to remove naturally present impurities, will meet New York State Department of Health drinking water standards and will be considered safe and satisfactory for drinking water purposes.
Class AA:	Source of water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation, and fishing. These waters shall be suitable for fish propagation and survival. These waters, if subjected to approved disinfection treatment, with additional treatment if necessary to remove naturally present impurities, will meet New York State Department of Health drinking-water standards and will be considered safe and satisfactory for drinking-water purposes.
Class A:	Source of water supply for drinking, culinary or food-processing purposes; primary and secondary contact recreation, and fishing. These waters shall be suitable for fish propagation and survival. These waters, if subjected to approved treatment equal to coagulation, sedimentation, filtration and disinfection, with additional treatment if necessary to remove naturally

present impurities, will meet New York State Department of Health drinking-water standards and will be considered safe and satisfactory for drinking-water purposes

Class B	Suitable for primary and secondary contact recreation and fishing. These waters shall be suitable for fish propagation and survival.
Class C:	Suitable for fishing and fish propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.
Class D:	Suitable for fishing. Due to such natural conditions as intermittency of flow, water conditions not conducive to propagation of game fishery, or stream bed conditions, the waters will not support fish propagation. These waters shall be suitable for fish survival. The water-quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.
Class (T):	Designated for trout survival, defined by the Environmental Conservation Law Article 11 (NYS, 1984b) as brook trout, brown trout, red throat trout, rainbow trout, and splake.

APPENDIX C:
SUMMARY OF STATISTICAL METHODS USED TO EVALUATE TRENDS

1. Non-Parametric Analyses

Kendall tau ranking orders paired observations by one of the variables (arranging water clarity readings by date). Starting with the left-hand (earliest date) pair, the number of times that the variable not ordered (clarity readings) is exceeded by the same variable in subsequent pairs is computed as P, and the number of times in which the unordered variable is not exceeded is computed as Q. This computation is completed for each ordered pair, with N= total number of pairs (samples), and the sum of the differences S = Σ(P-Q). The Kendall tau rank correlation coefficient **t** is computed as:

$$t = 2S/(N^*(N-1))$$

Values for t range from –1 (complete negative correlation) to +1 (complete positive correlation). As above, strong correlations (or simply "significance") may be associated with values for t greater than 0.5 (or less than –0.5), and moderate correlations may be associated with values for t between 0.3 and 0.5 (or between –0.3 and –0.5), but the "significance" of this correlation must be further computed. Standard charts for computing the probabilities for testing the significance of S are provided in most statistics text books, and for values of N greater than 10, a standard normal deviate D can be computed by calculating the quotient:

$$D= S\sqrt{18} / \sqrt{[(N(N-1)(2N+5)]}$$

and attributing the following significance:

$D > 3.29$ = 0.05% significance
$2.58 < D < 3.29$ = 0.5% significance
$1.96 < D < 2.58$ = 2.5% significance
$D < 1.96$ = > 2.5% significance

For the purpose of this exercise, 2.5% significance or less is necessary to assign validity (or, using the vernacular above, "significance") to the trend determined by the Kendall tau correlation. It should be noted again that this evaluation does not determine the magnitude of the trend but only whether a trend is likely to occur.

Parametric trends can be defined by standard best-fit linear regression lines, with the significance of these data customarily defined by the magnitude of the best-fit regression coefficient ® or R^2. This can be conducted using raw or individual data points, or seasonal summaries (using some indicator of central tendency, such as mean or median). Because the former can be adversely influenced by seasonal variability and/or imprecision in the length and breadth of the sampling season during any given year, seasonal summaries may provide more realistic measures for long-term trend analyses. However, because the summaries may not adequately reflect variability within any given sampling season, it may be appropriate to compare deviations from seasonal means or medians with the "modeled" change in the mean/median resulting from the regression analyses.

When similar parametric and non-parametric tools are utilized to evaluate long-term trends in NYS lakes, a few assumptions must be adopted:

- Using the non-parametric tools, trend "significance" (defined as no more than approx. 3% "likelihood" that a trend is calculated when none exists) can only be achieved with at least four years of averaged water-quality data. When looking at all summer data points (as opposed to data averaging), a minimum of 40 data points is required to achieve some confidence in data significance. This corresponds to at least five years of CSLAP data. The "lesson" in these assumptions is that data trends assigned to data sets collected over fewer than five years assume only marginal significance.

As noted above, summer data only are utilized (as in the previous analyses) to minimize seasonal effects and different sampling schedules around the fringes (primarily May and September) of the sampling season. This reduces the number of data points used to compile averages or whole data sets but is considered necessary to best evaluate the CSLAP datasets.

2. Parametric Analyses

Parametric analyses are conducted by comparing annual changes in summer mean values for each of the analyzed sampling parameters. Summer is defined as the period from June 15 thru September 15, and roughly corresponds to the window between the end of spring runoff (after ice out) and start of thermal stratification, and the onset of thermal destratification. This period also corresponds to the peak summer recreational season and (for most lakes) the most critical period for water-quality impacts. It also bounds the most frequent range of sampling dates for the majority of both the primarily seasonal volunteers and full-time residents of CSLAP lakes.

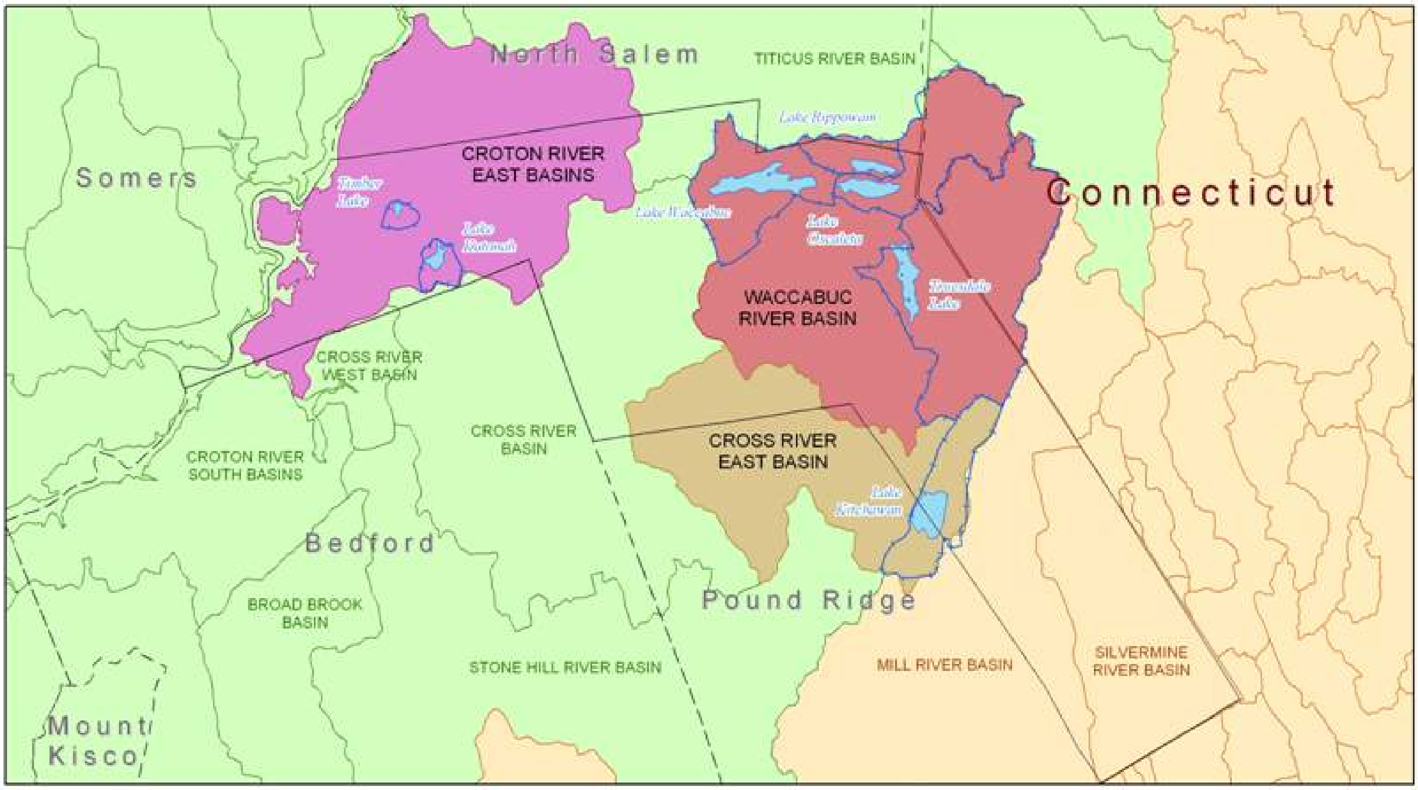
Trends in the parametric analyses are determined by the least squares method, in which "significance" requires both a high correlation coefficient (R^2>0.5) and intra-seasonal variance to be lower than the predicted change (trend) during the period of sampling (roughly corresponding to Δy). Changes in water-quality indicators are also evaluated by the two-sided t-test, in which the change (z statistic) in the mean summer value for each of the indicators by decade of sampling (1980s, 1990s, 2000s) is compared to the t statistic distribution within the 95% confidence interval, with the null hypothesis corresponding to no significant change.

APPENDIX D: BACKGROUND INFO FOR LAKE KITCHAWAN

CSLAP Number	218
Lake Name	L Kitchawan
First CSLAP Year	2008
Sampled in 2007?	no
Latitude	411433
Longitude	733314
Elevation (m)	159
Area (ha)	36.3
Volume Code	13
Volume Code Name	Lower Hudson River
Pond Number	114
Qualifier	none
Water-quality Classification	B
County	Westchester
Town	Pound Ridge
Watershed Area (ha)	not yet determined
Retention Time (years)	not yet determined
Mean Depth (m)	not yet determined
Runoff (m/yr)	not yet determined
Watershed Number	13
Watershed Name	Lower Hudson River
NOAA Section	5
Closest NOAA Station	Pleasantville
Closest USGS Gaging Station-Number	1374918
Closest USGS Gaging Station-Name	Stone Hill River south of Katonah
CSLAP Lakes in Watershed	Blue Heron L, Burden L, Copake L, Cranberry L, Duane L, Forest L-R, Gossamans P, Highland L, Hillside L, Indian L-P, Katonah L, Kinderhook L, L Carmel, L Celeste, L Lincolndale, L Lucille, L Mahopac, L Meahagh, L Mohegan, L Myosotis, L Nimham, L Oscaleta, L Oscawana, L Ossi, L Peekskill, L Rippowam, L Taghanic, L Tibet, L Truesdale, L Waccabuc, Long P, Monhagen L, Nassau L, Orange L, Peach L, Plum Brook L, Queechy L, Robinson P, Round P, Sagamore L, Sepasco L, Shaver P, Shawangunk L, Shenorock L, Snyders L, Spring L, Stissing L, Teatown L, Thompsons L, Timber L, Tomkins L, Ulster Heights L, Wallace P, Whaley L

APPENDIX C: TOWN OF LEWISBORO TOWN-WIDE COMPREHENSIVE LAKES MANAGEMENT PLAN (2009)

REPORT



Town-wide Comprehensive Lakes Management Plan

Town of Lewisboro, New York
Edward Brancati, Town Supervisor

Final Report
FEBRUARY 6, 2009

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1. Introduction

1.1. Objectives

In August 2007, EcoLogic entered into an agreement with the Town of Lewisboro to develop a planning document outlining management of the lakes and watershed areas within the Town. Four specific objectives were cited:

- Create a central repository of natural resource data, statistics, and testing data for each of the lakes in the Town;
- Summarize each lake's water quality and environmental concerns;
- Recommend the most logical, environmentally sound, and cost-effective sequence of projects to improve and maintain water quality throughout the Town;
- Synthesize and collate all the studies on each of the lakes.

Additional data gathering and evaluation tasks were included to meet the overall objectives. This document – *Town-Wide Comprehensive Lakes Management Plan* - summarizes the water quality and aquatic habitat conditions of seven lakes in the Town of Lewisboro, and recommends measures for their protection and restoration.

1.2. Report Organization

The Town-wide Lakes Management Plan is organized into ten sections. Sections 1, 2 and 3 are composed of this introduction, a summary of the environmental settings of the lakes, followed by "Fact Sheets" for each lake. These fact sheets may be used as reference material for the lake associations. Sections 4 and 5 discuss the water quality issues on a Town-wide basis, identify the pollutant(s) of concern and their source(s), and identify reductions needed to meet restoration goals. Sections 6, 7, 8 and 9 synthesize management options, set forth recommendations and potential sources for funding, and identify priority actions for the Town of Lewisboro. Section 10 details the references used to create this report.

1.3. The importance of phosphorus in the lake ecosystem

1.3.1. Eutrophication

Eutrophication is the term that describes both the process and the effects of enrichment of surface water systems (including lakes, estuaries, and reservoirs), and it is a major water quality issue. Aquatic systems become increasingly enriched with plant nutrients, organic matter, and silt, resulting in increased biomass of algae and plants, reduced water clarity, and ultimately, a reduction in volume. Aesthetic quality and habitat conditions are degraded, and surface waters may lose suitability for recreational uses and water supply as eutrophication proceeds. The composition and abundance of the aquatic biota may be altered.

While eutrophication is a natural process, it can be greatly accelerated by human activities. There are numerous lakes included in state compendia of impaired waters; most are listed due to excessive nutrient inputs from nonpoint sources such as agricultural runoff and (less frequently) point sources such as outfalls of wastewater treatment facilities.

Water resources managers focus on identifying and controlling the sources of nutrients, organic material, and silt to aquatic ecosystems in an effort to slow down the eutrophication process.

Phosphorus is most often the limiting nutrient for primary productivity and algal biomass in inland lakes of the Northeast. A limiting nutrient is one that is essential for algal growth, but can be present in amounts smaller than required. Once the limiting nutrient (phosphorus) is exhausted, the algal community stops growing. If more phosphorus is added, algal growth will continue until growth is again limited by lack of phosphorus or by other limiting environmental factors (example, decreased sunlight and/or temperature). This finding has focused lake restoration and management techniques on controlling the concentration of phosphorus and has led to significant improvements in many systems. However, Cooke et al. (1993) point out that many lakes are shallow, with extensive wetlands, littoral zones, and macrophyte communities. The complexity of nutrient flux and food web interactions at the sediment-water interface in highly productive shallow regions of lakes cannot be ignored. Nutrient cycling and biological interactions in shallow weedy sections of the Lewisboro Lakes may contribute to maintaining elevated nutrient levels and undesirable plant growth long after external loading is reduced.

1.3.2. Trophic States

Eutrophication, defined as enrichment of lakes with nutrients and the effects of this enrichment, occurs along a continuum. Lakes progress from a nutrient-poor, clear water state (*oligotrophic*) through an intermediate state of higher biological productivity (*mesotrophic*) and eventually to a nutrient rich condition of very high biological productivity (*eutrophic*). *Hypereutrophic* lakes are turbid lakes, closest to the wetland status. However, lakes may exist in a trophic equilibrium for decades or centuries. When human activities accelerate the eutrophication process, it is termed *cultural eutrophication*.

Limnologists and lake managers have developed guidelines to define the transition between trophic states based on phosphorus, water clarity, chlorophyll-a, and deep water dissolved oxygen concentrations (Table 1-1). Assigning a lake to one category requires professional judgment that considers the cumulative evidence of water quality conditions and the level of productivity.

Table 1-1. Trophic states and indicator parameters

	Oligotrophic	**Mesotrophic**	**Eutrophic**	**Hypereutrophic**
Average Total Phosphorus, upper waters (µg/l)	<10	10-35	35 -100	>100
Summer chlorophyll-a, upper waters (µg/l)	<2.5	2.5 - 8	8 - 25	>25
Peak chlorophyll-a (µg/l)	<8	8-25	25-75	>75
Average Secchi disk transparency (meters)	>6	6-3	3-1.5	<1.5
Minimum Secchi disk transparency (meters)	>3	3-1.5	1.5-0.7	<0.7
Dissolved oxygen in lower waters (% saturation)	80 - 100	10-80	Less than 10	Zero

Source: Janus and Vollenweider 1981

2. Environmental Setting

Seven lakes are included in this evaluation and report: Truesdale Lake, Lake Kitchawan, Lake Katonah, the Three Lakes (Rippowam, Oscaleta and Waccabuc), and Timber Lake. Collectively referred to as the Lewisboro Lakes, the lakes range in size from 2.9 to 57 ha (7.2– 141 acres) (Table 2-1). Location of the lakes within the Town of Lewisboro is displayed in Figure 2-1. Water levels in three of the seven lakes – Truesdale, Katonah and Timber – are controlled by dam structures, whereas the remaining four lakes –Rippowam, Oscaleta, Waccabuc and Kitchawan – are not dammed.

Table 2-1. Summary of physical characteristics: Lewisboro Lakes.

Lake	Average Depth (m)	Max. Depth (m)	Surface Area (ha)	Number of Structures[a]
Waccabuc	7.1	13.4	57	235
Kitchawan	1.7	4.3	43	127
Truesdale	1.1	3.4	34	303[b]
Oscaleta	5.9	10.8	27	68[c]
Rippowam	4.1	6.1	15	46
Katonah	1.6	3.1	10	44
Timber	2.1	3.1	2.9	20

[a] Number of structures within 100 m of surface water in watershed; excludes areas of Truesdale and Oscaleta watersheds in Connecticut. Number of structures was obtained from digitized map created by Westchester County from aerial photographs taken in 2000 and 2004.
[b] Of total area within 100m of surface water in Truesdale watershed, approximately 27% is within Connecticut and no structures data were available.
[c] Of total area within 100m of surface water in Oscaleta watershed, approximately 57% is within Connecticut and no structures data were available.

The Lewisboro Lakes are distributed among three drainage sub-basins, which are part of the New York City water supply watershed (Figure 2-2):

Major Basin	**Lower Hudson River**		
Regional Basin	***Croton River***		
Sub-Basin	*Waccabuc River*	*Cross River East*	*Croton River East*
Lake Basins	Rippowam Oscaleta Waccabuc Truesdale	Kitchawan	Timber Katonah

2.1. Vegetative cover and land use

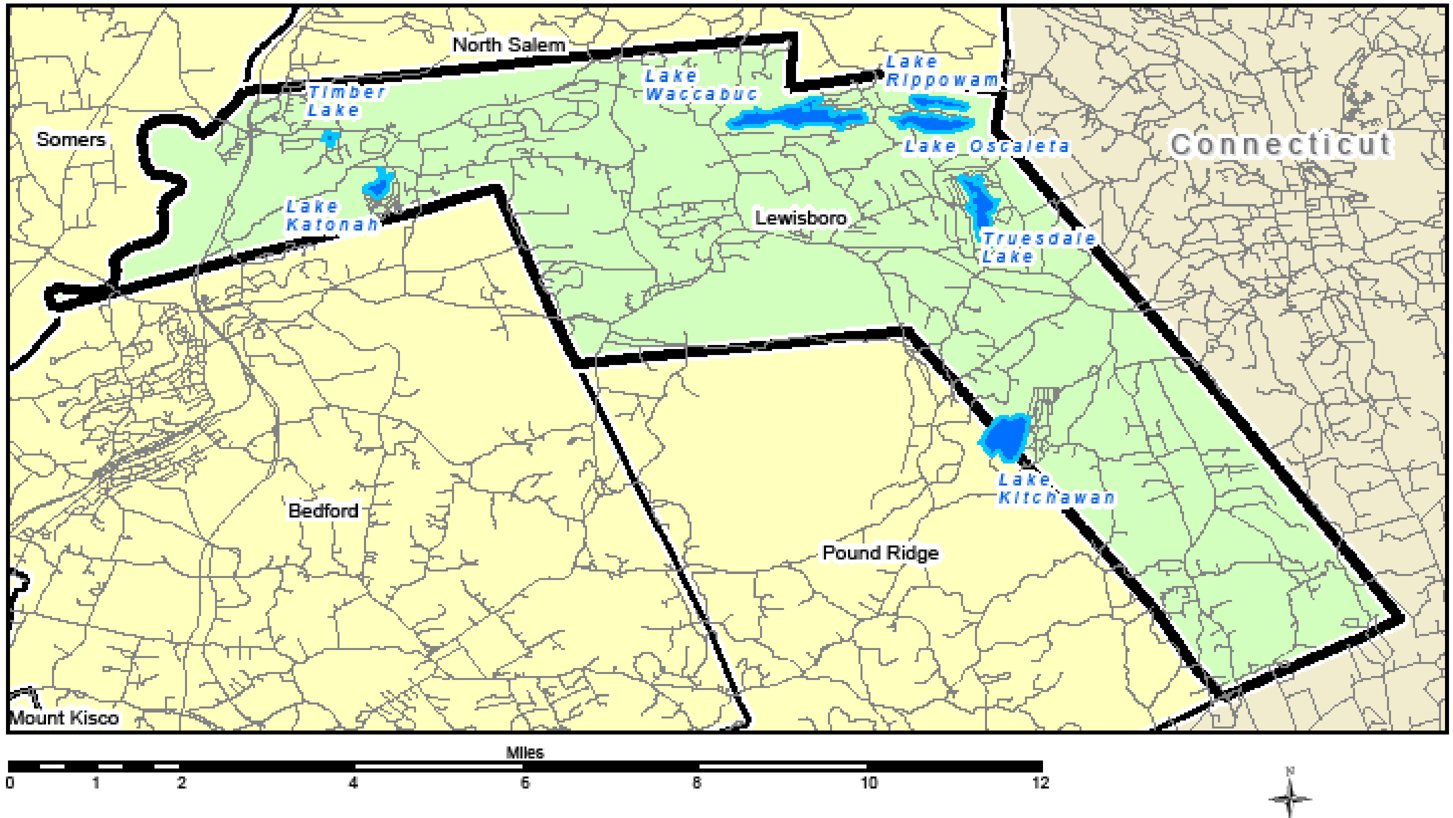
Nearly all the Lewisboro Lake watersheds had more than half of their area covered by Forest/Shrub class (Table 2-2). The exception was Lake Katonah, where the Developed class was dominant (48%). The Developed class was the second most common land cover class for four of the seven watersheds – Waccabuc, Truesdale, Kitchawan and Timber. The Forest/Shrub class was the second most common in the Lake Katonah watershed; and the Open Water class was the second most common in the Rippowam and Oscaleta watersheds.

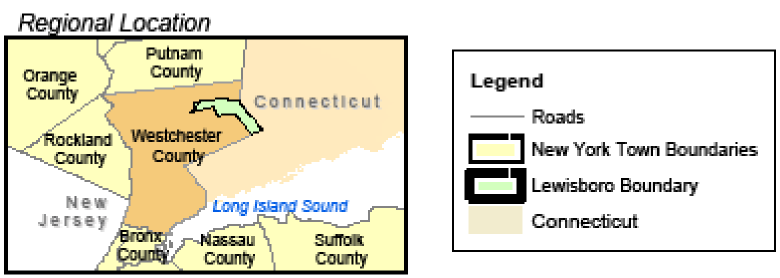
Table 2-2. Watershed land cover class distribution, Lewisboro Lakes.

	Land Cover by Watershed (percent)						
Land Cover Classes	**Rippowam**	**Oscaleta**	**Waccabuc**	**Truesdale**	**Kitchawan**	**Katonah**	**Timber**
Open water	11	9.0	15	3.5	12	16	9.0
Developed*	6.8	5.4	26	15	20	48	43
Forest/Shrub**	73	78	53	67	51	36	46
Grassland/Pasture/Crops	0.86	1.9	3.4	4.3	1.2	--	--
Wetlands (woody/emergent)	7.9	5.4	2.7	10	16	--	2.1
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: National Land Cover Dataset 2001
Shaded cells indicate the highest percentage for land cover class in each watershed.
*Developed – sum of three Developed classes: open space, low intensity and medium intensity.
*Forest/Shrub – sum of four classes: Forest Deciduous, Forest Evergreen, Forest Mixed, and Shrub/scrub.

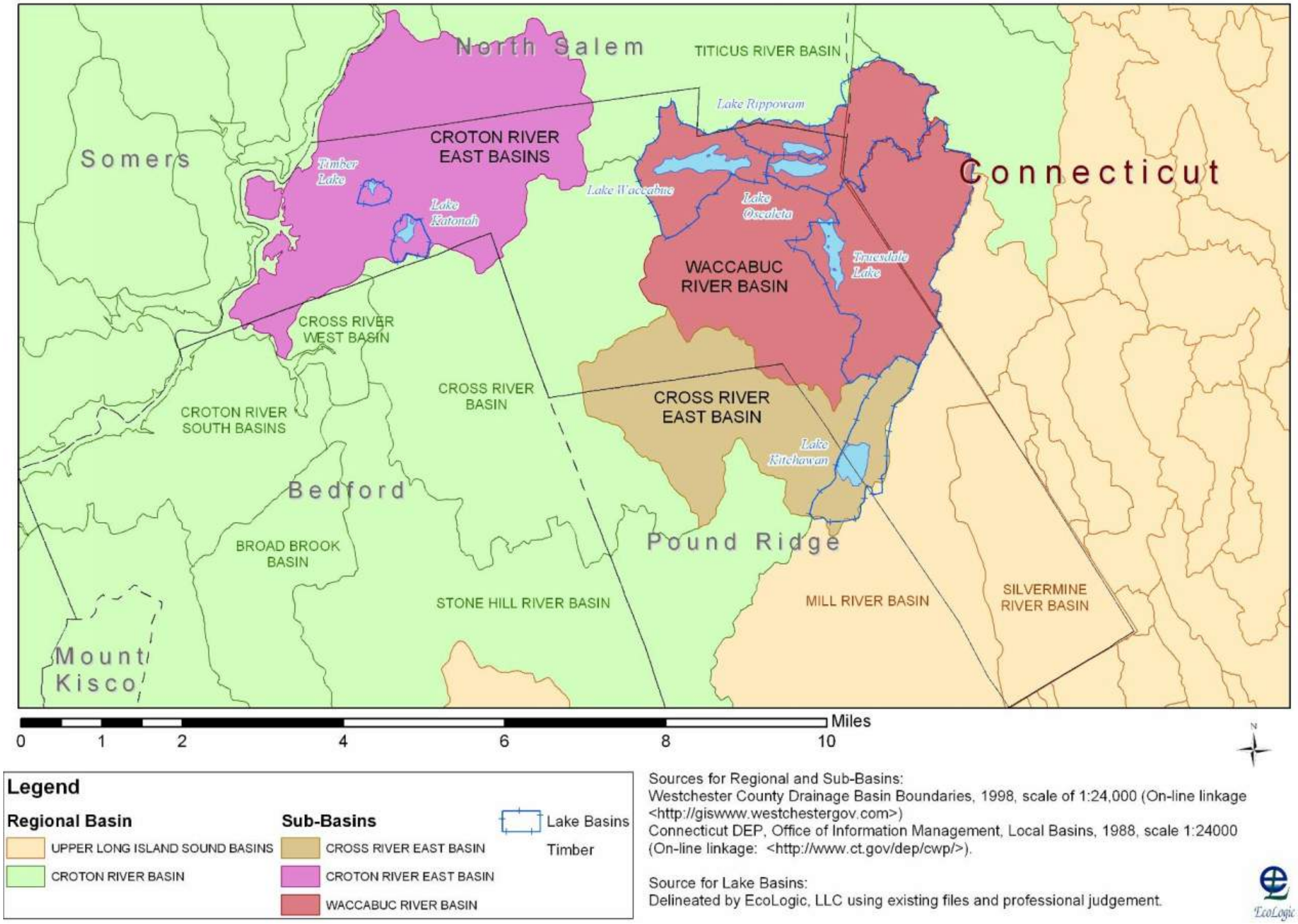
Figure 2-1
Town Of Lewisboro Lakes





Sources:
Borders: U.S. Department of Commerce U.S. Census Bureau Geography Division. Census Minor Civil Divisions, New York State. (Shapefile : 2001).
CUGIR, the Cornell University Geospatial Information Repository, using US Department of Commerce, Bureau of the Census data, developed the GIS data set versions of 2000 Census TIGER/Line files for 12 coverages for each of the 62 counties in New York State.
Roads and lakes: Obtained from the Westchester County web site http://giswww.westchestergov.com/
Municipal planimetric datasets were photogrammetrically derived from the county's 2004 base map project and meet National Map Accuracy Standards at 1"=100'.

Figure 2-2
Town Of Lewisboro Drainage Basins



2.2. Soils

Lewisboro is underlain by bedrock of the Manhattan Prong, which includes metamorphic gneiss, schist and carbonate rock (Leggette, Brashears & Graham, Inc.). The bedrock is generally covered by shallow surficial soils at higher elevations and thicker surficial soils in the valleys. This material predominantly consists of glacial till, composed of a very poorly-sorted mixture of sand, gravel, silt, clay and stones deposited directly by the glacial ice (Leggette, Brashears & Graham, Inc.).

The combination of shallow till soils and fairly steep slopes exacerbate rainfall runoff, increasing the potential for erosion and transport of sediment, nutrients and contaminants from upland areas into the lakes.

2.3. Fish and wildlife

The Town of Lewisboro has a significant amount of green space interspersed with residential development. This green space supports a diverse wildlife population including a number of State listed rare plant and animal species (see Fact Sheets for listing of species for each lake's watershed).

The lakes in Lewisboro support productive fish communities. Warmwater species, such as bass and sunfish, tend to be most abundant because of the shallowness of many of the lakes. The deeper lakes (Waccabuc, Oscaleta, and Rippowam) have historically supported both a warm and cold water (trout) fishery. Although some of the deeper lakes, such as Oscaleta, have been stocked with trout in recent years, the seasonal low dissolved oxygen concentrations in the deeper colder areas of the lakes has apparently led to significant declines in the coldwater fishery. This trend is likely to continue as the lakes continue to become increasingly eutrophic.

3. Lake Fact Sheets

A large amount of information has been collected by individual lake associations. This information has been summarized into fact sheets for each lake. This section presents a summary of lake and watershed characteristics for each lake. The page numbering system in this section is intended to allow each fact sheet to act as a standalone document that can be used by each lakes association. The fact sheets are ordered by surface area (largest to smallest).

3.2. Lake Kitchawan

Lake Kitchawan

Surface water quality classification: Class B

Morphology Summary:

Characteristic	Units	Value	Source
Surface area	hectares	43	ENSR 2008
Watershed area	hectares	225 184.6 (lake) 141.9 (lagoon) 326.4 (both)	EcoLogic 2008 (excl lake) ENSR 2008
Volume	mgal	174 (lake) 3 (lagoon) 177 (both)	ENSR 2008
Elevation	m	158	
Maximum depth	m	4.3	ENSR 2008
Average Depth	m	1.7	ENSR 2008

Lake Inlet: Primary inlet drains a large area to the north and enters at north end. Secondary inlets drain areas west and south of the lake. Numerous storm drains enter along east shore.

Lake Outlet: The Lake discharges to the west.

Recreational impacts: Occasional poor water quality. High density of macrophytes.

Lakeshore Development: Development is predominantly residential; the highest density is to the east of the lake.

Figure 1
Lake Kitchawan
Bathymetry

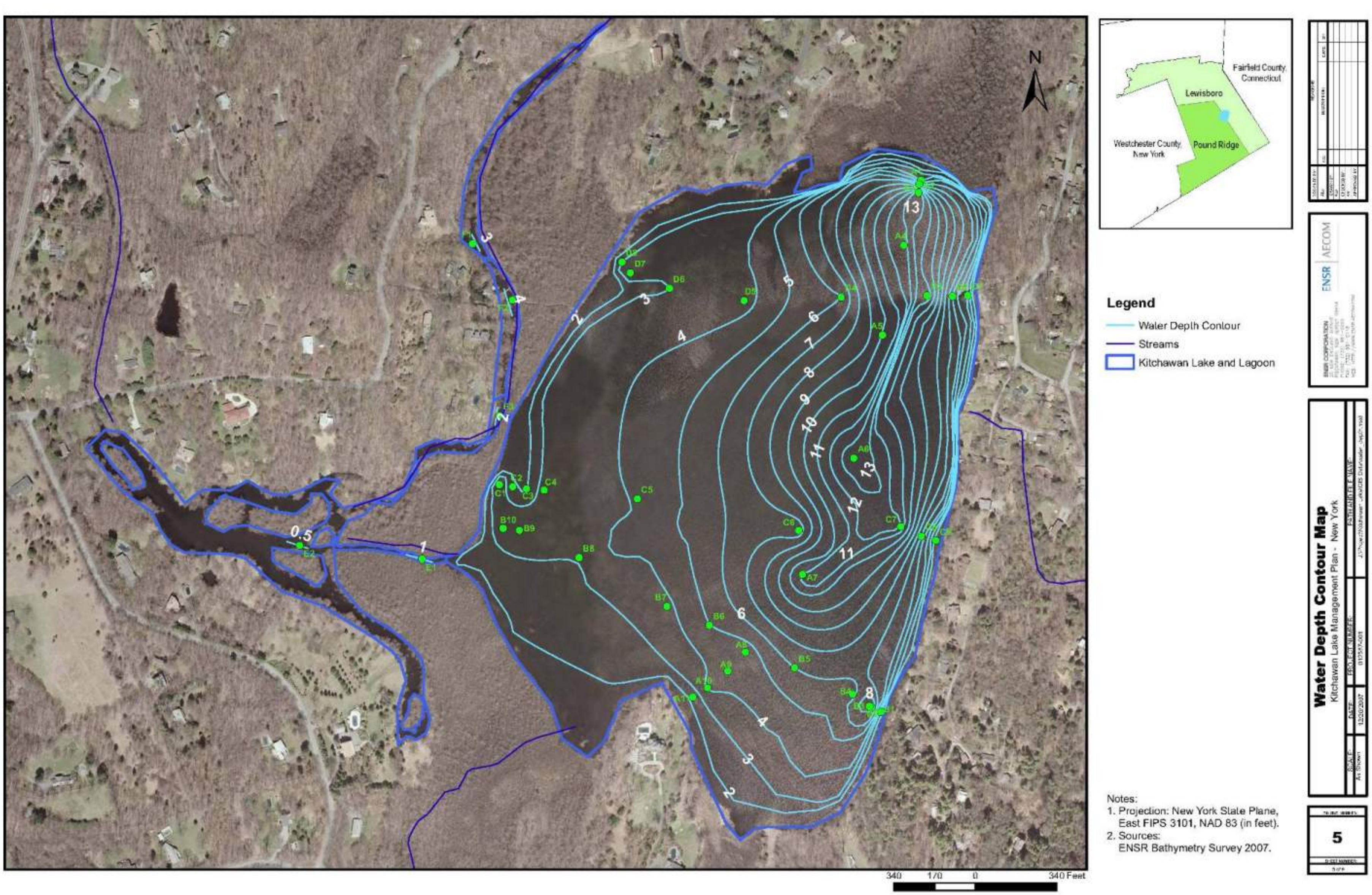
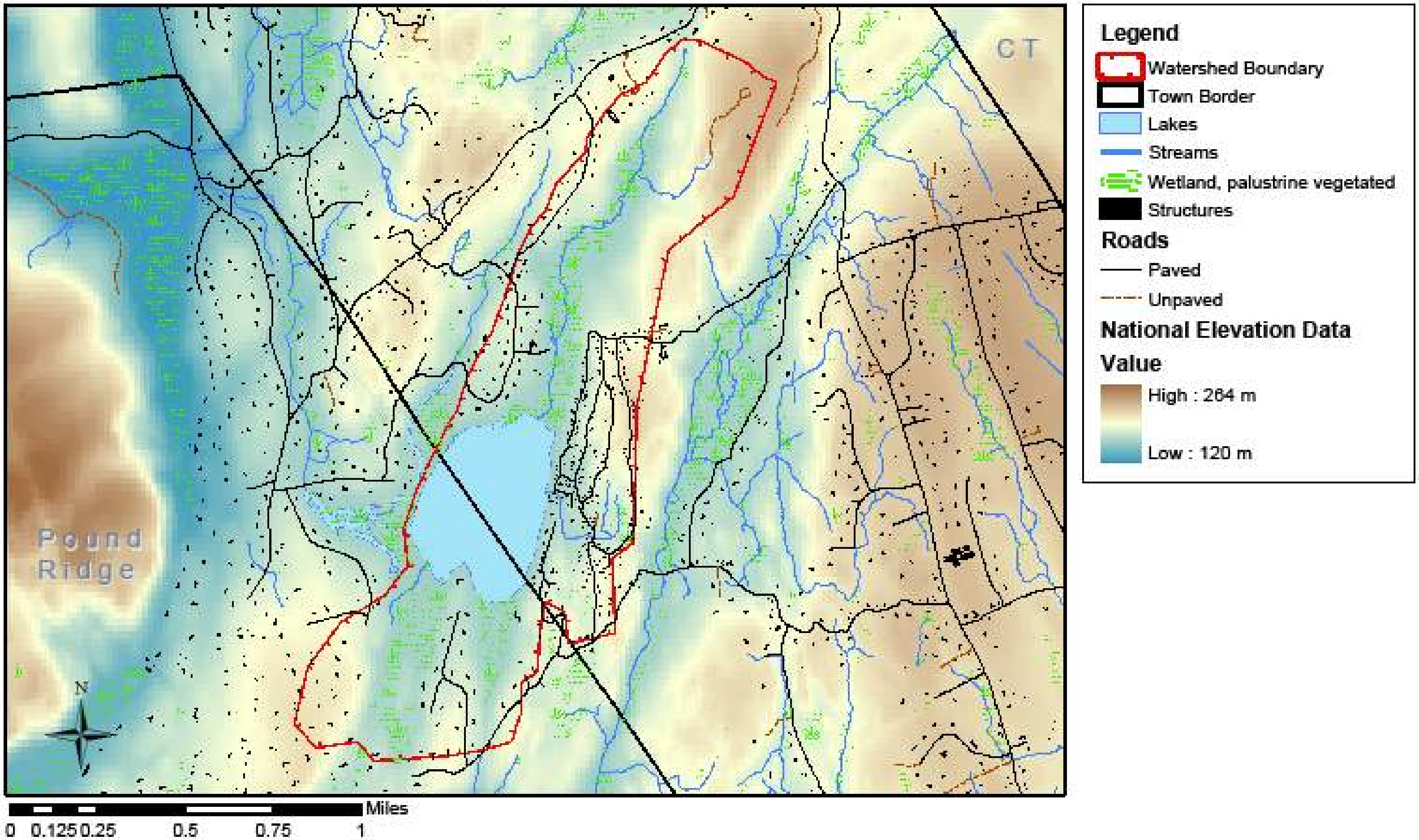


Figure 2

Lake Kitchawan

Topographic and Human Features



Sources:

Lakes, Streams, Wetlands, Roads and Structures - On-line at Westchester County web site http://giswww.westchestergov.com/. Municipal planimetric datasets were photogrammetrically derived from the county's 2004 base map project and meet National Map Accuracy Standards at 1"=100'.

National Elevation Dataset - U.S. Geological Survey (USGS), EROS Data Center, 1999. On-line at http://gisdata.usgs.net/ned/. Geographic coordinate system. Horizontal datum of NAD83. Vertical datum of NAVD88.

Historical water quality data summary: ENSR(2007) reported two sample events, May and July; Samples were collected from five sites: three in the lake; one at the outlet; and one in the wetland. Only one of the five sites – Site 2 – was sampled both at the surface and at depth.

A. Representing in-lake samples collected in May and July2007.

Parameter (units)	Time Period	Location	Number of Samples	Minimum	Maximum	Average
Alkalinity (mg/l)	2007	Upper waters	6	58.9	160	77.5
		Lower waters	2	64.9	85.9	75.4
Chlorophyll-α (ug/l)	2007	Upper waters	2	0.65	5.8	3.2
		Lower waters	0	--	--	--
Conductivity (uS/cm)	2007	Upper waters	9	248	282	263
		Lower waters	5	257	321	275
Dissolved oxygen (mg/l)	2007	Upper waters	9	5.66	11.7	8.95
		Lower waters	5	0.26	16.4	9.94
Dissolved oxygen (%)	2007	Upper waters	9	68	138	106
		Lower waters	5	3.1	183	108
Fecal Coliform (col/100ml)	2007	Upper waters	6	4	46	16.7
		Lower waters	0	--	--	--
pH (std units)	2007	Upper waters	9	7.82	9.06	8.48
		Lower waters	5	6.98	8.84	8.17
Temperature (°C)	2007	Upper waters	9	22.8	25.3	23.8
		Lower waters	5	17.9	21.8	19.9
Total suspended solids (mg/l)	2007	Upper waters	5	<3.9	5.0	4.2
		Lower waters	2	<3.9	6.0	5.0
Nutrients:						
Total Phosphorus (mg/l)	2007	Upper waters	6	0.015	0.085	0.037
		Lower waters	2	0.011	0.023	0.017
Soluble Reactive P (mg/l)	2007	Upper waters	6	<0.005	0.03	0.017
		Lower waters	2	0.009	0.02	0.015
Ammonia Nitrogen (mg/l)	2007	Upper waters	6	<0.032	0.1	0.058
		Lower waters	2	<0.032	0.13	0.081
Nitrate plus Nitrite (mg/l)	2007	Upper waters	6	<0.007	0.062	0.023
		Lower waters	2	<0.007	0.008	0.0075
Total Kjeldahl Nitrogen (mg/l)	2007	Upper waters	6	0.38	0.72	0.58
		Lower waters	2	0.27	0.81	0.54

Note: Site 2 surface duplicate averaged with parent sample prior to calculating upper waters average.
Upper waters statistics represent samples collected at depths of less than 2m from three sites in the lake. Lower waters statistics represent samples collected at depths greater than 2m from Site 2 in the lake.

B. Representing in-lake samples collected in July2007.

Parameter (units)	Time Period	Location	Number of Samples	Minimum	Maximum	Average
Chlorophyll-α (ug/l)	2007	Upper waters	1	5.75	5.75	5.75
		Lower waters	0	--	--	--

B. Representing in-lake samples collected in July2007.

Parameter (units)	Time Period	Location	Number of Samples	Minimum	Maximum	Average
Dissolved oxygen (mg/l)	2007	Upper waters	4	6.95	8.48	7.44
		Lower waters	3	14.89	16.36	15.46
Dissolved oxygen (%)	2007	Upper waters	4	81	100.4	87.95
		Lower waters	2	3.1	35.2	19.2
Nutrients:						
Total Phosphorus (mg/l)	2007	Upper waters	3	0.015	0.031	0.025
		Lower waters	1	0.023	0.023	0.023
Soluble Reactive P (mg/l)	2007	Upper waters	3	<0.005	0.03	0.015
		Lower waters	1	0.021	0.021	0.021
Ammonia Nitrogen (mg/l)	2007	Upper waters	3	0.066	0.1	0.084
		Lower waters	1	0.13	0.13	0.13
Nitrate plus Nitrite (mg/l)	2007	Upper waters	3	0.026	0.062	0.039
		Lower waters	1	0.008	0.008	0.008
Total Kjeldahl Nitrogen (mg/l)	2007	Upper waters	3	0.66	0.72	0.69
		Lower waters	1	0.81	0.81	0.81

Note: Site 2 surface duplicate averaged with parent sample prior to calculating upper waters average.
Upper waters statistics represent samples collected at depths of less than 2m from three sites in the lake. Lower waters statistics represent samples collected at depths greater than 2m from Site 2 in the lake.

August 2008 water quality data summary:

A. Analytical Results

Parameter (units)	**Surface (0 m)**	**Depth (4.6 m)**
Secchi Transparency (m)	1.50	na
Chlorophyll-a (mg/l)	0.014	na
Alkalinity (mg/l)	54	na
Phosphorus:		
Total Phosphorus (mg/l)	0.013	0.035
Soluble Reactive Phosphorus (mg/l)	0.0087[a]	0.014[a]
Nitrogen:		
Total Nitrogen	1	1.5
Nitrate + Nitrite N (mg/l)	0.049[a]	0.17[a]
Total Kjeldahl Nitrogen (mg/l)	0.98[a]	1.3[a]

na – not analyzed
[a] The result of the laboratory control sample was greater than the established limit.

B. Field Profiles

Depth ft (m)	Temperature (°C)	pH	Conductivity (us)	DO (mg/l)	DO (% sat)
1 (0.305)	23.4	6.8	319	5.0	59.5
2 (0.610)	23.8		321	5.0	59.5
3 (0.915)	23.8		321	5.0	59.5
4 (1.22)	23.8		321	5.0	59.8
5 (1.53)	23.8		319	5.0	59.8
6 (1.83)	23.8		321	5.0	59.8
7 (2.14)	23.8		320	5.0	58.9
8 (2.44)	23.8		319	5.1	60.6
9 (2.75)	23.8		319	5.2	61.4
10 (3.05)	23.7		312	5.5	62.6
11 (3.36)	23.2		312	5.5	62.8
12 (3.66)	22.9		295	4.6	54.3
13 (3.97)	22.8		297	4.7	55.4
14 (4.27)	22.4		287	4.6	53.1
14.5 (4.42)	22.4		287	4.6	53.1

Sediment data summary:

- Composite samples collected August 12, 2008 (EcoLogic, 2008):

Parameter	Analytical Method	Result (mg/kg dry wt)
Pesticides/PCBs	EPA 8081/8082	ND
TCL Volatiles	EPA 8260B	ND
TCL Semi-Volatiles	EPA 8270	ND
RCRA Total Metals	EPA 6010	
Arsenic		ND
Barium		16
Cadmium		0.24
Chromium		3.1
Copper		8.5
Lead		11
Selenium		0.054
Silver		ND
RCRA Mercury	EPA 7471	ND
Total Organic Carbon	EPA 9060	94000
Total Solids	SM 18-20 2540B	12%

ND – non-detect. Analytes reported as less than the method detection limit.

Sediment Contaminant Analysis: Interest has been expressed in exploring the feasibility of dredging. A composite sediment sample was collected on August 13, 2008 (EcoLogic, 2008) to determine if any threshold screening values that might preclude dredging were exceeded. Results are summarized in Table C, in the context of NYSDEC Screening levels. A complete set of results is attached to the end of this report. (Attachment 2 - 2008 Water Quality and Sediment Sampling Locations and Laboratory Analysis Reports)**.** The NYSDEC screening levels are separated into three Classes: A, B, and C:

- **Class A - No Appreciable Contamination (No Toxicity to aquatic life).**
  If sediment chemistry is found to be at or below the chemical concentrations which define this class, dredging and in-water or riparian placement, at approved locations, can generally proceed.

- **Class B - Moderate Contamination (Chronic Toxicity to aquatic life).**
  Dredging and riparian placement may be conducted with several restrictions. These restrictions may be applied based upon site-specific concerns and knowledge coupled with sediment evaluation.

- **Class C - High Contamination (Acute Toxicity to aquatic life).**
  Class C dredged material is expected to be acutely toxic to aquatic biota and therefore, dredging and disposal requirements may be stringent. When the contaminant levels exceed Class C, it is the responsibility of the applicant to ensure that the dredged material is not a regulated hazardous material as defined in 6NYCRR Part 371. This TOGS does not apply to dredged materials determined to be hazardous.

Table C. Lake Kitchawan sediment analytical results, with NYSDEC Sediment Quality Threshold Values for Dredging, Riparian or In-water Placement. Threshold values are based on known and presumed impacts on aquatic organisms/ecosystem. Results that fall into Class C (high contamination) are highlighted. ND= Not detected.

Compound	Required Method Detection Limit	Threshold Values			Kitchawan Results	Threshold Class
		Class A	Class B	Class C		
Metals (mg/kg dry wt) – EPA Method 6010B						
Arsenic	1.0	< 14	14 – 53	> 53	ND	A
Cadmium	0.5	< 1.2	1.2 - 9.5	> 9.5	0.24	A
Copper*	2.5	< 33	33 – 207	> 207	8.5	A
Lead	5.0	< 33	33 – 166	> 166	11	A
Mercury+	0.2	< 0.17	0.17 - 1.6	> 1.6	ND	A
PAHs and Petroleum-Related Compounds (mg/kg dry wt) – EPA Methods 8020, 8021, 8260 and 8270						
Benzene	0.002	< 0.59	0.59 - 2.16	> 2.16	ND	A
Total BTEX*	0.002	< 0.96	0.96 - 5.9	> 5.9	ND	A
Total PAH[1]	0.33	< 4	4 - 35	> 35	ND	A
Pesticides (mg/kg dry wt) – EPA Methods 8081						
Sum of DDT+DDD+DDE+	0.029	< 0.003	0.003 - 0.03	> 0.03	ND	A
Mirex*+	0.189	< 0.0014	0.0014 - 0.014	> 0.014	na	--
Chlordane*+	0.031	< 0.003	0.003 - 0.036	> 0.036	ND	A
Dieldrin	0.019	< 0.11	0.11 -0. 48	> 0.48	ND	A
Chlorinated Hydrocarbons (mg/kg dry wt) – EPA Methods 8082 and 1613B						
PCBs (sum of aroclors)[2]	0.025	< 0.1	0.1 - 1	> 1	ND	A
2,3,7,8-TCDD*[3](sum of toxic equivalency)	0.000002	< 0.0000045	0.0000045 - 0.00005	> 0.00005	na	--

na – not analyzed. ND – not detected

+Threshold values lower than the Method Detection Limit are superseded by the Method Detection Limit.

* Indicates case-specific parameter. The analysis and evaluation of these case specific analytes is recommended for those waters known or suspected to have sediment contamination caused by those chemicals. These determinations are made at the discretion of Division staff.

[1]For Sum of PAH, see Appendix E of TOGS 5.1.9. For Lake Kitchawan, each of the 18 PAH compounds were reported as non-detect (<0.7 mg/kg).

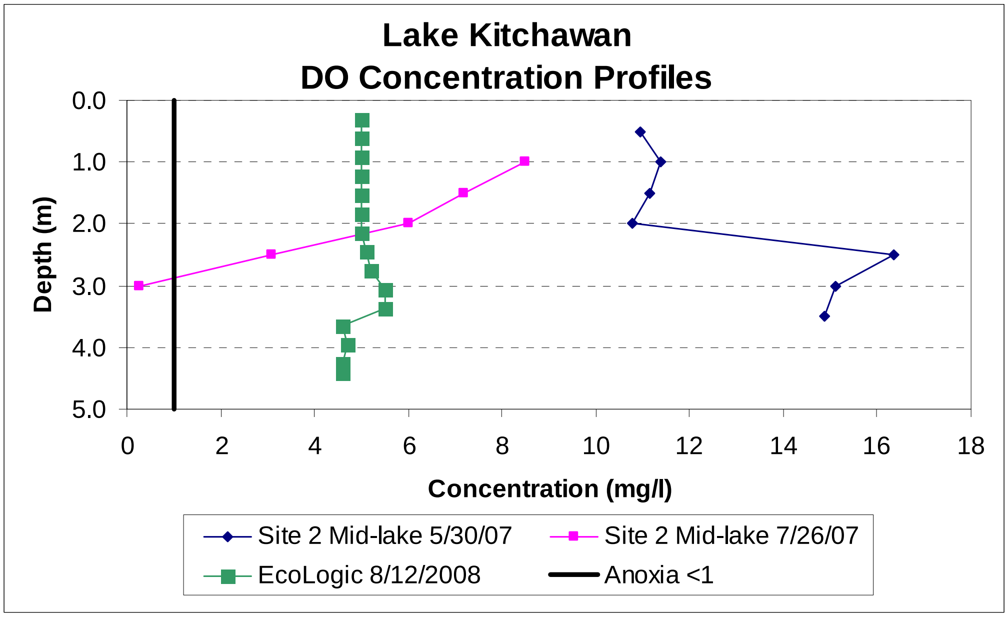
[2]For the sum of the 22 PCB congeners required by the USACE NYD or EPA Region 2, the sum must be multiplied by two to determine the total PCB concentration. For Lake Kitchawan, seven Aroclors were each reported as <0.2 mg/kg; this value is reported above.

[3]TEQ calculation as per the NATO - 1988 method (see Appendix D of TOGS 5.1.9).

Note: The proposed list of analytes can be augmented with additional site specific parameters of concern. Any additional analytes suggested will require Division approved sediment quality threshold values for the A, B and C classifications.

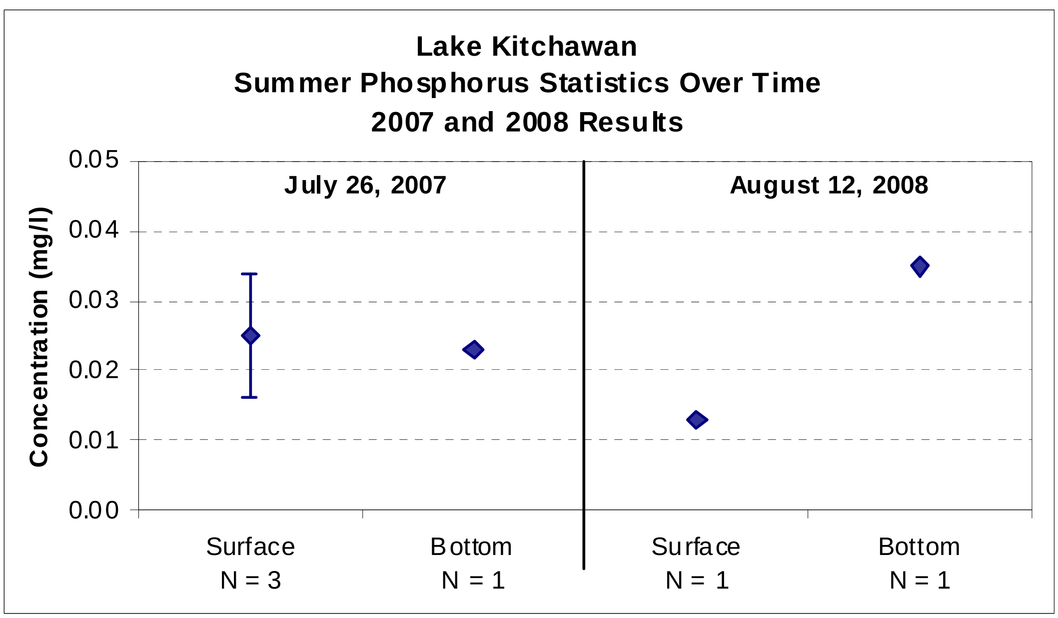
Source: Table 2, NYSDEC Division of Water, Technical & Operational Guidance Series (TOGS) 5.1.9, "In-Water and Riparian Management of Sediment and Dredged Material", Nov. 2004

Anoxia: Evidence of anoxic conditions at depth in July 2007; no stratification in May 2007 or in August 2008.

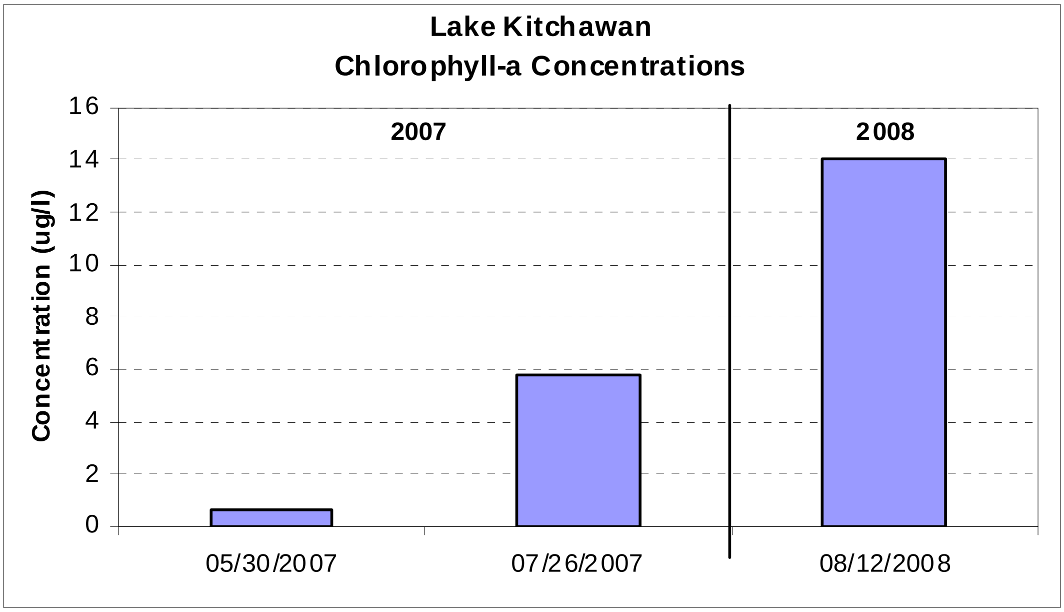


Water Clarity: Secchi depth was measured at 1.5 meters by EcoLogic on August 12, 2008. This is the only known Secchi measurement.

Phosphorus Concentrations: Samples were collected in-lake in May and July 2007, and August 2008.



Chlorophyll-α: Two samples collected in 2007 from the mid-lake sample location, and one sample in 2008.



Trophic Status:

Parameter	Trophic State (shading indicates match to Lake) Oligotrophic	Mesotrophic	Eutrophic	Hypereutrophic	Lake Kitchawan*
Summer average Total Phosphorus, upper waters (µg/l)	<10	10-35	35 -100	>100	23
Summer chlorophyll-a, upper waters (µg/l)	<2.5	2.5 - 8	8 - 25	>25	5.6
Peak chlorophyll-a (µg/l)	<8	8-25	25-75	>75	5.8
Average Secchi disk transparency, m	>6	6-3	3-1.5	<1.5	1.5
Minimum Secchi disk transparency, meters	>3	3-1.5	1.5-0.7	<0.7	1.5
Dissolved oxygen in lower waters (% saturation)	80 - 100	10-80	Less than 10	Zero	19%

ENSR data collected May and July 2007; summer represented by July samples except Secchi depth which represents one reading collected by EcoLogic on 8/12/2008.
Sample results from 2007 include three lake stations, and do not include outlet and wetland samples collected during the same field event.

Aquatic Habitat:

- Supports a warm-water fish community (largemouth bass, sunfish, other recreational species)
- Invasives observed: Eurasian watermilfoil

- Aquatic plants identified in July 2007

Scientific Name	Common Name
Ceratophyllum demersum	Coontail
Elodea canadensis	Common Water Weed
Lemna sp.	Duckweed
Lythrum salicaria	Purple Loosestrife
Myriophyllum spicatum.	Eurasion Milfoil
Nuphar polysepala	Spatterdock
Nuphar sp.	Yellow Water Lily

Scientific Name	Common Name
Nympheae sp.	White Water Lily
Pontederia cordata	Pickerel Weed
Potamogeton crispus	Curly Pondweed
Potamogeton illinoensis	Illinois Pondweed
Potamogeton robensii	Fern Pondweed
Ranunculus longirostris	White Water Crowfoot
Vallisneria americana	Wild Celery

Invasive Species: Early Detection List for eight regions in New York State, published by the Invasive Species Plant Council of New York State. Obtained on-line (11/29/07). Lower Hudson region list:

Scientific Name	Common Name
Heracleum mantegazzianum	Giant Hogweed
Wisteria floribunda	Japanese Wisteria, Wisteria
Digitalis grandiflora (D. pupurea)	Yellow Foxglove, Foxglove
Geranium thunbergii	Thunberg's Geranium
Miscanthus sinensis	Chinese Silver Grass, Eulalia
Myriophyllum aquaticum	Parrot-feather, Waterfeather, Brazilian Watermilfoil.
Pinus thunbergiana (P. thunbergii)	Japanese Black Pine
Prunus padus	European Bird Cherry
Veronica beccabunga	European Speedwell

Endangered Species:

- US Fish and Wildlife Service

Scientific Name	Common Name	Federal Status
Reptiles		
Clemmys muhlenbergii	Bog Turtle	Threatened, Westchester Co.
Birds		
Haliaeefus leucocephalus	Bald Eagle	Threatened, entire state
Mammals		
Myotis sodalist	Indiana Bat	Endangered, entire state
Felix concolor couguar	Eastern Cougar	Endangered, entire state (probably extinct)
Plants		
Isotria medeoloides	Small Whorled Pogonia	Threatened, entire state
Platanthera leucophea	Eastern Prairie Orchid	Threatened, not relocated in NY
Scirpus ancistrochaetus	Northeastern Bulrush	Endangered, not relocated in NY

- New York Natural Heritage Program – Town of Lewisboro

Scientific Name	Common Name	NY Legal Status
Reptiles		
Glyptemys muhlenbergii (formerly *Clemmys muhlenbergii*)	Bog Turtle	Endangered
Birds		
Oporornis formosus	Kentucky Warbler	Protected
Butterflies and Skippers		
Satyrium favonius ontario	Northern Oak Hairstreak	Unlisted
Dragonflies and Damselflies		
Enallagma laterale	New England Bluet	Unlisted*
Plants		
Asclepias purpurascens	Purple Milkweed	Unlisted
Eleocharis quadrangulata	Angled Spikerush	Endangered

* indicates species of particular concern for this lake and watershed.

Water Balance:

USGS Mean Annual (inches/year)		Volume (acre-ft/year)
Precipitation (P)	48	427
Evaporation (ET)	22	196
Runoff (R)	26	1,204

Water Budget:	
Inflow to Lake [R+(P-ET)]	468 mgal/yr
Lake Volume	174 mgal
Flushing Rate	2.7 times/year
Residence Time	0.37 years

Phosphorus Budget:

(A) Watershed Land Cover: 2001 National Land Cover Data Set (MRLC). Includes phosphorus export coefficient (kg/ha/year) and estimated phosphorus export.

Description	Watershed (acres)	Cover (%)	Phosphorus Export Coeff	Estim P Export kg/year	Estim P Export Percent
Open water (all)	78	12	0.30	9.5	26
Developed, open space	130	19	0.20	10.5	28
Developed, low intensity	3.6	0.53	0.30	0.432	1.2
Deciduous forest	305	45	0.07	8.63	23
Evergreen forest	35	5.2	0.20	2.82	7.6
Mixed forest	7.1	1.0	0.09	0.257	0.69
Shrub/scrub	0.16	0.02	0.28	0.018	0.05
Pasture/hay	8.3	1.2	0.30	1.01	2.7
Woody wetlands	97	14	2.10	3.55	10
Emergent herbaceous wetlands	12	1.7	0.09	0.467	1.3
Total Acres*	**676**	**100**		**37.2**	**100**

(B) Septic: Assumes that communities around the lake are on septic systems.

Estimated population on septic by soil suitability class with US 2000 Census household size for 100-meter buffer of surface water.

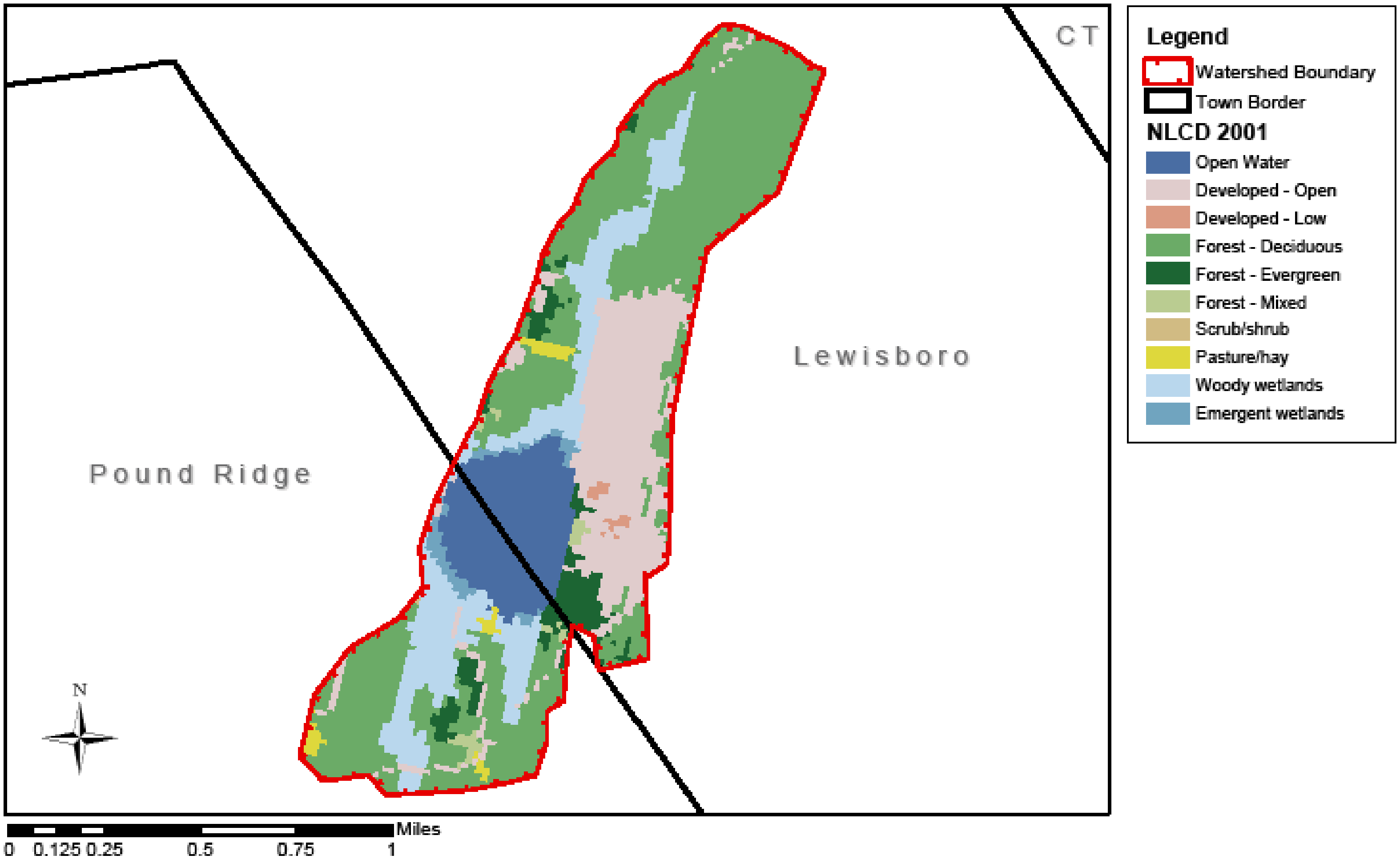
Class	N Structures	Average Household	Estimated Population*
Not limited	0	2.5	0
Somewhat limited	57	2.5	143
Very limited	71	2.5	175
Total	**127**		**318**

Estimated Phosphorus export by Soil Suitability class for 100-meter buffer of surface water, with failure rate of 5%.

Class	Population*	P per cap	Transport	kg/year
Not limited	0	0.6	10%	0
Somewhat limited	135	0.6	30%	24
Very limited	166	0.6	60%	60
Failed systems (5%)	17	0.6	100%	10
Total	**318**			**94**

Figure 3

Lake Kitchawan
National Land Cover Dataset 2001

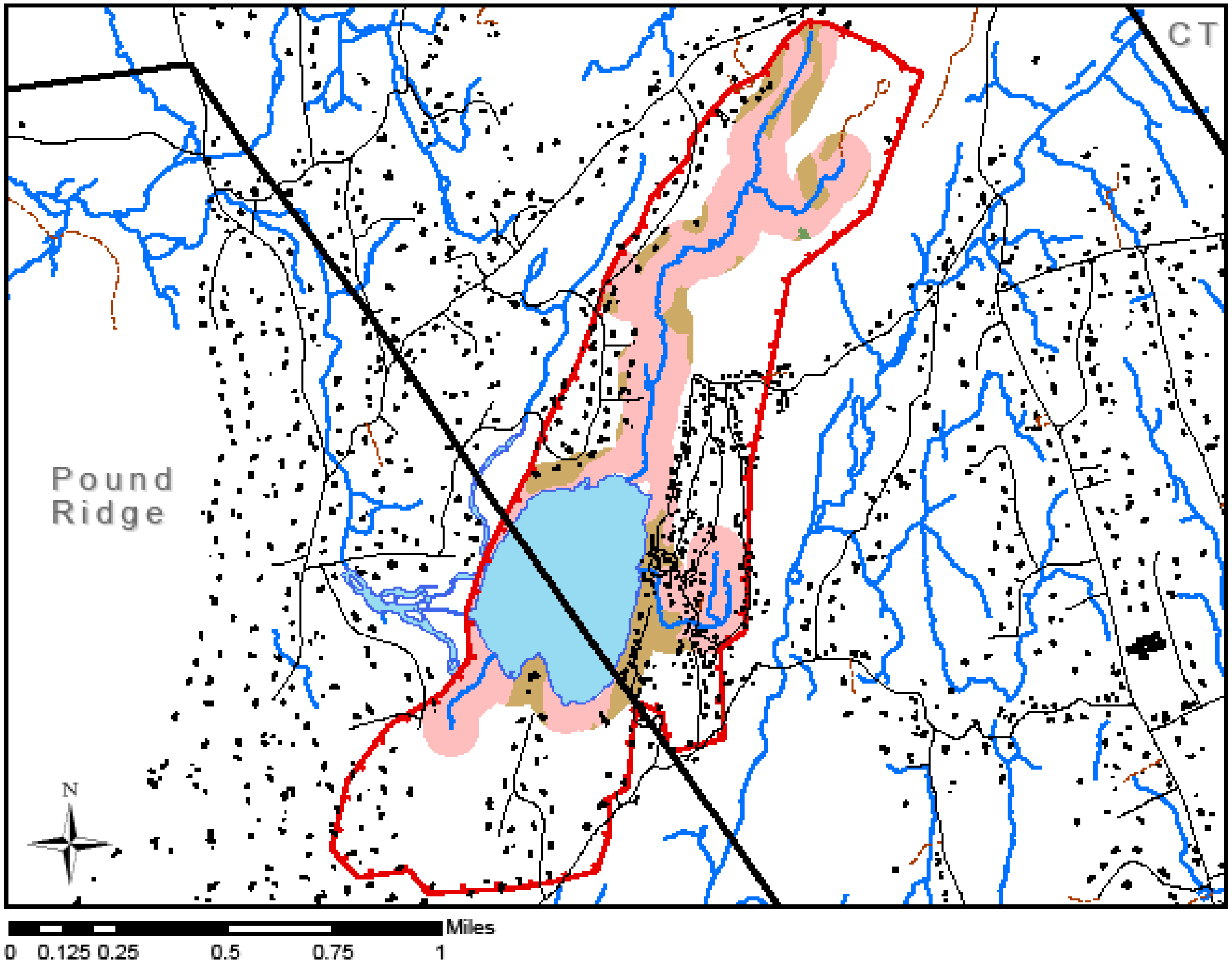


Source:
National Land Cover Database zone 65 Land Cover Layer. On-line at http://www.mrlc.gov
The National Land Cover Database 2001 land cover layer for mapping zone 65 was produced through a cooperative project conducted by the Multi-Resolution Land Characteristics (MRLC) Consortium. Minimum mapping unit = 1 acre. Geo-referenced to Albers Conical Equal Area, with a spheroid of GRS 1980, and Datum of NAD83.

Figure 4

Lake Kitchawan

Soil Septic Suitability, 100-Meter Stream Buffer Within the Watershed



Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect septic absorption fields:

"Not limited" - the soil has features that are very favorable. Good performance and very low maintenance can be expected.

"Somewhat limited" - the soil has features that are moderately favorable. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected.

"Very limited" - the soil has one or more features that are unfavorable. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Sources:

Lakes, Streams, Wetlands, Roads and Structures - On-line at Westchester County web site http://giswww.westchestergov.com/. Municipal planimetric datasets were photogrammetrically derived from the county's 2004 base map project and meet National Map Accuracy Standards at 1"=100'.

Soil Survey of Westchester County - Compiled by Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. On-line at http://soildatamart.nrcs.usda.gov/. Accessed November 28, 2007. *"Septic tank absorption fields" are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 72 inches or between a depth of 24 inches and a restrictive layer is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health.*

EcoLogic

(C) Point Sources: There are no known point sources of phosphorus to Lake Kitchawan

(D) Summary of Phosphorus Input to the Lake:

Source	**Input (kg/year)**
Watershed Land Cover	37
Point Sources	0
Septic within 100m of surface water	94
Internal loading (sediment)	0
Total	**131**

<u>Phosphorus Mass Balance:</u> Empirical estimates of net loss from system based on mean depth and water residence time.

$$p = W'/10+H\rho$$

where:

p = summer average in-lake TP concentration, ug/l
W′ = areal loading rate, g/m^2/year
H = mean depth, m
ρ = residence time (year)

Parameter	**Units**	**Result**
W′	g/m^2/year	303
H	m	1.7
ρ	flushes per year	0.37
p	**ug/l**	**28**
Summer average TP 2007 and 2008, upper waters:		**22 ug/l**

REFERENCES

ENSR Corporation. 2008. Final Report - Lake/Lagoon and Watershed Management Plan for Lake Kitchawan –Pound Ridge, NY. Prepared for Lake Kitchawan Conservation Committee, Pound Ridge, New York. March 2008. Document number 12567-002-100.

Invasive Species Council of New York State. Early Detection Invasive Plants by Region. Web site: http://www.ipcnys.org/. Obtained on-line 11/29/07.

New York Natural Heritage Program. Letter dated December 21, 2007 received by EcoLogic, LLC. New York State Department of Environmental Conservation, Division of Fish, Wildlife & Marine Resources.

US Fish and Wildlife Service. 2007. US Fish and Wildlife Service State Listing. List filtered to species with possible presence in the Town of Lewisboro. Obtained from web site on 11/28/07. Web site: http://www.fws.gov/northeast/Endangered/.

4. Water Quality – Current Conditions

The fact sheets in Section 3 summarize the current conditions and temporal trends in water quality for each lake. This section assesses the current state of the Lewisboro Lakes as a whole.

4.1. Sources of data and information

The extent of water quality and habitat data available for the Lewisboro Lakes varied from lake to lake. The Three Lakes – Rippowam, Oscaleta and Waccabuc – had the most long-term water quality data; measurements extended from the 1970s to the present. In contrast, Lake Kitchawan was characterized only with two sampling events in 2007. The 2008 field collection program was designed to help fill data gaps.

Data utilized used for this analysis are summarized in Table 4-1.

Table 4-1. Data sources utilized.

Lake	CSLAP* Program	Three Lakes Council	Other Lake Reports	Aquatic Macrophyte Surveys
Rippowam	2007	1978-2007	Cedar Eden 2004	Cedar Eden 2004
Oscaleta	2007	1972-2007	Cedar Eden 2004	Cedar Eden 2004
Waccabuc	1986-2007	1936-2007	Cedar Eden 2004	Cedar Eden 2004
Truesdale	1999-2007	--	Land-Tech 2001	Allied Biological 2005
Kitchawan	--	--	ENSR 2008	ENSR 2008
Katonah	2007	--	--	--
Timber	1994-2007	--	--	--

** CSLAP=Citizens State- wide Lake Assessment Program*

4.2. Classification and use attainment

Classification

All waters in New York State are classified according to their best uses. Six of the Lewisboro Lakes hold a Surface Water Quality Classification of "B", which indicates that the best usages are primary and secondary contact recreation and fishing, and that these waters shall be suitable for fish propagation and survival. Lake Waccabuc is designated Class A, which indicates that the best usages are a source of water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation; and fishing, and the waters shall be suitable for fish propagation and survival. Class A is designated for waters that may, if properly treated, meet New York State Department of Health drinking water standards and may be considered satisfactory for drinking water purposes.

Use Attainment

Six of the lakes (Kitchawan excepted) participate in the Citizens Statewide Lake Assessment Program (CSLAP). This volunteer lake monitoring program is jointly managed by the NYS Department of Environmental Conservation and the state's Federation of Lake Associations (FOLA). CSLAP includes water quality monitoring and an evaluation of perceived suitability of the lake for recreational uses. Water quality assessment and perception survey results for some recent CSLAP annual reports are summarized in Table 4-2.

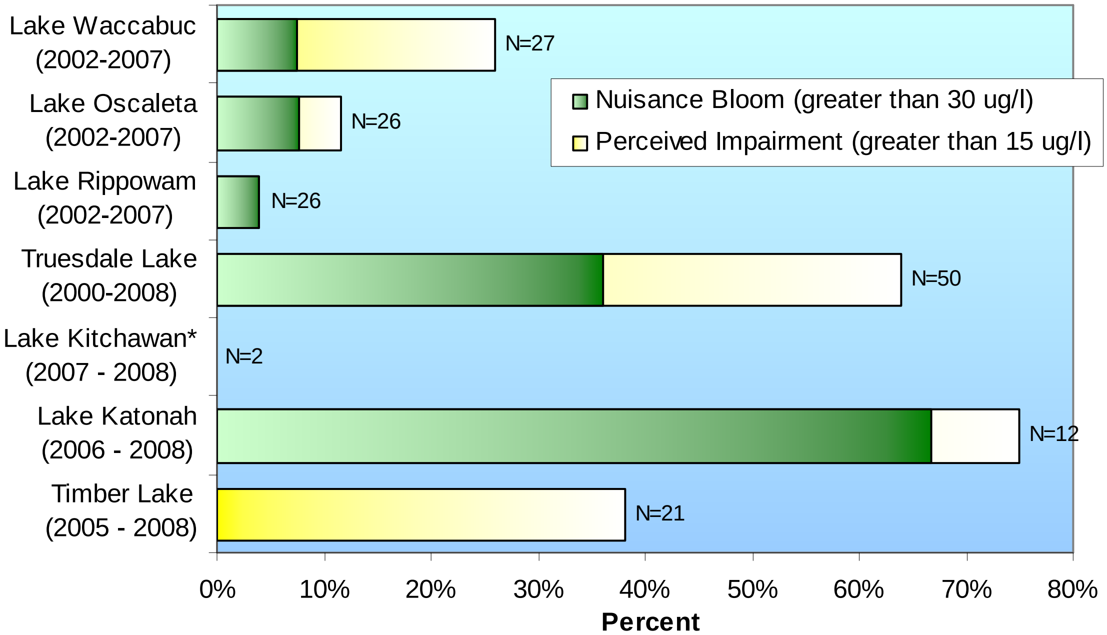
Table 4-2. Summary of 2005-2007 CSLAP perception surveys and water quality assessments.

Lake	Water Quality Assessment	Volunteer Perceptions of Water Quality	
		Lake Conditions	Problems
Rippowam	may not be adequate to support some recreational uses during the summer	Excellent conditions Not quite crystal clear	Poor water clarity Excessive algae growth
Oscaleta	may not be adequate to support some recreational uses during the summer	Slightly impaired Definite algal greenness	Poor water clarity Weed density Excessive algae growth
Waccabuc	adequate to support most recreational uses during the summer	Excellent to slightly Impaired	Poor water clarity Excessive algae growth
Truesdale	sometimes adequate to support most recreational uses during the summer	Slightly to substantially impaired	Weed density Excessive algae growth
Kitchawan	No CLSAP data	No CLSAP data	No CLSAP data
Katonah	very minor aesthetic problems but excellent for overall use	Not quite crystal clear definite algal greeness	Weed density Excessive algae growth
Timber	may not be adequate to support recreational uses during at least part of the summer	Slightly to substantially impaired	Poor water clarity High algae levels

Overall, the Lewisboro Lakes exhibit some level of perceived impairment based on the CSLAP program results. The causes of this impairment are generally listed as poor water clarity, excessive algal growth and/or weed density in the Lewisboro Lakes. Conditions in lakes Rippowam, Oscaleta and Waccabuc are considered better (excellent to slightly impaired) than conditions in Truesdale, Timber, and Katonah (slightly to substantially impaired). These perceptions of recreational suitability are consistent with measured concentrations of phosphorus and chlorophyll-a.

Chlorophyll-a concentrations above 15 µg/l are associated with a perception of algal greenness; concentrations over 30 µg/l are considered nuisance blooms. The percent of chlorophyll-a measurements exceeding these thresholds during the summer recreational period (June 15 to September 15) for each of the Lewisboro Lakes is displayed in Figure 4-1.

Figure 4-1
Percent of Chlorophyll-a Measurements Exceeding Thresholds
1.5 m depth, June 15 to September 15 Summer Period



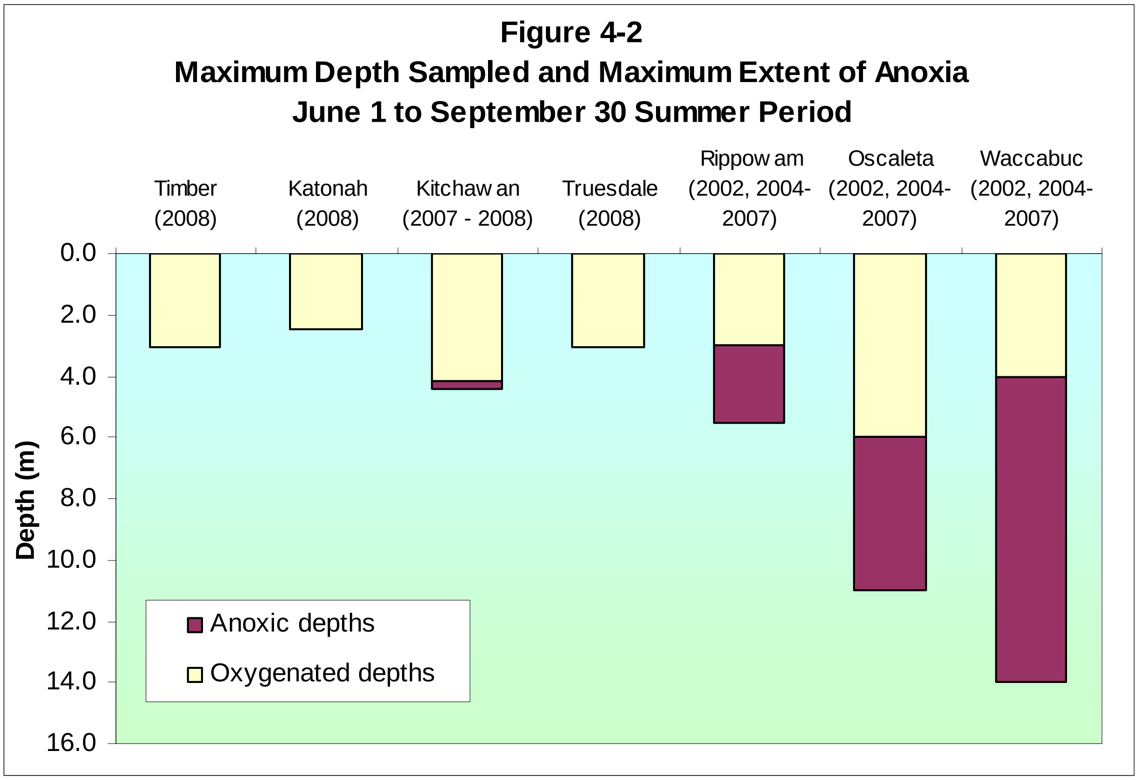
**Lake Kitchawan represents two samples, one collected July 2007 and one collected August 2008. Both results were less than 15 ug/l. N indicates number of samples evaluated for period shown.*

The perceived impairment and nuisance bloom percentages shown in Figure 4-1 coincide with the public perception survey results of CSLAP – lakes with greater percentage of chlorophyll-a measurements above thresholds are those identified as slightly to substantially impaired for desired uses (Truesdale, Timber and Katonah). As expected, higher phosphorus concentrations are associated with elevated chlorophyll-a concentrations and a higher risk of algal blooms.

The lakes support recreational fisheries. Fishery quality is directly dependant on both water and habitat quality. When lakes are deep enough to develop stable thermal stratification, the colder bottom waters become isolated from the atmosphere during the summer. As a result, bottom waters can become depleted of oxygen as the microbial community decomposes organic material. Under these conditions, coldwater fish species that would typically seek refuge from warm surface waters in these deeper areas cannot tolerate dissolved oxygen concentrations below about 5 mg/L for prolonged periods of time.

Lakes deeper than about 5 meters typically exhibit some degree of thermal stratification during the summer. Of the seven Lewisboro Lakes, three are deeper than 5 meters – Rippowam, Oscaleta and Waccabuc. These lakes develop stable thermal stratification with maximum temperature difference between surface and deep waters ranging from 17.8°C to 23.4°C. Dissolved oxygen concentrations in the deeper waters of these three lakes fall to very low levels during the summer,

The depth to which low oxygen conditions extend has a profound impact on the nature of he aquatic community. The maximum extent of anoxia (tracked as dissolved oxygen levels below 1 mg/l) for the Lewisboro Lakes is displayed in Figure 4-2. The bars illustrate the shallowest depth at which dissolved oxygen less than 1 mg/l has been measured. For example, in Lake Waccabuc, only the top 4 meters of the lake water column have dissolved oxygen concentrations that would support aquatic life during the summer.



Based on this analysis, the Lewisboro Lakes may be grouped into categories describing current water quality and habitat conditions and use attainment. This grouping is presented in Table 4-3.

Table 4-3. Summary of current water quality conditions and use attainment

	Water Quality and Aquatic Habitat Status		
Depth Categories	*Meets Desired Uses*	*Meets Desired Uses, with Evidence of Degradation*	*Do Not Meet Desired Uses*
Shallow (less than 3 m maximum depth)			Timber Katonah
Medium (3 – 8 m maximum depth)		Kitchawan Rippowam	Truesdale
Deep (greater than 8 m maximum depth)		Oscaleta Waccabuc	

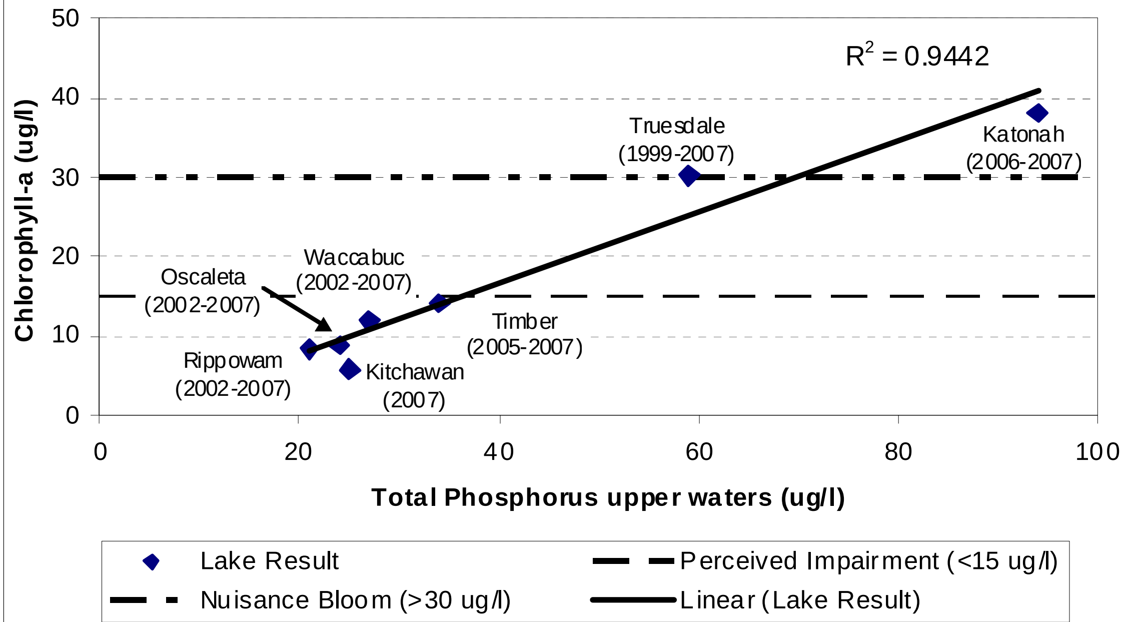
4.3. Phosphorus and Algae Correlation

Total phosphorus in the upper waters is one measure of nutrients in the water column available for algae and plant growth. In general, higher concentrations of phosphorus in lakes results in increased amounts of algal growth, which in turn reduce water clarity.

Average chlorophyll-a concentrations, which are an indicator of algae in the water, are highly correlated with total phosphorus in the Lewisboro Lakes (Figure 4-3). This relationship is important when considering priorities for lake protection and restoration. Certain lakes will require reductions in the supply of phosphorus to reduce the frequency of nuisance algae blooms; other lakes need protective measures to keep nuisance blooms from developing.

On average, total phosphorus and chlorophyll-a concentrations are lowest in Lakes Rippowam, Oscaleta, Kitchawan, and Waccabuc, highest in Lake Katonah, and intermediate in Timber and Truesdale Lakes.

Figure 4-3
Total Phosphorus vs Chlorophyll-a
June 15 - September 15 Average



4.4. Trophic State

The available water quality and aquatic habitat data collected in recent years indicate that the Lewisboro Lakes are in various stages of eutrophication. While the data for some lakes are somewhat limited, representing few sampling points, they do provide a basis for making an assessment of trophic state using the standard indicators described in Table 1-1. The final row in Table 4-4 represents a professional judgment of trophic state.

Table 4-4. Summary of Trophic State Parameters, Lewisboro Lakes

	Surface Water Data						
	Rippowam (2002-2007)	**Oscaleta (2002-2007)**	**Waccabuc (2002-2007)**	**Truesdale (1999-2007)**	**Kitchawan (2007-2008)**	**Katonah (2006-2007)**	**Timber (2005-2007)**
Average Total Phosphorus, upper waters (µg/l)	21	24	27	59	23	94	34
Summer chlorophyll-a, upper waters (µg/l)	8.4	8.8	12	30	5.6[a]	38	14
Peak chlorophyll-a (µg/l)	39	54	40	116	5.8[a]	79	28
Average Secchi disk transparency, m	2.2	3.2	2.4	1.1	1.5[b]	0.95	1.5
Minimum Secchi disk transparency, meters	0.50	0.50	1.1	0.53	1.5[b]	0.50	0.70
Dissolved oxygen in lower waters (% saturation)	8.5%[d]	2.8%[d]	2.5%[d]	--	--	--	--
Trophic State[c]	**M**	**E**	**E**	**E**	**M**	**H**	**E**

Notes:
Statistics represent summer period (June 15-September 15).
[a] Kitchawan chlorophyll-a data from one in-lake sample on July 26, 2007.
[b] Secchi disk transparency for Lake Kitchawan measured by EcoLogic in August 2008.
[c] Trophic State: E - eutrophic; M - mesotrophic, H - Hypereutrophic
[d] Percent saturation of DO calculated from DO concentration and temperature for Rippowam, Oscaleta and Waccabuc, using June-September data 2002-2007 as available. Since Truesdale, Timber, Katonah and Kitchawan do not stratify, the lower waters DO percent saturation is not presented.

4.5. Sources of phosphorus

Two important processes have been quantified for many aquatic systems:

(1) the relationship between watershed activities and loading (quantity of material that enters a lake over a defined period; for example kilograms of phosphorous per year), and

(2) the relationship between loading and resultant water quality conditions.

For the first relationship, scientists, engineers, and planners have quantified nutrient runoff from various conditions of land use and population density. For the second, limnologists and oceanographers have determined the physical and hydrologic features such as depth and water residence time that contribute to a lake's assimilative capacity. These relationships form the basis for defining an acceptable loading to aquatic systems to meet water quality objectives.

Standard limnological methods have been developed to quantify the relationship between external loading and in-lake concentration as a function of mean depth and water residence time. These standard methods were developed based on empirical observations of a large number of lakes, with defined inlets and outlets.

The phosphorus budget for the Lewisboro Lakes is based on existing data describing water quality conditions in the Lewisboro Lakes, and land use and vegetative cover data throughout the watershed. Several measures were taken into account:

- Water balance (volume in and volume out)
- Land cover types in the watersheds
- Septic contributions
- Point sources
- Internal loading from sediments

Watershed boundaries were delineated for the Lewisboro Lakes, using existing watershed boundaries from Westchester County[2] and Connecticut Department of Environmental Protection[3], with topographic information from the National Elevation Dataset[4] and professional judgment. The watershed boundaries provide the spatial basis for the phosphorus budget.

4.6. Water Balance

The first step in developing a phosphorus budget is to quantify the water balance. A water balance essentially estimates the total amount of water that enters and leaves a lake each year. The water balance is important because runoff from the watershed delivers phosphorus and other materials to the lake. In addition, the period of time that water stays in the lake affects the amount of phosphorus available. All else being equal, lakes with faster flushing rates will tend to grow less algae than lakes with slower flushing rates. For calculating the water balances of each of the Lewisboro Lakes, USGS mean annual values for the area were used as estimates of precipitation (48 inches/year), evaporation (22 inches/year) and runoff (26 inches/year)[5].

The water balance for each lake is displayed in Table 4-5. Flushing rate is the approximate number of times per year that all the water in the lake would be replaced in a typical year. Residence time is the opposite of this (how many years water stays in the lake, on average). The flushing rates vary from 0.4 times per year in Waccabuc to 18 times per year in Truesdale.

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[2] Westchester County GIS, July 1998. Westchester County Drainage Basin Boundaries. On-line at http://giswww.westchestergov.com/westchester/emap/wc1.htm.

[3] Connecticut DEP, Office of Information Management 1988. Local Basins. On-line at http://www.ct.gov/dep/cwp/view.asp?a=2698&q=322898&depNav_GID=1707.

[4] U.S. Geological Survey (USGS), EROS Data Center, 1999. National Elevation Dataset. On-line at http://gisdata.usgs.net/ned/.

[5] USGS Mean annual runoff, precipitation and evapotranspiration in the glaciated Northeastern US 1951-1980. Plates 1 and 2.

Table 4-5. Flushing rate and residence times for the Lewisboro Lakes.

Lake	Inflow to Lake (mgal/year)	Lake Volume (mgal)	Flushing Rate (times/year)	Residence Time (years)
Rippowam	191	150[a]	1.3	0.8
Oscaleta	908	412[a]	2.2	0.5
Waccabuc	1,528	3,696[a]	0.4	2.4
Truesdale	1,756	180[b]	10	0.1
Kitchawan	468	174[c]	2.7	0.4
Katonah	90	41	2.2	0.5
Timber	44	16	2.8	0.4

Sources:
[a]Cedar Eden 2004
[b]Land-Tech, 2001
[c]ENSR 2008

4.7. Phosphorus Loading and Sources

The next step in developing a phosphorus budget is to estimate phosphorus loading. Phosphorus loading to the Lewisboro Lakes occurs through several mechanisms:

- Phosphorus carried in runoff from surrounding watershed; the amount of phosphorus runoff varies by land cover type;
- Phosphorus from septic systems that have failed, or septic systems located in poor soils that allow phosphorus to migrate to surface water
- Phosphorus from point sources; outlets of other lakes are considered point sources for the purpose of this analysis.

4.7.1. Land Cover Contributions

Nonpoint source phosphorus export from watersheds may be estimated by applying regionally-appropriate phosphorus export coefficients as a function of land use and vegetative cover using an Export Coefficient model. This estimate does not include loading from on-site wastewater disposal systems; contributions from these sources are calculated separately.

Topography can also play a role in the quantity of phosphorus exported to the lakes. More steeply-sloped watersheds pose a greater risk of soil erosion, although this relationship can be mitigated by soil type and land cover. Topography is not factored into the land use calculations, but is considered in the interpretation of the results.

For the Lewisboro Lakes, phosphorus transport from surrounding land uses was estimated using land cover GIS files; phosphorus export coefficients were derived from established literature values. The export coefficients (units of kg/ha/year) were multiplied by the area of land cover class in each watershed to get an estimate of annual phosphorus loading from each cover class (Table 4-6). The total amount of phosphorus from a given land cover is a function of both the size of the area and the loading coefficient. Overall, developed lands contribute more phosphorus per unit area than natural lands.

Table 4-6. Watershed phosphorus loading by land cover class.

	Phosphorus Loading by Land Cover Class (kg/yr)						
Land Cover Type	**Rippowam**	**Oscaleta**	**Waccabuc**	**Truesdale**	**Kitchawan**	**Katonah**	**Timber**
Open water	3.8	12	16	11	9.5	2.5	0.70
Developed*	1.5	4.7	20	32	11	4.9	2.2
Forest/Shrub**	6.9	32	18	54	12	1.7	0.8
Grassland/Pasture/Crops	0.29	2.5	3.7	15	1.0	--	0.11
Wetlands (woody/emergent)	0.81	2.1	0.90	9.6	4.0	--	0.05
Total	**13**	**53**	**58**	**122**	**37**	**9.1**	**3.9**

Totals are approximate due to rounding errors.
Shaded cells indicate the highest contribution for land cover class in each watershed.
*Developed – sum of three Developed classes: open space, low intensity and medium intensity.
*Forest/Shrub – sum of four classes: Forest Deciduous, Forest Evergreen, Forest Mixed, and Shrub/scrub.

Of the significant contributors by land cover class, Forest/Shrub and Open Water contributions are natural; in contrast, Developed contributions are directly influenced by human activity. Most of the phosphorus from land cover classes in the Lewisboro Lakes watersheds is contributed by natural sources; only Timber, Katonah and Waccabuc land cover contributions were mainly from areas affected by human activity (Table 4-6). Residential development increases phosphorus export.

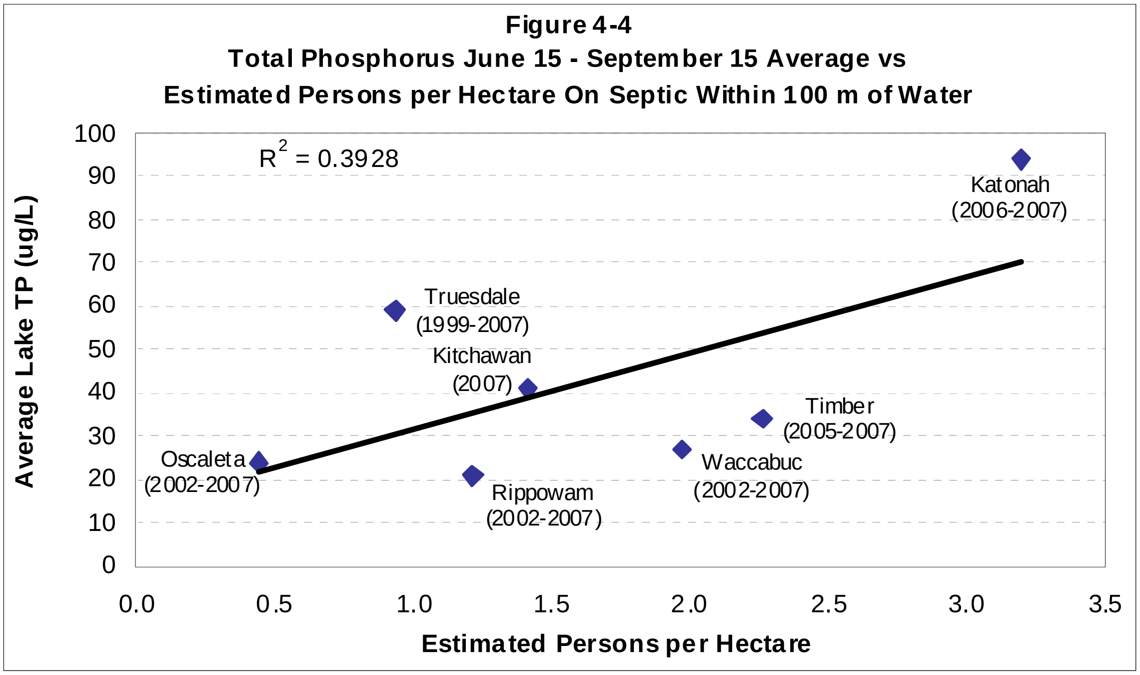
4.7.2. On-site Wastewater Disposal System Contributions

The Lewisboro Lakes' watersheds are not served by sanitary sewers. Residents dispose of wastewater using individual on-site wastewater treatment systems, primarily septic tanks with leach fields. Several sources of data were compiled to estimate the potential contribution of these onsite wastewater disposal systems to the phosphorus budget of the Lewisboro Lakes.

Environmental factors influence the total potential phosphorus migration from on-site systems to the lakes. Important factors include soil texture (particle size), mineralogy, depth to groundwater/seasonal saturation, and permeability/infiltration rate. Other factors include slope, oxygen, pH, and temperature conditions. Finally, how systems are loaded and maintained affects the potential for phosphorus migration.

For this analysis, the estimated phosphorus loading from on-site systems was assumed to be a factor of soil suitability, population density, and proximity to surface waters. There is a substantial body of research demonstrating that on-site systems in close proximity to surface waters have the potential to be a source of phosphorus, and that systems distant from surface waters have a low probability of phosphorus migration into surface waters. There is a general correlation between the number of persons living within 100m of water and the total phosphorus concentration in the Lewisboro Lakes (Figure 4-4). Therefore, only systems located within 100 m of surface waters were included in the septic phosphorus budget. In addition an overall on-site system failure rate of 5% was used for each watershed. EPA indicates that on average New York septic failure rates are about 4%. The 5% used in this analysis is a conservative estimate (i.e. we did not want to overestimate septic contribution). A cost/feasibility study done in the nearby Peach Lake watershed conducted by Stearns & Wheler found a 28% failure rate for dye tests and a 71% failure rate for percolation tests. If the failure rates in the Lewisboro lakes are anything like those in the Peach Lake watershed then we can assume septics are an even greater contributor to the Lakes problems than are estimated here. This would only make the need to eliminate this source more urgent.

An algorithm was applied to estimate the contribution of phosphorus from on-site systems (South Nation Conservation, Ontario Ministry of Environment, 2003):



Phosphorus contribution = 0.6 kg/cap/yr * (population) * 1-A

"A" represents an attenuation factor such that phosphorus loading is scaled by soil suitability classes of:

- Not limited- 10% of phosphorus is transported to the lake.
- Somewhat limited- 30% of phosphorus is transported to the lake.
- Very limited- 60% of phosphorus is transported to the lake.
- Somewhat limited- 30% of phosphorus is transported to the lake.
- Failed systems- 100% of phosphorus is transported to the lake (it was assumed that 5% of systems are failing for each watershed.

The results of this analysis are presented in Table 4-7. It is important to keep in mind that a large number of assumptions were built into this estimate of phosphorus contribution from on-site wastewater disposal systems. A range of +/- 50% around the estimated total is reasonable.

Table 4-7. Estimated phosphorus loading from septics by soil types.

	Phosphorus Loading from Septic by Soil Type (kg/yr)						
Soil Suitability (percent P transport to surface water)	**Rippowam**	**Oscaleta**	**Waccabuc**	**Truesdale**	**Kitchawan**	**Katonah**	**Timber**
Not Limited (10%)	1.0	1.7	3.0	1.5	0	0	0
Somewhat Limited (30%)	9.1	20	61	102	24	3.1	6
Very Limited (60%)	15	7.7	62	98	60	39	9.2
Failed Systems (100%)	3.5	5.1	18	27	10	4.0	1.8
Total	**29**	**35**	**144**	**229**	**94**	**46**	**17**

Totals are approximate due to rounding errors.
Shaded cells indicate the highest percentage in each watershed.
Soil Suitability:
"Not Limited" - the soil has features that are very favorable. Good performance and very low maintenance can be expected.
"Somewhat Limited" - the soil has features that are moderately favorable. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected.
"Very Limited" - the soil has one or more features that are unfavorable. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

As shown in the soil suitability maps in each lake's Fact Sheet (Section 3.0), the soils in Lewisboro are mostly either "Somewhat" or "Very" limited with respect to their ability to prevent phosphorus from on-site systems from reaching the lakes. This results in very high phosphorus loads from on-site systems to the Town's lakes. The contribution from this source alone is usually greater than the combined total of the other sources. On average, on-site systems contribute about 75% of the anthropogenic phosphors to the lakes on an annual basis, with a range of 29% to 94%.

4.7.3. Point Sources

Based on the available information, there are no significant point sources of phosphorus in the watersheds of the Lewisboro Lakes, such as wastewater treatment plant discharges. However, there are three inter-connected lakes: Rippowam, Oscaleta and Waccabuc. The upstream lakes may be considered point sources of phosphorus loading to the downstream lakes – Rippowam discharges to Oscaleta, and Oscaleta discharges to Waccabuc. The estimated loading from the upstream to the downstream lakes are shown in Table 4-8. Overall, the phosphorus contribution from upstream lakes is small compared with other sources.

Table 4-8. Contribution of upstream lakes

Drainage Basin	Discharges to:	Water Volume Input (m^3/year)	Water Volume Output (m^3/year)	Surface Average TP Concentration (ug/l)	Surface Average TP N samples	Estimated Export to Downstream
Rippowam	Oscaleta	721,943	721,943	24	42	17 kg/yr
Oscaleta	Waccabuc	3,438,272	3,438,272	24	43	83 kg/yr

Surface average total phosphorus (TP) concentrations represent summer average (June 15 – September 15) upper waters (<=1.0 m depth) for the period 2002-2007.

4.7.4. Internal Phosphorus Loading

The three lakes that exhibit thermal stratification during the summer – Rippowam, Oscaleta and Waccabuc – develop anoxic conditions in their lower waters that allow phosphorus in sediments to be released into the water column. This is a consequence of chemical reactions at the sediment surface. As iron and manganese compounds are reduced, phosphorus held in mineral complexes is released from the sediments. Much of this phosphorus remains in the deeper waters during the stratified period and is not available to algae growing in the sunlit layers above. This can change during certain conditions such as high winds or low barometric pressure when water from deep in the lake mixes with the shallow layers. In the fall, when the lake waters cool and mix, phosphorus from sediments can be distributed throughout the water column.

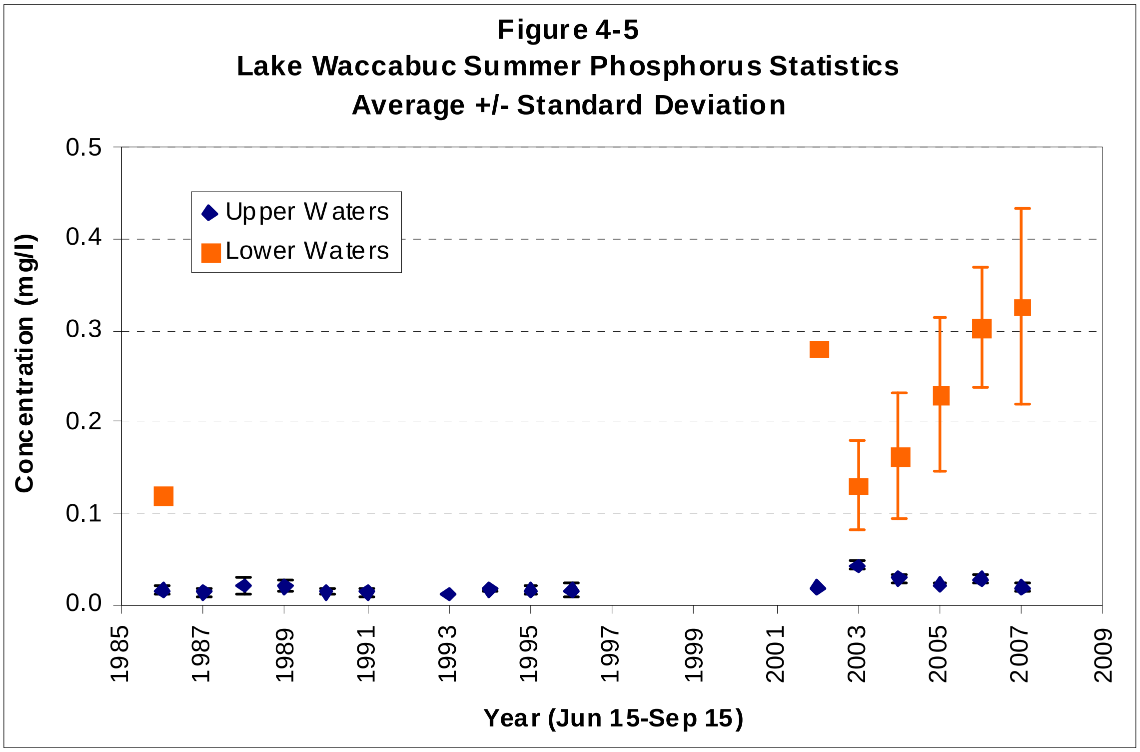
To estimate the potential for sediment phosphorus to contribute to the lakes' phosphorus budgets, the difference in lower water phosphorus concentration between spring and late summer was calculated. This difference in concentrations was multiplied by the volume of water in the lower waters to estimate the mass of phosphorus released from the sediments (Table 4-9).

Table 4-9. Estimated sediment phosphorus load

Drainage basin	Phosphorus in Lower Waters (ug/l) Spring	Late Summer	Difference	Lower Waters Volume (m^3)	Estimated internal Loading (kg)
Rippowam	42	53	11	456	<1
Oscaleta	46	99	53	230,898	12.2
Waccabuc	114	300	190	1,398,107	260

Notes:
Spring concentration represents the average of May averages over time in lowest 2 meters sampled. Includes these years: Rippowam (2003, 2006, 2007); Oscaleta (1975, 2003, 2006, 2007); Waccabuc (1975, 2003, 2006, 2007).
Late summer concentration represents the average of September averages over time in lowest 2 meters sampled. Includes these years: Rippowam (2002-2006), Oscaleta (2002-2007), Waccabuc (1975, 2002-2007)
Hypolimnetic (lower water) volumes from Cedar Eden (2004).

The estimated internal load in Lakes Rippowam and Oscaleta represents a small percentage of the external annual loading. However, as the lakes become increasingly eutrophic, the extent and duration of oxygen depletion is likely to increase, leading to increased sediment phosphorus release. The estimated internal loading in Lake Waccabuc is a more significant source of phosphorus to the lake's annual phosphorus budget; moreover, the deep water phosphorus concentrations appear to be increasing (Figure 4-5). It is notable that the total phosphorus levels in the upper waters appear to be stable.



4.8. Phosphorus Loading Summary

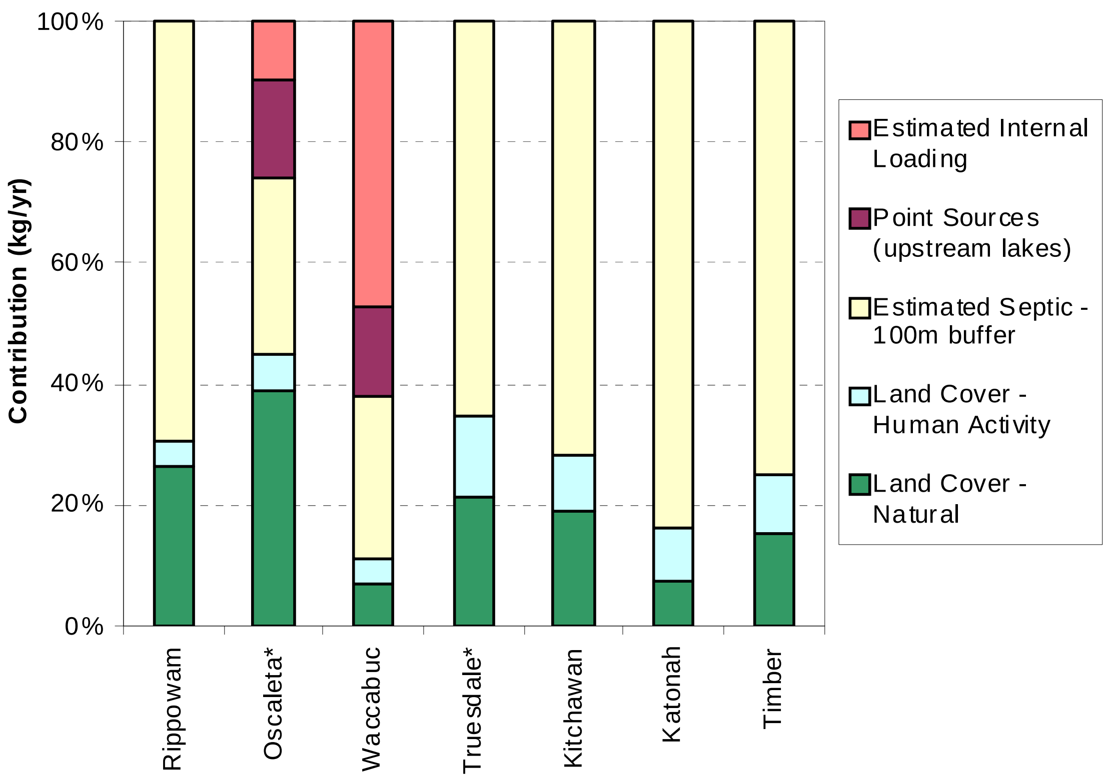
The summary of phosphorus loading for each of the Lewisboro Lakes is summarized in Table 4-10 and Figure 4-6. The shaded values represent the highest annual loading estimated for that watershed. It is clear that contributions from on-site wastewater disposal systems represent the primary source of phosphorus, with the exceptions of Lakes Oscaleta and Waccabuc. In Lake Oscaleta the generally undeveloped nature of the watershed resulted in natural land uses being the primary source. However, of the anthropogenic source of phosphorus, on-site wastewater disposal systems were the primary source. In Lake Waccabuc, internal loading appears to be the largest source of phosphorus to the annual budget. This pool of phosphorus does not appear to affect concentrations of phosphorus in the upper waters during the summer growing season. However, this lake has the longest water residence time (over 2 years), and at least a fraction of the phosphorus released during the summer will be present in the upper waters next spring. Phosphorus from on-site wastewater disposal systems in this watershed will be available to support algal growth during the summer recreational season, thus underscoring their significance.

Table 4-10. Phosphorus loading contribution summary.

Watershed	Land Cover Contribution: Natural (kg/year)	Land Cover Contribution: Human Activity (kg/year)	Estimated 100m Septic (kg/year)	Point Sources (upstream lakes) (kg/year)	Internal Loading (kg/year)	Total Loading (kg/year)
Rippowam	11	1.8	29	0	0.0049	42
Oscaleta	46	7.2	35*	17	12.2	117
Waccabuc	37	22	143	83	260	544
Truesdale	75	47	229*	0	0	351
Kitchawan	25	12	94	0	0	131
Katonah	4.1	4.9	46	0	0	55
Timber	6.4	4.0	17	0	0	21

* Estimated septic input from New York portion of the watershed only; Connecticut portion not calculated due to lack of data.

Figure 4-6
Phosphorus Loading Estimate, Lewisboro Lakes



*Septic contributions for Oscaleta and Truesdale Lakes do not include possible contributions from Connecticut, therefore these values may be underestimated.

5. Reductions in Phosphorus Needed to Meet State Guidance Targets

The Lewisboro Lakes are in various stages of eutrophication. A small decrease in the phosphorus concentrations in some lakes may have noticeable effects on water quality while in others only a substantial reduction in phosphorus is likely to result in perceptible improvement. In order to quantify reductions in loading, an in-lake target concentration is needed.

New York State has a narrative standard for phosphorus: "*None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages*." The narrative standard is interpreted for lakes using a guidance value for phosphorus to protect recreational quality. A target concentration of 20 ug/l was adopted; this is measured as a summer average mid-lake sample at 1 m depth. This concentration was selected based on a statistical analysis relating perceived water quality impairment for recreational use to total phosphorus concentration.

Reduction targets for the Lewisboro Lakes were estimated using 20 ug/l total phosphorus concentration as a target concentration. For lakes with phosphorus levels near this concentration (Oscaleta, Rippowam, and Waccabuc) 20 ug/l appears to be achievable with a focused effort to reduce the phosphorus loading. For lakes currently exhibiting higher concentrations (Kitchawan, Timber, Truesdale, and Katonah) major reductions in loading would be necessary.

The estimated percent reduction needed in each lake to approach the NYS phosphorus guidance values is summarized in Table 5-1. The table also presents the reductions in external phosphorus loading based upon two management scenarios: reducing watershed load from developed lands by 50% (through best management practices), and removing the phosphorus contribution from on-site wastewater disposal systems (through installing sanitary sewers). Clearly, approaching the guidance concentration for phosphorus in most lakes is unlikely unless the contribution from on-site systems is addressed.

Table 5-1. Estimated percent reduction needed to approach state guidance targets in relation to estimated load reductions from BMPs in watershed and elimination of on-site wastewater disposal systems.

Lake	Estimated Percent Reduction in Phosphorus load needed to meet 20 ug/l target concentration	Estimated percent reduction achieved with 50% decrease in phosphorus load in runoff from developed areas	Estimated Percent Reduction achieved with installation of sanitary sewers
Oscaleta	9%	6%	29%
Rippowam	27%	4%	68%
Waccabuc	28%	4%	27%
Kitchawan	46%	9%	72%
Timber	52%	10%	75%
Truesdale	63%	13%	65%
Katonah	82%	9%	84%

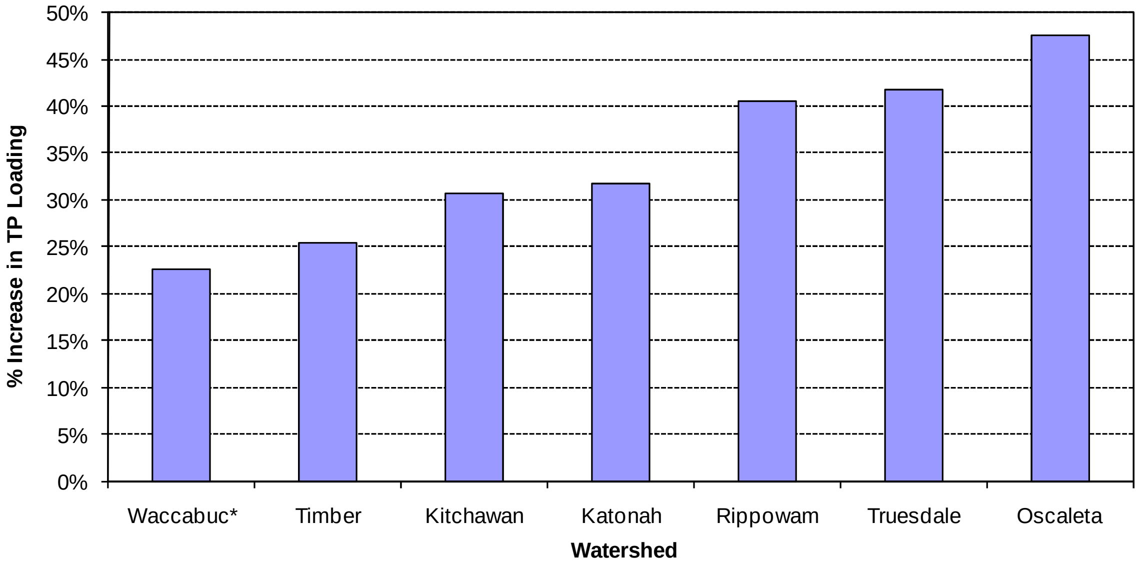
5.1. Factors Affecting Progress – Build-Out Analysis

There are currently numerous efforts, either underway or planned, within the watersheds of the Lewisboro Lakes intend to reduce phosphorus loading. The goal of improving water quality in the lakes cannot focus only on current phosphorus sources; the potential impact of continued development must be considered. Improved best management practices on new development can mitigate, but not eliminate, increased nutrient losses. The aging on-site wastewater disposal systems represent a continued source. The majority of soils types in the town have limited assimilative capacity for septic waste. Many areas are likely approaching saturation levels for phosphorus binding capacity. In addition, the failure rate of currently functioning septic systems will likely increase as the septics age.

All potential future sources of phosphorus must be considered when planning remedial measures. It is not difficult to imagine scenarios where extensive investments are made to reduce current sources of phosphorus only to have progress towards improvement offset by increased development in the watershed or other factors. The restoration of the Lewisboro Lakes is not simply a phosphorus reduction effort; it needs to be viewed as a combined reduction/prevention effort.

Because of the potential effects of increased development, a generic build-out analysis was performed to gauge the magnitude of increased phosphorus load to the lakes. The analysis was not meant to be a projection tool for planning purpose, but rather a technique to understand how increased development could potentially affect the lakes. It was assumed that 75% of the land area currently classified as forested is developed. The land use and septic contributions were adjusted accordingly and a revised loading estimate was calculated for each lake. The estimated percent increase in loading to each lake (Figure 5-1) demonstrates a range of impacts. The effect on smaller and more developed watershed is less dramatic. Overall, it is clear that future development needs to be managed in a pro-active manner to mitigate the potential for increased nutrient inputs to the lakes.

Figure 5-1
75% Buildout Analysis - Estimated Percent Change in Phosphorus Loading From Septic and Land Cover as a Result of Future Development



* Waccabuc increase does not take into account current estimated internal load.
Assumptions:
1. Forest land cover reduced by 75%; acres converted to Developed-Medium Intensity cover type, and the loading coefficient for Developed-Medium Intensity was used to estimate phosphorus loading.

2. Estimated increased septic loading using GIS-based analysis of parcels, structures, wetlands, 100m buffer around water bodies, US Census data, and soils, as follows:
- Identify parcels that do not contain structures. Assumes that the parcel is vacant without septic.
- Of those parcels, identify those that are not crossed by wetland boundaries. Assumes that parcels in wetlands will not be developed.
- Of those parcels, identify those that are within 100 ft of streams and lakes.
- For the selected parcels, apply the average household size of the watershed to estimate the added population.
- Proportionally distribute the added population among the soil types for septic suitability based on initial proportional distribution.
- Estimate phosphorus loading using revised population numbers, 0.6 kg/year/person loading, and transport coefficients for soil types.

5.2. Data Gaps

This report would not have been possible without the extensive work conducted to date by the various lake associations. The primary cause and sources of water quality degradation have been identified. The information available is sufficient to make broad recommendations aimed at restoring lake water quality. There are, however, still areas where data gaps exist. It is not necessary to have a complete understanding of each of these prior to initiation of restoration activities as the primary causes of water quality degradation is clear. If, however, the Town wishes to have a greater understanding of the issues facing the lakes we would recommend the following focus areas:

1) Determine septic failure rates and priority areas throughout the watersheds. The testing can be modeled after those done in the Peach Lake watershed and should include both dye and percolations testing.

2) Conduct a comprehensive groundwater study to determine the spatial and temporal variation of the physical and chemical properties of groundwater entering each of the lakes. This will also help determine the travel time of groundwater to the lakes; this affects the expected delay in recovery if septics are eliminated.

3) Identify priority stormwater discharge points in each watershed, and estimate sediment and phosphorus loadings from each.

4) Determine the relative importance of phosphorus loading from lake sediments in Lakes Oscaleta, Waccabuc, and Rippowam.

6. Town-wide management options

Existing data show that phosphorus is the primary nutrient supporting algae and weed growth in the Lewisboro Lakes, and that phosphorus enrichment is adversely affecting recreational quality. The estimates of phosphorus loading indicate that on-site wastewater disposal systems represent the most significant cultural source of phosphorus; nonpoint runoff from residential development is a secondary source. In addition, some of the deeper lakes exhibit anoxic conditions that allow phosphorus stored in sediments to enter the water column. Because of the high proportion of phosphorus originating from wastewater, strategies for mitigating loading should focus primarily on this source, with secondary efforts directed at storm water runoff from developed areas. The importance of phosphorus released from sediment in deeper lakes needs to be explored further.

The town has three general management options to consider:

- Do nothing

  Under this option, the town would not implement watershed management actions to address water quality issues in the lakes. It is assumed that development in the town would continue, that septic system issues would not be addressed, and that enforcement of existing town codes regarding erosion control would remain as-is. It is predicted that if no actions are taken, water quality conditions in the seven lakes will gradually deteriorate over time. It is assumed that the Town of Lewisboro would not choose this approach; therefore our recommendations will focus on the following options.

- Actions to maintain/slightly improve current water quality conditions

  Under this option, the objective is to maintain or slightly improve water quality conditions in the lakes. If there are changes in the watershed resulting in increased nutrient loading to the lakes, remedial measures would be implemented to compensate for added nutrient loading in order to maintain net loading of nutrients. This option is most warranted in those lakes experiencing only minor levels of eutrophication: Lakes <u>Waccabuc</u>, <u>Rippowam</u>, <u>Oscaleta</u>, and <u>Kitchawan</u>.

- Actions to substantially improve water quality conditions

  Under this option, the objective is to improve water quality conditions in the lakes from their present levels to the extent that it is noticeable to lake residents. This will require stronger measures to reduce, rather than maintain, nutrient loading and erosion. This option is most warranted in those lakes that are currently either in a stable eutrophic state: Lakes <u>Truesdale</u>, and <u>Timber</u>, or a stable hypereutrophic state: <u>Katonah</u>.

Greater levels of phosphorus reduction are associated with greater levels of effort, cost, and control over development in the watersheds. Examples of measures that could be used to address these objectives are presented in Table 6-1**,** specific recommendations to restore/protect the Lewisboro lakes are presented in Section 7.

The Town Codes provide the primary means by which the Town of Lewisboro can begin to address the water quality issues of the seven lakes. The existing Town Codes were reviewed to identify whether codes are already in place to address watershed management issues, and to identify gaps where issues are not addressed. This code review is detailed in Attachment 1.

Table 6-1. Examples of measures for implementing phosphorus loading reductions.

Objective	Measures
Small reductions to slow the eutrophication process	• Storm water runoff controls o Catch basins o Street sweeping o Erosion controls • Restrict use of fertilizers containing phosphorus • On-site wastewater disposal system controls o Test for and fix failed systems o Require that older systems are upgraded when properties are transferred • Implement goose controls on lakes with large populations. • Public education and outreach
Moderate reductions to maintain current conditions	• Storm water controls – list above plus: o Require homeowners to establish and maintain vegetative buffers on properties adjacent to surface water • On-site wastewater disposal system controls– list above plus: o Require routine (e.g annual, biennial) inspection of all septic systems located within 100 m of water bodies o Require periodic inspection of all septic systems not located near water bodies o Require maintenance/repair of tested systems that are not performing properly o Prohibit construction of new septic systems near water bodies or in soils of very limited septic suitability o Conversion to composting toilets or similar technology • Development controls o Restrict new construction near water bodies o Require storm runoff plans for new developments o Mandate utilization of Low Impact Development (LID) strategies for new development and re-devlopmnet • Public education and outreach
Significant reductions to improve conditions	• On-site wastewater disposal system controls - listed above plus: o Eliminate septic systems in populated areas by installing sewers and treatment plants • Development controls – listed above plus o Prohibit new construction near water bodies o Restrict all new development • Public education and outreach

6.1. Feasibility of Dredging – Sediment Screening Results

The potential benefit of sediment removal by dredging was brought up by members of several local Lake Associations. A detailed dredging feasibility study is beyond the scope of this assignment. However, sediment samples were collected in six of the lakes during the 2008 field effort and tested for analytes used to screen dredged material for disposal options. Results are included in the Fact Sheets of the individual lakes. The detailed lab results of all 85 analytes are included as Attachment 2.

Sediments collected at the connections between Lakes Oscaleta and Waccabuc were composited and analyzed. This sample was classified as "uncontaminated" based on the NYS guidance for disposal of dredged material. Only trace concentrations of lead and copper were detected; all analytes were well below criteria for unrestricted disposal.

One composite sediment sample was collected in Lake Kitchawan near the bathing beach. Again, the analytes present were below thresholds for contamination. The sample exhibited detectable concentrations of the metals barium, cadmium, chromium, copper, lead, and selenium.

Two composite sediment samples were collected in Truesdale Lake (refer to Attachment 2 for map of locations). The sediments exhibited detectable concentrations of the metals: barium, cadmium, chromium, copper and lead. All except copper were below thresholds for unrestricted disposal as fill. However, copper was well above these thresholds; this is likely a result of previous algaecide applications.

Lake Katonah had a single composite sediment sample collected from its south end. Detectable levels of arsenic, barium, cadmium, chromium, copper, lead, and selenium were reported. All analytes, with the exception of copper, were below thresholds for unrestricted disposal.

A composite of Timber Lake sediments were collected along the mid-axis of the lake. They had detectable levels of barium, cadmium, chromium, copper, and lead. All were below State thresholds for being considered contaminated sediments.

These results indicate that sediments near the connection between Oscaleta and Waccabuc, near the bathing beach in Kitchawan, and along the mid-axis of Timber are likely suitable for recreational dredging. Truesdale Lake and Lake Katonah would need additional testing to draw a conclusion regarding the potential for additional restrictions associated with sediment handling and disposal, due to the copper levels.

6.2. Progress Towards Improvement

Each individual lake association is striving to improve and protect their lake. The result of these efforts is an extensive set of recommendations by the associations and, in many cases, their consultants. In some cases, recommended actions have been or are being implemented; other lakes are not yet to that stage. A summary of the recommendations provided in other studies is presented in Table 6-2.

The current state of efforts in each lake is summarized below:

<u>Rippowam, Oscaleta and Waccabuc</u>: The Three Lakes Council, which coordinates the environmental efforts for the Waccabuc - Oscaleta - Rippowam watershed, monitors the water

quality of the lakes. As of 2007, the Council obtained some funding for storm water runoff controls on Twin Lakes Road by the Rippowam-Oscaleta channel[6].

Truesdale: Truesdale Lake appears to be farthest along with mitigation activities. Engineering designs were available for controlling storm runoff at six sites. In 2007, two homeowner associations proposed establishing a tax district to raise the money for repairing the dam and implementing projects in the watershed to reduce sediment and nutrient loading[7].

Kitchawan: In November 2006, the Town of Pound Ridge was awarded a Water Quality Planning and Implementation Grant for New York City Watershed Communities to perform a Comprehensive Watershed Study of Lake Kitchawan. The outcome of this study was the ENSR report (March 2008), which recommended a management plan for the lake.

Katonah and Timber: Based on the available data, Katonah and Timber Lakes are presently in the Problem Definition stage, and are part of the CSLAP monitoring program.

[6] Three Lakes Council website, minutes of October 2007 meeting.
[7] Truesdale Lake Website

Table 6-2. Summary of management recommendations already made to individual lake associations.

	Rippowam	Oscaleta	Waccabuc	Truesdale	Kitchawan	Katonah	Timber
Watershed Management							
Nutrient Controls							
Homeowner BMPs: • Increase use of buffers; use non-phosphorus fertilizers; manage pet waste	X	X	X	X			X
Golf course management	X	X	X				
Replace orthophosphorus with an alternate corrosion inhibitor in drinking water supply	X	X					
Replace old on-site wastewater disposal systems with non-polluting alternatives	X	X	X				
Wastewater management • ongoing maintenance and inspections • septic inventory/wastewater study					X		
Maintaining septic systems							X
Stormwater management • Buffer strips and swales; created pocket wetlands • Rain garden • Street sweeping/catch basin cleaning					X		X
Erosion Controls							
Utilize effective erosion and sediment control measures during construction	X	X	X		X		
Minimize land disturbances near surface waters							X
Stabilize eroding gullies and streambanks	X	X	X		X		
Maintain roads and culvert	X	X	X				
Maintain riparian corridors	X	X	X				
Control inlet stream sediment sources; install forebays				X			
Address sedimentation problems in six identified areas				X			
Zoning and Land Use Planning					X		
Invasive species							
Control purple loosestrife	X	X	X				
Establish invasive species task force	X	X	X				
Public Education	X	X	X	X	X		

Category	Subcategory	Measure	Rippowam	Oscaleta	Waccabuc	Truesdale	Kitchawan	Katonah	Timber
In-Lake Management									
	Phosphorus and algae								
		Alum treatment program	X	X	X				
		Lake aeration		X	X				
		Introduce rooted emergents along shores to take up nutrients, improve aesthetics & habitat				X			
		Discourage waterfowl				X			
	Plant controls								
		Mechanical controls	X	X	X				
		Herbicides	X	X	X		X		
		Allow bassweed to out-compete Eurasian water milfoil		X	X				
		Dredge coves to increase habitat diversity				X			
		Dredging to control plants					X		
		Benthic barriers					X		
		Hand pulling (with manual removal)					X		
		Harvesting with collection					X		
		Hydroraking					X		
		Invasive species control plan					X		
		Minimize introductions of additional exotic plants and animals from public and private launch areas into lake							X
		Selective planting					X		
Channel Management									
		Between Rippowam and Oscaleta	X	X					
		Between Oscaleta and Waccabuc		X	X				

Sources: Rippowam, Oscaleta and Waccabuc – Cedar Eden 2004; Truesdale – Land-Tech 2001; Kitchawan – ENSR draft 2008; Timber – CSLAP 2006

7. Recommended Strategies

The lakes in Lewisboro can be placed into three groups; those that are in the beginning stages of eutrophication (Waccabuc, Rippowam, Oscaleta, and Kitchawan), those that are in a stable eutrophic state (Truesdale and Timber), and those that are hypereutrophic (Katonah). Those in the beginning stages of eutrophication would likely see some improvements with only relatively moderate reductions in phosphorus loading. The eutrophic lakes will require more intensive efforts before improvements are realized. Lake Katonah's phosphorus concentrations are extreme and will require a large reduction in phosphorus before significant improvements are realized. Although there are many options available to decrease phosphorus loading, effective solutions must be tailored to reflect the most significant sources and consider the nature of the watersheds.

7.1. Reduction in phosphorus migration from on-site wastewater disposal systems

Because on-site wastewater disposal systems are by far the most significant source of anthropogenic phosphorus to the surface waters of all the Town's lakes, effective strategies to minimize this source should be the primary focus. Unless this is source is mitigated, it is unlikely that other efforts will results in noticeable long term improvements to water quality.

7.1.1. Sewers

It is estimated that between 27% and 85% of the phosphorus entering the lakes originates in septic systems. The single best way to reduce/eliminate this load would be to install a wastewater treatment system (sewers) in each watershed. All lakes would be expected to show water quality improvements after the elimination of this load. The benefits would likely not be realized immediately however. Phosphorus laden groundwater from septics takes a varying amount of time to reach the lakes. In some cases it could be decades before the full benefit of sewers is realized.

An example of a watershed community facing similar challenge is nearby Peach Lake (see text box). The municipalities in this watershed are constructing a wastewater collection and treatment system to mitigate water quality degradation associated with wastewater disposal. This recommendation is offered:

- ✓ The Town of Lewisboro should work with an engineering firm to conduct a feasibility/cost/benefit analysis associated with installing sewers in the watersheds of each lake. Priority watersheds should be those with the highest phosphorus levels: Katonah, Truesdale, and Timber.

The Peach Lake Example

In 2003 Putnam and Westchester Counties retained Stearns & Wheler, LLC to perform a wastewater study of Peach Lake. It was concluded that septic systems around the lakeshore were failing and discharging effluent into the lake. Due to the limiting conditions for enhanced on-site septic systems along the lake shore properties, it was decided that the construction of a sewer system and new treatment plant was the only option to eliminate the health risks and stop the lake degradation. The proposed service area for the low pressure, sanitary sewer system includes approximately 470 properties located in four associations around the Lake and a cluster of nearby businesses.

The treatment plant will discharge into the outlet or Peach Lake Brook (extensive wetlands permitting will be required). The plant will be designed with a permitted capacity (maximum month) of 170,000 gallons per day and an expected average annual flow of 120,000 gallons per day.

Any new surface discharging plant within the drinking water supply watershed requires a variance under New York City Watershed Rules and Regulations. The location of the plant places it under the jurisdiction of both the NYSDEC and NYCDEP. As such, it requires an advanced level of treatment including ammonia removal, sand and membrane filtration, and ultraviolet disinfection.

Estimated project costs:
- Treatment plant: $10 million
- Collection system: $14 million.
- Average cost per resident $1200 per year for 30 years

Funding:
- Putnam County: $2.5 million
- Westchester County: $10 million
- NYCDEP: TBD (they will reimburse for the tertiary level of treatment which is currently estimated to be $2.4 million

7.1.2. Mitigation of Existing On-site Wastewater Disposal Systems

Until a decision is made regarding the financial and technical feasibility of installing sanitary sewers, stringent requirements for maintenance and inspection of the on-site systems is recommended. Financial incentives for installation of technologies separating gray water and using non-discharge alternatives (such as composting toilets) for toilet waste should be considered, as should alternative on-site wastewater technologies. Many alternative septic technologies exist such as Fixed-Media Filter and Peat-Based Filter systems, as well as Aerobic Treatment Units. These technologies are primarily designed to reduce bacteria, not phosphorus. Total phosphorus reductions of less than 50% can be expected (primarily due to filtration of solids), however the reduction in soluble reactive phosphorus (the bioavailable portion that results in algal growth) will be much less (Patterson 1999). The oldest and/or failing systems would be a priority for replacement with these technologies. Discussion with the County Health Department will need to take place to outline the permitting process for these technologies.

Public education aimed at reducing disposal of household materials containing phosphorus is also warranted. Use of garbage disposals should be discouraged as should use of phosphate-containing dishwasher detergents. The Town may wish to consider restricting the sale and use of phosphate-containing dishwasher detergents within the watersheds.

This option, as a whole, is likely to be significantly less effective than installations of sewers and will require a substantial initial investment by homeowners and constant monitoring and maintenance. It may be a feasible alternative in the less eutrophic lakes (Waccabuc, Rippowam, Oscaleta, and possibly Kitchawan) where the recommended phosphorus reductions are less than the other lakes.

The overall effectiveness of this option is not predictable because the failure rate and current conditions of the septic systems are not known. The effectiveness of this option may also be limited because of the poor soil suitability of the watersheds. Properly functioning on-site wastewater disposal systems located on soils with limited assimilative capacity will still result in phosphorus transport to surface waters. Unfortunately much of the Lewisboro watershed in proximity to the lakes is limited with regards to its phosphorus assimilative capacity, meaning that inspection and maintenance will do little to reduce phosphorus loads in these areas. These recommendations are offered:

- ✓ In areas of lake watersheds where sewers are not installed the Town of Lewisboro should institute a septic inspection and maintenance program whereas septic are inspected every five years and pumped biennially.
- ✓ The Town should initiate a Public education campaign aimed at informing residents of the importance of proper septic maintenance and upkeep.
- ✓ The Town should consider a ban on sale and use of phosphate-containing dishwasher detergents within the watershed.
- ✓ The Town of Lewisboro should offer financial incentives to homeowners who convert to new technologies designed to reduce impact from septic systems. Some examples of these types of technologies are composting toilets, gray water recycling systems, Fixed-Media Filter systems, Peat-Based Filter systems, and Aerobic Treatment Units.

7.2. Management of Stormwater Runoff

Stormwater has been identified as a major conduit for phosphorus traveling from developed areas of the watersheds to the lakes. The Town of Lewisboro recognizes this and has already taken a number of steps to reduce stormwater impacts, including forming a Stormwater Management Committee in September 2007, and passing two stormwater ordinances in December 2007 to address illicit discharges, stormwater management, and sediment and erosion control measures. In addition a number of stormwater management projects have been completed, or are underway, in several watersheds. These projects include activities such as construction of catch basins and identifying storm drains and discharge points.

The current stormwater management efforts by the Town should continue and expand, as reflected in the following recommended actions:

- ✓ The Town of Lewisboro should continue to identify stormwater discharge points and drains.
- ✓ The Town of Lewisboro should expand its funding of stormwater management BMPs such as catch basins. The recommendations provided by each lakes association should be used as guidance.

- ✓ The Town should reinstitute the practice of picking up and disposing of leaves and yard waste as these areas a potential source of organic matter carried to the lakes via stormwater runoff.
- ✓ Storm drain structure sumps and catch basins should be routinely cleaned of accumulated sediment.
- ✓ The Town of Lewisboro should form watershed tax districts in order to provide a dedicated funding source to upgrade the Towns stormwater management program.

7.3. Development / Land Acquisition

New development will result in increases in phosphorus loading to the lakes. Unless controlled, new development will reduce the effectiveness of efforts to decrease phosphorus elsewhere in the watershed. Three recommendations are offered to address this issue:

- ✓ Consider adopting a moratorium on new construction of homes in affected watersheds until a sewer feasibility study is completed.
- ✓ The Town of Lewisboro should pass an ordinance that prohibits new septic constructed in areas of lake watersheds that are within 100 meters of a waterbody that is hydrologically connected to one of the Towns lakes.
- ✓ The Town of Lewisboro should identify and acquire key parcels of open space. Place high priority for acquisition of properties in riparian areas.

7.4. Fertilizer Restrictions

There are a large number of homes on or near most of the Lewisboro Lakes; many with cultivated lawns. Fertilizers applied to lawns are potentially a significant source of nutrients to nearby lakes. This recommendation is offered:

- ✓ The Town of Lewisboro should introduce a local law restricting application of phosphorus as a fertilizer. The local law should consider the following provisions:

  1. Fertilizers containing phosphorus cannot be used on lawns and turf in the <u>watersheds</u> of the Lewisboro Lakes unless one of the following situations exists:
     - A soil test or plant tissue test shows a need for phosphorus.
     - A new lawn is being established by seeding or laying sod.
     - Phosphorus fertilizer is being applied on a golf course by trained staff.
     - Phosphorus fertilizer is being applied on farm cropland.

  2. Fertilizers containing phosphorus should not be used on lawns and turf <u>within 100m</u> of a lake or waterbody hydrologically connected to one of the lakes.

7.5. Canadian Geese Controls

The number of geese on the lakes and phosphorus contribution from their waste is not quantified for the Lewisboro Lakes. An estimate as to the benefits, if any, of instituting/continuing controls cannot be made without further quantitative study. However, control efforts can be implemented rather easily and at low cost. Some reduction in overall phosphorus load would likely occur, although it is highly unlikely that this reduction would result in any notable changes in water quality. Benefits beyond phosphorus reduction are also likely to result. We recommend that:

- ✓ The Town of Lewisboro continues with their egg oiling program on the Three Lakes and Truesdale Lake, and considers implementing a similar program on the other Town lakes.
- ✓ On lakes where goose populations become large the Town should implement a volunteer goose harassment program designed to deter geese from staying on the lakes for long periods.

7.6. Education/Involvement

Educating and involving the public in the decision making process will be essential for successful implementation of a protection/restoration plan. The following recommendations are offered:

- ✓ The Town of Lewisboro, in collaboration with the Lake Associations, should convene a public forum to discuss lake ecology, the range of current water quality conditions in the seven lakes, and potential mitigating measures.
- ✓ The Town, in collaboration with the Lake Associations, should prepare an annual Lewisboro Lakes Report Card to enhance public understanding of water quality conditions and contributing factors.

7.7. Summary of Findings and Recommendations for Each Lake

Specific observations and recommendations summaries for the seven Lewisboro Lakes are summarized in Table 7-1.

Table 7-1. Summary of major findings and specific recommendations for Lewisboro Lakes, ordered by lake surface area.

Lake	Major Findings	Recommended Actions
Lake Waccabuc	Borderline eutrophic, generally good clarity, periodic algal blooms, elevated lower water phosphorus, Brazilian elodea in '08, on-site wastewater disposal systems primary P source	Education, protection, small/moderate reductions in phosphorus, additional study needed on impact of lower water phosphorus, immediate management of Brazilian elodea, consider dredging channels between other lakes, routine bacteria testing, stormwater management, consider sewers
Lake Kitchawan	Borderline eutrophic, algal blooms less than expected given phosphorus, macrophytes probably tying up phosphorus in biomass, stormwater, on-site wastewater disposal systems primary phosphorus source,	Education, moderate reductions in phosphorus, benthic barriers in swimming area, do not try to reduce macrophyte growth, routine bacteria testing, stormwater management, consider sewers
Truesdale Lake	Eutrophic, algal bloom prevalent, poor clarity, copper contaminated sediments, stormwater very problematic, on-site wastewater disposal systems primary phosphorus source	Education, significant reductions in phosphorus, routine bacteria testing at beaches, stormwater management, sewers needed
Lake Oscaleta	Borderline eutrophic, generally good clarity, periodic algal blooms, somewhat elevated lower water phosphorus, on-site wastewater disposal systems primary phosphorus source	Education, protection, small/moderate reductions in phosphorus, additional study needed on impact of sediment phosphorus release, consider dredging channels, routine bacteria testing, consider sewers
Lake Rippowam	Borderline eutrophic, generally good clarity, periodic algal blooms, elevated phosphorus in the lower waters, on-site wastewater disposal systems primary phosphorus source	Education, protection, small/moderate reductions in phosphorus, more information needed on impact of sediment phosphorus release, consider dredging channels, routine bacteria testing, consider sewers
Lake Katonah	Hypereutrophic, poor clarity, nuisance algal blooms, sediment has elevated concentration of some metals, especially copper, watershed unsuitable for on-site wastewater disposal systems, stormwater issues significant, on-site wastewater disposal systems primary phosphorus source	Education, large reduction in phosphorus load needed, routine bacteria testing, stormwater management and sewers critical
Timber Lake	Eutrophic, algal blooms, moderate clarity, elevated levels of some metals, especially copper in sediments, stormwater problematic, on-site wastewater disposal systems primary phosphorus source	Education, significant reductions in phosphorus, routine bacteria testing, stormwater management, sewers likely needed

8. Potential Funding Sources

Clearly, the costs of implementing these recommendations are high and will be difficult for the local community to finance, particularly given the current economic climate. Creativity and persistence will be needed to identify sufficient resources from potential partners at the local, city, county, state, and federal levels.

8.1. Existing Programs

New York State has a well-developed program of water resources protection and nonpoint source pollution controls, and the Lewisboro Lakes are also part of the New York City watershed; therefore, an important first step is to identify existing programs and funding opportunities. Program leaders should be contacted and made aware of the need to target restoration funds to the Lewisboro Lakes watersheds. Sources of matching funds need to be identified and leveraged to maximize state and federal contributions.

The New York City Department of Environmental Protection (NYCDEP) should be a priority contact. They have numerous programs designed to protect the drinking water supply for the city including the Septic System Rehabilitation and Replacement Program (MOA Section 124), which seems particularly applicable to the Town of Lewisboro. The NYCDEP has in the past provided assistance to the upstate communities within the City's watershed, such as nearby Peach Lake where they agreed to reimburse the community for the entire cost of upgrading a wastewater treatment facility to tertiary treatment.

The New York State Department of Environmental Conservation (NYSDEC) provides funding for nonpoint source pollution control through Nonpoint Source Management Program grants (Section 319); funding decisions are reviewed by the statewide Nonpoint Source Coordinating Committee which includes representatives of NYSDEC, the state Soil and Water Conservation Committee, and the Department of State. Awards are distributed and administered through County Water Quality Coordinating Committees. Effective cooperation and coordination with these agencies will be essential to effectively target funds to the Lewisboro Lakes restoration effort.

The United States Environmental Protection Agency (USEPA) has previously allocated funds for lake protection and restoration projects through the Clean Lakes Program (Section 314). However, the USEPA has not requested funds for the Clean Lakes Program in recent years, but rather has encouraged states to use Section 319 to fund eligible activities that might have been funded in previous years under Section 314. USEPA suggests that each state use at least 5 percent of its Section 319 funds for Clean Lakes activities to address the restoration and protection needs of priority lakes, ponds and reservoirs. They also suggest that states give priority to funding the following Clean Lakes activities: Lake Water Quality Assessment (LWQA) projects; Phase 1 Diagnostic/Feasibility Studies; Phase 2 Restoration/Implementation Projects; and Phase 3 Post-Restoration Monitoring Studies. Clearly, funding is highly competitive. Detailed proposals are required.

The Town of Lewisboro has been successful in obtaining relatively small grants through New York State and New York City. A well-developed proposal for a member item might support certain phases of the restoration efforts.

8.2. General List of Resources

The following are included as a resource for identifying the major programs that include environmental restoration among their funding priorities. Many of these resources can be best explored on the Internet; web sites are included whenever possible.

The New York State Environmental Facilities Corporation (NYSEFC) provides low-cost financing and technical assistance to municipalities, businesses and State agencies for environmental projects. The Clean Water State Revolving Fund (CWSRF) provides low-interest rate financing to construct water quality protection projects. The NYSEFC web site (www.nysefc.org) provides potential applicants with the information needed to apply for CWSRF financing, with NYSEFC staff assistance as needed. In recent news, the US House of Representatives released its first draft of an $825 billion economic recovery bill (January 15, 2009), which included $6 billion for the CWSRF, of which New York State would receive approximately $640 million. Although the bill is likely to change as it moves through Congress, it appears that some level of funding will be available through this economic recover bill for projects eligible for CWSRF financing.

The Environmental Financing Information Network (EFIN) maintains a Web page of Environmental Financial Tools (http://www.epa.gov/efinpage/efinfin.htm). This page includes tools produced by the Center for Environmental Finance, the Environmental Financial Advisory Board (EFAB), the Environmental Finance Center Network (EFCs), EFIN, EPA Offices and Programs and Other (outside EPA) sources. A key work among the financing mechanisms on this page is the *Guidebook of Financial Tools*. The *Guidebook* is produced by the Environmental Finance Center Network and the Environmental Financial Advisory Board. The 2008 revision of the *Guidebook* is a reference document for officials with environmental responsibilities, designed to assist all interested with finding the means of financing environmental protection initiatives that are appropriate for them. The *Guidebook* contains over 300 financial tools that can be used to pay for environmental systems, with ten sections covering topics ranging from raising capital and enhancing credit to financing pollution prevention activities, community-based environmental protection, and brownfields redevelopment. A new section “Tools for Accessing State and Local Financing,” includes many state grant programs. The information is intended to help governments and other parties expand their thinking about the financial options and resources available to help meet important environmental mandates and create sustainable systems.

The Catalog of Federal Funding Sources for Watershed Protection (http://cfpub.epa.gov/fedfund/) is a searchable on-line database of financial assistance sources (grants, loans, and cost-sharing) available to fund a variety of watershed protection projects. Below is a list of examples of these funding sources, organized according to topic.

Economic Development

U.S. Department of Agriculture

Water and Waste Disposal Systems for Rural Communities (Rural Utilities Service - RUS)
Rural Economic Development Loan and Grant Program

U.S. Department of Commerce

Public Works and Development Facilities Program (EDA)

U.S. Department of Housing and Urban Development

Community Development Block Grant Program (CPD)

Education and Research

Corporation for National Service

Learn and Serve America Program

U.S. Environmental Protection Agency

Science to Achieve Results (ORD)

Forestry

U.S. Department of Agriculture

Cooperative Forestry Assistance Programs (FS)

Forestry Incentives Program (NRCS)

Monitoring

U.S. Environmental Protection Agency

Environmental Monitoring for Public Access and Community Tracking (OEI)

Pollution Control

Small Business Administration

Pollution Control Loans

U.S. Environmental Protection Agency

Chemical Emergency Preparedness and Prevention Technical Assistance Grants (CEPPO)

Pesticide Environmental Stewardship Grants (OPPTS)

Pollution Prevention Incentives for States (OPPTS)

Watershed and Drinking Water Source Protection

U.S. Department of Agriculture

Watershed Protection and Flood Prevention Program (NRCS)

U.S. Department of Transportation

Transportation Equity Act for the 21st Century Funding Programs (FHWA)

U.S. Department of the Interior

Land and Water Conservation Fund Grants to States (NPS)

U.S. Environmental Protection Agency

Capitalization Grants for Clean Water State Revolving Fund (OWM)

Capitalization Grants for Drinking Water State Revolving Fund (OGWDW)

Great Lakes Program (GLNPO)

Nonpoint Source Implementation Grants (319 Program) (OWOW)

Water Quality Cooperative Agreements (OWM)

Watershed Assistance Grants (OWOW)

Wetlands

U.S. Department of Agriculture

Wetlands Reserve Program (NRCS)

U.S. Department of the Interior

Coastal Wetlands Planning, Protection, and Restoration Act Program (FWS)

National Coastal Wetlands Conservation Grant Program (FWS)

North American Wetlands Conservation Act Grants Program (FWS)

U.S. Environmental Protection Agency
Five-Star Restoration Program (OWOW)
Wetlands Program Development Grants (OWOW)

Wildlife

National Fish and Wildlife Foundation
Bring Back the Natives Grant Program
U.S. Department of Agriculture
Wildlife Habitat Incentives Program (NRCS)
U.S. Department of Commerce
Community-Based Restoration Program (NOAA)
Fisheries Development and Utilization Research and Development Grants and Cooperative Agreements Program (NOAA)
U.S. Department of the Interior
Partners for Fish and Wildlife Program (FWS)
Wildlife Conservation and Appreciation Program (FWS)

8.3. **Private, Nonprofit Sources**

- **Chronicle of Philanthrop**y. The Chronicle Web site (http://www.philanthropy.com) includes articles and grant announcements. Users may search the Chronicle database to find what funders have provided money for projects like theirs in the past. There is currently a $50 annual fee. The Chronicle's Internet site also provides links to information on fund raising, volunteerism, technology, academic centers on philanthropy, and publications for nonprofit professionals.

- **Community of Science (COS**). The COS Funding Opportunities Internet site (http://www.cos.com) is updated daily and includes information on more than 15,000 grants from around the world. Annual subscription fees range from $500 to $1500 for most institutions and $500 for individuals.

- **Conservation Technology Support Program (CTSP**) annually awards grants of equipment plus software to tax-exempt conservation organizations to build their geographic information system (GIS) capacity. CTSP is supported by donations of equipment by Hewlett Packard Company and software by Environmental Systems Research Institute. (http://www.conservationgis.org/aagisgrant.html)

- **Council on Foundations.** The Council supports an Internet site (http://www.cof.org) that provides information on foundation grant monies.

- **Environmental Support Center (ESC**). The goal of ESC's (http://www.envsc.org) is to improve the U.S. environment by enhancing the health and well-being of local, state, and regional organizations working on environmental issues. ESC offers a Training and Organizational Assistance Program, a Technology Resources Program, a Workplace Solicitation Program, and a new Environmental Loan Fund to help environmental groups become better managed, funded, and equipped. The Environmental Loan Fund is a revolving loan fund intended to stabilize, increase, and diversify an organization's long-term funding base. ESC's Internet site also offers information on funding resources in its *Fundraising*

Resources for Grassroots Environmental Groups—An Annotated Bibliography, Parts I and II.

- **Foundation Center (FC**). The FC (http://foundationcenter.org/) publishes directories of funding opportunities, including the *Foundation Directory,* which features the nation's largest foundation funders; the *National Guide to Funding for the Environment and Animal Welfar*e, which lists 2,000 foundations, corporate direct giving programs, and grant-making public charities with an interest in the field; the *National Directory of Corporate Givin*g, which profiles more than 2,300 corporate philanthropic programs; and *FC Search: The Foundation Center's Database on CD-ROM*, a fully searchable database that includes the FC's exclusive database of foundation and corporate grant makers, as well as their associated grants.

- **Foundations and Grantmakers Directory**. Offered by the Northern California Community Foundation, this Internet site provides links to corporate, private, and community foundations (http://www.foundations.org/grantmakers.html).

- **Fundsnet Online Service**s. This web site (http://www.fundsnetservices.com) offers information on funding opportunities, listed alphabetically by geographical location and topic. Fundsnet also provides information about fund-raising and grant writing.

- **National Fish and Wildlife Foundation (NFWF**). NFWF (http://www.nfwf.org), a nonprofit organization established by Congress in 1984, awards challenge grants for natural resource conservation projects. NFWF uses its federally appropriated funds to match private sector funds. NFWF's six priority program areas include wetland conservation, conservation education, fisheries, neo-tropical migratory bird conservation, conservation policy, and wildlife and habitat. Pre-proposals are due July 1 and November 15, annually. NFWF forges partnerships between the public and private sectors to join resources in order to meet its conservation goals and to fund eligible projects.

- **Non-profit Resource Center (NRC**). The NRC (http://www.not-for-profit.org) serves as a one-stop directory for Internet resources of interest and value to nonprofit organizations. NRC provides valuable information, including a comprehensive list of fund-raising publications, fund-raising software and consultants, fund-raising programs, and information on grants and grantsmanship.

- **Sustainable Community Network (SCN**). SCN (http://www.sustainable.org/) focuses on using innovative strategies to produce communities that are environmentally sound, economically prosperous, and socially equitable. The SCN Internet site offers a variety of information, including funding sources and a comprehensive list of sustainable development resources.

8.4. Federal Sources

- ***Catalog of Federal Domestic Assistance (CFDA)* (Source: U.S. General Services Administration).** The CFDA is a comprehensive catalog that lists all sources of federal assistance (financial and technical). The CFDA can be accessed on the

Internet (http://www.gsa.gov/fdac/) and (http://aspe.os.dhhs.gov/cfda/). CFDA program information is also available on machine-readable magnetic tape, high-density floppy diskettes, and CD-ROM.

- **Center for Environmental Finance (CEF)**. The U.S. Environmental Protection Agency has developed the CEF to assist communities in their search for creative approaches to funding environmental projects (http://www.epa.gov/efinpage/). Drawing on the financing expertise of staff, the Environmental Financial Advisory Board (EFAB), and university-based Environmental Finance Centers (EFC), the CEF seeks to lower costs, increase investment, and build capacity by creating partnerships with state and local governments and the private sector to fund environmental needs. The CEF operates a number of funding resource services, including the following:

  (1) **Environmental Finance Center (EFC) Network**, a university-based program providing financial outreach services to regulated communities. The Network consists of eight EFCs that share information and expertise on finance issues and engage jointly in projects. The Network includes the University of New Mexico, the University of Maryland, Syracuse University, California State University at Hayward, Cleveland State University, Boise State University, the University of Louisville and the University of North Carolina at Chapel Hill. A central goal of the EFCs is to help create sustainable environmental systems in the public and private sectors. Many EFCs offer funding publications online: (http://www.epa.gov/efinpage/efcn.htm)

  (2) **Environmental Financing Information Network (EFIN)** is an outreach service offering electronic access (http://www.epa.gov/efinpage/efin.htm) to many types of environmental financing information for state and local environmental programs and projects . EFIN maintains an Internet web site of environmental financial tools. Of particular note among the financing mechanisms on this page is the *Guidebook of Financial Tool*s. The guidebook, produced by the EFC Network and the EFAB, is intended as a basic financial reference document for public and private officials with environmental responsibilities.

- **EPA's State Revolving Fund (SRF) Program (Office of Wastewater Management, Office of Ground Water and Drinking Water**). SRFs are available to fund a wide variety of water quality projects, including all types of nonpoint source, source water protection, and estuary management projects, as well as more traditional municipal wastewater and drinking water treatment projects.

  (1) **Clean Water State Revolving Fund (CWSRF)**. Clean Water State Revolving Fund (CWSRF) programs provided more than $5 billion annually in recent years to fund water quality protection projects for wastewater treatment, nonpoint source pollution control, and watershed and estuary management.)

  (2) **Drinking Water State Revolving Fund (DWSRF)** The Safe Drinking Water Act, as amended in 1996, established the Drinking Water State Revolving Fund to make funds available to drinking water systems to finance

infrastructure improvements. The program also emphasizes providing funds to small and disadvantaged communities and to programs that encourage pollution prevention as a tool for ensuring safe drinking water

- ***A Guide to Grants, Fellowships, and Scholarships in International Forestry and Natural Resources* (Source: U.S. Department of Agriculture's U.S. Forest Service, International Forestry Division, Document No. FS-584, December 1995).** This guide, available on the Internet (http://www.fs.fed.us/people/gf/gf00.htm), contains a detailed description of grants, fellowships, and scholarships available to university students, scholars, and professionals seeking funding to undertake studies or research in forestry or natural resources. Information about the awards includes the title of each program; a description; the purpose; eligibility requirements; the number, duration, and amount of awards; and application requirements, deadlines, instructions, and contacts.

- **Notices of Funding Availability (NOFA**). The NOFA Internet site (http://www.eda.gov/InvestmentsGrants/Nofa.xml) allows users to generate a customized listing of announcements that appear in the *Federal Registe*r. The *Federal Registe*r, printed each business day by the U.S. government, invites applications for federal grant programs.

- **United States Geological Survey (USGS**). The USGS provides funding for research, water resources data collection, data management, and information transfer activities. USGS program information is available on-line (http://www.usgs.gov/) and (http://www.gsa.gov/fdac/)

9. Priority Actions for the Town of Lewisboro

Actions recommended for 2009

Convene a public educational forum to discuss current water quality and habitat conditions of the lakes of Lewisboro. Solicit public input on the desired future for the lakes (overall and for individual lakes). Major topics include:

- The eutrophication process
- How have conditions changed in recent decades
- What can be done
- Why each lake may require slightly different strategies (protection, active intervention) based on physical characteristics, current conditions, and desired use
- How will a wastewater facilities affect the lakes
- What are the costs and benefits associated with alternatives

Continue and expand the annual lakes monitoring program to improve baseline data and gather data needed to apply for permits and funding for implementation of control measures. The recommended monitoring plan would collect water the standard CSLAP variables monthly from May to October in all lakes. Stratified lakes would include a near bottom water sample analyzed for phosphorus.

Prepare an annual Lewisboro Lakes Report Card to enhance public understanding of water quality conditions and contributing factors.

Convene technical committee (or select consultant) to initiate detailed planning, cost estimating, and identify funding sources for construction regional wastewater treatment facilities to serve the Town of Lewisboro Lakes watersheds.

Approach state and federal agencies to initiate discussions for funding, recognizing that the earlier the process starts, the sooner the appropriate applications can be submitted, and the more likely that funds will be available to implement lake improvement initiatives.

Propose creation of watershed tax districts to help fund stormwater management.

Propose an initiative program to encourage the use of "green" technologies as they relate to onsite waste water treatment.

Propose a moratorium on septic system construction in lake watersheds until decision is made on wastewater treatment facilities.

Introduce a local law prohibiting septic system construction within 100 meters of a waterbody hydrologically connected to one of the Towns lakes.

Actions recommended for 2010 - 2011

Propose a local law requiring periodic inspection, maintenance, and pumping of individual on-site wastewater treatment systems if wastewater facility option not initiated. The frequency can be linked to distance to lakes and hydrologically connected waterbodies, with more stringent requirements within a defined buffer zone.

<u>If wastewater facilities are not approved, propose an ordinance that prohibits any septic system construction</u> within 100 meters of a waterbody that is hydrologically connected to one of the Towns lakes.

<u>Continue to convene periodic public educational forums</u> that focus on current conditions and what needs to be done.

<u>Continue the expanded annual lakes monitoring program and Lewisboro Lakes Report Card</u>

10. References

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APPENDIX D: WCDOH SEPTIC PUMP OUT DATA

Lewisboro and Pound Ridge
2018 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
56 LAKE SHORE DR, Lewisboro	South Salem NY 10590	11/7/2018 0:00	Y	43.11-3-19
190 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	5/23/2018 0:00	Y	096.02-1-31
20 INDIAN HILL RD, Pound Ridge	Pound Ridge NY 10576	7/5/2018 0:00	Y	075.03-1-86
25 HONEY HOLLOW RD, Pound Ridge	POUND RIDGE NY 10576	5/3/2018 0:00	Y	
0 RT 22, Lewisboro	N/A	12/15/2018 0:00	N	
1 BRADY LN, Lewisboro	Katonah NY 10536	11/5/2018 0:00	N	41.2-1-10
1 CHEYENNE CT, Lewisboro	Goldens Bridge NY 10526	12/24/2018 0:00	N	31.4-3-34
1 FAY LN, Lewisboro	South Salem NY 10590	4/1/2018 0:00	N	54.4-2-10
1 FAY LN, Lewisboro	South Salem NY 10590	10/4/2018 0:00	N	54.4-2-10
1 GILBERT ST, Lewisboro	South Salem NY 10590	5/12/2018 0:00	N	43.11-2-1
1 HASTINGS CT, Lewisboro	SOUTH SALEM NY 10590	3/6/2018 0:00	N	78.1-2-20
1 HILLSIDE AVE, Lewisboro	Goldens Bridge NY 10526	10/19/2018 0:00	N	30.4-3-20
1 JONAH'S LN, Lewisboro	Cross River NY 10518	10/3/2018 0:00	N	42.1-1-23
1 KENFIELD RD, Lewisboro	South Salem NY 10590	12/12/2018 0:00	N	77.4-5-21
1 KENFIELD RD, Lewisboro	South Salem NY 10590	12/12/2018 0:00	N	77.4-5-21
1 LEDGEWOOD LN, Lewisboro	South Salem NY 10590	8/7/2018 0:00	N	66.1-1-14
1 MAKEPEACE HL, Lewisboro	WACCABUC NY 10597	12/6/2018 0:00	N	
1 MANCH DR, Lewisboro	goldens bridge NY 10526	9/8/2018 0:00	N	
1 RESERVOIR RD, Lewisboro	South Salem NY 10590	5/24/2018 0:00	N	77.2-4-4
1 ROBINS WOOD LN, Lewisboro	South Salem NY 10590	7/24/2018 0:00	N	77.4-3-40
1 SAWGRASS DR, Lewisboro	Katonah NY 10536	6/15/2018 0:00	N	41.6-2-17
1 SHOSHONE DR, Lewisboro	Goldens Bridge NY 10526	10/19/2018 0:00	N	31.4-3-57
1 SPRING ST S, Lewisboro	SOUTH SALEM NY 10590	3/14/2018 0:00	N	43.3-3-1
1 STEWART RD, Lewisboro	South Salem NY 10590	8/17/2018 0:00	N	43.1-2-64
10 APPLE HILL CT, Lewisboro	SOUTH SALEM NY 10590	3/1/2018 0:00	N	43.3-2-6
10 BROOKSIDE TRL, Lewisboro	SOUTH SALEM NY 10590	2/21/2018 0:00	N	65.8-1-23
10 CORNWALL CT, Lewisboro	Katonah NY 10536	8/8/2018 0:00	N	31.4-2-48
10 FLINTLOCK RIDGE RD, Lewisboro	Katonah NY 10536	7/31/2018 0:00	N	31.4-2-31
10 HARBOR PL, Lewisboro	SOUTH SALEM NY 10590	3/23/2018 0:00	N	54.1-2-1
10 HILLTOP RD, Lewisboro	Waccabuc NY 10597	10/4/2018 0:00	N	32.1-3-37
10 INDIAN HILL RD, Lewisboro	Katonah NY 10536	11/24/2018 0:00	N	31.4-2-3
10 LOCKWOOD RD, Lewisboro	South Salem NY 10590	5/28/2018 0:00	N	66.4-2-3
10 MAIN ST, Lewisboro	Goldens Bridge NY 10526	9/21/2018 0:00	N	31.3-1-14
10 MOHAWK TRL, Lewisboro	Katonah NY 10536	6/6/2018 0:00	N	31.4-2-16
10 PERCH BAY RD, Lewisboro	WACCABUC NY 10597	1/29/2018 0:00	N	32.4-3-45
10 STONEWALL CT, Lewisboro	SOUTH SALEM NY 10590	4/26/2018 0:00	N	55.3-7-10
10 TARRY-A-BIT DR, Lewisboro	Waccabuc NY 10597	11/28/2018 0:00	N	32.4-3-54
10 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	6/1/2018 0:00	N	43.15-3-25
10 WILD OAKS RD, Lewisboro	Goldens Bridge NY 10526	5/31/2018 0:00	N	31.13-1-2
100 CROSS RIVER RD, Lewisboro	N/A	6/26/2018 0:00	N	
100 UPPER LAKESHORE DR, Lewisboro	KATONAH NY 10536	10/9/2018 0:00	N	
1004 ROUTE 35, Lewisboro	Cross River NY 10518	6/4/2018 0:00	N	42.4-1-41
101 POST OFFICE RD, Lewisboro	waccabook NY 10597	9/14/2018 0:00	N	
1016 ROUTE 35, Lewisboro	Cross River NY 10518	10/25/2018 0:00	N	42.4-1-43
102 RIDGELAND RD, Lewisboro	South Salem NY 10590	10/20/2018 0:00	N	65.8-4-12
103 N SALEM RD, Lewisboro	Cross River NY 10518	9/4/2018 0:00	N	42.1-2-17
104 GOLDENS BRIDGE RD, Lewisboro	GOLDENS BRIDGE NY 10526	10/4/2018 0:00	N	

Lewisboro and Pound Ridge
2018 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
104 GOLDENS BRIDGE RD, Lewisboro	GOLDENS BRIDGE NY 10526	10/19/2018 0:00	N	
104 GOLDENS BRIDGE RD, Lewisboro	GOLDENS BRIDGE NY 10526	10/19/2018 0:00	N	
104 GOLDENS BRIDGE RD, Lewisboro	GOLDENS BRIDGE NY 10526	10/5/2018 0:00	N	
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	4/14/2018 0:00	N	30.4-3-1
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	3/12/2018 0:00	N	30.4-3-1
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	1/16/2018 0:00	N	30.4-3-1
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	1/16/2018 0:00	N	30.4-3-1
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	2/13/2018 0:00	N	30.4-3-1
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	2/6/2018 0:00	N	30.4-3-1
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	2/6/2018 0:00	N	30.4-3-1
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	2/6/2018 0:00	N	30.4-3-1
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	2/6/2018 0:00	N	30.4-3-1
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	5/14/2018 0:00	N	30.4-3-1
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	5/14/2018 0:00	N	30.4-3-1
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	6/18/2018 0:00	N	30.4-3-1
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	9/13/2018 0:00	N	30.4-3-1
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	9/21/2018 0:00	N	30.4-3-1
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	9/21/2018 0:00	N	30.4-3-1
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	7/31/2018 0:00	N	30.4-3-1
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	8/22/2018 0:00	N	30.4-3-1
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	7/13/2018 0:00	N	30.4-3-1
104 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	12/14/2018 0:00	N	30.4-3-1
105 POST OFFICE RD, Lewisboro	SOUTH SALEM NY 10590	7/30/2018 0:00	N	
106 BOWAY RD, Lewisboro	SOUTH SALEM NY 10590	2/12/2018 0:00	N	43.12-2-6
106 EAST ST, Lewisboro	South Salem NY 10590	8/21/2018 0:00	N	77.2-5-25
106 EAST ST, Lewisboro	South Salem NY 10590	8/21/2018 0:00	N	77.2-5-25
107 EAST ST, Lewisboro	SOUTH SALEM NY 10590	6/25/2018 0:00	N	
107 TODD RD, Lewisboro	Katonah NY 10536	9/13/2018 0:00	N	41.6-2-4
1078 OLD POST RD, Lewisboro	south salem NY 10590	11/5/2018 0:00	N	
1079 RT-35, Lewisboro	SOUTH SALEM NY 10590	5/25/2018 0:00	N	
1079 RT-35, Lewisboro	SOUTH SALEM NY 10590	5/26/2018 0:00	N	
109 MAIN ST, Lewisboro	South Salem NY 10590	6/11/2018 0:00	N	43.7-1-35
109 SMITH RIDGE RD, Lewisboro	N/A	11/21/2018 0:00	N	
109 SMITH RIDGE RD, Lewisboro	Katonah NY 10590	11/21/2018 0:00	N	
1090 OLD POST RD, Lewisboro	south salem NY 10590	11/5/2018 0:00	N	
11 APPLE HILL CT, Lewisboro	South Salem NY 10590	6/27/2018 0:00	N	43.3-2-8
11 AUTUMN RIDGE RD, Lewisboro	SOUTH SALEM NY 10590	3/27/2018 0:00	N	43.1-2-17
11 BILLINGSLEY TRL, Lewisboro	Goldens Bridge NY 10526	10/5/2018 0:00	N	32.1-2-29
11 BOUTONVILLE RD, Lewisboro	CROSS RIVER NY 10518	6/19/2018 0:00	N	
11 BROOKSIDE TRL, Lewisboro	SOUTH SALEM NY 10590	2/23/2018 0:00	N	65.8-1-24
11 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	11/20/2018 0:00	N	32.3-1-5
11 CHURCH TAVERN RD, Lewisboro	South Salem NY 10590	10/15/2018 0:00	N	44.3-1-20
11 HOLLY HILL LN, Lewisboro	KATONAH NY 10536	5/9/2018 0:00	N	
11 HUNT FARM RD, Lewisboro	waccabuc NY 10597	10/5/2018 0:00	N	
11 KINGSWOOD WAY, Lewisboro	South Salem NY 10590	11/2/2018 0:00	N	77.4-2-20
11 KNAPP RD, Lewisboro	South Salem NY 10590	9/18/2018 0:00	N	33.3-3-23
11 LAUREL RD, Lewisboro	South Salem NY 10590	8/21/2018 0:00	N	77.2-2-23

Lewisboro and Pound Ridge
2018 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
11 LONG POND RD, Lewisboro	Waccabuc NY 10597	6/29/2018 0:00	N	32.2-1-12
11 LORRAINE RD, Lewisboro	South Salem NY 10590	11/1/2018 0:00	N	77.2-1-31
11 MAIN ST, Lewisboro	SOUTH SALEM NY 10590	3/14/2018 0:00	N	43.15-2-14
11 MAIN ST, Lewisboro	SOUTH SALEM NY 10590	3/14/2018 0:00	N	43.15-2-14
11 PAMELA LN, Lewisboro	SOUTH SALEM NY 10590	5/3/2018 0:00	N	43.3-1-13
11 PAMELA LN, Lewisboro	SOUTH SALEM NY 10590	5/3/2018 0:00	N	43.3-1-13
11 ROADS END RD, Lewisboro	South Salem NY 10590	9/4/2018 0:00	N	66.2-3-15
11 SABBATH DAY HILL RD, Lewisboro	SOUTH SALEM NY 10590	2/5/2018 0:00	N	43.3-4-32
11 SILVERMINE DR, Lewisboro	South Salem NY 10590	10/25/2018 0:00	N	66.4-3-38
11 STEWART RD, Lewisboro	South Salem NY 10590	8/24/2018 0:00	N	43.1-2-59
11 STEWART RD, Lewisboro	South Salem NY 10590	8/24/2018 0:00	N	43.1-2-59
11 SUNNY RDG, Lewisboro	Katonah NY 10536	5/24/2018 0:00	N	41.6-2-10
11 TWIN LAKES RD, Lewisboro	South Salem NY 10590	9/4/2018 0:00	N	33.3-2-13
11 TWIN LAKES RD, Lewisboro	South Salem NY 10590	9/4/2018 0:00	N	
11 WEST LN, Lewisboro	South Salem NY 10590	10/11/2018 0:00	N	55.3-5-6
11 WOODSRIDGE, Lewisboro	katonah NY 10536	9/6/2018 0:00	N	
110 MIDDLE RIVER RD, Lewisboro	N/A	11/5/2018 0:00	N	
111 SPRING ST, Lewisboro	SOUTH SALEM NY 10590	5/21/2018 0:00	N	
111 SPRING ST, Lewisboro	SOUTH SALEM NY 10590	5/21/2018 0:00	N	
111 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	8/3/2018 0:00	N	31.4-1-16
112 LOCKWOOD RD, Lewisboro	South Salem NY 10590	11/26/2018 0:00	N	77.2-2-18
1125 RT-35, Lewisboro	SOUTH SALEM NY 10590	8/6/2018 0:00	N	
1125 RT-35, Lewisboro	SOUTH SALEM NY 10590	8/6/2018 0:00	N	
1125 RT-35, Lewisboro	SOUTH SALEM NY 10590	8/20/2018 0:00	N	
1145 ROUTE 35, Lewisboro	South Salem NY 10590	8/6/2018 0:00	N	43.3-4-3
1156 ROUTE 35, Lewisboro	South Salem NY 10590	5/21/2018 0:00	N	43.3-2-5
1156 ROUTE 35, Lewisboro	South Salem NY 10590	5/21/2018 0:00	N	43.3-2-5
116 N SALEM RD, Lewisboro	Cross River NY 10518	6/18/2018 0:00	N	42.1-1-31
116 UPPER LAKESHORE DR, Lewisboro	KATONAH NY 10536	3/31/2018 0:00	N	
117 ELMWOOD RD, Lewisboro	South Salem NY 10590	8/16/2018 0:00	N	66.2-2-4
117 RIDGELAND RD, Lewisboro	South Salem NY 10590	6/25/2018 0:00	N	65.8-5-8
118 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	7/9/2018 0:00	N	55.3-3-13
1181 ROUTE 35, Lewisboro	SOUTH SALEM NY 10590	4/8/2018 0:00	N	43.3-3-13
119 MEAD ST, Lewisboro	Waccabuc NY 10597	6/19/2018 0:00	N	32.4-3-56
1190 ROUTE 35, Lewisboro	SOUTH SALEM NY 10590	3/14/2018 0:00	N	43.3-2-26
1195 ROUTE 35, Lewisboro	South Salem NY 10590	10/12/2018 0:00	N	43.3-3-22
12 AUDUBON RD, Lewisboro	SOUTH SALEM NY 10590	1/15/2018 0:00	N	77.2-5-17
12 AUTUMN RIDGE RD, Lewisboro	South Salem NY 10590	5/31/2018 0:00	N	43.1-2-53
12 CROSS POND RD, Lewisboro	SOUTH SALEM NY 10590	3/31/2018 0:00	N	54.2-3-4
12 DEEPWELL FARMS RD, Lewisboro	South Salem NY 10590	8/1/2018 0:00	N	66.1-3-3
12 GRANDVIEW RD, Lewisboro	South Salem NY 10590	12/12/2018 0:00	N	65.8-1-20
12 GRANDVIEW RD, Lewisboro	South Salem NY 10590	3/5/2018 0:00	N	65.8-1-20
12 HOYT ST, Lewisboro	South Salem NY 10590	12/27/2018 0:00	N	43.7-5-6
12 HOYT ST, Lewisboro	South Salem NY 10590	12/27/2018 0:00	N	43.7-5-6
12 HUNT FARM RD, Lewisboro	WACCABUC NY 10597	11/27/2018 0:00	N	
12 LOWER LAKESHORE DR, Lewisboro	KATONAH NY 10536	12/3/2018 0:00	N	
12 LOWER SALEM RD, Lewisboro	SOUTH SALEM NY 10590	3/12/2018 0:00	N	43.1-3-21

Lewisboro and Pound Ridge
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Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
12 MAIN ST, Lewisboro	Goldens Bridge NY 10526	7/7/2018 0:00	N	31.3-1-15
12 MANOR DR, Lewisboro	Goldens Bridge NY 10526	6/13/2018 0:00	N	31.13-2-45
12 N SALEM RD, Lewisboro	Cross River NY 10518	9/25/2018 0:00	N	53.6-1-23
12 ORCHARD DR, Lewisboro	SOUTH SALEM NY 10590	3/6/2018 0:00	N	33.1-2-13
12 SHOSHONE DR, Lewisboro	KATONAH NY 10536	6/13/2018 0:00	N	
12 WAKEMAN RD, Lewisboro	South Salem NY 10590	11/28/2018 0:00	N	66.4-3-22
120 BOWAY, Lewisboro	South Salem NY 10590	11/14/2018 0:00	N	43.2-1-9
121 LAKE KITCHAWAN DR, Lewisboro	SOUTH SALEM NY 10590	2/5/2018 0:00	N	54.20-4-28
122 POST OFFICE RD, Lewisboro	South Salem NY 10590	7/13/2018 0:00	N	43.1-1-7
1220 ROUTE 35, Lewisboro	South Salem NY 10590	6/28/2018 0:00	N	43.3-2-21
123 BOWAY RD, Lewisboro	SOUTH SALEM NY 10590	4/30/2018 0:00	N	43.2-1-4
123 SPRING ST, Lewisboro	South Salem NY 10590	6/20/2018 0:00	N	43.15-2-17
124 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	7/3/2018 0:00	N	54.20-3-13
124 NORTH SALEM RD, Lewisboro	s salem NY 10590	4/17/2018 0:00	N	
126 ELMWOOD RD, Lewisboro	SOUTH SALEM NY 10590	1/2/2018 0:00	N	66.2-1-2
126 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	10/6/2018 0:00	N	54.20-3-14
126 SMITH RIDGE RD, Lewisboro	south salem NY 10576	9/21/2018 0:00	N	
126 UPPER LAKE SHR, Lewisboro	Katonah NY 10536	7/1/2018 0:00	N	41.10-2-4
129 UPPER LAKESHORE DR, Lewisboro	KATONAH NY 10536	1/24/2018 0:00	N	
13 LAURIE LN, Lewisboro	South Salem NY 10590	11/6/2018 0:00	N	54.2-2-23
130 ELMWOOD RD, Lewisboro	South Salem NY 10590	5/11/2018 0:00	N	66.2-1-1
130 RIDGELAND RD, Lewisboro	South Salem NY 10590	7/28/2018 0:00	N	65.8-4-17
131 SPRING ST, Lewisboro	SOUTH SALEM NY 10590	4/18/2018 0:00	N	43.4-1-27
132 OSCALETA RD, Lewisboro	South Salem NY 10590	8/11/2018 0:00	N	33.1-1-41
134 TODD RD, Lewisboro	Katonah NY 10536	9/6/2018 0:00	N	41.2-2-29
1340 ROUTE 35, Lewisboro	South Salem NY 10590	5/26/2018 0:00	N	43.4-4-24
1340 ROUTE 35, Lewisboro	South Salem NY 10590	5/26/2018 0:00	N	43.4-4-24
137 UPPER LAKESHORE DR, Lewisboro	KATONAH NY 10536	11/5/2018 0:00	N	
138 TODD RD, Lewisboro	Katonah NY 10536	10/26/2018 0:00	N	41.2-2-31
139 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	2/20/2018 0:00	N	54.20-4-25
139 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	10/1/2018 0:00	N	54.20-4-25
14 BUTTERNUT LN, Lewisboro	KATONAH NY 10536	4/4/2018 0:00	N	
14 DOUGLAS DR, Lewisboro	South Salem NY 10590	9/11/2018 0:00	N	77.2-1-19
14 EAST ST, Lewisboro	South Salem NY 10590	8/11/2018 0:00	N	77.4-4-6
14 FIVE PONDS DR, Lewisboro	Waccabuc NY 10597	5/11/2018 0:00	N	32.2-1-48
14 GILBERT ST, Lewisboro	South Salem NY 10590	9/20/2018 0:00	N	43.11-2-19
14 HOLLY HILL LN, Lewisboro	KATONAH NY 10536	6/18/2018 0:00	N	
14 HUNT FARM RD, Lewisboro	WACCABUC NY 10597	7/17/2018 0:00	N	
14 HUNTS LN, Lewisboro	CROSS RIVER NY 10518	4/26/2018 0:00	N	42.4-3-49
14 LOCKWOOD RD, Lewisboro	South Salem NY 10590	5/25/2018 0:00	N	66.4-2-4
14 MANDIA LN, Lewisboro	Goldens Bridge NY 10526	10/30/2018 0:00	N	40.1-1-11
14 MANOR DR, Lewisboro	Goldens Bridge NY 10526	10/22/2018 0:00	N	31.13-2-31
14 MOHAWK TRL, Lewisboro	Katonah NY 10536	6/22/2018 0:00	N	31.4-2-18
14 ORCHARD DR, Lewisboro	South Salem NY 10590	8/4/2018 0:00	N	33.1-2-12
14 ROBINS WOOD LN, Lewisboro	South Salem NY 10590	7/18/2018 0:00	N	77.4-3-50
14 ROCK SHELTER RD, Lewisboro	WACCABUC NY 10597	2/16/2018 0:00	N	
14 SALEM HILL RD, Lewisboro	South Salem NY 10590	7/3/2018 0:00	N	43.11-1-17

Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
14 SAWGRASS DR, Lewisboro	Katonah NY 10536	7/11/2018 0:00	N	41.6-2-26
14 SCHOOLHOUSE RD, Lewisboro	WACCABUC NY 10597	7/11/2018 0:00	N	
14 SCHOOLHOUSE RD, Lewisboro	WACCABUC NY 10597	7/12/2018 0:00	N	
14 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	10/1/2018 0:00	N	32.1-2-18
14 WOODS RIGE RD, Lewisboro	KATONAH NY 10536	4/19/2018 0:00	N	
141 RIDGEFIELD AVE, Lewisboro	SOUTH SALEM NY 10590	3/29/2018 0:00	N	54.2-4-1
1410 ROUTE 35, Lewisboro	South Salem NY 10590	9/12/2018 0:00	N	55.1-2-6
1410 ROUTE 35, Lewisboro	South Salem NY 10590	9/12/2018 0:00	N	55.1-2-6
1440 RT-35, Lewisboro	SOUTH SALEM NY 10590	9/12/2018 0:00	N	
148 Spring ST, Lewisboro	South Salem NY 10590	12/14/2018 0:00	N	43.4-4-3
149 RIDGEFIELD AVE, Lewisboro	SOUTH SALEM NY 10590	5/8/2018 0:00	N	54.2-4-3
149 TODD RD, Lewisboro	Katonah NY 10536	9/19/2018 0:00	N	41.2-1-13
15 ASHWOOD RD, Lewisboro	South Salem NY 10590	9/21/2018 0:00	N	43.12-3-10
15 AUTUMN RIDGE RD, Lewisboro	N/A	5/18/2018 0:00	N	
15 BEAVER POND LN, Lewisboro	South Salem NY 10590	11/6/2018 0:00	N	66.1-2-41
15 BOUTON ST, Lewisboro	South Salem NY 10590	11/7/2018 0:00	N	43.7-4-18
15 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	8/17/2018 0:00	N	32.3-1-6
15 CHURCH TAVERN RD, Lewisboro	South Salem NY 10590	9/6/2018 0:00	N	44.3-1-19
15 COL FERRIS RD, Lewisboro	South Salem NY 10590	10/20/2018 0:00	N	66.1-1-9
15 GILBERT ST, Lewisboro	South Salem NY 10590	5/10/2018 0:00	N	43.11-2-17
15 HOWE ST, Lewisboro	SOUTH SALEM NY 10590	3/30/2018 0:00	N	43.7-3-9
15 N LAKE CIR, Lewisboro	South Salem NY 10590	6/22/2018 0:00	N	33.3-2-22
15 ORCHARD DR, Lewisboro	South Salem NY 10590	9/7/2018 0:00	N	33.1-2-9
15 PARK AVE, Lewisboro	Goldens Bridge NY 10526	7/11/2018 0:00	N	30.4-1-20
15 RIDGELAND RD, Lewisboro	SOUTH SALEM NY 10590	1/9/2018 0:00	N	54.20-7-9
15 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	3/19/2018 0:00	N	65.8-1-12
15 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	4/18/2018 0:00	N	65.8-1-12
15 s shore dr, Lewisboro	South Salem NY 10590	5/29/2018 0:00	N	65.8-1-12
15 s shore dr, Lewisboro	South Salem NY 10590	9/4/2018 0:00	N	65.8-1-12
15 s shore dr, Lewisboro	South Salem NY 10590	10/19/2018 0:00	N	65.8-1-12
15 s shore dr, Lewisboro	South Salem NY 10590	11/30/2018 0:00	N	65.8-1-12
15 SALEM LN, Lewisboro	South Salem NY 10590	11/12/2018 0:00	N	43.12-1-11
15 SALEM LN, Lewisboro	South Salem NY 10590	8/4/2018 0:00	N	43.12-1-11
15 SHOSHONE DR, Lewisboro	KATONAH NY 10536	2/28/2018 0:00	N	
15 SOUNDVIEW LOOP, Lewisboro	SOUTH SALEM NY 10590	2/22/2018 0:00	N	77.4-5-37
15 south shore dr, Lewisboro	South Salem NY 10590	7/19/2018 0:00	N	65.8-1-12
15 south shore dr, Lewisboro	South Salem NY 10590	8/10/2018 0:00	N	65.8-1-12
15 SULLIVAN RD, Lewisboro	Goldens Bridge NY 10526	11/2/2018 0:00	N	32.1-1-1
15 TOMMY'S LN, Lewisboro	South Salem NY 10590	10/11/2018 0:00	N	77.11-2-20
15 TWIN LAKES RD, Lewisboro	SOUTH SALEM NY 10590	3/26/2018 0:00	N	33.3-2-14
150 BOWAY, Lewisboro	South Salem NY 10590	5/31/2018 0:00	N	43.7-6-6
151 LAKESIDE DR, Lewisboro	SOUTH SALEM NY 10590	2/12/2018 0:00	N	
153 SPRING ST, Lewisboro	SOUTH SALEM NY 10590	2/28/2018 0:00	N	43.4-3-12
154 BOWAY, Lewisboro	South Salem NY 10590	5/11/2018 0:00	N	43.7-1-17
156 MEAD ST, Lewisboro	Waccabuc NY 10597	6/25/2018 0:00	N	32.4-2-13
157 TODD RD, Lewisboro	Katonah NY 10536	11/19/2018 0:00	N	31.4-2-38
158 MAIN ST, Lewisboro	SOUTH SALEM NY 10590	2/21/2018 0:00	N	33.4-2-30

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159 RIDGEFIELD AVE, Lewisboro	South Salem NY 10590	10/12/2018 0:00	N	54.2-4-7
16 APACHE CIR, Lewisboro	KATONAH NY 10536	10/9/2018 0:00	N	
16 BILLINGSLEY TRL, Lewisboro	Goldens Bridge NY 10526	7/12/2018 0:00	N	32.1-2-4
16 BIRCH SPRING RD, Lewisboro	South Salem NY 10590	7/13/2018 0:00	N	55.3-1-4
16 BISBEE DR, Lewisboro	South Salem NY 10590	10/20/2018 0:00	N	54.2-2-4
16 BUTTERNUT LN, Lewisboro	KATONAH NY 10536	8/1/2018 0:00	N	
16 DEBBIE LN, Lewisboro	CROSS RIVER NY 10518	3/14/2018 0:00	N	42.4-1-34
16 GREEN HILL RD, Lewisboro	Goldens Bridge NY 10526	11/20/2018 0:00	N	30.4-2-49
16 LAKEVIEW PASS, Lewisboro	Katonah NY 10536	6/14/2018 0:00	N	41.10-4-7
16 MOHAWK TRL, Lewisboro	Katonah NY 10536	10/4/2018 0:00	N	31.4-2-19
16 PARK AVE, Lewisboro	GOLDENS BRIDGE NY 10526	4/9/2018 0:00	N	30.4-1-33
16 STONEWALL CT, Lewisboro	South Salem NY 10590	10/16/2018 0:00	N	55.4-1-7
16 TODD RD N, Lewisboro	Katonah NY 10536	10/1/2018 0:00	N	31.3-2-14
16 TODD RD N, Lewisboro	Katonah NY 10536	6/27/2018 0:00	N	31.3-2-14
16 TODD RD N, Lewisboro	Katonah NY 10536	6/27/2018 0:00	N	31.3-2-14
16 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	10/25/2018 0:00	N	43.15-3-22
16 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	11/14/2018 0:00	N	43.15-3-22
16 TWIN LAKES RD, Lewisboro	South Salem NY 10590	8/23/2018 0:00	N	33.3-2-62
16 WEST LN, Lewisboro	South Salem NY 10590	5/31/2018 0:00	N	55.3-6-32
160 Spring ST, Lewisboro	South Salem NY 10590	10/12/2018 0:00	N	43.4-4-8
160 TODD RD, Lewisboro	KATONAH NY 10536	1/24/2018 0:00	N	41.2-2-43
160 WILTON RD, Lewisboro	SOUTH SALEM NY 10590	11/8/2018 0:00	N	
161 N SALEM RD, Lewisboro	Cross River NY 10518	4/24/2018 0:00	N	42.1-2-2
161 N SALEM RD, Lewisboro	Cross River NY 10518	4/24/2018 0:00	N	42.1-2-2
161 TODD RD, Lewisboro	Katonah NY 10536	8/16/2018 0:00	N	31.4-2-37
162 WITTON RD, Lewisboro	lewisboro NY 10590	11/2/2018 0:00	N	
165 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	10/17/2018 0:00	N	65.8-2-7
165 MAIN ST, Lewisboro	South Salem NY 10590	12/11/2018 0:00	N	43.2-1-1
165 TODD RD, Lewisboro	KATONAH NY 10536	1/19/2018 0:00	N	31.4-2-35
165 TODD RD, Lewisboro	KATONAH NY 10536	3/29/2018 0:00	N	31.4-2-35
165 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	6/30/2018 0:00	N	31.4-1-1
166 JOURNEY'S END RD, Lewisboro	South Salem NY 10590	8/20/2018 0:00	N	78.1-2-25
17 DEER TRACK LN, Lewisboro	GOLDENS BRIDGE NY 10526	5/4/2018 0:00	N	31.13-2-34
17 HOLLY HILL LN, Lewisboro	KATONAH NY 10536	10/25/2018 0:00	N	
17 HOWE ST, Lewisboro	SOUTH SALEM NY 10590	4/28/2018 0:00	N	43.7-3-8
17 KINGSWOOD WAY, Lewisboro	South Salem NY 10590	4/12/2018 0:00	N	77.4-2-22
17 MEAD ST, Lewisboro	WACCABUC NY 10597	10/12/2018 0:00	N	
17 PINE HILL DR, Lewisboro	SOUTH SALEM NY 10590	4/24/2018 0:00	N	54.2-1-30
17 SAWGRASS DR, Lewisboro	Katonah NY 10536	6/27/2018 0:00	N	41.6-2-28
17 SUNSET, Lewisboro	Katonah NY 10536	7/17/2018 0:00	N	41.10-4-44
17 WAKEMAN RD, Lewisboro	South Salem NY 10590	10/23/2018 0:00	N	66.4-3-11
170 JOURNEY'S END RD, Lewisboro	South Salem NY 10590	6/2/2018 0:00	N	78.1-2-26
170 RIDGEFIELD AVE, Lewisboro	SOUTH SALEM NY 10590	3/29/2018 0:00	N	54.2-2-18
175 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	10/15/2018 0:00	N	31.3-2-11
177 MAIN ST, Lewisboro	South Salem NY 10590	5/15/2018 0:00	N	33.4-2-41
18 APACHE CIR, Lewisboro	KATONAH NY 10536	2/15/2018 0:00	N	
18 AUTUMN RIDGE RD, Lewisboro	South Salem NY 10590	5/29/2018 0:00	N	33.3-4-14

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18 BARBERRY LN, Lewisboro	N/A	5/7/2018 0:00	N	
18 BAYBERRY LN, Lewisboro	SOUTH SALEM NY 10590	3/14/2018 0:00	N	43.1-4-35
18 BAYBERRY LN, Lewisboro	SOUTH SALEM NY 10590	4/19/2018 0:00	N	43.1-4-35
18 BAYBERRY LN, Lewisboro	SOUTH SALEM NY 10590	3/20/2018 0:00	N	43.1-4-35
18 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	10/11/2018 0:00	N	32.3-1-37
18 EAST ST, Lewisboro	South Salem NY 10590	10/30/2018 0:00	N	77.4-4-8
18 Glen DR, Lewisboro	South Salem NY 10590	6/7/2018 0:00	N	77.2-3-8
18 GREEN HILL RD, Lewisboro	Goldens Bridge NY 10526	8/24/2018 0:00	N	30.4-2-48
18 LAKE KITCHAWAN DR, Lewisboro	SOUTH SALEM NY 10590	4/28/2018 0:00	N	55.3-1-18
18 Old OSCALETA RD, Lewisboro	South Salem NY 10590	5/21/2018 0:00	N	33.4-2-25
18 WOODS RDG, Lewisboro	KATONAH NY 10536	4/17/2018 0:00	N	41.10-3-9
183 JOURNEY'S END RD, Lewisboro	South Salem NY 10590	6/25/2018 0:00	N	78.1-2-28
183 RIDGEFIELD AVE, Lewisboro	South Salem NY 10590	12/10/2018 0:00	N	55.1-3-5
185 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	8/10/2018 0:00	N	66.1-3-9
186 WACCABUC RD, Lewisboro	Katonah NY 10536	9/29/2018 0:00	N	31.4-2-1
186 WACCABUC RD, Lewisboro	Katonah NY 10536	9/29/2018 0:00	N	31.4-2-1
187 KITCHAWAN RD, Lewisboro	SOUTH SALEM NY 10590	4/14/2018 0:00	N	66.1-2-2
187 MEAD ST, Lewisboro	WACCABUC NY 10597	8/7/2018 0:00	N	
187 TODD RD, Lewisboro	KATONAH NY 10536	10/10/2018 0:00	N	
187 TODD RD, Lewisboro	KATONAH NY 10536	10/10/2018 0:00	N	
19 AUTUMN RIDGE RD, Lewisboro	South Salem NY 10590	6/15/2018 0:00	N	43.1-2-13
19 BILLINGSLEY TRAIL, Lewisboro	N/A	9/29/2018 0:00	N	
19 BRUNDIGE DR, Lewisboro	GOLDENS BRIDGE NY 10526	3/16/2018 0:00	N	32.3-1-8
19 COL FERRIS RD, Lewisboro	South Salem NY 10590	2/19/2018 0:00	N	66.1-1-31
19 CORNEL DR, Lewisboro	Goldens Bridge NY 10526	8/9/2018 0:00	N	32.3-1-40
19 GREEN HILL RD, Lewisboro	Goldens Bridge NY 10526	8/31/2018 0:00	N	30.4-2-10
19 HUNT FARM RD, Lewisboro	WACCABUC NY 10597	9/28/2018 0:00	N	
19 LAKEVIEW PASS, Lewisboro	Katonah NY 10536	11/9/2018 0:00	N	41.10-2-24
19 LAUREL RD, Lewisboro	South Salem NY 10590	5/23/2018 0:00	N	77.2-2-11
19 LEDGEWOOD LN, Lewisboro	SOUTH SALEM NY 10590	3/26/2018 0:00	N	55.3-3-24
19 MARK MEAD RD, Lewisboro	Cross River NY 10518	6/21/2018 0:00	N	42.18-1-6
19 MARK MEAD RD, Lewisboro	Cross River NY 10518	6/21/2018 0:00	N	42.18-1-6
19 MOHAWK TRL, Lewisboro	KATONAH NY 10536	4/27/2018 0:00	N	31.4-3-49
19 N LAKE CIR, Lewisboro	South Salem NY 10590	9/7/2018 0:00	N	33.3-2-35
19 N SALEM RD, Lewisboro	Cross River NY 10518	2/1/2018 0:00	N	42.18-1-3
19 N SALEM RD, Lewisboro	Cross River NY 10518	4/4/2018 0:00	N	42.18-1-3
19 SALEM LN, Lewisboro	South Salem NY 10590	8/16/2018 0:00	N	43.12-1-9
19 SOUNDVIEW LOOP, Lewisboro	South Salem NY 10590	9/24/2018 0:00	N	77.4-5-41
19 Spring ST S, Lewisboro	South Salem NY 10590	1/19/2018 0:00	N	43.3-3-8
19 Spring ST S, Lewisboro	South Salem NY 10590	11/19/2018 0:00	N	43.3-3-8
19 TRUESDALE LAKE DR, Lewisboro	SOUTH SALEM NY 10590	3/23/2018 0:00	N	43.15-3-20
19 WACCABUC RIVER LN, Lewisboro	South Salem NY 10590	6/15/2018 0:00	N	43.3-1-4
190 GOLDENS BRIDGE RD, Lewisboro	Katonah NY 10536	8/8/2018 0:00	N	40.4-2-2
190 GOLDENS BRIDGE RD, Lewisboro	Katonah NY 10536	4/9/2018 0:00	N	40.4-2-2
190 GOLDENS BRIDGE RD, Lewisboro	Katonah NY 10536	4/9/2018 0:00	N	40.4-2-2
190 GOLDENS BRIDGE RD, Lewisboro	Katonah NY 10536	12/13/2018 0:00	N	40.4-2-2
190 GOLDENS BRIDGE RD, Lewisboro	Katonah NY 10536	12/13/2018 0:00	N	40.4-2-2

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195 GOLDENS BRIDGE RD, Lewisboro	N/A	4/23/2018 0:00	N	
195 N SALEM RD, Lewisboro	Cross River NY 10518	12/13/2018 0:00	N	32.3-3-20
199 ELMWOOD RD, Lewisboro	SOUTH SALEM NY 10590	2/27/2018 0:00	N	66.4-2-28
199 GOLDENS BRIDGE RD, Lewisboro	katonah NY 10536	10/12/2018 0:00	N	
2 APPLE HILL CT, Lewisboro	South Salem NY 10590	6/26/2018 0:00	N	43.3-2-1
2 AUDUBON RD, Lewisboro	SOUTH SALEM NY 10590	3/19/2018 0:00	N	77.2-5-8
2 BUTTERNUT LN, Lewisboro	KATONAH NY 10536	6/5/2018 0:00	N	
2 CHURCH TAVERN RD, Lewisboro	South Salem NY 10590	9/13/2018 0:00	N	44.3-1-29
2 CORNEL DR, Lewisboro	GOLDENS BRIDGE NY 10526	4/20/2018 0:00	N	32.3-1-25
2 COUNTRY LN, Lewisboro	South Salem NY 10590	6/6/2018 0:00	N	43.2-1-12
2 HARBOR PL, Lewisboro	South Salem NY 10590	7/9/2018 0:00	N	43.3-4-18
2 HILLTOP RD, Lewisboro	Waccabuc NY 10597	7/9/2018 0:00	N	32.1-3-42
2 HILLTOP RD, Lewisboro	Waccabuc NY 10597	7/9/2018 0:00	N	32.1-3-42
2 HUNTS LN, Lewisboro	Cross River NY 10518	5/29/2018 0:00	N	42.4-3-34
2 KINGS GRANT WAY, Lewisboro	Waccabuc NY 10597	8/31/2018 0:00	N	32.4-2-1
2 LAKE SHORE DR, Lewisboro	SOUTH SALEM NY 10590	2/23/2018 0:00	N	43.15-2-18
2 MEADOW ST, Lewisboro	Goldens Bridge NY 10526	6/6/2018 0:00	N	30.4-1-7
2 MILLSTONE LN, Lewisboro	South Salem NY 10590	6/28/2018 0:00	N	55.3-3-6
2 MOHAWK TRL, Lewisboro	Katonah NY 10536	12/11/2018 0:00	N	31.4-2-6
2 OLD LN, Lewisboro	South Salem NY 10590	8/24/2018 0:00	N	66.1-2-8
2 OLD POND RD, Lewisboro	South Salem NY 10590	5/29/2018 0:00	N	33.1-1-39
2 ROBINS CT, Lewisboro	South Salem NY 10590	11/2/2018 0:00	N	77.4-3-44
2 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	7/31/2018 0:00	N	
2 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	11/26/2018 0:00	N	
2 SALEM LN, Lewisboro	SOUTH SALEM NY 10590	3/27/2018 0:00	N	43.4-2-7
2 SCENIC DR, Lewisboro	SOUTH SALEM NY 10590	3/22/2018 0:00	N	88.2-1-3
2 SHOSHONE DR, Lewisboro	KATONAH NY 10536	5/1/2018 0:00	N	31.4-3-56
2 SILVERMINE DR, Lewisboro	South Salem NY 10590	8/31/2018 0:00	N	66.4-3-55
2 SOUNDVIEW LOOP, Lewisboro	South Salem NY 10590	10/24/2018 0:00	N	77.4-5-43
2 THE HOOK, Lewisboro	WACCABUC NY 10597	6/18/2018 0:00	N	
2 THE LOGGING RD, Lewisboro	WACCABUC NY 10597	3/1/2018 0:00	N	32.2-1-18
2 TWIN LAKES RD, Lewisboro	SOUTH SALEM NY 10590	3/1/2018 0:00	N	33.3-2-69
2 WEST RD, Lewisboro	South Salem NY 10590	10/15/2018 0:00	N	77.4-2-1
2 WOODWAY, Lewisboro	South Salem NY 10590	12/11/2018 0:00	N	43.4-3-5
2 WRIGHT DR, Lewisboro	Goldens Bridge NY 10526	6/11/2018 0:00	N	32.3-1-35
20 AUTUMN RIDGE RD, Lewisboro	South Salem NY 10590	7/30/2018 0:00	N	33.3-4-15
20 Branch ST, Lewisboro	Goldens Bridge NY 10526	8/27/2018 0:00	N	31.3-2-55
20 FLINTLOCK RIDGE RD, Lewisboro	KATONAH NY 10536	11/15/2018 0:00	N	
20 MARK MEAD RD, Lewisboro	CROSS RIVER NY 10518	5/7/2018 0:00	N	53.6-1-28
20 Shore TRL, Lewisboro	South Salem NY 10590	3/20/2018 0:00	N	65.8-1-10
20 Shore TRL, Lewisboro	South Salem NY 10590	10/18/2018 0:00	N	65.8-1-10
20 SPRING ST S, Lewisboro	South Salem NY 10590	6/27/2018 0:00	N	43.3-4-9
20 SPRING ST S, Lewisboro	South Salem NY 10590	6/27/2018 0:00	N	43.3-4-9
20 SPRING ST S, Lewisboro	South Salem NY 10590	6/27/2018 0:00	N	43.3-4-9
20 TORRY BIT DR, Lewisboro	SOUTH SALEM NY 10590	4/18/2018 0:00	N	
201 TODD RD, Lewisboro	KATONAH NY 10536	3/28/2018 0:00	N	
201 TODD RD, Lewisboro	KATONAH NY 10536	3/19/2018 0:00	N	

Lewisboro and Pound Ridge
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201 TODD RD, Lewisboro	KATONAH NY 10536	11/20/2018 0:00	N	
202 RIDGEFIELD AVE, Lewisboro	South Salem NY 10590	5/9/2018 0:00	N	55.1-1-8
205 RIDGEFIELD AVE, Lewisboro	South Salem NY 10590	8/23/2018 0:00	N	55.1-3-9
21 BAYBERRY LN, Lewisboro	South Salem NY 10590	9/26/2018 0:00	N	43.11-1-23
21 CORNEL DR, Lewisboro	Goldens Bridge NY 10526	8/10/2018 0:00	N	32.3-1-44
21 EAST ST, Lewisboro	South Salem NY 10590	8/15/2018 0:00	N	77.4-3-39
21 Glen DR, Lewisboro	South Salem NY 10590	7/18/2018 0:00	N	77.2-1-11
21 GREEN HILL RD, Lewisboro	Goldens Bridge NY 10526	6/13/2018 0:00	N	30.4-2-11
21 HOYT ST, Lewisboro	South Salem NY 10590	9/14/2018 0:00	N	43.7-1-19
21 Old POND RD, Lewisboro	South Salem NY 10590	8/7/2018 0:00	N	33.1-1-18
21 SILVERMINE DR, Lewisboro	South Salem NY 10590	10/2/2018 0:00	N	66.4-3-40
21 TODD HILL CIR, Lewisboro	Goldens Bridge NY 10526	7/18/2018 0:00	N	31.3-2-18
21 TODD RD, Lewisboro	KATONAH NY 10536	12/18/2018 0:00	N	
21 WEST RD, Lewisboro	SOUTH SALEM NY 10590	2/22/2018 0:00	N	77.4-1-5
21 WOODWAY RD, Lewisboro	SOUTH SALEM NY 10590	4/4/2018 0:00	N	44.3-1-1
21 WOODWAY RD, Lewisboro	SOUTH SALEM NY 10590	4/4/2018 0:00	N	44.3-1-1
210 RIDGEFIELD AVE, Lewisboro	SOUTH SALEM NY 10590	3/27/2018 0:00	N	55.1-1-6
210 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	11/12/2018 0:00	N	66.1-2-36
215 KITCHAWAN RD, Lewisboro	South Salem NY 10590	9/27/2018 0:00	N	66.1-2-16
218 RIDGEFIELD AVE, Lewisboro	South Salem NY 10590	6/5/2018 0:00	N	55.1-1-4
21BOUTONVILLE RD, Lewisboro	N/A	12/27/2018 0:00	N	
22 BEAVER POND LN, Lewisboro	South Salem NY 10590	10/20/2018 0:00	N	66.3-2-14
22 HILLTOP RD, Lewisboro	WACCABUC NY 10597	3/15/2018 0:00	N	32.1-3-15
22 HOWE ST, Lewisboro	South Salem NY 10590	8/29/2018 0:00	N	43.7-2-2
22 MOHAWK TRAIL, Lewisboro	N/A	1/9/2018 0:00	N	
22 MT HOLLY RD E, Lewisboro	KATONAH NY 10536	4/23/2018 0:00	N	
22 OUTPOST, Lewisboro	Katonah NY 10536	12/26/2018 0:00	N	41.10-4-62
22 SOUNDVIEW LOOP, Lewisboro	South Salem NY 10590	4/30/2018 0:00	N	77.4-5-30
22 SOUNDVIEW LOOP, Lewisboro	South Salem NY 10590	11/27/2018 0:00	N	77.4-5-30
22 TARRY-A-BIT DR, Lewisboro	Waccabuc NY 10597	9/11/2018 0:00	N	32.4-3-47
22 TODD HILL CIR, Lewisboro	Goldens Bridge NY 10526	7/20/2018 0:00	N	31.3-2-35
22 TRI-BROOK DR, Lewisboro	South Salem NY 10590	12/17/2018 0:00	N	66.2-2-25
22 WACCABUC RIVER LN, Lewisboro	South Salem NY 10590	5/9/2018 0:00	N	43.1-1-22
22 WEST RD, Lewisboro	South Salem NY 10590	10/18/2018 0:00	N	77.4-2-74
221 NORTH SALEM RD, Lewisboro	waccabuc NY 10597	9/10/2018 0:00	N	
225 MEAD ST, Lewisboro	Waccabuc NY 10597	10/22/2018 0:00	N	32.2-2-57
23 E MOUNTAIN RD, Lewisboro	Katonah NY 10536	11/7/2018 0:00	N	41.10-4-24
23 GILBERT ST, Lewisboro	N/A	4/5/2018 0:00	N	
23 LAKE ST, Lewisboro	GOLDENS BRIDGE NY 10526	4/10/2018 0:00	N	31.3-2-60
23 POST OFFICE RD, Lewisboro	Waccabuc NY 10597	11/19/2018 0:00	N	32.4-3-40
23 ROCK SHELTER RD, Lewisboro	WACCABUC NY 10597	2/12/2018 0:00	N	
23 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	10/25/2018 0:00	N	
23 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	10/2/2018 0:00	N	
23 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	7/16/2018 0:00	N	
23 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	8/15/2018 0:00	N	
23 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	8/1/2018 0:00	N	
23 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	2/28/2018 0:00	N	

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23 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	2/6/2018 0:00	N	
23 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	1/5/2018 0:00	N	
23 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	4/12/2018 0:00	N	
23 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	3/16/2018 0:00	N	
23 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	6/22/2018 0:00	N	
23 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	5/2/2018 0:00	N	
23 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	5/24/2018 0:00	N	
23 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	11/21/2018 0:00	N	
23 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	12/7/2018 0:00	N	
23 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	12/24/2018 0:00	N	
23 SALEM LN, Lewisboro	South Salem NY 10590	7/20/2018 0:00	N	43.12-1-7
23 SUNNY RDG, Lewisboro	Katonah NY 10536	9/19/2018 0:00	N	41.6-2-29
23 TRI-BROOK DR, Lewisboro	South Salem NY 10590	8/29/2018 0:00	N	66.2-2-17
23 UPPER LAKE SHR, Lewisboro	Katonah NY 10536	11/10/2018 0:00	N	41.6-2-8
231 INCREASE MILLER RD, Lewisboro	Katonah NY 10536	6/6/2018 0:00	N	41.2-2-19
233 INCREASE MILLER RD, Lewisboro	Katonah NY 10536	10/30/2018 0:00	N	41.2-2-20
235 ELMWOOD RD, Lewisboro	South Salem NY 10590	10/19/2018 0:00	N	66.4-2-20
236 KITCHAWAN RD, Lewisboro	South Salem NY 10590	12/17/2018 0:00	N	66.1-1-35
237 TODD RD, Lewisboro	KATONAH NY 10536	6/4/2018 0:00	N	
24 CHURCH TAVERN RD, Lewisboro	South Salem NY 10590	10/15/2018 0:00	N	44.3-1-5
24 EAST ST, Lewisboro	South Salem NY 10590	8/28/2018 0:00	N	77.4-4-10
24 Glen DR, Lewisboro	South Salem NY 10590	12/7/2018 0:00	N	77.2-3-11
24 LOWER SALEM RD, Lewisboro	South Salem NY 10590	9/12/2018 0:00	N	43.1-3-27
24 TRI-BROOK DR, Lewisboro	South Salem NY 10590	8/15/2018 0:00	N	66.2-2-24
24 WEST LN, Lewisboro	South Salem NY 10590	12/19/2018 0:00	N	55.3-7-26
245 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	8/10/2018 0:00	N	66.4-1-25
247 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	7/5/2018 0:00	N	66.3-3-5
25 Branch ST, Lewisboro	Goldens Bridge NY 10526	7/5/2018 0:00	N	31.3-2-49
25 BRUNDIGE DR, Lewisboro	GOLDENS BRIDGE NY 10526	3/16/2018 0:00	N	32.3-1-10
25 FIVE PONDS DR, Lewisboro	WACCABUC NY 10597	2/28/2018 0:00	N	32.2-1-45
25 HOLLY HILL LN, Lewisboro	KATONAH NY 10536	8/16/2018 0:00	N	
25 SILVERMINE DR, Lewisboro	SOUTH SALEM NY 10590	2/20/2018 0:00	N	66.4-3-42
25 SUNSET, Lewisboro	Katonah NY 10536	11/7/2018 0:00	N	41.10-4-45
25 TRI BROOK DR, Lewisboro	SOUTH SALEM NY 10590	1/26/2018 0:00	N	66.2-2-18
25 WACCABUC RIVER LN, Lewisboro	South Salem NY 10590	10/8/2018 0:00	N	43.1-1-21
25 WACCABUC RIVER LN, Lewisboro	South Salem NY 10590	10/8/2018 0:00	N	43.1-1-21
25 WEST RD, Lewisboro	SOUTH SALEM NY 10590	4/30/2018 0:00	N	77.4-1-7
25 WOODWAY RD, Lewisboro	SOUTH SALEM NY 10590	4/8/2018 0:00	N	43.4-5-6
252 INCREASE MILLER RD, Lewisboro	Katonah NY 10536	8/7/2018 0:00	N	41.2-1-2
252 N SALEM DR, Lewisboro	N/A	7/30/2018 0:00	N	
254 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	10/5/2018 0:00	N	66.3-2-25
254 TODD RD, Lewisboro	KATONAH NY 10536	11/2/2018 0:00	N	
255 SILVER SPRING RD, Lewisboro	South Salem NY 10590	5/8/2018 0:00	N	78.1-2-9
257 KITCHAWAN RD, Lewisboro	SOUTH SALEM NY 10590	4/30/2018 0:00	N	66.1-2-25
257 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	7/27/2018 0:00	N	66.4-1-23
258 INCREASE MILLER RD, Lewisboro	Katonah NY 10536	6/19/2018 0:00	N	31.4-2-60
26 Branch ST, Lewisboro	Goldens Bridge NY 10526	7/5/2018 0:00	N	31.3-2-51

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26 Cove RD, Lewisboro	South Salem NY 10590	7/9/2018 0:00	N	33.13-2-38
26 DEERTRACK LN, Lewisboro	Goldens Bridge NY 10526	8/27/2018 0:00	N	31.13-2-32
26 GILBERT ST, Lewisboro	South Salem NY 10590	9/19/2018 0:00	N	43.7-4-38
26 MANDIA LN, Lewisboro	Goldens Bridge NY 10526	10/30/2018 0:00	N	40.1-1-8
26 Old BEDFORD RD, Lewisboro	Goldens Bridge NY 10526	2/28/2018 0:00	N	30.4-1-49
26 Old BEDFORD RD, Lewisboro	Goldens Bridge NY 10526	2/28/2018 0:00	N	30.4-1-49
26 ROCK SHELTER RD, Lewisboro	WACCABUC NY 10597	5/30/2018 0:00	N	
26 SCOTTS LN, Lewisboro	South Salem NY 10590	9/20/2018 0:00	N	43.1-4-17
26 SHADY LN, Lewisboro	South Salem NY 10590	8/23/2018 0:00	N	66.1-3-25
26 TRI-BROOK DR, Lewisboro	South Salem NY 10590	6/18/2018 0:00	N	66.2-2-23
260 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	5/18/2018 0:00	N	66.3-2-28
269 KITCHAWAN RD, Lewisboro	South Salem NY 10590	8/2/2018 0:00	N	66.1-2-28
27 BOUTON ST, Lewisboro	SOUTH SALEM NY 10590	4/26/2018 0:00	N	43.7-4-23
27 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	7/5/2018 0:00	N	32.1-2-24
27 GILBERT ST, Lewisboro	SOUTH SALEM NY 10590	2/1/2018 0:00	N	43.7-4-10
27 GRANDVIEW RD, Lewisboro	SOUTH SALEM NY 10590	3/28/2018 0:00	N	65.8-3-9
27 HALL AVE, Lewisboro	Goldens Bridge NY 10526	7/3/2018 0:00	N	31.3-1-18
27 HEMLOCK RD, Lewisboro	South Salem NY 10590	5/30/2018 0:00	N	54.20-6-12
27 HUNT FARM RD, Lewisboro	WACCABUC NY 10597	7/10/2018 0:00	N	
27 MARK MEAD RD, Lewisboro	CROSS RIVER NY 10518	1/9/2018 0:00	N	42.4-2-2
27 MT HOLLY RD E, Lewisboro	KATONAH NY 10536	5/11/2018 0:00	N	
27 OLD OSCALETA RD, Lewisboro	SOUTH SALEM NY 10590	4/30/2018 0:00	N	33.4-2-5
27 OLD SHOP RD, Lewisboro	CROSS RIVER NY 10518	2/20/2018 0:00	N	53.1-2-27
27 SPRING ST, Lewisboro	SOUTH SALEM NY 10590	4/6/2018 0:00	N	43.3-3-10
27 SULLIVAN RD, Lewisboro	NORTH SALEM NY 10560	6/29/2018 0:00	N	
27 TODD RD, Lewisboro	KATONAH NY 10536	7/19/2018 0:00	N	
27 TODD RD, Lewisboro	KATONAH NY 10536	7/19/2018 0:00	N	
27 TRI BROOK DR, Lewisboro	SOUTH SALEM NY 10590	1/29/2018 0:00	N	66.2-2-19
272 KITCHAWAN RD, Lewisboro	SOUTH SALEM NY 10590	3/28/2018 0:00	N	66.1-1-26
272 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	7/4/2018 0:00	N	66.3-2-31
275 TODD RD, Lewisboro	KATONAH NY 10536	6/18/2018 0:00	N	
276 N SALEM RD, Lewisboro	CROSS RIVER NY 10518	2/19/2018 0:00	N	
279 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	8/9/2018 0:00	N	31.13-1-59
28 CHURCH TAVERN RD, Lewisboro	South Salem NY 10590	10/2/2018 0:00	N	44.3-1-6
28 COVE RD, Lewisboro	South Salem NY 10590	5/9/2018 0:00	N	33.13-2-37
28 DEERFIELD, Lewisboro	Katonah NY 10536	8/1/2018 0:00	N	41.10-4-50
28 DEERTRACK LN, Lewisboro	Goldens Bridge NY 10526	8/1/2018 0:00	N	31.13-2-33
28 INDIAN LN, Lewisboro	South Salem NY 10590	6/26/2018 0:00	N	43.7-1-25
28 OLD POST RD, Lewisboro	N/A	5/24/2018 0:00	N	
28 TWIN LAKES RD, Lewisboro	South Salem NY 10590	8/14/2018 0:00	N	33.3-2-55
28 WEST LN, Lewisboro	South Salem NY 10590	5/10/2018 0:00	N	55.3-7-6
284 WACCABUC RD, Lewisboro	N/A	12/5/2018 0:00	N	
284 WACCABUC RD, Lewisboro	N/A	12/5/2018 0:00	N	
285 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	5/11/2018 0:00	N	66.4-1-19
287 TODD RD, Lewisboro	KATONAH NY 10536	8/16/2018 0:00	N	
287 TODD RD, Lewisboro	KATONAH NY 10536	7/19/2018 0:00	N	
288 TODD RD, Lewisboro	KATONAH NY 10536	8/29/2018 0:00	N	

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29 BOUTON ST, Lewisboro	South Salem NY 10590	6/26/2018 0:00	N	43.7-4-24
29 EAST ST, Lewisboro	South Salem NY 10590	7/6/2018 0:00	N	77.4-3-37
29 GREEN HILL RD, Lewisboro	GOLDENS BRIDGE NY 10526	3/15/2018 0:00	N	30.4-2-15
29 HOYT ST, Lewisboro	South Salem NY 10590	5/16/2018 0:00	N	43.7-6-2
29 LAKE SHORE DR, Lewisboro	South Salem NY 10590	9/10/2018 0:00	N	43.15-3-6
29 MARK MEAD RD, Lewisboro	Cross River NY 10518	6/7/2018 0:00	N	42.4-2-3
29 MT HOLLY RD E, Lewisboro	KATONAH NY 10536	4/4/2018 0:00	N	
29 OLD BEDFORD RD, Lewisboro	Goldens Bridge NY 10526	10/18/2018 0:00	N	30.4-1-12
29 OSCALETA RD, Lewisboro	South Salem NY 10590	11/6/2018 0:00	N	33.3-3-25
29 S MOUNTAIN PASS, Lewisboro	Katonah NY 10536	7/11/2018 0:00	N	41.10-3-22
3 APACHE CIR, Lewisboro	Katonah NY 10536	12/18/2018 0:00	N	31.4-3-52
3 AUDUBON RD, Lewisboro	SOUTH SALEM NY 10590	5/4/2018 0:00	N	77.2-5-11
3 AUTUMN RIDGE RD, Lewisboro	South Salem NY 10590	11/9/2018 0:00	N	43.1-2-23
3 BEAVER POND LN, Lewisboro	South Salem NY 10590	8/22/2018 0:00	N	66.3-2-8
3 BILLINGSLEY TRL, Lewisboro	GOLDENS BRIDGE NY 10526	4/9/2018 0:00	N	32.1-2-25
3 BIRCH RD, Lewisboro	South Salem NY 10590	5/31/2018 0:00	N	77.2-2-3
3 HASTINGS CT, Lewisboro	South Salem NY 10590	12/3/2018 0:00	N	78.1-2-19
3 HUNT FARM RD, Lewisboro	WACCABUC NY 10597	12/10/2018 0:00	N	
3 IDA LN, Lewisboro	SOUTH SALEM NY 10590	3/27/2018 0:00	N	54.20-1-11
3 MILLSTONE LN, Lewisboro	South Salem NY 10590	8/16/2018 0:00	N	55.3-3-33
3 MOHAWK TRL, Lewisboro	Katonah NY 10536	11/7/2018 0:00	N	31.4-3-41
3 SHOSHONE DR, Lewisboro	KATONAH NY 10536	8/29/2018 0:00	N	
3 TIMBERWOOD PL, Lewisboro	South Salem NY 10590	11/15/2018 0:00	N	66.2-2-29
3 TRI-BROOK DR, Lewisboro	South Salem NY 10590	10/16/2018 0:00	N	66.2-2-7
3 W MAIN ST, Lewisboro	Goldens Bridge NY 10526	11/2/2018 0:00	N	31.3-1-68
30 BOUTON ST, Lewisboro	South Salem NY 10590	6/1/2018 0:00	N	43.7-3-1
30 CHAPEL CT, Lewisboro	WACCABUC NY 10597	10/12/2018 0:00	N	
30 E RIDGE RD, Lewisboro	WACCABUC NY 10597	7/20/2018 0:00	N	
30 EAST ST, Lewisboro	South Salem NY 10590	8/18/2018 0:00	N	77.4-4-11
30 LAKEVIEW RD, Lewisboro	South Salem NY 10590	10/23/2018 0:00	N	33.13-4-5
30 TWIN LAKES RD, Lewisboro	South Salem NY 10590	10/30/2018 0:00	N	33.3-2-54
300 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	11/15/2018 0:00	N	66.4-1-16
300 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	11/21/2018 0:00	N	31.3-1-7
304 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	8/15/2018 0:00	N	77.1-1-24
31 BOUTON ST, Lewisboro	SOUTH SALEM NY 10590	2/28/2018 0:00	N	43.7-4-25
31 BRUNDIGE DR, Lewisboro	GOLDENS BRIDGE NY 10526	5/3/2018 0:00	N	32.3-2-19
31 FLINTLOCK RIDGE RD, Lewisboro	KATONAH NY 10536	7/17/2018 0:00	N	
31 GREEN HILL RD, Lewisboro	Goldens Bridge NY 10526	6/20/2018 0:00	N	30.4-2-16
31 INDIAN LN, Lewisboro	South Salem NY 10590	12/11/2018 0:00	N	43.7-1-12
31 ROCK SHELTER RD, Lewisboro	WACCABUC NY 10597	3/26/2018 0:00	N	
31 SABBATHDAY HL, Lewisboro	South Salem NY 10590	11/19/2018 0:00	N	43.3-4-27
31 SPRING ST S, Lewisboro	SOUTH SALEM NY 10590	2/23/2018 0:00	N	43.3-3-12
31 TODD HILL CIR, Lewisboro	Goldens Bridge NY 10526	12/7/2018 0:00	N	31.3-2-23
313 GOLDENS BRIDGE RD, Lewisboro	N/A	2/22/2018 0:00	N	
313 MAIN ST, Lewisboro	goldens bridge NY 10526	7/13/2018 0:00	N	
313 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	5/24/2018 0:00	N	30.4-2-36
313 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	1/12/2018 0:00	N	30.4-2-36

Lewisboro and Pound Ridge
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Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
313 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	1/11/2018 0:00	N	30.4-2-36
313 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	3/15/2018 0:00	N	30.4-2-36
313 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	3/6/2018 0:00	N	30.4-2-36
313 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	3/6/2018 0:00	N	30.4-2-36
313 TODD RD, Lewisboro	KATONAH NY 10536	12/13/2018 0:00	N	
32 BOUTONVILLE RD, Lewisboro	SOUTH SALEM NY 10590	6/5/2018 0:00	N	
32 FLINTLOCK RIDGE RD, Lewisboro	KATONAH NY 10536	12/6/2018 0:00	N	
32 GREEN HILL RD, Lewisboro	GOLDENS BRIDGE NY 10526	3/12/2018 0:00	N	30.4-2-43
32 OLD CHURCH LN, Lewisboro	SOUTH SALEM NY 10590	9/26/2018 0:00	N	
32 WACCABUC RD, Lewisboro	GOLDENS BRIDGE NY 10526	4/12/2018 0:00	N	32.1-2-10
321 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	6/8/2018 0:00	N	30.4-2-38
325 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	7/6/2018 0:00	N	77.2-1-32
327 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	11/15/2018 0:00	N	30.4-2-19
33 BOOTENVILLE ROAD, Lewisboro	N/A	9/10/2018 0:00	N	
33 BOUTON ST, Lewisboro	South Salem NY 10590	10/17/2018 0:00	N	43.7-4-26
33 COVE RD, Lewisboro	South Salem NY 10590	5/24/2018 0:00	N	33.13-4-34
33 LOWER SALEM RD, Lewisboro	South Salem NY 10590	11/8/2018 0:00	N	43.1-3-32
33 MEAD ST, Lewisboro	WACCABUC NY 10597	5/16/2018 0:00	N	
33 SULLIVAN RD, Lewisboro	NORTH SALEM NY 10560	8/17/2018 0:00	N	
33 WEST LN, Lewisboro	South Salem NY 10590	11/5/2018 0:00	N	55.1-4-13
336 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	5/30/2018 0:00	N	77.1-2-14
34 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	10/26/2018 0:00	N	32.3-1-17
34 COVE RD, Lewisboro	South Salem NY 10590	9/20/2018 0:00	N	33.13-2-25
34 GILBERT ST, Lewisboro	South Salem NY 10590	8/17/2018 0:00	N	43.7-4-34
34 GREENHILL RD, Lewisboro	N/A	9/19/2018 0:00	N	
34 LAKE KITCHAWAN DR, Lewisboro	SOUTH SALEM NY 10590	2/19/2018 0:00	N	55.3-1-25
34 MAIN ST, Lewisboro	SOUTH SALEM NY 10590	1/23/2018 0:00	N	43.11-1-14
34 WEST RD, Lewisboro	South Salem NY 10590	9/18/2018 0:00	N	77.4-2-69
35 CROSS POND RD, Lewisboro	POUND RIDGE NY 10576	3/27/2018 0:00	N	
35 INDIAN HILL RD, Lewisboro	KATONAH NY 10536	3/26/2018 0:00	N	
35 MAIN ST, Lewisboro	SOUTH SALEM NY 10590	2/1/2018 0:00	N	43.11-3-40
35 MARK MEAD RD, Lewisboro	Cross River NY 10518	10/11/2018 0:00	N	42.4-2-4
35 N SALEM RD, Lewisboro	Cross River NY 10518	11/8/2018 0:00	N	42.3-2-7
35 N SALEM RD, Lewisboro	Cross River NY 10518	11/8/2018 0:00	N	42.3-2-7
35 S MOUNTAIN PASS, Lewisboro	KATONAH NY 10536	4/21/2018 0:00	N	41.10-3-21
35 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	4/24/2018 0:00	N	
35 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	8/23/2018 0:00	N	
35 SCHOOLHOUSE RD, Lewisboro	WACCABUC NY 10597	10/4/2018 0:00	N	
35 Spring ST S, Lewisboro	South Salem NY 10590	6/1/2018 0:00	N	43.3-3-14
353 ROUTE 22, Lewisboro	GOLDENS BRIDGE NY 10526	4/28/2018 0:00	N	30.4-2-40
355 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	8/30/2018 0:00	N	77.2-3-1
355 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	8/30/2018 0:00	N	77.2-3-1
355 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	3/9/2018 0:00	N	30.4-2-21
355 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	5/8/2018 0:00	N	30.4-2-21
355 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	5/8/2018 0:00	N	30.4-2-21
36 E RIDGE RD, Lewisboro	WACCABUC NY 10597	6/8/2018 0:00	N	
36 HOLLY HILL LN, Lewisboro	KATONAH NY 10536	6/7/2018 0:00	N	

Lewisboro and Pound Ridge

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Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
36 HOYT ST, Lewisboro	South Salem NY 10590	11/15/2018 0:00	N	43.7-5-13
36 LOCKWOOD RD, Lewisboro	South Salem NY 10590	11/7/2018 0:00	N	66.4-2-8
36 MEAD ST, Lewisboro	WACCABUC NY 10597	7/6/2018 0:00	N	
36 MEAD ST, Lewisboro	WACCABUC NY 10597	7/6/2018 0:00	N	
36 TRUESDALE WOODS, Lewisboro	SOUTH SALEM NY 10590	12/11/2018 0:00	N	
36 WEST LN, Lewisboro	South Salem NY 10590	12/26/2018 0:00	N	55.4-1-1
37 BOLTON RD, Lewisboro	N/A	7/9/2018 0:00	N	
37 CROSS POND RD, Lewisboro	POUND RIDGE NY 10576	3/27/2018 0:00	N	
37 EAST ST, Lewisboro	South Salem NY 10590	10/30/2018 0:00	N	77.4-3-35
37 GLEN DR, Lewisboro	SOUTH SALEM NY 10590	5/10/2018 0:00	N	
37 HOYT ST, Lewisboro	South Salem NY 10590	12/3/2018 0:00	N	43.7-6-16
37 INDIAN HILL RD, Lewisboro	KATONAH NY 10536	8/8/2018 0:00	N	
37 KNAPP RD, Lewisboro	South Salem NY 10590	8/29/2018 0:00	N	33.3-3-17
37 LOWER SALEM RD, Lewisboro	South Salem NY 10590	5/10/2018 0:00	N	43.1-3-30
377 SMITH RIDGE RD, Lewisboro	SOUTH SALEM NY 10590	1/18/2018 0:00	N	77.11-2-9
377 SMITH RIDGE RD, Lewisboro	SOUTH SALEM NY 10590	1/18/2018 0:00	N	77.11-2-9
38 MARK MEAD RD, Lewisboro	CROSS RIVER NY 10518	2/15/2018 0:00	N	53.2-1-2
38 TRUESDALE LAKE DR, Lewisboro	SOUTH SALEM NY 10590	4/27/2018 0:00	N	43.12-1-18
38 UPPER LAKESHORE DR, Lewisboro	KATONAH NY 10536	10/5/2018 0:00	N	
382 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	10/3/2018 0:00	N	30.2-1-8
384 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	10/29/2018 0:00	N	30.2-1-9
386 SMITH RIDGE RD, Lewisboro	SOUTH SALEM NY 10590	3/28/2018 0:00	N	
386 SMITH RIDGE RD, Lewisboro	N/A	7/12/2018 0:00	N	
39 CHURCH TAVERN RD, Lewisboro	South Salem NY 10590	8/16/2018 0:00	N	44.3-1-14
39 GREEN HILL RD, Lewisboro	Goldens Bridge NY 10526	11/27/2018 0:00	N	30.4-2-18
39 INDIAN HILL RD, Lewisboro	KATONAH NY 10536	4/26/2018 0:00	N	
39 KNAPP RD, Lewisboro	South Salem NY 10590	5/22/2018 0:00	N	33.3-3-16
39 LOWER SALEM RD, Lewisboro	South Salem NY 10590	9/24/2018 0:00	N	43.1-2-78
39 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	3/5/2018 0:00	N	
391 POUND RIDGE RD, Lewisboro	South Salem NY 10590	12/26/2018 0:00	N	54.1-2-11
399 POUND RIDGE RD, Lewisboro	South Salem NY 10590	5/30/2018 0:00	N	54.1-2-10
4 ADAMS HILL RD, Lewisboro	Cross River NY 10518	12/31/2018 0:00	N	42.4-3-27
4 APACHE CIR, Lewisboro	Goldens Bridge NY 10526	7/5/2018 0:00	N	31.4-3-23
4 APPLE HILL CT, Lewisboro	South Salem NY 10590	5/21/2018 0:00	N	43.3-2-2
4 AUTUMN RIDGE RD, Lewisboro	SOUTH SALEM NY 10590	3/23/2018 0:00	N	43.1-2-29
4 BILLINGSLEY TRL, Lewisboro	GOLDENS BRIDGE NY 10526	2/5/2018 0:00	N	32.1-2-17
4 BIRCH RD, Lewisboro	South Salem NY 10590	7/19/2018 0:00	N	77.2-1-5
4 BRADY LN, Lewisboro	Katonah NY 10536	6/26/2018 0:00	N	41.2-1-8
4 BROOK MANOR DR, Lewisboro	South Salem NY 10590	6/25/2018 0:00	N	43.1-2-37
4 BROOKSIDE TRL, Lewisboro	South Salem NY 10590	9/25/2018 0:00	N	65.8-1-15
4 CHERRY ST, Lewisboro	KATONAH NY 10536	6/25/2018 0:00	N	
4 CHURCH TAVERN RD, Lewisboro	South Salem NY 10590	7/20/2018 0:00	N	44.3-1-28
4 DEER RUN RD, Lewisboro	South Salem NY 10590	4/26/2018 0:00	N	66.2-3-27
4 FAY LN, Lewisboro	South Salem NY 10590	10/2/2018 0:00	N	54.4-2-4
4 FLINTLOCK RIDGE RD, Lewisboro	Katonah NY 10536	8/1/2018 0:00	N	31.4-2-34
4 FLINTLOCK RIDGE RD, Lewisboro	Katonah NY 10536	8/1/2018 0:00	N	31.4-2-34
4 FLINTLOCK RIDGE RD, Lewisboro	Katonah NY 10536	11/5/2018 0:00	N	31.4-2-34

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4 IDA LN, Lewisboro	POUND RIDGE NY 10576	8/24/2018 0:00	N	
4 MAKEPEACE HL, Lewisboro	Waccabuc NY 10597	6/1/2018 0:00	N	32.2-2-21
4 MAKEPEACE HL, Lewisboro	Waccabuc NY 10597	7/21/2018 0:00	N	32.2-2-21
4 OLD ORCHARD RD, Lewisboro	South Salem NY 10590	9/10/2018 0:00	N	66.2-3-38
4 ROBINS CT, Lewisboro	South Salem NY 10590	7/24/2018 0:00	N	77.4-3-45
4 S WIND DR, Lewisboro	Cross River NY 10518	10/23/2018 0:00	N	53.1-2-15
4 SHORE TRL, Lewisboro	SOUTH SALEM NY 10590	4/6/2018 0:00	N	65.8-1-5
4 SOUNDVIEW LOOP, Lewisboro	SOUTH SALEM NY 10590	3/5/2018 0:00	N	77.4-5-42
4 SUNNY RDG, Lewisboro	Katonah NY 10536	12/17/2018 0:00	N	41.6-2-52
4 THE LOGGING RD, Lewisboro	Waccabuc NY 10597	5/29/2018 0:00	N	32.2-1-19
4 TIMBERWOOD PL, Lewisboro	South Salem NY 10590	6/13/2018 0:00	N	66.2-2-33
4 UPLAND CT, Lewisboro	SOUTH SALEM NY 10590	3/19/2018 0:00	N	77.4-2-53
40 BRUNDIGE DR, Lewisboro	GOLDENS BRIDGE NY 10526	4/20/2018 0:00	N	32.3-1-27
40 GILBERT ST, Lewisboro	South Salem NY 10590	11/9/2018 0:00	N	43.7-4-31
40 HILLTOP RD, Lewisboro	Waccabuc NY 10597	7/19/2018 0:00	N	32.1-3-6
401 SMITH RIDGE RD, Lewisboro	SOUTH SALEM NY 10590	2/12/2018 0:00	N	77.11-2-15
405 SMITH RIDGE RD, Lewisboro	SOUTH SALEM NY 10590	3/30/2018 0:00	N	77.4-3-1
407 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	8/7/2018 0:00	N	77.4-3-3
407 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	8/7/2018 0:00	N	77.4-3-3
41 CROSS POND RD, Lewisboro	POUND RIDGE NY 10576	6/6/2018 0:00	N	
41 E RIDGE RD, Lewisboro	WACCABUC NY 10597	11/9/2018 0:00	N	
41 HUNT FARM RD, Lewisboro	N/A	12/24/2018 0:00	N	
41 LAKEVIEW PASS, Lewisboro	Katonah NY 10536	6/21/2018 0:00	N	41.10-2-19
41 LAKEVIEW RD, Lewisboro	South Salem NY 10590	10/30/2018 0:00	N	33.13-3-27
41 LOCKWOOD RD, Lewisboro	South Salem NY 10590	7/19/2018 0:00	N	66.4-3-58
41 LOWER SALEM RD, Lewisboro	South Salem NY 10590	11/21/2018 0:00	N	43.1-3-29
41 LOWER SALEM RD, Lewisboro	South Salem NY 10590	11/21/2018 0:00	N	43.1-3-29
41 PERCH BAY RD, Lewisboro	Waccabuc NY 10597	6/28/2018 0:00	N	33.3-1-2
41 PINE HILL DR, Lewisboro	South Salem NY 10590	10/16/2018 0:00	N	54.2-1-36
41 ROCK SHELTER RD, Lewisboro	WACCABUC NY 10597	12/1/2018 0:00	N	
41 ROCK SHELTER RD, Lewisboro	WACCABUC NY 10597	12/1/2018 0:00	N	
411 SMITH RIDGE RD, Lewisboro	SOUTH SALEM NY 10590	4/30/2018 0:00	N	77.4-3-4
411 SMITH RIDGE RD, Lewisboro	SOUTH SALEM NY 10590	4/30/2018 0:00	N	77.4-3-4
42 GRANDVIEW RD, Lewisboro	South Salem NY 10590	9/17/2018 0:00	N	65.8-5-22
42 HILLTOP RD, Lewisboro	Waccabuc NY 10597	11/9/2018 0:00	N	32.1-3-5
42 INDIAN HILL RD, Lewisboro	Katonah NY 10536	9/11/2018 0:00	N	31.4-2-25
42 LAKE SHORE DR, Lewisboro	SOUTH SALEM NY 10590	4/25/2018 0:00	N	43.11-3-14
42 MAIN ST, Lewisboro	Goldens Bridge NY 10526	12/17/2018 0:00	N	41.1-1-12
42 OLD CHURCH LN, Lewisboro	SOUTH SALEM NY 10590	9/17/2018 0:00	N	
425 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	10/5/2018 0:00	N	77.4-3-80
43 BOUTONVILLE RD, Lewisboro	South Salem NY 10590	11/29/2018 0:00	N	54.2-2-58
43 GILBERT ST, Lewisboro	South Salem NY 10590	7/3/2018 0:00	N	43.7-4-2
43 GREEN HILL RD, Lewisboro	Goldens Bridge NY 10526	5/12/2018 0:00	N	30.4-2-28
43 TODD HILL CIR, Lewisboro	Goldens Bridge NY 10526	11/8/2018 0:00	N	31.3-2-28
43 TWIN LAKES RD, Lewisboro	South Salem NY 10590	12/27/2018 0:00	N	33.3-2-38
448 SMITH RIDGE RD, Lewisboro	SOUTH SALEM NY 10590	4/19/2018 0:00	N	77.4-2-30
45 BOUTON RD, Lewisboro	South Salem NY 10590	7/5/2018 0:00	N	43.1-4-6

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45 COVE RD, Lewisboro	South Salem NY 10590	8/10/2018 0:00	N	33.13-3-12
45 EAST ST, Lewisboro	South Salem NY 10590	12/4/2018 0:00	N	77.4-3-33
45 ELMWOOD RD, Lewisboro	South Salem NY 10590	8/23/2018 0:00	N	55.3-7-17
45 HOWE ST, Lewisboro	SOUTH SALEM NY 10590	11/14/2018 0:00	N	
45 MAIN ST, Lewisboro	GOLDENS BRIDGE NY 10526	1/16/2018 0:00	N	
45 OLD BEDFORD RD, Lewisboro	GOLDENS BRIDGE NY 10526	1/9/2018 0:00	N	30.4-1-29
45 ROCK SHELTER RD, Lewisboro	WACCABUC NY 10597	7/25/2018 0:00	N	
45 TODD HILL CIR, Lewisboro	Goldens Bridge NY 10526	10/26/2018 0:00	N	31.3-2-29
45 TWIN LAKES RD, Lewisboro	South Salem NY 10590	7/14/2018 0:00	N	33.3-2-39
46 CROSS POND RD, Lewisboro	POUND RIDGE NY 10576	12/12/2018 0:00	N	
46 GRANDVIEW RD, Lewisboro	SOUTH SALEM NY 10590	3/27/2018 0:00	N	65.8-5-21
46 GREEN HILL RD, Lewisboro	Goldens Bridge NY 10526	9/4/2018 0:00	N	30.4-2-31
46 TRUESDALE WOODS, Lewisboro	SOUTH SALEM NY 10590	10/23/2018 0:00	N	
463 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	9/13/2018 0:00	N	77.4-3-62
47 BENEDICT RD, Lewisboro	South Salem NY 10590	10/2/2018 0:00	N	33.3-1-20
47 MAIN ST, Lewisboro	SOUTH SALEM NY 10590	3/19/2018 0:00	N	43.11-3-31
48 BOUTON RD, Lewisboro	SOUTH SALEM NY 10590	8/10/2018 0:00	N	
48 LAKE SHORE DR, Lewisboro	South Salem NY 10590	5/15/2018 0:00	N	43.11-3-16
48 TWIN LAKES RD, Lewisboro	SOUTH SALEM NY 10590	1/30/2018 0:00	N	33.3-2-45
485 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	7/20/2018 0:00	N	77.4-4-9
49 CHURCH TAVERN RD, Lewisboro	SOUTH SALEM NY 10590	3/28/2018 0:00	N	44.3-1-12
49 CONANT VALLEY RD, Lewisboro	South Salem NY 10590	6/28/2018 0:00	N	77.1-1-13
49 EAST ST, Lewisboro	South Salem NY 10590	10/20/2018 0:00	N	77.4-3-31
49 LAKE SHORE DR, Lewisboro	South Salem NY 10590	6/4/2018 0:00	N	43.11-3-12
49 TODD HILL CIR, Lewisboro	Goldens Bridge NY 10526	5/23/2018 0:00	N	31.3-2-30
49 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	10/18/2018 0:00	N	43.11-5-3
5 APACHE CIR, Lewisboro	Katonah NY 10536	10/26/2018 0:00	N	31.4-3-53
5 BIG WOODS TRL, Lewisboro	Katonah NY 10536	5/22/2018 0:00	N	41.10-2-18
5 BLUEBERRY LN, Lewisboro	SOUTH SALEM NY 10590	1/15/2018 0:00	N	77.4-2-6
5 BOUTON ST, Lewisboro	South Salem NY 10590	9/12/2018 0:00	N	43.11-2-12
5 CANAAN CIR, Lewisboro	South Salem NY 10590	7/24/2018 0:00	N	78.3-1-3
5 CHEROKEE CT, Lewisboro	Katonah NY 10536	7/2/2018 0:00	N	31.4-2-8
5 CIDER MILL FARM, Lewisboro	SOUTH SALEM NY 10590	3/19/2018 0:00	N	43.3-2-13
5 CORNEL DR, Lewisboro	GOLDENS BRIDGE NY 10526	5/7/2018 0:00	N	32.3-1-19
5 CORNER DR, Lewisboro	N/A	5/1/2018 0:00	N	
5 EAST ST, Lewisboro	SOUTH SALEM NY 10590	8/30/2018 0:00	N	
5 FAY LN, Lewisboro	South Salem NY 10590	5/8/2018 0:00	N	54.4-2-8
5 FLINTLOCK RIDGE RD, Lewisboro	GOLDENS BRIDGE NY 10526	3/26/2018 0:00	N	31.4-4-21
5 GREEN HILL RD, Lewisboro	Goldens Bridge NY 10526	11/13/2018 0:00	N	30.4-2-6
5 HASTINGS CT, Lewisboro	South Salem NY 10590	9/10/2018 0:00	N	78.1-2-15
5 HEMLOCK RD, Lewisboro	SOUTH SALEM NY 10590	4/10/2018 0:00	N	54.20-6-16
5 HILLSIDE AVE, Lewisboro	Goldens Bridge NY 10526	5/21/2018 0:00	N	31.3-1-41
5 HOLLY HILL LN, Lewisboro	KATONAH NY 10536	9/18/2018 0:00	N	
5 HOYT ST, Lewisboro	SOUTH SALEM NY 10590	1/15/2018 0:00	N	43.7-1-26
5 KENFIELD RD, Lewisboro	South Salem NY 10590	12/1/2018 0:00	N	77.4-5-23
5 LAKEVIEW RD, Lewisboro	South Salem NY 10590	10/30/2018 0:00	N	33.13-3-45
5 LEDGEWOOD LN, Lewisboro	South Salem NY 10590	11/30/2018 0:00	N	55.3-3-18

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Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
5 LOCKWOOD RD, Lewisboro	SOUTH SALEM NY 10590	1/25/2018 0:00	N	66.4-3-29
5 Manor DR, Lewisboro	Goldens Bridge NY 10526	5/18/2018 0:00	N	31.13-2-39
5 MARK MEAD RD, Lewisboro	Cross River NY 10518	12/5/2018 0:00	N	53.6-1-17
5 MERRITT CT, Lewisboro	KATONAH NY 10536	3/12/2018 0:00	N	41.10-4-31
5 MOHAWK TRAIL, Lewisboro	N/A	12/11/2018 0:00	N	
5 OLD SHOP RD, Lewisboro	Cross River NY 10518	11/28/2018 0:00	N	53.1-2-23
5 PERCH BAY RD, Lewisboro	Waccabuc NY 10597	7/30/2018 0:00	N	32.4-3-21
5 POWDER HILL RD, Lewisboro	Waccabuc NY 10597	9/11/2018 0:00	N	32.2-2-49
5 ROADS END RD, Lewisboro	South Salem NY 10590	5/25/2018 0:00	N	66.2-3-12
5 ROBINS WOOD LN, Lewisboro	South Salem NY 10590	6/8/2018 0:00	N	77.4-3-42
5 SKY TOP, Lewisboro	Katonah NY 10536	7/18/2018 0:00	N	41.10-4-38
5 SPRING HILL LN, Lewisboro	South Salem NY 10590	12/6/2018 0:00	N	55.3-4-7
5 Spring ST S, Lewisboro	South Salem NY 10590	8/8/2018 0:00	N	43.3-3-2
5 Spring ST S, Lewisboro	South Salem NY 10590	7/30/2018 0:00	N	43.3-3-2
5 SUNNYRIDGE RD, Lewisboro	KATONAH NY 10536	7/6/2018 0:00	N	
5 THE LOGGING RD, Lewisboro	Waccabuc NY 10597	11/1/2018 0:00	N	32.2-1-27
5 TODD RD, Lewisboro	KATONAH NY 10536	7/18/2018 0:00	N	
5 TOMMY'S LN, Lewisboro	South Salem NY 10590	11/1/2018 0:00	N	77.11-2-16
5 WONDWAY RD, Lewisboro	southsalem NY 10590	6/20/2018 0:00	N	
50 LAKE SHORE DR, Lewisboro	South Salem NY 10590	12/26/2018 0:00	N	43.11-3-17
50 WEST RD, Lewisboro	South Salem NY 10590	10/24/2018 0:00	N	77.4-2-65
500 MT HOLLY RD, Lewisboro	Katonah NY 10536	11/6/2018 0:00	N	39.12-1-5
508 MT HOLLY RD, Lewisboro	Katonah NY 10536	7/11/2018 0:00	N	41.2-2-52
508 MT HOLLY RD, Lewisboro	Katonah NY 10536	7/11/2018 0:00	N	41.2-2-52
51 GRANDVIEW RD, Lewisboro	South Salem NY 10590	9/19/2018 0:00	N	65.8-5-15
51 GRANDVIEW RD, Lewisboro	South Salem NY 10590	10/19/2018 0:00	N	65.8-5-15
51 MILL RIVER RD, Lewisboro	SOUTH SALEM NY 10590	4/24/2018 0:00	N	55.3-3-31
51 MILL RIVER RD, Lewisboro	SOUTH SALEM NY 10590	4/24/2018 0:00	N	55.3-3-31
51 TWIN LAKES RD, Lewisboro	South Salem NY 10590	6/18/2018 0:00	N	33.3-2-42
512 MT HOLLY RD, Lewisboro	Katonah NY 10536	10/1/2018 0:00	N	41.2-2-51
52 EAST ST, Lewisboro	South Salem NY 10590	6/2/2018 0:00	N	77.4-5-19
52 GILBERT ST, Lewisboro	South Salem NY 10590	4/25/2018 0:00	N	43.7-1-32
53 BOWAY RD, Lewisboro	SOUTH SALEM NY 10590	3/20/2018 0:00	N	43.4-5-2
53 LAKE SHORE DR, Lewisboro	South Salem NY 10590	6/13/2018 0:00	N	43.11-3-11
53 PINE HILL DR, Lewisboro	South Salem NY 10590	6/19/2018 0:00	N	54.1-2-26
53 RIDGEFIELD AVE, Lewisboro	South Salem NY 10590	2/27/2018 0:00	N	54.4-2-3
53 RIDGEFIELD AVE, Lewisboro	South Salem NY 10590	11/20/2018 0:00	N	54.4-2-3
53 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	10/2/2018 0:00	N	
53 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	10/2/2018 0:00	N	
53 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	7/31/2018 0:00	N	
53 SUNNY RDG, Lewisboro	Katonah NY 10536	5/10/2018 0:00	N	41.10-4-11
54 DEERFIELD, Lewisboro	Katonah NY 10536	11/5/2018 0:00	N	41.10-4-52
55 CHAPEL RD, Lewisboro	Waccabuc NY 10597	7/23/2018 0:00	N	32.1-3-24
55 EAST ST, Lewisboro	South Salem NY 10590	8/27/2018 0:00	N	77.4-3-26
55 GRANDVIEW RD, Lewisboro	South Salem NY 10590	11/27/2018 0:00	N	65.8-5-17
55 SUNNY RDG, Lewisboro	Katonah NY 10536	10/26/2018 0:00	N	41.10-4-12
55 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	10/29/2018 0:00	N	43.12-2-1

Lewisboro and Pound Ridge
2018 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
56 COVE RD, Lewisboro	SOUTH SALEM NY 10590	10/15/2018 0:00	N	
56 EAST ST, Lewisboro	South Salem NY 10590	6/28/2018 0:00	N	77.4-5-17
57 ELMWOOD RD, Lewisboro	South Salem NY 10590	7/19/2018 0:00	N	55.3-7-14
57 ELMWOOD RD, Lewisboro	South Salem NY 10590	7/19/2018 0:00	N	55.3-7-14
57 ELMWOOD RD, Lewisboro	South Salem NY 10590	12/12/2018 0:00	N	55.3-7-14
57 LAKE SHORE DR, Lewisboro	SOUTH SALEM NY 10590	1/15/2018 0:00	N	43.11-3-10
57 LAKE SHORE DR, Lewisboro	SOUTH SALEM NY 10590	1/15/2018 0:00	N	43.11-3-10
57 LAKE SHORE DR, Lewisboro	SOUTH SALEM NY 10590	1/15/2018 0:00	N	43.11-3-10
57 LOCKWOOD RD, Lewisboro	South Salem NY 10590	10/5/2018 0:00	N	66.4-4-3
57 PINE HILL DR, Lewisboro	South Salem NY 10590	8/24/2018 0:00	N	54.1-2-27
57 SUNNYRIDGE RD, Lewisboro	KATONAH NY 10536	8/15/2018 0:00	N	
57 TODD HILL CIR, Lewisboro	Goldens Bridge NY 10526	8/15/2018 0:00	N	31.3-2-33
58 MARK MEAD RD, Lewisboro	CROSS RIVER NY 10518	5/2/2018 0:00	N	42.4-2-9
58 Old BEDFORD RD, Lewisboro	Goldens Bridge NY 10526	8/15/2018 0:00	N	30.4-1-40
58 SUNNYRIDGE RD, Lewisboro	KATONAH NY 10536	4/9/2018 0:00	N	
58 UPPER LAKESHORE DR, Lewisboro	KATONAH NY 10536	4/19/2018 0:00	N	
59 BENEDICT RD, Lewisboro	SOUTH SALEM NY 10590	3/30/2018 0:00	N	33.3-1-17
59 CONANT VALLEY RD, Lewisboro	POUND RIDGE NY 10576	9/24/2018 0:00	N	
59 EAST ST, Lewisboro	South Salem NY 10590	8/23/2018 0:00	N	77.4-3-23
59 GRANDVIEW RD, Lewisboro	SOUTH SALEM NY 10590	4/7/2018 0:00	N	65.2-1-8
59 OLD OSCALETA RD, Lewisboro	SOUTH SALEM NY 10590	4/30/2018 0:00	N	33.4-2-13
59 TWIN LAKES RD, Lewisboro	SOUTH SALEM NY 10590	2/27/2018 0:00	N	33.4-1-4
6 ADAMS HILL RD, Lewisboro	CROSS RIVER NY 10518	4/4/2018 0:00	N	42.4-3-26
6 APPLE HILL CT, Lewisboro	South Salem NY 10590	8/20/2018 0:00	N	43.3-2-3
6 BICKFORD LN, Lewisboro	South Salem NY 10590	8/31/2018 0:00	N	77.2-3-20
6 BIRCH RD, Lewisboro	SOUTH SALEM NY 10590	1/9/2018 0:00	N	77.2-1-4
6 BOUTON ST, Lewisboro	South Salem NY 10590	11/21/2018 0:00	N	43.11-2-9
6 CORNWALL CT, Lewisboro	Katonah NY 10536	10/24/2018 0:00	N	31.4-2-46
6 DEBBIE LN, Lewisboro	Cross River NY 10518	10/26/2018 0:00	N	42.4-1-28
6 DIANE CT, Lewisboro	Katonah NY 10536	10/3/2018 0:00	N	41.2-2-23
6 ELMWOOD RD, Lewisboro	South Salem NY 10590	7/24/2018 0:00	N	55.3-6-3
6 FAY LN, Lewisboro	South Salem NY 10590	9/21/2018 0:00	N	54.4-2-5
6 FIVE PONDS DR, Lewisboro	Waccabuc NY 10597	5/21/2018 0:00	N	32.2-1-43
6 FLINTLOCK RIDGE RD, Lewisboro	Katonah NY 10536	12/18/2018 0:00	N	31.4-2-33
6 GRANDVIEW RD, Lewisboro	South Salem NY 10590	6/28/2018 0:00	N	65.8-1-18
6 GREEN HILL RD, Lewisboro	Goldens Bridge NY 10526	9/17/2018 0:00	N	30.4-2-52
6 KINGSWOOD WAY, Lewisboro	SOUTH SALEM NY 10590	3/26/2018 0:00	N	77.4-2-27
6 LORRAINE RD, Lewisboro	South Salem NY 10590	6/19/2018 0:00	N	77.2-1-37
6 MERRITT CT, Lewisboro	Katonah NY 10536	6/7/2018 0:00	N	41.10-4-29
6 MOHAWK TRL, Lewisboro	Katonah NY 10536	11/1/2018 0:00	N	31.4-2-14
6 OLD ORCHARD RD, Lewisboro	South Salem NY 10590	10/29/2018 0:00	N	66.2-3-36
6 PERCH BAY RD, Lewisboro	Waccabuc NY 10597	2/14/2018 0:00	N	32.4-3-44
6 PERCH BAY RD, Lewisboro	Waccabuc NY 10597	8/1/2018 0:00	N	32.4-3-44
6 ROBINS CT, Lewisboro	South Salem NY 10590	5/29/2018 0:00	N	77.4-3-46
6 ROBINS WOOD LN, Lewisboro	South Salem NY 10590	11/26/2018 0:00	N	77.4-3-54
6 ROCK SHELTER RD, Lewisboro	WACCABUC NY 10597	10/15/2018 0:00	N	
6 SALEM LN, Lewisboro	South Salem NY 10590	10/1/2018 0:00	N	43.4-2-13

Lewisboro and Pound Ridge
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Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
6 SPRING HILL LN, Lewisboro	SOUTH SALEM NY 10590	3/19/2018 0:00	N	55.3-5-10
6 SPRING ST, Lewisboro	SOUTH SALEM NY 10590	4/19/2018 0:00	N	
6 STONEWALL CT, Lewisboro	South Salem NY 10590	10/13/2018 0:00	N	55.3-7-8
6 TWIN LAKES RD, Lewisboro	South Salem NY 10590	10/2/2018 0:00	N	33.3-2-67
6 UPLAND CT, Lewisboro	South Salem NY 10590	12/20/2018 0:00	N	77.4-2-54
6 WAKEMAN RD, Lewisboro	South Salem NY 10590	6/28/2018 0:00	N	66.4-3-25
60 CROSS RIVER RD, Lewisboro	POUND RIDGE NY 10576	3/30/2018 0:00	N	
60 FOREST RANGE, Lewisboro	Katonah NY 10536	7/25/2018 0:00	N	41.10-3-28
61 Cove RD, Lewisboro	South Salem NY 10590	5/30/2018 0:00	N	33.13-3-3
61 KNAPP RD, Lewisboro	SOUTH SALEM NY 10590	5/3/2018 0:00	N	33.3-3-5
61 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	3/19/2018 0:00	N	
61 TRUESDALE WOODS, Lewisboro	SOUTH SALEM NY 10590	10/17/2018 0:00	N	
62 HOYT ST, Lewisboro	South Salem NY 10590	5/12/2018 0:00	N	43.7-5-24
62 LAKE SHORE DR, Lewisboro	South Salem NY 10590	9/21/2018 0:00	N	43.11-3-22
62 TWIN LAKES RD, Lewisboro	South Salem NY 10590	8/14/2018 0:00	N	33.4-1-25
63 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	7/27/2018 0:00	N	32.3-2-2
63 Cove RD, Lewisboro	South Salem NY 10590	8/22/2018 0:00	N	33.13-3-2
63 DEERFIELD, Lewisboro	Katonah NY 10536	6/1/2018 0:00	N	41.10-4-55
63 HOYT ST, Lewisboro	South Salem NY 10590	5/30/2018 0:00	N	43.7-6-28
63 POST OFFICE RD, Lewisboro	Waccabuc NY 10597	6/29/2018 0:00	N	32.4-3-20
63 TWIN LAKES RD, Lewisboro	South Salem NY 10590	6/26/2018 0:00	N	33.4-1-6
63 UPPER LAKE SHR, Lewisboro	Katonah NY 10536	10/23/2018 0:00	N	41.6-2-43
64 LAKE SHORE DR, Lewisboro	South Salem NY 10590	11/6/2018 0:00	N	43.11-3-23
64 PINE HILL DR, Lewisboro	South Salem NY 10590	10/26/2018 0:00	N	54.1-2-20
64 TWIN LAKES RD, Lewisboro	South Salem NY 10590	5/22/2018 0:00	N	33.4-1-24
65 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	6/28/2018 0:00	N	32.3-2-1
65 CHAPEL RD, Lewisboro	Waccabuc NY 10597	8/17/2018 0:00	N	32.2-1-2
65 COVE RD, Lewisboro	SOUTH SALEM NY 10590	3/5/2018 0:00	N	33.13-3-4
65 EAST ST, Lewisboro	SOUTH SALEM NY 10590	1/29/2018 0:00	N	77.4-3-19
65 HOYT ST, Lewisboro	South Salem NY 10590	8/30/2018 0:00	N	43.7-6-29
65 KNAPP RD, Lewisboro	South Salem NY 10590	7/13/2018 0:00	N	33.3-3-3
65 OLD BEDFORD RD, Lewisboro	GOLDENS BRIDGE NY 10526	3/28/2018 0:00	N	30.4-1-32
65 TWIN LAKES RD, Lewisboro	South Salem NY 10590	8/14/2018 0:00	N	33.4-1-7
65 TWIN LAKES RD, Lewisboro	South Salem NY 10590	8/14/2018 0:00	N	33.4-1-7
66 LOCKWOOD RD, Lewisboro	SOUTH SALEM NY 10590	4/30/2018 0:00	N	66.4-2-16
66 MARK MEAD RD, Lewisboro	CROSS RIVER NY 10518	4/14/2018 0:00	N	42.4-2-10
66 TWIN LAKES RD, Lewisboro	South Salem NY 10590	7/12/2018 0:00	N	33.4-1-23
66 UPPER LAKE SHR, Lewisboro	Katonah NY 10536	9/24/2018 0:00	N	41.6-1-27
67 EAST ST, Lewisboro	South Salem NY 10590	6/2/2018 0:00	N	77.4-3-18
67 PINE HILL DR, Lewisboro	South Salem NY 10590	8/28/2018 0:00	N	54.1-2-13
67 TWIN LAKES RD, Lewisboro	SOUTH SALEM NY 10590	3/19/2018 0:00	N	33.4-1-8
68 LAKE SHORE DR, Lewisboro	South Salem NY 10590	7/21/2018 0:00	N	43.11-3-25
68 RIDGEFIELD AVE, Lewisboro	South Salem NY 10590	9/13/2018 0:00	N	54.4-1-15
69 HOYT ST, Lewisboro	South Salem NY 10590	10/22/2018 0:00	N	43.7-6-31
69 KNAPP RD, Lewisboro	South Salem NY 10590	8/17/2018 0:00	N	33.3-3-2
69 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	11/30/2018 0:00	N	54.20-7-2
69 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	11/30/2018 0:00	N	54.20-7-2

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69 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	10/22/2018 0:00	N	54.20-7-2
69 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	8/6/2018 0:00	N	54.20-7-2
69 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	8/6/2018 0:00	N	54.20-7-2
7 APACHE CIR, Lewisboro	Katonah NY 10536	9/27/2018 0:00	N	31.4-3-54
7 BUTTERNUT LN, Lewisboro	KATONAH NY 10536	11/2/2018 0:00	N	
7 COL FERRIS RD, Lewisboro	SOUTH SALEM NY 10590	5/1/2018 0:00	N	66.1-1-11
7 CORNEL DR, Lewisboro	Goldens Bridge NY 10526	7/18/2018 0:00	N	32.3-1-20
7 CROSS POND RD, Lewisboro	South Salem NY 10590	11/8/2018 0:00	N	54.2-4-9
7 GILBERT ST, Lewisboro	South Salem NY 10590	7/14/2018 0:00	N	43.11-2-7
7 HALL AVE, Lewisboro	Goldens Bridge NY 10526	7/30/2018 0:00	N	31.3-1-3
7 HOWE ST, Lewisboro	South Salem NY 10590	12/15/2018 0:00	N	43.7-3-14
7 HOYT ST, Lewisboro	SOUTH SALEM NY 10590	4/18/2018 0:00	N	43.7-1-24
7 LAKEVIEW RD, Lewisboro	South Salem NY 10590	7/9/2018 0:00	N	33.13-3-44
7 LOGGING RD, Lewisboro	waccabuc NY 10597	8/17/2018 0:00	N	
7 LONG POND RD, Lewisboro	Waccabuc NY 10597	7/19/2018 0:00	N	32.2-1-14
7 MILLOT ST, Lewisboro	goldens bridge NY 10526	10/1/2018 0:00	N	
7 N LAKE CIR, Lewisboro	South Salem NY 10590	10/24/2018 0:00	N	33.3-2-18
7 Park AVE, Lewisboro	Goldens Bridge NY 10526	7/11/2018 0:00	N	30.4-1-22
7 RESERVOIR RD, Lewisboro	South Salem NY 10590	5/24/2018 0:00	N	77.2-4-6
7 RESERVOIR RD, Lewisboro	South Salem NY 10590	10/11/2018 0:00	N	77.2-4-6
7 ROBINS WOOD LN, Lewisboro	South Salem NY 10590	7/11/2018 0:00	N	77.4-3-43
7 SOUNDVIEW LOOP, Lewisboro	SOUTH SALEM NY 10590	5/4/2018 0:00	N	77.4-5-40
7 STEWART RD, Lewisboro	South Salem NY 10590	10/16/2018 0:00	N	43.1-2-61
70 BENEDICT RD, Lewisboro	South Salem NY 10590	6/5/2018 0:00	N	33.3-4-5
70 COVE RD, Lewisboro	SOUTH SALEM NY 10590	8/25/2018 0:00	N	
70 COVE RD, Lewisboro	SOUTH SALEM NY 10590	12/27/2018 0:00	N	
70 COVE RD, Lewisboro	SOUTH SALEM NY 10590	12/27/2018 0:00	N	
70 COXE RD, Lewisboro	N/A	2/13/2018 0:00	N	
70 LAKE VIEW RD, Lewisboro	SOUTH SALEM NY 10590	5/30/2018 0:00	N	
71 PINE HILL DR, Lewisboro	South Salem NY 10590	8/7/2018 0:00	N	54.1-2-14
71 POST OFFICE RD, Lewisboro	Waccabuc NY 10597	5/17/2018 0:00	N	32.4-3-18
72 POST OFFICE RD, Lewisboro	WACCABUC NY 10597	12/11/2018 0:00	N	
73 BOUTONVILLE RD, Lewisboro	South Salem NY 10590	6/18/2018 0:00	N	54.2-2-47
73 OLD OSCALETA RD, Lewisboro	South Salem NY 10590	7/5/2018 0:00	N	33.4-2-8
73 POST OFFICE RD, Lewisboro	Waccabuc NY 10597	11/19/2018 0:00	N	33.3-1-35
74 ELMWOOD RD, Lewisboro	South Salem NY 10590	6/19/2018 0:00	N	66.1-3-15
74 HEMLOCK RD, Lewisboro	South Salem NY 10590	6/21/2018 0:00	N	65.8-2-18
74 MILL RIVER RD, Lewisboro	SOUTH SALEM NY 10590	4/12/2018 0:00	N	55.3-2-21
74 RIDGEFIELD AVE, Lewisboro	South Salem NY 10590	7/3/2018 0:00	N	54.4-1-16
76 COVE RD, Lewisboro	SOUTH SALEM NY 10590	11/26/2018 0:00	N	
77 ELMWOOD RD, Lewisboro	South Salem NY 10590	8/27/2018 0:00	N	55.4-1-14
77 ELMWOOD RD, Lewisboro	South Salem NY 10590	8/27/2018 0:00	N	55.4-1-14
77 ELMWOOD RD, Lewisboro	South Salem NY 10590	8/27/2018 0:00	N	55.4-1-14
77 ELMWOOD RD, Lewisboro	South Salem NY 10590	8/27/2018 0:00	N	55.4-1-14
77 TODD RD, Lewisboro	KATONAH NY 10536	10/19/2018 0:00	N	
77 TODD RD, Lewisboro	KATONAH NY 10536	10/19/2018 0:00	N	
777-795 ROUTE 35, Lewisboro	CROSS RIVER NY 10518	3/12/2018 0:00	N	

Lewisboro and Pound Ridge
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Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
788 ROUTE 35, Lewisboro	Cross River NY 10518	6/20/2018 0:00	N	53.6-1-2
788 ROUTE 35, Lewisboro	Cross River NY 10518	2/23/2018 0:00	N	53.6-1-2
788 ROUTE 35, Lewisboro	Cross River NY 10518	9/14/2018 0:00	N	53.6-1-2
79 BOUTON RD, Lewisboro	South Salem NY 10590	9/22/2018 0:00	N	43.1-4-14
79 BOUTON RD, Lewisboro	South Salem NY 10590	9/22/2018 0:00	N	43.1-4-14
79 BOUTON RD, Lewisboro	South Salem NY 10590	9/22/2018 0:00	N	43.1-4-14
79 N SALEM RD, Lewisboro	N/A	11/27/2018 0:00	N	
792 ROUTE 35, Lewisboro	Cross River NY 10518	3/15/2018 0:00	N	53.6-1-4
792 ROUTE 35, Lewisboro	Cross River NY 10518	8/17/2018 0:00	N	53.6-1-4
8 ADAMS HILL RD, Lewisboro	Cross River NY 10518	5/12/2018 0:00	N	42.4-3-25
8 AUDUBON RD, Lewisboro	South Salem NY 10590	8/11/2018 0:00	N	77.2-5-19
8 AUTUMN RIDGE RD, Lewisboro	South Salem NY 10590	5/22/2018 0:00	N	43.1-2-30
8 BOWAY, Lewisboro	South Salem NY 10590	8/13/2018 0:00	N	43.4-1-30
8 CHEROKEE CT, Lewisboro	Katonah NY 10536	10/23/2018 0:00	N	31.4-2-10
8 DEBBIE LN, Lewisboro	Cross River NY 10518	12/5/2018 0:00	N	42.4-1-29
8 FIRST ST, Lewisboro	N/A	8/10/2018 0:00	N	
8 HILLSIDE AVE, Lewisboro	GOLDENS BRIDGE NY 10526	4/10/2018 0:00	N	31.3-1-43
8 HOLLY HILL LN, Lewisboro	KATONAH NY 10536	11/12/2018 0:00	N	
8 INDIAN HILL RD, Lewisboro	KATONAH NY 10536	6/7/2018 0:00	N	
8 LAUREL RD, Lewisboro	SOUTH SALEM NY 10590	1/18/2018 0:00	N	77.2-3-24
8 MARK MEAD RD, Lewisboro	Cross River NY 10518	8/6/2018 0:00	N	53.6-1-34
8 N LAKE CIR, Lewisboro	SOUTH SALEM NY 10590	4/18/2018 0:00	N	33.3-2-25
8 OLD FARM RD, Lewisboro	South Salem NY 10590	6/5/2018 0:00	N	66.3-2-18
8 Old ORCHARD RD, Lewisboro	South Salem NY 10590	8/17/2018 0:00	N	66.2-3-34
8 Park AVE, Lewisboro	Goldens Bridge NY 10526	6/29/2018 0:00	N	30.4-1-34
8 PERCH BAY RD, Lewisboro	Waccabuc NY 10597	8/31/2018 0:00	N	32.4-3-43
8 POND ST, Lewisboro	GOLDENS BRIDGE NY 10526	4/19/2018 0:00	N	30.4-3-10
8 ROADS END RD, Lewisboro	South Salem NY 10590	5/24/2018 0:00	N	66.2-3-17
8 ROBINS WOOD LN, Lewisboro	South Salem NY 10590	12/10/2018 0:00	N	77.4-3-53
8 SALEM LN, Lewisboro	South Salem NY 10590	6/15/2018 0:00	N	43.4-2-12
8 SAW GRASS DR, Lewisboro	N/A	3/16/2018 0:00	N	
8 SILVERMINE DR, Lewisboro	South Salem NY 10590	9/19/2018 0:00	N	66.4-3-52
8 SOUTHWIND DR, Lewisboro	CROSS RIVER NY 10518	7/26/2018 0:00	N	
8 STEWART RD, Lewisboro	South Salem NY 10590	12/14/2018 0:00	N	43.1-2-48
8 STEWART RD, Lewisboro	South Salem NY 10590	12/14/2018 0:00	N	43.1-2-48
8 STEWART RD, Lewisboro	South Salem NY 10590	12/22/2018 0:00	N	43.1-2-48
8 TOMMY'S LN, Lewisboro	South Salem NY 10590	10/20/2018 0:00	N	77.11-2-28
8 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	8/16/2018 0:00	N	43.15-3-26
8 TWIN LAKES RD, Lewisboro	South Salem NY 10590	12/27/2018 0:00	N	33.3-2-66
8 WEST LN, Lewisboro	South Salem NY 10590	10/10/2018 0:00	N	55.3-6-28
800 CROSS RIVER RD, Lewisboro	katonah NY 10536	4/13/2018 0:00	N	
800 CROSS RIVER RD, Lewisboro	N/A	4/8/2018 0:00	N	
800 CROSS RIVER RD, Lewisboro	N/A	2/6/2018 0:00	N	
800 CROSS RIVER RD, Lewisboro	CROSS RIVER NY 10518	9/5/2018 0:00	N	
800 CROSS RIVER RD, Lewisboro	CROSS RIVER NY 10518	9/7/2018 0:00	N	
800 CROSS RIVER RD, Lewisboro	CROSS RIVER NY 10518	9/7/2018 0:00	N	
800 CROSS RIVER RD, Lewisboro	CROSS RIVER NY 10518	9/17/2018 0:00	N	

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800 CROSS RIVER RD, Lewisboro	CROSS RIVER NY 10518	9/28/2018 0:00	N	
800 CROSS RIVER RD, Lewisboro	CROSS RIVER NY 10518	9/22/2018 0:00	N	
800 CROSS RIVER RD, Lewisboro	CROSS RIVER NY 10518	9/22/2018 0:00	N	
800 CROSS RIVER RD, Lewisboro	CROSS RIVER NY 10518	10/5/2018 0:00	N	
800 CROSS RIVER RD, Lewisboro	CROSS RIVER NY 10518	10/5/2018 0:00	N	
800 CROSS RIVER RD, Lewisboro	CROSS RIVER NY 10518	12/12/2018 0:00	N	
800 CROSS RIVER RD, Lewisboro	CROSS RIVER NY 10518	12/20/2018 0:00	N	
800 CROSS RIVER RD, Lewisboro	CROSS RIVER NY 10518	11/6/2018 0:00	N	
800 CROSS RIVER RD, Lewisboro	CROSS RIVER NY 10518	11/9/2018 0:00	N	
800 CROSS RIVER RD, Lewisboro	CROSS RIVER NY 10518	11/24/2018 0:00	N	
800 CROSS RIVER RD, Lewisboro	CROSS RIVER NY 10518	11/24/2018 0:00	N	
800 CROSS RIVER RD, Lewisboro	CROSS RIVER NY 10518	12/3/2018 0:00	N	
800 CROSS RIVER RD, Lewisboro	CROSS RIVER NY 10518	12/3/2018 0:00	N	
800 ROUTE 35, Lewisboro	Cross River NY 10518	1/31/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	1/22/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	1/11/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	1/24/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	1/24/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	3/6/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	3/9/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	2/21/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	2/21/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	2/23/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	2/28/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	2/26/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	2/16/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	2/16/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	4/9/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	3/28/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	3/28/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	3/16/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	3/16/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	5/3/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	5/3/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	4/28/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	5/5/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	5/10/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	5/18/2018 0:00	N	53.1-2-9
800 ROUTE 35, Lewisboro	Cross River NY 10518	5/18/2018 0:00	N	53.1-2-9
804 ROUTE 35, Lewisboro	Cross River NY 10518	12/19/2018 0:00	N	53.6-1-6
808 ROUTE 35, Lewisboro	Cross River NY 10518	12/19/2018 0:00	N	53.6-1-7
808 ROUTE 35, Lewisboro	Cross River NY 10518	12/19/2018 0:00	N	53.6-1-7
81 E RIDGE RD, Lewisboro	WACCABUC NY 10597	5/1/2018 0:00	N	43.1-1-29
81 POST OFFICE RD, Lewisboro	Waccabuc NY 10597	5/29/2018 0:00	N	33.3-1-36
81 SPRING ST, Lewisboro	SOUTH SALEM NY 10590	3/14/2018 0:00	N	
819 ROUTE 35, Lewisboro	CROSS RIVER NY 10518	3/29/2018 0:00	N	53.6-1-37
82 HEMLOCK RD, Lewisboro	South Salem NY 10590	5/30/2018 0:00	N	65.8-2-16

Lewisboro and Pound Ridge
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Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
82 HEMLOCK RD, Lewisboro	South Salem NY 10590	1/3/2018 0:00	N	65.8-2-16
82 HEMLOCK RD, Lewisboro	South Salem NY 10590	10/16/2018 0:00	N	65.8-2-16
82 Spring ST, Lewisboro	South Salem NY 10590	10/4/2018 0:00	N	43.15-1-25
82 Spring ST, Lewisboro	South Salem NY 10590	10/4/2018 0:00	N	43.15-1-25
82 Spring ST, Lewisboro	South Salem NY 10590	10/4/2018 0:00	N	43.15-1-25
82 TODD RD, Lewisboro	Katonah NY 10536	9/6/2018 0:00	N	41.6-1-9
82 WACCABUC RD, Lewisboro	GOLDENS BRIDGE NY 10526	4/19/2018 0:00	N	31.4-3-8
83 TODD RD, Lewisboro	KATONAH NY 10536	4/10/2018 0:00	N	41.6-1-1
83 TODD RD, Lewisboro	KATONAH NY 10536	4/10/2018 0:00	N	41.6-1-1
83 TODD RD, Lewisboro	KATONAH NY 10536	4/10/2018 0:00	N	41.6-1-1
84 CHAPEL RD, Lewisboro	WACCABUC NY 10597	5/18/2018 0:00	N	
84 CHAPEL RD, Lewisboro	WACCABUC NY 10597	10/9/2018 0:00	N	
84 RIDGEFIELD AVE, Lewisboro	South Salem NY 10590	12/20/2018 0:00	N	54.4-1-19
84 TODD RD, Lewisboro	Katonah NY 10536	6/13/2018 0:00	N	41.6-1-10
84 WACCABUC RD, Lewisboro	GOLDENS BRIDGE NY 10526	3/22/2018 0:00	N	31.4-3-7
85 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	10/25/2018 0:00	N	54.20-4-1
85 TODD RD, Lewisboro	Katonah NY 10536	7/11/2018 0:00	N	41.6-1-2
86 TODD RD, Lewisboro	Katonah NY 10536	8/8/2018 0:00	N	41.6-1-11
87 LOCKWOOD RD, Lewisboro	South Salem NY 10590	7/19/2018 0:00	N	77.2-2-10
89 CHAPEL RD, Lewisboro	Waccabuc NY 10597	9/11/2018 0:00	N	32.1-3-32
89 CHAPEL RD, Lewisboro	Waccabuc NY 10597	9/11/2018 0:00	N	32.1-3-32
89 HEMLOCK RD, Lewisboro	South Salem NY 10590	7/19/2018 0:00	N	65.8-3-13
9 AUTUMN RIDGE RD, Lewisboro	South Salem NY 10590	11/2/2018 0:00	N	43.1-2-18
9 DEBBIE LN, Lewisboro	Cross River NY 10518	6/2/2018 0:00	N	42.4-1-38
9 GILBERT ST, Lewisboro	South Salem NY 10590	10/19/2018 0:00	N	43.11-2-15
9 HOYT ST, Lewisboro	South Salem NY 10590	10/10/2018 0:00	N	43.7-1-22
9 HUNT FARM RD, Lewisboro	WACCABUC NY 10597	6/26/2018 0:00	N	
9 JONAS LN, Lewisboro	KATONAH NY 10536	4/26/2018 0:00	N	
9 KINGSWOOD WAY, Lewisboro	South Salem NY 10590	6/15/2018 0:00	N	77.4-2-19
9 LEDGEWOOD LN, Lewisboro	South Salem NY 10590	8/27/2018 0:00	N	55.3-3-20
9 LONG POND RD, Lewisboro	Waccabuc NY 10597	1/24/2018 0:00	N	32.2-1-13
9 LONG POND RD, Lewisboro	Waccabuc NY 10597	12/28/2018 0:00	N	32.2-1-13
9 MAIN ST, Lewisboro	South Salem NY 10590	4/3/2018 0:00	N	43.15-2-25
9 POND ST, Lewisboro	Goldens Bridge NY 10526	6/27/2018 0:00	N	30.4-3-21
9 RESERVOIR RD, Lewisboro	South Salem NY 10590	5/21/2018 0:00	N	77.2-4-7
9 RIDGELAND RD, Lewisboro	SOUTH SALEM NY 10590	3/6/2018 0:00	N	54.20-7-6
9 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	10/29/2018 0:00	N	
9 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	8/17/2018 0:00	N	
9 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	2/16/2018 0:00	N	
9 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	6/11/2018 0:00	N	
9 SCENIC DR, Lewisboro	South Salem NY 10590	10/4/2018 0:00	N	77.4-2-39
9 SCOTTS LN, Lewisboro	South Salem NY 10590	6/25/2018 0:00	N	43.1-4-28
9 SILVERMINE DR, Lewisboro	South Salem NY 10590	11/8/2018 0:00	N	66.4-3-37
9 SOUNDVIEW LOOP, Lewisboro	South Salem NY 10590	9/10/2018 0:00	N	77.4-5-38
9 THE LOGGING RD, Lewisboro	WACCABUC NY 10597	4/23/2018 0:00	N	32.2-1-25
90 MAIN ST, Lewisboro	South Salem NY 10590	5/26/2018 0:00	N	43.7-2-16
90 MAIN ST, Lewisboro	South Salem NY 10590	7/28/2018 0:00	N	43.7-2-16

Lewisboro and Pound Ridge
2018 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
91 POST OFFICE RD, Lewisboro	South Salem NY 10590	7/17/2018 0:00	N	33.3-1-30
91 Spring ST, Lewisboro	South Salem NY 10590	8/10/2018 0:00	N	43.15-1-14
91 Spring ST, Lewisboro	South Salem NY 10590	4/26/2018 0:00	N	43.15-1-14
92 EAST ST, Lewisboro	South Salem NY 10590	7/28/2018 0:00	N	77.2-5-28
92 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	9/20/2018 0:00	N	31.4-3-4
929 ROUTE 35, Lewisboro	CROSS RIVER NY 10518	4/11/2018 0:00	N	42.4-2-8
93 BOUTON RD, Lewisboro	South Salem NY 10590	11/5/2018 0:00	N	43.1-4-30
93 HEMLOCK RD, Lewisboro	South Salem NY 10590	10/16/2018 0:00	N	65.8-3-7
93 LAKE KITCHAWAN DR, Lewisboro	SOUTH SALEM NY 10590	5/4/2018 0:00	N	54.20-4-34
93 RIDGELAND RD, Lewisboro	South Salem NY 10590	12/26/2018 0:00	N	65.8-4-18
935 ROUTE 35, Lewisboro	CROSS RIVER NY 10518	1/31/2018 0:00	N	
94 Spring ST, Lewisboro	South Salem NY 10590	11/23/2018 0:00	N	43.15-1-17
94 Spring ST, Lewisboro	South Salem NY 10590	11/23/2018 0:00	N	43.15-1-17
95 UPPER LAKE SHR, Lewisboro	Katonah NY 10536	10/23/2018 0:00	N	41.10-2-12
966 OLD POST RD, Lewisboro	N/A	7/20/2018 0:00	N	
97 RIDGELAND RD, Lewisboro	South Salem NY 10590	5/7/2018 0:00	N	66.1-1-1
97 TODD RD, Lewisboro	KATONAH NY 10536	2/26/2018 0:00	N	41.6-1-6
99 CHAPEL RD, Lewisboro	Waccabuc NY 10597	5/30/2018 0:00	N	32.1-3-34
99 ELMWOOD RD, Lewisboro	SOUTH SALEM NY 10590	3/28/2018 0:00	N	
99 ELMWOOD RD, Lewisboro	SOUTH SALEM NY 10590	3/28/2018 0:00	N	
99 ELMWOOD RD, Lewisboro	SOUTH SALEM NY 10590	3/28/2018 0:00	N	
1 DOE VIEW LN, Pound Ridge	Pound Ridge NY 10576	8/8/2018 0:00	N	074.04-2-1
1 SHERWOOD RD, Pound Ridge	POUND RIDGE NY 10576	1/22/2018 0:00	N	096.03-1-59
1 SHERWOOD RD, Pound Ridge	POUND RIDGE NY 10576	1/29/2018 0:00	N	096.03-1-59
10 KINNICUTT RD, Pound Ridge	Pound Ridge NY 10576	8/20/2018 0:00	N	086.08-1-8
10 PHEASANT RD W, Pound Ridge	Pound Ridge NY 10576	4/20/2018 0:00	N	096.03-1-60
10 SARLES RD, Pound Ridge	POUND RIDGE NY 10576	2/15/2018 0:00	N	085.02-1-14
10 SISCOWIT RD, (& 12), Pound Ridge	Pound Ridge NY 10576	10/29/2018 0:00	N	087.01-1-56
10 WHITE BIRCH RD, Pound Ridge	Pound Ridge NY 10576	11/20/2018 0:00	N	096.04-1-52
100 KITCHEN WAY, Pound Ridge	pound ridge NY 10576	8/15/2018 0:00	N	
101 DANN FARM RD, Pound Ridge	POUND RIDGE NY 10576	2/14/2018 0:00	N	087.01-1-41
101 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	6/8/2018 0:00	N	063.03-1-61
101 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	11/7/2018 0:00	N	075.04-2-12
104 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	6/28/2018 0:00	N	075.04-1-57
105 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	9/18/2018 0:00	N	086.01-2-47
106 WESTCHESTER AVE, Pound Ridge	POUND RIDGE NY 10576	2/22/2018 0:00	N	086.11-1-34
107 OLD CHURCH LN, Pound Ridge	POUND RIDGE NY 10576	10/6/2018 0:00	N	
108 HIGH RIDGE RD, Pound Ridge	Pound Ridge NY 10576	5/25/2018 0:00	N	086.03-1-24
108 HIGH RIDGE RD, Pound Ridge	Pound Ridge NY 10576	6/4/2018 0:00	N	086.03-1-24
109 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	10/22/2018 0:00	N	086.01-2-45
109 OLD CHURCH LN, Pound Ridge	POUND RIDGE NY 10576	2/20/2018 0:00	N	
11 BUCK HILL LN, Pound Ridge	Pound Ridge NY 10576	12/12/2018 0:00	N	074.02-1-33
11 HOYT RD, Pound Ridge	POUND RIDGE NY 10576	3/21/2018 0:00	N	075.03-2-4
11 OLD LOGGING RD, Pound Ridge	Bedford NY 10506	10/17/2018 0:00	N	085.04-1-8
11 PARK VIEW PL, Pound Ridge	POUND RIDGE NY 10576	5/1/2018 0:00	N	063.01-1-23
11 SAMUEL DANN WAY, Pound Ridge	Pound Ridge NY 10576	8/30/2018 0:00	N	087.01-1-17
11 SPRING HOUSE RD, Pound Ridge	Pound Ridge NY 10576	5/29/2018 0:00	N	062.04-1-10

Lewisboro and Pound Ridge
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11 WOODLAND RD, Pound Ridge	Pound Ridge NY 10576	9/27/2018 0:00	N	086.12-1-17
110 CROSS POND RD, Pound Ridge	Pound Ridge NY 10576	12/27/2018 0:00	N	052.04-1-34
110 SALEM RD, Pound Ridge	Pound Ridge NY 10576	7/19/2018 0:00	N	063.03-1-81
114 PARK VIEW RD, Pound Ridge	Pound Ridge NY 10576	6/4/2018 0:00	N	052.03-1-15
115 BARNEGAT RD, Pound Ridge	Pound Ridge NY 10576	6/14/2018 0:00	N	087.01-1-12
116 CROSS POND RD, Pound Ridge	Pound Ridge NY 10576	7/30/2018 0:00	N	052.04-1-33
118 DANN FARM RD, Pound Ridge	Pound Ridge NY 10576	5/5/2018 0:00	N	087.01-1-8
11ELLACKS, Pound Ridge	N/A	9/27/2018 0:00	N	
12 CEDAR HILL LN, Pound Ridge	Pound Ridge NY 10576	5/7/2018 0:00	N	096.03-1-68
12 OLD LOGGING RD, Pound Ridge	BEDFORD NY 10506	4/26/2018 0:00	N	085.04-1-39
12 SISCOWIT RD, Pound Ridge	POUND RIDGE NY 10576	10/29/2018 0:00	N	
12 UPPER SHAD RD, Pound Ridge	POUND RIDGE NY 10576	2/1/2018 0:00	N	086.15-1-8
12 WHITE BIRCH RD S, Pound Ridge	Pound Ridge NY 10576	12/14/2018 0:00	N	096.04-1-54
120 BARNEGAT RD, (& 120 A), Pound Ridge	Pound Ridge NY 10576	7/17/2018 0:00	N	087.03-1-5
121 PARK VIEW RD, Pound Ridge	Pound Ridge NY 10576	7/2/2018 0:00	N	052.03-1-21
124 KITCHAWAN RD, Pound Ridge	Pound Ridge NY 10576	12/12/2018 0:00	N	063.02-2-35
124 PARK VIEW RD, Pound Ridge	POUND RIDGE NY 10576	3/29/2018 0:00	N	052.03-1-13
124 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	9/5/2018 0:00	N	086.03-3-6
125 BROOK FARM RD E, Pound Ridge	Pound Ridge NY 10576	6/21/2018 0:00	N	074.04-1-9
125 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	8/10/2018 0:00	N	086.01-2-37
126 SALEM RD, Pound Ridge	N/A	7/6/2018 0:00	N	075.01-1-43
126 SALEM RD, Pound Ridge	N/A	7/6/2018 0:00	N	075.01-1-43
129 BLACK ROCK RD, Pound Ridge	N/A	7/6/2018 0:00	N	
130 SALEM RD, Pound Ridge	POUND RIDGE NY 10576	6/9/2018 0:00	N	
131 PARK VIEW RD, Pound Ridge	POUND RIDGE NY 10576	3/29/2018 0:00	N	052.03-1-25
131 S BEDFORD RD, Pound Ridge	Pound Ridge NY 10576	7/11/2018 0:00	N	085.02-1-21
135 KITCHAWAN RD, Pound Ridge	Pound Ridge NY 10576	7/27/2018 0:00	N	063.02-2-32
137 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	6/18/2018 0:00	N	063.03-1-51
139 S BEDFORD RD, Pound Ridge	POUND RIDGE NY 10576	4/13/2018 0:00	N	085.02-1-25
14 DOE VIEW LN, Pound Ridge	POUND RIDGE NY 10576	4/13/2018 0:00	N	074.02-1-37
14 LOWER TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	12/20/2018 0:00	N	086.16-1-26
14 SCENIC DR, Pound Ridge	pound ridge NY 10576	8/8/2018 0:00	N	
14 SELLECKS WALK, Pound Ridge	N/A	9/27/2018 0:00	N	03/106.6-2-14
14 TRINITY LN, Pound Ridge	Pound Ridge NY 10576	10/13/2018 0:00	N	086.16-1-12
14 TWIN FAWN LN, Pound Ridge	POUND RIDGE NY 10576	1/29/2018 0:00	N	074.04-1-18
140 HONEY HOLLOW RD, Pound Ridge	Pound Ridge NY 10576	7/3/2018 0:00	N	062.01-1-11
140 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	9/17/2018 0:00	N	086.01-1-21
143 HIGH RIDGE RD, Pound Ridge	Pound Ridge NY 10576	9/29/2018 0:00	N	086.01-1-35
143 LOWER SHAD RD, Pound Ridge	Pound Ridge NY 10576	6/29/2018 0:00	N	096.04-1-40
144 HONEY HOLLOW RD, Pound Ridge	Pound Ridge NY 10576	10/17/2018 0:00	N	062.01-1-10
144 WESTCHESTER AVE, Pound Ridge	POUND RIDGE NY 10576	1/2/2018 0:00	N	086.01-1-20
145 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	6/25/2018 0:00	N	063.03-1-47
148 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	11/13/2018 0:00	N	063.03-1-37
15 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	7/18/2018 0:00	N	086.07-1-29
15 PINE DR, Pound Ridge	Pound Ridge NY 10576	8/6/2018 0:00	N	086.15-1-10
15 POUND RIDGE RD, Pound Ridge	POUND RIDGE NY 10576	3/19/2018 0:00	N	075.03-1-18
15 S BEDFORD RD, (& 15 A), Pound Ridge	Pound Ridge NY 10576	8/28/2018 0:00	N	086.03-1-12

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Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
15 SCOFIELD RD, Pound Ridge	Pound Ridge NY 10576	10/26/2018 0:00	N	063.02-1-66
15 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	10/17/2018 0:00	N	086.12-1-11
151 EASTWOODS RD, (&151A), Pound Ridge	Pound Ridge NY 10576	6/14/2018 0:00	N	076.03-1-2
151 EASTWOODS RD, (&151A), Pound Ridge	Pound Ridge NY 10576	6/14/2018 0:00	N	076.03-1-2
152 HONEY HOLLOW RD, Pound Ridge	POUND RIDGE NY 10576	4/12/2018 0:00	N	062.01-1-9
154 BARNEGAT RD, Pound Ridge	POUND RIDGE NY 10576	4/30/2018 0:00	N	086.12-1-23
155 EASTWOODS RD, Pound Ridge	POUND RIDGE NY 10576	4/12/2018 0:00	N	076.03-1-3
155 PARK VIEW RD, Pound Ridge	Pound Ridge NY 10576	9/21/2018 0:00	N	052.03-1-31
156 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	5/18/2018 0:00	N	063.03-1-43
158 SALEM RD, Pound Ridge	POUND RIDGE NY 10576	5/7/2018 0:00	N	063.03-1-49
16 BEECH HILL LN, Pound Ridge	Pound Ridge NY 10576	6/15/2018 0:00	N	086.07-1-3
16 OLD POUND RD, Pound Ridge	POUND RIDGE NY 10576	4/9/2018 0:00	N	075.03-1-78
16 PETTIT LN, Pound Ridge	POUND RIDGE NY 10576	2/15/2018 0:00	N	086.03-1-31
16 ROLLING MEADOW LN, Pound Ridge	Pound Ridge NY 10576	12/20/2018 0:00	N	086.19-1-12
16 SHAD RD W, Pound Ridge	Pound Ridge NY 10576	11/29/2018 0:00	N	096.04-1-88
160 SALEM RD, (& 158), Pound Ridge	Pound Ridge NY 10576	11/20/2018 0:00	N	063.03-1-48
160 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	9/20/2018 0:00	N	086.01-1-17
161 UPPER SHAD RD, Pound Ridge	POUND RIDGE NY 10576	4/18/2018 0:00	N	086.03-2-25
162 OLD CHURCH LN, Pound Ridge	POUND RIDGE NY 10576	4/30/2018 0:00	N	076.01-1-13
164 EASTWOODS RD, Pound Ridge	POUND RIDGE NY 10576	1/12/2018 0:00	N	076.01-1-21
166 EASTWOODS RD, Pound Ridge	POUND RIDGE NY 10576	8/28/2018 0:00	N	
168 PARK VIEW RD N, Pound Ridge	POUND RIDGE NY 10576	4/27/2018 0:00	N	052.03-1-5
169 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	11/15/2018 0:00	N	076.03-1-5
169 SALEM RD, Pound Ridge	Pound Ridge NY 10576	7/5/2018 0:00	N	063.02-1-68
17 BAYBERRY WAY, Pound Ridge	POUND RIDGE NY 10576	3/28/2018 0:00	N	086.01-1-24
17 FOX HILL RD, Pound Ridge	Pound Ridge NY 10576	11/30/2018 0:00	N	096.01-1-23
17 FOX HILL RD, Pound Ridge	Pound Ridge NY 10576	11/30/2018 0:00	N	096.01-1-23
17 MILLER RD, Pound Ridge	Pound Ridge NY 10576	7/18/2018 0:00	N	096.02-2-17
17 THRESHING ROCK RD, Pound Ridge	Pound Ridge NY 10576	8/23/2018 0:00	N	096.02-1-17
170 WESTCHESTER AVE, Pound Ridge	POUND RIDGE NY 10576	4/14/2018 0:00	N	086.01-1-15
174 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	6/18/2018 0:00	N	086.01-1-14
176 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	1/2/2018 0:00	N	086.01-1-13
176 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	4/3/2018 0:00	N	086.01-1-13
176 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	6/27/2018 0:00	N	086.01-1-13
176 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	10/11/2018 0:00	N	086.01-1-13
18 EBENEZER LN, Pound Ridge	Pound Ridge NY 10576	7/20/2018 0:00	N	063.02-1-22
18 HIGH RIDGE RD, Pound Ridge	N/A	5/29/2018 0:00	N	
18 HIGH RIDGE RD, Pound Ridge	N/A	5/29/2018 0:00	N	
18 KITCHAWAN RD, Pound Ridge	Pound Ridge NY 10576	5/15/2018 0:00	N	063.04-1-11
18 NANCYS LN, Pound Ridge	Pound Ridge NY 10576	9/20/2018 0:00	N	076.01-1-49
18 OLD POUND RD # A, Pound Ridge	POUND RIDGE NY 10576	2/6/2018 0:00	N	
18 OLD POUND RD, Pound Ridge	Pound Ridge NY 10576	2/6/2018 0:00	N	075.03-1-80
18 PINE DR, Pound Ridge	Pound Ridge NY 10576	5/11/2018 0:00	N	086.15-1-30
18 ROLLING MEADOW LN, Pound Ridge	POUND RIDGE NY 10576	2/9/2018 0:00	N	086.19-1-11
18 SCHOOLHOUSE RD, Pound Ridge	POUND RIDGE NY 10576	1/22/2018 0:00	N	051.03-1-14
18 SPY ROCK RD, Pound Ridge	Pound Ridge NY 10576	11/13/2018 0:00	N	075.01-1-4
187 BARNEGAT RD, Pound Ridge	POUND RIDGE NY 10576	11/15/2018 0:00	N	

Lewisboro and Pound Ridge
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Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
189 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	7/6/2018 0:00	N	085.04-1-65
19 KINNICUTT RD, Pound Ridge	Pound Ridge NY 10576	5/29/2018 0:00	N	086.08-1-15
19 KNAPP RD, Pound Ridge	POUND RIDGE NY 10576	5/7/2018 0:00	N	063.02-2-11
19 SARLES RD, Pound Ridge	Pound Ridge NY 10576	7/11/2018 0:00	N	086.01-3-12
19 SHERWOOD RD, Pound Ridge	Pound Ridge NY 10576	10/5/2018 0:00	N	096.03-1-72
19 SISCOWIT RD, Pound Ridge	Pound Ridge NY 10576	12/27/2018 0:00	N	087.01-1-60
19 WHITE BIRCH RD S, Pound Ridge	Pound Ridge NY 10576	8/27/2018 0:00	N	096.04-1-68
192 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	6/20/2018 0:00	N	086.01-2-19
196 TRINITY PASS RD, Pound Ridge	POUND RIDGE NY 10576	7/18/2018 0:00	N	
196 TRINITY PASS RD, Pound Ridge	POUND RIDGE NY 10576	7/18/2018 0:00	N	
199 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	11/28/2018 0:00	N	076.03-1-11
2 BAYBERRY WAY, Pound Ridge	Pound Ridge NY 10576	7/5/2018 0:00	N	086.11-1-39
2 BAYBERRY WAY, Pound Ridge	Pound Ridge NY 10576	7/5/2018 0:00	N	086.11-1-39
2 BOB HILL RD, Pound Ridge	Pound Ridge NY 10576	7/16/2018 0:00	N	096.01-1-41
2 CONANT VALLEY RD, Pound Ridge	N/A	8/1/2018 0:00	N	
2 DAVIDS LN, Pound Ridge	POUND RIDGE NY 10576	11/19/2018 0:00	N	
20 CLEARWATER LN, Pound Ridge	Pound Ridge NY 10576	10/24/2018 0:00	N	097.01-1-35
20 MALLARD LAKE RD, Pound Ridge	Pound Ridge NY 10576	10/30/2018 0:00	N	085.04-1-58
20 MILLER RD, Pound Ridge	POUND RIDGE NY 10576	4/9/2018 0:00	N	096.02-2-4
20 SCOFIELD RD, Pound Ridge	Pound Ridge NY 10576	10/30/2018 0:00	N	063.02-1-30
20 TATOMUCK RD, Pound Ridge	Pound Ridge NY 10576	7/13/2018 0:00	N	074.04-1-55
205 BARNEGAT RD, Pound Ridge	POUND RIDGE NY 10576	5/4/2018 0:00	N	086.08-1-17
205 HONEY HOLLOW RD, Pound Ridge	Pound Ridge NY 10576	6/12/2018 0:00	N	051.03-1-13
205 UPPER SHAD RD, Pound Ridge	POUND RIDGE NY 10576	2/15/2018 0:00	N	085.04-1-73
205 WESTCHESTER AVE, Pound Ridge	POUND RIDGE NY 10576	1/24/2018 0:00	N	075.03-3-7
206 BARNEGAT RD, Pound Ridge	Pound Ridge NY 10576	7/9/2018 0:00	N	086.08-1-41
209 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	6/12/2018 0:00	N	075.03-3-9
21 BEECH HILL LN, Pound Ridge	POUND RIDGE NY 10576	4/5/2018 0:00	N	075.04-1-8
21 BISHOP PARK RD, Pound Ridge	POUND RIDGE NY 10576	5/3/2018 0:00	N	
21 CONANT VALLEY RD, Pound Ridge	N/A	12/17/2018 0:00	N	
21 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	9/12/2018 0:00	N	086.01-2-67
21 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	9/12/2018 0:00	N	086.01-2-67
21 KENDALL RD, Pound Ridge	Pound Ridge NY 10576	7/17/2018 0:00	N	096.02-2-8
21 PATTERSON RD, Pound Ridge	Pound Ridge NY 10576	10/6/2018 0:00	N	075.01-1-42
21 POUND RIDGE RD, Pound Ridge	Pound Ridge NY 10576	12/20/2018 0:00	N	075.03-1-15
21 SALEM RD, Pound Ridge	Pound Ridge NY 10576	8/27/2018 0:00	N	075.01-2-28
210 TRINITY PASS RD, (& 208), Pound Ridge	Pound Ridge NY 10576	8/10/2018 0:00	N	075.02-1-19
210 TRINITY PASS RD, (& 208), Pound Ridge	Pound Ridge NY 10576	8/10/2018 0:00	N	075.02-1-19
210 TRINITY PASS RD, (& 208), Pound Ridge	Pound Ridge NY 10576	8/10/2018 0:00	N	075.02-1-19
210 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	8/30/2018 0:00	N	096.02-1-28
214 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	6/8/2018 0:00	N	076.03-1-40
216 TRINITY PASS RD, Pound Ridge	POUND RIDGE NY 10576	2/22/2018 0:00	N	075.02-1-16
22 JACKSON RD, Pound Ridge	N/A	4/24/2018 0:00	N	
22 LOWER SHAD RD, Pound Ridge	Pound Ridge NY 10576	8/3/2018 0:00	N	097.01-1-18
22 LOWER TRIUITY TD, Pound Ridge	poun ridge NY 10576	8/27/2018 0:00	N	
22 MIDWAY LN, Pound Ridge	Pound Ridge NY 10576	7/2/2018 0:00	N	085.02-1-19
22 MILLER RD, Pound Ridge	Pound Ridge NY 10576	8/31/2018 0:00	N	096.02-2-5

Lewisboro and Pound Ridge
2018 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
22 WOODLAND RD, Pound Ridge	Pound Ridge NY 10576	5/11/2018 0:00	N	086.12-1-15
225 HONEY HOLLOW RD, Pound Ridge	POUND RIDGE NY 10576	4/23/2018 0:00	N	051.03-1-16
23 BLACKSMITH LN, Pound Ridge	Pound Ridge NY 10576	7/12/2018 0:00	N	086.01-3-16
23 CLEARWATER LN, Pound Ridge	Pound Ridge NY 10576	9/7/2018 0:00	N	097.01-1-34
23 FOX HILL RD, Pound Ridge	Pound Ridge NY 10576	8/11/2018 0:00	N	096.01-1-24
23 FOX RUN RD, Pound Ridge	Pound Ridge NY 10576	5/15/2018 0:00	N	075.04-1-10
23 HACK GREEN RD, Pound Ridge	N/A	7/10/2018 0:00	N	075.01-1-43
23 KENDALL RD, Pound Ridge	Pound Ridge NY 10576	12/7/2018 0:00	N	096.02-2-7
23 LOWER TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	5/15/2018 0:00	N	086.16-1-16
23 MILLER RD, Pound Ridge	Pound Ridge NY 10576	6/27/2018 0:00	N	096.02-2-16
23 TATOMUCK RD, Pound Ridge	POUND RIDGE NY 10576	2/12/2018 0:00	N	074.04-1-66
23 WESTCHESTE AVE, Pound Ridge	N/A	6/14/2018 0:00	N	
230 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	9/20/2018 0:00	N	076.03-1-30
233 STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	10/11/2018 0:00	N	075.01-1-31
234 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	5/30/2018 0:00	N	075.03-2-22
24 FANCHER RD, Pound Ridge	POUND RIDGE NY 10576	1/22/2018 0:00	N	086.01-1-10
24 HACK GREEN RD, Pound Ridge	Pound Ridge NY 10576	5/18/2018 0:00	N	076.01-1-37.9
24 NANCYS LN, Pound Ridge	Pound Ridge NY 10576	5/29/2018 0:00	N	076.01-1-52
24 PATTERSON RD, Pound Ridge	Pound Ridge NY 10576	5/23/2018 0:00	N	075.01-1-32
241 STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	6/26/2018 0:00	N	075.01-1-28
243 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	5/18/2018 0:00	N	076.03-1-16
249 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	11/21/2018 0:00	N	096.02-1-11
25 BLACKSMITH LN, Pound Ridge	Pound Ridge NY 10576	9/13/2018 0:00	N	086.01-3-17
25 CROSS POND RD, Pound Ridge	N/A	6/5/2018 0:00	N	
25 HIGHCLIFF TER, Pound Ridge	POUND RIDGE NY 10576	3/16/2018 0:00	N	097.01-1-24
25 HIGHVIEW RD, Pound Ridge	Pound Ridge NY 10576	10/19/2018 0:00	N	052.04-1-57
25 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	9/12/2018 0:00	N	086.01-2-66
25 KINNICUTT RD, Pound Ridge	Pound Ridge NY 10576	8/21/2018 0:00	N	086.08-1-13
25 KITCHAWAN RD, Pound Ridge	Pound Ridge NY 10576	7/19/2018 0:00	N	063.04-1-24
25 TRINITY LN, Pound Ridge	POUND RIDGE NY 10576	1/30/2018 0:00	N	086.16-1-8
25 WARING RD, Pound Ridge	POUND RIDGE NY 10576	3/23/2018 0:00	N	096.02-2-13
250 SALEM RD, Pound Ridge	Pound Ridge NY 10576	11/15/2018 0:00	N	063.02-1-2
252 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	6/2/2018 0:00	N	076.03-1-22
253 HONEY HOLLOW RD, Pound Ridge	Pound Ridge NY 10576	7/18/2018 0:00	N	051.03-1-20
254 STONE HILL RD, Pound Ridge	N/A	5/29/2018 0:00	N	
254 STONE HILL RD, Pound Ridge	N/A	5/29/2018 0:00	N	
254 STONE HILL RD, Pound Ridge	N/A	5/29/2018 0:00	N	
254 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	8/17/2018 0:00	N	075.01-2-34
255 HONEY HOLLOW RD, Pound Ridge	Pound Ridge NY 10576	7/18/2018 0:00	N	051.03-1-21
255 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	12/21/2018 0:00	N	075.03-1-71
258 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	2/9/2018 0:00	N	075.03-1-25
258 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	2/23/2018 0:00	N	075.03-1-25
258 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	1/12/2018 0:00	N	075.03-1-25
258 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	4/3/2018 0:00	N	075.03-1-25
258 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	4/28/2018 0:00	N	075.03-1-25
258 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	4/6/2018 0:00	N	075.03-1-25
258 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	5/18/2018 0:00	N	075.03-1-25

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Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
258 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	5/4/2018 0:00	N	075.03-1-25
258 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	6/22/2018 0:00	N	075.03-1-25
258 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	7/6/2018 0:00	N	075.03-1-25
258 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	8/3/2018 0:00	N	075.03-1-25
258 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	8/31/2018 0:00	N	075.03-1-25
258 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	9/14/2018 0:00	N	075.03-1-25
258 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	10/11/2018 0:00	N	075.03-1-25
258 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	10/26/2018 0:00	N	075.03-1-25
258 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	11/9/2018 0:00	N	075.03-1-25
258 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	12/7/2018 0:00	N	075.03-1-25
259 STONE HILL RD, Pound Ridge	N/A	7/24/2018 0:00	N	075.01-1-43
26 CRADLE ROCK RD, Pound Ridge	POUND RIDGE NY 10576	4/30/2018 0:00	N	096.02-1-44
26 DINGEE RD, Pound Ridge	Pound Ridge NY 10576	11/20/2018 0:00	N	052.04-1-69
26 FOX RUN RD, Pound Ridge	Pound Ridge NY 10576	9/13/2018 0:00	N	075.04-1-5
26 FOX RUN RD, Pound Ridge	Pound Ridge NY 10576	6/4/2018 0:00	N	075.04-1-5
26 HIGHCLIFF TER, Pound Ridge	Pound Ridge NY 10576	9/21/2018 0:00	N	097.01-1-30
26 KINNICUTT RD, Pound Ridge	Pound Ridge NY 10576	9/7/2018 0:00	N	086.08-1-11
26 LAUREL RD, Pound Ridge	Pound Ridge NY 10576	11/1/2018 0:00	N	075.04-2-53
26 LOWER TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	5/29/2018 0:00	N	086.16-1-22
26 MAJOR TALLMADGE LN, Pound Ridge	Pound Ridge NY 10576	12/14/2018 0:00	N	075.01-1-54
26 NANCYS LN, Pound Ridge	Pound Ridge NY 10576	10/22/2018 0:00	N	076.01-1-39
26 PETTIT LN, Pound Ridge	POUND RIDGE NY 10576	4/6/2018 0:00	N	086.03-1-40
26 POUND RIDGE RD, Pound Ridge	POUND RIDGE NY 10576	4/11/2018 0:00	N	075.03-2-26
26 TATOMUCK RD, Pound Ridge	Pound Ridge NY 10576	9/10/2018 0:00	N	074.04-1-54
26 TRINITY PASS RD, Pound Ridge	POUND RIDGE NY 10576	2/1/2018 0:00	N	086.11-1-8
26 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	8/23/2018 0:00	N	086.15-1-5
26 WOODLAND RD, Pound Ridge	Pound Ridge NY 10576	5/11/2018 0:00	N	086.12-1-14
261 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	5/9/2018 0:00	N	075.03-1-68
267 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	10/17/2018 0:00	N	075.03-1-66
26M FOX RUN RD, Pound Ridge	POUND RIDGE NY 10576	4/2/2018 0:00	N	
27 AUTUMN RIDGE RD, Pound Ridge	POUND RIDGE NY 10576	5/8/2018 0:00	N	074.02-1-83
27 HIGHVIEW RD, Pound Ridge	Pound Ridge NY 10576	6/1/2018 0:00	N	052.04-1-58
27 HOYT RD, Pound Ridge	Pound Ridge NY 10576	7/31/2018 0:00	N	074.04-2-12
27 SCOFIELD RD, Pound Ridge	Pound Ridge NY 10576	6/7/2018 0:00	N	063.02-1-64
27 THRESHING ROCK RD, Pound Ridge	Pound Ridge NY 10576	12/14/2018 0:00	N	096.02-1-18
27 WARING RD, Pound Ridge	POUND RIDGE NY 10576	4/12/2018 0:00	N	096.02-2-12
270 STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	6/29/2018 0:00	N	075.01-1-11
270 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	5/9/2018 0:00	N	075.01-2-32
276 SALEM RD, Pound Ridge	POUND RIDGE NY 10576	1/3/2018 0:00	N	052.04-1-26
279 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	7/5/2018 0:00	N	096.02-1-8
28 HACK GREEN RD, Pound Ridge	Pound Ridge NY 10576	9/11/2018 0:00	N	076.01-1-30
28 PETERS LN, Pound Ridge	Pound Ridge NY 10576	7/9/2018 0:00	N	075.04-2-32
28 POUND RIDGE RD, Pound Ridge	POUND RIDGE NY 10576	3/29/2018 0:00	N	075.03-2-27
28 TWIN FAWN LN, Pound Ridge	Pound Ridge NY 10576	5/23/2018 0:00	N	074.04-1-15
29 AUTUMN RIDGE RD, Pound Ridge	Pound Ridge NY 10576	10/18/2018 0:00	N	074.02-1-82
29 BAYBERRY WAY, Pound Ridge	Pound Ridge NY 10576	5/17/2018 0:00	N	086.03-1-46
29 MAJOR TALLMADGE LN, Pound Ridge	Pound Ridge NY 10576	7/11/2018 0:00	N	075.01-1-57

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29 SISCOWIT RD, Pound Ridge	POUND RIDGE NY 10576	2/20/2018 0:00	N	087.01-1-59
29 SPRING HOUSE RD, Pound Ridge	Pound Ridge NY 10576	9/19/2018 0:00	N	062.04-1-17
29 TATOMUCK RD, Pound Ridge	POUND RIDGE NY 10576	1/31/2018 0:00	N	074.04-1-71
290 SALEM RD, Pound Ridge	Pound Ridge NY 10576	9/27/2018 0:00	N	052.04-1-21
290 SALEM RD, Pound Ridge	Pound Ridge NY 10576	9/27/2018 0:00	N	052.04-1-21
293 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	6/1/2018 0:00	N	096.02-1-5
3 ADAMS LN, Pound Ridge	Pound Ridge NY 10576	5/21/2018 0:00	N	063.03-1-65
3 HEMLOCK HILL RD, Pound Ridge	Pound Ridge NY 10576	6/22/2018 0:00	N	086.15-1-12
3 LONDON RD, Pound Ridge	POUND RIDGE NY 10576	5/7/2018 0:00	N	096.02-2-33
3 LYNDEL RD, Pound Ridge	Pound Ridge NY 10576	12/13/2018 0:00	N	063.01-1-17
3 SARLES RD, Pound Ridge	Pound Ridge NY 10576	12/20/2018 0:00	N	086.03-1-1
3 TATOMUCK RD E, Pound Ridge	Pound Ridge NY 10576	7/25/2018 0:00	N	074.04-1-61
3 WARING RD, Pound Ridge	Pound Ridge NY 10576	7/30/2018 0:00	N	096.04-1-32
30 AUSTIN HILL RD, Pound Ridge	Pound Ridge NY 10576	11/6/2018 0:00	N	075.02-1-39
30 FOX HILL RD, Pound Ridge	Pound Ridge NY 10576	10/17/2018 0:00	N	096.01-1-44
30 KNAPP RD, (& 30A), Pound Ridge	Pound Ridge NY 10576	8/16/2018 0:00	N	063.02-2-5
30 WEST LN, Pound Ridge	Pound Ridge NY 10576	5/14/2018 0:00	N	086.01-2-15
30 WHITE BIRCH RD, Pound Ridge	Pound Ridge NY 10576	10/1/2018 0:00	N	096.04-1-72
31 FOX RUN RD, Pound Ridge	Pound Ridge NY 10576	11/1/2018 0:00	N	075.04-1-3
31 HEMLOCK HILL RD, Pound Ridge	Pound Ridge NY 10576	8/16/2018 0:00	N	086.15-1-16
31 OLD SNAKE HILL RD, Pound Ridge	Pound Ridge NY 10576	6/4/2018 0:00	N	086.03-1-68
31 PHEASANT RD, Pound Ridge	Pound Ridge NY 10576	5/9/2018 0:00	N	096.04-1-2
31 ROBIN HOOD RD, Pound Ridge	POUND RIDGE NY 10576	1/29/2018 0:00	N	
31 SHAD RD W, Pound Ridge	Pound Ridge NY 10576	11/27/2018 0:00	N	096.04-1-8
31 SPRING HOUSE RD, Pound Ridge	Pound Ridge NY 10576	9/7/2018 0:00	N	062.04-1-18
31 THRESHING ROCK RD, Pound Ridge	POUND RIDGE NY 10576	4/10/2018 0:00	N	096.02-1-20
31 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	10/24/2018 0:00	N	086.12-1-5
31 WHITE BIRCH RD, Pound Ridge	POUND RIDGE NY 10576	10/23/2018 0:00	N	
317 SALEM RD, Pound Ridge	Pound Ridge NY 10576	10/22/2018 0:00	N	052.04-1-9
32 OLD STONE HILL RD, Pound Ridge	POUND RIDGE NY 10576	1/31/2018 0:00	N	063.03-1-5
32 S BEDFORD RD, Pound Ridge	Pound Ridge NY 10576	11/29/2018 0:00	N	086.03-2-11
32 TWIN FAWN LN, Pound Ridge	POUND RIDGE NY 10576	1/25/2018 0:00	N	074.04-1-13
32 WEST LN, Pound Ridge	POUND RIDGE NY 10576	1/26/2018 0:00	N	086.01-2-14
32 WEST LN, Pound Ridge	POUND RIDGE NY 10576	1/26/2018 0:00	N	086.01-2-14
320 LONG RIDGE RD, Pound Ridge	POUND RIDGE NY 10576	2/28/2018 0:00	N	096.04-1-85
321 STONE HILL RD, Pound Ridge	POUND RIDGE NY 10576	3/16/2018 0:00	N	074.02-1-8
321 STONE HILL RD, Pound Ridge	POUND RIDGE NY 10576	3/16/2018 0:00	N	074.02-1-8
323 PINE BROOK RD, Pound Ridge	Bedford NY 10506	6/4/2018 0:00	N	085.02-1-32
33 BENDER WAY, Pound Ridge	Pound Ridge NY 10576	12/8/2018 0:00	N	075.04-2-16
33 ROBIN HOOD RD, Pound Ridge	POUND RIDGE NY 10576	11/30/2018 0:00	N	
330 STONE HILL RD, (& 330A), Pound Ridge	Pound Ridge NY 10576	12/6/2018 0:00	N	074.02-1-51
330 STONE HILL RD, (& 330A), Pound Ridge	Pound Ridge NY 10576	12/6/2018 0:00	N	074.02-1-51
333 PINE BROOK RD, Pound Ridge	BEDFORD NY 10506	5/4/2018 0:00	N	085.02-1-36
34 DAVIDS LN, Pound Ridge	Pound Ridge NY 10576	6/14/2018 0:00	N	075.04-2-48
34 DEER FIELD RD, Pound Ridge	Pound Ridge NY 10576	6/20/2018 0:00	N	074.02-1-34
34 EBENEZER LN, Pound Ridge	Pound Ridge NY 10576	8/23/2018 0:00	N	063.02-1-25
34 EBENEZER LN, Pound Ridge	Pound Ridge NY 10576	10/1/2018 0:00	N	063.02-1-25

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Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
34 S BEDFORD RD, Pound Ridge	POUND RIDGE NY 10576	3/28/2018 0:00	N	086.03-2-9
344 PINE BROOK RD, (& 344A), Pound Ridge	Bedford NY 10506	8/29/2018 0:00	N	085.03-1-46
35 HACK GREEN RD, Pound Ridge	Pound Ridge NY 10576	12/17/2018 0:00	N	076.03-1-48
35 PHEASANT RD, Pound Ridge	Pound Ridge NY 10576	7/31/2018 0:00	N	096.04-1-1
35 WHITE BIRCH RD S, Pound Ridge	Pound Ridge NY 10576	10/10/2018 0:00	N	096.04-1-65
352 SALEM RD, Pound Ridge	Pound Ridge NY 10576	8/23/2018 0:00	N	052.01-1-12
354 PINE BROOK RD, Pound Ridge	Bedford NY 10506	11/7/2018 0:00	N	085.03-1-45
36 FOX HILL RD, Pound Ridge	Pound Ridge NY 10576	12/6/2018 0:00	N	096.01-1-43
36 FOX RUN RD, Pound Ridge	POUND RIDGE NY 10576	2/19/2018 0:00	N	075.03-3-11
367 LONG RIDGE RD, Pound Ridge	POUND RIDGE NY 10576	3/29/2018 0:00	N	096.02-2-23
37 KNAPP RD, Pound Ridge	Pound Ridge NY 10576	8/29/2018 0:00	N	063.02-2-14
37 LOWER TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	8/30/2018 0:00	N	086.20-1-2
37 MAJOR LOCKWOOD LN, Pound Ridge	Pound Ridge NY 10576	9/5/2018 0:00	N	074.04-1-43
37 SADDLE RIDGE RD, Pound Ridge	Pound Ridge NY 10576	5/14/2018 0:00	N	062.03-1-11
37 WEST LN, Pound Ridge	Pound Ridge NY 10576	10/19/2018 0:00	N	075.03-2-16
372 PINE BROOK RD, Pound Ridge	Bedford NY 10506	6/28/2018 0:00	N	085.03-1-40
375 LONG RIDGE RD, Pound Ridge	Pound Ridge NY 10576	1/24/2018 0:00	N	096.02-2-22
375 LONG RIDGE RD, Pound Ridge	Pound Ridge NY 10576	9/5/2018 0:00	N	096.02-2-22
375 LONG RIDGE RD, Pound Ridge	Pound Ridge NY 10576	9/5/2018 0:00	N	096.02-2-22
38 MALLARD LAKE RD, Pound Ridge	Pound Ridge NY 10576	7/26/2018 0:00	N	085.04-1-56
38 S BEDFORD RD, Pound Ridge	POUND RIDGE NY 10576	2/13/2018 0:00	N	086.03-2-8
38 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	7/5/2018 0:00	N	086.11-1-5
385 STONE HILL RD, Pound Ridge	POUND RIDGE NY 10576	4/4/2018 0:00	N	074.02-1-2
39 AUSTIN HILL RD, Pound Ridge	POUND RIDGE NY 10576	2/2/2018 0:00	N	075.02-1-40
39 BENDER WAY, Pound Ridge	Pound Ridge NY 10576	6/14/2018 0:00	N	075.04-2-15
39 BUNDAGE RIDGE RD, Pound Ridge	pound ridge NY 10576	10/5/2018 0:00	N	
39 ROLLING MEADOW LN, Pound Ridge	POUND RIDGE NY 10576	1/8/2018 0:00	N	086.19-1-19
39 SCOFIELD RD, Pound Ridge	Pound Ridge NY 10576	10/31/2018 0:00	N	063.02-1-61
4 LONS LN, Pound Ridge	Pound Ridge NY 10576	11/1/2018 0:00	N	087.02-1-6
4 LOWER SHAD RD, Pound Ridge	POUND RIDGE NY 10576	5/4/2018 0:00	N	097.01-1-21
4 S EASTERN FARM RD, Pound Ridge	Pound Ridge NY 10576	8/16/2018 0:00	N	096.04-1-34
4 S EASTERN FARM RD, Pound Ridge	Pound Ridge NY 10576	3/9/2018 0:00	N	096.04-1-34
40 LOWER TRINITY PASS RD, Pound Ridge	POUND RIDGE NY 10576	1/12/2018 0:00	N	086.16-1-20
40 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	3/28/2018 0:00	N	086.11-1-4
40 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	6/30/2018 0:00	N	086.11-1-4
40 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	10/4/2018 0:00	N	086.11-1-4
41 WEST LN, Pound Ridge	Pound Ridge NY 10576	5/18/2018 0:00	N	075.03-2-15
42 KITCHAWAN RD, Pound Ridge	Pound Ridge NY 10576	7/25/2018 0:00	N	063.04-1-8
42 WEST LN, Pound Ridge	POUND RIDGE NY 10576	1/31/2018 0:00	N	086.01-2-13
42 WHITE BIRCH RD, Pound Ridge	Pound Ridge NY 10576	11/1/2018 0:00	N	096.04-1-64
43 DEER FIELD RD, Pound Ridge	Pound Ridge NY 10576	7/3/2018 0:00	N	074.02-1-42
44 EBENEZER LN, Pound Ridge	Pound Ridge NY 10576	7/11/2018 0:00	N	063.02-1-26
44 LOWER TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	5/15/2018 0:00	N	086.20-1-24
44 MAJOR LOCKWOOD LN, Pound Ridge	Pound Ridge NY 10576	12/19/2018 0:00	N	074.04-1-44
44 SCOFIELD RD, Pound Ridge	Pound Ridge NY 10576	7/6/2018 0:00	N	063.02-1-34
44 SISCOWIT RD, Pound Ridge	Pound Ridge NY 10576	9/20/2018 0:00	N	076.03-1-61
44 SISCOWIT RD, Pound Ridge	Pound Ridge NY 10576	9/20/2018 0:00	N	076.03-1-61

Lewisboro and Pound Ridge
2018 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
46 FOX RUN RD, Pound Ridge	Pound Ridge NY 10576	9/18/2018 0:00	N	075.03-3-12
46 LOWER TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	8/2/2018 0:00	N	086.20-1-25
46 WHITE BIRCH RD, Pound Ridge	POUND RIDGE NY 10576	4/9/2018 0:00	N	096.04-1-63
460 LONG RIDGE RD, Pound Ridge	Bedford NY 10506	10/4/2018 0:00	N	096.01-1-1
47 HACK GREEN RD, Pound Ridge	Pound Ridge NY 10576	6/6/2018 0:00	N	076.03-1-51
47 INDIAN HILL RD, Pound Ridge	Pound Ridge NY 10576	9/7/2018 0:00	N	075.03-1-41
47 LOWER TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	10/30/2018 0:00	N	086.20-1-7
476 LONG RIDGE RD, Pound Ridge	BEDFORD NY 10506	5/1/2018 0:00	N	085.03-1-11
48 BISHOP PARK RD, Pound Ridge	N/A	8/23/2018 0:00	N	
48 CRADLE ROCK RD, Pound Ridge	POUND RIDGE NY 10576	3/28/2018 0:00	N	096.02-1-42
48 OLD POUND RD, Pound Ridge	Pound Ridge NY 10576	7/18/2018 0:00	N	075.03-1-82
48 SHAD RD W, Pound Ridge	Pound Ridge NY 10576	9/18/2018 0:00	N	096.03-1-46
48 WEST LN, (& 48 A), Pound Ridge	Pound Ridge NY 10576	8/20/2018 0:00	N	086.01-2-11
48 WEST LN, (& 48 A), Pound Ridge	Pound Ridge NY 10576	8/20/2018 0:00	N	086.01-2-11
49 INDIAN HILL RD, Pound Ridge	Pound Ridge NY 10576	9/7/2018 0:00	N	075.03-1-40
49 KITCHAWAN RD, Pound Ridge	Pound Ridge NY 10576	6/1/2018 0:00	N	063.04-1-30
49 LOW SHAD, Pound Ridge	pound ridge NY 10576	9/20/2018 0:00	N	
49 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	9/27/2018 0:00	N	086.03-1-50
5 PETERS LN, Pound Ridge	POUND RIDGE NY 10576	11/19/2018 0:00	N	
5 WESTCHESTER AVE, Pound Ridge	POUND RIDGE NY 10576	12/11/2018 0:00	N	
50 HIGH RIDGE RD, Pound Ridge	Pound Ridge NY 10576	11/5/2018 0:00	N	086.03-3-21
50 SHAD RD W, Pound Ridge	Pound Ridge NY 10576	8/31/2018 0:00	N	096.03-1-45
50 SISCOWIT RD, Pound Ridge	Pound Ridge NY 10576	7/24/2018 0:00	N	076.03-1-62
50 WHITE BIRCH RD, Pound Ridge	Pound Ridge NY 10576	10/16/2018 0:00	N	096.04-1-62
51 FOX RUN RD, Pound Ridge	Pound Ridge NY 10576	12/31/2018 0:00	N	075.03-3-13
51 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	5/21/2018 0:00	N	086.08-1-43
515 POUND RIDGE RD, Pound Ridge	N/A	2/20/2018 0:00	N	
515 POUND RIDGE RD, Pound Ridge	N/A	2/20/2018 0:00	N	
52 DOE VIEW LN, Pound Ridge	Pound Ridge NY 10576	8/22/2018 0:00	N	075.03-1-6
52 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	10/5/2018 0:00	N	086.01-3-28
52 OLD LOGGING RD, Pound Ridge	BEDFORD NY 10506	7/27/2018 0:00	N	
52 SISCOWIT RD, Pound Ridge	Pound Ridge NY 10576	5/17/2018 0:00	N	076.03-1-63
53 FOX RUN RD, Pound Ridge	Pound Ridge NY 10576	9/7/2018 0:00	N	075.03-3-21
53 WEST LN, Pound Ridge	POUND RIDGE NY 10576	2/16/2018 0:00	N	075.03-2-13
54 CONANT VALLEY RD, Pound Ridge	Pound Ridge NY 10576	7/16/2018 0:00	N	076.01-1-56
54 HACK GREEN RD, Pound Ridge	Pound Ridge NY 10576	7/24/2018 0:00	N	076.03-1-76
54 LOWER SHAD RD, Pound Ridge	Pound Ridge NY 10576	7/11/2018 0:00	N	097.01-1-6
55 FOX RUN RD, Pound Ridge	POUND RIDGE NY 10576	2/1/2018 0:00	N	075.03-3-15
55 OLD LOGGING RD, Pound Ridge	Bedford NY 10506	10/24/2018 0:00	N	085.04-1-12
55 POUND RIDGE RD, Pound Ridge	POUND RIDGE NY 10576	3/6/2018 0:00	N	074.04-1-79
55 WESTCHESTER AVE, (& 57), Pound Ridge	Pound Ridge NY 10576	9/24/2018 0:00	N	086.16-1-55
55 WESTCHESTER AVE, (& 57), Pound Ridge	Pound Ridge NY 10576	9/24/2018 0:00	N	086.16-1-55
55 WESTCHESTER AVE, (& 57), Pound Ridge	Pound Ridge NY 10576	11/12/2018 0:00	N	086.16-1-55
55 WESTCHESTER AVE, Pound Ridge	POUND RIDGE NY 10576	5/8/2018 0:00	N	086.16-1-55
55 WESTCHESTER AVE, Pound Ridge	POUND RIDGE NY 10576	3/15/2018 0:00	N	086.16-1-55
55 WESTCHESTER AVE, Pound Ridge	POUND RIDGE NY 10576	2/6/2018 0:00	N	086.16-1-55
55 WESTCHESTER AVE, Pound Ridge	POUND RIDGE NY 10576	1/19/2018 0:00	N	086.16-1-55

Lewisboro and Pound Ridge
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Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
55 WESTCHESTER AVE, Pound Ridge	POUND RIDGE NY 10576	1/8/2018 0:00	N	086.16-1-55
55 WESTCHESTER AVE, Pound Ridge	POUND RIDGE NY 10576	4/11/2018 0:00	N	086.16-1-55
55 WESTCHESTER AVE, Pound Ridge	N/A	5/18/2018 0:00	N	
55 WESTCHESTER AVE, Pound Ridge	N/A	6/6/2018 0:00	N	
55 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	8/7/2018 0:00	N	086.16-1-55
56 WEST LN, Pound Ridge	POUND RIDGE NY 10576	5/1/2018 0:00	N	086.01-2-8
56 WEST LN, Pound Ridge	POUND RIDGE NY 10576	5/1/2018 0:00	N	086.01-2-8
57 CROSS RIVER RD, Pound Ridge	Pound Ridge NY 10576	11/19/2018 0:00	N	051.03-1-25
57 SALEM RD, Pound Ridge	Pound Ridge NY 10576	10/23/2018 0:00	N	075.01-2-19
58 KITCHAWAN RD, Pound Ridge	Pound Ridge NY 10576	5/24/2018 0:00	N	063.04-1-5
59 SISCOWIT RD, Pound Ridge	Pound Ridge NY 10576	12/5/2018 0:00	N	076.04-1-8
6 APPLE TREE LN, Pound Ridge	POUND RIDGE NY 10576	3/14/2018 0:00	N	096.02-2-26
6 BENGER RD, Pound Ridge	POUND RIDGE NY 10576	2/15/2018 0:00	N	076.01-1-36
6 HOYT RD, Pound Ridge	Pound Ridge NY 10576	12/19/2018 0:00	N	075.03-2-8
6 POUND RIDGE RD, (& 4), Pound Ridge	Pound Ridge NY 10576	8/22/2018 0:00	N	075.03-2-25
6 POUND RIDGE RD, (& 4), Pound Ridge	Pound Ridge NY 10576	8/22/2018 0:00	N	075.03-2-25
6 POUND RIDGE RD, Pound Ridge	POUND RIDGE NY 10576	4/11/2018 0:00	N	075.03-2-25
6 SCOFIELD RD, Pound Ridge	Pound Ridge NY 10576	2/6/2018 0:00	N	063.02-1-19
6 SCOFIELD RD, Pound Ridge	Pound Ridge NY 10576	8/9/2018 0:00	N	063.02-1-19
6 WEST LN, Pound Ridge	Pound Ridge NY 10576	10/29/2018 0:00	N	086.01-2-26
60 OLD MILL RIVER RD, Pound Ridge	Pound Ridge NY 10576	10/29/2018 0:00	N	075.02-1-29
60 SALEM RD, Pound Ridge	Pound Ridge NY 10576	7/24/2018 0:00	N	075.01-1-52
61 LOWER SHAD RD, Pound Ridge	Pound Ridge NY 10576	7/11/2018 0:00	N	096.02-1-61
62 AUTUMN RIDGE RD, Pound Ridge	Pound Ridge NY 10576	5/25/2018 0:00	N	074.02-1-65
62 CONANT VALLEY RD, Pound Ridge	Pound Ridge NY 10576	9/11/2018 0:00	N	076.01-1-57
62 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	6/29/2018 0:00	N	086.01-3-27
62 PARK VIEW RD, Pound Ridge	Pound Ridge NY 10576	5/16/2018 0:00	N	063.01-1-9
62 WEST LN, Pound Ridge	Pound Ridge NY 10576	6/4/2018 0:00	N	086.01-2-7
63 AUTUMN RIDGE RD, Pound Ridge	Pound Ridge NY 10576	6/18/2018 0:00	N	074.02-1-72
63 DANN FARM RD, Pound Ridge	Pound Ridge NY 10576	10/4/2018 0:00	N	087.01-1-36
63 HACK GREEN RD, Pound Ridge	Pound Ridge NY 10576	8/27/2018 0:00	N	076.03-1-54
63 LYNDEL RD, Pound Ridge	POUND RIDGE NY 10576	2/1/2018 0:00	N	063.01-1-11
63 LYNDEL RD, Pound Ridge	POUND RIDGE NY 10576	2/1/2018 0:00	N	063.01-1-11
64 DINGEE RD, Pound Ridge	Pound Ridge NY 10576	11/29/2018 0:00	N	052.04-1-65
66 CROSS RIVER RD, Pound Ridge	Pound Ridge NY 10576	10/8/2018 0:00	N	051.03-1-2
66 DANN FARM RD, Pound Ridge	Pound Ridge NY 10576	7/6/2018 0:00	N	087.01-1-31
67 OLD LOGGING RD, Pound Ridge	BEDFORD NY 10506	1/8/2018 0:00	N	085.04-1-15
67 OLD STONE HILL RD, Pound Ridge	POUND RIDGE NY 10576	4/13/2018 0:00	N	063.03-1-71
67 WEST LN, Pound Ridge	POUND RIDGE NY 10576	4/30/2018 0:00	N	075.03-2-11
68 HACK GREEN RD, Pound Ridge	POUND RIDGE NY 10576	4/18/2018 0:00	N	076.03-1-73
69 FANCHER RD, Pound Ridge	Pound Ridge NY 10576	8/20/2018 0:00	N	086.07-1-13
69 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	6/26/2018 0:00	N	086.01-2-57
69 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	7/17/2018 0:00	N	086.11-1-15
7 HIGHVIEW RD, Pound Ridge	Pound Ridge NY 10576	12/27/2018 0:00	N	052.04-1-53
7 POUND RIDGE RD, Pound Ridge	Pound Ridge NY 10576	3/16/2018 0:00	N	075.03-1-21
7 POUND RIDGE RD, Pound Ridge	Pound Ridge NY 10576	1/5/2018 0:00	N	075.03-1-21
7 POUND RIDGE RD, Pound Ridge	Pound Ridge NY 10576	1/16/2018 0:00	N	075.03-1-21

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7 POUND RIDGE RD, Pound Ridge	Pound Ridge NY 10576	2/5/2018 0:00	N	075.03-1-21
7 POUND RIDGE RD, Pound Ridge	Pound Ridge NY 10576	2/15/2018 0:00	N	075.03-1-21
7 POUND RIDGE RD, Pound Ridge	Pound Ridge NY 10576	4/26/2018 0:00	N	075.03-1-21
7 POUND RIDGE RD, Pound Ridge	Pound Ridge NY 10576	8/13/2018 0:00	N	075.03-1-21
70 CONANT VALLEY RD, Pound Ridge	Pound Ridge NY 10576	6/14/2018 0:00	N	076.01-1-65
70 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	10/5/2018 0:00	N	086.01-3-25
70 PARK VIEW RD S, Pound Ridge	Pound Ridge NY 10576	10/30/2018 0:00	N	063.01-1-8
70 WESTCHESTER AVE, Pound Ridge	POUND RIDGE NY 10576	3/28/2018 0:00	N	086.16-1-5
70 WESTCHESTER AVE, Pound Ridge	POUND RIDGE NY 10576	3/28/2018 0:00	N	086.16-1-5
71 INDIAN HILL RD, Pound Ridge	POUND RIDGE NY 10576	2/22/2018 0:00	N	075.03-1-57
71 LOWER SHAD RD, Pound Ridge	POUND RIDGE NY 10576	4/7/2018 0:00	N	096.02-1-62
71 OLD MILL RIVER RD, Pound Ridge	Pound Ridge NY 10576	9/7/2018 0:00	N	076.01-1-2
71 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	10/31/2018 0:00	N	063.03-1-70
71 PARK VIEW RD S, Pound Ridge	POUND RIDGE NY 10576	4/27/2018 0:00	N	063.01-1-29
71 SHAD RD W, Pound Ridge	POUND RIDGE NY 10576	4/3/2018 0:00	N	096.03-1-31
71 WHITE BIRCH RD, Pound Ridge	Pound Ridge NY 10576	8/16/2018 0:00	N	103.01-1-5
72 OLD CHURCH LN, Pound Ridge	pound ridge NY 10576	2/14/2018 0:00	N	
72 OLD CHURCH LN, Pound Ridge	pound ridge NY 10576	2/14/2018 0:00	N	
72 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	9/21/2018 0:00	N	086.16-1-4
73 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	7/24/2018 0:00	N	086.11-1-13
73 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	8/9/2018 0:00	N	086.11-1-13
74 INDIAN HILL RD, Pound Ridge	Pound Ridge NY 10576	6/1/2018 0:00	N	075.03-1-49
75 EASTWWODS RD, Pound Ridge	pound ridge NY 10576	8/23/2018 0:00	N	
75 FANCHER RD, Pound Ridge	Pound Ridge NY 10576	6/20/2018 0:00	N	086.07-1-15
75 WEST RD, Pound Ridge	POUND RIDGE NY 10576	5/15/2018 0:00	N	
76 SHAD RD W, Pound Ridge	Pound Ridge NY 10576	11/2/2018 0:00	N	096.03-1-41
76 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	8/17/2018 0:00	N	086.16-1-2
76 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	8/22/2018 0:00	N	086.16-1-2
76 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	8/22/2018 0:00	N	086.16-1-2
76 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	1/10/2018 0:00	N	086.16-1-2
76 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	4/14/2018 0:00	N	086.16-1-2
76 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	4/14/2018 0:00	N	086.16-1-2
76 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	4/14/2018 0:00	N	086.16-1-2
76 WHITE BIRCH RD, Pound Ridge	Pound Ridge NY 10576	7/3/2018 0:00	N	103.01-1-11
77 HACK GREEN RD, Pound Ridge	Pound Ridge NY 10576	12/14/2018 0:00	N	076.03-1-57
78 INDIAN HILL RD, Pound Ridge	Pound Ridge NY 10576	6/11/2018 0:00	N	075.03-1-50
78 WEST AVE, Pound Ridge	POUND RIDGE NY 10576	3/23/2018 0:00	N	
79 OLD CHURCH LN, Pound Ridge	pound ridge NY 10576	10/25/2018 0:00	N	
8 HEMLOCK HILL RD, Pound Ridge	Pound Ridge NY 10576	12/18/2018 0:00	N	086.15-1-22
8 ROBIN HOOD RD, Pound Ridge	Pound Ridge NY 10576	10/24/2018 0:00	N	096.03-1-20
8 THRESHING ROCK RD, Pound Ridge	Pound Ridge NY 10576	12/19/2018 0:00	N	096.02-1-25
81 FANCHER RD, Pound Ridge	POUND RIDGE NY 10576	3/23/2018 0:00	N	086.07-1-16
82 HACK GREEN RD, Pound Ridge	Pound Ridge NY 10576	10/18/2018 0:00	N	076.04-1-1
83 HACK GREEN RD, Pound Ridge	Pound Ridge NY 10576	8/7/2018 0:00	N	076.03-1-65
83 WEST AVE, Pound Ridge	POUND RIDGE NY 10576	3/23/2018 0:00	N	
83 WEST RD, Pound Ridge	Pound Ridge NY 10576	8/3/2018 0:00	N	087.02-1-7
83 WEST RD, Pound Ridge	Pound Ridge NY 10576	8/27/2018 0:00	N	087.02-1-7

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Street Address	CityStateZip	Service Date	Evidence of Septage	Print Key
84 SALEM RD, Pound Ridge	Pound Ridge NY 10576	10/30/2018 0:00	N	075.01-1-64
85 DANN FARM RD, Pound Ridge	Pound Ridge NY 10576	7/13/2018 0:00	N	087.01-1-44
85 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	5/21/2018 0:00	N	075.04-2-6
85 HIGH RIDGE RD, Pound Ridge	Pound Ridge NY 10576	10/15/2018 0:00	N	086.03-1-52
85 UPPER SHAD RD, Pound Ridge	POUND RIDGE NY 10576	5/1/2018 0:00	N	086.03-1-19
85 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	2/22/2018 0:00	N	086.11-1-22
85 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	6/19/2018 0:00	N	086.11-1-22
87 S BEDFORD RD, Pound Ridge	Pound Ridge NY 10576	12/12/2018 0:00	N	085.02-1-16
87 WESTCHESTER AVE, Pound Ridge	POUND RIDGE NY 10576	1/26/2018 0:00	N	086.11-1-23
88 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	11/7/2018 0:00	N	075.04-1-52
88 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	11/7/2018 0:00	N	075.04-1-52
88 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	11/7/2018 0:00	N	075.04-1-52
89 OLD CHURCH LN, Pound Ridge	N/A	5/1/2018 0:00	N	
89 PARK VIEW RD, Pound Ridge	Pound Ridge NY 10576	7/2/2018 0:00	N	063.01-1-31
89 WEST RD, Pound Ridge	Pound Ridge NY 10576	11/1/2018 0:00	N	087.02-1-8
9 EASTWOODS RD, Pound Ridge	POUND RIDGE NY 10576	3/20/2018 0:00	N	086.07-1-25
9 EASTWOODS RD, Pound Ridge	POUND RIDGE NY 10576	4/3/2018 0:00	N	086.07-1-25
9 GREAT HILL FARMS RD, Pound Ridge	Bedford NY 10506	5/29/2018 0:00	N	085.03-1-18
9 GREAT HILL FARMS RD, Pound Ridge	Bedford NY 10506	5/29/2018 0:00	N	085.03-1-18
9 HEERDT FARM LN, Pound Ridge	Pound Ridge NY 10576	12/26/2018 0:00	N	086.01-1-28
9 LIGHT HORSE LN, Pound Ridge	POUND RIDGE NY 10576	5/2/2018 0:00	N	086.16-1-40
9 NANCYS LN, Pound Ridge	Pound Ridge NY 10576	5/15/2018 0:00	N	076.01-1-44
9 SOUTH BEDFORD RD, Pound Ridge	N/A	6/14/2018 0:00	N	
90 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	9/18/2018 0:00	N	086.01-2-52
90 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	12/14/2018 0:00	N	063.03-1-21
94 WEST RD, Pound Ridge	Pound Ridge NY 10576	9/10/2018 0:00	N	087.02-1-11
96 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	5/15/2018 0:00	N	086.01-2-43
99 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	10/9/2018 0:00	N	086.01-2-49

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
38 Truesdale Lake Dr, Lewisboro	South Salem NY 10590	12/23/2019 0:00	Single Family	Y
54 Smith Ridge Rd, Lewisboro	South Salem NY 10590	3/15/2019 0:00	Single Family	Y
190 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	2/28/2019 0:00	Single Family	Y
31 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	5/6/2019 0:00	Single Family	Y
1 AUDUBON RD, Lewisboro	South Salem NY 10590	6/1/2019 0:00	Single Family	N
1 Autumn Ridge Rd, Lewisboro	South Salem NY 10590	7/18/2019 0:00	Single Family	N
1 BOUTONVILLE RD, Lewisboro	Cross River NY 10518	9/17/2019 0:00	Single Family	N
1 BOWAY, Lewisboro	South Salem NY 10590	7/24/2019 0:00	Single Family	N
1 BRISCOE RD, Lewisboro	South Salem NY 10590	4/22/2019 0:00	Single Family	N
1 Carol Ln, Lewisboro	South Salem NY 10590	8/14/2019 0:00	Single Family	N
1 CIDER MILL FARM, Lewisboro	South Salem NY 10590	8/1/2019 0:00	Single Family	N
1 CONANT VALLEY RD, Lewisboro	South Salem NY 10590	2/20/2019 0:00	Single Family	N
1 E RIDGE RD, Lewisboro	Waccabuc NY 10597	6/20/2019 0:00	Single Family	N
1 FOX RUN, Lewisboro	SOUTH SALEM NY 10590	4/10/2019 0:00	Single Family	N
1 JAY CT, Lewisboro	N/A	11/22/2019 0:00	Commercial	N
1 JAY CT, Lewisboro	N/A	11/8/2019 0:00	Multi Family	N
1 Kings Grant Way, Lewisboro	Waccabuc NY 10597	11/18/2019 0:00	Single Family	N
1 KITCHAWAN RD, Lewisboro	N/A	7/3/2019 0:00	Single Family	N
1 KNAPP RD, Lewisboro	South Salem NY 10590	9/26/2019 0:00	Single Family	N
1 LOWER LAKE SHR, Lewisboro	Katonah NY 10536	5/14/2019 0:00	Single Family	N
1 Old POND RD, Lewisboro	South Salem NY 10590	3/25/2019 0:00	Single Family	N
1 ORCHARD DR, Lewisboro	South Salem NY 10590	1/8/2019 0:00	Single Family	N
1 Pamela Ln, Lewisboro	South Salem NY 10590	12/10/2019 0:00	Single Family	N
1 ROBINS CT, Lewisboro	South Salem NY 10590	6/13/2019 0:00	Single Family	N
1 ROBINS WOOD LN, Lewisboro	South Salem NY 10590	7/9/2019 0:00	Single Family	N
1 SALEM LN, Lewisboro	South Salem NY 10590	8/14/2019 0:00	Single Family	N
1 SCENIC DR, Lewisboro	South Salem NY 10590	2/26/2019 0:00	Single Family	N
1 Shoshone Dr, Lewisboro	Katonah NY 10536	10/30/2019 0:00	Single Family	N
1 SILVERMINE DR, Lewisboro	South Salem NY 10590	12/31/2019 0:00	Single Family	N
1 Soundview Loop, Lewisboro	South Salem NY 10590	9/10/2019 0:00	Single Family	N
10 Audubon Rd, Lewisboro	South Salem NY 10590	11/7/2019 0:00	Single Family	N
10 BAYBERRY LN, Lewisboro	South Salem NY 10590	4/25/2019 0:00	Single Family	N
10 BAYBERRY LN, Lewisboro	South Salem NY 10590	4/25/2019 0:00	Single Family	N
10 BIRCH RD, Lewisboro	South Salem NY 10590	10/29/2019 0:00	Single Family	N
10 CANAAN CIR, Lewisboro	South Salem NY 10590	4/9/2019 0:00	Single Family	N
10 Deer Run Rd, Lewisboro	South Salem NY 10590	8/28/2019 0:00	Single Family	N
10 GREEN HILL RD, Lewisboro	Goldens Bridge NY 10526	11/4/2019 0:00	Single Family	N
10 Harbor Pl, Lewisboro	South Salem NY 10590	10/2/2019 0:00	Single Family	N
10 HOWARD DR, Lewisboro	N/A	11/7/2019 0:00	Single Family	N
10 HUNT FARM RD, Lewisboro	Waccabuc NY 10597	8/15/2019 0:00	Single Family	N
10 LOIS LN, Lewisboro	Katonah NY 10536	3/18/2019 0:00		N
10 Lower Salem Rd, Lewisboro	South Salem NY 10590	9/16/2019 0:00	Single Family	N
10 MAKEPEACE HL, Lewisboro	Waccabuc NY 10597	9/30/2019 0:00	Single Family	N
10 Manor Dr, Lewisboro	Goldens Bridge NY 10526	8/15/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
10 Meadow ST, Lewisboro	Goldens Bridge NY 10526	1/14/2019 0:00	Multi Family	N
10 Mohawk Trl, Lewisboro	Katonah NY 10536	11/5/2019 0:00	Single Family	N
10 Orchard Dr, Lewisboro	South Salem NY 10590	9/5/2019 0:00	Single Family	N
10 RESERVOIR RD, Lewisboro	South Salem NY 10590	6/19/2019 0:00	Single Family	N
10 SCENIC DR, Lewisboro	South Salem NY 10590	3/15/2019 0:00	Single Family	N
10 Shoshone Dr, Lewisboro	Katonah NY 10536	11/1/2019 0:00	Single Family	N
10 Sky Top, Lewisboro	Katonah NY 10536	10/10/2019 0:00	Single Family	N
10 Soundview Loop, Lewisboro	South Salem NY 10590	7/11/2019 0:00	Single Family	N
10 Tommy'S Ln, Lewisboro	South Salem NY 10590	6/13/2019 0:00	Single Family	N
10 Truesdale Woods Rd, Lewisboro	South Salem NY 10590	8/7/2019 0:00	Single Family	N
10 TWIN LAKES RD, Lewisboro	South Salem NY 10590	7/9/2019 0:00	Single Family	N
10 WATERVIEW CT, Lewisboro	South Salem NY 10590	4/22/2019 0:00	Single Family	N
100 RIDGEFIELD AVE, Lewisboro	South Salem NY 10590	1/4/2019 0:00	Single Family	N
100 RT 22, Lewisboro	N/A	12/27/2019 0:00		N
100 SPRING ST, Lewisboro	South Salem NY 10590	6/7/2019 0:00	Multi Family	N
100 UPPER LAKE SHR, Lewisboro	Katonah NY 10536	10/10/2019 0:00	Single Family	N
1010 Route 35, Lewisboro	Cross River NY 10518	10/9/2019 0:00	Single Family	N
102 BOUTON RD, Lewisboro	South Salem NY 10590	10/14/2019 0:00	Single Family	N
102 COVE RD, Lewisboro	South Salem NY 10590	4/17/2019 0:00	Single Family	N
102 N SALEM RD, Lewisboro	Cross River NY 10518	3/25/2019 0:00	Single Family	N
103 POST OFFICE RD, Lewisboro	South Salem NY 10590	10/30/2019 0:00	Single Family	N
103 TODD RD, Lewisboro	Katonah NY 10536	5/14/2019 0:00	Single Family	N
104 GOLDENS BRIDGE RD, Lewisboro	GOLDENS BRIDGE NY 10526	1/18/2019 0:00	Commercial	N
104 GOLDENS BRIDGE RD, Lewisboro	GOLDENS BRIDGE NY 10526	1/18/2019 0:00	Commercial	N
104 RIDGEFIELD AVE, Lewisboro	South Salem NY 10590	2/25/2019 0:00	Single Family	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	12/10/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	2/19/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	2/19/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	9/16/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	10/7/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	10/24/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	9/16/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	8/23/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	8/17/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	8/23/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	10/25/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	10/24/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	6/11/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	4/27/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	4/27/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	4/27/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	6/27/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	8/30/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	9/3/2019 0:00	Commercial	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
104 Route 22, Lewisboro	Goldens Bridge NY 10526	10/23/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	8/13/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	10/17/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	9/28/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	10/12/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	10/23/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	7/13/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	6/25/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	10/22/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	10/3/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	12/11/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	8/3/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	7/22/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	7/10/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	7/11/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	7/12/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	7/12/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	7/8/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	6/17/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	4/30/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	4/30/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	5/22/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	5/22/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	8/2/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	7/26/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	8/19/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	8/23/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	8/13/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	10/18/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	10/22/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	10/22/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	10/22/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	10/22/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	10/22/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	10/22/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	2/25/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	3/19/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	3/19/2019 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	6/15/2019 0:00	Commercial	N
104 UPPER LAKE SHR, Lewisboro	Katonah NY 10536	9/5/2019 0:00	Single Family	N
1048 OLD POST RD, Lewisboro	N/A	9/11/2019 0:00	Single Family	N
105 MAIN ST, Lewisboro	South Salem NY 10590	11/17/2019 0:00	Single Family	N
106 BOWAY, Lewisboro	South Salem NY 10590	2/6/2019 0:00	Single Family	N
106 LOCKWOOD RD, Lewisboro	South Salem NY 10590	1/5/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
106 MEAD ST, Lewisboro	Waccabuc NY 10597	5/21/2019 0:00	Single Family	N
106 Spring St, Lewisboro	South Salem NY 10590	6/7/2019 0:00	Multi Family	N
106 SPRING ST, Lewisboro	South Salem NY 10590	6/10/2019 0:00	Single Family	N
106B SPRING ST, Lewisboro	N/A	6/10/2019 0:00	Multi Family	N
107 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	5/29/2019 0:00	Single Family	N
107 MAIN ST, Lewisboro	South Salem NY 10590	8/2/2019 0:00	Single Family	N
1070 Route 35, Lewisboro	South Salem NY 10590	8/21/2019 0:00	Single Family	N
1070 Route 35, Lewisboro	South Salem NY 10590	8/21/2019 0:00	Single Family	N
1079 Rt-35, Lewisboro	South Salem NY 10590	6/7/2019 0:00	Other	N
109 Lockwood Rd, Lewisboro	South Salem NY 10590	8/2/2019 0:00	Single Family	N
109 Main St, Lewisboro	South Salem NY 10590	10/17/2019 0:00	Single Family	N
109 Todd Rd, Lewisboro	Katonah NY 10536	8/24/2019 0:00	Single Family	N
11 Brundige Dr, Lewisboro	Goldens Bridge NY 10526	10/16/2019 0:00	Single Family	N
11 Butternut Ln, Lewisboro	Katonah NY 10536	11/26/2019 0:00	Single Family	N
11 DEBBIE LN, Lewisboro	Cross River NY 10518	1/15/2019 0:00	Single Family	N
11 DEEPWELL FARMS RD, Lewisboro	South Salem NY 10590	5/23/2019 0:00	Single Family	N
11 E MOUNTAIN RD, Lewisboro	Katonah NY 10536	3/17/2019 0:00	Single Family	N
11 Elmwood Rd, Lewisboro	South Salem NY 10590	8/7/2019 0:00		N
11 GILBERT ST, Lewisboro	South Salem NY 10590	3/28/2019 0:00	Single Family	N
11 HOWE ST, Lewisboro	South Salem NY 10590	2/5/2019 0:00	Single Family	N
11 HOWE ST, Lewisboro	South Salem NY 10590	2/5/2019 0:00	Single Family	N
11 Knapp Rd, Lewisboro	South Salem NY 10590	11/4/2019 0:00	Single Family	N
11 Lake St, Lewisboro	Goldens Bridge NY 10526	12/10/2019 0:00	Single Family	N
11 LAURIE LN, Lewisboro	South Salem NY 10590	5/10/2019 0:00	Single Family	N
11 Ledgewood Ln, Lewisboro	South Salem NY 10590	10/11/2019 0:00	Single Family	N
11 LOCKWOOD RD, Lewisboro	South Salem NY 10590	12/26/2019 0:00	Single Family	N
11 MAIN ST, Lewisboro	South Salem NY 10590	4/3/2019 0:00	Commercial	N
11 MAIN ST, Lewisboro	South Salem NY 10590	4/12/2019 0:00	Commercial	N
11 Mark Mead Rd, Lewisboro	Cross River NY 10518	9/6/2019 0:00	Single Family	N
11 OLD POND RD, Lewisboro	South Salem NY 10590	8/5/2019 0:00	Single Family	N
11 SAWGRASS DR, Lewisboro	Katonah NY 10536	12/13/2019 0:00	Single Family	N
11 SCHOOLHOUSE RD, Lewisboro	Waccabuc NY 10597	12/12/2019 0:00	Single Family	N
11 SCHOOLHOUSE RD, Lewisboro	Waccabuc NY 10597	12/12/2019 0:00	Single Family	N
11 SCHOOLHOUSE RD, Lewisboro	Waccabuc NY 10597	12/12/2019 0:00	Single Family	N
11 SPRING ST S, Lewisboro	South Salem NY 10590	2/11/2019 0:00	Single Family	N
11 TODD HILL CIR, Lewisboro	Goldens Bridge NY 10526	5/6/2019 0:00	Single Family	N
11 TOMMY'S LN, Lewisboro	South Salem NY 10590	4/19/2019 0:00	Single Family	N
11 Twin Lakes Rd, Lewisboro	South Salem NY 10590	12/4/2019 0:00	Single Family	N
110 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	11/26/2019 0:00	Single Family	N
110 POST OFFICE RD, Lewisboro	South Salem NY 10590	2/14/2019 0:00	Single Family	N
110 RIDGEFIELD AVE, Lewisboro	South Salem NY 10590	1/3/2019 0:00	Single Family	N
111 Elmwood Rd, Lewisboro	South Salem NY 10590	12/13/2019 0:00	Single Family	N
111 SPRING ST, Lewisboro	N/A	5/6/2019 0:00	Other	N
112 Spring St, Lewisboro	South Salem NY 10590	8/30/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
1125 Rt-35, Lewisboro	South Salem NY 10590	6/24/2019 0:00	Single Family	N
113 East St, Lewisboro	South Salem NY 10590	11/18/2019 0:00	Single Family	N
113 East St, Lewisboro	South Salem NY 10590	11/18/2019 0:00	Single Family	N
114 East St, Lewisboro	South Salem NY 10590	5/29/2019 0:00	Single Family	N
114 Post Office Rd, Lewisboro	South Salem NY 10590	9/23/2019 0:00	Single Family	N
114 Spring St, Lewisboro	South Salem NY 10590	9/4/2019 0:00	Single Family	N
1145 ROUTE 35, Lewisboro	South Salem NY 10590	2/11/2019 0:00	Single Family	N
1156 OLD POST RD, Lewisboro	N/A	1/2/2019 0:00	Commercial	N
1156 OLD POST RD, Lewisboro	N/A	1/2/2019 0:00	Commercial	N
116 Upper Lakeshore Dr, Lewisboro	Katonah NY 10536	10/25/2019 0:00	Single Family	N
117 EAST ST, Lewisboro	South Salem NY 10590	5/2/2019 0:00	Single Family	N
117 OSCALETA RD, Lewisboro	South Salem NY 10590	7/26/2019 0:00	Single Family	N
118 E RIDGE RD, Lewisboro	South Salem NY 10590	4/12/2019 0:00	Single Family	N
118 Mead St, Lewisboro	Waccabuc NY 10597	11/13/2019 0:00	Single Family	N
118 POST OFFICE RD, Lewisboro	South Salem NY 10590	4/4/2019 0:00	Single Family	N
1187 OLD POST RD, Lewisboro	south salem NY 10590	9/10/2019 0:00	Single Family	N
12 APACHE CIR, Lewisboro	KATONAH NY 10536	4/25/2019 0:00	Single Family	N
12 BOWAY, Lewisboro	South Salem NY 10590	4/22/2019 0:00	Single Family	N
12 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	7/24/2019 0:00	Single Family	N
12 BUTTERNUT LN, Lewisboro	Katonah NY 10536	4/15/2019 0:00	Single Family	N
12 CORNWALL CT, Lewisboro	Katonah NY 10536	4/15/2019 0:00	Single Family	N
12 Deer Run Rd, Lewisboro	South Salem NY 10590	8/13/2019 0:00	Single Family	N
12 Elmwood Rd, Lewisboro	South Salem NY 10590	6/10/2019 0:00	Single Family	N
12 Gilbert St, Lewisboro	South Salem NY 10590	1/8/2019 0:00	Single Family	N
12 Gilbert St, Lewisboro	South Salem NY 10590	12/31/2019 0:00	Single Family	N
12 Glen Dr, Lewisboro	South Salem NY 10590	7/10/2019 0:00	Single Family	N
12 HEMLOCK RD, Lewisboro	South Salem NY 10590	5/17/2019 0:00	Single Family	N
12 HILLTOP RD, Lewisboro	Waccabuc NY 10597	3/11/2019 0:00	Single Family	N
12 HOWE ST, Lewisboro	South Salem NY 10590	6/18/2019 0:00	Single Family	N
12 HUNTS LN, Lewisboro	Cross River NY 10518	4/25/2019 0:00	Single Family	N
12 LAKEVIEW PASS, Lewisboro	Katonah NY 10536	3/12/2019 0:00	Single Family	N
12 LAURIE LN, Lewisboro	South Salem NY 10590	8/21/2019 0:00	Single Family	N
12 N LAKE CIR, Lewisboro	South Salem NY 10590	4/4/2019 0:00	Single Family	N
12 N Salem Rd, Lewisboro	Cross River NY 10518	8/26/2019 0:00	Commercial	N
12 N Salem Rd, Lewisboro	Cross River NY 10518	5/9/2019 0:00	Commercial	N
12 N Salem Rd, Lewisboro	Cross River NY 10518	1/7/2019 0:00	Commercial	N
12 OLD OSCALETA RD, Lewisboro	South Salem NY 10590	6/21/2019 0:00	Single Family	N
12 POST OFFICE RD, Lewisboro	Waccabuc NY 10597	3/19/2019 0:00	Single Family	N
12 S MOUNTAIN PASS, Lewisboro	Katonah NY 10536	9/5/2019 0:00	Single Family	N
12 Salem Ln, Lewisboro	South Salem NY 10590	7/2/2019 0:00	Single Family	N
12 SCENIC DR, Lewisboro	South Salem NY 10590	8/31/2019 0:00	Single Family	N
12 W MAIN ST, Lewisboro	Goldens Bridge NY 10526	5/6/2019 0:00	Single Family	N
12 WATERVIEW CT, Lewisboro	South Salem NY 10590	10/7/2019 0:00	Single Family	N
120 Mill River Rd, Lewisboro	South Salem NY 10590	10/8/2019 0:00	Multi Family	N

Lewisboro and Pound Ridge
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Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
1208 ROUTE 35, Lewisboro	South Salem NY 10590	7/29/2019 0:00	Single Family	N
1208 ROUTE 35, Lewisboro	South Salem NY 10590	7/29/2019 0:00	Single Family	N
1208 Route 35, Lewisboro	South Salem NY 10590	6/10/2019 0:00	Single Family	N
1208 Route 35, Lewisboro	South Salem NY 10590	1/8/2019 0:00	Single Family	N
121 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	11/21/2019 0:00	Single Family	N
122 TODD RD, Lewisboro	Katonah NY 10536	9/27/2019 0:00	Single Family	N
123 N SALEM RD, Lewisboro	Cross River NY 10518	6/24/2019 0:00	Single Family	N
123 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	10/22/2019 0:00	Single Family	N
124 Oscaleta Rd, Lewisboro	South Salem NY 10590	11/6/2019 0:00	Single Family	N
124 SMITH RIDGE RD, Lewisboro	south salem NY 10590	1/4/2019 0:00	Single Family	N
125 MAIN ST, Lewisboro	South Salem NY 10590	5/17/2019 0:00	Single Family	N
126 MAIN ST, Lewisboro	South Salem NY 10590	11/27/2019 0:00	Single Family	N
126 Upper Lakeshore Dr, Lewisboro	Katonah NY 10536	8/8/2019 0:00	Single Family	N
127 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	7/30/2019 0:00	Single Family	N
127 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	7/30/2019 0:00	Single Family	N
128 Spring St, Lewisboro	South Salem NY 10590	11/7/2019 0:00	Single Family	N
1280 ROUTE 35, Lewisboro	South Salem NY 10590	4/10/2019 0:00	Single Family	N
129 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	3/25/2019 0:00	Single Family	N
129 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	3/25/2019 0:00	Single Family	N
13 Autumn Ridge Rd, Lewisboro	South Salem NY 10590	9/25/2019 0:00	Single Family	N
13 BOUTON ST, Lewisboro	South Salem NY 10590	1/28/2019 0:00	Multi Family	N
13 Hunt Farm Rd, Lewisboro	Waccabuc NY 10597	7/16/2019 0:00	Single Family	N
13 Meadow St, Lewisboro	Goldens Bridge NY 10526	9/30/2019 0:00	Commercial	N
13 W Main St, Lewisboro	Goldens Bridge NY 10526	5/20/2019 0:00	Single Family	N
131 Elmwood Rd, Lewisboro	South Salem NY 10590	6/17/2019 0:00	Single Family	N
131 Smith Ridge Rd, Lewisboro	South Salem NY 10590	12/4/2019 0:00	Single Family	N
1310 ROUTE 35, Lewisboro	South Salem NY 10590	8/19/2019 0:00	Commercial	N
1310 ROUTE 35, Lewisboro	South Salem NY 10590	8/19/2019 0:00	Commercial	N
132 MAIN ST, Lewisboro	South Salem NY 10590	1/2/2019 0:00	Single Family	N
132 Oscaleta Rd, Lewisboro	South Salem NY 10590	8/26/2019 0:00	Single Family	N
133 OSCALETA RD, Lewisboro	South Salem NY 10590	5/28/2019 0:00	Single Family	N
1331 RT-35, Lewisboro	South Salem NY 10590	8/5/2019 0:00	Single Family	N
1340 Route 35, Lewisboro	South Salem NY 10590	5/31/2019 0:00	Other	N
1340 Route 35, Lewisboro	South Salem NY 10590	5/31/2019 0:00	Other	N
135 MAIN ST, Lewisboro	South Salem NY 10590	2/6/2019 0:00	Single Family	N
1351 OLD POST RD, Lewisboro	N/A	6/20/2019 0:00	Single Family	N
1351 OLD POST RD, Lewisboro	N/A	6/20/2019 0:00	Single Family	N
1379 RT-35, Lewisboro	South Salem NY 10590	6/7/2019 0:00	Single Family	N
139 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	1/16/2019 0:00	Single Family	N
139 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	12/12/2019 0:00	Single Family	N
139 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	6/6/2019 0:00	Single Family	N
139 Smith Ridge Rd, Lewisboro	South Salem NY 10590	9/14/2019 0:00	Single Family	N
1393 ROUTE 35, Lewisboro	South Salem NY 10590	6/1/2019 0:00	Single Family	N
14 APACHE CIR, Lewisboro	KATONAH NY 10536	5/8/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
14 CANAAN CIR, Lewisboro	South Salem NY 10590	8/10/2019 0:00	Single Family	N
14 CAPTAIN LAWRENCE DR, Lewisboro	South Salem NY 10590	11/20/2019 0:00	Single Family	N
14 CHAPEL RD, Lewisboro	WACCABUC NY 10597	1/10/2019 0:00	Single Family	N
14 CHURCH TAVERN RD, Lewisboro	South Salem NY 10590	1/3/2019 0:00	Single Family	N
14 CORNWALL CT, Lewisboro	Katonah NY 10536	3/6/2019 0:00	Single Family	N
14 Cove RD, Lewisboro	South Salem NY 10590	2/20/2019 0:00	Single Family	N
14 Five Ponds Dr, Lewisboro	Waccabuc NY 10597	9/7/2019 0:00	Single Family	N
14 Gilbert St, Lewisboro	South Salem NY 10590	9/10/2019 0:00	Single Family	N
14 HILLSIDE AVE, Lewisboro	Goldens Bridge NY 10526	4/16/2019 0:00	Single Family	N
14 Hilltop Rd, Lewisboro	Waccabuc NY 10597	9/10/2019 0:00	Single Family	N
14 LAKEVIEW PASS, Lewisboro	Katonah NY 10536	12/31/2019 0:00	Single Family	N
14 LONGVIEW RD, Lewisboro	South Salem NY 10590	9/19/2019 0:00	Single Family	N
14 LOWER LAKESHORE DR, Lewisboro	Katonah NY 10536	6/26/2019 0:00	Single Family	N
14 MAIN ST, Lewisboro	Goldens Bridge NY 10526	6/14/2019 0:00		N
14 MAIN ST, Lewisboro	South Salem NY 10590	3/26/2019 0:00	Single Family	N
14 Mandia Ln, Lewisboro	Goldens Bridge NY 10526	10/11/2019 0:00	Multi Family	N
14 N LAKE CIR, Lewisboro	South Salem NY 10590	9/16/2019 0:00	Single Family	N
14 REDCOAT LN, Lewisboro	Waccabuc NY 10597	5/8/2019 0:00	Single Family	N
14 SOUNDVIEW LOOP, Lewisboro	South Salem NY 10590	9/27/2019 0:00	Single Family	N
14 Truesdale Lake Dr, Lewisboro	South Salem NY 10590	10/17/2019 0:00	Single Family	N
140 MAIN ST, Lewisboro	South Salem NY 10590	8/30/2019 0:00	Single Family	N
141 EAST ST, Lewisboro	South Salem NY 10590	5/21/2019 0:00	Single Family	N
1410 Route 35, Lewisboro	South Salem NY 10590	4/11/2019 0:00	Commercial	N
1410 Route 35, Lewisboro	South Salem NY 10590	8/12/2019 0:00	Commercial	N
1410 Route 35, Lewisboro	South Salem NY 10590	4/11/2019 0:00	Commercial	N
1410 Route 35, Lewisboro	South Salem NY 10590	12/16/2019 0:00	Commercial	N
142 BOWAY, Lewisboro	South Salem NY 10590	11/27/2019 0:00		N
142 Smith Ridge Rd, Lewisboro	South Salem NY 10590	5/25/2019 0:00	Single Family	N
142 Smith Ridge Rd, Lewisboro	South Salem NY 10590	10/11/2019 0:00	Single Family	N
1437 OLD POST RD, Lewisboro	N/A	8/7/2019 0:00	Single Family	N
144 ELMWOOD RD, Lewisboro	South Salem NY 10590	3/15/2019 0:00	Single Family	N
145 Boway, Lewisboro	South Salem NY 10590	7/18/2019 0:00	Single Family	N
145 RT-35, Lewisboro	South Salem NY 10590	8/27/2019 0:00	Single Family	N
145 SPRING ST, Lewisboro	South Salem NY 10590	11/19/2019 0:00	Single Family	N
147 Main St, Lewisboro	South Salem NY 10590	10/3/2019 0:00	Single Family	N
147 Main St, Lewisboro	South Salem NY 10590	10/4/2019 0:00	Single Family	N
147 Main St, Lewisboro	South Salem NY 10590	10/22/2019 0:00	Single Family	N
149 Spring St, Lewisboro	South Salem NY 10590	10/15/2019 0:00	Single Family	N
15 Beaver Pond Ln, Lewisboro	South Salem NY 10590	9/5/2019 0:00	Single Family	N
15 Debbie Ln, Lewisboro	Cross River NY 10518	5/14/2019 0:00	Single Family	N
15 DEEPWELL FARMS RD, Lewisboro	South Salem NY 10590	10/1/2019 0:00	Single Family	N
15 Flintlock Ridge Rd, Lewisboro	Katonah NY 10536	12/26/2019 0:00	Single Family	N
15 FLINTLOCK RIDGE RD, Lewisboro	Katonah NY 10536	12/26/2019 0:00	Single Family	N
15 HUNT FARM RD, Lewisboro	Waccabuc NY 10597	8/16/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
15 Mohawk Trl, Lewisboro	Katonah NY 10536	11/5/2019 0:00	Single Family	N
15 N Lake Cir, Lewisboro	South Salem NY 10590	9/24/2019 0:00	Single Family	N
15 Oscaleta Rd, Lewisboro	South Salem NY 10590	10/23/2019 0:00	Single Family	N
15 Peaceable St, Lewisboro	South Salem NY 10590	7/19/2019 0:00	Single Family	N
15 ROBINS WOOD LN, Lewisboro	South Salem NY 10590	10/26/2019 0:00	Single Family	N
15 SABBATHDAY HL, Lewisboro	South Salem NY 10590	3/25/2019 0:00	Single Family	N
15 Shore Trl, Lewisboro	South Salem NY 10590	12/31/2019 0:00	Other	N
15 Shore Trl, Lewisboro	South Salem NY 10590	12/11/2019 0:00	Other	N
15 Shore Trl, Lewisboro	South Salem NY 10590	4/12/2019 0:00	Single Family	N
15 Shore Trl, Lewisboro	South Salem NY 10590	8/31/2019 0:00	Single Family	N
15 Shore Trl, Lewisboro	South Salem NY 10590	6/21/2019 0:00	Single Family	N
15 Shore Trl, Lewisboro	South Salem NY 10590	3/21/2019 0:00	Single Family	N
15 Shore Trl, Lewisboro	South Salem NY 10590	8/7/2019 0:00	Single Family	N
15 Shore Trl, Lewisboro	South Salem NY 10590	5/10/2019 0:00	Single Family	N
15 Shore Trl, Lewisboro	South Salem NY 10590	7/14/2019 0:00	Single Family	N
15 Soundview Loop, Lewisboro	South Salem NY 10590	1/25/2019 0:00	Single Family	N
15 Soundview Loop, Lewisboro	South Salem NY 10590	10/26/2019 0:00	Single Family	N
15 south shore dr, Lewisboro	South Salem NY 10590	2/8/2019 0:00	Single Family	N
15 STEWART RD, Lewisboro	South Salem NY 10590	8/6/2019 0:00	Single Family	N
15 TODD HILL CIR, Lewisboro	Goldens Bridge NY 10526	7/22/2019 0:00	Single Family	N
15 TODD RD, Lewisboro	KATONAH NY 10536	4/1/2019 0:00	Single Family	N
150 Boway, Lewisboro	South Salem NY 10590	10/26/2019 0:00	Single Family	N
150 Jay Ct, Lewisboro	Cross River NY 10518	12/20/2019 0:00	Multi Family	N
150 Jay Ct, Lewisboro	Cross River NY 10518	12/13/2019 0:00	Other	N
150 Upper Lakeshore Dr, Lewisboro	Katonah NY 10536	9/13/2019 0:00	Single Family	N
151 East St, Lewisboro	South Salem NY 10590	9/16/2019 0:00	Single Family	N
151 POST OFFICE RD, Lewisboro	South Salem NY 10590	9/4/2019 0:00	Single Family	N
152 Elmwood Rd, Lewisboro	South Salem NY 10590	12/23/2019 0:00	Single Family	N
152 MEAD ST, Lewisboro	Waccabuc NY 10597	3/13/2019 0:00		N
153 Spring St, Lewisboro	South Salem NY 10590	7/24/2019 0:00	Single Family	N
153 Todd Rd, Lewisboro	Katonah NY 10536	7/15/2019 0:00	Single Family	N
154 WILTON RD, Lewisboro	South Salem NY 10590	4/10/2019 0:00	Single Family	N
156 Ridgefield Ave, Lewisboro	South Salem NY 10590	6/25/2019 0:00	Single Family	N
157 BOWAY, Lewisboro	South Salem NY 10590	7/25/2019 0:00	Single Family	N
157 ELMWOOD RD, Lewisboro	South Salem NY 10590	8/19/2019 0:00	Single Family	N
157 Smith Ridge Rd, Lewisboro	South Salem NY 10590	6/11/2019 0:00	Single Family	N
16 BIRCH SPRING RD, Lewisboro	South Salem NY 10590	3/27/2019 0:00		N
16 DEEPWELL FARMS RD, Lewisboro	South Salem NY 10590	4/13/2019 0:00	Single Family	N
16 DOUGLAS DR, Lewisboro	South Salem NY 10590	9/18/2019 0:00	Single Family	N
16 FLINTLOCK RIDGE RD, Lewisboro	Katonah NY 10536	4/15/2019 0:00		N
16 HOLLY HILL LN, Lewisboro	Katonah NY 10536	10/22/2019 0:00	Single Family	N
16 Howe St, Lewisboro	South Salem NY 10590	6/20/2019 0:00	Single Family	N
16 LAKE SHORE DR, Lewisboro	South Salem NY 10590	10/17/2019 0:00	Single Family	N
16 ORCHARD DR, Lewisboro	South Salem NY 10590	1/8/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
16 OUTPOST, Lewisboro	Katonah NY 10536	7/24/2019 0:00	Single Family	N
16 Pond St, Lewisboro	Goldens Bridge NY 10526	11/25/2019 0:00	Single Family	N
16 Pond St, Lewisboro	Goldens Bridge NY 10526	11/21/2019 0:00	Single Family	N
16 SAWGRASS DR, Lewisboro	Katonah NY 10536	4/9/2019 0:00	Single Family	N
16 Scenic Dr, Lewisboro	South Salem NY 10590	8/8/2019 0:00	Single Family	N
16 SILVERMINE DR, Lewisboro	South Salem NY 10590	4/25/2019 0:00	Single Family	N
16 Soundview Loop, Lewisboro	South Salem NY 10590	11/23/2019 0:00	Single Family	N
16 TARRY-A-BIT DR, Lewisboro	Waccabuc NY 10597	8/27/2019 0:00	Single Family	N
16 WAKEMAN RD, Lewisboro	South Salem NY 10590	4/8/2019 0:00	Single Family	N
160 MEAD ST, Lewisboro	Waccabuc NY 10597	5/7/2019 0:00	Single Family	N
160 Spring St, Lewisboro	South Salem NY 10590	11/19/2019 0:00	Single Family	N
161 Main St, Lewisboro	South Salem NY 10590	6/3/2019 0:00	Single Family	N
161 N Salem Rd, Lewisboro	Cross River NY 10518	10/22/2019 0:00	Multi Family	N
161 N Salem Rd, Lewisboro	Cross River NY 10518	10/22/2019 0:00	Multi Family	N
161 N Salem Rd, Lewisboro	Cross River NY 10518	10/22/2019 0:00	Multi Family	N
161 N Salem Rd, Lewisboro	Cross River NY 10518	10/22/2019 0:00	Multi Family	N
161 N Salem Rd, Lewisboro	Cross River NY 10518	10/22/2019 0:00	Multi Family	N
161 RIDGEFIELD AVE, Lewisboro	South Salem NY 10590	2/11/2019 0:00	Single Family	N
161 RIDGEFIELD AVE, Lewisboro	South Salem NY 10590	2/11/2019 0:00	Single Family	N
161 Spring St, Lewisboro	South Salem NY 10590	9/27/2019 0:00	Single Family	N
164 POST OFFICE RD, Lewisboro	South Salem NY 10590	5/9/2019 0:00	Single Family	N
164 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	11/13/2019 0:00	Single Family	N
165 Ridgefield Ave, Lewisboro	South Salem NY 10590	7/1/2019 0:00	Single Family	N
167 MAIN ST, Lewisboro	South Salem NY 10590	6/13/2019 0:00	Single Family	N
17 Adams Hill Rd, Lewisboro	Cross River NY 10518	10/11/2019 0:00	Multi Family	N
17 AUTUMN RIDGE RD, Lewisboro	South Salem NY 10590	7/25/2019 0:00	Single Family	N
17 BILLINGSLEY TRL, Lewisboro	Goldens Bridge NY 10526	2/6/2019 0:00	Single Family	N
17 Butternut Ln, Lewisboro	Katonah NY 10536	10/22/2019 0:00	Single Family	N
17 CANAAN CIR, Lewisboro	South Salem NY 10590	3/27/2019 0:00	Single Family	N
17 CANAAN CIR, Lewisboro	South Salem NY 10590	3/27/2019 0:00	Single Family	N
17 CORNEL DR, Lewisboro	Goldens Bridge NY 10526	4/17/2019 0:00	Single Family	N
17 DEEPWELL FARMS RD, Lewisboro	South Salem NY 10590	7/18/2019 0:00	Single Family	N
17 E MOUNTAIN RD, Lewisboro	Katonah NY 10536	4/19/2019 0:00	Single Family	N
17 LAKEVIEW RD, Lewisboro	South Salem NY 10590	4/4/2019 0:00	Single Family	N
17 Laurel Rd, Lewisboro	South Salem NY 10590	6/6/2019 0:00	Single Family	N
17 N Lake Cir, Lewisboro	South Salem NY 10590	10/4/2019 0:00	Single Family	N
17 Old Shop Rd, Lewisboro	Cross River NY 10518	11/1/2019 0:00	Single Family	N
17 PINE HILL DR, Lewisboro	South Salem NY 10590	7/9/2019 0:00	Single Family	N
17 RIDGELAND RD, Lewisboro	South Salem NY 10590	7/8/2019 0:00	Single Family	N
17 Robins Wood Ln, Lewisboro	South Salem NY 10590	6/12/2019 0:00	Single Family	N
17 Soundview Loop, Lewisboro	South Salem NY 10590	5/8/2019 0:00	Single Family	N
17 Truesdale Lake Dr, Lewisboro	South Salem NY 10590	7/11/2019 0:00	Single Family	N
171 ELMWOOD RD, Lewisboro	South Salem NY 10590	3/28/2019 0:00	Single Family	N
171 JOURNEY'S END RD, Lewisboro	South Salem NY 10590	6/27/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
171 MAIN ST, Lewisboro	South Salem NY 10590	1/22/2019 0:00	Single Family	N
174 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	2/25/2019 0:00	Single Family	N
177 Main St, Lewisboro	South Salem NY 10590	6/4/2019 0:00	Single Family	N
178 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	9/6/2019 0:00	Single Family	N
179 JOURNEY'S END RD, Lewisboro	South Salem NY 10590	11/26/2019 0:00	Single Family	N
18 Bayberry Ln, Lewisboro	South Salem NY 10590	8/6/2019 0:00	Single Family	N
18 BEAVER POND LN, Lewisboro	South Salem NY 10590	4/10/2019 0:00	Single Family	N
18 BOWAY, Lewisboro	South Salem NY 10590	9/4/2019 0:00	Single Family	N
18 BUTTERNUT LN, Lewisboro	KATONAH NY 10536	1/9/2019 0:00	Single Family	N
18 BUTTERNUT LN, Lewisboro	KATONAH NY 10536	1/9/2019 0:00	Single Family	N
18 Douglas Dr, Lewisboro	South Salem NY 10590	6/20/2019 0:00	Single Family	N
18 Holly Hill Ln, Lewisboro	Katonah NY 10536	7/22/2019 0:00	Single Family	N
18 HOWE ST, Lewisboro	South Salem NY 10590	5/1/2019 0:00	Single Family	N
18 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	11/13/2019 0:00	Single Family	N
18 LAKEVIEW RD, Lewisboro	South Salem NY 10590	12/9/2019 0:00	Single Family	N
18 MAKEPEACE HL, Lewisboro	Waccabuc NY 10597	9/16/2019 0:00	Single Family	N
18 Old Oscaleta Rd, Lewisboro	South Salem NY 10590	6/6/2019 0:00	Single Family	N
18 Soundview Loop, Lewisboro	South Salem NY 10590	8/8/2019 0:00	Single Family	N
18 WACCABUC RIVER LN, Lewisboro	South Salem NY 10590	4/23/2019 0:00	Single Family	N
18 Woods Rdg, Lewisboro	Katonah NY 10536	3/22/2019 0:00	Single Family	N
181 MEAD ST, Lewisboro	Waccabuc NY 10597	7/13/2019 0:00	Single Family	N
183 Elmwood Rd, Lewisboro	South Salem NY 10590	6/12/2019 0:00	Single Family	N
183 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	6/21/2019 0:00	Single Family	N
184 ELMWOOD RD, Lewisboro	South Salem NY 10590	8/19/2019 0:00	Single Family	N
184 Ridgefield Ave, Lewisboro	South Salem NY 10590	6/24/2019 0:00	Single Family	N
184 SPRING ST, Lewisboro	South Salem NY 10590	10/24/2019 0:00	Single Family	N
185 MEAD ST, Lewisboro	Waccabuc NY 10597	7/11/2019 0:00	Single Family	N
186 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	11/16/2019 0:00	Other	N
186 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	11/16/2019 0:00	Other	N
186 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	11/16/2019 0:00	Other	N
186 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	11/16/2019 0:00	Other	N
187 KITCHAWITH RD, Lewisboro	south salem NY 10590	6/19/2019 0:00	Single Family	N
189 Waccabuc Rd, Lewisboro	Goldens Bridge NY 10526	12/28/2019 0:00	Single Family	N
19 Beaver Pond Ln, Lewisboro	South Salem NY 10590	10/15/2019 0:00		N
19 Beaver Pond Ln, Lewisboro	South Salem NY 10590	10/15/2019 0:00		N
19 Beaver Pond Ln, Lewisboro	South Salem NY 10590	10/15/2019 0:00		N
19 CHURCH TAVERN RD, Lewisboro	South Salem NY 10590	1/22/2019 0:00	Single Family	N
19 CROSS POND RD, Lewisboro	South Salem NY 10590	7/31/2019 0:00	Single Family	N
19 DEER RUN RD, Lewisboro	South Salem NY 10590	3/26/2019 0:00	Single Family	N
19 Ledgewood Ln, Lewisboro	South Salem NY 10590	11/1/2019 0:00	Single Family	N
19 N Salem Rd, Lewisboro	Cross River NY 10518	1/22/2019 0:00	Commercial	N
19 N Salem Rd, Lewisboro	Cross River NY 10518	10/14/2019 0:00	Commercial	N
19 Old Pond Rd, Lewisboro	South Salem NY 10590	11/22/2019 0:00	Single Family	N
19 RIDGELAND RD, Lewisboro	South Salem NY 10590	8/27/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
19 S Shore Dr, Lewisboro	South Salem NY 10590	8/21/2019 0:00	Single Family	N
19 TRI-BROOK DR, Lewisboro	South Salem NY 10590	8/29/2019 0:00	Single Family	N
19 Truesdale Lake Dr, Lewisboro	South Salem NY 10590	8/30/2019 0:00	Single Family	N
19 WEST LN, Lewisboro	South Salem NY 10590	1/30/2019 0:00	Single Family	N
190 Goldens Bridge Rd, Lewisboro	Katonah NY 10536	8/15/2019 0:00	Commercial	N
190 Goldens Bridge Rd, Lewisboro	Katonah NY 10536	11/13/2019 0:00	Commercial	N
190 Goldens Bridge Rd, Lewisboro	Katonah NY 10536	11/13/2019 0:00	Commercial	N
190 Goldens Bridge Rd, Lewisboro	Katonah NY 10536	2/11/2019 0:00	Commercial	N
190 Goldens Bridge Rd, Lewisboro	Katonah NY 10536	4/11/2019 0:00	Commercial	N
190 Goldens Bridge Rd, Lewisboro	Katonah NY 10536	4/11/2019 0:00	Commercial	N
190 Goldens Bridge Rd, Lewisboro	Katonah NY 10536	4/11/2019 0:00	Commercial	N
191 N SALEM RD, Lewisboro	Cross River NY 10518	6/5/2019 0:00	Single Family	N
191 Spring St, Lewisboro	South Salem NY 10590	8/27/2019 0:00	Single Family	N
192 Smith Ridge Rd, Lewisboro	South Salem NY 10590	6/13/2019 0:00	Single Family	N
193 Mead St, Lewisboro	Waccabuc NY 10597	11/19/2019 0:00	Single Family	N
195 ELMWOOD RD, Lewisboro	South Salem NY 10590	3/19/2019 0:00	Single Family	N
195 Waccabuc Rd, Lewisboro	Goldens Bridge NY 10526	8/16/2019 0:00	Single Family	N
198 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	10/14/2019 0:00	Single Family	N
199 ELMWOOD RD, Lewisboro	South Salem NY 10590	2/28/2019 0:00	Single Family	N
2 Apache Cir, Lewisboro	Katonah NY 10536	10/18/2019 0:00	Single Family	N
2 AUDOBOHN RD, Lewisboro	N/A	10/26/2019 0:00	Single Family	N
2 BOUTON RD, Lewisboro	South Salem NY 10590	9/24/2019 0:00	Single Family	N
2 CANAAN CIR, Lewisboro	South Salem NY 10590	10/15/2019 0:00	Single Family	N
2 CAPTAIN LAWRENCE DR, Lewisboro	South Salem NY 10590	8/6/2019 0:00	Single Family	N
2 COMANCHE CT, Lewisboro	Katonah NY 10536	8/16/2019 0:00	Single Family	N
2 E Mountain Rd, Lewisboro	Katonah NY 10536	7/22/2019 0:00	Single Family	N
2 Gilbert St, Lewisboro	South Salem NY 10590	5/8/2019 0:00	Single Family	N
2 HOWE ST, Lewisboro	South Salem NY 10590	9/24/2019 0:00	Single Family	N
2 HOWLAND DR, Lewisboro	Cross River NY 10518	7/26/2019 0:00	Single Family	N
2 Hunts Ln, Lewisboro	Cross River NY 10518	10/9/2019 0:00	Single Family	N
2 LAKE SHORE DR, Lewisboro	South Salem NY 10590	2/20/2019 0:00	Single Family	N
2 LAKEVIEW RD, Lewisboro	South Salem NY 10590	5/6/2019 0:00	Single Family	N
2 LOIS LN, Lewisboro	Katonah NY 10536	7/8/2019 0:00	Single Family	N
2 LOWER SALEM RD, Lewisboro	South Salem NY 10590	5/8/2019 0:00	Single Family	N
2 Millstone Ln, Lewisboro	South Salem NY 10590	9/13/2019 0:00	Single Family	N
2 OLD OSCALETA RD, Lewisboro	South Salem NY 10590	5/6/2019 0:00	Single Family	N
2 POND ST, Lewisboro	Goldens Bridge NY 10526	3/12/2019 0:00	Single Family	N
2 RESERVOIR RD, Lewisboro	South Salem NY 10590	2/8/2019 0:00	Single Family	N
2 ROADS END RD, Lewisboro	South Salem NY 10590	4/24/2019 0:00	Single Family	N
2 S Shore Dr, Lewisboro	South Salem NY 10590	11/25/2019 0:00	Single Family	N
2 S Shore Dr, Lewisboro	South Salem NY 10590	5/6/2019 0:00	Single Family	N
2 Salem Ln, Lewisboro	South Salem NY 10590	10/30/2019 0:00	Single Family	N
2 SOUTHWIND DR, Lewisboro	Cross River NY 10518	9/11/2019 0:00	Single Family	N
2 TOMMY'S LN, Lewisboro	South Salem NY 10590	6/12/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
2 UPPER LAKESHORE DR, Lewisboro	Katonah NY 10536	5/14/2019 0:00	Other	N
2 Webb Ln, Lewisboro	Goldens Bridge NY 10526	3/15/2019 0:00		N
2 WEST LN, Lewisboro	South Salem NY 10590	11/2/2019 0:00	Single Family	N
2 Woodway, Lewisboro	South Salem NY 10590	11/7/2019 0:00	Single Family	N
20 Hilltop Rd, Lewisboro	Waccabuc NY 10597	11/4/2019 0:00	Single Family	N
20 HOLLY HILL LN, Lewisboro	KATONAH NY 10536	2/25/2019 0:00	Single Family	N
20 HOYT ST, Lewisboro	South Salem NY 10590	7/22/2019 0:00	Single Family	N
20 Hunt Farm Rd, Lewisboro	Waccabuc NY 10597	5/15/2019 0:00	Single Family	N
20 LOCKWOOD RD, Lewisboro	South Salem NY 10590	4/30/2019 0:00	Single Family	N
20 SCHOOLHOUSE RD, Lewisboro	Waccabuc NY 10597	8/28/2019 0:00	Single Family	N
20 Shore Trl, Lewisboro	South Salem NY 10590	6/6/2019 0:00	Single Family	N
20 Soundview Loop, Lewisboro	South Salem NY 10590	8/21/2019 0:00	Single Family	N
20 Spring ST S, Lewisboro	South Salem NY 10590	3/26/2019 0:00	Commercial	N
201 Mead St, Lewisboro	Waccabuc NY 10597	6/28/2019 0:00	Single Family	N
202 Ridgefield Ave, Lewisboro	South Salem NY 10590	7/8/2019 0:00	Single Family	N
205 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	3/29/2019 0:00	Multi Family	N
205 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	3/29/2019 0:00	Multi Family	N
205 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	3/29/2019 0:00	Multi Family	N
205 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	3/28/2019 0:00	Multi Family	N
205 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	3/28/2019 0:00	Multi Family	N
207 RIDGEFIELD AVE, Lewisboro	South Salem NY 10590	8/16/2019 0:00	Single Family	N
21 Cornel Dr, Lewisboro	Goldens Bridge NY 10526	10/8/2019 0:00	Single Family	N
21 DINGEE RD, Lewisboro	South Salem NY 10590	11/6/2019 0:00	Single Family	N
21 ELMWOOD RD, Lewisboro	South Salem NY 10590	10/4/2019 0:00	Single Family	N
21 FIVE PONDS DR, Lewisboro	Waccabuc NY 10597	4/17/2019 0:00	Single Family	N
21 Lower Salem Rd, Lewisboro	South Salem NY 10590	10/1/2019 0:00	Single Family	N
21 TRI-BROOK DR, Lewisboro	South Salem NY 10590	12/23/2019 0:00	Single Family	N
21 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	4/5/2019 0:00	Single Family	N
21 WOODWAY, Lewisboro	South Salem NY 10590	4/3/2019 0:00	Single Family	N
21 WOODWAY, Lewisboro	South Salem NY 10590	4/3/2019 0:00	Single Family	N
215 SILVER SPRINGS RD, Lewisboro	South Salem NY 10590	4/13/2019 0:00	Single Family	N
218 KITCHAWAN RD, Lewisboro	South Salem NY 10590	6/25/2019 0:00	Single Family	N
218 Spring St, Lewisboro	South Salem NY 10590	12/5/2019 0:00	Single Family	N
22 Beaver Pond Ln, Lewisboro	South Salem NY 10590	6/19/2019 0:00	Single Family	N
22 Gilbert St, Lewisboro	South Salem NY 10590	9/22/2019 0:00	Single Family	N
22 Hall Ave, Lewisboro	Goldens Bridge NY 10526	6/14/2019 0:00	Single Family	N
22 LAKEVIEW RD, Lewisboro	South Salem NY 10590	3/6/2019 0:00	Single Family	N
22 MARK MEAD RD, Lewisboro	Cross River NY 10518	6/20/2019 0:00	Single Family	N
22 RIDGELAND RD, Lewisboro	South Salem NY 10590	8/26/2019 0:00	Single Family	N
22 Soundview Loop, Lewisboro	South Salem NY 10590	6/28/2019 0:00	Single Family	N
221 MEAD ST, Lewisboro	Waccabuc NY 10597	7/26/2019 0:00	Single Family	N
221 MEAD ST, Lewisboro	Waccabuc NY 10597	7/26/2019 0:00	Single Family	N
223 ELMWOOD RD, Lewisboro	South Salem NY 10590	9/26/2019 0:00	Single Family	N
223 ELMWOOD RD, Lewisboro	South Salem NY 10590	9/26/2019 0:00	Single Family	N

Lewisboro and Pound Ridge

2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
223 Kitchawan Rd, Lewisboro	South Salem NY 10590	5/31/2019 0:00	Single Family	N
229 Kitchawan Rd, Lewisboro	South Salem NY 10590	5/29/2019 0:00	Single Family	N
229 Kitchawan Rd, Lewisboro	South Salem NY 10590	5/29/2019 0:00	Single Family	N
229 Kitchawan Rd, Lewisboro	South Salem NY 10590	5/21/2019 0:00	Single Family	N
23 Cornel Dr, Lewisboro	Goldens Bridge NY 10526	4/18/2019 0:00	Single Family	N
23 Gilbert St, Lewisboro	South Salem NY 10590	3/16/2019 0:00	Single Family	N
23 GLEN DR, Lewisboro	South Salem NY 10590	6/11/2019 0:00	Single Family	N
23 HUNT FARM LN, Lewisboro	N/A	9/27/2019 0:00	Single Family	N
23 LAKE SHORE DR, Lewisboro	South Salem NY 10590	1/25/2019 0:00	Single Family	N
23 S Mountain Pass, Lewisboro	Katonah NY 10536	5/21/2019 0:00	Single Family	N
23 S Shore Dr, Lewisboro	South Salem NY 10590	4/12/2019 0:00	Single Family	N
23 S Shore Dr, Lewisboro	South Salem NY 10590	2/1/2019 0:00	Single Family	N
23 S Shore Dr, Lewisboro	South Salem NY 10590	3/20/2019 0:00	Single Family	N
23 S Shore Dr, Lewisboro	South Salem NY 10590	10/10/2019 0:00	Single Family	N
23 S Shore Dr, Lewisboro	South Salem NY 10590	4/24/2019 0:00	Single Family	N
23 S Shore Dr, Lewisboro	South Salem NY 10590	6/26/2019 0:00	Single Family	N
23 S Shore Dr, Lewisboro	South Salem NY 10590	5/15/2019 0:00	Single Family	N
23 S Shore Dr, Lewisboro	South Salem NY 10590	6/10/2019 0:00	Single Family	N
23 S Shore Dr, Lewisboro	South Salem NY 10590	8/19/2019 0:00	Single Family	N
23 S Shore Dr, Lewisboro	South Salem NY 10590	12/18/2019 0:00	Single Family	N
23 S Shore Dr, Lewisboro	South Salem NY 10590	11/26/2019 0:00	Single Family	N
23 Salem Hill Rd, Lewisboro	South Salem NY 10590	11/14/2019 0:00	Single Family	N
23 Sunnyridge Rd, Lewisboro	Katonah NY 10536	9/11/2019 0:00	Single Family	N
23 Todd Rd, Lewisboro	Katonah NY 10536	9/18/2019 0:00	Single Family	N
23 TWIN LAKES RD, Lewisboro	South Salem NY 10590	1/25/2019 0:00	Single Family	N
230 Spring St, Lewisboro	South Salem NY 10590	9/3/2019 0:00	Single Family	N
231 N Salem Rd, Lewisboro	Cross River NY 10518	12/27/2019 0:00	Single Family	N
232 N Salem Rd, Lewisboro	Cross River NY 10518	9/17/2019 0:00	Single Family	N
237 Increase Miller Rd, Lewisboro	Katonah NY 10536	10/29/2019 0:00	Single Family	N
238 Spring St, Lewisboro	South Salem NY 10590	11/19/2019 0:00	Single Family	N
239 Elmwood Rd, Lewisboro	South Salem NY 10590	5/14/2019 0:00	Single Family	N
24 AUTUMN RIDGE RD, Lewisboro	South Salem NY 10590	9/5/2019 0:00	Single Family	N
24 FLINTLOCK RIDGE RD, Lewisboro	KATONAH NY 10536	4/29/2019 0:00	Single Family	N
24 Glen Dr, Lewisboro	South Salem NY 10590	11/15/2019 0:00	Single Family	N
24 GRANDVIEW RD, Lewisboro	South Salem NY 10590	2/15/2019 0:00	Single Family	N
24 Hillside Ave, Lewisboro	Goldens Bridge NY 10526	7/29/2019 0:00	Single Family	N
24 Hilltop Rd, Lewisboro	Waccabuc NY 10597	12/4/2019 0:00	Single Family	N
24 HOLLY LN, Lewisboro	N/A	6/20/2019 0:00	Single Family	N
24 Indian Ln, Lewisboro	South Salem NY 10590	5/30/2019 0:00	Single Family	N
24 Soundview Loop, Lewisboro	South Salem NY 10590	7/25/2019 0:00	Single Family	N
24 Tarry-A-Bit Dr, Lewisboro	Waccabuc NY 10597	9/3/2019 0:00	Single Family	N
24 Todd Rd, Lewisboro	Katonah NY 10536	12/24/2019 0:00	Single Family	N
24 WACCABUC RIVER LN, Lewisboro	South Salem NY 10590	7/17/2019 0:00	Single Family	N
241 Elmwood Rd, Lewisboro	South Salem NY 10590	8/6/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
241 Kitchawan Rd, Lewisboro	South Salem NY 10590	10/31/2019 0:00	Single Family	N
241 N SALEM RD, Lewisboro	Cross River NY 10518	5/24/2019 0:00	Single Family	N
242 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	3/28/2019 0:00	Single Family	N
243 Mead St, Lewisboro	Waccabuc NY 10597	10/29/2019 0:00	Single Family	N
244 Smith Ridge Rd, Lewisboro	South Salem NY 10590	9/16/2019 0:00	Single Family	N
246 KITCHAWAN RD, Lewisboro	South Salem NY 10590	9/18/2019 0:00	Single Family	N
248 TODD RD, Lewisboro	KATONAH NY 10536	4/9/2019 0:00	Single Family	N
25 CHAPEL RD, Lewisboro	Waccabuc NY 10597	4/9/2019 0:00	Single Family	N
25 Flintlock Ridge Rd, Lewisboro	Katonah NY 10536	6/13/2019 0:00	Single Family	N
25 Howe St, Lewisboro	South Salem NY 10590	9/27/2019 0:00	Single Family	N
25 MT HOLLY RD E, Lewisboro	Katonah NY 10536	12/31/2019 0:00	Single Family	N
25 SALEM LN, Lewisboro	South Salem NY 10590	5/23/2019 0:00	Single Family	N
25 Shoshone Dr, Lewisboro	Katonah NY 10536	10/30/2019 0:00	Single Family	N
25 TODD HILL CIR, Lewisboro	Goldens Bridge NY 10526	4/19/2019 0:00	Single Family	N
25 TODD RD, Lewisboro	KATONAH NY 10536	5/11/2019 0:00	Single Family	N
25 TRI-BROOK DR, Lewisboro	South Salem NY 10590	4/8/2019 0:00	Single Family	N
25 Twin Lakes Rd, Lewisboro	South Salem NY 10590	11/6/2019 0:00	Single Family	N
25 WOODWAY, Lewisboro	South Salem NY 10590	4/3/2019 0:00	Single Family	N
250 KITCHAWAN RD, Lewisboro	South Salem NY 10590	7/12/2019 0:00	Single Family	N
250 Smith Ridge Rd, Lewisboro	South Salem NY 10590	5/29/2019 0:00	Single Family	N
251 Todd Rd, Lewisboro	Katonah NY 10536	5/13/2019 0:00	Single Family	N
251 Todd Rd, Lewisboro	Katonah NY 10536	5/13/2019 0:00	Single Family	N
254 KITCHAWAN RD, Lewisboro	South Salem NY 10590	4/4/2019 0:00	Single Family	N
26 Brundige Dr, Lewisboro	Goldens Bridge NY 10526	7/30/2019 0:00	Single Family	N
26 Green Hill Rd, Lewisboro	Goldens Bridge NY 10526	11/13/2019 0:00	Single Family	N
26 HUNT FARM RD, Lewisboro	Waccabuc NY 10597	7/10/2019 0:00	Single Family	N
26 Lake Path, Lewisboro	South Salem NY 10590	11/21/2019 0:00	Single Family	N
26 Mandia Ln, Lewisboro	Goldens Bridge NY 10526	10/11/2019 0:00	Single Family	N
26 Old Bedford Rd, Lewisboro	Goldens Bridge NY 10526	1/23/2019 0:00	Single Family	N
26 Old Bedford Rd, Lewisboro	Goldens Bridge NY 10526	1/23/2019 0:00	Single Family	N
26 Old Bedford Rd, Lewisboro	Goldens Bridge NY 10526	11/27/2019 0:00	Single Family	N
26 Old Bedford Rd, Lewisboro	Goldens Bridge NY 10526	11/27/2019 0:00	Single Family	N
26 Old Bedford Rd, Lewisboro	Goldens Bridge NY 10526	11/27/2019 0:00	Single Family	N
26 Old Bedford Rd, Lewisboro	Goldens Bridge NY 10526	10/24/2019 0:00	Single Family	N
26 Salem Hill Rd, Lewisboro	South Salem NY 10590	11/26/2019 0:00	Single Family	N
260 Waccabuc Rd, Lewisboro	Goldens Bridge NY 10526	3/23/2019 0:00	Single Family	N
260 Waccabuc Rd, Lewisboro	Goldens Bridge NY 10526	11/29/2019 0:00	Single Family	N
261 KITCHAWAN RD, Lewisboro	South Salem NY 10590	7/3/2019 0:00	Single Family	N
262 Increase Miller Rd, Lewisboro	Katonah NY 10536	12/11/2019 0:00	Single Family	N
27 Cove Rd, Lewisboro	South Salem NY 10590	6/11/2019 0:00	Single Family	N
27 Cove Rd, Lewisboro	South Salem NY 10590	6/11/2019 0:00	Single Family	N
27 Howe St, Lewisboro	South Salem NY 10590	7/17/2019 0:00	Single Family	N
27 Hoyt St, Lewisboro	South Salem NY 10590	6/27/2019 0:00	Single Family	N
27 INDIAN LN, Lewisboro	South Salem NY 10590	4/17/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
27 Lake Shore Dr, Lewisboro	South Salem NY 10590	6/13/2019 0:00	Single Family	N
27 NARCISSUS RD, Lewisboro	N/A	10/17/2019 0:00	Single Family	N
27 RT-121, Lewisboro	Cross River NY 10518	11/1/2019 0:00	Single Family	N
27 SALEM LN, Lewisboro	South Salem NY 10590	7/16/2019 0:00	Single Family	N
27 Sullivan Rd, Lewisboro	North Salem NY 10560	8/14/2019 0:00	Single Family	N
27 Truesdale Lake Dr, Lewisboro	South Salem NY 10590	10/16/2019 0:00	Single Family	N
27 TWIN LAKES RD, Lewisboro	South Salem NY 10590	11/11/2019 0:00	Single Family	N
27 WOODWAY, Lewisboro	South Salem NY 10590	9/17/2019 0:00	Single Family	N
276 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	5/10/2019 0:00	Single Family	N
276 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	5/10/2019 0:00	Single Family	N
28 BOUTON ST, Lewisboro	South Salem NY 10590	7/11/2019 0:00	Single Family	N
28 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	2/25/2019 0:00	Single Family	N
28 Cove Rd, Lewisboro	South Salem NY 10590	9/4/2019 0:00	Single Family	N
28 Deerfield, Lewisboro	Katonah NY 10536	6/19/2019 0:00	Single Family	N
28 LAKEVIEW RD, Lewisboro	South Salem NY 10590	2/28/2019 0:00	Single Family	N
28 MAIN ST, Lewisboro	Goldens Bridge NY 10526	9/3/2019 0:00	Single Family	N
28 Todd Rd, Lewisboro	Katonah NY 10536	6/19/2019 0:00	Single Family	N
281 Todd Rd, Lewisboro	Katonah NY 10536	5/8/2019 0:00	Single Family	N
285 Smith Ridge Rd, Lewisboro	South Salem NY 10590	11/26/2019 0:00	Single Family	N
285 Smith Ridge Rd, Lewisboro	South Salem NY 10590	11/26/2019 0:00	Single Family	N
286 TODD RD, Lewisboro	KATONAH NY 10536	5/1/2019 0:00	Single Family	N
287 TODD RD, Lewisboro	KATONAH NY 10536	3/14/2019 0:00	Single Family	N
287 TODD RD, Lewisboro	KATONAH NY 10536	3/14/2019 0:00	Single Family	N
29 BISHOP PARK RD, Lewisboro	South Salem NY 10590	1/3/2019 0:00	Single Family	N
29 BOUTONVILLE RD, Lewisboro	CROSS RIVER NY 10518	1/23/2019 0:00	Single Family	N
29 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	5/23/2019 0:00	Single Family	N
29 GILBERT ST, Lewisboro	South Salem NY 10590	5/16/2019 0:00	Single Family	N
29 HOWE ST, Lewisboro	South Salem NY 10590	5/16/2019 0:00	Single Family	N
29 Indian Ln, Lewisboro	South Salem NY 10590	7/8/2019 0:00	Single Family	N
29 Indian Ln, Lewisboro	South Salem NY 10590	7/8/2019 0:00	Single Family	N
29 Old Shop Rd, Lewisboro	Cross River NY 10518	11/20/2019 0:00	Single Family	N
29 PERCH BAY RD, Lewisboro	Waccabuc NY 10597	5/14/2019 0:00	Single Family	N
29 POST OFFICE RD, Lewisboro	Waccabuc NY 10597	9/24/2019 0:00	Single Family	N
29 TRI-BROOK DR, Lewisboro	South Salem NY 10590	11/1/2019 0:00	Single Family	N
29 West Rd, Lewisboro	South Salem NY 10590	9/11/2019 0:00	Single Family	N
290 TODD RD, Lewisboro	Katonah NY 10536	11/6/2019 0:00	Single Family	N
292 Smith Ridge Rd, Lewisboro	South Salem NY 10590	5/16/2019 0:00	Single Family	N
3 BISBEE DR, Lewisboro	South Salem NY 10590	5/10/2019 0:00	Single Family	N
3 CANAAN CIR, Lewisboro	South Salem NY 10590	9/27/2019 0:00	Single Family	N
3 Cider Mill Farm, Lewisboro	South Salem NY 10590	12/21/2019 0:00	Single Family	N
3 Cove RD, Lewisboro	South Salem NY 10590	3/22/2019 0:00	Single Family	N
3 CURTIS RD, Lewisboro	South Salem NY 10590	2/22/2019 0:00	Single Family	N
3 Debbie Ln, Lewisboro	Cross River NY 10518	10/2/2019 0:00	Single Family	N
3 DEER RUN RD, Lewisboro	South Salem NY 10590	10/28/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
3 DIANE CT, Lewisboro	Katonah NY 10536	1/14/2019 0:00	Single Family	N
3 Fay Ln, Lewisboro	South Salem NY 10590	12/5/2019 0:00	Single Family	N
3 Fay Ln, Lewisboro	South Salem NY 10590	12/5/2019 0:00	Single Family	N
3 KENFIELD RD, Lewisboro	South Salem NY 10590	3/6/2019 0:00	Single Family	N
3 Laurie Ln, Lewisboro	South Salem NY 10590	5/21/2019 0:00	Single Family	N
3 LORRAINE RD, Lewisboro	South Salem NY 10590	6/13/2019 0:00	Single Family	N
3 Main St, Lewisboro	South Salem NY 10590	7/25/2019 0:00	Single Family	N
3 MARK MEAD RD, Lewisboro	Cross River NY 10518	11/6/2019 0:00	Single Family	N
3 Orchard Dr, Lewisboro	South Salem NY 10590	10/11/2019 0:00	Single Family	N
3 Robins Ct, Lewisboro	South Salem NY 10590	6/10/2019 0:00	Single Family	N
3 Sawgrass Dr, Lewisboro	Katonah NY 10536	6/4/2019 0:00	Single Family	N
3 SERENITY PL, Lewisboro	South Salem NY 10590	10/16/2019 0:00	Single Family	N
3 Stewart Rd, Lewisboro	South Salem NY 10590	6/10/2019 0:00	Single Family	N
3 Stonewall Ct, Lewisboro	South Salem NY 10590	10/31/2019 0:00	Single Family	N
30 Bouton St, Lewisboro	South Salem NY 10590	7/16/2019 0:00	Single Family	N
30 Cross Pond Rd, Lewisboro	Pound Ridge NY 10576	9/30/2019 0:00	Single Family	N
30 East St, Lewisboro	South Salem NY 10590	12/19/2019 0:00	Single Family	N
30 East St, Lewisboro	South Salem NY 10590	5/9/2019 0:00	Single Family	N
30 GREEN HILL RD, Lewisboro	Goldens Bridge NY 10526	7/2/2019 0:00	Single Family	N
30 Indian Ln, Lewisboro	South Salem NY 10590	8/8/2019 0:00	Single Family	N
30 Sullivan Rd, Lewisboro	North Salem NY 10560	7/10/2019 0:00	Single Family	N
300 Smith Ridge Rd, Lewisboro	South Salem NY 10590	12/6/2019 0:00	Single Family	N
305 Smith Ridge Rd, Lewisboro	South Salem NY 10590	7/10/2019 0:00	Other	N
31 CROSS POND RD, Lewisboro	Pound Ridge NY 10576	4/3/2019 0:00	Single Family	N
31 Cross Pond Rd, Lewisboro	Pound Ridge NY 10576	5/23/2019 0:00	Single Family	N
31 Indian Ln, Lewisboro	South Salem NY 10590	5/17/2019 0:00	Single Family	N
31 LAKEVIEW PASS, Lewisboro	Katonah NY 10536	3/12/2019 0:00	Single Family	N
31 LOWER SALEM RD, Lewisboro	South Salem NY 10590	10/25/2019 0:00	Single Family	N
31 PERCH BAY RD, Lewisboro	Waccabuc NY 10597	4/10/2019 0:00	Single Family	N
31 Sullivan Rd, Lewisboro	North Salem NY 10560	9/19/2019 0:00	Single Family	N
31 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	7/8/2019 0:00	Single Family	N
313 MAIN ST, Lewisboro	N/A	9/19/2019 0:00	Commercial	N
313 MAIN ST, Lewisboro	N/A	9/19/2019 0:00	Commercial	N
313 MAIN ST, Lewisboro	N/A	1/11/2019 0:00	Commercial	N
313 Route 22, Lewisboro	Goldens Bridge NY 10526	8/16/2019 0:00	Commercial	N
313 Route 22, Lewisboro	Goldens Bridge NY 10526	4/4/2019 0:00	Commercial	N
313 Route 22, Lewisboro	Goldens Bridge NY 10526	7/31/2019 0:00	Commercial	N
313 Route 22, Lewisboro	Goldens Bridge NY 10526	7/11/2019 0:00	Commercial	N
313 Route 22, Lewisboro	Goldens Bridge NY 10526	7/2/2019 0:00	Commercial	N
313 Route 22, Lewisboro	Goldens Bridge NY 10526	7/2/2019 0:00	Commercial	N
313 Route 22, Lewisboro	Goldens Bridge NY 10526	6/3/2019 0:00	Commercial	N
313 Route 22, Lewisboro	Goldens Bridge NY 10526	6/3/2019 0:00	Commercial	N
313 Route 22, Lewisboro	Goldens Bridge NY 10526	8/29/2019 0:00	Commercial	N
313 Route 22, Lewisboro	Goldens Bridge NY 10526	2/6/2019 0:00	Commercial	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
313 Route 22, Lewisboro	Goldens Bridge NY 10526	2/6/2019 0:00	Commercial	N
313 Route 22, Lewisboro	Goldens Bridge NY 10526	2/26/2019 0:00	Commercial	N
313 Todd Rd, Lewisboro	Katonah NY 10536	12/3/2019 0:00	Multi Family	N
313 Todd Rd, Lewisboro	Katonah NY 10536	12/3/2019 0:00	Multi Family	N
313 Todd Rd, Lewisboro	Katonah NY 10536	12/3/2019 0:00	Multi Family	N
32 Boutonville Rd, Lewisboro	South Salem NY 10590	6/27/2019 0:00	Single Family	N
32 DEERTRACK LN, Lewisboro	Goldens Bridge NY 10526	4/11/2019 0:00	Single Family	N
32 Hillside Ave, Lewisboro	Goldens Bridge NY 10526	9/5/2019 0:00	Single Family	N
32 Hoyt St, Lewisboro	South Salem NY 10590	6/5/2019 0:00	Single Family	N
32 MAIN ST, Lewisboro	South Salem NY 10590	8/7/2019 0:00	Single Family	N
32 OLD LN, Lewisboro	South Salem NY 10590	8/14/2019 0:00	Single Family	N
32 Twin Lakes Rd, Lewisboro	South Salem NY 10590	5/17/2019 0:00	Single Family	N
320 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	4/18/2019 0:00	Single Family	N
321 Route 22, Lewisboro	Goldens Bridge NY 10526	5/16/2019 0:00		N
321 Route 22, Lewisboro	Goldens Bridge NY 10526	5/16/2019 0:00		N
321 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	3/26/2019 0:00	Single Family	N
322 Waccabuc Rd, Lewisboro	Goldens Bridge NY 10526	10/1/2019 0:00	Single Family	N
329 Smith Ridge Rd, Lewisboro	South Salem NY 10590	7/22/2019 0:00	Single Family	N
33 Boutonville Rd, Lewisboro	South Salem NY 10590	12/23/2019 0:00	Single Family	N
33 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	1/16/2019 0:00	Single Family	N
33 Conant Valley Rd, Lewisboro	Pound Ridge NY 10576	9/9/2019 0:00	Single Family	N
33 Conant Valley Rd, Lewisboro	Pound Ridge NY 10576	9/10/2019 0:00	Single Family	N
33 Hoyt St, Lewisboro	South Salem NY 10590	2/28/2019 0:00	Single Family	N
33 Hoyt St, Lewisboro	South Salem NY 10590	12/27/2019 0:00	Single Family	N
33 LAKE SHORE DR, Lewisboro	South Salem NY 10590	2/14/2019 0:00	Single Family	N
33 MEAD ST, Lewisboro	WACCABUC NY 10597	1/29/2019 0:00	Single Family	N
33 Oscaleta Rd, Lewisboro	South Salem NY 10590	11/21/2019 0:00	Single Family	N
33 ROCK SHELTER RD, Lewisboro	WACCABUC NY 10597	5/8/2019 0:00	Single Family	N
33 Todd Hill Cir, Lewisboro	Goldens Bridge NY 10526	9/3/2019 0:00	Single Family	N
33 TRI-BROOK DR, Lewisboro	South Salem NY 10590	4/25/2019 0:00	Single Family	N
34 MARK MEAD RD, Lewisboro	Cross River NY 10518	3/27/2019 0:00	Single Family	N
34 PATRIOT PASS, Lewisboro	Waccabuc NY 10597	7/29/2019 0:00	Single Family	N
35 Church Tavern Rd, Lewisboro	South Salem NY 10590	4/30/2019 0:00	Single Family	N
35 GILBERT ST, Lewisboro	South Salem NY 10590	8/7/2019 0:00	Single Family	N
35 HOYT ST, Lewisboro	South Salem NY 10590	6/27/2019 0:00	Single Family	N
35 HOYT ST, Lewisboro	South Salem NY 10590	6/27/2019 0:00	Single Family	N
35 Indian Hill Rd, Lewisboro	Katonah NY 10536	5/31/2019 0:00	Single Family	N
35 Lake St, Lewisboro	Goldens Bridge NY 10526	9/5/2019 0:00	Single Family	N
35 LOWER SALEM RD, Lewisboro	South Salem NY 10590	9/23/2019 0:00	Single Family	N
35 N Salem Rd, Lewisboro	Cross River NY 10518	10/25/2019 0:00	Single Family	N
35 Patriot Pass, Lewisboro	Waccabuc NY 10597	7/29/2019 0:00	Single Family	N
35 S Shore Dr, Lewisboro	South Salem NY 10590	4/5/2019 0:00	Single Family	N
35 S Shore Dr, Lewisboro	South Salem NY 10590	7/9/2019 0:00	Single Family	N
35 Todd Rd, Lewisboro	Katonah NY 10536	11/27/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
355 Smith Ridge Rd, Lewisboro	South Salem NY 10590	8/8/2019 0:00	Commercial	N
355 Smith Ridge Rd, Lewisboro	South Salem NY 10590	8/8/2019 0:00	Commercial	N
355 Smith Ridge Rd, Lewisboro	South Salem NY 10590	10/8/2019 0:00	Commercial	N
355 Smith Ridge Rd, Lewisboro	South Salem NY 10590	10/8/2019 0:00	Commercial	N
36 E Ridge Rd, Lewisboro	Waccabuc NY 10597	6/4/2019 0:00	Single Family	N
36 HILLTOP RD, Lewisboro	Waccabuc NY 10597	1/9/2019 0:00	Single Family	N
36 HUNT FARM RD, Lewisboro	WACCABUC NY 10597	3/20/2019 0:00	Single Family	N
36 TODD RD, Lewisboro	Katonah NY 10536	11/27/2019 0:00	Single Family	N
36 Truesdale Lake Dr, Lewisboro	South Salem NY 10590	11/20/2019 0:00	Single Family	N
367 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	1/4/2019 0:00	Single Family	N
368 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	8/15/2019 0:00	Single Family	N
369 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	8/15/2019 0:00	Single Family	N
37 Bouton Rd, Lewisboro	South Salem NY 10590	7/1/2019 0:00	Single Family	N
37 Conant Valley Rd, Lewisboro	Pound Ridge NY 10576	9/19/2019 0:00	Single Family	N
37 HUNT FARM RD, Lewisboro	Waccabuc NY 10597	5/28/2019 0:00	Single Family	N
37 Ridgeland Rd, Lewisboro	South Salem NY 10590	11/11/2019 0:00	Single Family	N
370 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	3/28/2019 0:00	Single Family	N
370 ROUTE 22, Lewisboro	Goldens Bridge NY 10526	4/23/2019 0:00	Single Family	N
372 MAIN ST, Lewisboro	N/A	9/13/2019 0:00	Single Family	N
377 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	2/15/2019 0:00	Other	N
377 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	2/15/2019 0:00	Other	N
38 Brundige Dr, Lewisboro	Goldens Bridge NY 10526	6/13/2019 0:00	Single Family	N
38 Deertrack Ln, Lewisboro	Goldens Bridge NY 10526	10/10/2019 0:00	Single Family	N
38 GLEN DR, Lewisboro	South Salem NY 10590	3/21/2019 0:00	Single Family	N
38 Hilltop Rd, Lewisboro	Waccabuc NY 10597	9/3/2019 0:00	Single Family	N
38 Old Church Ln, Lewisboro	South Salem NY 10590	5/29/2019 0:00	Single Family	N
38 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	3/22/2019 0:00	Single Family	N
381 Mt Holly Rd, Lewisboro	Katonah NY 10536	9/11/2019 0:00	Single Family	N
381 Mt Holly Rd, Lewisboro	Katonah NY 10536	9/11/2019 0:00	Single Family	N
383 Route 22, Lewisboro	Goldens Bridge NY 10526	11/27/2019 0:00	Single Family	N
386 Smith Ridge Rd, Lewisboro	South Salem NY 10590	9/9/2019 0:00	Commercial	N
386 SMITH RIDGE RD, Lewisboro	south salem NY 10590	3/25/2019 0:00	Commercial	N
386 Smith Ridge Rd, Lewisboro	South Salem NY 10590	12/6/2019 0:00	Commercial	N
39 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	4/19/2019 0:00	Single Family	N
39 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	4/19/2019 0:00	Single Family	N
39 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	4/19/2019 0:00	Single Family	N
39 Knapp Rd, Lewisboro	South Salem NY 10590	8/27/2019 0:00	Single Family	N
39 Knapp Rd, Lewisboro	South Salem NY 10590	8/27/2019 0:00	Single Family	N
39 Lake Path, Lewisboro	South Salem NY 10590	12/30/2019 0:00	Single Family	N
39 Todd Hill Cir, Lewisboro	Goldens Bridge NY 10526	5/17/2019 0:00	Single Family	N
4 Beaver Pond Ln, Lewisboro	South Salem NY 10590	7/11/2019 0:00	Single Family	N
4 BENJAMEN GREEN LANE, Lewisboro	N/A	10/17/2019 0:00	Single Family	N
4 BOUTON ST, Lewisboro	South Salem NY 10590	3/21/2019 0:00	Single Family	N
4 BROOK MANOR DR, Lewisboro	South Salem NY 10590	4/16/2019 0:00		N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
4 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	11/25/2019 0:00	Single Family	N
4 Canaan Cir, Lewisboro	South Salem NY 10590	8/30/2019 0:00	Single Family	N
4 Diane Ct, Lewisboro	Katonah NY 10536	12/20/2019 0:00	Single Family	N
4 FIVE PONDS DR, Lewisboro	Waccabuc NY 10597	11/7/2019 0:00	Single Family	N
4 HILLCREST CT, Lewisboro	South Salem NY 10590	2/15/2019 0:00	Single Family	N
4 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	10/3/2019 0:00	Single Family	N
4 LONS LANE, Lewisboro	N/A	2/7/2019 0:00	Single Family	N
4 MERRITT CT, Lewisboro	Katonah NY 10536	2/14/2019 0:00	Single Family	N
4 Rampart Pass, Lewisboro	Waccabuc NY 10597	10/15/2019 0:00	Single Family	N
4 Rock Shelter Rd, Lewisboro	Waccabuc NY 10597	8/8/2019 0:00	Single Family	N
4 Salem Ln, Lewisboro	South Salem NY 10590	12/16/2019 0:00	Single Family	N
4 SAWGRASS DR, Lewisboro	Katonah NY 10536	7/19/2019 0:00	Single Family	N
4 SHOSHONE DR, Lewisboro	Katonah NY 10536	5/10/2019 0:00	Single Family	N
4 Sunny Rdg, Lewisboro	Katonah NY 10536	11/26/2019 0:00	Single Family	N
4 The Hook, Lewisboro	Waccabuc NY 10597	12/31/2019 0:00	Single Family	N
4 The Hook, Lewisboro	Waccabuc NY 10597	12/31/2019 0:00	Single Family	N
4 WEST LN, Lewisboro	South Salem NY 10590	8/21/2019 0:00	Single Family	N
4 Wild Oaks Rd, Lewisboro	Goldens Bridge NY 10526	10/11/2019 0:00	Single Family	N
40 DEERTRACK LN, Lewisboro	Goldens Bridge NY 10526	3/15/2019 0:00	Single Family	N
40 Gilbert St, Lewisboro	South Salem NY 10590	11/29/2019 0:00	Single Family	N
40 Hunt Farm Rd, Lewisboro	Waccabuc NY 10597	7/24/2019 0:00	Single Family	N
40 LOCKWOOD RD, Lewisboro	South Salem NY 10590	1/25/2019 0:00	Single Family	N
40 OLD CHURCH LN, Lewisboro	South Salem NY 10590	6/27/2019 0:00	Single Family	N
40 PERCH BAY RD, Lewisboro	Waccabuc NY 10597	8/21/2019 0:00	Single Family	N
40 Salem Ln, Lewisboro	South Salem NY 10590	11/12/2019 0:00	Single Family	N
407 Smith Ridge Rd, Lewisboro	South Salem NY 10590	10/28/2019 0:00	Commercial	N
407 Smith Ridge Rd, Lewisboro	South Salem NY 10590	3/18/2019 0:00	Commercial	N
407 Smith Ridge Rd, Lewisboro	South Salem NY 10590	3/18/2019 0:00	Commercial	N
41 GILBERT ST, Lewisboro	South Salem NY 10590	2/11/2019 0:00	Single Family	N
41 Lakeview Pass, Lewisboro	Katonah NY 10536	6/13/2019 0:00	Single Family	N
41 MAIN ST, Lewisboro	South Salem NY 10590	6/20/2019 0:00	Single Family	N
41 Perch Bay Rd, Lewisboro	Waccabuc NY 10597	7/9/2019 0:00	Single Family	N
41 SCHOOLHOUSE RD, Lewisboro	Waccabuc NY 10597	6/27/2019 0:00	Single Family	N
41 TODD HILL CIR, Lewisboro	Goldens Bridge NY 10526	4/12/2019 0:00	Single Family	N
416 POUND RIDGE RD, Lewisboro	South Salem NY 10590	2/5/2019 0:00	Single Family	N
42 Boutonville Rd, Lewisboro	South Salem NY 10590	7/25/2019 0:00	Single Family	N
42 ELMWOOD RD, Lewisboro	South Salem NY 10590	8/20/2019 0:00	Single Family	N
42 Gilbert St, Lewisboro	South Salem NY 10590	12/5/2019 0:00	Single Family	N
42 Truesdale Lake Dr, Lewisboro	South Salem NY 10590	6/25/2019 0:00	Single Family	N
424 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	10/11/2019 0:00	Single Family	N
427 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	3/20/2019 0:00	Single Family	N
43 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	1/8/2019 0:00	Single Family	N
43 KNAPP RD, Lewisboro	South Salem NY 10590	4/15/2019 0:00	Single Family	N
43 SABBATHDAY HL, Lewisboro	South Salem NY 10590	10/2/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
44 STEVEN LANE, Lewisboro	N/A	10/17/2019 0:00	Single Family	N
44 TRUESDALE LAKE DR, Lewisboro	N/A	6/3/2019 0:00	Single Family	N
44 UPPER LAKESHORE DR, Lewisboro	Katonah NY 10536	10/25/2019 0:00	Single Family	N
449 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	4/11/2019 0:00	Single Family	N
45 Main St, Lewisboro	South Salem NY 10590	7/8/2019 0:00	Single Family	N
45 OSCALETA RD, Lewisboro	South Salem NY 10590	10/11/2019 0:00	Single Family	N
45 SUNNY RDG, Lewisboro	Katonah NY 10536	5/13/2019 0:00	Single Family	N
45 WEST RD, Lewisboro	South Salem NY 10590	3/26/2019 0:00	Single Family	N
453 Smith Ridge Rd, Lewisboro	South Salem NY 10590	10/15/2019 0:00	Single Family	N
46 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	12/3/2019 0:00	Single Family	N
46 CHURCH TAVERN RD, Lewisboro	South Salem NY 10590	3/8/2019 0:00	Single Family	N
46 Grandview Rd, Lewisboro	South Salem NY 10590	7/2/2019 0:00	Single Family	N
46 Old Oscaleta Rd, Lewisboro	South Salem NY 10590	9/19/2019 0:00	Single Family	N
46 S SHORE DR, Lewisboro	South Salem NY 10590	11/25/2019 0:00	Single Family	N
46 TWIN LAKES RD, Lewisboro	South Salem NY 10590	4/5/2019 0:00	Single Family	N
47 Knapp Rd, Lewisboro	South Salem NY 10590	7/17/2019 0:00	Single Family	N
47 S SHORE DR, Lewisboro	South Salem NY 10590	7/13/2019 0:00	Single Family	N
47 SPRING ST S, Lewisboro	South Salem NY 10590	2/1/2019 0:00	Single Family	N
47 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	3/29/2019 0:00	Single Family	N
48 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	3/1/2019 0:00	Single Family	N
48 CHURCH TAVERN RD, Lewisboro	South Salem NY 10590	3/19/2019 0:00	Single Family	N
48 Lake Shore Dr, Lewisboro	South Salem NY 10590	5/16/2019 0:00	Single Family	N
48 OLD BEDFORD RD, Lewisboro	Goldens Bridge NY 10526	12/23/2019 0:00	Single Family	N
49 Brundige Dr, Lewisboro	Goldens Bridge NY 10526	8/23/2019 0:00	Single Family	N
49 E Ridge Rd, Lewisboro	Waccabuc NY 10597	6/6/2019 0:00	Single Family	N
49 East St, Lewisboro	South Salem NY 10590	12/6/2019 0:00	Single Family	N
49 Lake Shore Dr, Lewisboro	South Salem NY 10590	5/24/2019 0:00	Single Family	N
49 LOCKWOOD RD, Lewisboro	South Salem NY 10590	2/28/2019 0:00	Single Family	N
49 Truesdale Lake Dr, Lewisboro	South Salem NY 10590	10/29/2019 0:00	Single Family	N
49 UPPER LAKESHORE DR, Lewisboro	Katonah NY 10536	11/15/2019 0:00	Single Family	N
5 AUTUMN RIDGE RD, Lewisboro	South Salem NY 10590	6/4/2019 0:00	Single Family	N
5 BIG ROCK LOOP, Lewisboro	Katonah NY 10536	3/25/2019 0:00	Single Family	N
5 BLUEBERRY LN, Lewisboro	South Salem NY 10590	1/8/2019 0:00	Single Family	N
5 Brady Ln, Lewisboro	Katonah NY 10536	5/14/2019 0:00	Single Family	N
5 BROOK MANOR DR, Lewisboro	South Salem NY 10590	4/18/2019 0:00	Single Family	N
5 CHEYENNE CT, Lewisboro	Katonah NY 10536	8/7/2019 0:00	Single Family	N
5 DEEPWELL FARMS RD, Lewisboro	South Salem NY 10590	12/28/2019 0:00	Single Family	N
5 DEER RUN RD, Lewisboro	South Salem NY 10590	5/8/2019 0:00	Single Family	N
5 Duffy'S Bridge Rd, Lewisboro	Katonah NY 10536	10/4/2019 0:00	Single Family	N
5 HOWLAND DR, Lewisboro	Cross River NY 10518	2/5/2019 0:00	Single Family	N
5 JAY ST, Lewisboro	N/A	12/13/2019 0:00	Other	N
5 Jonahs Ln, Lewisboro	Katonah NY 10536	9/4/2019 0:00	Single Family	N
5 Kings Grant Way, Lewisboro	Waccabuc NY 10597	8/8/2019 0:00	Single Family	N
5 LAUREL RD, Lewisboro	South Salem NY 10590	3/11/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
5 LAUREL RD, Lewisboro	South Salem NY 10590	2/19/2019 0:00	Single Family	N
5 Lower Salem Rd, Lewisboro	South Salem NY 10590	11/27/2019 0:00	Single Family	N
5 Melody Ln, Lewisboro	Pound Ridge NY 10576	10/3/2019 0:00	Single Family	N
5 RAINBOW HL, Lewisboro	South Salem NY 10590	6/28/2019 0:00	Single Family	N
5 Rampart Pass, Lewisboro	Waccabuc NY 10597	10/29/2019 0:00	Single Family	N
5 SALEM LN, Lewisboro	South Salem NY 10590	11/15/2019 0:00	Single Family	N
5 Sawgrass Dr, Lewisboro	Katonah NY 10536	8/5/2019 0:00	Single Family	N
5 Stewart Rd, Lewisboro	South Salem NY 10590	11/27/2019 0:00	Single Family	N
5 STONEWALL CT, Lewisboro	South Salem NY 10590	3/22/2019 0:00	Single Family	N
5 THE LOGGING RD, Lewisboro	Waccabuc NY 10597	4/16/2019 0:00	Single Family	N
5 Timberwood Pl, Lewisboro	South Salem NY 10590	11/21/2019 0:00	Single Family	N
5 TOMMY'S LN, Lewisboro	South Salem NY 10590	11/13/2019 0:00	Single Family	N
5 Tri-Brook Dr, Lewisboro	South Salem NY 10590	11/17/2019 0:00	Single Family	N
5 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	1/25/2019 0:00	Single Family	N
5 Waterview Ct, Lewisboro	South Salem NY 10590	7/17/2019 0:00	Single Family	N
5 Waterview Ct, Lewisboro	South Salem NY 10590	5/6/2019 0:00	Single Family	N
5 WEBB LANE, Lewisboro	N/A	10/31/2019 0:00	Single Family	N
50 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	3/21/2019 0:00	Single Family	N
50 E Ridge Rd, Lewisboro	Waccabuc NY 10597	7/22/2019 0:00	Single Family	N
50 ELMWOOD RD, Lewisboro	South Salem NY 10590	4/11/2019 0:00	Single Family	N
50 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	8/6/2019 0:00	Single Family	N
50 Laurel Rd, Lewisboro	South Salem NY 10590	10/16/2019 0:00	Single Family	N
50 MAIN ST, Lewisboro	South Salem NY 10590	7/30/2019 0:00	Single Family	N
50 SUNNY RDG, Lewisboro	Katonah NY 10536	10/4/2019 0:00	Single Family	N
50 Twin Lakes Rd, Lewisboro	South Salem NY 10590	5/22/2019 0:00	Single Family	N
500 Mt Holly Rd, Lewisboro	Katonah NY 10536	12/26/2019 0:00	Single Family	N
51 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	8/17/2019 0:00	Single Family	N
51 GILBERT ST, Lewisboro	South Salem NY 10590	5/2/2019 0:00	Single Family	N
51 Grandview Rd, Lewisboro	South Salem NY 10590	5/26/2019 0:00	Single Family	N
51 Knapp Rd, Lewisboro	South Salem NY 10590	6/28/2019 0:00	Single Family	N
51 Truesdale Lake Dr, Lewisboro	South Salem NY 10590	6/28/2019 0:00	Single Family	N
51 Twin Lakes Rd, Lewisboro	South Salem NY 10590	6/26/2019 0:00	Single Family	N
51 WEST RD, Lewisboro	South Salem NY 10590	7/21/2019 0:00	Single Family	N
51 WEST RD, Lewisboro	South Salem NY 10590	7/21/2019 0:00	Single Family	N
514 MT HOLLY RD, Lewisboro	Katonah NY 10536	5/14/2019 0:00	Single Family	N
52 BOUTON RD, Lewisboro	South Salem NY 10590	11/2/2019 0:00	Single Family	N
52 Conant Valley Rd, Lewisboro	Pound Ridge NY 10576	10/16/2019 0:00	Single Family	N
52 Grandview Rd, Lewisboro	South Salem NY 10590	6/3/2019 0:00	Single Family	N
52 HOYT ST, Lewisboro	South Salem NY 10590	7/4/2019 0:00	Single Family	N
52 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	10/25/2019 0:00	Single Family	N
53 Forest Range, Lewisboro	Katonah NY 10536	7/22/2019 0:00	Single Family	N
53 Hoyt St, Lewisboro	South Salem NY 10590	11/4/2019 0:00	Single Family	N
53 Lake Shore Dr, Lewisboro	South Salem NY 10590	9/17/2019 0:00	Single Family	N
53 S Shore Dr, Lewisboro	South Salem NY 10590	7/16/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
54 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	8/13/2019 0:00	Single Family	N
54 Old Bedford Rd, Lewisboro	Goldens Bridge NY 10526	9/12/2019 0:00	Single Family	N
54 OSCALETA RD, Lewisboro	South Salem NY 10590	10/10/2019 0:00	Single Family	N
54 Smith Ridge Rd, Lewisboro	South Salem NY 10590	4/27/2019 0:00	Single Family	N
54 Smith Ridge Rd, Lewisboro	South Salem NY 10590	7/22/2019 0:00	Single Family	N
54 Smith Ridge Rd, Lewisboro	South Salem NY 10590	9/28/2019 0:00	Single Family	N
54 Twin Lakes Rd, Lewisboro	South Salem NY 10590	9/24/2019 0:00	Single Family	N
55 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	5/13/2019 0:00	Single Family	N
55 Grandview Rd, Lewisboro	South Salem NY 10590	11/21/2019 0:00	Single Family	N
55 Oscaleta Rd, Lewisboro	South Salem NY 10590	5/22/2019 0:00	Single Family	N
55 RT-121, Lewisboro	Cross River NY 10518	11/29/2019 0:00	Other	N
56 CHURCH TAVERN RD, Lewisboro	South Salem NY 10590	3/21/2019 0:00	Single Family	N
56 COVE RD, Lewisboro	SOUTH SALEM NY 10590	2/4/2019 0:00	Single Family	N
56 COVE RD, Lewisboro	SOUTH SALEM NY 10590	1/14/2019 0:00	Single Family	N
56 PINE HILL DR, Lewisboro	South Salem NY 10590	3/29/2019 0:00	Single Family	N
56 PINE HILL DR, Lewisboro	South Salem NY 10590	3/27/2019 0:00	Single Family	N
56 TWIN LAKES RD, Lewisboro	South Salem NY 10590	1/8/2019 0:00	Single Family	N
57 DEERFIELD, Lewisboro	Katonah NY 10536	3/19/2019 0:00	Single Family	N
57 Lockwood Rd, Lewisboro	South Salem NY 10590	9/14/2019 0:00	Single Family	N
57 S SHORE DR, Lewisboro	SOUTH SALEM NY 10590	2/7/2019 0:00	Single Family	N
57 TWIN LAKES RD, Lewisboro	South Salem NY 10590	7/29/2019 0:00	Single Family	N
58 BENEDICT RD, Lewisboro	South Salem NY 10590	5/24/2019 0:00	Single Family	N
58 COVE RD, Lewisboro	SOUTH SALEM NY 10590	4/19/2019 0:00	Single Family	N
58 DEERFIELD, Lewisboro	Katonah NY 10536	4/4/2019 0:00	Single Family	N
58 Gilbert St, Lewisboro	South Salem NY 10590	6/25/2019 0:00	Single Family	N
58 HOYT ST, Lewisboro	South Salem NY 10590	5/8/2019 0:00	Single Family	N
58 Sunnyridge Rd, Lewisboro	Katonah NY 10536	5/28/2019 0:00	Single Family	N
59 Cove Rd, Lewisboro	South Salem NY 10590	7/10/2019 0:00	Single Family	N
59 Truesdale Lake Dr, Lewisboro	South Salem NY 10590	7/10/2019 0:00	Single Family	N
592 RT 22, Lewisboro	Croton Falls NY 10519	3/18/2019 0:00		N
6 ASHFIELD RD, Lewisboro	N/A	1/10/2019 0:00	Single Family	N
6 Bickford Ln, Lewisboro	South Salem NY 10590	8/2/2019 0:00	Single Family	N
6 BOWAY, Lewisboro	South Salem NY 10590	8/8/2019 0:00	Single Family	N
6 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	1/17/2019 0:00	Single Family	N
6 CANAAN CIR, Lewisboro	South Salem NY 10590	10/4/2019 0:00	Single Family	N
6 CAROL LN, Lewisboro	South Salem NY 10590	6/15/2019 0:00	Single Family	N
6 CHAPEL CT, Lewisboro	Waccabuc NY 10597	5/13/2019 0:00	Single Family	N
6 CHEROKEE CT, Lewisboro	Katonah NY 10536	11/26/2019 0:00	Single Family	N
6 Comanche Ct, Lewisboro	Katonah NY 10536	8/20/2019 0:00	Single Family	N
6 Debbie Ln, Lewisboro	Cross River NY 10518	10/17/2019 0:00	Single Family	N
6 Deer Run Rd, Lewisboro	South Salem NY 10590	6/10/2019 0:00	Single Family	N
6 DEERFIELD, Lewisboro	Katonah NY 10536	10/16/2019 0:00	Single Family	N
6 HOLLY HILL LN, Lewisboro	KATONAH NY 10536	1/15/2019 0:00	Single Family	N
6 HUNTS LN, Lewisboro	Cross River NY 10518	12/16/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
6 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	6/27/2019 0:00	Single Family	N
6 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	6/27/2019 0:00	Single Family	N
6 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	1/7/2019 0:00	Single Family	N
6 LOIS LN, Lewisboro	Katonah NY 10536	11/28/2019 0:00	Single Family	N
6 Lower Salem Rd, Lewisboro	South Salem NY 10590	6/27/2019 0:00	Single Family	N
6 OUTPOST, Lewisboro	Katonah NY 10536	10/17/2019 0:00	Single Family	N
6 RESERVOIR RD, Lewisboro	South Salem NY 10590	5/30/2019 0:00	Single Family	N
6 SALEM HILL RD, Lewisboro	South Salem NY 10590	9/16/2019 0:00	Single Family	N
6 SCHOOLHOUSE RD, Lewisboro	WACCABUC NY 10597	5/7/2019 0:00	Single Family	N
6 Soundview Loop, Lewisboro	South Salem NY 10590	6/6/2019 0:00	Single Family	N
6 Spring Hill Ln, Lewisboro	South Salem NY 10590	7/1/2019 0:00	Single Family	N
6 STUART LAKE RD, Lewisboro	South Salem NY 10590	4/5/2019 0:00	Single Family	N
6 Timberwood Pl, Lewisboro	South Salem NY 10590	7/18/2019 0:00	Single Family	N
6 TOMMY'S LN, Lewisboro	South Salem NY 10590	6/26/2019 0:00	Single Family	N
6 Twin Lakes Rd, Lewisboro	South Salem NY 10590	11/27/2019 0:00	Single Family	N
60 Lake Shore Dr, Lewisboro	South Salem NY 10590	7/25/2019 0:00	Single Family	N
60 N Salem Rd, Lewisboro	Cross River NY 10518	6/15/2019 0:00	Other	N
60 N Salem Rd, Lewisboro	Cross River NY 10518	6/15/2019 0:00	Other	N
60 N Salem Rd, Lewisboro	Cross River NY 10518	8/15/2019 0:00	Other	N
60 N Salem Rd, Lewisboro	Cross River NY 10518	12/21/2019 0:00	Other	N
60 N Salem Rd, Lewisboro	Cross River NY 10518	12/21/2019 0:00	Other	N
60 N Salem Rd, Lewisboro	Cross River NY 10518	12/21/2019 0:00	Other	N
60 Salem Rd, Lewisboro	South Salem NY 10590	3/26/2019 0:00	Other	N
60 Salem Rd, Lewisboro	South Salem NY 10590	9/28/2019 0:00	Other	N
60 Salem Rd, Lewisboro	South Salem NY 10590	9/28/2019 0:00	Other	N
60 Salem Rd, Lewisboro	South Salem NY 10590	9/28/2019 0:00	Other	N
61 BOWAY, Lewisboro	South Salem NY 10590	10/10/2019 0:00	Single Family	N
61 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	11/18/2019 0:00	Single Family	N
61 CROSS POND RD, Lewisboro	Pound Ridge NY 10576	6/5/2019 0:00	Single Family	N
61 Truesdale Lake Dr, Lewisboro	South Salem NY 10590	7/10/2019 0:00	Single Family	N
62 Hoyt St, Lewisboro	South Salem NY 10590	6/10/2019 0:00	Single Family	N
62 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	5/18/2019 0:00	Single Family	N
62 Main St, Lewisboro	South Salem NY 10590	6/10/2019 0:00	Single Family	N
62a MEAD ST, Lewisboro	WACCABUC NY 10597	3/13/2019 0:00	Single Family	N
63 CHAPEL RD, Lewisboro	Waccabuc NY 10597	7/9/2019 0:00	Single Family	N
63 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	10/1/2019 0:00	Single Family	N
63 Pine Hill Dr, Lewisboro	South Salem NY 10590	6/15/2019 0:00	Single Family	N
65 Chapel Rd, Lewisboro	Waccabuc NY 10597	9/12/2019 0:00	Single Family	N
65 Chapel Rd, Lewisboro	Waccabuc NY 10597	9/12/2019 0:00	Single Family	N
65 LAKE SHORE DR, Lewisboro	South Salem NY 10590	4/17/2019 0:00	Single Family	N
66 Mark Mead Rd, Lewisboro	Cross River NY 10518	3/23/2019 0:00	Single Family	N
67 HOYT ST, Lewisboro	South Salem NY 10590	5/6/2019 0:00	Single Family	N
68 Cove Rd, Lewisboro	South Salem NY 10590	6/6/2019 0:00	Single Family	N
68 MEAD ST, Lewisboro	WACCABUC NY 10597	3/13/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
68 MEAD ST, Lewisboro	WACCABUC NY 10597	3/13/2019 0:00	Single Family	N
68 MEAD ST, Lewisboro	WACCABUC NY 10597	3/15/2019 0:00	Single Family	N
68 POST OFFICE RD, Lewisboro	WACCABUC NY 10597	1/9/2019 0:00	Single Family	N
69 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	1/25/2019 0:00	Single Family	N
69 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	1/25/2019 0:00	Single Family	N
69 Mead St, Lewisboro	Waccabuc NY 10597	7/25/2019 0:00	Single Family	N
69 OLD BEDFORD RD, Lewisboro	Goldens Bridge NY 10526	12/11/2019 0:00	Single Family	N
69 TWIN LAKES RD, Lewisboro	South Salem NY 10590	3/28/2019 0:00	Single Family	N
7 Adams Hill Rd, Lewisboro	Cross River NY 10518	10/1/2019 0:00	Single Family	N
7 BENEDICT RD, Lewisboro	South Salem NY 10590	4/15/2019 0:00	Single Family	N
7 Brady Ln, Lewisboro	Katonah NY 10536	10/28/2019 0:00	Single Family	N
7 DIANE CT, Lewisboro	Katonah NY 10536	9/4/2019 0:00	Single Family	N
7 DIANE CT, Lewisboro	Katonah NY 10536	9/4/2019 0:00	Single Family	N
7 DOUGLAS DR, Lewisboro	South Salem NY 10590	9/16/2019 0:00	Single Family	N
7 E Mountain Rd, Lewisboro	Katonah NY 10536	8/30/2019 0:00	Single Family	N
7 FAY LN, Lewisboro	South Salem NY 10590	4/12/2019 0:00	Single Family	N
7 Flintlock Ridge Rd, Lewisboro	Katonah NY 10536	11/4/2019 0:00	Single Family	N
7 HOLLY HILL LN, Lewisboro	KATONAH NY 10536	5/3/2019 0:00	Single Family	N
7 HOWLAND DR, Lewisboro	Cross River NY 10518	1/15/2019 0:00	Single Family	N
7 Hunt Farm Rd, Lewisboro	Waccabuc NY 10597	4/25/2019 0:00	Single Family	N
7 KEELER CT, Lewisboro	South Salem NY 10590	11/11/2019 0:00	Single Family	N
7 Kingswood Way, Lewisboro	South Salem NY 10590	11/23/2019 0:00	Single Family	N
7 Lake St, Lewisboro	Goldens Bridge NY 10526	9/30/2019 0:00	Single Family	N
7 Lois Ln, Lewisboro	Katonah NY 10536	10/10/2019 0:00	Single Family	N
7 MOHAWK TRL, Lewisboro	Katonah NY 10536	5/7/2019 0:00	Single Family	N
7 SALEM LN, Lewisboro	South Salem NY 10590	3/5/2019 0:00	Single Family	N
7 SAWGRASS DR, Lewisboro	Katonah NY 10536	4/11/2019 0:00	Single Family	N
7 Stonewall Ct, Lewisboro	South Salem NY 10590	8/13/2019 0:00	Single Family	N
7 SULLIVAN RD, Lewisboro	Goldens Bridge NY 10526	2/7/2019 0:00	Single Family	N
7 SULLIVAN RD, Lewisboro	Goldens Bridge NY 10526	2/7/2019 0:00	Single Family	N
7 TIMBERWOOD PL, Lewisboro	South Salem NY 10590	6/10/2019 0:00	Single Family	N
7 WEBB LN, Lewisboro	Goldens Bridge NY 10526	3/14/2019 0:00	Single Family	N
70 Bouton Rd, Lewisboro	South Salem NY 10590	11/13/2019 0:00	Single Family	N
70 Cove Rd, Lewisboro	South Salem NY 10590	10/8/2019 0:00	Single Family	N
70 Cove Rd, Lewisboro	South Salem NY 10590	10/8/2019 0:00	Single Family	N
70 Cove Rd, Lewisboro	South Salem NY 10590	9/21/2019 0:00	Single Family	N
70 Cove Rd, Lewisboro	South Salem NY 10590	4/30/2019 0:00	Single Family	N
70 Cove Rd, Lewisboro	South Salem NY 10590	8/19/2019 0:00	Single Family	N
70 Cove Rd, Lewisboro	South Salem NY 10590	2/21/2019 0:00	Single Family	N
70 Cove Rd, Lewisboro	South Salem NY 10590	2/21/2019 0:00	Single Family	N
70 Cove Rd, Lewisboro	South Salem NY 10590	7/8/2019 0:00	Single Family	N
70 EAST ST, Lewisboro	South Salem NY 10590	1/16/2019 0:00	Single Family	N
70 LOCKWOOD BRD, Lewisboro	N/A	2/6/2019 0:00	Single Family	N
70 SPRING ST S, Lewisboro	South Salem NY 10590	12/5/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
70 SPRING ST S, Lewisboro	South Salem NY 10590	12/5/2019 0:00	Single Family	N
70 TWIN LAKES RD, Lewisboro	South Salem NY 10590	2/14/2019 0:00	Single Family	N
71 Post Office Rd, Lewisboro	Waccabuc NY 10597	5/25/2019 0:00	Single Family	N
71 Truesdale Lake Dr, Lewisboro	South Salem NY 10590	7/9/2019 0:00	Single Family	N
72 OSCALETA RD, Lewisboro	South Salem NY 10590	3/7/2019 0:00	Single Family	N
72 Post Office Rd, Lewisboro	Waccabuc NY 10597	8/22/2019 0:00	Single Family	N
72 Post Office Rd, Lewisboro	Waccabuc NY 10597	8/22/2019 0:00	Single Family	N
73 PINE HILL DR, Lewisboro	South Salem NY 10590	1/9/2019 0:00	Single Family	N
74 HEMLOCK RD, Lewisboro	South Salem NY 10590	4/30/2019 0:00	Single Family	N
74 Mead St, Lewisboro	Waccabuc NY 10597	7/17/2019 0:00	Single Family	N
75 CONANT VALLEY RD, Lewisboro	Pound Ridge NY 10576	5/24/2019 0:00	Single Family	N
75 Twin Lakes Rd, Lewisboro	South Salem NY 10590	8/23/2019 0:00	Single Family	N
76 TWIN LAKES RD, Lewisboro	South Salem NY 10590	2/25/2019 0:00	Single Family	N
77 RIDGELAND RD, Lewisboro	South Salem NY 10590	10/1/2019 0:00	Single Family	N
77 UPPER LAKESHORE DR, Lewisboro	KATONAH NY 10536	3/1/2019 0:00	Single Family	N
777 RT-35, Lewisboro	CROSS RIVER NY 10518	4/4/2019 0:00	Other	N
78 BOUTON RD, Lewisboro	South Salem NY 10590	4/28/2019 0:00	Single Family	N
78 BOWAY, Lewisboro	South Salem NY 10590	9/12/2019 0:00	Single Family	N
78 BOWAY, Lewisboro	South Salem NY 10590	9/12/2019 0:00	Single Family	N
788 Route 35, Lewisboro	Cross River NY 10518	11/25/2019 0:00	Commercial	N
788 Route 35, Lewisboro	Cross River NY 10518	8/13/2019 0:00	Commercial	N
788 Route 35, Lewisboro	Cross River NY 10518	6/18/2019 0:00	Commercial	N
788 Route 35, Lewisboro	Cross River NY 10518	6/18/2019 0:00	Commercial	N
788 Route 35, Lewisboro	Cross River NY 10518	3/25/2019 0:00	Commercial	N
79 East St, Lewisboro	South Salem NY 10590	9/24/2019 0:00	Single Family	N
79 KNAPP RD, Lewisboro	South Salem NY 10590	2/28/2019 0:00	Single Family	N
79 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	4/30/2019 0:00	Single Family	N
8 Audubon Rd, Lewisboro	South Salem NY 10590	10/15/2019 0:00	Single Family	N
8 Bickford Ln, Lewisboro	South Salem NY 10590	7/9/2019 0:00	Single Family	N
8 BOUTON ST, Lewisboro	South Salem NY 10590	10/2/2019 0:00	Single Family	N
8 CHAPEL CT, Lewisboro	Waccabuc NY 10597	10/1/2019 0:00	Single Family	N
8 CHURCH TAVERN RD, Lewisboro	South Salem NY 10590	4/15/2019 0:00		N
8 CORNEL DR, Lewisboro	Goldens Bridge NY 10526	1/7/2019 0:00	Single Family	N
8 CORNEL DR, Lewisboro	Goldens Bridge NY 10526	5/3/2019 0:00	Single Family	N
8 DEBBIE LN, Lewisboro	Cross River NY 10518	3/19/2019 0:00	Single Family	N
8 DOGWOOD LN, Lewisboro	South Salem NY 10590	7/23/2019 0:00	Single Family	N
8 Five Ponds Dr, Lewisboro	Waccabuc NY 10597	10/29/2019 0:00	Single Family	N
8 GLEN DR, Lewisboro	South Salem NY 10590	10/15/2019 0:00	Single Family	N
8 HALL AVE, Lewisboro	Goldens Bridge NY 10526	4/10/2019 0:00	Single Family	N
8 Hilltop Rd, Lewisboro	Waccabuc NY 10597	11/8/2019 0:00	Single Family	N
8 Indian Hill Rd, Lewisboro	Katonah NY 10536	6/4/2019 0:00	Other	N
8 Kingswood Way, Lewisboro	South Salem NY 10590	7/29/2019 0:00	Single Family	N
8 Lakeview Rd, Lewisboro	South Salem NY 10590	11/19/2019 0:00	Single Family	N
8 Laurel Rd, Lewisboro	South Salem NY 10590	7/29/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
8 LAURIE LN, Lewisboro	South Salem NY 10590	1/3/2019 0:00	Single Family	N
8 LONGVIEW RD, Lewisboro	South Salem NY 10590	7/30/2019 0:00	Single Family	N
8 LORRAINE RD, Lewisboro	South Salem NY 10590	1/8/2019 0:00	Single Family	N
8 Lower Salem Rd, Lewisboro	South Salem NY 10590	9/19/2019 0:00	Single Family	N
8 Park Ave, Lewisboro	Goldens Bridge NY 10526	11/29/2019 0:00	Multi Family	N
8 Park Ave, Lewisboro	Goldens Bridge NY 10526	11/27/2019 0:00	Multi Family	N
8 Pond St, Lewisboro	Goldens Bridge NY 10526	5/21/2019 0:00	Single Family	N
8 Reservoir Rd, Lewisboro	South Salem NY 10590	12/4/2019 0:00	Single Family	N
8 SCHOOLHOUSE RD, Lewisboro	WACCABUC NY 10597	3/28/2019 0:00	Single Family	N
8 Silvermine Dr, Lewisboro	South Salem NY 10590	10/8/2019 0:00	Single Family	N
8 SOUNDVIEW LOOP, Lewisboro	South Salem NY 10590	4/12/2019 0:00	Single Family	N
8 TARRY-A-BIT DR, Lewisboro	Waccabuc NY 10597	5/24/2019 0:00	Single Family	N
8 TOMMY'S LN, Lewisboro	South Salem NY 10590	10/18/2019 0:00	Single Family	N
8 Truesdale Lake Dr, Lewisboro	South Salem NY 10590	8/29/2019 0:00	Single Family	N
8 WAKEMAN RD, Lewisboro	South Salem NY 10590	12/23/2019 0:00	Single Family	N
8 West Ln, Lewisboro	South Salem NY 10590	7/14/2019 0:00	Single Family	N
80 COVE RD, Lewisboro	South Salem NY 10590	8/29/2019 0:00	Single Family	N
80 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	4/24/2019 0:00	Single Family	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	11/25/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	4/19/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	5/24/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	6/5/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/18/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	3/15/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	9/18/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	9/10/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	3/1/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/25/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/4/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	4/3/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	3/28/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	5/10/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	5/21/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	2/15/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	12/18/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	8/27/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	9/9/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	9/3/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	12/13/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	9/16/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	6/3/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	6/4/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	6/4/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	6/4/2019 0:00	Commercial	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
800 Cross River Rd, Lewisboro	Cross River NY 10518	6/4/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	5/31/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	5/31/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	6/3/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	6/3/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	5/29/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	5/29/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	5/4/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	5/4/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	11/7/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	11/18/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	7/30/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	7/30/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	7/9/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	6/28/2019 0:00	Commercial	N
800 CROSS RIVER RD, Lewisboro	N/A	4/26/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	5/17/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/11/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/11/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/11/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	2/21/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	4/5/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	2/8/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	3/20/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	3/20/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	2/25/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/25/2019 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	2/1/2019 0:00	Commercial	N
81 E RIDGE RD, Lewisboro	Waccabuc NY 10597	4/4/2019 0:00	Single Family	N
81 Hemlock Rd, Lewisboro	South Salem NY 10590	5/13/2019 0:00	Single Family	N
81 SPRING ST, Lewisboro	South Salem NY 10590	4/3/2019 0:00	Single Family	N
811 OLD POST RD, Lewisboro	N/A	11/8/2019 0:00	Single Family	N
82 E Ridge Rd, Lewisboro	Waccabuc NY 10597	9/17/2019 0:00	Single Family	N
82 EAST ST, Lewisboro	South Salem NY 10590	7/24/2019 0:00	Single Family	N
82 Hemlock Rd, Lewisboro	South Salem NY 10590	11/21/2019 0:00	Single Family	N
82 Hemlock Rd, Lewisboro	South Salem NY 10590	5/29/2019 0:00	Single Family	N
82 OSCALETA RD, Lewisboro	South Salem NY 10590	7/26/2019 0:00	Single Family	N
82 TWIN LAKES RD, Lewisboro	South Salem NY 10590	10/14/2019 0:00	Single Family	N
83 EAST ST, Lewisboro	South Salem NY 10590	5/9/2019 0:00	Single Family	N
831 Route 35, Lewisboro	Cross River NY 10518	10/16/2019 0:00	Single Family	N
84 Chapel Rd, Lewisboro	Waccabuc NY 10597	11/14/2019 0:00	Single Family	N
86 Lockwood Rd, Lewisboro	South Salem NY 10590	10/17/2019 0:00	Single Family	N
86 Spring ST, Lewisboro	South Salem NY 10590	2/14/2019 0:00	Single Family	N
87 Main St, Lewisboro	South Salem NY 10590	10/18/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
870 Route 35, Lewisboro	Cross River NY 10518	11/26/2019 0:00	Commercial	N
88 N SALEM RD, Lewisboro	Cross River NY 10518	1/29/2019 0:00	Single Family	N
89 BOWAY, Lewisboro	South Salem NY 10590	3/18/2019 0:00	Single Family	N
890 Route 35, Lewisboro	Cross River NY 10518	11/11/2019 0:00	Commercial	N
892 Route 35, Lewisboro	Cross River NY 10518	10/25/2019 0:00	Commercial	N
9 ASHWOOD RD, Lewisboro	South Salem NY 10590	10/3/2019 0:00	Single Family	N
9 Beaver Pond Ln, Lewisboro	South Salem NY 10590	9/12/2019 0:00	Single Family	N
9 CHAPEL CT, Lewisboro	Waccabuc NY 10597	5/3/2019 0:00	Single Family	N
9 CHURCH TAVERN RD, Lewisboro	South Salem NY 10590	4/10/2019 0:00	Single Family	N
9 CORNEL DR, Lewisboro	Goldens Bridge NY 10526	3/21/2019 0:00	Single Family	N
9 Cornwall Ct, Lewisboro	Katonah NY 10536	8/14/2019 0:00	Single Family	N
9 Hoyt St, Lewisboro	South Salem NY 10590	11/1/2019 0:00	Single Family	N
9 Keeler Ct, Lewisboro	South Salem NY 10590	5/8/2019 0:00	Single Family	N
9 KNAPP RD, Lewisboro	South Salem NY 10590	4/25/2019 0:00	Single Family	N
9 LAKE SHORE DR, Lewisboro	South Salem NY 10590	12/5/2019 0:00	Single Family	N
9 LOIS LN, Lewisboro	Katonah NY 10536	4/25/2019 0:00	Single Family	N
9 LORRAINE RD, Lewisboro	South Salem NY 10590	4/17/2019 0:00		N
9 Main St, Lewisboro	South Salem NY 10590	8/1/2019 0:00	Single Family	N
9 MOHAWK TRL, Lewisboro	Katonah NY 10536	5/1/2019 0:00	Single Family	N
9 N LAKE CIR, Lewisboro	South Salem NY 10590	4/24/2019 0:00	Single Family	N
9 Powder Hill Rd, Lewisboro	Waccabuc NY 10597	7/16/2019 0:00	Single Family	N
9 RIDGELAND RD, Lewisboro	South Salem NY 10590	4/1/2019 0:00	Single Family	N
9 S Shore Dr, Lewisboro	South Salem NY 10590	5/31/2019 0:00	Single Family	N
9 S Shore Dr, Lewisboro	South Salem NY 10590	3/11/2019 0:00	Single Family	N
9 S Shore Dr, Lewisboro	South Salem NY 10590	9/9/2019 0:00	Single Family	N
9 SALEM HILL RD, Lewisboro	South Salem NY 10590	6/20/2019 0:00	Single Family	N
9 Sawgrass Dr, Lewisboro	Katonah NY 10536	4/18/2019 0:00	Single Family	N
9 Scenic Dr, Lewisboro	South Salem NY 10590	10/8/2019 0:00	Single Family	N
9 STONEWALL CT, Lewisboro	South Salem NY 10590	9/19/2019 0:00	Single Family	N
9 Tri-Brook Dr, Lewisboro	South Salem NY 10590	1/12/2019 0:00	Single Family	N
9 Tri-Brook Dr, Lewisboro	South Salem NY 10590	11/5/2019 0:00	Single Family	N
9 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	3/16/2019 0:00	Single Family	N
9 UPLAND CT, Lewisboro	South Salem NY 10590	5/29/2019 0:00	Single Family	N
9 WACCABUC RIVER LN, Lewisboro	South Salem NY 10590	5/8/2019 0:00	Single Family	N
9 WATERVIEW CT, Lewisboro	South Salem NY 10590	11/12/2019 0:00	Single Family	N
9 WATERVIEW CT, Lewisboro	South Salem NY 10590	11/12/2019 0:00	Single Family	N
9 WOODWAY, Lewisboro	South Salem NY 10590	7/21/2019 0:00	Single Family	N
90 Mead St, Lewisboro	Waccabuc NY 10597	11/6/2019 0:00		N
91 KNAPP RD, Lewisboro	South Salem NY 10590	2/22/2019 0:00	Single Family	N
91 OLD CHURCH LN, Lewisboro	Pound Ridge NY 10576	6/7/2019 0:00	Single Family	N
91 Spring ST, Lewisboro	South Salem NY 10590	3/15/2019 0:00	Single Family	N
914 ROUTE 35, Lewisboro	Cross River NY 10518	10/9/2019 0:00	Single Family	N
916 Route 35, Lewisboro	Cross River NY 10518	10/9/2019 0:00	Single Family	N
918 Route 35, Lewisboro	Cross River NY 10518	10/9/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
92 UPPER LAKE SHR, Lewisboro	Katonah NY 10536	2/15/2019 0:00	Single Family	N
924 OLD POST RD, Lewisboro	N/A	8/7/2019 0:00	Single Family	N
929 Route 35, Lewisboro	Cross River NY 10518	1/24/2019 0:00	Single Family	N
929 Route 35, Lewisboro	Cross River NY 10518	7/15/2019 0:00	Single Family	N
93 RT-35, Lewisboro	South Salem NY 10590	12/17/2019 0:00	Single Family	N
941 OLD POST RD, Lewisboro	N/A	3/20/2019 0:00	Single Family	N
95 UPPER LAKESHORE DR, Lewisboro	KATONAH NY 10536	3/12/2019 0:00	Single Family	N
951 OLD POST RD, Lewisboro	N/A	7/2/2019 0:00	Single Family	N
951 OLD POST RD, Lewisboro	N/A	7/2/2019 0:00	Single Family	N
96 LOCKWOOD RD, Lewisboro	South Salem NY 10590	5/21/2019 0:00	Single Family	N
96 Ridgefield Ave, Lewisboro	South Salem NY 10590	10/1/2019 0:00	Single Family	N
96 SPRING ST, Lewisboro	South Salem NY 10590	7/25/2019 0:00	Single Family	N
97 BOUTON RD, Lewisboro	South Salem NY 10590	4/23/2019 0:00	Single Family	N
99 ELMWOOD RD, Lewisboro	SOUTH SALEM NY 10590	4/12/2019 0:00	Other	N
99 ELMWOOD RD, Lewisboro	SOUTH SALEM NY 10590	4/12/2019 0:00	Other	N
99 ELMWOOD RD, Lewisboro	SOUTH SALEM NY 10590	4/12/2019 0:00	Other	N
1 DAVIDS LN, Pound Ridge	Pound Ridge NY 10576	4/17/2019 0:00	Single Family	N
1 TWIN FAWN LN, Pound Ridge	Pound Ridge NY 10576	11/12/2019 0:00	Single Family	N
10 Apple Tree Ln, Pound Ridge	Pound Ridge NY 10576	6/20/2019 0:00	Single Family	N
10 Apple Tree Ln, Pound Ridge	Pound Ridge NY 10576	7/1/2019 0:00	Single Family	N
10 MILLER RD, Pound Ridge	Pound Ridge NY 10576	11/21/2019 0:00	Single Family	N
10 Old Stone Hill Rd, Pound Ridge	Pound Ridge NY 10576	12/6/2019 0:00	Single Family	N
10 PETTIT LN, Pound Ridge	Pound Ridge NY 10576	4/8/2019 0:00	Single Family	N
10 Siscowit Rd, (& 12), Pound Ridge	Pound Ridge NY 10576	10/16/2019 0:00	Single Family	N
101 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	1/3/2019 0:00	Single Family	N
101 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	11/27/2019 0:00	Single Family	N
101 UPPER SHAD D, Pound Ridge	N/A	5/7/2019 0:00	Single Family	N
103 Old Mill River Rd, Pound Ridge	Pound Ridge NY 10576	9/18/2019 0:00	Single Family	N
104 CROSS POND RD, Pound Ridge	Pound Ridge NY 10576	10/31/2019 0:00	Single Family	N
104 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	12/20/2019 0:00	Single Family	N
104 HACK GREEN RD, Pound Ridge	Pound Ridge NY 10576	12/20/2019 0:00	Single Family	N
105 OLD MILL RIVER RD, Pound Ridge	Pound Ridge NY 10576	10/29/2019 0:00	Single Family	N
105 UPPER SHAD RD, (& 105 A), Pound Ridg	Pound Ridge NY 10576	3/15/2019 0:00	Single Family	N
106 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	4/10/2019 0:00	Single Family	N
106 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	4/10/2019 0:00	Single Family	N
106 PARK VIEW RD, Pound Ridge	Pound Ridge NY 10576	4/23/2019 0:00	Single Family	N
11 Bishop Park Rd, Pound Ridge	Pound Ridge NY 10576	11/25/2019 0:00	Single Family	N
11 CONANT VALLEY RD, Pound Ridge	Pound Ridge NY 10576	3/15/2019 0:00	Single Family	N
11 Doe View Ln, Pound Ridge	Pound Ridge NY 10576	10/9/2019 0:00	Single Family	N
11 Old Pound Rd, Pound Ridge	Pound Ridge NY 10576	6/6/2019 0:00	Single Family	N
11 Park View Pl, Pound Ridge	Pound Ridge NY 10576	8/23/2019 0:00	Single Family	N
11 Rolling Meadow Ln, Pound Ridge	Pound Ridge NY 10576	7/25/2019 0:00	Single Family	N
11 S Eastern Farm Rd, Pound Ridge	Pound Ridge NY 10576	8/9/2019 0:00	Single Family	N
11 Spring House Rd, Pound Ridge	Pound Ridge NY 10576	6/6/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
11 THRESHING ROCK RD, Pound Ridge	Pound Ridge NY 10576	5/7/2019 0:00	Single Family	N
11 Waring Rd, Pound Ridge	Pound Ridge NY 10576	6/22/2019 0:00	Single Family	N
11 WHITE BIRCH RD, Pound Ridge	Pound Ridge NY 10576	8/21/2019 0:00	Single Family	N
11 WHITE BIRCH RD, Pound Ridge	Pound Ridge NY 10576	8/21/2019 0:00	Single Family	N
11 WHITE BIRCH RD, Pound Ridge	Pound Ridge NY 10576	8/21/2019 0:00	Single Family	N
110 Old Stone Hill Rd, Pound Ridge	Pound Ridge NY 10576	5/3/2019 0:00	Single Family	N
115 BARNEGAT RD, Pound Ridge	Pound Ridge NY 10576	5/1/2019 0:00	Single Family	N
116 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	4/23/2019 0:00	Single Family	N
118 HIGH RIDGE RD, Pound Ridge	Pound Ridge NY 10576	3/11/2019 0:00	Single Family	N
12 Cedar Hill Ln, Pound Ridge	Pound Ridge NY 10576	10/22/2019 0:00	Single Family	N
12 LOST NATIONS RD, Pound Ridge	Pound Ridge NY 10576	12/10/2019 0:00	Single Family	N
12 Old Pound Rd, Pound Ridge	Pound Ridge NY 10576	9/24/2019 0:00	Single Family	N
12 Siscowit Rd, Pound Ridge	Pound Ridge NY 10576	10/16/2019 0:00	Single Family	N
121 HIGH RIDGE RD, Pound Ridge	Pound Ridge NY 10576	5/23/2019 0:00	Single Family	N
122 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	3/19/2019 0:00	Single Family	N
124 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	11/25/2019 0:00	Single Family	N
124 S BEDFORD RD, Pound Ridge	Pound Ridge NY 10576	5/23/2019 0:00	Single Family	N
125 OLD MILL RIVER RD, (& 125A), Pound Rid	Pound Ridge NY 10576	5/29/2019 0:00	Single Family	N
127 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	9/7/2019 0:00	Single Family	N
127 S Bedford Rd, Pound Ridge	Pound Ridge NY 10576	7/31/2019 0:00	Single Family	N
132 Old Stone Hill Rd, Pound Ridge	Pound Ridge NY 10576	12/5/2019 0:00	Single Family	N
137 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	9/19/2019 0:00	Single Family	N
139 Park View Rd, Pound Ridge	Pound Ridge NY 10576	6/3/2019 0:00	Single Family	N
14 ADAMS LN, Pound Ridge	Pound Ridge NY 10576	3/11/2019 0:00	Single Family	N
14 Bayberry Way, Pound Ridge	Pound Ridge NY 10576	11/15/2019 0:00	Single Family	N
14 Samuel Dann Way, Pound Ridge	Pound Ridge NY 10576	8/9/2019 0:00	Single Family	N
140 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	4/11/2019 0:00	Single Family	N
140 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	4/11/2019 0:00	Single Family	N
140 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	2/8/2019 0:00	Single Family	N
140 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	9/25/2019 0:00	Single Family	N
142 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	6/5/2019 0:00	Single Family	N
144 KITCHAWAN RD, Pound Ridge	Pound Ridge NY 10576	6/5/2019 0:00	Single Family	N
15 COL SHELDON LN, Pound Ridge	Pound Ridge NY 10576	9/24/2019 0:00	Single Family	N
15 Davids Ln, Pound Ridge	Pound Ridge NY 10576	6/18/2019 0:00	Single Family	N
15 Hemlock Hill Rd, Pound Ridge	Pound Ridge NY 10576	5/28/2019 0:00	Single Family	N
15 LAUREL RD, Pound Ridge	Pound Ridge NY 10576	4/17/2019 0:00	Single Family	N
15 S Bedford Rd, (& 15 A), Pound Ridge	Pound Ridge NY 10576	6/26/2019 0:00	Single Family	N
15 Sellecks Walk, Pound Ridge	Pound Ridge NY 10576	4/29/2019 0:00	Single Family	N
15 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	8/21/2019 0:00	Single Family	N
15 WINTERBOTTOM LN, Pound Ridge	Pound Ridge NY 10576	4/22/2019 0:00	Single Family	N
150 PARK VIEW RD, Pound Ridge	Pound Ridge NY 10576	10/16/2019 0:00	Single Family	N
151 EASTWOODS RD, (&151A), Pound Ridge	Pound Ridge NY 10576	5/1/2019 0:00	Single Family	N
154 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	10/1/2019 0:00	Single Family	N
157 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	5/31/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
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Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
157 SALEM RD, (& 157A), Pound Ridge	Pound Ridge NY 10576	3/6/2019 0:00	Single Family	N
158 Salem Rd, Pound Ridge	Pound Ridge NY 10576	12/20/2019 0:00	Single Family	N
16 Old Logging Rd, Pound Ridge	Bedford NY 10506	7/29/2019 0:00	Single Family	N
16 OLD POUND RD, Pound Ridge	Pound Ridge NY 10576	5/17/2019 0:00	Single Family	N
16 THRESHING ROCK RD, Pound Ridge	Pound Ridge NY 10576	11/21/2019 0:00	Single Family	N
16 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	9/11/2019 0:00	Single Family	N
163 OLD CHURCH LN, Pound Ridge	Pound Ridge NY 10576	12/30/2019 0:00	Single Family	N
165 SALEM RD, Pound Ridge	Pound Ridge NY 10576	8/14/2019 0:00	Single Family	N
166 BARNEGAT RD, Pound Ridge	Pound Ridge NY 10576	4/19/2019 0:00	Single Family	N
166 PARK VIEW RD, Pound Ridge	Pound Ridge NY 10576	6/22/2019 0:00	Single Family	N
17 Autumn Ridge Rd, Pound Ridge	Pound Ridge NY 10576	5/19/2019 0:00	Single Family	N
17 Ebenezer Ln, Pound Ridge	Pound Ridge NY 10576	8/21/2019 0:00	Single Family	N
17 FOX RUN RD, Pound Ridge	Pound Ridge NY 10576	11/7/2019 0:00	Single Family	N
17 Mallard Lake Rd, Pound Ridge	Pound Ridge NY 10576	5/29/2019 0:00	Single Family	N
17 PATTERSON RD, Pound Ridge	Pound Ridge NY 10576	5/10/2019 0:00	Single Family	N
17 SARLES RD, Pound Ridge	Pound Ridge NY 10576	3/15/2019 0:00	Single Family	N
171 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	9/5/2019 0:00	Single Family	N
176 BARNEGAT RD, Pound Ridge	Pound Ridge NY 10576	8/30/2019 0:00	Single Family	N
176 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	9/5/2019 0:00	Single Family	N
176 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	12/6/2019 0:00	Single Family	N
176 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	2/5/2019 0:00	Single Family	N
179 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	7/1/2019 0:00	Other	N
18 DOE VIEW LN, Pound Ridge	Pound Ridge NY 10576	1/8/2019 0:00	Single Family	N
18 GREAT HILL FARMS RD, Pound Ridge	Bedford NY 10506	5/9/2019 0:00	Single Family	N
18 Hoyt Rd, Pound Ridge	Pound Ridge NY 10576	10/23/2019 0:00	Single Family	N
18 OLD POUND RD, Pound Ridge	Pound Ridge NY 10576	1/16/2019 0:00	Single Family	N
18 OLD POUND RD, Pound Ridge	Pound Ridge NY 10576	1/16/2019 0:00	Single Family	N
18 Salem Rd, Pound Ridge	Pound Ridge NY 10576	12/6/2019 0:00	Single Family	N
18 THRESHING ROCK RD, Pound Ridge	Pound Ridge NY 10576	4/3/2019 0:00	Single Family	N
18 Trinity Ln, Pound Ridge	Pound Ridge NY 10576	4/4/2019 0:00	Single Family	N
184 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	4/25/2019 0:00	Single Family	N
184 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	5/7/2019 0:00	Single Family	N
185 OLD CHURCH LN, Pound Ridge	Pound Ridge NY 10576	10/15/2019 0:00	Single Family	N
193 Old Church Ln, Pound Ridge	Pound Ridge NY 10576	10/26/2019 0:00	Single Family	N
199 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	11/7/2019 0:00	Single Family	N
2 CALF PASTURE LN, Pound Ridge	Pound Ridge NY 10576	10/21/2019 0:00	Single Family	N
2 MAJOR LOCKWOOD LN, Pound Ridge	Pound Ridge NY 10576	5/7/2019 0:00	Commercial	N
2 SHERWOOD RD, Pound Ridge	POUND RIDGE NY 10576	1/14/2019 0:00	Single Family	N
20 BUCK HILL LN, Pound Ridge	Pound Ridge NY 10576	1/8/2019 0:00	Single Family	N
20 LAUREL RD, Pound Ridge	Pound Ridge NY 10576	6/19/2019 0:00	Single Family	N
20 SPY ROCK RD, Pound Ridge	Pound Ridge NY 10576	10/2/2019 0:00	Single Family	N
20 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	2/19/2019 0:00	Single Family	N
20 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	6/26/2019 0:00	Single Family	N
200 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	9/19/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
201 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	2/14/2019 0:00	Single Family	N
202 STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	11/1/2019 0:00		N
205 Honey Hollow Rd, Pound Ridge	Pound Ridge NY 10576	5/10/2019 0:00	Single Family	N
205 Honey Hollow Rd, Pound Ridge	Pound Ridge NY 10576	5/19/2019 0:00	Single Family	N
209 SALEM RD, (& 209A), Pound Ridge	Pound Ridge NY 10576	12/24/2019 0:00	Single Family	N
21 Bishop Park Rd, Pound Ridge	Pound Ridge NY 10576	7/8/2019 0:00	Single Family	N
21 Bishop Park Rd, Pound Ridge	Pound Ridge NY 10576	8/14/2019 0:00	Single Family	N
21 DAVIDS LN, Pound Ridge	Pound Ridge NY 10576	1/15/2019 0:00	Single Family	N
21 Deer Field Rd, Pound Ridge	Pound Ridge NY 10576	10/22/2019 0:00	Single Family	N
21 GORGE LN, Pound Ridge	Pound Ridge NY 10576	7/26/2019 0:00	Single Family	N
21 Hoyt Rd, Pound Ridge	Pound Ridge NY 10576	10/1/2019 0:00	Single Family	N
21 Kendall Rd, Pound Ridge	Pound Ridge NY 10576	8/14/2019 0:00		N
21 Old Logging Rd, Pound Ridge	Bedford NY 10506	9/23/2019 0:00	Single Family	N
21 OLD SNAKE HILL RD, Pound Ridge	Pound Ridge NY 10576	6/7/2019 0:00	Single Family	N
21 Patterson Rd, Pound Ridge	Pound Ridge NY 10576	10/16/2019 0:00	Single Family	N
21 WATERBURY WAY, Pound Ridge	Pound Ridge NY 10576	10/28/2019 0:00	Single Family	N
21 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	10/25/2019 0:00	Single Family	N
210 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	8/20/2019 0:00	Single Family	N
217 STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	5/2/2019 0:00	Single Family	N
22 BAYBERRY WAY, Pound Ridge	Pound Ridge NY 10576	1/10/2019 0:00	Single Family	N
22 HEMLOCK HILL RD, Pound Ridge	Pound Ridge NY 10576	4/24/2019 0:00	Single Family	N
22 HONEY HOLLOW RD, Pound Ridge	Pound Ridge NY 10576	4/26/2019 0:00	Single Family	N
22 Knapp Rd, Pound Ridge	Pound Ridge NY 10576	7/9/2019 0:00	Single Family	N
22 Patterson Rd, Pound Ridge	Pound Ridge NY 10576	5/21/2019 0:00	Single Family	N
22 ROLLING MEADOW LN, Pound Ridge	Pound Ridge NY 10576	3/9/2019 0:00	Single Family	N
225 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	5/2/2019 0:00	Single Family	N
228 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	12/6/2019 0:00	Single Family	N
229 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	4/23/2019 0:00	Single Family	N
23 ADAMS LN, Pound Ridge	Pound Ridge NY 10576	8/7/2019 0:00	Single Family	N
23 ADAMS LN, Pound Ridge	Pound Ridge NY 10576	8/7/2019 0:00	Single Family	N
23 High Ridge Rd, Pound Ridge	Pound Ridge NY 10576	5/22/2019 0:00	Single Family	N
23 Highcliff Ter, Pound Ridge	Pound Ridge NY 10576	6/3/2019 0:00	Single Family	N
23 KINNICUTT RD E, Pound Ridge	Pound Ridge NY 10576	6/17/2019 0:00	Single Family	N
23 LAUREL RD, Pound Ridge	Pound Ridge NY 10576	4/25/2019 0:00	Single Family	N
23 LAUREL RD, Pound Ridge	Pound Ridge NY 10576	4/26/2019 0:00	Single Family	N
23 Saddle Ridge Rd, Pound Ridge	Pound Ridge NY 10576	5/16/2019 0:00	Single Family	N
235 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	5/29/2019 0:00	Single Family	N
238 Honey Hollow Rd, Pound Ridge	Pound Ridge NY 10576	5/12/2019 0:00	Single Family	N
24 Bayberry Way, Pound Ridge	Pound Ridge NY 10576	10/25/2019 0:00	Single Family	N
24 Hack Green Rd, Pound Ridge	Pound Ridge NY 10576	6/18/2019 0:00	Single Family	N
24 HIGHVIEW RD, Pound Ridge	Pound Ridge NY 10576	5/15/2019 0:00	Single Family	N
24 Midway Ln, Pound Ridge	Pound Ridge NY 10576	5/21/2019 0:00	Single Family	N
24 Midway Ln, Pound Ridge	Pound Ridge NY 10576	5/21/2019 0:00	Single Family	N
24 MILLER RD, Pound Ridge	Pound Ridge NY 10576	5/1/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
24 MILLER RD, Pound Ridge	Pound Ridge NY 10576	5/1/2019 0:00	Single Family	N
24 OLD STONE HILL RD, (& 24A), Pound Ridg	Pound Ridge NY 10576	1/10/2019 0:00	Single Family	N
24 PINE DR, Pound Ridge	Pound Ridge NY 10576	6/27/2019 0:00	Single Family	N
242 HONEY HOLLOW RD, Pound Ridge	Pound Ridge NY 10576	3/29/2019 0:00	Single Family	N
246 HONEY HOLLOW RD, Pound Ridge	Pound Ridge NY 10576	10/17/2019 0:00	Single Family	N
248 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	4/8/2019 0:00	Single Family	N
249 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	11/7/2019 0:00	Single Family	N
25 BEECH HILL LN, Pound Ridge	Pound Ridge NY 10576	10/1/2019 0:00	Single Family	N
25 EASTWOODS RD, (& 25A), Pound Ridge	Pound Ridge NY 10576	4/23/2019 0:00	Single Family	N
25 GREAT HILL FARMS RD, Pound Ridge	Bedford NY 10506	5/3/2019 0:00	Single Family	N
25 Pettit Ln, Pound Ridge	Pound Ridge NY 10576	6/12/2019 0:00	Single Family	N
25 POUND RIDGE RD, (& 25A), Pound Ridge	Pound Ridge NY 10576	11/7/2019 0:00	Single Family	N
25 POUND RIDGE RD, (& 25A), Pound Ridge	Pound Ridge NY 10576	11/7/2019 0:00	Single Family	N
25 S Bedford Rd, Pound Ridge	Pound Ridge NY 10576	12/28/2019 0:00	Single Family	N
252 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	7/26/2019 0:00	Single Family	N
252 STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	8/21/2019 0:00	Single Family	N
253 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	5/22/2019 0:00	Single Family	N
254 Stone Hill Rd, (& 254A), Pound Ridge	Pound Ridge NY 10576	3/25/2019 0:00		N
254 Stone Hill Rd, (& 254A), Pound Ridge	Pound Ridge NY 10576	3/25/2019 0:00		N
254 Stone Hill Rd, (& 254A), Pound Ridge	Pound Ridge NY 10576	3/25/2019 0:00		N
254 Stone Hill Rd, (& 254A), Pound Ridge	Pound Ridge NY 10576	10/1/2019 0:00		N
254 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	5/31/2019 0:00	Single Family	N
255 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	2/15/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	1/4/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	3/15/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	3/1/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	1/18/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	2/1/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	6/7/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	3/29/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	5/10/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	5/24/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	7/5/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	6/20/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	4/11/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	12/6/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	12/20/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	8/2/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	8/16/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	7/19/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	10/11/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	9/13/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	8/30/2019 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	11/22/2019 0:00	Other	N

Lewisboro and Pound Ridge

2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
259 STONE HILL RD, (& 259A), Pound Ridge	Pound Ridge NY 10576	8/2/2019 0:00	Single Family	N
259 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	7/3/2019 0:00	Single Family	N
259 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	7/3/2019 0:00	Single Family	N
26 AUTUMN RIDGE RD, Pound Ridge	Pound Ridge NY 10576	9/7/2019 0:00	Single Family	N
26 Doe View Ln, Pound Ridge	Pound Ridge NY 10576	7/19/2019 0:00	Single Family	N
26 Highcliff Ter, Pound Ridge	Pound Ridge NY 10576	10/29/2019 0:00	Single Family	N
26 HIGHVIEW RD, Pound Ridge	Pound Ridge NY 10576	1/29/2019 0:00	Single Family	N
26 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	4/18/2019 0:00	Single Family	N
26 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	7/26/2019 0:00	Single Family	N
26 SALEM RD, Pound Ridge	Pound Ridge NY 10576	7/5/2019 0:00	Single Family	N
26 Winterbottom Ln, Pound Ridge	Pound Ridge NY 10576	9/5/2019 0:00	Single Family	N
260 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	12/5/2019 0:00	Single Family	N
263 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	10/25/2019 0:00	Single Family	N
264 SALEM RD, Pound Ridge	Pound Ridge NY 10576	4/29/2019 0:00	Single Family	N
265 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	7/3/2019 0:00	Single Family	N
268 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	7/1/2019 0:00	Single Family	N
27 DEER FIELD RD, Pound Ridge	Pound Ridge NY 10576	11/20/2019 0:00	Single Family	N
27 KITCHAWAN RD, Pound Ridge	Pound Ridge NY 10576	4/13/2019 0:00	Single Family	N
27 Peters Ln, Pound Ridge	Pound Ridge NY 10576	10/11/2019 0:00	Single Family	N
27 Peters Ln, Pound Ridge	Pound Ridge NY 10576	10/12/2019 0:00	Single Family	N
27 Saddle Ridge Rd, Pound Ridge	Pound Ridge NY 10576	5/20/2019 0:00	Single Family	N
27 SALEM RD, Pound Ridge	Pound Ridge NY 10576	12/27/2019 0:00	Single Family	N
27 Threshing Rock Rd, Pound Ridge	Pound Ridge NY 10576	12/27/2019 0:00	Single Family	N
27 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	12/10/2019 0:00	Single Family	N
27 WEST LN, Pound Ridge	Pound Ridge NY 10576	6/27/2019 0:00	Single Family	N
270 Stone Hill Rd, Pound Ridge	Pound Ridge NY 10576	5/29/2019 0:00	Single Family	N
271 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	11/3/2019 0:00	Commercial	N
271 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	6/28/2019 0:00	Commercial	N
271 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	6/28/2019 0:00	Commercial	N
28 CROSS POND RD, Pound Ridge	Pound Ridge NY 10576	4/25/2019 0:00	Single Family	N
28 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	8/27/2019 0:00	Single Family	N
28 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	4/9/2019 0:00	Single Family	N
28 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	4/9/2019 0:00	Single Family	N
28 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	4/25/2019 0:00	Single Family	N
28 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	4/25/2019 0:00	Single Family	N
28 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	9/7/2019 0:00	Single Family	N
28 Kitchawan Rd, Pound Ridge	Pound Ridge NY 10576	12/6/2019 0:00	Single Family	N
28 LAUREL RD, Pound Ridge	Pound Ridge NY 10576	4/3/2019 0:00	Single Family	N
28 Rolling Meadow Ln, Pound Ridge	Pound Ridge NY 10576	9/17/2019 0:00	Single Family	N
28 Twin Fawn Ln, Pound Ridge	Pound Ridge NY 10576	11/6/2019 0:00	Single Family	N
28 Twin Fawn Ln, Pound Ridge	Pound Ridge NY 10576	5/10/2019 0:00	Single Family	N
280 SALEM RD, Pound Ridge	Pound Ridge NY 10576	4/1/2019 0:00	Single Family	N
287 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	6/11/2019 0:00	Single Family	N
29 Autumn Ridge Rd, Pound Ridge	Pound Ridge NY 10576	10/22/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
29 Dann Farm Rd, Pound Ridge	Pound Ridge NY 10576	10/30/2019 0:00	Single Family	N
29 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	9/10/2019 0:00	Single Family	N
293 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	10/7/2019 0:00	Single Family	N
294 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	1/17/2019 0:00	Single Family	N
3 Benger Rd, Pound Ridge	Pound Ridge NY 10576	10/16/2019 0:00	Single Family	N
3 Lyndel Rd, Pound Ridge	Pound Ridge NY 10576	12/3/2019 0:00	Other	N
3 Old Mill River Rd, Pound Ridge	Pound Ridge NY 10576	12/30/2019 0:00	Single Family	N
3 PATTERSON RD, Pound Ridge	Pound Ridge NY 10576	11/13/2019 0:00	Single Family	N
3 POUND RIDGE RD, Pound Ridge	Pound Ridge NY 10576	5/14/2019 0:00	Commercial	N
3 POUND RIDGE RD, Pound Ridge	Pound Ridge NY 10576	5/14/2019 0:00	Commercial	N
30 Robin Hood Rd, Pound Ridge	Pound Ridge NY 10576	8/16/2019 0:00	Single Family	N
30 S BEDFORD RD, Pound Ridge	Pound Ridge NY 10576	12/13/2019 0:00	Single Family	N
30 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	10/31/2019 0:00	Single Family	N
30 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	8/30/2019 0:00	Single Family	N
30 WINTERBOTTOM LN, Pound Ridge	Pound Ridge NY 10576	8/22/2019 0:00	Single Family	N
308 SALEM RD, Pound Ridge	Pound Ridge NY 10576	3/12/2019 0:00	Single Family	N
31 Austin Hill Rd, Pound Ridge	Pound Ridge NY 10576	7/19/2019 0:00	Single Family	N
31 Shad Rd W, Pound Ridge	Pound Ridge NY 10576	9/11/2019 0:00	Single Family	N
310 Stone Hill Rd, Pound Ridge	Pound Ridge NY 10576	9/24/2019 0:00	Single Family	N
314 SALEM RD, Pound Ridge	Pound Ridge NY 10576	4/15/2019 0:00	Single Family	N
32 Austin Hill Rd, Pound Ridge	Pound Ridge NY 10576	11/20/2019 0:00	Single Family	N
32 Beech Hill Ln, Pound Ridge	Pound Ridge NY 10576	8/2/2019 0:00	Single Family	N
32 HEMLOCK HILL RD, Pound Ridge	Pound Ridge NY 10576	2/15/2019 0:00	Single Family	N
32 PETERS LN, Pound Ridge	Pound Ridge NY 10576	5/21/2019 0:00	Single Family	N
32 ROLLING MEADOW LN, Pound Ridge	Pound Ridge NY 10576	8/31/2019 0:00	Single Family	N
33 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	8/15/2019 0:00	Single Family	N
33 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	8/15/2019 0:00	Single Family	N
33 SADDLE RIDGE RD, Pound Ridge	POUND RIDGE NY 10576	5/8/2019 0:00	Single Family	N
33 SISCOWIT RD, Pound Ridge	Pound Ridge NY 10576	4/29/2019 0:00	Single Family	N
33 SISCOWIT RD, Pound Ridge	Pound Ridge NY 10576	4/29/2019 0:00	Single Family	N
33 WEST LN, Pound Ridge	Pound Ridge NY 10576	8/19/2019 0:00	Single Family	N
33 WEST LN, Pound Ridge	Pound Ridge NY 10576	8/19/2019 0:00	Single Family	N
33 White Birch Rd, Pound Ridge	Pound Ridge NY 10576	11/7/2019 0:00	Single Family	N
331 Pine Brook Rd, Pound Ridge	Bedford NY 10506	11/29/2019 0:00	Single Family	N
332 LONG RIDGE RD, Pound Ridge	Pound Ridge NY 10576	5/13/2019 0:00	Single Family	N
34 DAVIDS LN, Pound Ridge	Pound Ridge NY 10576	5/1/2019 0:00	Single Family	N
34 FOX RUN RD, Pound Ridge	Pound Ridge NY 10576	12/31/2019 0:00	Single Family	N
34 S Bedford Rd, Pound Ridge	Pound Ridge NY 10576	12/5/2019 0:00	Single Family	N
34 WHITE BIRCH RD, Pound Ridge	Pound Ridge NY 10576	12/10/2019 0:00	Single Family	N
341 PINE BROOK RD, Pound Ridge	N/A	1/10/2019 0:00	Single Family	N
35 Austin Hill Rd, Pound Ridge	Pound Ridge NY 10576	8/7/2019 0:00	Single Family	N
35 Austin Hill Rd, Pound Ridge	Pound Ridge NY 10576	8/7/2019 0:00	Single Family	N
35 Davids Ln, Pound Ridge	Pound Ridge NY 10576	8/29/2019 0:00	Single Family	N
35 INDIAN HILL RD, Pound Ridge	Pound Ridge NY 10576	8/21/2019 0:00	Single Family	N

Lewisboro and Pound Ridge

2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
35 JOSHUA HOBBY LN, Pound Ridge	Pound Ridge NY 10576	10/24/2019 0:00	Single Family	N
35 MAJOR LOCKWOOD LN, Pound Ridge	Pound Ridge NY 10576	5/8/2019 0:00	Single Family	N
35 TRINITY PASS RD, (& 35A), Pound Ridge	Pound Ridge NY 10576	9/10/2019 0:00	Single Family	N
35 WOODLAND RD, Pound Ridge	Pound Ridge NY 10576	5/30/2019 0:00	Single Family	N
36 Dann Farm Rd, Pound Ridge	Pound Ridge NY 10576	10/17/2019 0:00	Single Family	N
36 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	11/20/2019 0:00	Commercial	N
36 WHITE BIRCH RD S, Pound Ridge	Pound Ridge NY 10576	6/26/2019 0:00	Single Family	N
367 Long Ridge Rd, Pound Ridge	Pound Ridge NY 10576	5/2/2019 0:00	Single Family	N
37 AUSTIN HILL RD, Pound Ridge	Pound Ridge NY 10576	4/18/2019 0:00	Single Family	N
37 GREAT HILL FARMS RD, Pound Ridge	Bedford NY 10506	9/3/2019 0:00	Single Family	N
370 Pine Brook Rd, Pound Ridge	Bedford NY 10506	6/5/2019 0:00	Single Family	N
376 Pine Brook Rd, Pound Ridge	Bedford NY 10506	11/14/2019 0:00	Single Family	N
38 BISHOP PARK RD, Pound Ridge	Pound Ridge NY 10576	5/7/2019 0:00	Single Family	N
38 HACK GREEN RD, Pound Ridge	Pound Ridge NY 10576	2/6/2019 0:00	Single Family	N
38 PINE DR, Pound Ridge	Pound Ridge NY 10576	5/9/2019 0:00	Single Family	N
38 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	11/11/2019 0:00	Other	N
385 STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	3/15/2019 0:00	Single Family	N
39 Cradle Rock Rd, Pound Ridge	Pound Ridge NY 10576	10/23/2019 0:00	Single Family	N
39 Cradle Rock Rd, Pound Ridge	Pound Ridge NY 10576	6/14/2019 0:00	Single Family	N
39 GREAT HILL FARMS RD, Pound Ridge	Bedford NY 10506	8/21/2019 0:00	Single Family	N
4 HORSESHOE HILL RD W, Pound Ridge	Pound Ridge NY 10576	5/9/2019 0:00	Single Family	N
4 INDIAN HILL RD, Pound Ridge	Pound Ridge NY 10576	5/1/2019 0:00	Single Family	N
4 Lower Shad Rd, Pound Ridge	Pound Ridge NY 10576	5/22/2019 0:00	Other	N
4 S Eastern Farm Rd, Pound Ridge	Pound Ridge NY 10576	8/26/2019 0:00	Single Family	N
4 S Eastern Farm Rd, Pound Ridge	Pound Ridge NY 10576	3/1/2019 0:00	Single Family	N
4 SADDLE RIDGE RD, Pound Ridge	Pound Ridge NY 10576	4/25/2019 0:00	Single Family	N
40 Fox Hill Rd, Pound Ridge	Pound Ridge NY 10576	9/17/2019 0:00	Single Family	N
40 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	7/16/2019 0:00	Commercial	N
40 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	10/17/2019 0:00	Commercial	N
40 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	1/7/2019 0:00	Commercial	N
40 WESTCHESTER AVE, (& 40A), Pound Ridg	Pound Ridge NY 10576	4/22/2019 0:00	Single Family	N
41 CRADLE ROCK RD, Pound Ridge	Pound Ridge NY 10576	3/11/2019 0:00	Single Family	N
41 INDIAN HILL RD, Pound Ridge	Pound Ridge NY 10576	7/31/2019 0:00	Single Family	N
41 PHEASANT RD, Pound Ridge	Pound Ridge NY 10576	1/4/2019 0:00	Single Family	N
42 BISHOP PARK RD, Pound Ridge	Pound Ridge NY 10576	5/7/2019 0:00	Single Family	N
42 KNAPP RD, Pound Ridge	Pound Ridge NY 10576	6/24/2019 0:00	Single Family	N
42 KNAPP RD, Pound Ridge	Pound Ridge NY 10576	6/24/2019 0:00	Single Family	N
42 Lower Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	7/23/2019 0:00	Single Family	N
43 CRADLE ROCK RD, Pound Ridge	Pound Ridge NY 10576	4/15/2019 0:00	Single Family	N
43 S BEDFORD RD, Pound Ridge	Pound Ridge NY 10576	8/9/2019 0:00	Single Family	N
43 S BEDFORD RD, Pound Ridge	Pound Ridge NY 10576	8/9/2019 0:00	Single Family	N
44 HOYT RD, Pound Ridge	Pound Ridge NY 10576	12/3/2019 0:00	Single Family	N
44 INDIAN HILL RD, Pound Ridge	Pound Ridge NY 10576	1/16/2019 0:00	Single Family	N
44 Lower Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	6/28/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
446 LONG RIDGE RD, Pound Ridge	Bedford NY 10506	5/1/2019 0:00	Single Family	N
446 LONG RIDGE RD, Pound Ridge	Bedford NY 10506	5/1/2019 0:00	Single Family	N
45 Deer Field Rd, Pound Ridge	Pound Ridge NY 10576	12/31/2019 0:00	Single Family	N
47 Fox Run Rd, Pound Ridge	Pound Ridge NY 10576	4/17/2019 0:00	Single Family	N
47 Kitchawan Rd, Pound Ridge	Pound Ridge NY 10576	7/10/2019 0:00	Single Family	N
47 Major Lockwood Ln, Pound Ridge	Pound Ridge NY 10576	11/22/2019 0:00	Single Family	N
48 Saddle Ridge Rd, Pound Ridge	Pound Ridge NY 10576	9/23/2019 0:00	Single Family	N
49 Kitchawan Rd, Pound Ridge	Pound Ridge NY 10576	6/3/2019 0:00	Single Family	N
49 PHEASANT RD, Pound Ridge	Pound Ridge NY 10576	7/11/2019 0:00	Single Family	N
49 Salem Rd, Pound Ridge	Pound Ridge NY 10576	7/3/2019 0:00	Single Family	N
49 Salem Rd, Pound Ridge	Pound Ridge NY 10576	7/3/2019 0:00	Single Family	N
49 West Ln, Pound Ridge	Pound Ridge NY 10576	7/23/2019 0:00	Single Family	N
49 West Ln, Pound Ridge	Pound Ridge NY 10576	8/2/2019 0:00	Single Family	N
5 Heerdt Farm Ln, Pound Ridge	Pound Ridge NY 10576	12/26/2019 0:00	Single Family	N
5 MAC LEAN DR, Pound Ridge	Pound Ridge NY 10576	11/4/2019 0:00	Single Family	N
5 MILLER RD, Pound Ridge	Pound Ridge NY 10576	5/6/2019 0:00	Single Family	N
5 PATTERSON RD, Pound Ridge	Pound Ridge NY 10576	2/5/2019 0:00	Single Family	N
5 S BEDFORD RD, (& 5 A), Pound Ridge	Pound Ridge NY 10576	11/14/2019 0:00	Single Family	N
5 SCOFIELD RD, Pound Ridge	Pound Ridge NY 10576	1/14/2019 0:00	Single Family	N
50 PHEASANT RD, Pound Ridge	Pound Ridge NY 10576	9/6/2019 0:00	Single Family	N
50 Shad Rd W, Pound Ridge	Pound Ridge NY 10576	10/31/2019 0:00	Single Family	N
50 Siscowit Rd, Pound Ridge	Pound Ridge NY 10576	3/16/2019 0:00	Single Family	N
50 Siscowit Rd, Pound Ridge	Pound Ridge NY 10576	12/27/2019 0:00	Single Family	N
50 WOODLAND RD, Pound Ridge	Pound Ridge NY 10576	5/22/2019 0:00	Single Family	N
506 Long Ridge Rd, Pound Ridge	Bedford NY 10506	9/20/2019 0:00	Single Family	N
51 Old Stone Hill Rd, Pound Ridge	Pound Ridge NY 10576	8/19/2019 0:00	Single Family	N
511 Long Ridge Rd, Pound Ridge	Bedford NY 10506	8/1/2019 0:00	Single Family	N
52 HONEY HOLLOW RD, Pound Ridge	Pound Ridge NY 10576	3/8/2019 0:00	Single Family	N
52 Major Lockwood Ln, Pound Ridge	Pound Ridge NY 10576	11/25/2019 0:00	Single Family	N
52 Old Logging Rd, Pound Ridge	Bedford NY 10506	8/26/2019 0:00	Single Family	N
52 West Ln, Pound Ridge	Pound Ridge NY 10576	9/11/2019 0:00	Single Family	N
53 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	6/3/2019 0:00	Single Family	N
53 HACK GREEN RD, Pound Ridge	Pound Ridge NY 10576	5/24/2019 0:00	Single Family	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	9/16/2019 0:00	Commercial	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	12/12/2019 0:00	Commercial	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	10/28/2019 0:00	Commercial	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	7/16/2019 0:00	Commercial	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	1/11/2019 0:00	Commercial	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	5/29/2019 0:00	Commercial	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	3/11/2019 0:00	Commercial	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	5/28/2019 0:00	Commercial	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	1/29/2019 0:00	Commercial	N
56 Dann Farm Rd, Pound Ridge	Pound Ridge NY 10576	9/11/2019 0:00	Single Family	N
56 SHAD RD W, Pound Ridge	Pound Ridge NY 10576	3/23/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
57 FOX RUN RD, Pound Ridge	Pound Ridge NY 10576	4/3/2019 0:00	Single Family	N
57 Lower Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	12/27/2019 0:00	Single Family	N
58 KITCHAWAN RD, Pound Ridge	Pound Ridge NY 10576	5/7/2019 0:00	Single Family	N
59 DANN FARM RD, Pound Ridge	Pound Ridge NY 10576	3/27/2019 0:00	Single Family	N
59 LOWER SHAD RD, Pound Ridge	Pound Ridge NY 10576	9/20/2019 0:00	Single Family	N
59 LOWER TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	1/9/2019 0:00	Single Family	N
6 HEMLOCK HILL RD, Pound Ridge	Pound Ridge NY 10576	8/28/2019 0:00	Single Family	N
6 LOWER TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	6/20/2019 0:00	Commercial	N
6 MILLER RD, Pound Ridge	Pound Ridge NY 10576	8/13/2019 0:00	Single Family	N
6 Old Pound Rd, Pound Ridge	Pound Ridge NY 10576	10/17/2019 0:00	Single Family	N
6 Samuel Dann Way, Pound Ridge	Pound Ridge NY 10576	8/28/2019 0:00	Single Family	N
6 SUNSET LN, Pound Ridge	Pound Ridge NY 10576	9/17/2019 0:00	Single Family	N
60 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	12/31/2019 0:00	Single Family	N
60 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	9/25/2019 0:00	Single Family	N
62 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	6/24/2019 0:00	Single Family	N
63 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	11/12/2019 0:00	Single Family	N
64 S BEDFORD RD, Pound Ridge	Pound Ridge NY 10576	5/23/2019 0:00	Single Family	N
65 Lower Shad Rd, Pound Ridge	Pound Ridge NY 10576	4/29/2019 0:00	Single Family	N
65 OLD MILL RD, Pound Ridge	N/A	5/6/2019 0:00	Single Family	N
65 SALEM RD, Pound Ridge	Pound Ridge NY 10576	1/4/2019 0:00	Single Family	N
65 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	1/14/2019 0:00	Commercial	N
66 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	5/3/2019 0:00	Single Family	N
66 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	7/24/2019 0:00	Commercial	N
67 OLD LOGGING RD, (& 67A), Pound Ridge	Bedford NY 10506	12/23/2019 0:00	Single Family	N
68 Dann Farm Rd, Pound Ridge	Pound Ridge NY 10576	3/26/2019 0:00	Single Family	N
68 Dann Farm Rd, Pound Ridge	Pound Ridge NY 10576	12/13/2019 0:00	Single Family	N
68 Dann Farm Rd, Pound Ridge	Pound Ridge NY 10576	12/13/2019 0:00	Single Family	N
68 Old Stone Hill Rd, Pound Ridge	Pound Ridge NY 10576	9/20/2019 0:00	Single Family	N
68 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	1/25/2019 0:00	Commercial	N
69 POUND RIDGE RD, Pound Ridge	Pound Ridge NY 10576	4/4/2019 0:00	Single Family	N
69 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	1/23/2019 0:00	Commercial	N
69 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	9/9/2019 0:00	Commercial	N
69 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	5/22/2019 0:00	Commercial	N
69 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	5/22/2019 0:00	Commercial	N
69 WHITE BIRCH RD, Pound Ridge	Pound Ridge NY 10576	8/14/2019 0:00	Single Family	N
7 FOX HILL RD, Pound Ridge	Pound Ridge NY 10576	6/26/2019 0:00	Single Family	N
7 HACK GREEN RD, Pound Ridge	Pound Ridge NY 10576	8/26/2019 0:00		N
7 KITCHAWAN RD, Pound Ridge	Pound Ridge NY 10576	5/2/2019 0:00	Single Family	N
7 Pound Ridge Rd, Pound Ridge	Pound Ridge NY 10576	7/19/2019 0:00	Other	N
7 Pound Ridge Rd, Pound Ridge	Pound Ridge NY 10576	5/21/2019 0:00	Other	N
7 Pound Ridge Rd, Pound Ridge	Pound Ridge NY 10576	8/19/2019 0:00	Other	N
7 Pound Ridge Rd, Pound Ridge	Pound Ridge NY 10576	6/20/2019 0:00	Other	N
7 Pound Ridge Rd, Pound Ridge	Pound Ridge NY 10576	9/18/2019 0:00	Other	N
7 Pound Ridge Rd, Pound Ridge	Pound Ridge NY 10576	6/10/2019 0:00	Other	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
7 Pound Ridge Rd, Pound Ridge	Pound Ridge NY 10576	2/20/2019 0:00	Other	N
7 Pound Ridge Rd, Pound Ridge	Pound Ridge NY 10576	5/10/2019 0:00	Other	N
7 Pound Ridge Rd, Pound Ridge	Pound Ridge NY 10576	4/11/2019 0:00	Other	N
7 TATOMUCK RD E, Pound Ridge	Pound Ridge NY 10576	1/3/2019 0:00	Single Family	N
70 HONEY HOLLOW RD, Pound Ridge	Pound Ridge NY 10576	8/26/2019 0:00	Single Family	N
70 PARK VIEW RD S, Pound Ridge	Pound Ridge NY 10576	2/4/2019 0:00	Single Family	N
70 PARK VIEW RD S, Pound Ridge	Pound Ridge NY 10576	2/4/2019 0:00	Single Family	N
70 PARK VIEW RD S, Pound Ridge	Pound Ridge NY 10576	2/4/2019 0:00	Single Family	N
70 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	9/11/2019 0:00	Single Family	N
70 West Ln, Pound Ridge	Pound Ridge NY 10576	9/24/2019 0:00	Single Family	N
70 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	12/6/2019 0:00	Commercial	N
70 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	12/6/2019 0:00	Commercial	N
70 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	6/28/2019 0:00	Commercial	N
70 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	6/28/2019 0:00	Commercial	N
71 Autumn Ridge Rd, Pound Ridge	Pound Ridge NY 10576	9/16/2019 0:00	Single Family	N
71 INDIAN HILL RD, Pound Ridge	Pound Ridge NY 10576	3/26/2019 0:00	Single Family	N
71 Old Mill River Rd, Pound Ridge	Pound Ridge NY 10576	7/11/2019 0:00	Single Family	N
71 SALEM RD, Pound Ridge	Pound Ridge NY 10576	2/19/2019 0:00		N
72 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	4/15/2019 0:00		N
72 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	9/23/2019 0:00	Commercial	N
72 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	4/25/2019 0:00	Commercial	N
73 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	4/26/2019 0:00	Commercial	N
73 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	4/26/2019 0:00	Commercial	N
73 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	4/26/2019 0:00	Commercial	N
74 HACK GREEN RD, Pound Ridge	Pound Ridge NY 10576	11/8/2019 0:00	Single Family	N
74 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	9/20/2019 0:00	Commercial	N
75 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	4/2/2019 0:00	Single Family	N
75 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	4/20/2019 0:00	Commercial	N
76 Dann Farm Rd, Pound Ridge	Pound Ridge NY 10576	10/26/2019 0:00	Single Family	N
76 Fancher Rd, Pound Ridge	Pound Ridge NY 10576	8/26/2019 0:00	Single Family	N
76 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	7/16/2019 0:00	Commercial	N
76 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	1/29/2019 0:00	Commercial	N
77 Old Logging Rd, Pound Ridge	Bedford NY 10506	9/9/2019 0:00	Single Family	N
78 Honey Hollow Rd, Pound Ridge	Pound Ridge NY 10576	7/19/2019 0:00	Single Family	N
78 S BEDFORD RD, Pound Ridge	Pound Ridge NY 10576	12/20/2019 0:00	Single Family	N
79 Park View Rd, Pound Ridge	Pound Ridge NY 10576	9/16/2019 0:00	Single Family	N
79 WESTCHESTER AVE, (& 81), Pound Ridge	Pound Ridge NY 10576	12/20/2019 0:00	Commercial	N
8 Calf Pasture Ln, Pound Ridge	Pound Ridge NY 10576	10/6/2019 0:00	Single Family	N
8 Hack Green Rd, Pound Ridge	Pound Ridge NY 10576	12/20/2019 0:00	Single Family	N
8 Saddle Ridge Rd, Pound Ridge	Pound Ridge NY 10576	12/26/2019 0:00	Single Family	N
8 TRINITY LN, Pound Ridge	Pound Ridge NY 10576	4/12/2019 0:00	Single Family	N
80 Old Logging Rd, Pound Ridge	Bedford NY 10506	5/14/2019 0:00	Single Family	N
80 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	2/25/2019 0:00	Single Family	N
80 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	3/25/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2019 Septic Pump Out Data

Street Address	CityStateZip	Service Date	Building type	Evidence of Septage
80 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	3/25/2019 0:00	Single Family	N
81 Hack Green Rd, Pound Ridge	Pound Ridge NY 10576	11/21/2019 0:00	Single Family	N
81 High Ridge Rd, Pound Ridge	Pound Ridge NY 10576	10/22/2019 0:00	Single Family	N
81 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	8/27/2019 0:00	Single Family	N
83 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	5/12/2019 0:00	Single Family	N
83 Westchester Ave, (& 83 A), Pound Ridge	Pound Ridge NY 10576	2/15/2019 0:00	Commercial	N
83 Westchester Ave, (& 83 A), Pound Ridge	Pound Ridge NY 10576	8/30/2019 0:00	Commercial	N
84 HIGH RIDGE RD, Pound Ridge	Pound Ridge NY 10576	3/15/2019 0:00	Single Family	N
85 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	11/21/2019 0:00	Commercial	N
85 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	9/19/2019 0:00	Commercial	N
85 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	9/19/2019 0:00	Commercial	N
85 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	7/16/2019 0:00	Commercial	N
85 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	7/16/2019 0:00	Commercial	N
85 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	2/28/2019 0:00	Commercial	N
85 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	2/28/2019 0:00	Commercial	N
86 FANCHER RD, (& 86A), Pound Ridge	Pound Ridge NY 10576	12/5/2019 0:00	Single Family	N
87 Old Mill River Rd, Pound Ridge	Pound Ridge NY 10576	12/13/2019 0:00	Single Family	N
87 Old Mill River Rd, Pound Ridge	Pound Ridge NY 10576	1/23/2019 0:00	Single Family	N
88 HORSE SHOE RD, Pound Ridge	N/A	8/22/2019 0:00	Single Family	N
89 High Ridge Rd, Pound Ridge	Pound Ridge NY 10576	7/25/2019 0:00	Single Family	N
89 PARK VIEW RD, Pound Ridge	Pound Ridge NY 10576	5/20/2019 0:00	Single Family	N
9 APPLE TREE LN, Pound Ridge	Pound Ridge NY 10576	5/29/2019 0:00	Single Family	N
9 Bender Way, Pound Ridge	Pound Ridge NY 10576	9/6/2019 0:00	Single Family	N
9 Bender Way, Pound Ridge	Pound Ridge NY 10576	7/19/2019 0:00	Single Family	N
9 Highview Rd, Pound Ridge	Pound Ridge NY 10576	12/16/2019 0:00	Single Family	N
9 KNAPP RD, Pound Ridge	Pound Ridge NY 10576	4/24/2019 0:00	Single Family	N
9 PHEASANT RD, Pound Ridge	Pound Ridge NY 10576	5/23/2019 0:00	Single Family	N
9 Pheasant Rd, Pound Ridge	Pound Ridge NY 10576	8/9/2019 0:00	Single Family	N
9 Pheasant Rd, Pound Ridge	Pound Ridge NY 10576	5/23/2019 0:00	Single Family	N
9 ROLLING MEADOW LN, Pound Ridge	Pound Ridge NY 10576	11/21/2019 0:00	Single Family	N
90 DANN FARM RD, Pound Ridge	Pound Ridge NY 10576	10/16/2019 0:00	Single Family	N
90 OLD LOGGING RD, Pound Ridge	Bedford NY 10506	10/30/2019 0:00	Single Family	N
90 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	1/8/2019 0:00	Single Family	N
93 DANN FARM RD, Pound Ridge	Pound Ridge NY 10576	4/1/2019 0:00	Single Family	N
93 OLD MILL RIVER RD, Pound Ridge	Pound Ridge NY 10576	11/8/2019 0:00	Single Family	N
94 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	5/30/2019 0:00	Single Family	N
96 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	10/5/2019 0:00	Single Family	N
97 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	10/17/2019 0:00	Single Family	N
97 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	1/29/2019 0:00	Single Family	N
99 Old Stone Hill Rd, Pound Ridge	Pound Ridge NY 10576	12/20/2019 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
1276 Route 35, Lewisboro	South Salem NY 10590	3/13/2020 0:00	Single Family	Y
11 Powder Hill Rd, Lewisboro	Waccabuc NY 10597	8/24/2020 0:00	Single Family	N
1156 Route 35, Lewisboro	South Salem NY 10590	7/14/2020 0:00	Commercial	N
1156 Route 35, Lewisboro	South Salem NY 10590	7/14/2020 0:00	Commercial	N
1177 Route 35, Lewisboro	South Salem NY 10590	9/21/2020 0:00	Single Family	N
119 Ridgefield Ave, Lewisboro	South Salem NY 10590	5/7/2020 0:00	Single Family	N
13 Hillside Ave, Lewisboro	Goldens Bridge NY 10526	3/5/2020 0:00	Single Family	N
13 Sullivan Rd, Lewisboro	Goldens Bridge NY 10526	9/30/2020 0:00	Single Family	N
139 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	4/16/2020 0:00	Single Family	N
14 Hunt Farm Rd, Lewisboro	Waccabuc NY 10597	9/21/2020 0:00	Single Family	N
149 Ridgefield Ave, Lewisboro	South Salem NY 10590	3/18/2020 0:00	Single Family	N
149 Todd Rd, Lewisboro	Katonah NY 10536	11/12/2020 0:00	Single Family	N
156 Ridgefield Ave, Lewisboro	South Salem NY 10590	7/31/2020 0:00	Single Family	N
16 Apache Cir, Lewisboro	Katonah NY 10536	7/31/2020 0:00	Single Family	N
170 Ridgefield Ave, Lewisboro	South Salem NY 10590	3/25/2020 0:00	Single Family	N
2 Mohawk Trl, Lewisboro	Katonah NY 10536	3/2/2020 0:00	Single Family	N
21 Cornel Dr, Lewisboro	Goldens Bridge NY 10526	5/28/2020 0:00	Single Family	N
21 Cornel Dr, Lewisboro	Goldens Bridge NY 10526	12/24/2020 0:00	Single Family	N
219 Spring St, Lewisboro	South Salem NY 10590	10/15/2020 0:00	Single Family	N
23 Big Rock Loop, Lewisboro	Katonah NY 10536	11/9/2020 0:00	Single Family	N
26 Benedict Rd, Lewisboro	South Salem NY 10590	6/26/2020 0:00	Single Family	N
26 Benedict Rd, Lewisboro	South Salem NY 10590	6/5/2020 0:00	Single Family	N
26 Old Pond Rd, Lewisboro	South Salem NY 10590	4/23/2020 0:00	Single Family	N
28 Hunt Farm Rd, Lewisboro	Waccabuc NY 10597	3/30/2020 0:00	Single Family	N
3 Main St, Lewisboro	South Salem NY 10590	7/23/2020 0:00	Single Family	N
30 Benedict Rd, Lewisboro	South Salem NY 10590	2/5/2020 0:00	Single Family	N
33 Hoyt St, Lewisboro	South Salem NY 10590	6/4/2020 0:00	Single Family	N
33 Mead St, Lewisboro	Waccabuc NY 10597	2/19/2020 0:00	Single Family	N
34 Main St, Lewisboro	Goldens Bridge NY 10526	8/3/2020 0:00	Single Family	N
376 Route 22, Lewisboro	Goldens Bridge NY 10526	12/28/2020 0:00	Single Family	N
39 Church Tavern Rd, Lewisboro	South Salem NY 10590	7/13/2020 0:00	Single Family	N
4 Ida Ln, Lewisboro	Pound Ridge NY 10576	3/19/2020 0:00	Single Family	N
42 Grandview Rd, Lewisboro	South Salem NY 10590	1/27/2020 0:00	Single Family	N
42 Main St, Lewisboro	Goldens Bridge NY 10526	12/16/2020 0:00	Single Family	N
44 Cove Rd, Lewisboro	South Salem NY 10590	4/20/2020 0:00	Single Family	N
44 Cove Rd, Lewisboro	South Salem NY 10590	12/7/2020 0:00	Single Family	N
5 Big Rock Loop, Lewisboro	Katonah NY 10536	9/11/2020 0:00	Single Family	N
5 Brady'S Farm Rd, Lewisboro	Goldens Bridge NY 10526	7/17/2020 0:00	Single Family	N
5 Hillside Ave, Lewisboro	Goldens Bridge NY 10526	4/20/2020 0:00	Single Family	N
5 Sky Top, Lewisboro	Katonah NY 10536	6/26/2020 0:00	Single Family	N
53 Pine Hill Dr, Lewisboro	South Salem NY 10590	9/29/2020 0:00	Single Family	N
59 Pine Hill Dr, Lewisboro	South Salem NY 10590	1/31/2020 0:00	Single Family	N
70 Cove Rd, Lewisboro	South Salem NY 10590	5/29/2020 0:00	Single Family	N
70 Perch Bay Rd, Lewisboro	Waccabuc NY 10597	5/28/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
8 Rampart Pass, Lewisboro	Waccabuc NY 10597	12/10/2020 0:00	Single Family	N
82 Hemlock Rd, Lewisboro	South Salem NY 10590	11/27/2020 0:00	Single Family	N
82 Hemlock Rd, Lewisboro	South Salem NY 10590	4/23/2020 0:00	Single Family	N
83 Todd Rd, Lewisboro	Katonah NY 10536	6/17/2020 0:00	Single Family	N
84 Chapel Rd, Lewisboro	Waccabuc NY 10597	11/6/2020 0:00	Single Family	N
9 Powder Hill Rd, Lewisboro	Waccabuc NY 10597	6/2/2020 0:00	Single Family	N
9 Main St, Lewisboro	South Salem NY 10590	10/5/2020 0:00	Single Family	N
94 Spring St, Lewisboro	South Salem NY 10590	4/17/2020 0:00	Commercial	N
94 Spring St, Lewisboro	South Salem NY 10590	4/17/2020 0:00	Commercial	N
99 Chapel Rd, Lewisboro	Waccabuc NY 10597	7/2/2020 0:00	Single Family	N
43 Ridgefield Ave, Lewisboro	South Salem NY 10590	8/17/2020 0:00	Single Family	N
55 Twin Lakes Rd, Lewisboro	South Salem NY 10590	5/11/2020 0:00	Single Family	N
8 Sawgrass Dr, Lewisboro	Katonah NY 10536	4/22/2020 0:00	Single Family	N
375 Route 22, Lewisboro	Goldens Bridge NY 10526	10/1/2020 0:00	Single Family	N
375 Route 22, Lewisboro	Goldens Bridge NY 10526	1/11/2020 0:00	Single Family	N
41 Lakeview Pass, Lewisboro	Katonah NY 10536	7/9/2020 0:00	Single Family	N
7 Lake Path, Lewisboro	South Salem NY 10590	11/7/2020 0:00	Single Family	N
10 Flintlock Ridge Rd, Lewisboro	Katonah NY 10536	10/20/2020 0:00	Single Family	N
13 Bouton St, Lewisboro	South Salem NY 10590	11/2/2020 0:00	Multi Family	N
157 Spring St, Lewisboro	South Salem NY 10590	12/28/2020 0:00	Single Family	N
1145 Route 35, Lewisboro	South Salem NY 10590	3/17/2020 0:00	Single Family	N
19 Boutonville Rd, Lewisboro	South Salem NY 10590	11/13/2020 0:00	Single Family	N
4 Cherokee Ct, Lewisboro	Katonah NY 10536	5/15/2020 0:00	Single Family	N
1401 Route 35, Lewisboro	South Salem NY 10590	10/5/2020 0:00	Single Family	N
50 Forest Range, Lewisboro	Katonah NY 10536	2/11/2020 0:00	Single Family	N
30 Lakeview Rd, Lewisboro	South Salem NY 10590	7/13/2020 0:00	Single Family	N
126 Upper Lakeshore Dr, Lewisboro	Katonah NY 10536	8/13/2020 0:00	Single Family	N
41 Cross Pond Rd, Lewisboro	Pound Ridge NY 10576	7/30/2020 0:00	Single Family	N
48 Twin Lakes Rd, Lewisboro	South Salem NY 10590	4/22/2020 0:00	Single Family	N
39 Knapp Rd, Lewisboro	South Salem NY 10590	10/26/2020 0:00	Single Family	N
169 Ridgefield Ave, Lewisboro	South Salem NY 10590	2/26/2020 0:00	Single Family	N
121 Bouton Rd, Lewisboro	South Salem NY 10590	6/30/2020 0:00	Single Family	N
33 Lake St, Lewisboro	Goldens Bridge NY 10526	8/19/2020 0:00	Single Family	N
119 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	9/11/2020 0:00	Single Family	N
4 Twin Lakes Rd, Lewisboro	South Salem NY 10590	4/8/2020 0:00	Single Family	N
24 Mark Mead Rd, Lewisboro	Cross River NY 10518	8/6/2020 0:00	Single Family	N
15 E Ridge Rd, Lewisboro	Waccabuc NY 10597	1/3/2020 0:00	Single Family	N
3 The Hook, Lewisboro	Waccabuc NY 10597	12/1/2020 0:00	Single Family	N
12 Lower Lakeshore Dr, Lewisboro	Katonah NY 10536	2/6/2020 0:00	Single Family	N
92 Ridgefield Ave, Lewisboro	South Salem NY 10590	8/12/2020 0:00	Single Family	N
35 Indian Hill Rd, Lewisboro	Katonah NY 10536	6/15/2020 0:00	Single Family	N
14 Waccabuc Rd, Lewisboro	Goldens Bridge NY 10526	10/26/2020 0:00	Single Family	N
6 Church Tavern Rd, Lewisboro	South Salem NY 10590	2/18/2020 0:00	Single Family	N
2 Cornwall Ct, Lewisboro	Katonah NY 10536	3/19/2020 0:00	Single Family	N

Lewisboro and Pound Ridge

2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
50 Laurel Rd, Lewisboro	South Salem NY 10590	10/26/2020 0:00	Single Family	N
4 Dogwood Ln, Lewisboro	Pound Ridge NY 10576	7/14/2020 0:00	Single Family	N
5 Comanche Ct, Lewisboro	Katonah NY 10536	5/5/2020 0:00	Single Family	N
18 Post Office Rd, Lewisboro	Waccabuc NY 10597	12/30/2020 0:00	Single Family	N
23 Green Hill Rd, Lewisboro	Goldens Bridge NY 10526	6/3/2020 0:00	Single Family	N
37 Main St, Lewisboro	South Salem NY 10590	10/22/2020 0:00	Single Family	N
31 Bouton St, Lewisboro	South Salem NY 10590	3/6/2020 0:00	Single Family	N
161 N Salem Rd, Lewisboro	Cross River NY 10518	4/23/2020 0:00	Multi Family	N
161 N Salem Rd, Lewisboro	Cross River NY 10518	4/23/2020 0:00	Multi Family	N
57 Knapp Rd, Lewisboro	South Salem NY 10590	5/27/2020 0:00	Single Family	N
52 Twin Lakes Rd, Lewisboro	South Salem NY 10590	6/24/2020 0:00	Single Family	N
52 Twin Lakes Rd, Lewisboro	South Salem NY 10590	11/20/2020 0:00	Single Family	N
17 Flintlock Ridge Rd, Lewisboro	Katonah NY 10536	10/19/2020 0:00	Single Family	N
5 Sunnyridge Rd, Lewisboro	Katonah NY 10536	7/7/2020 0:00	Single Family	N
189 Mead St, Lewisboro	Waccabuc NY 10597	2/24/2020 0:00	Single Family	N
189 Mead St, Lewisboro	Waccabuc NY 10597	2/24/2020 0:00	Single Family	N
24 Schoolhouse Rd, Lewisboro	Waccabuc NY 10597	4/16/2020 0:00	Single Family	N
237 Todd Rd, Lewisboro	Katonah NY 10536	12/2/2020 0:00	Single Family	N
42 Hilltop Rd, Lewisboro	Waccabuc NY 10597	12/15/2020 0:00	Single Family	N
1 Todd Hill Cir, Lewisboro	Goldens Bridge NY 10526	3/21/2020 0:00	Single Family	N
23 Twin Lakes Rd, Lewisboro	South Salem NY 10590	6/10/2020 0:00	Single Family	N
14 Sawgrass Dr, Lewisboro	Katonah NY 10536	9/10/2020 0:00	Single Family	N
17 Schoolhouse Rd, Lewisboro	Waccabuc NY 10597	3/24/2020 0:00	Single Family	N
9 Autumn Ridge Rd, Lewisboro	South Salem NY 10590	1/9/2020 0:00	Single Family	N
9 Autumn Ridge Rd, Lewisboro	South Salem NY 10590	12/1/2020 0:00	Single Family	N
193 Todd Rd, Lewisboro	Katonah NY 10536	6/1/2020 0:00	Single Family	N
377 Mt Holly Rd, Lewisboro	Katonah NY 10536	3/18/2020 0:00	Single Family	N
32 Green Hill Rd, Lewisboro	Goldens Bridge NY 10526	1/23/2020 0:00	Single Family	N
32 Green Hill Rd, Lewisboro	Goldens Bridge NY 10526	9/16/2020 0:00	Single Family	N
12 N Salem Rd, Lewisboro	Cross River NY 10518	2/5/2020 0:00	Commercial	N
508 Mt Holly Rd, Lewisboro	Katonah NY 10536	7/29/2020 0:00	Single Family	N
508 Mt Holly Rd, Lewisboro	Katonah NY 10536	7/29/2020 0:00	Single Family	N
275 Todd Rd, Lewisboro	Katonah NY 10536	10/27/2020 0:00	Single Family	N
3 Cherokee Ct, Lewisboro	Katonah NY 10536	7/27/2020 0:00	Single Family	N
82 Waccabuc Rd, Lewisboro	Goldens Bridge NY 10526	10/15/2020 0:00	Single Family	N
1330 Route 35, Lewisboro	South Salem NY 10590	4/8/2020 0:00	Single Family	N
322 Waccabuc Rd, Lewisboro	Goldens Bridge NY 10526	12/7/2020 0:00	Single Family	N
2 Ida Ln, Lewisboro	Pound Ridge NY 10576	12/21/2020 0:00	Single Family	N
6 Todd Rd, Lewisboro	Katonah NY 10536	11/12/2020 0:00	Single Family	N
60 Forest Range, Lewisboro	Katonah NY 10536	8/4/2020 0:00	Single Family	N
37 Hoyt St, Lewisboro	South Salem NY 10590	7/6/2020 0:00	Single Family	N
52 Mead St, Lewisboro	Waccabuc NY 10597	9/16/2020 0:00	Single Family	N
52 Mead St, Lewisboro	Waccabuc NY 10597	9/16/2020 0:00	Single Family	N
10 Apache Cir, Lewisboro	Katonah NY 10536	4/11/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
73 Pine Hill Dr, Lewisboro	South Salem NY 10590	9/22/2020 0:00	Single Family	N
193 Waccabuc Rd, Lewisboro	Goldens Bridge NY 10526	11/4/2020 0:00	Single Family	N
1 Shady Glen Ct, Lewisboro	South Salem NY 10590	10/2/2020 0:00	Single Family	N
29 Waccabuc River Ln, Lewisboro	South Salem NY 10590	3/26/2020 0:00	Single Family	N
14 Branch St, Lewisboro	Goldens Bridge NY 10526	5/14/2020 0:00	Single Family	N
25 Boutonville Rd, Lewisboro	South Salem NY 10590	5/15/2020 0:00	Single Family	N
5 Orchard Dr, Lewisboro	South Salem NY 10590	4/2/2020 0:00	Single Family	N
10 Longview Rd, Lewisboro	South Salem NY 10590	2/20/2020 0:00	Single Family	N
502 Mt Holly Rd, Lewisboro	Katonah NY 10536	9/17/2020 0:00	Single Family	N
2 Sawgrass Dr, Lewisboro	Katonah NY 10536	7/22/2020 0:00	Single Family	N
2 Sawgrass Dr, Lewisboro	Katonah NY 10536	3/19/2020 0:00	Single Family	N
8 Orchard Dr, Lewisboro	South Salem NY 10590	5/21/2020 0:00	Single Family	N
20 Lower Salem Rd, Lewisboro	South Salem NY 10590	8/21/2020 0:00	Single Family	N
1 Sawgrass Dr, Lewisboro	Katonah NY 10536	11/2/2020 0:00	Single Family	N
11 Stewart Rd, Lewisboro	South Salem NY 10590	5/29/2020 0:00	Single Family	N
10 Perch Bay Rd, Lewisboro	Waccabuc NY 10597	1/22/2020 0:00	Single Family	N
20 Mohawk Trail, Lewisboro	Katonah NY 10536	11/18/2020 0:00	Single Family	N
3 Cheyenne Ct, Lewisboro	Katonah NY 10536	6/3/2020 0:00	Single Family	N
3 Howland Dr, Lewisboro	Cross River NY 10518	3/19/2020 0:00	Single Family	N
5 Mark Mead Rd, Lewisboro	Cross River NY 10518	2/10/2020 0:00	Single Family	N
4 Comanche Ct, Lewisboro	Katonah NY 10536	6/25/2020 0:00	Single Family	N
32 Perch Bay Rd, Lewisboro	Waccabuc NY 10597	3/18/2020 0:00	Single Family	N
32 Perch Bay Rd, Lewisboro	Waccabuc NY 10597	3/18/2020 0:00	Single Family	N
10 Church Tavern Rd, Lewisboro	South Salem NY 10590	4/27/2020 0:00	Single Family	N
162 Main St, Lewisboro	South Salem NY 10590	12/4/2020 0:00	Single Family	N
162 Main St, Lewisboro	South Salem NY 10590	12/4/2020 0:00	Single Family	N
12 Orchard Dr, Lewisboro	South Salem NY 10590	4/21/2020 0:00	Single Family	N
12 Orchard Dr, Lewisboro	South Salem NY 10590	6/24/2020 0:00	Single Family	N
12 Orchard Dr, Lewisboro	South Salem NY 10590	11/16/2020 0:00	Single Family	N
3 Park Ave, Lewisboro	Goldens Bridge NY 10526	5/18/2020 0:00	Single Family	N
49 Mead St, Lewisboro	Waccabuc NY 10597	1/30/2020 0:00	Single Family	N
15 Howland Dr, Lewisboro	Cross River NY 10518	8/7/2020 0:00	Single Family	N
27 Howe St, Lewisboro	South Salem NY 10590	10/20/2020 0:00	Single Family	N
9 Stewart Rd, Lewisboro	South Salem NY 10590	2/11/2020 0:00	Single Family	N
18 Apache Cir, Lewisboro	Katonah NY 10536	2/3/2020 0:00	Single Family	N
59 Truesdale Lake Dr, Lewisboro	South Salem NY 10590	8/8/2020 0:00	Single Family	N
153 Spring St, Lewisboro	South Salem NY 10590	8/19/2020 0:00	Single Family	N
8 Apple Hill Ct, Lewisboro	South Salem NY 10590	10/22/2020 0:00	Single Family	N
1203 Route 35, Lewisboro	South Salem NY 10590	7/22/2020 0:00	Single Family	N
21 Gilbert St, Lewisboro	South Salem NY 10590	4/8/2020 0:00	Single Family	N
26 Hemlock Rd, Lewisboro	South Salem NY 10590	6/17/2020 0:00	Single Family	N
28 Oscaleta Rd, Lewisboro	South Salem NY 10590	9/22/2020 0:00	Single Family	N
177 Spring St, Lewisboro	South Salem NY 10590	9/1/2020 0:00	Single Family	N
5 Holly Hill Ln, Lewisboro	Katonah NY 10536	9/24/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
8 Cornel Dr, Lewisboro	Goldens Bridge NY 10526	12/3/2020 0:00	Single Family	N
8 Cornel Dr, Lewisboro	Goldens Bridge NY 10526	4/17/2020 0:00	Single Family	N
9 Howland Dr, Lewisboro	Cross River NY 10518	10/20/2020 0:00	Single Family	N
12 Autumn Ridge Rd, Lewisboro	South Salem NY 10590	12/7/2020 0:00	Single Family	N
38 Church Tavern Rd, Lewisboro	South Salem NY 10590	5/26/2020 0:00	Single Family	N
258 Increase Miller Rd, Lewisboro	Katonah NY 10536	9/24/2020 0:00	Single Family	N
68 E Ridge Rd, Lewisboro	Waccabuc NY 10597	12/22/2020 0:00	Single Family	N
46 Church Tavern Rd, Lewisboro	South Salem NY 10590	12/31/2020 0:00	Single Family	N
14 Cove Rd, Lewisboro	South Salem NY 10590	2/26/2020 0:00	Single Family	N
8 Holly Hill Ln, Lewisboro	Katonah NY 10536	4/10/2020 0:00	Single Family	N
11 Mt Holly Rd E, Lewisboro	Katonah NY 10536	3/9/2020 0:00	Single Family	N
1340 Route 35, Lewisboro	South Salem NY 10590	5/26/2020 0:00	Other	N
1340 Route 35, Lewisboro	South Salem NY 10590	5/26/2020 0:00	Other	N
30 Cove Rd, Lewisboro	South Salem NY 10590	4/20/2020 0:00	Single Family	N
74 Hemlock Rd, Lewisboro	South Salem NY 10590	8/18/2020 0:00	Single Family	N
5 Cornel Dr, Lewisboro	Goldens Bridge NY 10526	5/22/2020 0:00	Single Family	N
233 Increase Miller Rd, Lewisboro	Katonah NY 10536	11/12/2020 0:00	Single Family	N
27 Hoyt St, Lewisboro	South Salem NY 10590	5/7/2020 0:00	Single Family	N
22 Lower Salem Rd, Lewisboro	South Salem NY 10590	7/16/2020 0:00	Single Family	N
7 Twin Lakes Rd, Lewisboro	South Salem NY 10590	12/2/2020 0:00	Single Family	N
211 Ridgefield Ave, Lewisboro	South Salem NY 10590	9/14/2020 0:00	Single Family	N
788 Route 35, Lewisboro	Cross River NY 10518	2/24/2020 0:00	Commercial	N
2 Orchard Dr, Lewisboro	South Salem NY 10590	4/27/2020 0:00	Single Family	N
44 Twin Lakes Rd, Lewisboro	South Salem NY 10590	10/2/2020 0:00	Single Family	N
44 Twin Lakes Rd, Lewisboro	South Salem NY 10590	10/2/2020 0:00	Single Family	N
4 Orchard Dr, Lewisboro	South Salem NY 10590	5/8/2020 0:00	Single Family	N
3 Cider Mill Farm, Lewisboro	South Salem NY 10590	8/28/2020 0:00	Single Family	N
12 Twin Lakes Rd, Lewisboro	South Salem NY 10590	8/17/2020 0:00	Single Family	N
37 Cross Pond Rd, Lewisboro	Pound Ridge NY 10576	4/16/2020 0:00	Single Family	N
3 Howe St, Lewisboro	South Salem NY 10590	11/4/2020 0:00	Single Family	N
5 Hemlock Rd, Lewisboro	South Salem NY 10590	7/29/2020 0:00	Single Family	N
89 Hemlock Rd, Lewisboro	South Salem NY 10590	6/1/2020 0:00	Single Family	N
55 Chapel Rd, Lewisboro	Waccabuc NY 10597	1/14/2020 0:00	Single Family	N
21 Todd Rd, Lewisboro	Katonah NY 10536	11/17/2020 0:00	Single Family	N
17 Waccabuc Rd, Lewisboro	Goldens Bridge NY 10526	5/11/2020 0:00	Single Family	N
58 Lake Shore Dr, Lewisboro	South Salem NY 10590	9/10/2020 0:00	Single Family	N
10 Cornwall Ct, Lewisboro	Katonah NY 10536	4/14/2020 0:00	Single Family	N
7 Hilltop Rd, Lewisboro	Waccabuc NY 10597	7/28/2020 0:00	Single Family	N
3 Autumn Ridge Rd, Lewisboro	South Salem NY 10590	11/12/2020 0:00	Single Family	N
1195 Route 35, Lewisboro	South Salem NY 10590	10/22/2020 0:00	Single Family	N
19 Dingee Rd, Lewisboro	South Salem NY 10590	8/26/2020 0:00	Single Family	N
35 Sullivan Rd, Lewisboro	North Salem NY 10560	5/15/2020 0:00	Single Family	N
20 Adams Hill Rd, Lewisboro	Cross River NY 10518	6/30/2020 0:00	Single Family	N
20 Adams Hill Rd, Lewisboro	Cross River NY 10518	6/29/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
9 Comanche Ct, Lewisboro	Katonah NY 10536	2/4/2020 0:00	Single Family	N
32 Hunt Farm Rd, Lewisboro	Waccabuc NY 10597	7/28/2020 0:00	Single Family	N
58 Old Bedford Rd, Lewisboro	Goldens Bridge NY 10526	10/28/2020 0:00	Single Family	N
237 Increase Miller Rd, Lewisboro	Katonah NY 10536	8/27/2020 0:00	Single Family	N
84 Post Office Rd, Lewisboro	Waccabuc NY 10597	12/10/2020 0:00	Single Family	N
31 Flintlock Ridge Rd, Lewisboro	Katonah NY 10536	6/1/2020 0:00	Single Family	N
120 Spring St, Lewisboro	South Salem NY 10590	4/8/2020 0:00	Single Family	N
51 Cross Pond Rd, Lewisboro	Pound Ridge NY 10576	12/11/2020 0:00	Single Family	N
16 Mark Mead Rd, Lewisboro	Cross River NY 10518	12/8/2020 0:00	Single Family	N
27 Hunt Farm Rd, Lewisboro	Waccabuc NY 10597	2/6/2020 0:00	Single Family	N
19 Salem Hill Rd, Lewisboro	South Salem NY 10590	2/5/2020 0:00	Single Family	N
500 Mt Holly Rd, Lewisboro	Katonah NY 10536	8/26/2020 0:00	Single Family	N
500 Mt Holly Rd, Lewisboro	Katonah NY 10536	9/2/2020 0:00	Single Family	N
5 Long Pond Rd, Lewisboro	Waccabuc NY 10597	11/12/2020 0:00	Single Family	N
70 Twin Lakes Rd, Lewisboro	South Salem NY 10590	9/14/2020 0:00	Single Family	N
37 Lower Salem Rd, Lewisboro	South Salem NY 10590	2/13/2020 0:00	Single Family	N
8 Hillside Ave, Lewisboro	Goldens Bridge NY 10526	8/26/2020 0:00	Single Family	N
14 Gilbert St, Lewisboro	South Salem NY 10590	2/10/2020 0:00	Single Family	N
14 Gilbert St, Lewisboro	South Salem NY 10590	4/6/2020 0:00	Single Family	N
14 Gilbert St, Lewisboro	South Salem NY 10590	4/9/2020 0:00	Single Family	N
14 Gilbert St, Lewisboro	South Salem NY 10590	12/23/2020 0:00	Single Family	N
27 Flintlock Ridge Rd, Lewisboro	Katonah NY 10536	5/6/2020 0:00	Single Family	N
17 Todd Rd, Lewisboro	Katonah NY 10536	6/16/2020 0:00	Single Family	N
29 Mt Holly Rd E, Lewisboro	Katonah NY 10536	4/1/2020 0:00	Single Family	N
7 Stewart Rd, Lewisboro	South Salem NY 10590	10/26/2020 0:00	Single Family	N
60 Chapel Rd, Lewisboro	Waccabuc NY 10597	1/6/2020 0:00	Single Family	N
60 Chapel Rd, Lewisboro	Waccabuc NY 10597	1/6/2020 0:00	Single Family	N
254 Increase Miller Rd, Lewisboro	Katonah NY 10536	3/17/2020 0:00	Single Family	N
14 Cornel Dr, Lewisboro	Goldens Bridge NY 10526	5/18/2020 0:00	Single Family	N
53 Ridgefield Ave, Lewisboro	South Salem NY 10590	12/3/2020 0:00	Single Family	N
11 Flintlock Ridge Rd, Lewisboro	Katonah NY 10536	11/20/2020 0:00	Single Family	N
26 Old Bedford Rd, Lewisboro	Goldens Bridge NY 10526	1/2/2020 0:00	Single Family	N
26 Old Bedford Rd, Lewisboro	Goldens Bridge NY 10526	1/2/2020 0:00	Single Family	N
26 Old Bedford Rd, Lewisboro	Goldens Bridge NY 10526	1/2/2020 0:00	Single Family	N
26 Old Bedford Rd, Lewisboro	Goldens Bridge NY 10526	2/22/2020 0:00	Single Family	N
26 Old Bedford Rd, Lewisboro	Goldens Bridge NY 10526	3/20/2020 0:00	Single Family	N
26 Old Bedford Rd, Lewisboro	Goldens Bridge NY 10526	3/20/2020 0:00	Single Family	N
12 Indian Hill Rd, Lewisboro	Katonah NY 10536	7/22/2020 0:00	Single Family	N
115 Ridgefield Ave, Lewisboro	South Salem NY 10590	5/7/2020 0:00	Single Family	N
35 Knapp Rd, Lewisboro	South Salem NY 10590	9/2/2020 0:00	Single Family	N
8 Hilltop Rd, Lewisboro	Waccabuc NY 10597	9/28/2020 0:00	Single Family	N
125 Oscaleta Rd, Lewisboro	South Salem NY 10590	7/27/2020 0:00	Single Family	N
56 Lake Shore Dr, Lewisboro	South Salem NY 10590	5/5/2020 0:00	Single Family	N
57 South Shore Dr, Lewisboro	South Salem NY 10590	8/24/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
102 N Salem Rd, Lewisboro	Cross River NY 10518	4/24/2020 0:00	Single Family	N
54 Cove Rd, Lewisboro	South Salem NY 10590	7/6/2020 0:00	Single Family	N
22 Bouton St, Lewisboro	South Salem NY 10590	3/26/2020 0:00	Single Family	N
49 Lake Shore Dr, Lewisboro	South Salem NY 10590	5/19/2020 0:00	Single Family	N
22 Gilbert St, Lewisboro	South Salem NY 10590	3/23/2020 0:00	Single Family	N
5 Branch St, Lewisboro	Goldens Bridge NY 10526	5/14/2020 0:00	Single Family	N
85 Todd Rd, Lewisboro	Katonah NY 10536	7/30/2020 0:00	Single Family	N
5 Church Tavern Rd, Lewisboro	South Salem NY 10590	6/5/2020 0:00	Single Family	N
30 E Ridge Rd, Lewisboro	Waccabuc NY 10597	8/26/2020 0:00	Single Family	N
1 Old Pond Rd, Lewisboro	South Salem NY 10590	8/12/2020 0:00	Single Family	N
35 Cross Pond Rd, Lewisboro	Pound Ridge NY 10576	4/16/2020 0:00	Single Family	N
190 Goldens Bridge Rd, Lewisboro	Katonah NY 10536	9/23/2020 0:00	Commercial	N
190 Goldens Bridge Rd, Lewisboro	Katonah NY 10536	9/23/2020 0:00	Commercial	N
190 Goldens Bridge Rd, Lewisboro	Katonah NY 10536	1/10/2020 0:00	Commercial	N
190 Goldens Bridge Rd, Lewisboro	Katonah NY 10536	3/10/2020 0:00	Commercial	N
190 Goldens Bridge Rd, Lewisboro	Katonah NY 10536	11/6/2020 0:00	Commercial	N
108 Boutonville Rd, Lewisboro	South Salem NY 10590	4/10/2020 0:00	Single Family	N
174 Goldens Bridge Rd, Lewisboro	Katonah NY 10536	8/25/2020 0:00	Single Family	N
174 Goldens Bridge Rd, Lewisboro	Katonah NY 10536	8/25/2020 0:00	Single Family	N
218 Ridgefield Ave, Lewisboro	South Salem NY 10590	8/14/2020 0:00	Single Family	N
2 Shoshone Dr, Lewisboro	Katonah NY 10536	5/13/2020 0:00	Single Family	N
143 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	6/16/2020 0:00	Single Family	N
9 Orchard Dr, Lewisboro	South Salem NY 10590	3/6/2020 0:00	Single Family	N
20 Manor Dr, Lewisboro	Goldens Bridge NY 10526	7/14/2020 0:00	Single Family	N
20 Manor Dr, Lewisboro	Goldens Bridge NY 10526	7/14/2020 0:00	Single Family	N
11 Lakeview Rd, Lewisboro	South Salem NY 10590	7/24/2020 0:00	Single Family	N
33 Hillside Ave, Lewisboro	Goldens Bridge NY 10526	5/7/2020 0:00	Single Family	N
33 Hillside Ave, Lewisboro	Goldens Bridge NY 10526	5/7/2020 0:00	Single Family	N
68 Ridgefield Ave, Lewisboro	South Salem NY 10590	2/21/2020 0:00	Single Family	N
34 Cross Pond Rd, Lewisboro	Pound Ridge NY 10576	10/14/2020 0:00	Single Family	N
98 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	11/2/2020 0:00	Single Family	N
165 Main St, Lewisboro	South Salem NY 10590	8/6/2020 0:00	Single Family	N
7 Cider Mill Farm, Lewisboro	South Salem NY 10590	1/15/2020 0:00	Single Family	N
6 Stewart Rd, Lewisboro	South Salem NY 10590	6/26/2020 0:00	Single Family	N
13 Sullivan Rd, Lewisboro	North Salem NY 10560	9/14/2020 0:00	Single Family	N
150 Mead St, Lewisboro	Waccabuc NY 10597	3/19/2020 0:00	Single Family	N
34 Waccabuc Rd, Lewisboro	Goldens Bridge NY 10526	1/30/2020 0:00	Single Family	N
23 S Shore Dr, Lewisboro	South Salem NY 10590	3/21/2020 0:00	Single Family	N
23 S Shore Dr, Lewisboro	South Salem NY 10590	2/29/2020 0:00	Single Family	N
23 S Shore Dr, Lewisboro	South Salem NY 10590	1/7/2020 0:00	Single Family	N
23 S Shore Dr, Lewisboro	South Salem NY 10590	2/3/2020 0:00	Single Family	N
34 Mark Mead Rd, Lewisboro	Cross River NY 10518	7/9/2020 0:00	Single Family	N
11 Kingswood Way, Lewisboro	South Salem NY 10590	9/28/2020 0:00	Single Family	N
12 Silvermine Dr, Lewisboro	South Salem NY 10590	5/19/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
19 Deer Run Rd, Lewisboro	South Salem NY 10590	7/30/2020 0:00	Single Family	N
2 Audubon Rd, Lewisboro	South Salem NY 10590	11/7/2020 0:00	Single Family	N
22 Soundview Loop, Lewisboro	South Salem NY 10590	2/21/2020 0:00	Single Family	N
241 Smith Ridge Rd, Lewisboro	South Salem NY 10590	10/13/2020 0:00	Single Family	N
3 Lake Ave, Lewisboro	South Salem NY 10590	1/7/2020 0:00	Single Family	N
33 Conant Valley Rd, Lewisboro	Pound Ridge NY 10576	10/15/2020 0:00	Single Family	N
4 Serenity Pl, Lewisboro	South Salem NY 10590	1/14/2020 0:00	Single Family	N
407 Smith Ridge Rd, Lewisboro	South Salem NY 10590	7/10/2020 0:00	Commercial	N
407 Smith Ridge Rd, Lewisboro	South Salem NY 10590	7/10/2020 0:00	Commercial	N
44 Lockwood Rd, Lewisboro	South Salem NY 10590	9/8/2020 0:00	Single Family	N
6 Soundview Loop, Lewisboro	South Salem NY 10590	3/25/2020 0:00	Single Family	N
83 East St, Lewisboro	South Salem NY 10590	9/30/2020 0:00	Single Family	N
22 West Rd, Lewisboro	South Salem NY 10590	12/12/2020 0:00	Single Family	N
5 Wakeman Rd, Lewisboro	South Salem NY 10590	10/9/2020 0:00	Single Family	N
160 Kitchawan Rd, Lewisboro	South Salem NY 10590	4/16/2020 0:00	Single Family	N
7 Soundview Loop, Lewisboro	South Salem NY 10590	3/18/2020 0:00	Single Family	N
8 Roads End Rd, Lewisboro	South Salem NY 10590	3/19/2020 0:00	Single Family	N
233 Elmwood Rd, Lewisboro	South Salem NY 10590	8/19/2020 0:00	Single Family	N
53 Smith Ridge Rd, Lewisboro	South Salem NY 10590	8/20/2020 0:00	Single Family	N
247 Smith Ridge Rd, Lewisboro	South Salem NY 10590	8/27/2020 0:00	Single Family	N
21 Glen Dr, Lewisboro	South Salem NY 10590	8/27/2020 0:00	Single Family	N
447 Smith Ridge Rd, Lewisboro	South Salem NY 10590	6/10/2020 0:00	Single Family	N
10 Stonewall Ct, Lewisboro	South Salem NY 10590	2/15/2020 0:00	Single Family	N
7 Silvermine Dr, Lewisboro	South Salem NY 10590	10/29/2020 0:00	Single Family	N
55 Conant Valley Rd, Lewisboro	Pound Ridge NY 10576	11/10/2020 0:00	Single Family	N
104 Smith Ridge Rd, Lewisboro	South Salem NY 10590	4/24/2020 0:00	Single Family	N
4 Soundview Loop, Lewisboro	South Salem NY 10590	1/14/2020 0:00	Single Family	N
4 Soundview Loop, Lewisboro	South Salem NY 10590	4/27/2020 0:00	Single Family	N
215 Kitchawan Rd, Lewisboro	South Salem NY 10590	6/6/2020 0:00	Single Family	N
2 Kenfield Rd, Lewisboro	South Salem NY 10590	5/8/2020 0:00	Single Family	N
6 Silvermine Dr, Lewisboro	South Salem NY 10590	2/13/2020 0:00	Single Family	N
6 Silvermine Dr, Lewisboro	South Salem NY 10590	10/14/2020 0:00	Single Family	N
35 West Rd, Lewisboro	South Salem NY 10590	3/30/2020 0:00	Single Family	N
18 Glen Dr, Lewisboro	South Salem NY 10590	12/15/2020 0:00	Single Family	N
30 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	7/29/2020 0:00	Single Family	N
34 Glen Dr, Lewisboro	South Salem NY 10590	8/6/2020 0:00	Single Family	N
75 East St, Lewisboro	South Salem NY 10590	7/24/2020 0:00	Single Family	N
15 Soundview Loop, Lewisboro	South Salem NY 10590	10/16/2020 0:00	Single Family	N
3 Stonewall Ct, Lewisboro	South Salem NY 10590	12/7/2020 0:00	Single Family	N
273 Smith Ridge Rd, Lewisboro	South Salem NY 10590	5/13/2020 0:00	Single Family	N
76 Smith Ridge Rd, Lewisboro	South Salem NY 10590	5/22/2020 0:00	Single Family	N
100 Lockwood Rd, Lewisboro	South Salem NY 10590	7/1/2020 0:00	Single Family	N
152 Elmwood Rd, Lewisboro	South Salem NY 10590	12/22/2020 0:00	Single Family	N
18 Mill River Rd, Lewisboro	South Salem NY 10590	9/24/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
162 Wilton Rd, Lewisboro	South Salem NY 10590	10/17/2020 0:00	Single Family	N
172 Elmwood Rd, Lewisboro	South Salem NY 10590	11/25/2020 0:00	Single Family	N
41 West Rd, Lewisboro	South Salem NY 10590	4/2/2020 0:00	Single Family	N
14 Scenic Dr, Lewisboro	South Salem NY 10590	10/21/2020 0:00	Single Family	N
75 Mill River Rd, Lewisboro	South Salem NY 10590	9/15/2020 0:00	Single Family	N
75 Mill River Rd, Lewisboro	South Salem NY 10590	9/15/2020 0:00	Single Family	N
75 Mill River Rd, Lewisboro	South Salem NY 10590	9/15/2020 0:00	Single Family	N
75 Mill River Rd, Lewisboro	South Salem NY 10590	9/15/2020 0:00	Single Family	N
199 Elmwood Rd, Lewisboro	South Salem NY 10590	2/25/2020 0:00	Single Family	N
99 Elmwood Rd, Lewisboro	South Salem NY 10590	4/6/2020 0:00	Other	N
99 Elmwood Rd, Lewisboro	South Salem NY 10590	4/6/2020 0:00	Other	N
99 Elmwood Rd, Lewisboro	South Salem NY 10590	4/6/2020 0:00	Other	N
87 Lockwood Rd, Lewisboro	South Salem NY 10590	10/1/2020 0:00	Single Family	N
46 West Rd, Lewisboro	South Salem NY 10590	3/30/2020 0:00	Single Family	N
114 Smith Ridge Rd, Lewisboro	South Salem NY 10590	7/30/2020 0:00	Single Family	N
59 Conant Valley Rd, Lewisboro	Pound Ridge NY 10576	9/4/2020 0:00	Single Family	N
7 Col Ferris Rd, Lewisboro	South Salem NY 10590	3/30/2020 0:00	Single Family	N
24 Silvermine Dr, Lewisboro	South Salem NY 10590	8/7/2020 0:00	Single Family	N
178 Elmwood Rd, Lewisboro	South Salem NY 10590	10/13/2020 0:00	Single Family	N
25 Glen Dr, Lewisboro	South Salem NY 10590	11/27/2020 0:00	Single Family	N
99 Ridgeland Rd, Lewisboro	South Salem NY 10590	10/9/2020 0:00	Single Family	N
423 Smith Ridge Rd, Lewisboro	South Salem NY 10590	1/20/2020 0:00	Single Family	N
386 Smith Ridge Rd, Lewisboro	South Salem NY 10590	7/9/2020 0:00	Commercial	N
18 East St, Lewisboro	South Salem NY 10590	4/1/2020 0:00	Single Family	N
21 East St, Lewisboro	South Salem NY 10590	10/22/2020 0:00	Single Family	N
61 Mill River Rd, Lewisboro	South Salem NY 10590	4/1/2020 0:00	Single Family	N
108 Smith Ridge Rd, Lewisboro	South Salem NY 10590	4/14/2020 0:00	Single Family	N
49 East St, Lewisboro	South Salem NY 10590	11/28/2020 0:00	Single Family	N
4 Wakeman Rd, Lewisboro	South Salem NY 10590	4/18/2020 0:00	Single Family	N
14 East St, Lewisboro	South Salem NY 10590	6/4/2020 0:00	Single Family	N
445 Smith Ridge Rd, Lewisboro	South Salem NY 10590	1/25/2020 0:00	Single Family	N
17 Lockwood Rd, Lewisboro	South Salem NY 10590	1/31/2020 0:00	Single Family	N
9 Scenic Dr, Lewisboro	South Salem NY 10590	10/12/2020 0:00	Single Family	N
57 Lockwood Rd, Lewisboro	South Salem NY 10590	9/19/2020 0:00	Single Family	N
426 Smith Ridge Rd, Lewisboro	South Salem NY 10590	11/28/2020 0:00	Single Family	N
71 Conant Valley Rd, Lewisboro	Pound Ridge NY 10576	5/22/2020 0:00	Single Family	N
2 Kingswood Way, Lewisboro	South Salem NY 10590	4/8/2020 0:00	Single Family	N
67 East St, Lewisboro	South Salem NY 10590	9/29/2020 0:00	Single Family	N
54 Twin Lakes Rd, Lewisboro	South Salem NY 10590	11/10/2020 0:00	Single Family	N
8 Comanche Ct, Lewisboro	Katonah NY 10536	7/13/2020 0:00	Single Family	N
152 Mead St, Lewisboro	Waccabuc NY 10597	11/4/2020 0:00	Single Family	N
60 Lake Shore Dr, Lewisboro	South Salem NY 10590	11/10/2020 0:00	Single Family	N
8 Lower Lakeshore Dr, Lewisboro	Katonah NY 10536	9/21/2020 0:00	Single Family	N
18 Bayberry Ln, Lewisboro	South Salem NY 10590	4/6/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
44 Perch Bay Rd, Lewisboro	Waccabuc NY 10597	4/16/2020 0:00	Single Family	N
61 Benedict Rd, Lewisboro	South Salem NY 10590	6/17/2020 0:00	Single Family	N
124 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	3/18/2020 0:00	Single Family	N
30 Patriots Pass, Lewisboro	Waccabuc NY 10597	10/22/2020 0:00	Single Family	N
3 Shoshone Dr, Lewisboro	Katonah NY 10536	3/30/2020 0:00	Single Family	N
13 Meadow St, Lewisboro	Goldens Bridge NY 10526	1/14/2020 0:00	Commercial	N
22 Schoolhouse Rd, Lewisboro	Waccabuc NY 10597	7/13/2020 0:00	Single Family	N
81 Spring St, Lewisboro	South Salem NY 10590	4/6/2020 0:00	Single Family	N
759 Route 35, Lewisboro	Cross River NY 10518	7/17/2020 0:00	Commercial	N
759 Route 35, Lewisboro	Cross River NY 10518	7/17/2020 0:00	Commercial	N
42 Hunt Farm Rd, Lewisboro	Waccabuc NY 10597	1/27/2020 0:00	Single Family	N
38 Oscaleta Rd, Lewisboro	South Salem NY 10590	6/2/2020 0:00	Single Family	N
26 Cove Rd, Lewisboro	South Salem NY 10590	6/25/2020 0:00	Single Family	N
58 Cove Rd, Lewisboro	South Salem NY 10590	7/28/2020 0:00	Single Family	N
189 Todd Rd, Lewisboro	Katonah NY 10536	5/18/2020 0:00	Single Family	N
3 Manor Dr, Lewisboro	Goldens Bridge NY 10526	4/24/2020 0:00	Single Family	N
28 Rock Shelter Rd, Lewisboro	Waccabuc NY 10597	8/3/2020 0:00	Single Family	N
48 Lake Shore Dr, Lewisboro	South Salem NY 10590	4/24/2020 0:00	Single Family	N
792 Route 35, Lewisboro	Cross River NY 10518	9/29/2020 0:00	Commercial	N
3 Benedict Rd, Lewisboro	South Salem NY 10590	11/10/2020 0:00	Single Family	N
37 Pine Hill Dr, Lewisboro	South Salem NY 10590	6/3/2020 0:00	Single Family	N
32 Lakeview Rd, Lewisboro	South Salem NY 10590	3/26/2020 0:00	Single Family	N
7 Mark Mead Rd, Lewisboro	Cross River NY 10518	9/14/2020 0:00	Single Family	N
4 Truesdale Lake Dr, Lewisboro	South Salem NY 10590	11/17/2020 0:00	Single Family	N
75 Cove Rd, Lewisboro	South Salem NY 10590	7/29/2020 0:00	Single Family	N
196 Ridgefield Ave, Lewisboro	South Salem NY 10590	5/7/2020 0:00	Single Family	N
5 Apple Hill Ct, Lewisboro	South Salem NY 10590	5/5/2020 0:00	Single Family	N
32 Boutonville Rd, Lewisboro	South Salem NY 10590	4/28/2020 0:00	Single Family	N
72 Lake Shore Dr, Lewisboro	South Salem NY 10590	4/28/2020 0:00	Single Family	N
6 Lower Salem Rd, Lewisboro	South Salem NY 10590	10/15/2020 0:00	Single Family	N
41 Perch Bay Rd, Lewisboro	Waccabuc NY 10597	10/22/2020 0:00	Single Family	N
37 Bouton Rd, Lewisboro	South Salem NY 10590	7/13/2020 0:00	Single Family	N
6 Orchard Dr, Lewisboro	South Salem NY 10590	7/28/2020 0:00	Single Family	N
49 Brundige Dr, Lewisboro	Goldens Bridge NY 10526	12/1/2020 0:00	Single Family	N
90 Chapel Rd, Lewisboro	Waccabuc NY 10597	3/27/2020 0:00	Single Family	N
5 Hunts Ln, Lewisboro	Cross River NY 10518	1/22/2020 0:00	Single Family	N
10 Cornel Dr, Lewisboro	Goldens Bridge NY 10526	10/7/2020 0:00	Single Family	N
71 Post Office Rd, Lewisboro	Waccabuc NY 10597	6/15/2020 0:00	Single Family	N
18 Hillside Ave, Lewisboro	Goldens Bridge NY 10526	3/26/2020 0:00	Single Family	N
88 E Ridge Rd, Lewisboro	Waccabuc NY 10597	12/8/2020 0:00	Single Family	N
25 Twin Lakes Rd, Lewisboro	South Salem NY 10590	11/23/2020 0:00	Single Family	N
63 Cove Rd, Lewisboro	South Salem NY 10590	3/30/2020 0:00	Single Family	N
156 Todd Rd, Lewisboro	Katonah NY 10536	1/31/2020 0:00	Single Family	N
9 Bouton St, Lewisboro	South Salem NY 10590	11/3/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
21 Branch St, Lewisboro	Goldens Bridge NY 10526	6/25/2020 0:00	Single Family	N
136 Todd Rd, Lewisboro	Katonah NY 10536	8/26/2020 0:00	Single Family	N
168 Todd Rd, Lewisboro	Katonah NY 10536	4/14/2020 0:00	Single Family	N
36 Twin Lakes Rd, Lewisboro	South Salem NY 10590	6/3/2020 0:00	Single Family	N
16 Cornwall Ct, Lewisboro	Katonah NY 10536	7/10/2020 0:00	Single Family	N
69 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	5/1/2020 0:00	Single Family	N
69 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	12/3/2020 0:00	Single Family	N
284 Waccabuc Rd, Lewisboro	Goldens Bridge NY 10526	4/2/2020 0:00	Single Family	N
284 Waccabuc Rd, Lewisboro	Goldens Bridge NY 10526	4/2/2020 0:00	Single Family	N
284 Waccabuc Rd, Lewisboro	Goldens Bridge NY 10526	4/2/2020 0:00	Single Family	N
12 The Logging Rd, Lewisboro	Waccabuc NY 10597	11/4/2020 0:00	Single Family	N
179 Waccabuc Rd, Lewisboro	Goldens Bridge NY 10526	8/31/2020 0:00	Single Family	N
64 Bouton Rd, Lewisboro	South Salem NY 10590	4/22/2020 0:00	Single Family	N
15 Waccabuc Rd, Lewisboro	Goldens Bridge NY 10526	12/9/2020 0:00	Single Family	N
451 Pound Ridge Rd, Lewisboro	South Salem NY 10590	7/15/2020 0:00	Single Family	N
81 Twin Lakes Rd, Lewisboro	South Salem NY 10590	1/17/2020 0:00	Single Family	N
6 Green Hill Rd, Lewisboro	Goldens Bridge NY 10526	8/13/2020 0:00	Single Family	N
40 Gilbert St, Lewisboro	South Salem NY 10590	11/12/2020 0:00	Single Family	N
30 Main St, Lewisboro	South Salem NY 10590	8/18/2020 0:00	Single Family	N
78 Waccabuc Rd, Lewisboro	Goldens Bridge NY 10526	4/9/2020 0:00	Single Family	N
7 Lake St, Lewisboro	Goldens Bridge NY 10526	9/25/2020 0:00	Single Family	N
1 Sabbathday Hill, Lewisboro	South Salem NY 10590	9/30/2020 0:00	Single Family	N
18 Hilltop Rd, Lewisboro	Waccabuc NY 10597	2/24/2020 0:00	Single Family	N
2 S Shore Dr, Lewisboro	South Salem NY 10590	5/20/2020 0:00	Single Family	N
2 S Shore Dr, Lewisboro	South Salem NY 10590	8/10/2020 0:00	Single Family	N
2 S Shore Dr, Lewisboro	South Salem NY 10590	10/2/2020 0:00	Single Family	N
2 S Shore Dr, Lewisboro	South Salem NY 10590	12/8/2020 0:00	Single Family	N
107 Post Office Rd, Lewisboro	South Salem NY 10590	5/20/2020 0:00	Single Family	N
1125 Route 35, Lewisboro	South Salem NY 10590	5/19/2020 0:00	Single Family	N
1125 Route 35, Lewisboro	South Salem NY 10590	5/19/2020 0:00	Single Family	N
93 Todd Rd, Lewisboro	Katonah NY 10536	1/13/2020 0:00	Single Family	N
8 Truesdale Lake Dr, Lewisboro	South Salem NY 10590	8/21/2020 0:00	Single Family	N
11 Hunt Farm Rd, Lewisboro	Waccabuc NY 10597	6/12/2020 0:00	Single Family	N
41 Mark Mead Rd, Lewisboro	Cross River NY 10518	1/10/2020 0:00	Single Family	N
41 Mark Mead Rd, Lewisboro	Cross River NY 10518	1/10/2020 0:00	Single Family	N
41 Mark Mead Rd, Lewisboro	Cross River NY 10518	1/2/2020 0:00	Single Family	N
1202 Route 35, Lewisboro	South Salem NY 10590	1/10/2020 0:00	Single Family	N
1202 Route 35, Lewisboro	South Salem NY 10590	1/10/2020 0:00	Single Family	N
100 Upper Lakeshore Dr, Lewisboro	Katonah NY 10536	10/6/2020 0:00	Single Family	N
95 Upper Lakeshore Dr, Lewisboro	Katonah NY 10536	3/19/2020 0:00	Single Family	N
2 Manor Dr, Lewisboro	Goldens Bridge NY 10526	11/19/2020 0:00	Single Family	N
41 Hunt Farm Rd, Lewisboro	Waccabuc NY 10597	5/14/2020 0:00	Single Family	N
51 Oscaleta Rd, Lewisboro	South Salem NY 10590	9/15/2020 0:00	Single Family	N
12 Redcoat Ln, Lewisboro	Waccabuc NY 10597	3/25/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
8 Cross Pond Rd, Lewisboro	South Salem NY 10590	10/1/2020 0:00	Single Family	N
6 Lakeview Rd, Lewisboro	South Salem NY 10590	5/14/2020 0:00	Single Family	N
11 Cornel Dr, Lewisboro	Goldens Bridge NY 10526	5/21/2020 0:00	Single Family	N
3 Cornwall Ct, Lewisboro	Katonah NY 10536	7/30/2020 0:00	Single Family	N
45 Brundige Dr, Lewisboro	Goldens Bridge NY 10526	11/9/2020 0:00	Single Family	N
44 Gilbert St, Lewisboro	South Salem NY 10590	1/29/2020 0:00	Single Family	N
56 Cove Rd, Lewisboro	South Salem NY 10590	2/18/2020 0:00	Single Family	N
46 Oscaleta Rd, Lewisboro	South Salem NY 10590	10/21/2020 0:00	Single Family	N
12 Gilbert St, Lewisboro	South Salem NY 10590	11/16/2020 0:00	Single Family	N
11 Lower Salem Rd, Lewisboro	South Salem NY 10590	3/16/2020 0:00	Single Family	N
295 Todd Rd, Lewisboro	Katonah NY 10536	7/20/2020 0:00	Single Family	N
295 Todd Rd, Lewisboro	Katonah NY 10536	7/20/2020 0:00	Single Family	N
26 Hilltop Rd, Lewisboro	Waccabuc NY 10597	9/14/2020 0:00	Single Family	N
16 Lower Lakeshore Dr, Lewisboro	Katonah NY 10536	1/22/2020 0:00	Single Family	N
241 Todd Rd, Lewisboro	Katonah NY 10536	1/7/2020 0:00	Single Family	N
241 Todd Rd, Lewisboro	Katonah NY 10536	10/13/2020 0:00	Single Family	N
11 Cornwall Ct, Lewisboro	Katonah NY 10536	7/30/2020 0:00	Single Family	N
50 Lake Shore Dr, Lewisboro	South Salem NY 10590	1/2/2020 0:00	Single Family	N
9 Long Pond Rd, Lewisboro	Waccabuc NY 10597	5/7/2020 0:00	Single Family	N
10 Butternut Lane, Lewisboro	Katonah NY 10536	10/8/2020 0:00	Single Family	N
51 Knapp Rd, Lewisboro	South Salem NY 10590	7/31/2020 0:00	Single Family	N
129 Upper Lakeshore Dr, Lewisboro	Katonah NY 10536	2/11/2020 0:00	Single Family	N
2 Lake Shore Dr, Lewisboro	South Salem NY 10590	1/29/2020 0:00	Single Family	N
1 Pamela Ln, Lewisboro	South Salem NY 10590	3/16/2020 0:00	Single Family	N
2 The Logging Rd, Lewisboro	Waccabuc NY 10597	7/16/2020 0:00	Single Family	N
2 The Logging Rd, Lewisboro	Waccabuc NY 10597	12/2/2020 0:00	Single Family	N
22 Hilltop Rd, Lewisboro	Waccabuc NY 10597	7/1/2020 0:00	Commercial	N
29 Green Hill Rd, Lewisboro	Goldens Bridge NY 10526	3/5/2020 0:00	Single Family	N
38 Mark Mead Rd, Lewisboro	Cross River NY 10518	2/5/2020 0:00	Single Family	N
31 Spring St S, Lewisboro	South Salem NY 10590	2/20/2020 0:00	Single Family	N
97 Todd Rd, Lewisboro	Katonah NY 10536	7/27/2020 0:00	Single Family	N
46 Grandview Rd, Lewisboro	South Salem NY 10590	10/22/2020 0:00	Single Family	N
201 Todd Rd, Lewisboro	Katonah NY 10536	8/17/2020 0:00	Single Family	N
201 Todd Rd, Lewisboro	Katonah NY 10536	8/17/2020 0:00	Single Family	N
19 Brundige Dr, Lewisboro	Goldens Bridge NY 10526	4/9/2020 0:00	Single Family	N
819 Route 35, Lewisboro	Cross River NY 10518	12/4/2020 0:00	Single Family	N
66 Mark Mead Rd, Lewisboro	Cross River NY 10518	4/29/2020 0:00	Single Family	N
9 The Logging Rd, Lewisboro	Waccabuc NY 10597	11/25/2020 0:00	Single Family	N
38 Truesdale Lake Dr, Lewisboro	South Salem NY 10590	1/21/2020 0:00	Single Family	N
31 Brundige Dr, Lewisboro	Goldens Bridge NY 10526	6/18/2020 0:00	Single Family	N
93 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	6/25/2020 0:00		N
14 Butternut Ln, Lewisboro	Katonah NY 10536	3/25/2020 0:00	Single Family	N
929 Route 35, Lewisboro	Cross River NY 10518	1/27/2020 0:00	Single Family	N
929 Route 35, Lewisboro	Cross River NY 10518	6/24/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
28 Cove Rd, Lewisboro	South Salem NY 10590	8/6/2020 0:00	Single Family	N
202 Ridgefield Ave, Lewisboro	South Salem NY 10590	6/18/2020 0:00	Single Family	N
154 Boway, Lewisboro	South Salem NY 10590	4/7/2020 0:00	Single Family	N
62 Hoyt St, Lewisboro	South Salem NY 10590	6/29/2020 0:00	Single Family	N
4 Apple Hill Ct, Lewisboro	South Salem NY 10590	5/19/2020 0:00	Single Family	N
26 Rock Shelter Rd, Lewisboro	Waccabuc NY 10597	12/16/2020 0:00	Single Family	N
26 Rock Shelter Rd, Lewisboro	Waccabuc NY 10597	12/21/2020 0:00	Single Family	N
399 Pound Ridge Rd, Lewisboro	South Salem NY 10590	3/16/2020 0:00	Single Family	N
27 Hemlock Rd, Lewisboro	South Salem NY 10590	3/20/2020 0:00	Single Family	N
150 Boway, Lewisboro	South Salem NY 10590	10/31/2020 0:00	Single Family	N
177 Main St, Lewisboro	South Salem NY 10590	7/8/2020 0:00	Single Family	N
63 Deerfield, Lewisboro	Katonah NY 10536	5/20/2020 0:00	Single Family	N
12 Manor Dr, Lewisboro	Goldens Bridge NY 10526	9/29/2020 0:00	Single Family	N
117 Ridgeland Rd, Lewisboro	South Salem NY 10590	6/29/2020 0:00		N
156 Mead St, Lewisboro	Waccabuc NY 10597	11/20/2020 0:00	Single Family	N
9 Hunt Farm Rd, Lewisboro	Waccabuc NY 10597	7/31/2020 0:00	Single Family	N
20 Spring St S, Lewisboro	South Salem NY 10590	1/22/2020 0:00	Commercial	N
43 Gilbert St, Lewisboro	South Salem NY 10590	7/28/2020 0:00	Single Family	N
31 Rock Shelter Rd, Lewisboro	Waccabuc NY 10597	3/11/2020 0:00	Single Family	N
2 Hilltop Rd, Lewisboro	Waccabuc NY 10597	8/12/2020 0:00	Single Family	N
2 Hilltop Rd, Lewisboro	Waccabuc NY 10597	8/12/2020 0:00	Single Family	N
14 Schoolhouse Rd, Lewisboro	Waccabuc NY 10597	4/20/2020 0:00	Single Family	N
14 Schoolhouse Rd, Lewisboro	Waccabuc NY 10597	4/20/2020 0:00	Single Family	N
2 Old Pond Rd, Lewisboro	South Salem NY 10590	5/15/2020 0:00	Single Family	N
81 Post Office Rd, Lewisboro	Waccabuc NY 10597	3/30/2020 0:00	Single Family	N
63 Hoyt St, Lewisboro	South Salem NY 10590	4/23/2020 0:00	Single Family	N
63 Hoyt St, Lewisboro	South Salem NY 10590	8/17/2020 0:00	Single Family	N
122 Post Office Rd, Lewisboro	South Salem NY 10590	4/18/2020 0:00	Single Family	N
65 Knapp Rd, Lewisboro	South Salem NY 10590	3/24/2020 0:00	Single Family	N
7 Long Pond Rd, Lewisboro	Waccabuc NY 10597	4/28/2020 0:00	Single Family	N
4 Church Tavern Rd, Lewisboro	South Salem NY 10590	7/27/2020 0:00	Single Family	N
70 Benedict Rd, Lewisboro	South Salem NY 10590	6/18/2020 0:00	Single Family	N
21 Green Hill Rd, Lewisboro	Goldens Bridge NY 10526	9/17/2020 0:00	Single Family	N
187 Mead St, Lewisboro	Waccabuc NY 10597	11/4/2020 0:00	Single Family	N
6 Grandview Rd, Lewisboro	South Salem NY 10590	4/6/2020 0:00	Single Family	N
14 Salem Hill Rd, Lewisboro	South Salem NY 10590	8/10/2020 0:00	Single Family	N
33 Sullivan Rd, Lewisboro	North Salem NY 10560	10/8/2020 0:00	Single Family	N
17 Sunset, Lewisboro	Katonah NY 10536	3/27/2020 0:00	Single Family	N
132 Oscaleta Rd, Lewisboro	South Salem NY 10590	10/16/2020 0:00	Single Family	N
65 Hoyt St, Lewisboro	South Salem NY 10590	9/2/2020 0:00	Single Family	N
8 Perch Bay Rd, Lewisboro	Waccabuc NY 10597	11/17/2020 0:00	Single Family	N
252 Increase Miller Rd, Lewisboro	Katonah NY 10536	10/20/2020 0:00	Single Family	N
28 Twin Lakes Rd, Lewisboro	South Salem NY 10590	7/9/2020 0:00	Single Family	N
15 Orchard Dr, Lewisboro	South Salem NY 10590	8/10/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
5 Powder Hill Rd, Lewisboro	Waccabuc NY 10597	8/10/2020 0:00	Single Family	N
28 Deerfield, Lewisboro	Katonah NY 10536	8/13/2020 0:00	Single Family	N
65 Twin Lakes Rd, Lewisboro	South Salem NY 10590	8/10/2020 0:00	Single Family	N
65 Twin Lakes Rd, Lewisboro	South Salem NY 10590	8/10/2020 0:00	Single Family	N
65 Twin Lakes Rd, Lewisboro	South Salem NY 10590	8/10/2020 0:00	Single Family	N
5 Bouton St, Lewisboro	South Salem NY 10590	9/16/2020 0:00	Single Family	N
34 Cove Rd, Lewisboro	South Salem NY 10590	6/24/2020 0:00	Single Family	N
37 Knapp Rd, Lewisboro	South Salem NY 10590	9/28/2020 0:00	Single Family	N
25 Waccabuc River Lane, Lewisboro	South Salem NY 10590	6/4/2020 0:00	Single Family	N
29 Lake Shore Dr, Lewisboro	South Salem NY 10590	10/5/2020 0:00	Single Family	N
22 Tarry-A-Bit Dr, Lewisboro	Waccabuc NY 10597	11/19/2020 0:00	Single Family	N
89 Chapel Rd, Lewisboro	Waccabuc NY 10597	12/8/2020 0:00	Single Family	N
89 Chapel Rd, Lewisboro	Waccabuc NY 10597	12/8/2020 0:00	Single Family	N
107 Todd Rd, Lewisboro	Katonah NY 10536	12/4/2020 0:00	Single Family	N
159 Ridgefield Ave, Lewisboro	South Salem NY 10590	9/13/2020 0:00	Single Family	N
14 Manor Dr, Lewisboro	Goldens Bridge NY 10526	3/26/2020 0:00	Single Family	N
63 Upper Lake Shr, Lewisboro	Katonah NY 10536	4/20/2020 0:00	Single Family	N
8 Cherokee Ct, Lewisboro	Katonah NY 10536	4/7/2020 0:00	Single Family	N
55 Truesdale Lake Dr, Lewisboro	South Salem NY 10590	11/25/2020 0:00	Single Family	N
225 Mead St, Lewisboro	Waccabuc NY 10597	11/19/2020 0:00	Single Family	N
29 Oscaleta Rd, Lewisboro	South Salem NY 10590	8/31/2020 0:00	Single Family	N
19 Lakeview Pass, Lewisboro	Katonah NY 10536	10/8/2020 0:00	Single Family	N
327 Waccabuc Rd, Lewisboro	Goldens Bridge NY 10526	11/18/2020 0:00	Single Family	N
73 Post Office Rd, Lewisboro	Waccabuc NY 10597	7/13/2020 0:00	Single Family	N
12 Hunt Farm Rd, Lewisboro	Waccabuc NY 10597	8/26/2020 0:00	Single Family	N
55 Grandview Rd, Lewisboro	South Salem NY 10590	11/19/2020 0:00	Single Family	N
30 Twin Lakes Rd, Lewisboro	South Salem NY 10590	10/2/2020 0:00	Single Family	N
1 Cheyenne Ct, Lewisboro	Goldens Bridge NY 10526	9/15/2020 0:00	Single Family	N
391 Pound Ridge Rd, Lewisboro	South Salem NY 10590	10/5/2020 0:00	Single Family	N
64 Lake Shore Dr, Lewisboro	South Salem NY 10590	4/23/2020 0:00	Single Family	N
132 Main St, Lewisboro	South Salem NY 10590	6/1/2020 0:00	Single Family	N
1 Orchard Dr, Lewisboro	South Salem NY 10590	6/24/2020 0:00	Single Family	N
33 Brundige Dr, Lewisboro	Goldens Bridge NY 10526	3/31/2020 0:00	Single Family	N
22 Outpost, Lewisboro	Katonah NY 10536	2/20/2020 0:00	Single Family	N
43 Twin Lakes Rd, Lewisboro	South Salem NY 10590	8/10/2020 0:00	Single Family	N
106 Boway, Lewisboro	South Salem NY 10590	2/5/2020 0:00	Single Family	N
7 Sullivan Rd, Lewisboro	Goldens Bridge NY 10526	10/16/2020 0:00	Single Family	N
33 Lake Shore Dr, Lewisboro	South Salem NY 10590	7/17/2020 0:00	Single Family	N
110 Post Office Rd, Lewisboro	South Salem NY 10590	8/5/2020 0:00	Single Family	N
110 Post Office Rd, Lewisboro	South Salem NY 10590	8/17/2020 0:00	Single Family	N
92 Upper Lake Shr, Lewisboro	Katonah NY 10536	2/25/2020 0:00	Single Family	N
15 Shore Trl, Lewisboro	South Salem NY 10590	4/27/2020 0:00	Other	N
69 Twin Lakes Rd, Lewisboro	South Salem NY 10590	7/10/2020 0:00	Single Family	N
4 Brook Manor Dr, Lewisboro	South Salem NY 10590	7/13/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
102 Cove Rd, Lewisboro	South Salem NY 10590	10/2/2020 0:00	Single Family	N
25 Woodway, Lewisboro	South Salem NY 10590	5/29/2020 0:00	Single Family	N
25 Woodway, Lewisboro	South Salem NY 10590	7/16/2020 0:00	Single Family	N
9 Chapel Ct, Lewisboro	Waccabuc NY 10597	4/8/2020 0:00	Single Family	N
777 Rt-35, Lewisboro	Cross River NY 10518	4/7/2020 0:00	Other	N
11 Main St, Lewisboro	South Salem NY 10590	4/7/2020 0:00	Commercial	N
11 Main St, Lewisboro	South Salem NY 10590	4/2/2020 0:00	Commercial	N
103 Todd Rd, Lewisboro	Katonah NY 10536	3/23/2020 0:00	Single Family	N
29 Brundige Dr, Lewisboro	Goldens Bridge NY 10526	7/1/2020 0:00	Single Family	N
21 Woodway, Lewisboro	South Salem NY 10590	7/16/2020 0:00	Single Family	N
107 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	8/5/2020 0:00	Single Family	N
2 Lakeview Rd, Lewisboro	South Salem NY 10590	5/19/2020 0:00	Single Family	N
514 Mt Holly Rd, Lewisboro	Katonah NY 10536	6/23/2020 0:00	Single Family	N
100 Spring St, Lewisboro	South Salem NY 10590	4/6/2020 0:00	Multi Family	N
106 Spring St, Lewisboro	South Salem NY 10590	4/2/2020 0:00	Single Family	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	12/22/2020 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	3/6/2020 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	4/7/2020 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	1/9/2020 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	2/24/2020 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	2/5/2020 0:00	Commercial	N
104 Route 22, Lewisboro	Goldens Bridge NY 10526	2/5/2020 0:00	Commercial	N
96 Spring St, Lewisboro	South Salem NY 10590	7/23/2020 0:00	Single Family	N
17 Autumn Ridge Rd, Lewisboro	South Salem NY 10590	5/13/2020 0:00	Single Family	N
5 Cheyenne Ct, Lewisboro	Katonah NY 10536	5/21/2020 0:00	Single Family	N
368 Route 22, Lewisboro	Goldens Bridge NY 10526	10/21/2020 0:00	Single Family	N
47 S Shore Dr, Lewisboro	South Salem NY 10590	3/19/2020 0:00	Single Family	N
2 Comanche Ct, Lewisboro	Katonah NY 10536	12/3/2020 0:00	Single Family	N
18 Makepeace Hl, Lewisboro	Waccabuc NY 10597	1/28/2020 0:00	Single Family	N
80 Cove Rd, Lewisboro	South Salem NY 10590	9/28/2020 0:00	Single Family	N
801 Cross River Rd, Lewisboro	Cross River NY 10518	7/29/2020 0:00	Other	N
801 Cross River Rd, Lewisboro	Cross River NY 10518	5/13/2020 0:00	Other	N
801 Cross River Rd, Lewisboro	Cross River NY 10518	5/13/2020 0:00	Other	N
801 Cross River Rd, Lewisboro	Cross River NY 10518	2/27/2020 0:00	Other	N
801 Cross River Rd, Lewisboro	Cross River NY 10518	3/3/2020 0:00	Other	N
52 Bouton Rd, Lewisboro	South Salem NY 10590	1/24/2020 0:00	Single Family	N
2 Howe St, Lewisboro	South Salem NY 10590	11/13/2020 0:00	Single Family	N
15 SOUTH SHORE DR, Lewisboro	South Salem NY 10590	4/6/2020 0:00	Other	N
15 SOUTH SHORE DR, Lewisboro	South Salem NY 10590	3/16/2020 0:00	Other	N
15 SOUTH SHORE DR, Lewisboro	South Salem NY 10590	2/20/2020 0:00	Other	N
150 Jay Ct, Lewisboro	Cross River NY 10518	12/11/2020 0:00	Other	N
150 Jay Ct, Lewisboro	Cross River NY 10518	12/18/2020 0:00	Other	N
150 Jay Ct, Lewisboro	Cross River NY 10518	12/24/2020 0:00	Other	N
150 Jay Ct, Lewisboro	Cross River NY 10518	12/24/2020 0:00	Other	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
150 Jay Ct, Lewisboro	Cross River NY 10518	12/4/2020 0:00	Other	N
150 Jay Ct, Lewisboro	Cross River NY 10518	12/4/2020 0:00	Other	N
150 Jay Ct, Lewisboro	Cross River NY 10518	12/9/2020 0:00	Other	N
150 Jay Ct, Lewisboro	Cross River NY 10518	12/9/2020 0:00	Other	N
150 Jay Ct, Lewisboro	Cross River NY 10518	11/6/2020 0:00	Other	N
150 Jay Ct, Lewisboro	Cross River NY 10518	11/6/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/2/2020 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/2/2020 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/3/2020 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/3/2020 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/3/2020 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/3/2020 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/3/2020 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/3/2020 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/16/2020 0:00	Commercial	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/16/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/16/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/16/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	1/24/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	2/14/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	3/13/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	3/23/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	3/4/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	3/5/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	3/9/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	3/9/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	4/9/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	5/14/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	4/14/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	7/8/2020 0:00	Other	N
4 CAPTAIN LAWRENCE DR, Lewisboro	South Salem NY 10590	1/10/2020 0:00	Single Family	N
134 SPRING ST, Lewisboro	South Salem NY 10590	1/14/2020 0:00	Single Family	N
11 Schoolhouse Rd, Lewisboro	Waccabuc NY 10597	1/7/2020 0:00	Single Family	N
11 Schoolhouse Rd, Lewisboro	Waccabuc NY 10597	5/19/2020 0:00	Single Family	N
288 MEAD ST, Lewisboro	Waccabuc NY 10597	1/22/2020 0:00	Single Family	N
420 POUND RIDGE RD, Lewisboro	South Salem NY 10590	1/6/2020 0:00	Single Family	N
20 CHURCH TAVERN RD, Lewisboro	South Salem NY 10590	2/6/2020 0:00	Single Family	N
44 PINE HILL DR, Lewisboro	South Salem NY 10590	2/10/2020 0:00	Single Family	N
22 MOHAWK TRL, Lewisboro	Katonah NY 10536	1/7/2020 0:00	Single Family	N
972 Route 35, Lewisboro	Cross River NY 10518	1/10/2020 0:00	Single Family	N
972 Route 35, Lewisboro	Cross River NY 10518	11/3/2020 0:00	Single Family	N
7 SOUTHWIND DR, Lewisboro	Cross River NY 10518	2/18/2020 0:00	Single Family	N
10 MANDIA LN, Lewisboro	Goldens Bridge NY 10526	2/27/2020 0:00	Single Family	N
7 MANOR DR, Lewisboro	Goldens Bridge NY 10526	2/27/2020 0:00	Single Family	N

Lewisboro and Pound Ridge

2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
11 Cross Pond Rd, Lewisboro	South Salem NY 10590	2/27/2020 0:00	Single Family	N
11 Cross Pond Rd, Lewisboro	South Salem NY 10590	5/28/2020 0:00	Single Family	N
19 CROSS RIVER RD, Lewisboro	Cross River NY 10518	3/3/2020 0:00	Single Family	N
48 MEAD ST, Lewisboro	Waccabuc NY 10597	1/31/2020 0:00	Single Family	N
260 INCREASE MILLER RD, Lewisboro	Katonah NY 10536	3/11/2020 0:00	Single Family	N
3 BROOK MANOR DR, Lewisboro	South Salem NY 10590	3/12/2020 0:00	Single Family	N
32 CHURCH TAVERN RD, Lewisboro	South Salem NY 10590	3/18/2020 0:00	Single Family	N
20 BOUTONVILLE RD, Lewisboro	Cross River NY 10518	3/18/2020 0:00		N
101 TODD RD, Lewisboro	Katonah NY 10536	3/20/2020 0:00	Single Family	N
7 COVE RD, Lewisboro	South Salem NY 10590	3/24/2020 0:00	Single Family	N
7 COVE RD, Lewisboro	South Salem NY 10590	3/24/2020 0:00	Single Family	N
1 LAURIE LN, Lewisboro	South Salem NY 10590	3/25/2020 0:00	Single Family	N
252 N SALEM RD, Lewisboro	Cross River NY 10518	3/25/2020 0:00	Single Family	N
9 Boutonville Rd So, Lewisboro	Cross River NY 10518	3/26/2020 0:00	Single Family	N
9 Boutonville Rd So, Lewisboro	Cross River NY 10518	8/26/2020 0:00	Single Family	N
58 MEAD ST, Lewisboro	Waccabuc NY 10597	3/26/2020 0:00	Single Family	N
53 BOWAY, Lewisboro	South Salem NY 10590	3/26/2020 0:00	Single Family	N
18 HALL AVE, Lewisboro	Goldens Bridge NY 10526	3/30/2020 0:00	Single Family	N
58 SUNNY RDG, Lewisboro	Katonah NY 10536	2/26/2020 0:00	Single Family	N
58 SUNNY RDG, Lewisboro	Katonah NY 10536	2/26/2020 0:00	Single Family	N
2 GREEN HILL RD, Lewisboro	Goldens Bridge NY 10526	4/1/2020 0:00	Single Family	N
53 COVE RD, Lewisboro	South Salem NY 10590	4/2/2020 0:00	Single Family	N
50 Cove Rd, Lewisboro	South Salem NY 10590	4/2/2020 0:00	Single Family	N
50 Cove Rd, Lewisboro	South Salem NY 10590	4/28/2020 0:00	Single Family	N
50 Cove Rd, Lewisboro	South Salem NY 10590	5/18/2020 0:00	Single Family	N
1 HILLSIDE AVE, Lewisboro	Goldens Bridge NY 10526	4/6/2020 0:00	Single Family	N
41 BOUTONVILLE RD, Lewisboro	Cross River NY 10518	4/6/2020 0:00	Single Family	N
1 BRANCH ST, Lewisboro	Goldens Bridge NY 10526	4/7/2020 0:00	Single Family	N
79 MAIN ST, Lewisboro	South Salem NY 10590	4/8/2020 0:00	Single Family	N
107 BOUTONVILLE RD, Lewisboro	South Salem NY 10590	4/8/2020 0:00	Single Family	N
21 SHOSHONE DR, Lewisboro	Katonah NY 10536	4/8/2020 0:00	Single Family	N
18 TODD HILL CIR, Lewisboro	Goldens Bridge NY 10526	4/9/2020 0:00	Single Family	N
26 Old Bedford Rd, Lewisboro	Goldens Bridge NY 10526	4/10/2020 0:00	Single Family	N
26 Old Bedford Rd, Lewisboro	Goldens Bridge NY 10526	6/3/2020 0:00	Single Family	N
26 Old Bedford Rd, Lewisboro	Goldens Bridge NY 10526	8/27/2020 0:00	Single Family	N
1 LAKEVIEW RD, Lewisboro	South Salem NY 10590	4/14/2020 0:00	Single Family	N
12 MARK MEAD RD, Lewisboro	Cross River NY 10518	3/17/2020 0:00	Single Family	N
19 JONAH'S LN, Lewisboro	Cross River NY 10518	4/17/2020 0:00	Single Family	N
14 HOWLAND DR, Lewisboro	Cross River NY 10518	4/17/2020 0:00	Single Family	N
76 E RIDGE RD, Lewisboro	Waccabuc NY 10597	4/17/2020 0:00	Single Family	N
1 MERRITT CT, Lewisboro	Katonah NY 10536	4/21/2020 0:00	Single Family	N
14 DEER TRACK LN, Lewisboro	Goldens Bridge NY 10526	4/21/2020 0:00	Single Family	N
30 HOLLY HILL LN, Lewisboro	Katonah NY 10536	4/21/2020 0:00	Single Family	N
161 Lake Kitchawan Dr, Lewisboro	South Salem NY 10590	3/20/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
58 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	3/20/2020 0:00	Single Family	N
7 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	3/26/2020 0:00	Single Family	N
43 LAKEVIEW RD, Lewisboro	South Salem NY 10590	3/12/2020 0:00	Single Family	N
7 GRANDVIEW RD, Lewisboro	South Salem NY 10590	2/13/2020 0:00	Single Family	N
21 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	4/27/2020 0:00	Single Family	N
7 BOUTON ST, Lewisboro	South Salem NY 10590	4/28/2020 0:00	Single Family	N
21 W MEADOW RD, Lewisboro	Goldens Bridge NY 10526	4/28/2020 0:00	Single Family	N
21 W MEADOW RD, Lewisboro	Goldens Bridge NY 10526	4/28/2020 0:00	Single Family	N
9 HUNTS LANE, Lewisboro	Cross River NY 10518	5/1/2020 0:00	Single Family	N
22 LAKE ST, Lewisboro	Goldens Bridge NY 10526	5/4/2020 0:00	Single Family	N
232 MEAD ST, Lewisboro	Waccabuc NY 10597	5/4/2020 0:00	Single Family	N
7 THE LOGGING RD, Lewisboro	Waccabuc NY 10597	5/5/2020 0:00	Single Family	N
32 SUNNY RIDGE, Lewisboro	Katonah NY 10536	5/5/2020 0:00	Single Family	N
35 South Mountain Pass, Lewisboro	Katonah NY 10536	5/5/2020 0:00	Single Family	N
1056 RT-35, Lewisboro	Cross River NY 10518	5/5/2020 0:00	Single Family	N
21 DEERFIELD, Lewisboro	Katonah NY 10536	5/5/2020 0:00	Single Family	N
1 WEBB LANE, Lewisboro	Goldens Bridge NY 10526	5/6/2020 0:00	Single Family	N
35 SOUTH SHORE DR, Lewisboro	South Salem NY 10590	5/6/2020 0:00	Single Family	N
33 SALEM LANE, Lewisboro	South Salem NY 10590	5/6/2020 0:00	Single Family	N
62 PINE HILL DR, Lewisboro	South Salem NY 10590	5/8/2020 0:00	Single Family	N
7 WEBB LANE, Lewisboro	Goldens Bridge NY 10526	5/8/2020 0:00	Single Family	N
28 OUTPOST, Lewisboro	Katonah NY 10536	5/8/2020 0:00	Single Family	N
8 TODD HILL CIRCLE, Lewisboro	Goldens Bridge NY 10526	5/11/2020 0:00	Single Family	N
10 Bayberry Lane, Lewisboro	South Salem NY 10590	5/12/2020 0:00	Single Family	N
10 Bayberry Lane, Lewisboro	South Salem NY 10590	5/12/2020 0:00	Single Family	N
13 LAURIE LANE, Lewisboro	South Salem NY 10590	3/13/2020 0:00	Single Family	N
41 EAST RIDGE RD, Lewisboro	Waccabuc NY 10597	5/12/2020 0:00	Single Family	N
15 Anderson Lane, Lewisboro	Goldens Bridge NY 10526	5/15/2020 0:00	Other	N
15 Anderson Lane, Lewisboro	Goldens Bridge NY 10526	5/26/2020 0:00	Other	N
16 SUNNY RIDGE, Lewisboro	Katonah NY 10536	4/1/2020 0:00	Single Family	N
106 RIDGELAND RD, Lewisboro	South Salem NY 10590	4/23/2020 0:00	Single Family	N
14 STEWART RD, Lewisboro	South Salem NY 10590	5/18/2020 0:00	Single Family	N
11 DEBBIE LANE, Lewisboro	Cross River NY 10518	4/16/2020 0:00	Single Family	N
15 South Shore Dr, Lewisboro	South Salem NY 10590	5/19/2020 0:00	Single Family	N
15 South Shore Dr, Lewisboro	South Salem NY 10590	6/23/2020 0:00	Single Family	N
15 South Shore Dr, Lewisboro	South Salem NY 10590	10/16/2020 0:00	Single Family	N
17 GREEN HILL RD, Lewisboro	Goldens Bridge NY 10526	5/19/2020 0:00	Single Family	N
22 OLD POND RD, Lewisboro	South Salem NY 10590	5/20/2020 0:00	Single Family	N
22 OLD POND RD, Lewisboro	South Salem NY 10590	5/20/2020 0:00	Single Family	N
20 SPRING ST SOUTH, Lewisboro	South Salem NY 10590	3/26/2020 0:00	Single Family	N
69 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	5/21/2020 0:00	Single Family	N
1 Spring St South, Lewisboro	South Salem NY 10590	4/14/2020 0:00	Single Family	N
1 Spring St South, Lewisboro	South Salem NY 10590	11/5/2020 0:00	Single Family	N
3 IDA LANE, Lewisboro	South Salem NY 10590	4/16/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
31 Indian Lane, Lewisboro	South Salem NY 10590	4/17/2020 0:00	Single Family	N
31 Indian Lane, Lewisboro	South Salem NY 10590	4/17/2020 0:00	Single Family	N
31 Indian Lane, Lewisboro	South Salem NY 10590	6/23/2020 0:00	Single Family	N
49 EAST RIDGE RD, Lewisboro	Waccabuc NY 10597	5/26/2020 0:00	Single Family	N
72 MARK MEAD RD, Lewisboro	Cross River NY 10518	4/29/2020 0:00	Single Family	N
245 INCREASE MILLER RD, Lewisboro	Katonah NY 10536	4/28/2020 0:00	Single Family	N
41 MAIN ST, Lewisboro	Goldens Bridge NY 10526	5/26/2020 0:00	Single Family	N
8 SALEM LANE, Lewisboro	South Salem NY 10590	5/27/2020 0:00	Single Family	N
257 INCREASE MILLER RD, Lewisboro	Katonah NY 10536	5/27/2020 0:00	Single Family	N
105 RT-35, Lewisboro	South Salem NY 10590	5/27/2020 0:00	Single Family	N
809 CROSS RIVER RD, Lewisboro	Cross River NY 10518	5/28/2020 0:00	Single Family	N
29 PINE HILL DR, Lewisboro	South Salem NY 10590	5/28/2020 0:00	Single Family	N
4 Chapel Rd, Lewisboro	Waccabuc NY 10597	5/28/2020 0:00	Single Family	N
4 Chapel Rd, Lewisboro	Waccabuc NY 10597	5/28/2020 0:00	Single Family	N
25 LOWER SALEM RD, Lewisboro	South Salem NY 10590	5/28/2020 0:00	Single Family	N
46 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	6/1/2020 0:00	Single Family	N
68 RIDGELAND RD, Lewisboro	South Salem NY 10590	6/2/2020 0:00	Single Family	N
34 SOUTH SHORE DR, Lewisboro	South Salem NY 10590	6/2/2020 0:00	Single Family	N
119 OSCALETA RD, Lewisboro	South Salem NY 10590	4/20/2020 0:00	Single Family	N
208 MEAD ST, Lewisboro	Waccabuc NY 10597	6/3/2020 0:00	Single Family	N
23 South Shore Dr, Lewisboro	South Salem NY 10590	6/3/2020 0:00	Single Family	N
23 South Shore Dr, Lewisboro	South Salem NY 10590	8/7/2020 0:00	Single Family	N
23 South Shore Dr, Lewisboro	South Salem NY 10590	7/17/2020 0:00	Single Family	N
23 South Shore Dr, Lewisboro	South Salem NY 10590	9/8/2020 0:00	Single Family	N
23 South Shore Dr, Lewisboro	South Salem NY 10590	12/14/2020 0:00	Single Family	N
23 South Shore Dr, Lewisboro	South Salem NY 10590	12/30/2020 0:00	Single Family	N
29 LOWER SALEM RD, Lewisboro	South Salem NY 10590	6/3/2020 0:00	Single Family	N
3 Mt Holly Rd E, Lewisboro	Katonah NY 10536	6/4/2020 0:00	Single Family	N
3 Mt Holly Rd E, Lewisboro	Katonah NY 10536	6/23/2020 0:00	Single Family	N
3 FLINTLOCK RIDGE RD, Lewisboro	Katonah NY 10536	6/4/2020 0:00	Single Family	N
38 GILBERT ST, Lewisboro	South Salem NY 10590	6/5/2020 0:00	Single Family	N
8 SHOSHONE DR, Lewisboro	Katonah NY 10536	6/8/2020 0:00	Single Family	N
7 COMANCHE CT, Lewisboro	Katonah NY 10536	6/8/2020 0:00	Single Family	N
25 HUNT FARM RD, Lewisboro	Waccabuc NY 10597	6/8/2020 0:00	Single Family	N
19 GILBERT ST, Lewisboro	South Salem NY 10590	6/8/2020 0:00	Single Family	N
19 DEERTRACK LANE, Lewisboro	Goldens Bridge NY 10526	6/8/2020 0:00	Single Family	N
29 BOUTONVILLE RD, Lewisboro	South Salem NY 10590	6/9/2020 0:00	Single Family	N
35 TODD HILL CIRCLE, Lewisboro	Goldens Bridge NY 10526	6/10/2020 0:00	Single Family	N
103 NORTH SALEM RD, Lewisboro	Cross River NY 10518	6/15/2020 0:00	Single Family	N
18 POND ST, Lewisboro	Goldens Bridge NY 10526	6/15/2020 0:00	Single Family	N
39 RIDGELAND RD, Lewisboro	South Salem NY 10590	6/15/2020 0:00	Single Family	N
469 Smith Ridge Rd, Lewisboro	South Salem NY 10590	5/21/2020 0:00	Commercial	N
469 Smith Ridge Rd, Lewisboro	South Salem NY 10590	5/21/2020 0:00	Commercial	N
469 Smith Ridge Rd, Lewisboro	South Salem NY 10590	2/19/2020 0:00	Commercial	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
469 Smith Ridge Rd, Lewisboro	South Salem NY 10590	10/27/2020 0:00	Commercial	N
66 East St, Lewisboro	South Salem NY 10590	5/7/2020 0:00	Single Family	N
4 Laurel Rd, Lewisboro	South Salem NY 10590	5/22/2020 0:00	Single Family	N
7 Upland Ct, Lewisboro	South Salem NY 10590	5/4/2020 0:00	Single Family	N
158 Elmwood Rd, Lewisboro	South Salem NY 10590	10/23/2020 0:00	Single Family	N
250 Smith Ridge Rd, Lewisboro	South Salem NY 10590	3/27/2020 0:00	Single Family	N
111 Smith Ridge Rd, Lewisboro	South Salem NY 10590	8/27/2020 0:00		N
47 Lockwood Rd, Lewisboro	South Salem NY 10590	4/28/2020 0:00	Single Family	N
8 Laurel Rd, Lewisboro	South Salem NY 10590	1/30/2020 0:00	Single Family	N
5 Reservoir Rd, Lewisboro	South Salem NY 10590	8/15/2020 0:00	Single Family	N
4 Robins Ct, Lewisboro	South Salem NY 10590	7/14/2020 0:00	Single Family	N
62 Lockwood Rd, Lewisboro	South Salem NY 10590	9/11/2020 0:00	Single Family	N
8 Silvermine Dr, Lewisboro	South Salem NY 10590	10/16/2020 0:00	Single Family	N
9 Wakeman Rd, Lewisboro	South Salem NY 10590	6/11/2020 0:00	Single Family	N
21 Col Ferris Rd, Lewisboro	South Salem NY 10590	4/7/2020 0:00	Single Family	N
9 East St, Lewisboro	South Salem NY 10590	6/4/2020 0:00	Single Family	N
63 East St, Lewisboro	South Salem NY 10590	9/12/2020 0:00	Single Family	N
5 Old Orchard Rd, Lewisboro	South Salem NY 10590	9/4/2020 0:00	Single Family	N
428 Smith Ridge Rd, Lewisboro	South Salem NY 10590	1/31/2020 0:00	Single Family	N
20 Glen Dr, Lewisboro	South Salem NY 10590	12/12/2020 0:00	Single Family	N
12 Glen Dr, Lewisboro	South Salem NY 10590	8/15/2020 0:00	Single Family	N
24 Glen Dr, Lewisboro	South Salem NY 10590	11/20/2020 0:00	Single Family	N
14 Beaver Pond Ln, Lewisboro	South Salem NY 10590	4/29/2020 0:00	Single Family	N
195 Elmwood Rd, Lewisboro	South Salem NY 10590	2/25/2020 0:00	Single Family	N
348 Smith Ridge Rd, Lewisboro	South Salem NY 10590	1/27/2020 0:00	Single Family	N
9 Silvermine Dr, Lewisboro	South Salem NY 10590	11/19/2020 0:00	Single Family	N
230 Elmwood Rd, Lewisboro	South Salem NY 10590	5/19/2020 0:00	Single Family	N
129 Elmwood Rd, Lewisboro	South Salem NY 10590	12/28/2020 0:00	Single Family	N
3 Tri-Brook Dr, Lewisboro	South Salem NY 10590	10/21/2020 0:00	Single Family	N
10 Lorraine Rd, Lewisboro	South Salem NY 10590	2/3/2020 0:00	Single Family	N
100 East St, Lewisboro	South Salem NY 10590	7/14/2020 0:00	Single Family	N
5 Blueberry Ln, Lewisboro	South Salem NY 10590	1/8/2020 0:00	Single Family	N
65 East St, Lewisboro	South Salem NY 10590	4/15/2020 0:00	Single Family	N
21 West Rd, Lewisboro	South Salem NY 10590	10/26/2020 0:00	Single Family	N
21 West Rd, Lewisboro	South Salem NY 10590	10/26/2020 0:00	Single Family	N
5 Lockwood Rd, Lewisboro	South Salem NY 10590	1/14/2020 0:00	Single Family	N
74 Mill River Rd, Lewisboro	South Salem NY 10590	9/28/2020 0:00	Single Family	N
6 Kingswood Way, Lewisboro	South Salem NY 10590	3/12/2020 0:00	Single Family	N
187 Kitchawan Rd, Lewisboro	South Salem NY 10590	6/25/2020 0:00	Single Family	N
25 West Rd, Lewisboro	South Salem NY 10590	4/23/2020 0:00	Single Family	N
4 Deer Run Rd, Lewisboro	South Salem NY 10590	4/7/2020 0:00	Single Family	N
97 Ridgeland Rd, Lewisboro	South Salem NY 10590	4/11/2020 0:00	Single Family	N
255 Silver Spring Rd, Lewisboro	South Salem NY 10590	8/19/2020 0:00	Single Family	N
6 Robins Ct, Lewisboro	South Salem NY 10590	4/15/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
1 Reservoir Rd, Lewisboro	South Salem NY 10590	5/19/2020 0:00	Single Family	N
257 Smith Ridge Rd, Lewisboro	South Salem NY 10590	1/9/2020 0:00	Single Family	N
57 Elmwood Rd, Lewisboro	South Salem NY 10590	9/11/2020 0:00	Single Family	N
57 Elmwood Rd, Lewisboro	South Salem NY 10590	9/11/2020 0:00	Single Family	N
304 Smith Ridge Rd, Lewisboro	South Salem NY 10590	3/16/2020 0:00	Single Family	N
24 Tri-Brook Dr, Lewisboro	South Salem NY 10590	4/20/2020 0:00	Single Family	N
11 Laurel Rd, Lewisboro	South Salem NY 10590	7/20/2020 0:00	Single Family	N
106 East St, Lewisboro	South Salem NY 10590	8/13/2020 0:00	Single Family	N
59 East St, Lewisboro	South Salem NY 10590	8/5/2020 0:00	Single Family	N
485 Smith Ridge Rd, Lewisboro	South Salem NY 10590	7/31/2020 0:00	Single Family	N
77 Elmwood Rd, Lewisboro	South Salem NY 10590	11/17/2020 0:00	Single Family	N
77 Elmwood Rd, Lewisboro	South Salem NY 10590	11/17/2020 0:00	Single Family	N
77 Elmwood Rd, Lewisboro	South Salem NY 10590	11/17/2020 0:00	Single Family	N
77 Elmwood Rd, Lewisboro	South Salem NY 10590	11/17/2020 0:00	Single Family	N
4 Old Orchard Rd, Lewisboro	South Salem NY 10590	11/23/2020 0:00	Single Family	N
425 Smith Ridge Rd, Lewisboro	South Salem NY 10590	9/23/2020 0:00	Single Family	N
463 Smith Ridge Rd, Lewisboro	South Salem NY 10590	11/3/2020 0:00	Single Family	N
11 Silvermine Dr, Lewisboro	South Salem NY 10590	10/2/2020 0:00	Single Family	N
37 East St, Lewisboro	South Salem NY 10590	12/23/2020 0:00	Single Family	N
11 Lorraine Rd, Lewisboro	South Salem NY 10590	11/25/2020 0:00	Single Family	N
112 Lockwood Rd, Lewisboro	South Salem NY 10590	6/26/2020 0:00	Single Family	N
5 Kenfield Rd, Lewisboro	South Salem NY 10590	1/31/2020 0:00	Single Family	N
236 Kitchawan Rd, Lewisboro	South Salem NY 10590	12/28/2020 0:00	Single Family	N
11 Beaver Pond Ln, Lewisboro	South Salem NY 10590	1/2/2020 0:00	Single Family	N
9 Tri-Brook Dr, Lewisboro	South Salem NY 10590	11/28/2020 0:00	Single Family	N
1 Conant Valley Rd, Lewisboro	South Salem NY 10590	6/23/2020 0:00	Single Family	N
33 Tri-Brook Dr, Lewisboro	South Salem NY 10590	8/11/2020 0:00	Single Family	N
25 Tri-Brook Dr, Lewisboro	South Salem NY 10590	4/24/2020 0:00	Single Family	N
142 Smith Ridge Rd, Lewisboro	South Salem NY 10590	7/7/2020 0:00	Single Family	N
91 Old Church Ln, Lewisboro	Pound Ridge NY 10576	3/23/2020 0:00	Single Family	N
3 Lorraine Rd, Lewisboro	South Salem NY 10590	10/12/2020 0:00	Single Family	N
63 Lockwood Rd, Lewisboro	South Salem NY 10590	11/24/2020 0:00	Single Family	N
54 Smith Ridge Rd, Lewisboro	South Salem NY 10590	1/31/2020 0:00	Single Family	N
54 Smith Ridge Rd, Lewisboro	South Salem NY 10590	4/16/2020 0:00	Single Family	N
54 Smith Ridge Rd, Lewisboro	South Salem NY 10590	9/30/2020 0:00	Single Family	N
127 Smith Ridge Rd, Lewisboro	South Salem NY 10590	10/16/2020 0:00	Single Family	N
223 Elmwood Rd, Lewisboro	South Salem NY 10590	9/19/2020 0:00	Single Family	N
223 Elmwood Rd, Lewisboro	South Salem NY 10590	9/19/2020 0:00	Single Family	N
5 Deepwell Farms Rd, Lewisboro	South Salem NY 10590	10/19/2020 0:00	Single Family	N
10 SILVERMINE DR, Lewisboro	South Salem NY 10590	1/6/2020 0:00	Single Family	N
12 TOMMY'S LN, Lewisboro	South Salem NY 10590	1/6/2020 0:00	Single Family	N
183 JOURNEY'S END RD, Lewisboro	South Salem NY 10590	1/9/2020 0:00	Single Family	N
195 KITCHAWAN RD, Lewisboro	South Salem NY 10590	1/6/2020 0:00	Single Family	N
313 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	2/12/2020 0:00	Other	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
258 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	2/28/2020 0:00	Single Family	N
54 OLD CHURCH LN, Lewisboro	South Salem NY 10590	3/11/2020 0:00	Single Family	N
27 TRI-BROOK DR, Lewisboro	South Salem NY 10590	2/4/2020 0:00	Single Family	N
401 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	2/20/2020 0:00	Commercial	N
229 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	3/12/2020 0:00	Commercial	N
24 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	3/16/2020 0:00	Single Family	N
83 LOCKWOOD RD, Lewisboro	South Salem NY 10590	3/17/2020 0:00	Single Family	N
274 KITCHAWAN RD, Lewisboro	South Salem NY 10590	3/18/2020 0:00	Single Family	N
7 LAUREL RD, Lewisboro	South Salem NY 10590	3/25/2020 0:00	Single Family	N
19 DEEPWELL FARMS RD, Lewisboro	South Salem NY 10590	3/24/2020 0:00	Single Family	N
3 COL FERRIS RD, Lewisboro	South Salem NY 10590	3/26/2020 0:00	Single Family	N
195 ELMWOOD RD, Lewisboro	South Salem NY 10590	2/25/2020 0:00	Single Family	N
11 STONEWALL CT, Lewisboro	South Salem NY 10590	4/2/2020 0:00	Single Family	N
32 CONANT VALLEY RD, Lewisboro	Pound Ridge NY 10576	4/8/2020 0:00	Single Family	N
42 MILL RIVER RD, Lewisboro	South Salem NY 10590	3/19/2020 0:00	Single Family	N
26 WEST LN, Lewisboro	South Salem NY 10590	4/17/2020 0:00	Single Family	N
2 Laurel Rd, Lewisboro	South Salem NY 10590	4/21/2020 0:00	Single Family	N
2 Laurel Rd, Lewisboro	South Salem NY 10590	6/5/2020 0:00	Single Family	N
3 CAROL LN, Lewisboro	South Salem NY 10590	4/22/2020 0:00	Single Family	N
5 KINGSWOOD WAY, Lewisboro	South Salem NY 10590	3/5/2020 0:00	Single Family	N
4 TOMMY'S LN, Lewisboro	South Salem NY 10590	4/24/2020 0:00	Single Family	N
3 DEEPWELL FARMS RD, Lewisboro	South Salem NY 10590	4/27/2020 0:00	Single Family	N
16 WEST RD, Lewisboro	South Salem NY 10590	4/27/2020 0:00	Single Family	N
11 TRI-BROOK DR, Lewisboro	South Salem NY 10590	5/1/2020 0:00	Single Family	N
5 ROBINS WOOD LANE, Lewisboro	South Salem NY 10590	5/4/2020 0:00	Single Family	N
170 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	5/5/2020 0:00	Single Family	N
68 EAST ST, Lewisboro	South Salem NY 10590	5/7/2020 0:00	Single Family	N
20 TRI-BROOK DR, Lewisboro	South Salem NY 10590	5/12/2020 0:00	Single Family	N
377 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	3/30/2020 0:00	Other	N
377 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	3/30/2020 0:00	Other	N
2 SERENITY PLACE, Lewisboro	South Salem NY 10590	3/17/2020 0:00	Single Family	N
14 STONEWALL CT, Lewisboro	South Salem NY 10590	5/14/2020 0:00	Single Family	N
31 CANAAN CIRCLE, Lewisboro	South Salem NY 10590	5/19/2020 0:00	Single Family	N
18 WEST LANE, Lewisboro	South Salem NY 10590	5/19/2020 0:00	Single Family	N
29 MAPLEWOOD DR, Lewisboro	South Salem NY 10590	4/16/2020 0:00		N
11 WEST LANE, Lewisboro	South Salem NY 10590	6/2/2020 0:00	Single Family	N
249 KITCHAWAN RD, Lewisboro	South Salem NY 10590	6/9/2020 0:00	Single Family	N
237 KITCHAWAN RD, Lewisboro	South Salem NY 10590	6/9/2020 0:00	Single Family	N
10 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	6/16/2020 0:00	Single Family	N
97 SPRING ST, Lewisboro	South Salem NY 10590	6/16/2020 0:00	Single Family	N
97 SPRING ST, Lewisboro	South Salem NY 10590	6/16/2020 0:00	Single Family	N
70 Cove Rd, Lewisboro	South Salem NY 10590	6/16/2020 0:00	Single Family	N
70 Cove Rd, Lewisboro	South Salem NY 10590	9/1/2020 0:00	Single Family	N
19 STEWART RD, Lewisboro	South Salem NY 10590	4/25/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
18 BUTTERNUT LANE, Lewisboro	Katonah NY 10536	6/18/2020 0:00	Single Family	N
5 SOUTH SHORE DR, Lewisboro	South Salem NY 10590	6/18/2020 0:00	Single Family	N
2 Hemlock Rd, Lewisboro	South Salem NY 10590	6/18/2020 0:00	Single Family	N
66 UPPER LAKESHORE DR, Lewisboro	Katonah NY 10536	4/29/2020 0:00	Single Family	N
5 SPRING ST SOUTH, Lewisboro	South Salem NY 10590	5/4/2020 0:00	Single Family	N
945 ROUTE 35, Lewisboro	Cross River NY 10518	5/7/2020 0:00	Single Family	N
44 HOYT ST, Lewisboro	South Salem NY 10590	5/7/2020 0:00	Single Family	N
5 TODD HILL CIRCLE, Lewisboro	Goldens Bridge NY 10526	5/11/2020 0:00	Single Family	N
48 MARK MEAD RD, Lewisboro	Cross River NY 10518	5/11/2020 0:00	Single Family	N
102 MEAD ST, Lewisboro	Waccabuc NY 10597	5/11/2020 0:00	Single Family	N
125 TODD RD, Lewisboro	Katonah NY 10536	5/13/2020 0:00	Single Family	N
9 MAKEPEACE HILL, Lewisboro	Waccabuc NY 10597	5/15/2020 0:00	Single Family	N
111 MAIN ST, Lewisboro	South Salem NY 10590	5/15/2020 0:00	Other	N
141 TODD RD, Lewisboro	Katonah NY 10536	5/20/2020 0:00	Single Family	N
8 HUNT FARM RD, Lewisboro	Waccabuc NY 10597	6/25/2020 0:00	Single Family	N
3 KEELER CT, Lewisboro	South Salem NY 10590	5/29/2020 0:00	Single Family	N
100 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	5/22/2020 0:00	Single Family	N
10 CHAPEL CT, Lewisboro	Waccabuc NY 10597	6/26/2020 0:00	Single Family	N
158 MAIN ST, Lewisboro	South Salem NY 10590	5/19/2020 0:00	Single Family	N
43 MAIN ST, Lewisboro	Goldens Bridge NY 10526	6/30/2020 0:00	Single Family	N
13 SCOTTS LANE, Lewisboro	South Salem NY 10590	6/30/2020 0:00	Single Family	N
3 MOHAWK TRAIL, Lewisboro	Katonah NY 10536	6/30/2020 0:00	Single Family	N
10 BISBEE DR, Lewisboro	South Salem NY 10590	7/1/2020 0:00	Single Family	N
35 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	7/1/2020 0:00	Single Family	N
134 UPPER LAKESHORE DR, Lewisboro	Katonah NY 10536	7/6/2020 0:00	Single Family	N
11 BAYBERRY LANE, Lewisboro	South Salem NY 10590	7/6/2020 0:00	Single Family	N
30 HILLTOP RD, Lewisboro	Waccabuc NY 10597	7/7/2020 0:00	Single Family	N
34 OSCALETA RD, Lewisboro	South Salem NY 10590	7/7/2020 0:00	Single Family	N
2 HARBOR PLACE, Lewisboro	South Salem NY 10590	7/7/2020 0:00	Single Family	N
1 MAKEPEACE HILL, Lewisboro	Waccabuc NY 10597	7/5/2020 0:00	Single Family	N
2 WEBB LANE, Lewisboro	Goldens Bridge NY 10526	7/8/2020 0:00	Single Family	N
11 DIANE CT, Lewisboro	Katonah NY 10536	7/8/2020 0:00	Single Family	N
11 DIANE CT, Lewisboro	Katonah NY 10536	7/8/2020 0:00	Single Family	N
109 Boway, Lewisboro	South Salem NY 10590	7/9/2020 0:00	Single Family	N
109 Boway, Lewisboro	South Salem NY 10590	7/9/2020 0:00	Single Family	N
109 Boway, Lewisboro	South Salem NY 10590	7/9/2020 0:00	Single Family	N
109 Boway, Lewisboro	South Salem NY 10590	7/9/2020 0:00	Single Family	N
14 SCOTTS LANE, Lewisboro	South Salem NY 10590	7/9/2020 0:00	Single Family	N
15 SPRING ST SOUTH, Lewisboro	South Salem NY 10590	7/9/2020 0:00	Single Family	N
2 WILD OAKS RD, Lewisboro	Goldens Bridge NY 10526	7/10/2020 0:00	Single Family	N
13 WEST MAIN ST, Lewisboro	Goldens Bridge NY 10526	7/10/2020 0:00	Single Family	N
21 HUNT FARM RD, Lewisboro	Waccabuc NY 10597	7/10/2020 0:00	Single Family	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	7/13/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	7/13/2020 0:00	Other	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
800 Cross River Rd, Lewisboro	Cross River NY 10518	7/30/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	7/30/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	7/30/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	7/30/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	7/28/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	8/28/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	10/5/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	9/29/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	9/29/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	9/25/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	9/17/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	9/17/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	9/17/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	10/20/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	12/23/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	12/23/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	12/23/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	12/23/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	12/23/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	12/23/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	12/23/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	12/23/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	12/23/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	12/24/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	12/24/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	12/28/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	12/28/2020 0:00	Other	N
800 Cross River Rd, Lewisboro	Cross River NY 10518	12/28/2020 0:00	Other	N
3 APACHE CIRCLE, Lewisboro	Katonah NY 10536	7/13/2020 0:00	Single Family	N
11 SHORE TRAIL, Lewisboro	South Salem NY 10590	7/14/2020 0:00	Single Family	N
3 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	7/14/2020 0:00	Single Family	N
15 BUTTERNUT LANE, Lewisboro	Katonah NY 10536	7/15/2020 0:00	Single Family	N
16 MOHAWK TRAIL, Lewisboro	Katonah NY 10536	7/15/2020 0:00	Single Family	N
10 BROOKSIDE TRAIL, Lewisboro	South Salem NY 10590	7/16/2020 0:00	Single Family	N
2 HUNT FARM RD, Lewisboro	Waccabuc NY 10597	6/2/2020 0:00	Single Family	N
788 Route 35, Lewisboro	Cross River NY 10518	7/17/2020 0:00	Commercial	N
788 Route 35, Lewisboro	Cross River NY 10518	7/17/2020 0:00	Commercial	N
788 Route 35, Lewisboro	Cross River NY 10518	12/30/2020 0:00	Commercial	N
18 PAMELA LANE, Lewisboro	South Salem NY 10590	7/20/2020 0:00	Single Family	N
4 MAKEPEACE HILL, Lewisboro	Waccabuc NY 10597	7/20/2020 0:00	Single Family	N
39 BOUTONVILLE RD, Lewisboro	South Salem NY 10590	7/20/2020 0:00	Single Family	N
27 EAST MOUNTAIN RD, Lewisboro	Katonah NY 10536	7/20/2020 0:00	Single Family	N
10 DIANE CT, Lewisboro	Katonah NY 10536	7/20/2020 0:00	Single Family	N
19 South Shore Dr, Lewisboro	South Salem NY 10590	7/20/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
60 Salem Rd, Lewisboro	South Salem NY 10590	6/15/2020 0:00	Other	N
60 Salem Rd, Lewisboro	South Salem NY 10590	6/15/2020 0:00	Other	N
60 Salem Rd, Lewisboro	South Salem NY 10590	6/15/2020 0:00	Other	N
60 Salem Rd, Lewisboro	South Salem NY 10590	9/5/2020 0:00	Other	N
26 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	7/21/2020 0:00	Single Family	N
11 CARRIAGE HOUSE RD, Lewisboro	Waccabuc NY 10597	7/22/2020 0:00	Single Family	N
72 OLD BEDFORD RD, Lewisboro	Goldens Bridge NY 10526	7/22/2020 0:00	Single Family	N
4 DEBBIE LANE, Lewisboro	Cross River NY 10518	7/22/2020 0:00	Single Family	N
20 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	7/24/2020 0:00	Single Family	N
36 S SHORE DR, Lewisboro	South Salem NY 10590	7/28/2020 0:00	Single Family	N
174 RIDGEFIELD AVE, Lewisboro	South Salem NY 10590	7/28/2020 0:00		N
29 TODD RD, Lewisboro	Katonah NY 10536	7/28/2020 0:00	Single Family	N
57 South Shore Dr, Lewisboro	South Salem NY 10590	7/29/2020 0:00	Single Family	N
57 South Shore Dr, Lewisboro	South Salem NY 10590	9/9/2020 0:00	Single Family	N
8 LOIS LANE, Lewisboro	Katonah NY 10536	7/29/2020 0:00	Single Family	N
14 MOHAWK TRAIL, Lewisboro	Katonah NY 10536	7/29/2020 0:00	Single Family	N
21 SALEM LANE, Lewisboro	South Salem NY 10590	7/29/2020 0:00	Single Family	N
137 BOWAY, Lewisboro	South Salem NY 10590	7/29/2020 0:00	Single Family	N
12 North Salem Rd, Lewisboro	Cross River NY 10518	6/29/2020 0:00	Commercial	N
1 APACHE CIRCLE, Lewisboro	Katonah NY 10536	8/3/2020 0:00	Single Family	N
104 CHAPEL RD, Lewisboro	Waccabuc NY 10597	8/3/2020 0:00	Single Family	N
3 CHURCH TAVERN RD, Lewisboro	South Salem NY 10590	8/3/2020 0:00	Single Family	N
39 MARK MEAD RD, Lewisboro	Cross River NY 10518	8/4/2020 0:00	Single Family	N
7 LAURIE LANE, Lewisboro	South Salem NY 10590	8/5/2020 0:00	Single Family	N
14 LAURIE LANE, Lewisboro	South Salem NY 10590	8/5/2020 0:00	Single Family	N
42 SABBATHDAY HILL, Lewisboro	South Salem NY 10590	8/7/2020 0:00	Single Family	N
18 SABBATHDAY HILL, Lewisboro	South Salem NY 10590	6/16/2020 0:00	Single Family	N
15 BISBEE DR, Lewisboro	South Salem NY 10590	8/11/2020 0:00	Single Family	N
22 COVE RD, Lewisboro	South Salem NY 10590	5/15/2020 0:00	Single Family	N
23 EAST MOUNTAIN RD, Lewisboro	Katonah NY 10536	8/13/2020 0:00		N
26 SOUTH MOUNTAIN PASS, Lewisboro	Katonah NY 10536	8/13/2020 0:00	Single Family	N
22 PERCH BAY RD, Lewisboro	Waccabuc NY 10597	6/26/2020 0:00	Single Family	N
5 REDCOAT LANE, Lewisboro	Waccabuc NY 10597	8/14/2020 0:00	Single Family	N
1 HUNT FARM RD, Lewisboro	Waccabuc NY 10597	8/14/2020 0:00	Single Family	N
15 CROSS POND RD, Lewisboro	South Salem NY 10590	7/14/2020 0:00	Single Family	N
27 INDIAN LANE, Lewisboro	South Salem NY 10590	7/14/2020 0:00	Single Family	N
116 NORTH SALEM RD, Lewisboro	Cross River NY 10518	8/17/2020 0:00	Single Family	N
23 WACCABUC RD, Lewisboro	Goldens Bridge NY 10526	8/17/2020 0:00	Single Family	N
65 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	8/17/2020 0:00	Single Family	N
29 LAKE ST, Lewisboro	Goldens Bridge NY 10526	8/18/2020 0:00	Single Family	N
4 CORNEL DR, Lewisboro	Goldens Bridge NY 10526	8/18/2020 0:00	Single Family	N
145 TODD RD, Lewisboro	Katonah NY 10536	8/19/2020 0:00	Single Family	N
32 SABBATHDAY HILL, Lewisboro	South Salem NY 10590	8/20/2020 0:00	Single Family	N
42 ROCK SHELTER RD, Lewisboro	Waccabuc NY 10597	8/21/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
11 WOODS RIDGE, Lewisboro	Katonah NY 10536	8/21/2020 0:00	Single Family	N
78 UPPER LAKE SHORE, Lewisboro	Katonah NY 10536	8/24/2020 0:00	Single Family	N
53 KNAPP RD, Lewisboro	South Salem NY 10590	8/24/2020 0:00	Single Family	N
7 POWDER HILL RD, Lewisboro	Waccabuc NY 10597	8/24/2020 0:00	Single Family	N
33 GILBERT ST, Lewisboro	South Salem NY 10590	7/17/2020 0:00	Single Family	N
7 DEBBIE LANE, Lewisboro	Cross River NY 10518	8/24/2020 0:00	Single Family	N
73 KNAPP RD, Lewisboro	South Salem NY 10590	8/25/2020 0:00	Single Family	N
10 HARBOR PLACE, Lewisboro	South Salem NY 10590	8/25/2020 0:00	Single Family	N
84 NORTH SALEM RD, Lewisboro	Cross River NY 10518	8/25/2020 0:00	Single Family	N
9 HOWE ST, Lewisboro	South Salem NY 10590	8/25/2020 0:00	Single Family	N
4 HILLSIDE AVE, Lewisboro	Goldens Bridge NY 10526	8/25/2020 0:00	Single Family	N
10 HUNTS LANE, Lewisboro	Cross River NY 10518	8/26/2020 0:00	Single Family	N
73 HEMLOCK RD, Lewisboro	South Salem NY 10590	8/26/2020 0:00	Single Family	N
3 COMANCHE CT, Lewisboro	Goldens Bridge NY 10526	8/27/2020 0:00	Single Family	N
23 SPRING ST SOUTH, Lewisboro	South Salem NY 10590	8/27/2020 0:00	Single Family	N
23 SPRING ST SOUTH, Lewisboro	South Salem NY 10590	8/27/2020 0:00	Single Family	N
199 TODD RD, Lewisboro	Katonah NY 10536	8/27/2020 0:00	Single Family	N
38 BOUTONVILLE RD, Lewisboro	South Salem NY 10590	8/31/2020 0:00	Single Family	N
25 PINE HILL DR, Lewisboro	South Salem NY 10590	9/1/2020 0:00	Single Family	N
6 BUTTERNUT LANE, Lewisboro	Katonah NY 10536	9/2/2020 0:00		N
9 BILLINGSLEY TRAIL, Lewisboro	Goldens Bridge NY 10526	9/8/2020 0:00	Single Family	N
30 BOUTONVILLE RD, Lewisboro	South Salem NY 10590	6/1/2020 0:00	Single Family	N
1 LAKE SHORE DR, Lewisboro	South Salem NY 10590	9/10/2020 0:00	Single Family	N
43 MAIN ST, Lewisboro	South Salem NY 10590	9/10/2020 0:00	Single Family	N
65 BENEDICT RD, Lewisboro	South Salem NY 10590	9/10/2020 0:00	Single Family	N
16 BUTTERNUT LANE, Lewisboro	Katonah NY 10536	9/11/2020 0:00	Single Family	N
110 NORTH SALEM RD, Lewisboro	Cross River NY 10518	1/28/2020 0:00	Single Family	N
62 Mead St, Lewisboro	Waccabuc NY 10597	9/11/2020 0:00	Single Family	N
62 Mead St, Lewisboro	Waccabuc NY 10597	9/17/2020 0:00	Single Family	N
20 TARRY-A-BIT DR, Lewisboro	Waccabuc NY 10597	2/29/2020 0:00	Single Family	N
174 MEAD ST, Lewisboro	Waccabuc NY 10597	3/29/2020 0:00	Single Family	N
12 Tarry-A-Bit Dr, Lewisboro	Waccabuc NY 10597	9/15/2020 0:00	Single Family	N
12 Tarry-A-Bit Dr, Lewisboro	Waccabuc NY 10597	11/23/2020 0:00	Single Family	N
7 APPLE HILL CT, Lewisboro	South Salem NY 10590	9/16/2020 0:00	Single Family	N
7 APPLE HILL CT, Lewisboro	South Salem NY 10590	9/16/2020 0:00	Single Family	N
67 Chapel Rd, Lewisboro	Waccabuc NY 10597	4/11/2020 0:00	Single Family	N
41 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	9/17/2020 0:00	Single Family	N
21 LAKE SHORE DR, Lewisboro	South Salem NY 10590	9/17/2020 0:00	Single Family	N
2 BOUTON RD, Lewisboro	South Salem NY 10590	9/18/2020 0:00	Single Family	N
47 TODD RD, Lewisboro	Katonah NY 10536	9/18/2020 0:00	Single Family	N
70 COVE RD, Lewisboro	N/A	9/21/2020 0:00	Single Family	N
249 MEAD ST, Lewisboro	Waccabuc NY 10597	9/21/2020 0:00	Single Family	N
19 SPRING ST SOUTH, Lewisboro	South Salem NY 10590	8/10/2020 0:00		N
221 N SALEM RD, Lewisboro	N/A	9/21/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
28 INDIAN LANE, Lewisboro	South Salem NY 10590	8/21/2020 0:00	Single Family	N
23 SALEM LANE, Lewisboro	South Salem NY 10590	9/24/2020 0:00		N
21 Todd Hill Circle, Lewisboro	Goldens Bridge NY 10526	8/13/2020 0:00	Single Family	N
11 PAMELA LANE, Lewisboro	South Salem NY 10590	8/14/2020 0:00	Single Family	N
30 CHAPEL RD, Lewisboro	Waccabuc NY 10597	9/28/2020 0:00	Single Family	N
21 SCOTTS LANE, Lewisboro	South Salem NY 10590	9/28/2020 0:00	Single Family	N
20 BOUTON ST, Lewisboro	South Salem NY 10590	9/29/2020 0:00	Single Family	N
4 LOIS LANE, Lewisboro	Katonah NY 10536	9/30/2020 0:00	Single Family	N
65 BOUTONVILLE RD, Lewisboro	South Salem NY 10590	9/30/2020 0:00	Single Family	N
19 Ashwood Rd, Lewisboro	South Salem NY 10590	9/30/2020 0:00	Single Family	N
19 Ashwood Rd, Lewisboro	South Salem NY 10590	11/9/2020 0:00	Single Family	N
101 POST OFFICE RD, Lewisboro	South Salem NY 10590	10/1/2020 0:00	Single Family	N
5 SHADY GLEN CT, Lewisboro	South Salem NY 10590	10/2/2020 0:00	Single Family	N
146 POST OFFICE RD, Lewisboro	South Salem NY 10590	10/2/2020 0:00	Single Family	N
47 SOUTH SHORE DR, Lewisboro	South Salem NY 10590	10/2/2020 0:00	Single Family	N
16 HOLLY HILL LANE, Lewisboro	Katonah NY 10536	10/2/2020 0:00	Single Family	N
135 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	10/6/2020 0:00	Single Family	N
238 MEAD ST, Lewisboro	Waccabuc NY 10597	10/6/2020 0:00	Single Family	N
16 OLD SHOP RD, Lewisboro	Cross River NY 10518	10/6/2020 0:00	Single Family	N
2 CROSS POND RD, Lewisboro	South Salem NY 10590	10/6/2020 0:00	Single Family	N
4 MAIN ST, Lewisboro	N/A	10/7/2020 0:00	Single Family	N
71 NORTH SALEM RD, Lewisboro	Cross River NY 10518	10/7/2020 0:00	Single Family	N
6 SALEM LANE, Lewisboro	South Salem NY 10590	10/8/2020 0:00	Single Family	N
20 POST OFFICE RD, Lewisboro	Waccabuc NY 10597	10/8/2020 0:00	Single Family	N
11 MOHAWK TRAIL, Lewisboro	Katonah NY 10536	10/13/2020 0:00	Single Family	N
2 MOHAWK TRAIL, Lewisboro	Katonah NY 10536	10/13/2020 0:00	Single Family	N
22 OLD BEDFORD RD, Lewisboro	Goldens Bridge NY 10526	9/25/2020 0:00	Single Family	N
5 Makepeace Hill, Lewisboro	Waccabuc NY 10597	10/19/2020 0:00	Single Family	N
5 Makepeace Hill, Lewisboro	Waccabuc NY 10597	11/28/2020 0:00	Single Family	N
7 NORTH LAKE CIRCLE, Lewisboro	South Salem NY 10590	10/21/2020 0:00	Single Family	N
15 LAKEVIEW RD, Lewisboro	South Salem NY 10590	10/22/2020 0:00	Single Family	N
15 CORNEL DR, Lewisboro	Goldens Bridge NY 10526	10/21/2020 0:00	Single Family	N
29 SOUTH MOUNTAIN PASS, Lewisboro	Katonah NY 10536	9/10/2020 0:00	Single Family	N
23 SUNNY RIDGE, Lewisboro	Katonah NY 10536	9/10/2020 0:00	Single Family	N
5 BIG WOODS TRAIL, Lewisboro	Katonah NY 10536	9/10/2020 0:00	Single Family	N
8 BUTTERNUT LANE, Lewisboro	Katonah NY 10536	9/21/2020 0:00	Single Family	N
53 SUNNY RIDGE, Lewisboro	Katonah NY 10536	9/24/2020 0:00	Single Family	N
21 BAYBERRY LANE, Lewisboro	South Salem NY 10590	9/25/2020 0:00	Single Family	N
20 BAYBERRY LANE, Lewisboro	South Salem NY 10590	9/25/2020 0:00	Single Family	N
1 FAY LANE, Lewisboro	South Salem NY 10590	10/26/2020 0:00	Single Family	N
3 BILLINGSLEY TRAIL, Lewisboro	Goldens Bridge NY 10526	10/27/2020 0:00	Single Family	N
5 MOHAWK TRAIL, Lewisboro	Katonah NY 10536	10/28/2020 0:00	Single Family	N
8 CAPTAIN LAWRENCE DR, Lewisboro	South Salem NY 10590	10/29/2020 0:00	Single Family	N
6 MARK MEAD RD, Lewisboro	Cross River NY 10518	10/29/2020 0:00	Single Family	N

Lewisboro and Pound Ridge

2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
11 HOLLY HILL LANE, Lewisboro	Katonah NY 10536	11/4/2020 0:00	Single Family	N
23 MARK MEAD RD, Lewisboro	Cross River NY 10518	11/4/2020 0:00	Single Family	N
35 NORTH SALEM RD, Lewisboro	Cross River NY 10518	11/5/2020 0:00	Single Family	N
7 TODD HILL CIRCLE, Lewisboro	Goldens Bridge NY 10526	11/6/2020 0:00	Single Family	N
37 BRUNDIGE DR, Lewisboro	Goldens Bridge NY 10526	11/9/2020 0:00	Single Family	N
17 BAYBERRY LANE, Lewisboro	South Salem NY 10590	11/9/2020 0:00	Single Family	N
17 TODD HILL CIRCLE, Lewisboro	Goldens Bridge NY 10526	11/10/2020 0:00	Single Family	N
5 MT HOLLY RD E, Lewisboro	Katonah NY 10536	10/14/2020 0:00	Single Family	N
28 CROSS POND RD, Lewisboro	South Salem NY 10590	11/12/2020 0:00	Single Family	N
29 Knapp Rd, Lewisboro	South Salem NY 10590	11/12/2020 0:00	Single Family	N
29 Knapp Rd, Lewisboro	South Salem NY 10590	12/31/2020 0:00	Single Family	N
29 Knapp Rd, Lewisboro	South Salem NY 10590	12/31/2020 0:00	Single Family	N
1 JAY CT, Lewisboro	Cross River NY 10518	11/13/2020 0:00	Commercial	N
45 TODD HILL CIRCLE, Lewisboro	Goldens Bridge NY 10526	10/13/2020 0:00	Single Family	N
51 TODD HILL CIRCLE, Lewisboro	Goldens Bridge NY 10526	11/13/2020 0:00	Single Family	N
2 HUNTS LANE, Lewisboro	Cross River NY 10518	10/8/2020 0:00	Single Family	N
2 WACCABUC RIVER LN, Lewisboro	South Salem NY 10590	10/8/2020 0:00	Single Family	N
57 TODD HILL CIRCLE, Lewisboro	Goldens Bridge NY 10526	10/19/2020 0:00	Single Family	N
5 WOODWAY, Lewisboro	South Salem NY 10590	10/20/2020 0:00	Single Family	N
56 E RIDGE RD, Lewisboro	Waccabuc NY 10597	11/20/2020 0:00	Single Family	N
27 OLD SHOP RD, Lewisboro	south salem NY 10590	11/23/2020 0:00	Single Family	N
52 SABBATHDAY HILL, Lewisboro	South Salem NY 10590	11/23/2020 0:00	Single Family	N
7 CORNEL DR, Lewisboro	N/A	11/24/2020 0:00	Single Family	N
26 BOUTON ST, Lewisboro	South Salem NY 10590	11/25/2020 0:00	Single Family	N
6 LONG POND RD, Lewisboro	Waccabuc NY 10597	11/25/2020 0:00	Single Family	N
53 Church Tavern Rd, Lewisboro	South Salem NY 10590	11/25/2020 0:00	Single Family	N
53 Church Tavern Rd, Lewisboro	South Salem NY 10590	11/25/2020 0:00	Single Family	N
19 JONAH'S LANE, Lewisboro	Cross River NY 10518	12/1/2020 0:00	Single Family	N
69 RIDGELAND RD, Lewisboro	South Salem NY 10590	12/1/2020 0:00	Single Family	N
1 SOUTH WIND DR, Lewisboro	Cross River NY 10518	12/1/2020 0:00	Single Family	N
29 INDIAN LANE, Lewisboro	South Salem NY 10590	12/3/2020 0:00	Single Family	N
29 INDIAN LANE, Lewisboro	South Salem NY 10590	12/3/2020 0:00	Single Family	N
140 OSCALETA RD, Lewisboro	South Salem NY 10590	9/26/2020 0:00	Single Family	N
33 SABBATHDAY HILL, Lewisboro	South Salem NY 10590	12/3/2020 0:00	Single Family	N
266 NORTH SALEM RD, Lewisboro	Cross River NY 10518	12/4/2020 0:00	Single Family	N
40 N Salem Rd, Lewisboro	Cross River NY 10518	10/21/2020 0:00	Other	N
40 N SALEM RD, Lewisboro	Cross River NY 10518	10/21/2020 0:00	Other	N
10 BILLINGSLEY TRAIL, Lewisboro	Goldens Bridge NY 10526	12/8/2020 0:00	Single Family	N
190 PARK RD EXT, Lewisboro	Goldens Bridge NY 10526	12/9/2020 0:00	Commercial	N
144 MAIN ST, Lewisboro	South Salem NY 10590	12/10/2020 0:00	Single Family	N
6 HILLTOP RD, Lewisboro	Waccabuc NY 10597	12/10/2020 0:00	Single Family	N
215 TODD RD, Lewisboro	Katonah NY 10536	12/10/2020 0:00	Single Family	N
163 MEAD ST, Lewisboro	Waccabuc NY 10597	10/15/2020 0:00	Single Family	N
163 MEAD ST, Lewisboro	Waccabuc NY 10597	10/15/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
7 CORNWALL CT, Lewisboro	Katonah NY 10536	10/15/2020 0:00	Single Family	N
16 BILLINGSLEY TRAIL, Lewisboro	Goldens Bridge NY 10526	12/15/2020 0:00	Single Family	N
6 DOGWOOD LN, Lewisboro	South Salem NY 10590	12/15/2020 0:00	Single Family	N
2 TRUESDALE WOODS RD, Lewisboro	South Salem NY 10590	12/15/2020 0:00	Single Family	N
26 INDIAN LANE, Lewisboro	South Salem NY 10590	12/18/2020 0:00	Single Family	N
39 SABBATHDAY HILL, Lewisboro	South Salem NY 10590	12/21/2020 0:00	Single Family	N
12 DEBBIE LANE, Lewisboro	Cross River NY 10518	12/22/2020 0:00	Single Family	N
104 PARK RD EXT, Lewisboro	Goldens Bridge NY 10526	12/23/2020 0:00	Commercial	N
104 PARK RD EXT, Lewisboro	Goldens Bridge NY 10526	12/23/2020 0:00	Commercial	N
11 LONGVIEW RD, Lewisboro	South Salem NY 10590	11/12/2020 0:00	Single Family	N
84 RIDGELAND RD, Lewisboro	South Salem NY 10590	11/17/2020 0:00	Single Family	N
11 BILLINGSLEY TRAIL, Lewisboro	Goldens Bridge NY 10526	11/18/2020 0:00	Single Family	N
6 FAY LANE, Lewisboro	South Salem NY 10590	11/5/2020 0:00	Single Family	N
26 OLD BEDFORD RD, Lewisboro	Goldens Bridge NY 10526	12/28/2020 0:00	Single Family	N
7 OUTPOST, Lewisboro	Katonah NY 10536	12/29/2020 0:00	Single Family	N
24 HOLLY HILL LANE, Lewisboro	Katonah NY 10536	12/29/2020 0:00	Single Family	N
2 BISBEE DR, Lewisboro	South Salem NY 10590	12/30/2020 0:00	Single Family	N
40 INDIAN HILL RD, Lewisboro	Katonah NY 10536	12/31/2020 0:00	Single Family	N
98 LAKE PATH, Lewisboro	South Salem NY 10590	11/3/2020 0:00	Single Family	N
47 LAKE SHORE DR, Lewisboro	South Salem NY 10590	11/5/2020 0:00	Single Family	N
11 SALEM LANE, Lewisboro	South Salem NY 10590	11/12/2020 0:00	Single Family	N
30 SOUTH SHORE DR, Lewisboro	South Salem NY 10590	11/27/2020 0:00	Single Family	N
35 TRUESDALE LAKE DR, Lewisboro	South Salem NY 10590	12/8/2020 0:00	Single Family	N
4 FAY LANE, Lewisboro	South Salem NY 10590	12/8/2020 0:00	Single Family	N
12 BOWAY, Lewisboro	South Salem NY 10590	12/16/2020 0:00	Single Family	N
25 BEAVER POND LANE, Lewisboro	South Salem NY 10590	4/14/2020 0:00	Single Family	N
166 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	4/24/2020 0:00	Single Family	N
5 CANAAN CIRCLE, Lewisboro	South Salem NY 10590	4/24/2020 0:00	Single Family	N
61 EAST ST, Lewisboro	South Salem NY 10590	5/7/2020 0:00	Single Family	N
165 ELMWOOD RD, Lewisboro	South Salem NY 10590	5/22/2020 0:00	Single Family	N
65 GRANDVIEW RD, Lewisboro	South Salem NY 10590	5/6/2020 0:00	Single Family	N
123 LOCKWOOD RD, Lewisboro	South Salem NY 10590	6/22/2020 0:00	Single Family	N
6 TOMMY'S LANE, Lewisboro	South Salem NY 10590	6/22/2020 0:00	Single Family	N
31 Elmwood Rd, Lewisboro	South Salem NY 10590	5/21/2020 0:00	Single Family	N
4 RESERVOIR RD, Lewisboro	South Salem NY 10590	5/19/2020 0:00	Single Family	N
118 EAST ST, Lewisboro	South Salem NY 10590	7/2/2020 0:00	Single Family	N
34 OLD CHURCH LANE, Lewisboro	South Salem NY 10590	7/6/2020 0:00	Single Family	N
21 WEST LANE, Lewisboro	South Salem NY 10590	7/6/2020 0:00	Single Family	N
47 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	7/8/2020 0:00	Single Family	N
22 SILVERMINE DR, Lewisboro	South Salem NY 10590	7/10/2020 0:00	Single Family	N
17 ROBINS WOOD LANE, Lewisboro	South Salem NY 10590	6/11/2020 0:00	Single Family	N
457 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	6/4/2020 0:00	Single Family	N
1 DEEPWELL FARMS RD, Lewisboro	South Salem NY 10590	6/14/2020 0:00	Single Family	N
46 LAKE KITCHAWAN DR, Lewisboro	South Salem NY 10590	7/15/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
50 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	7/17/2020 0:00	Single Family	N
28 WEST LANE, Lewisboro	South Salem NY 10590	7/20/2020 0:00	Single Family	N
25 EAST ST, Lewisboro	South Salem NY 10590	7/31/2020 0:00	Single Family	N
124 EAST ST, Lewisboro	South Salem NY 10590	7/31/2020 0:00	Single Family	N
121 EAST ST, Lewisboro	South Salem NY 10590	7/2/2020 0:00	Single Family	N
153 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	7/5/2020 0:00	Single Family	N
9 GLEN DR, Lewisboro	South Salem NY 10590	7/3/2020 0:00	Single Family	N
4 DOUGLAS DR, Lewisboro	South Salem NY 10590	7/5/2020 0:00	Single Family	N
16 BIRCH RD, Lewisboro	South Salem NY 10590	7/9/2020 0:00	Single Family	N
166 JOURNEY'S END RD, Lewisboro	South Salem NY 10590	8/17/2020 0:00	Single Family	N
2 CAROL LANE, Lewisboro	South Salem NY 10590	8/24/2020 0:00	Single Family	N
3 DOUGLAS DR, Lewisboro	South Salem NY 10590	8/26/2020 0:00	Single Family	N
22 BEAVER POND LANE, Lewisboro	South Salem NY 10590	8/15/2020 0:00	Single Family	N
1 ROBINS WOOD LANE, Lewisboro	South Salem NY 10590	8/15/2020 0:00	Single Family	N
18 TRI-BROOK DR, Lewisboro	South Salem NY 10590	9/8/2020 0:00	Single Family	N
3 BEAVER POND LANE, Lewisboro	South Salem NY 10590	9/10/2020 0:00	Single Family	N
73 EAST ST, Lewisboro	South Salem NY 10590	9/15/2020 0:00	Single Family	N
8 HILLCREST CT, Lewisboro	South Salem NY 10590	8/27/2020 0:00	Single Family	N
10 WEST LANE, Lewisboro	South Salem NY 10590	8/10/2020 0:00	Single Family	N
10 LAUREL RD, Lewisboro	South Salem NY 10590	9/22/2020 0:00	Single Family	N
14 GLEN DR, Lewisboro	South Salem NY 10590	8/17/2020 0:00	Single Family	N
91 MILL RIVER RD, Lewisboro	South Salem NY 10590	9/29/2020 0:00	Single Family	N
16 TRI-BROOK DR, Lewisboro	South Salem NY 10590	9/17/2020 0:00	Single Family	N
15 TOMMY'S LANE, Lewisboro	South Salem NY 10590	10/16/2020 0:00	Single Family	N
2 MILLSTONE LANE, Lewisboro	South Salem NY 10590	10/16/2020 0:00	Single Family	N
264 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	10/19/2020 0:00	Single Family	N
38 WEST RD, Lewisboro	South Salem NY 10590	10/22/2020 0:00		N
19 GLEN DR, Lewisboro	South Salem NY 10590	10/22/2020 0:00	Single Family	N
9 LEDGEWOOD LANE, Lewisboro	South Salem NY 10590	10/22/2020 0:00	Single Family	N
1 LEDGEWOOD LANE, Lewisboro	South Salem NY 10590	10/22/2020 0:00	Single Family	N
169 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	9/21/2020 0:00	Single Family	N
3 SERENITY PLACE, Lewisboro	South Salem NY 10590	10/26/2020 0:00	Single Family	N
62 WEST RD, Lewisboro	South Salem NY 10590	9/4/2020 0:00	Single Family	N
12 Soundview Loop, Lewisboro	South Salem NY 10590	9/12/2020 0:00	Single Family	N
12 Soundview Loop, Lewisboro	South Salem NY 10590	9/12/2020 0:00	Single Family	N
4 ROBINS WOOD LANE, Lewisboro	South Salem NY 10590	9/19/2020 0:00	Single Family	N
3 CANAAN CIRCLE, Lewisboro	South Salem NY 10590	9/23/2020 0:00	Single Family	N
9 WEST LANE, Lewisboro	South Salem NY 10590	11/2/2020 0:00	Single Family	N
459 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	11/5/2020 0:00	Single Family	N
15 KINGSWOOD WAY, Lewisboro	South Salem NY 10590	10/16/2020 0:00	Single Family	N
8 TOMMY'S LANE, Lewisboro	South Salem NY 10590	10/21/2020 0:00	Single Family	N
15 TRI-BROOK DR, Lewisboro	South Salem NY 10590	10/1/2020 0:00	Single Family	N
128 EAST ST, Lewisboro	South Salem NY 10590	10/1/2020 0:00	Single Family	N
5 BRISCOE RD, Lewisboro	South Salem NY 10590	10/1/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
17 COL FERRIS RD, Lewisboro	South Salem NY 10590	11/16/2020 0:00	Single Family	N
26 SHADY LANE, Lewisboro	South Salem NY 10590	10/28/2020 0:00	Single Family	N
5 TOMMY'S LANE, Lewisboro	South Salem NY 10590	11/20/2020 0:00	Single Family	N
4 TRI-BROOK DR, Lewisboro	South Salem NY 10590	11/24/2020 0:00	Single Family	N
2 WEST LANE, Lewisboro	South Salem NY 10590	11/25/2020 0:00	Single Family	N
15 ELMWOOD RD, Lewisboro	South Salem NY 10590	12/2/2020 0:00	Single Family	N
18 BEAVER POND LANE, Lewisboro	South Salem NY 10590	12/9/2020 0:00	Single Family	N
21 CONANT VALLEY RD, Lewisboro	South Salem NY 10590	12/10/2020 0:00	Single Family	N
149 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	12/11/2020 0:00	Single Family	N
6 BRISCOE RD, Lewisboro	South Salem NY 10590	11/5/2020 0:00	Single Family	N
3 TIMBERWOOD PLACE, Lewisboro	South Salem NY 10590	10/28/2020 0:00	Single Family	N
363 SMITH RIDGE RD, Lewisboro	South Salem NY 10590	12/28/2020 0:00	Single Family	N
10 Hoyt Rd, Pound Ridge	Pound Ridge NY 10576	7/15/2020 0:00	Single Family	N
25 Spring House Rd, Pound Ridge	Pound Ridge NY 10576	5/27/2020 0:00	Single Family	N
52 Honey Hollow Rd, Pound Ridge	Pound Ridge NY 10576	5/4/2020 0:00	Single Family	N
81 Lyndel Rd, Pound Ridge	Pound Ridge NY 10576	4/10/2020 0:00	Single Family	N
81 Lyndel Rd, Pound Ridge	Pound Ridge NY 10576	4/10/2020 0:00	Single Family	N
270 Stone Hill Rd, Pound Ridge	Pound Ridge NY 10576	5/7/2020 0:00	Single Family	N
315 Salem Rd, Pound Ridge	Pound Ridge NY 10576	7/15/2020 0:00	Single Family	N
5 Highview Rd, Pound Ridge	Pound Ridge NY 10576	3/17/2020 0:00	Single Family	N
203 Salem Rd, Pound Ridge	Pound Ridge NY 10576	6/9/2020 0:00	Single Family	N
139 Old Stone Hill Rd, Pound Ridge	Pound Ridge NY 10576	6/24/2020 0:00	Single Family	N
12 Major Lockwood Ln, Pound Ridge	Pound Ridge NY 10576	10/15/2020 0:00	Single Family	N
28 Knapp Rd, Pound Ridge	Pound Ridge NY 10576	8/12/2020 0:00	Single Family	N
120 Brook Farm Rd E, Pound Ridge	Pound Ridge NY 10576	6/11/2020 0:00	Single Family	N
115 Cross Pond Rd, Pound Ridge	Pound Ridge NY 10576	5/5/2020 0:00	Single Family	N
118 Park View Rd, Pound Ridge	Pound Ridge NY 10576	3/18/2020 0:00	Single Family	N
81 Scofield Rd, Pound Ridge	Pound Ridge NY 10576	6/22/2020 0:00	Single Family	N
66 Cross River Rd, Pound Ridge	Pound Ridge NY 10576	8/4/2020 0:00	Single Family	N
138 Boutonville Rd, Pound Ridge	Pound Ridge NY 10576	1/8/2020 0:00	Single Family	N
46 West Ln, Pound Ridge	Pound Ridge NY 10576	6/29/2020 0:00	Single Family	N
81 Cross River Rd, Pound Ridge	Pound Ridge NY 10576	3/4/2020 0:00	Single Family	N
240 Salem Rd, Pound Ridge	Pound Ridge NY 10576	7/15/2020 0:00	Single Family	N
240 Salem Rd, Pound Ridge	Pound Ridge NY 10576	9/29/2020 0:00	Single Family	N
152 Honey Hollow Rd, Pound Ridge	Pound Ridge NY 10576	4/25/2020 0:00	Single Family	N
98 Park View Rd, Pound Ridge	Pound Ridge NY 10576	7/7/2020 0:00	Single Family	N
74 West Ln, Pound Ridge	Pound Ridge NY 10576	9/22/2020 0:00	Single Family	N
74 West Ln, Pound Ridge	Pound Ridge NY 10576	9/22/2020 0:00	Single Family	N
74 West Ln, Pound Ridge	Pound Ridge NY 10576	9/22/2020 0:00	Single Family	N
18 Schoolhouse Rd, Pound Ridge	Pound Ridge NY 10576	7/16/2020 0:00	Single Family	N
89 Cross Pond Rd, Pound Ridge	Pound Ridge NY 10576	8/7/2020 0:00	Single Family	N
121 Brook Farm Rd E, Pound Ridge	Pound Ridge NY 10576	10/27/2020 0:00	Single Family	N
12 Old Logging Rd, Pound Ridge	Bedford NY 10506	8/25/2020 0:00	Single Family	N
340 Salem Rd, Pound Ridge	Pound Ridge NY 10576	9/16/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
340 Salem Rd, Pound Ridge	Pound Ridge NY 10576	9/16/2020 0:00	Single Family	N
40 Knapp Rd, Pound Ridge	Pound Ridge NY 10576	9/15/2020 0:00	Single Family	N
152 Old Stone Hill Rd, Pound Ridge	Pound Ridge NY 10576	7/28/2020 0:00	Single Family	N
317 Stone Hill Rd, Pound Ridge	Pound Ridge NY 10576	8/19/2020 0:00	Single Family	N
34 Knapp Rd, Pound Ridge	Pound Ridge NY 10576	2/21/2020 0:00	Single Family	N
10 Shad Rd W, Pound Ridge	Pound Ridge NY 10576	1/17/2020 0:00	Single Family	N
103 Dann Farm Rd, Pound Ridge	Pound Ridge NY 10576	4/30/2020 0:00	Single Family	N
11 Sellecks Walk, Pound Ridge	Pound Ridge NY 10576	12/10/2020 0:00	Single Family	N
118 Old Mill River Rd, Pound Ridge	Pound Ridge NY 10576	8/12/2020 0:00	Single Family	N
14 Cedar Hill Ln, Pound Ridge	Pound Ridge NY 10576	4/3/2020 0:00	Single Family	N
15 Benger Rd, Pound Ridge	Pound Ridge NY 10576	3/2/2020 0:00	Single Family	N
160 Old Church Ln, Pound Ridge	Pound Ridge NY 10576	5/21/2020 0:00	Single Family	N
160 Old Church Ln, Pound Ridge	Pound Ridge NY 10576	5/21/2020 0:00	Single Family	N
160 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	5/22/2020 0:00	Single Family	N
184 Barnegat Rd, Pound Ridge	Pound Ridge NY 10576	9/24/2020 0:00	Single Family	N
251 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	12/21/2020 0:00	Single Family	N
257 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	10/9/2020 0:00	Commercial	N
30 Austin Hill Rd, Pound Ridge	Pound Ridge NY 10576	10/8/2020 0:00	Single Family	N
30 Laurel Rd, Pound Ridge	Pound Ridge NY 10576	12/3/2020 0:00	Single Family	N
309 Pine Brook Rd, Pound Ridge	Bedford NY 10506	8/13/2020 0:00	Single Family	N
34 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	10/20/2020 0:00	Single Family	N
36 Dann Farm Rd, Pound Ridge	Pound Ridge NY 10576	4/22/2020 0:00	Single Family	N
4 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	5/7/2020 0:00	Single Family	N
40 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	1/30/2020 0:00	Multi Family	N
40 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	8/11/2020 0:00	Multi Family	N
5 Heerdt Farm Ln, Pound Ridge	Pound Ridge NY 10576	5/8/2020 0:00	Single Family	N
54 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	6/29/2020 0:00	Commercial	N
59 Dann Farm Rd, Pound Ridge	Pound Ridge NY 10576	8/15/2020 0:00	Single Family	N
59 Lower Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	5/18/2020 0:00	Single Family	N
6 Old Pound Rd, Pound Ridge	Pound Ridge NY 10576	12/21/2020 0:00	Single Family	N
69 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	5/12/2020 0:00	Commercial	N
69 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	1/7/2020 0:00	Commercial	N
69 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	11/20/2020 0:00	Commercial	N
7 Calf Pasture Ln, Pound Ridge	Pound Ridge NY 10576	7/30/2020 0:00	Single Family	N
72 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	9/15/2020 0:00	Commercial	N
75 Dann Farm Rd, Pound Ridge	Pound Ridge NY 10576	2/6/2020 0:00	Single Family	N
8 Samuel Dann Way, Pound Ridge	Pound Ridge NY 10576	7/29/2020 0:00	Single Family	N
99 High Ridge Rd, Pound Ridge	Pound Ridge NY 10576	5/7/2020 0:00	Single Family	N
31 Old Snake Hill Rd, Pound Ridge	Pound Ridge NY 10576	8/11/2020 0:00	Single Family	N
92 Salem Rd, Pound Ridge	Pound Ridge NY 10576	10/5/2020 0:00	Single Family	N
26 Waterbury Way, Pound Ridge	Pound Ridge NY 10576	8/17/2020 0:00	Single Family	N
22 Bayberry Way, Pound Ridge	Pound Ridge NY 10576	8/31/2020 0:00	Single Family	N
6 Bishop Park Rd, Pound Ridge	Pound Ridge NY 10576	3/27/2020 0:00	Single Family	N
66 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	12/14/2020 0:00	Commercial	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
96 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	6/10/2020 0:00	Single Family	N
209 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	5/26/2020 0:00	Single Family	N
10 Lost Nations Rd, Pound Ridge	Pound Ridge NY 10576	10/7/2020 0:00	Single Family	N
21 Bishop Park Rd, Pound Ridge	Pound Ridge NY 10576	9/22/2020 0:00	Single Family	N
366 Pine Brook Rd, Pound Ridge	Bedford NY 10506	6/11/2020 0:00	Single Family	N
29 Bob Hill Rd, Pound Ridge	Pound Ridge NY 10576	11/5/2020 0:00	Single Family	N
18 Pine Dr, Pound Ridge	Pound Ridge NY 10576	5/15/2020 0:00	Single Family	N
32 Austin Hill Rd, Pound Ridge	Pound Ridge NY 10576	10/21/2020 0:00	Single Family	N
116 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	6/30/2020 0:00	Single Family	N
31 Hemlock Hill Rd, Pound Ridge	Pound Ridge NY 10576	10/28/2020 0:00	Single Family	N
107 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	2/12/2020 0:00	Single Family	N
30 Fox Hill Rd, Pound Ridge	Pound Ridge NY 10576	4/10/2020 0:00	Single Family	N
220 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	6/1/2020 0:00	Single Family	N
14 Lower Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	12/9/2020 0:00	Single Family	N
77 Indian Hill Rd, Pound Ridge	Pound Ridge NY 10576	2/13/2020 0:00	Single Family	N
4 Lower Shad Rd, Pound Ridge	Pound Ridge NY 10576	8/11/2020 0:00	Other	N
53 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	10/21/2020 0:00	Single Family	N
10 Calf Pasture Ln, Pound Ridge	Pound Ridge NY 10576	5/13/2020 0:00	Single Family	N
4 Horseshoe Hill Rd W, Pound Ridge	Pound Ridge NY 10576	10/17/2020 0:00	Single Family	N
192 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	5/14/2020 0:00	Single Family	N
11 Old Pound Rd, Pound Ridge	Pound Ridge NY 10576	11/25/2020 0:00	Single Family	N
39 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	11/9/2020 0:00	Single Family	N
195 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	10/24/2020 0:00	Single Family	N
3 Blacksmith Ln, Pound Ridge	Pound Ridge NY 10576	11/17/2020 0:00	Single Family	N
67 Indian Hill Rd, Pound Ridge	Pound Ridge NY 10576	1/28/2020 0:00	Single Family	N
9 Cedar Hill Ln, Pound Ridge	Pound Ridge NY 10576	2/21/2020 0:00	Single Family	N
74 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	7/27/2020 0:00	Single Family	N
167 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	8/4/2020 0:00	Single Family	N
37 Highcliff Ter, Pound Ridge	Pound Ridge NY 10576	8/18/2020 0:00	Single Family	N
267 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	4/20/2020 0:00	Single Family	N
21 Pound Ridge Rd, Pound Ridge	Pound Ridge NY 10576	2/25/2020 0:00	Single Family	N
32 Pine Dr, Pound Ridge	Pound Ridge NY 10576	8/31/2020 0:00	Single Family	N
193 Old Church Ln, Pound Ridge	Pound Ridge NY 10576	6/15/2020 0:00	Single Family	N
193 Old Church Ln, Pound Ridge	Pound Ridge NY 10576	10/7/2020 0:00	Single Family	N
31 Shad Rd W, Pound Ridge	Pound Ridge NY 10576	3/12/2020 0:00	Single Family	N
79 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	5/15/2020 0:00	Single Family	N
149 High Ridge Rd, Pound Ridge	Pound Ridge NY 10576	4/15/2020 0:00	Single Family	N
36 Bender Way, Pound Ridge	Pound Ridge NY 10576	7/28/2020 0:00	Single Family	N
205 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	1/14/2020 0:00	Single Family	N
275 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	6/3/2020 0:00	Single Family	N
11 Bishop Park Rd, Pound Ridge	Pound Ridge NY 10576	10/9/2020 0:00	Single Family	N
22 Pettit Ln, Pound Ridge	Pound Ridge NY 10576	5/4/2020 0:00	Single Family	N
135 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	6/15/2020 0:00	Single Family	N
112 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	9/21/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
11 Laurel Rd, Pound Ridge	Pound Ridge NY 10576	12/23/2020 0:00	Single Family	N
27 Waring Rd, Pound Ridge	Pound Ridge NY 10576	6/25/2020 0:00	Single Family	N
46 White Birch Rd, Pound Ridge	Pound Ridge NY 10576	6/1/2020 0:00	Single Family	N
49 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	2/4/2020 0:00	Single Family	N
12 Siscowit Rd, Pound Ridge	Pound Ridge NY 10576	9/25/2020 0:00	Single Family	N
60 Old Mill River Rd, Pound Ridge	Pound Ridge NY 10576	9/25/2020 0:00	Single Family	N
367 Long Ridge Rd, Pound Ridge	Pound Ridge NY 10576	9/23/2020 0:00	Single Family	N
217 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	10/8/2020 0:00	Single Family	N
34 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	1/14/2020 0:00	Commercial	N
20 Lower Shad Rd, Pound Ridge	Pound Ridge NY 10576	11/17/2020 0:00	Single Family	N
277 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	8/5/2020 0:00	Single Family	N
19 Sherwood Rd, Pound Ridge	Pound Ridge NY 10576	7/22/2020 0:00	Single Family	N
183 Old Church Ln, Pound Ridge	Pound Ridge NY 10576	10/23/2020 0:00	Single Family	N
216 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	5/4/2020 0:00	Single Family	N
140 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	11/30/2020 0:00	Single Family	N
57 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	10/1/2020 0:00	Single Family	N
23 Kendall Rd, Pound Ridge	Pound Ridge NY 10576	3/18/2020 0:00	Single Family	N
24 Siscowit Rd, Pound Ridge	Pound Ridge NY 10576	2/3/2020 0:00	Single Family	N
11 Light Horse Ln, Pound Ridge	Pound Ridge NY 10576	7/20/2020 0:00	Single Family	N
15 Rolling Meadow Ln, Pound Ridge	Pound Ridge NY 10576	11/18/2020 0:00	Single Family	N
12 Bishop Park Rd, Pound Ridge	Pound Ridge NY 10576	2/27/2020 0:00	Single Family	N
35 Pheasant Rd, Pound Ridge	Pound Ridge NY 10576	7/29/2020 0:00	Single Family	N
370 Pine Brook Rd, Pound Ridge	Bedford NY 10506	6/3/2020 0:00	Single Family	N
51 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	6/15/2020 0:00	Single Family	N
25 Trinity Ln, Pound Ridge	Pound Ridge NY 10576	11/4/2020 0:00	Single Family	N
58 Kitchawan Rd, Pound Ridge	Pound Ridge NY 10576	4/24/2020 0:00	Single Family	N
90 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	10/8/2020 0:00	Single Family	N
35 Salem Rd, Pound Ridge	Pound Ridge NY 10576	3/24/2020 0:00	Single Family	N
35 Salem Rd, Pound Ridge	Pound Ridge NY 10576	5/21/2020 0:00	Single Family	N
258 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	10/29/2020 0:00	Single Family	N
474 Long Ridge Rd, Pound Ridge	Bedford NY 10506	5/12/2020 0:00	Single Family	N
31 Bayberry Way, Pound Ridge	Pound Ridge NY 10576	7/2/2020 0:00	Single Family	N
29 Bishop Park Rd, Pound Ridge	Pound Ridge NY 10576	6/1/2020 0:00	Single Family	N
29 Bishop Park Rd, Pound Ridge	Pound Ridge NY 10576	12/15/2020 0:00	Single Family	N
39 Fox Hill Rd, Pound Ridge	Pound Ridge NY 10576	4/30/2020 0:00	Single Family	N
20 Miller Rd, Pound Ridge	Pound Ridge NY 10576	1/7/2020 0:00	Single Family	N
63 Hack Green Rd, Pound Ridge	Pound Ridge NY 10576	6/29/2020 0:00	Single Family	N
15 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	5/20/2020 0:00	Single Family	N
8 Robin Hood Rd, Pound Ridge	Pound Ridge NY 10576	7/28/2020 0:00	Single Family	N
204 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	9/21/2020 0:00	Single Family	N
1 Old Mill River Rd, Pound Ridge	Pound Ridge NY 10576	7/24/2020 0:00	Single Family	N
76 Salem Rd, Pound Ridge	Pound Ridge NY 10576	9/24/2020 0:00	Single Family	N
38 Highcliff Ter, Pound Ridge	Pound Ridge NY 10576	7/14/2020 0:00	Single Family	N
21 Rolling Meadow Ln, Pound Ridge	Pound Ridge NY 10576	9/1/2020 0:00	Single Family	N

Lewisboro and Pound Ridge

2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
88 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	10/21/2020 0:00	Single Family	N
36 Fox Hill Rd, Pound Ridge	Pound Ridge NY 10576	10/5/2020 0:00	Single Family	N
24 Indian Hill Rd, Pound Ridge	Pound Ridge NY 10576	5/26/2020 0:00	Single Family	N
24 Indian Hill Rd, Pound Ridge	Pound Ridge NY 10576	5/26/2020 0:00	Single Family	N
29 Donbrook Rd, Pound Ridge	Pound Ridge NY 10576	6/25/2020 0:00	Single Family	N
52 Old Logging Rd, Pound Ridge	Bedford NY 10506	6/10/2020 0:00	Single Family	N
10 Old Pound Rd, Pound Ridge	Pound Ridge NY 10576	4/14/2020 0:00	Single Family	N
15 Pine Dr, Pound Ridge	Pound Ridge NY 10576	4/30/2020 0:00	Single Family	N
80 Old Logging Rd, Pound Ridge	Bedford NY 10506	1/17/2020 0:00	Single Family	N
52 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	4/30/2020 0:00	Single Family	N
315 Pine Brook Rd, Pound Ridge	Bedford NY 10506	1/3/2020 0:00	Single Family	N
55 Old Logging Rd, Pound Ridge	Bedford NY 10506	10/28/2020 0:00	Single Family	N
460 Long Ridge Rd, Pound Ridge	Bedford NY 10506	10/8/2020 0:00	Single Family	N
3 Robin Hood Rd, Pound Ridge	Pound Ridge NY 10576	3/12/2020 0:00	Single Family	N
25 Autumn Ridge Rd, Pound Ridge	Pound Ridge NY 10576	11/4/2020 0:00		N
8 Maclean Dr, Pound Ridge	Pound Ridge NY 10576	9/11/2020 0:00	Single Family	N
249 Stone Hill Rd, Pound Ridge	Pound Ridge NY 10576	3/12/2020 0:00	Single Family	N
22 Saddle Ridge Rd, Pound Ridge	Pound Ridge NY 10576	3/25/2020 0:00	Single Family	N
63 Autumn Ridge Rd, Pound Ridge	Pound Ridge NY 10576	9/11/2020 0:00	Single Family	N
139 S Bedford Rd, Pound Ridge	Pound Ridge NY 10576	4/10/2020 0:00	Single Family	N
197 Stone Hill Rd, Pound Ridge	Pound Ridge NY 10576	5/22/2020 0:00	Single Family	N
82 Old Stone Hill Rd, Pound Ridge	Pound Ridge NY 10576	6/12/2020 0:00	Single Family	N
141 Park View Rd, Pound Ridge	Pound Ridge NY 10576	3/23/2020 0:00	Single Family	N
52 Deer Field Rd, Pound Ridge	Pound Ridge NY 10576	3/4/2020 0:00	Single Family	N
29 Autumn Ridge Rd, Pound Ridge	Pound Ridge NY 10576	11/4/2020 0:00	Single Family	N
17 Autumn Ridge Rd, Pound Ridge	Pound Ridge NY 10576	4/16/2020 0:00	Single Family	N
21 Hoyt Rd, Pound Ridge	Pound Ridge NY 10576	5/13/2020 0:00	Single Family	N
10 Ebenezer Ln, Pound Ridge	Pound Ridge NY 10576	1/24/2020 0:00	Single Family	N
22 Knapp Rd, Pound Ridge	Pound Ridge NY 10576	8/19/2020 0:00	Single Family	N
14 Twin Fawn Ln, Pound Ridge	Pound Ridge NY 10576	5/8/2020 0:00	Single Family	N
32 Twin Fawn Ln, Pound Ridge	Pound Ridge NY 10576	2/4/2020 0:00	Single Family	N
55 Pound Ridge Rd, Pound Ridge	Pound Ridge NY 10576	3/5/2020 0:00	Single Family	N
385 Stone Hill Rd, Pound Ridge	Pound Ridge NY 10576	6/16/2020 0:00	Single Family	N
27 Autumn Ridge Rd, Pound Ridge	Pound Ridge NY 10576	5/14/2020 0:00	Single Family	N
37 Saddle Ridge Rd, Pound Ridge	Pound Ridge NY 10576	11/30/2020 0:00	Single Family	N
205 Honey Hollow Rd, Pound Ridge	Pound Ridge NY 10576	10/19/2020 0:00	Single Family	N
205 Honey Hollow Rd, Pound Ridge	Pound Ridge NY 10576	3/13/2020 0:00	Single Family	N
34 Deer Field Rd, Pound Ridge	Pound Ridge NY 10576	9/11/2020 0:00	Single Family	N
241 Stone Hill Rd, Pound Ridge	Pound Ridge NY 10576	4/7/2020 0:00	Single Family	N
140 Honey Hollow Rd, Pound Ridge	Pound Ridge NY 10576	12/15/2020 0:00	Single Family	N
169 Salem Rd, Pound Ridge	Pound Ridge NY 10576	9/29/2020 0:00	Single Family	N
44 Scofield Rd, Pound Ridge	Pound Ridge NY 10576	6/16/2020 0:00	Single Family	N
62 West Ln, Pound Ridge	Pound Ridge NY 10576	9/7/2020 0:00	Single Family	N
30 Knapp Rd, (& 30A), Pound Ridge	Pound Ridge NY 10576	3/10/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
34 Ebenezer Ln, Pound Ridge	Pound Ridge NY 10576	10/28/2020 0:00	Single Family	N
290 Salem Rd, Pound Ridge	Pound Ridge NY 10576	8/12/2020 0:00	Single Family	N
20 Scofield Rd, Pound Ridge	Pound Ridge NY 10576	4/29/2020 0:00	Single Family	N
26 Dingee Rd, Pound Ridge	Pound Ridge NY 10576	1/7/2020 0:00	Single Family	N
124 Kitchawan Rd, Pound Ridge	Pound Ridge NY 10576	10/21/2020 0:00	Single Family	N
24 Old Stone Hill Rd, (& 24A), Pound Ridge	Pound Ridge NY 10576	8/18/2020 0:00	Single Family	N
5 Scofield Rd, Pound Ridge	Pound Ridge NY 10576	9/29/2020 0:00	Single Family	N
254 Stone Hill Rd, (& 254A), Pound Ridge	Pound Ridge NY 10576	4/16/2020 0:00		N
254 Stone Hill Rd, (& 254A), Pound Ridge	Pound Ridge NY 10576	4/16/2020 0:00		N
254 Stone Hill Rd, (& 254A), Pound Ridge	Pound Ridge NY 10576	4/16/2020 0:00		N
89 Park View Rd, Pound Ridge	Pound Ridge NY 10576	5/11/2020 0:00	Single Family	N
134 BOUTONVILLE RD, (& 138), Pound Ridge	Pound Ridge NY 10576	1/8/2020 0:00	Single Family	N
74 CROSS POND RD, Pound Ridge	Pound Ridge NY 10576	1/9/2020 0:00	Single Family	N
139 BROOK FARM RD E, Pound Ridge	Pound Ridge NY 10576	1/10/2020 0:00	Single Family	N
126 Salem Rd, (& 130), Pound Ridge	Pound Ridge NY 10576	1/29/2020 0:00	Commercial	N
126 Salem Rd, (& 130), Pound Ridge	Pound Ridge NY 10576	2/4/2020 0:00	Commercial	N
126 Salem Rd, (& 130), Pound Ridge	Pound Ridge NY 10576	2/4/2020 0:00	Commercial	N
126 Salem Rd, (& 130), Pound Ridge	Pound Ridge NY 10576	2/4/2020 0:00	Commercial	N
50 MAJOR LOCKWOOD LN, Pound Ridge	Pound Ridge NY 10576	2/27/2020 0:00	Single Family	N
323 STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	2/11/2020 0:00	Single Family	N
323 STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	2/11/2020 0:00	Single Family	N
76 CROSS RIVER RD, Pound Ridge	Pound Ridge NY 10576	3/4/2020 0:00	Single Family	N
233 SALEM RD, Pound Ridge	Pound Ridge NY 10576	3/16/2020 0:00	Single Family	N
234 SALEM RD, Pound Ridge	Pound Ridge NY 10576	3/16/2020 0:00	Single Family	N
4 HIGHVIEW RD, Pound Ridge	Pound Ridge NY 10576	3/17/2020 0:00	Single Family	N
41 POUND RIDGE RD, Pound Ridge	Pound Ridge NY 10576	3/21/2020 0:00	Single Family	N
90 PARK VIEW RD, Pound Ridge	Pound Ridge NY 10576	3/27/2020 0:00	Single Family	N
160 PARK VIEW RD, Pound Ridge	Pound Ridge NY 10576	4/2/2020 0:00	Single Family	N
59 SCOFIELD RD, Pound Ridge	Pound Ridge NY 10576	4/15/2020 0:00	Single Family	N
131 PARK VIEW RD, Pound Ridge	Pound Ridge NY 10576	3/25/2020 0:00	Single Family	N
50 POUND RIDGE RD, (& 50 A), Pound Ridge	Pound Ridge NY 10576	4/22/2020 0:00	Single Family	N
218 HONEY HOLLOW RD, Pound Ridge	Pound Ridge NY 10576	4/23/2020 0:00	Single Family	N
268 SALEM RD, Pound Ridge	Pound Ridge NY 10576	3/19/2020 0:00	Single Family	N
4 TWIN FAWN LN, Pound Ridge	Pound Ridge NY 10576	5/4/2020 0:00	Single Family	N
129 SO BEDFORD RD, (&129 A), Pound Ridge	Pound Ridge NY 10576	5/4/2020 0:00	Single Family	N
55 MAJOR LOCKWOOD LN, Pound Ridge	Pound Ridge NY 10576	5/4/2020 0:00	Single Family	N
115 SO BEDFORD RD, (& 117), Pound Ridge	Pound Ridge NY 10576	5/14/2020 0:00	Single Family	N
117 S BEDFORD RD, Pound Ridge	Pound Ridge NY 10576	5/14/2020 0:00	Single Family	N
167 SALEM RD, (& 167A), Pound Ridge	Pound Ridge NY 10576	5/18/2020 0:00	Single Family	N
126 KITCHAWAN RD, (& 126A), Pound Ridge	Pound Ridge NY 10576	3/19/2020 0:00	Single Family	N
151 PARK VIEW RD, Pound Ridge	Pound Ridge NY 10576	6/2/2020 0:00	Single Family	N
316 STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	6/9/2020 0:00	Single Family	N
26 Pound Ridge Rd, Pound Ridge	Pound Ridge NY 10576	5/7/2020 0:00	Single Family	N
173 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	4/2/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
71 Indian Hill Rd, Pound Ridge	Pound Ridge NY 10576	3/10/2020 0:00	Single Family	N
56 Shad Rd W, Pound Ridge	Pound Ridge NY 10576	4/15/2020 0:00	Single Family	N
115 Barnegat Rd, Pound Ridge	Pound Ridge NY 10576	5/27/2020 0:00	Single Family	N
146 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	11/18/2020 0:00	Single Family	N
14 Old Pound Rd, Pound Ridge	Pound Ridge NY 10576	4/3/2020 0:00	Single Family	N
14 Old Pound Rd, Pound Ridge	Pound Ridge NY 10576	4/3/2020 0:00	Single Family	N
49 Kitchawan Rd, Pound Ridge	Pound Ridge NY 10576	6/9/2020 0:00	Single Family	N
141 Lower Shad Rd, Pound Ridge	Pound Ridge NY 10576	2/20/2020 0:00	Single Family	N
23 Highcliff Ter, Pound Ridge	Pound Ridge NY 10576	11/5/2020 0:00	Single Family	N
76 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	2/13/2020 0:00	Commercial	N
255 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	4/24/2020 0:00	Single Family	N
24 Miller Rd, Pound Ridge	Pound Ridge NY 10576	4/18/2020 0:00	Single Family	N
53 Dann Farm Rd, Pound Ridge	Pound Ridge NY 10576	4/28/2020 0:00	Single Family	N
80 Dann Farm Rd, Pound Ridge	Pound Ridge NY 10576	3/9/2020 0:00	Single Family	N
80 Dann Farm Rd, Pound Ridge	Pound Ridge NY 10576	3/9/2020 0:00	Single Family	N
252 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	8/15/2020 0:00	Single Family	N
1 Pettit Ln, Pound Ridge	Pound Ridge NY 10576	5/28/2020 0:00	Single Family	N
99 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	4/23/2020 0:00	Single Family	N
26 Lower Shad Rd, Pound Ridge	Pound Ridge NY 10576	10/14/2020 0:00	Single Family	N
20 Lower Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	6/1/2020 0:00	Single Family	N
22 Bob Hill Rd, Pound Ridge	Pound Ridge NY 10576	11/13/2020 0:00	Single Family	N
33 Austin Hill Rd, Pound Ridge	Pound Ridge NY 10576	5/18/2020 0:00	Single Family	N
58 Conant Valley Rd, Pound Ridge	Pound Ridge NY 10576	8/13/2020 0:00	Single Family	N
155 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	7/14/2020 0:00	Single Family	N
31 Salem Rd, Pound Ridge	Pound Ridge NY 10576	8/4/2020 0:00	Single Family	N
73 Fancher Rd, Pound Ridge	Pound Ridge NY 10576	8/27/2020 0:00	Single Family	N
9 Pheasant Rd W, Pound Ridge	Pound Ridge NY 10576	2/21/2020 0:00	Single Family	N
9 Pheasant Rd W, Pound Ridge	Pound Ridge NY 10576	12/22/2020 0:00	Single Family	N
480 Long Ridge Rd, Pound Ridge	Bedford NY 10506	11/5/2020 0:00	Single Family	N
80 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	7/16/2020 0:00	Single Family	N
54 Old Logging Rd, Pound Ridge	Pound Ridge NY 10576	6/3/2020 0:00	Single Family	N
18 Dann Farm Rd, Pound Ridge	Pound Ridge NY 10576	12/15/2020 0:00	Single Family	N
29 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	1/14/2020 0:00	Single Family	N
29 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	1/14/2020 0:00	Single Family	N
65 Salem Rd, Pound Ridge	Pound Ridge NY 10576	4/16/2020 0:00	Single Family	N
15 Salem Rd, Pound Ridge	Pound Ridge NY 10576	11/16/2020 0:00	Single Family	N
88 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	11/13/2020 0:00	Single Family	N
21 Patterson Rd, Pound Ridge	Pound Ridge NY 10576	10/21/2020 0:00	Single Family	N
26 Old Snake Hill Rd, Pound Ridge	Pound Ridge NY 10576	7/23/2020 0:00	Single Family	N
50 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	6/23/2020 0:00	Single Family	N
199 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	11/24/2020 0:00	Single Family	N
88 Salem Rd, Pound Ridge	Pound Ridge NY 10576	10/8/2020 0:00	Single Family	N
17 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	1/14/2020 0:00	Single Family	N
1 Sherwood Rd, Pound Ridge	Pound Ridge NY 10576	1/30/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
12 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	11/4/2020 0:00	Single Family	N
55 Fox Run Rd, Pound Ridge	Pound Ridge NY 10576	2/25/2020 0:00	Single Family	N
18 Old Pound Rd, Pound Ridge	Pound Ridge NY 10576	10/19/2020 0:00	Single Family	N
18 Old Pound Rd, Pound Ridge	Pound Ridge NY 10576	10/19/2020 0:00	Single Family	N
205 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	2/4/2020 0:00	Single Family	N
16 Pettit Ln, Pound Ridge	Pound Ridge NY 10576	3/27/2020 0:00	Single Family	N
36 Fox Run Rd, Pound Ridge	Pound Ridge NY 10576	5/6/2020 0:00	Single Family	N
29 Siscowit Rd, Pound Ridge	Pound Ridge NY 10576	5/6/2020 0:00	Single Family	N
320 Long Ridge Rd, Pound Ridge	Pound Ridge NY 10576	6/16/2020 0:00	Single Family	N
25 Highcliff Ter, Pound Ridge	Pound Ridge NY 10576	3/19/2020 0:00	Single Family	N
81 Fancher Rd, Pound Ridge	Pound Ridge NY 10576	5/11/2020 0:00	Single Family	N
48 Cradle Rock Rd, Pound Ridge	Pound Ridge NY 10576	4/21/2020 0:00	Single Family	N
101 Dann Farm Rd, Pound Ridge	Pound Ridge NY 10576	3/23/2020 0:00	Single Family	N
26 Pettit Ln, Pound Ridge	Pound Ridge NY 10576	11/5/2020 0:00	Single Family	N
31 Threshing Rock Rd, Pound Ridge	Pound Ridge NY 10576	8/4/2020 0:00	Single Family	N
155 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	6/11/2020 0:00	Single Family	N
170 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	3/2/2020 0:00	Single Family	N
26 Cradle Rock Rd, Pound Ridge	Pound Ridge NY 10576	3/24/2020 0:00	Single Family	N
56 West Ln, Pound Ridge	Pound Ridge NY 10576	9/22/2020 0:00	Single Family	N
9 Light Horse Ln, Pound Ridge	Pound Ridge NY 10576	7/14/2020 0:00	Single Family	N
205 Barnegat Rd, Pound Ridge	Pound Ridge NY 10576	9/17/2020 0:00	Single Family	N
22 Woodland Rd, Pound Ridge	Pound Ridge NY 10576	10/15/2020 0:00	Single Family	N
10 Pheasant Rd W, Pound Ridge	Pound Ridge NY 10576	4/2/2020 0:00	Single Family	N
24 Hack Green Rd, Pound Ridge	Pound Ridge NY 10576	7/30/2020 0:00	Single Family	N
78 Indian Hill Rd, Pound Ridge	Pound Ridge NY 10576	8/12/2020 0:00	Single Family	N
70 Conant Valley Rd, Pound Ridge	Pound Ridge NY 10576	8/11/2020 0:00	Single Family	N
39 Bender Way, Pound Ridge	Pound Ridge NY 10576	5/26/2020 0:00	Single Family	N
16 Beech Hill Ln, Pound Ridge	Pound Ridge NY 10576	4/27/2020 0:00	Single Family	N
62 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	7/27/2020 0:00	Single Family	N
38 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	12/30/2020 0:00	Single Family	N
28 Peters Ln, Pound Ridge	Pound Ridge NY 10576	7/20/2020 0:00	Single Family	N
52 Siscowit Rd, Pound Ridge	Pound Ridge NY 10576	6/30/2020 0:00	Single Family	N
2 Bob Hill Rd, Pound Ridge	Pound Ridge NY 10576	8/19/2020 0:00	Single Family	N
21 Kendall Rd, Pound Ridge	Pound Ridge NY 10576	9/17/2020 0:00	Industrial	N
46 Lower Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	8/26/2020 0:00	Single Family	N
151 Eastwoods Rd, (&151A), Pound Ridge	Pound Ridge NY 10576	5/27/2020 0:00	Single Family	N
151 Eastwoods Rd, (&151A), Pound Ridge	Pound Ridge NY 10576	5/27/2020 0:00	Single Family	N
83 West Rd, Pound Ridge	Pound Ridge NY 10576	10/5/2020 0:00	Single Family	N
210 Trinity Pass Rd, (& 208), Pound Ridge	Pound Ridge NY 10576	9/21/2020 0:00	Single Family	N
210 Trinity Pass Rd, (& 208), Pound Ridge	Pound Ridge NY 10576	9/21/2020 0:00	Single Family	N
210 Trinity Pass Rd, (& 208), Pound Ridge	Pound Ridge NY 10576	9/21/2020 0:00	Single Family	N
42 Kitchawan Rd, Pound Ridge	Pound Ridge NY 10576	10/14/2020 0:00	Single Family	N
120 Barnegat Rd, (& 120 A), Pound Ridge	Pound Ridge NY 10576	11/24/2020 0:00	Single Family	N
17 Threshing Rock Rd, Pound Ridge	Pound Ridge NY 10576	12/16/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
26 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	12/9/2020 0:00	Single Family	N
15 S Bedford Rd, (& 15 A), Pound Ridge	Pound Ridge NY 10576	3/31/2020 0:00	Single Family	N
22 Miller Rd, Pound Ridge	Pound Ridge NY 10576	12/11/2020 0:00	Single Family	N
22 Miller Rd, Pound Ridge	Pound Ridge NY 10576	12/11/2020 0:00	Single Family	N
53 Fox Run Rd, Pound Ridge	Pound Ridge NY 10576	9/15/2020 0:00	Single Family	N
62 Conant Valley Rd, Pound Ridge	Pound Ridge NY 10576	9/22/2020 0:00	Single Family	N
25 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	7/27/2020 0:00	Single Family	N
25 Blacksmith Ln, Pound Ridge	Pound Ridge NY 10576	10/14/2020 0:00	Single Family	N
105 Horseshoe Hill Rd, Pound Ridge	Pound Ridge NY 10576	10/14/2020 0:00	Single Family	N
230 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	11/24/2020 0:00	Single Family	N
26 Highcliff Ter, Pound Ridge	Pound Ridge NY 10576	10/15/2020 0:00	Single Family	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	6/3/2020 0:00	Commercial	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	5/19/2020 0:00	Commercial	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	4/24/2020 0:00	Commercial	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	3/24/2020 0:00	Commercial	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	3/9/2020 0:00	Commercial	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	2/8/2020 0:00	Commercial	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	6/29/2020 0:00	Commercial	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	9/18/2020 0:00	Commercial	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	8/12/2020 0:00	Commercial	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	10/14/2020 0:00	Commercial	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	10/7/2020 0:00	Commercial	N
143 High Ridge Rd, Pound Ridge	Pound Ridge NY 10576	5/27/2020 0:00	Single Family	N
31 Trinity Pass Rd, Pound Ridge	Pound Ridge NY 10576	5/20/2020 0:00	Single Family	N
6 West Ln, Pound Ridge	Pound Ridge NY 10576	10/26/2020 0:00	Single Family	N
10 Siscowit Rd, (& 12), Pound Ridge	Pound Ridge NY 10576	9/25/2020 0:00	Single Family	N
16 Shad Rd W, Pound Ridge	Pound Ridge NY 10576	2/5/2020 0:00	Single Family	N
41 Pheasant Rd, Pound Ridge	Pound Ridge NY 10576	10/14/2020 0:00	Single Family	N
90 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	3/5/2020 0:00	Single Family	N
44 Indian Hill Rd, Pound Ridge	Pound Ridge NY 10576	9/29/2020 0:00	Single Family	N
12 White Birch Rd S, Pound Ridge	Pound Ridge NY 10576	1/2/2020 0:00	Single Family	N
201 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	1/16/2020 0:00	Single Family	N
83 Westchester Ave, (& 83 A), Pound Ridge	Pound Ridge NY 10576	6/26/2020 0:00	Commercial	N
83 Westchester Ave, (& 83 A), Pound Ridge	Pound Ridge NY 10576	12/18/2020 0:00	Commercial	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	9/2/2020 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	3/13/2020 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	1/31/2020 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	1/3/2020 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	2/14/2020 0:00	Other	N
258 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	2/28/2020 0:00	Other	N
140 Upper Shad Rd, Pound Ridge	Pound Ridge NY 10576	10/12/2020 0:00	Single Family	N
118 High Ridge Rd, Pound Ridge	Pound Ridge NY 10576	11/20/2020 0:00	Single Family	N
84 High Ridge Rd, Pound Ridge	Pound Ridge NY 10576	12/30/2020 0:00	Single Family	N
57 Fox Run Rd, Pound Ridge	Pound Ridge NY 10576	9/8/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
34 Davids Ln, Pound Ridge	Pound Ridge NY 10576	5/27/2020 0:00	Single Family	N
42 Bishop Park Rd, Pound Ridge	Pound Ridge NY 10576	9/17/2020 0:00	Single Family	N
37 Austin Hill Rd, Pound Ridge	Pound Ridge NY 10576	11/10/2020 0:00	Single Family	N
33 Siscowit Rd, Pound Ridge	Pound Ridge NY 10576	4/24/2020 0:00	Single Family	N
33 Siscowit Rd, Pound Ridge	Pound Ridge NY 10576	4/24/2020 0:00	Single Family	N
24 Pine Dr, Pound Ridge	Pound Ridge NY 10576	11/17/2020 0:00	Single Family	N
30 Winterbottom Ln, Pound Ridge	Pound Ridge NY 10576	6/15/2020 0:00	Single Family	N
6 Sunset Ln, Pound Ridge	Pound Ridge NY 10576	8/27/2020 0:00	Single Family	N
105 Old Mill River Rd, Pound Ridge	Pound Ridge NY 10576	2/10/2020 0:00	Single Family	N
69 White Birch Rd, Pound Ridge	Pound Ridge NY 10576	7/15/2020 0:00	Single Family	N
10 Miller Rd, Pound Ridge	Pound Ridge NY 10576	3/6/2020 0:00	Single Family	N
37 INDIAN HILL RD, Pound Ridge	Pound Ridge NY 10576	1/7/2020 0:00	Single Family	N
333 PINE BROOK RD, (& 335), Pound Ridge	Bedford NY 10506	1/8/2020 0:00	Single Family	N
86 Fancher Rd, (& 86A), Pound Ridge	Pound Ridge NY 10576	12/12/2020 0:00	Single Family	N
-1 LOWER TRINITY PASS RD, (A/B), Pound Ridg	Pound Ridge NY 10576	1/27/2020 0:00	Single Family	N
5 WHITE BIRCH RD S, Pound Ridge	Pound Ridge NY 10576	1/28/2020 0:00	Single Family	N
42 SHAD RD W, Pound Ridge	Pound Ridge NY 10576	2/4/2020 0:00	Single Family	N
26 WHITE BIRCH RD, Pound Ridge	Pound Ridge NY 10576	2/12/2020 0:00	Single Family	N
8 CRADLE ROCK RD E, Pound Ridge	Pound Ridge NY 10576	2/17/2020 0:00	Single Family	N
350 LONG RIDGE RD, Pound Ridge	Pound Ridge NY 10576	2/17/2020 0:00	Single Family	N
11 PETTIT LN, Pound Ridge	Pound Ridge NY 10576	2/20/2020 0:00	Single Family	N
22 TRINITY LN, Pound Ridge	Pound Ridge NY 10576	1/29/2020 0:00	Single Family	N
7 COL SHELDON LN, Pound Ridge	Pound Ridge NY 10576	2/4/2020 0:00	Single Family	N
238 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	2/28/2020 0:00	Commercial	N
176 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	3/2/2020 0:00	Single Family	N
176 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	10/3/2020 0:00	Single Family	N
176 Westchester Ave, Pound Ridge	Pound Ridge NY 10576	6/25/2020 0:00	Single Family	N
10 CLEARWATER LN, (&10A), Pound Ridge	Pound Ridge NY 10576	2/4/2020 0:00	Single Family	N
10 CLEARWATER LN, (&10A), Pound Ridge	Pound Ridge NY 10576	2/4/2020 0:00	Single Family	N
16 HEERDT FARM LN, Pound Ridge	Pound Ridge NY 10576	3/10/2020 0:00	Single Family	N
5 WINTERBOTTOM LN, Pound Ridge	Pound Ridge NY 10576	3/11/2020 0:00	Single Family	N
8 WHITE BIRCH RD S, Pound Ridge	Pound Ridge NY 10576	3/12/2020 0:00	Single Family	N
5 CRADLE ROCK RD E, Pound Ridge	Pound Ridge NY 10576	3/13/2020 0:00	Single Family	N
7 Pound Ridge Rd, Pound Ridge	Pound Ridge NY 10576	3/16/2020 0:00	Other	N
7 Pound Ridge Rd, Pound Ridge	Pound Ridge NY 10576	9/25/2020 0:00	Other	N
7 Pound Ridge Rd, Pound Ridge	Pound Ridge NY 10576	12/4/2020 0:00	Other	N
7 Pound Ridge Rd, Pound Ridge	Pound Ridge NY 10576	11/24/2020 0:00	Other	N
7 Pound Ridge Rd, Pound Ridge	Pound Ridge NY 10576	11/24/2020 0:00	Other	N
18 High Ridge Rd, & 12, Pound Ridge	Pound Ridge NY 10576	3/17/2020 0:00	Commercial	N
18 High Ridge Rd, & 12, Pound Ridge	Pound Ridge NY 10576	3/17/2020 0:00	Commercial	N
18 High Ridge Rd, & 12, Pound Ridge	Pound Ridge NY 10576	3/17/2020 0:00	Commercial	N
39 INDIAN HILL RD, Pound Ridge	Pound Ridge NY 10576	3/19/2020 0:00	Single Family	N
204 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	3/30/2020 0:00	Single Family	N
11 CALF PASTURE LN, Pound Ridge	Pound Ridge NY 10576	4/2/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
119 BARNEGAT RD, Pound Ridge	Pound Ridge NY 10576	4/9/2020 0:00	Single Family	N
119 BARNEGAT RD, Pound Ridge	Pound Ridge NY 10576	4/9/2020 0:00	Single Family	N
38 SHAD RD W, Pound Ridge	Pound Ridge NY 10576	4/10/2020 0:00	Single Family	N
20 ROCK HILL WAY, Pound Ridge	Bedford NY 10506	4/17/2020 0:00	Single Family	N
418 LONG RIDGE RD, Pound Ridge	Pound Ridge NY 10576	4/22/2020 0:00	Single Family	N
4 DONBROOK RD, (& 6), Pound Ridge	Pound Ridge NY 10576	4/22/2020 0:00	Single Family	N
43 SHAD RD WEST, (& 43A), Pound Ridge	Pound Ridge NY 10576	5/2/2020 0:00	Single Family	N
164 EASTWOODS RD, (& 164A), Pound Ridge	Pound Ridge NY 10576	5/4/2020 0:00	Single Family	N
164 EASTWOODS RD, (& 164A), Pound Ridge	Pound Ridge NY 10576	5/4/2020 0:00	Single Family	N
48 WOODLAND RD, Pound Ridge	Pound Ridge NY 10576	3/4/2020 0:00	Single Family	N
19 PATTERSON RD, Pound Ridge	Pound Ridge NY 10576	5/7/2020 0:00	Single Family	N
26 PHEASANT RD, Pound Ridge	Pound Ridge NY 10576	5/7/2020 0:00	Single Family	N
2 WHITE BIRCH RD, Pound Ridge	Pound Ridge NY 10576	5/8/2020 0:00	Single Family	N
111 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	5/11/2020 0:00	Single Family	N
45 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	5/11/2020 0:00	Single Family	N
147 SALEM RD, Pound Ridge	Pound Ridge NY 10576	5/12/2020 0:00	Single Family	N
2 PHEASANT RD, Pound Ridge	Pound Ridge NY 10576	4/22/2020 0:00	Single Family	N
30 GORGE LN, & 30A, Pound Ridge	Pound Ridge NY 10576	5/18/2020 0:00	Single Family	N
30 GORGE LN, & 30A, Pound Ridge	Pound Ridge NY 10576	5/18/2020 0:00	Single Family	N
196 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	5/20/2020 0:00	Single Family	N
196 Eastwoods Rd, Pound Ridge	Pound Ridge NY 10576	9/15/2020 0:00	Single Family	N
89 HEMLOCK HILL RD, Pound Ridge	Pound Ridge NY 10576	5/22/2020 0:00	Single Family	N
89 SALEM RD, Pound Ridge	Pound Ridge NY 10576	5/27/2020 0:00	Single Family	N
56 CONANT VALLEY RD, Pound Ridge	Pound Ridge NY 10576	5/29/2020 0:00	Single Family	N
28 SO BEDFORD RD, Pound Ridge	Pound Ridge NY 10576	6/1/2020 0:00	Single Family	N
74 WHITE BIRCH RD, Pound Ridge	Pound Ridge NY 10576	6/2/2020 0:00	Single Family	N
23 Waring Rd, Pound Ridge	Pound Ridge NY 10576	6/3/2020 0:00	Single Family	N
23 Waring Rd, Pound Ridge	Pound Ridge NY 10576	7/31/2020 0:00	Single Family	N
85 SO BEDFORD RD, Pound Ridge	Pound Ridge NY 10576	6/4/2020 0:00	Single Family	N
25 WHITE BIRCH RD, Pound Ridge	Pound Ridge NY 10576	6/9/2020 0:00	Single Family	N
11 BEECH HILL LN, Pound Ridge	Pound Ridge NY 10576	6/9/2020 0:00	Single Family	N
42 LOWER SHAD RD, Pound Ridge	Pound Ridge NY 10576	6/9/2020 0:00	Single Family	N
47 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	6/10/2020 0:00	Single Family	N
146 KITCHAWAN RD, Pound Ridge	Pound Ridge NY 10576	6/11/2020 0:00	Single Family	N
16 MILLER RD, Pound Ridge	Pound Ridge NY 10576	6/11/2020 0:00	Single Family	N
56 Ebenezer Ln, Pound Ridge	Pound Ridge NY 10576	6/18/2020 0:00	Single Family	N
56 Ebenezer Ln, Pound Ridge	Pound Ridge NY 10576	9/28/2020 0:00	Single Family	N
48 POUND RIDGE RD, Pound Ridge	Pound Ridge NY 10576	5/4/2020 0:00	Single Family	N
43 KNAPP RD, Pound Ridge	Pound Ridge NY 10576	6/23/2020 0:00	Single Family	N
10 MIDWAY LN, (& 10 A), Pound Ridge	Pound Ridge NY 10576	6/24/2020 0:00	Single Family	N
25 COL SHELDON LN, Pound Ridge	Pound Ridge NY 10576	6/25/2020 0:00	Single Family	N
25 LYNDEL RD, (& 27/27A), Pound Ridge	Pound Ridge NY 10576	7/2/2020 0:00	Single Family	N
33 HIGHVIEW RD, Pound Ridge	Pound Ridge NY 10576	7/8/2020 0:00	Single Family	N
54 DINGEE RD, Pound Ridge	South Salem NY 10590	7/13/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
140 PARK VIEW RD, Pound Ridge	Pound Ridge NY 10576	6/6/2020 0:00	Single Family	N
47 AUTUMN RIDGE RD, Pound Ridge	Pound Ridge NY 10576	7/20/2020 0:00	Single Family	N
19 HIGHVIEW RD, Pound Ridge	Pound Ridge NY 10576	7/22/2020 0:00	Single Family	N
9 PARK VIEW PL, Pound Ridge	Pound Ridge NY 10576	6/22/2020 0:00	Single Family	N
324 SALEM RD, (& 324A), Pound Ridge	Pound Ridge NY 10576	7/29/2020 0:00	Single Family	N
53 POUND RIDGE RD, Pound Ridge	Pound Ridge NY 10576	8/3/2020 0:00	Single Family	N
29 COL SHELDON LN, (& 27), Pound Ridge	Pound Ridge NY 10576	8/3/2020 0:00	Single Family	N
29 COL SHELDON LN, (& 27), Pound Ridge	Pound Ridge NY 10576	8/3/2020 0:00	Single Family	N
338 SALEM RD, Pound Ridge	Pound Ridge NY 10576	8/17/2020 0:00	Single Family	N
24 OLD STONE RD, Pound Ridge	N/A	8/18/2020 0:00	Single Family	N
226 SALEM RD, Pound Ridge	Pound Ridge NY 10576	8/20/2020 0:00	Single Family	N
28 OLD STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	9/1/2020 0:00	Single Family	N
111 PARK VIEW RD, Pound Ridge	Pound Ridge NY 10576	9/2/2020 0:00	Single Family	N
9 TWIN FAWN LN, Pound Ridge	Pound Ridge NY 10576	9/4/2020 0:00	Single Family	N
129 PARK VIEW RD, Pound Ridge	Pound Ridge NY 10576	2/8/2020 0:00	Single Family	N
131 SO BEDFORD RD, Pound Ridge	Pound Ridge NY 10576	9/15/2020 0:00	Single Family	N
131 SO BEDFORD RD, Pound Ridge	Pound Ridge NY 10576	9/15/2020 0:00	Single Family	N
114 SALEM RD, Pound Ridge	Pound Ridge NY 10576	9/18/2020 0:00	Single Family	N
17 MAJOR COOKWOOD RD, Pound Ridge	N/A	8/11/2020 0:00	Single Family	N
338 STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	10/5/2020 0:00	Single Family	N
77 HONEY HOLLOW RD, (& 177A), Pound Ridg	Pound Ridge NY 10576	10/15/2020 0:00	Single Family	N
15 HIGHVIEW RD, Pound Ridge	Pound Ridge NY 10576	10/27/2020 0:00	Single Family	N
164 HONEY HOLLOW RD, Pound Ridge	Pound Ridge NY 10576	10/28/2020 0:00	Single Family	N
235 STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	10/28/2020 0:00	Single Family	N
27 HORSESHOE HILL RD W, Pound Ridge	Pound Ridge NY 10576	9/28/2020 0:00	Single Family	N
65 Autumn Ridge Rd, Pound Ridge	Pound Ridge NY 10576	11/16/2020 0:00	Single Family	N
65 Autumn Ridge Rd, Pound Ridge	Pound Ridge NY 10576	12/28/2020 0:00	Single Family	N
65 Autumn Ridge Rd, Pound Ridge	Pound Ridge NY 10576	12/28/2020 0:00	Single Family	N
82 POUND RIDGE RD, (& 84), Pound Ridge	Pound Ridge NY 10576	7/13/2020 0:00	Single Family	N
127 SO BEDFORD RD, Pound Ridge	Pound Ridge NY 10576	12/3/2020 0:00	Single Family	N
6 EBENEZER LN, Pound Ridge	Pound Ridge NY 10576	12/8/2020 0:00	Single Family	N
290 STONE HILL RD, Pound Ridge	Pound Ridge NY 10576	12/11/2020 0:00	Other	N
99 CROSS POND RD, Pound Ridge	Pound Ridge NY 10576	12/11/2020 0:00	Single Family	N
20 HERON LAKE DR, Pound Ridge	Bedford NY 10506	11/10/2020 0:00	Single Family	N
132 OLD CHURCH LN, Pound Ridge	Pound Ridge NY 10576	6/17/2020 0:00	Single Family	N
7 LIGHT HORSE LN, Pound Ridge	Pound Ridge NY 10576	6/17/2020 0:00	Single Family	N
158 EASTWOODS RD, (& 158A), Pound Ridge	Pound Ridge NY 10576	5/7/2020 0:00	Single Family	N
7 PATTERSON RD, Pound Ridge	Pound Ridge NY 10576	5/14/2020 0:00	Single Family	N
10 SO EASTERN FARM RD, Pound Ridge	Pound Ridge NY 10576	5/22/2020 0:00	Single Family	N
48 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	5/12/2020 0:00	Single Family	N
221 Upper Shad Rd, (& 221A), Pound Ridge	Pound Ridge NY 10576	6/22/2020 0:00	Single Family	N
221 Upper Shad Rd, (& 221A), Pound Ridge	Pound Ridge NY 10576	6/25/2020 0:00	Single Family	N
221 Upper Shad Rd, (& 221A), Pound Ridge	Pound Ridge NY 10576	6/25/2020 0:00	Single Family	N
32 ROBIN HOOD RD, Pound Ridge	Pound Ridge NY 10576	6/25/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

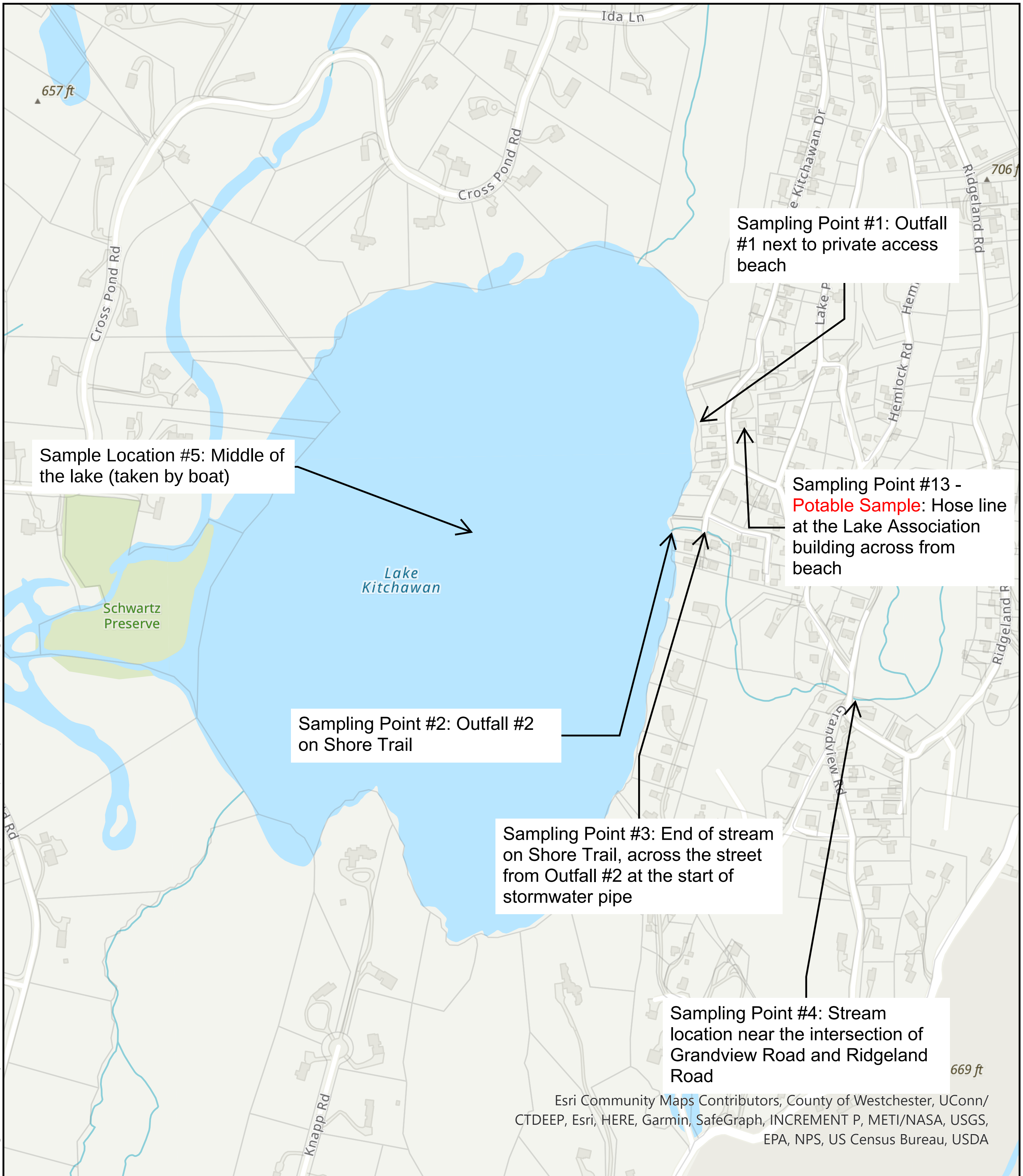
Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
229 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	6/26/2020 0:00	Single Family	N
71 FRANCHER RD, Pound Ridge	N/A	7/2/2020 0:00	Single Family	N
11 PINE DR, Pound Ridge	Pound Ridge NY 10576	6/12/2020 0:00	Single Family	N
424 LONG RIDGE RD, Pound Ridge	Bedford NY 10506	7/13/2020 0:00	Single Family	N
24 DAVIDS LN, Pound Ridge	Pound Ridge NY 10576	6/11/2020 0:00	Single Family	N
199 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	7/17/2020 0:00		N
440 Long Ridge Rd, (& 440A/B), Pound Ridge	Bedford NY 10506	7/17/2020 0:00	Single Family	N
440 Long Ridge Rd, (& 440A/B), Pound Ridge	Bedford NY 10506	7/17/2020 0:00	Single Family	N
440 Long Ridge Rd, (& 440A/B), Pound Ridge	Bedford NY 10506	7/20/2020 0:00	Single Family	N
35 Old Mill River Rd, Pound Ridge	Pound Ridge NY 10576	7/20/2020 0:00	Single Family	N
35 Old Mill River Rd, Pound Ridge	Pound Ridge NY 10576	7/22/2020 0:00	Single Family	N
93 LOWER TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	7/21/2020 0:00	Single Family	N
2 SHAD RD WEST, Pound Ridge	Pound Ridge NY 10576	7/23/2020 0:00	Single Family	N
40 MALLARD LAKE RD, (& 40A), Pound Ridge	Pound Ridge NY 10576	7/28/2020 0:00	Single Family	N
18 CEDAR HILL LN, Pound Ridge	Pound Ridge NY 10576	7/29/2020 0:00	Single Family	N
18 CEDAR HILL LN, Pound Ridge	Pound Ridge NY 10576	7/29/2020 0:00	Single Family	N
10 LOWER TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	7/29/2020 0:00	Single Family	N
15 SHAD RD WEST, Pound Ridge	Pound Ridge NY 10576	7/30/2020 0:00	Single Family	N
22 NANCYS LN, Pound Ridge	Pound Ridge NY 10576	8/4/2020 0:00	Single Family	N
20 ROLLING MEADOW LN, Pound Ridge	Pound Ridge NY 10576	8/7/2020 0:00	Single Family	N
17 WARING RD, Pound Ridge	Pound Ridge NY 10576	8/12/2020 0:00	Single Family	N
44 LOWER SHAD RD, Pound Ridge	Pound Ridge NY 10576	8/12/2020 0:00	Single Family	N
10 HORSESHOE HILL RD W, Pound Ridge	Pound Ridge NY 10576	7/20/2020 0:00	Single Family	N
288 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	7/15/2020 0:00	Single Family	N
11 PHEASANT RD, Pound Ridge	Pound Ridge NY 10576	8/18/2020 0:00	Single Family	N
84 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	8/20/2020 0:00	Single Family	N
118 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	8/21/2020 0:00	Single Family	N
81 SALEM RD, Pound Ridge	Pound Ridge NY 10576	8/25/2020 0:00	Single Family	N
190 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	8/26/2020 0:00	Single Family	N
19 HACK GREEN RD, Pound Ridge	Pound Ridge NY 10576	8/26/2020 0:00	Single Family	N
18 KINNICUTT RD E, Pound Ridge	Pound Ridge NY 10576	8/26/2020 0:00	Single Family	N
7 DAVIDS LN, Pound Ridge	Pound Ridge NY 10576	8/28/2020 0:00	Single Family	N
28 OLD SNAKE HILL RD, (& 26), Pound Ridge	Pound Ridge NY 10576	7/23/2020 0:00	Single Family	N
33 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	7/29/2020 0:00	Single Family	N
66 HACK GREEN RD, (& 66A), Pound Ridge	Pound Ridge NY 10576	8/19/2020 0:00	Single Family	N
1 BLACKSMITH LN, Pound Ridge	Pound Ridge NY 10576	9/10/2020 0:00	Single Family	N
8 WARING RD, Pound Ridge	Pound Ridge NY 10576	9/14/2020 0:00	Single Family	N
76 SHAD RD WEST, Pound Ridge	Pound Ridge NY 10576	9/15/2020 0:00	Single Family	N
28 WEST LN, Pound Ridge	Pound Ridge NY 10576	9/18/2020 0:00	Single Family	N
82 WESTCHESTER AVE, (& 182 A), Pound Ridg	Pound Ridge NY 10576	8/12/2020 0:00	Single Family	N
82 WESTCHESTER AVE, (& 182 A), Pound Ridg	Pound Ridge NY 10576	8/12/2020 0:00	Single Family	N
30 MALLARD LAKE RD, Pound Ridge	Pound Ridge NY 10576	9/23/2020 0:00	Single Family	N
65 OLD LOGGING RD, Pound Ridge	Bedford NY 10506	9/25/2020 0:00	Single Family	N
50 OLD LOGGING RD, Pound Ridge	Bedford NY 10506	9/25/2020 0:00	Single Family	N

Lewisboro and Pound Ridge
2020 Septic Pump Out Data

Street Address	CityStateZip	Service Data	Building Type	Evidence of Septage
28 KINNICUTT RD E, Pound Ridge	Pound Ridge NY 10576	8/8/2020 0:00	Single Family	N
35 HORSESHOE HILL RD, Pound Ridge	Pound Ridge NY 10576	9/29/2020 0:00	Single Family	N
49 LOWER SHAD RD, Pound Ridge	Pound Ridge NY 10576	10/8/2020 0:00	Single Family	N
86 SALEM RD, Pound Ridge	Pound Ridge NY 10576	10/9/2020 0:00	Single Family	N
183 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	10/9/2020 0:00	Other	N
14 SO EASTERN FARM RD, Pound Ridge	Pound Ridge NY 10576	9/26/2020 0:00	Single Family	N
6 HEERDT FARM LN, Pound Ridge	Pound Ridge NY 10576	10/21/2020 0:00	Single Family	N
7 LOWER SHAD RD, (& 7A), Pound Ridge	Pound Ridge NY 10576	10/22/2020 0:00	Single Family	N
112 HIGH RIDGE RD, Pound Ridge	Pound Ridge NY 10576	10/26/2020 0:00	Single Family	N
110 HIGH RIDGE RD, Pound Ridge	Pound Ridge NY 10576	10/26/2020 0:00	Single Family	N
193 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	9/3/2020 0:00	Single Family	N
49 FOX RUN RD, Pound Ridge	Pound Ridge NY 10576	10/29/2020 0:00	Single Family	N
55 Westchester Ave, (& 57), Pound Ridge	Pound Ridge NY 10576	11/2/2020 0:00	Commercial	N
20 EASTWOODS RD, Pound Ridge	Pound Ridge NY 10576	11/6/2020 0:00	Single Family	N
49 WHITE BIRCH RD, Pound Ridge	Pound Ridge NY 10576	10/16/2020 0:00	Single Family	N
25 SHAD RD WEST, Pound Ridge	Pound Ridge NY 10576	10/16/2020 0:00	Single Family	N
20 PINE DR, Pound Ridge	Pound Ridge NY 10576	11/12/2020 0:00	Single Family	N
50 LOWER SHAD RD, Pound Ridge	Pound Ridge NY 10576	11/13/2020 0:00	Single Family	N
35 LOWER TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	11/13/2020 0:00	Single Family	N
16 SHAD RD WEST, Pound Ridge	Pound Ridge NY 10576	11/16/2020 0:00	Single Family	N
7 WINTERBOTTOM LN, Pound Ridge	Pound Ridge NY 10576	11/16/2020 0:00	Single Family	N
67 SO BEDFORD RD, Pound Ridge	Pound Ridge NY 10576	11/17/2020 0:00	Single Family	N
23 POUND RIDGE RD, Pound Ridge	Pound Ridge NY 10576	11/18/2020 0:00	Single Family	N
11 HEMLOCK HILL RD, Pound Ridge	Pound Ridge NY 10576	11/24/2020 0:00	Single Family	N
7 PHEASANT RD W, Pound Ridge	Pound Ridge NY 10576	12/1/2020 0:00	Single Family	N
186 WESTCHESTER AVE, Pound Ridge	Pound Ridge NY 10576	10/20/2020 0:00	Single Family	N
470 LONG RIDGE RD, Pound Ridge	Bedford NY 10506	12/14/2020 0:00	Single Family	N
63 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	12/15/2020 0:00	Single Family	N
38 SHAD RD WEST, Pound Ridge	Pound Ridge NY 10576	12/21/2020 0:00	Single Family	N
23 PETERS LN, Pound Ridge	Pound Ridge NY 10576	11/3/2020 0:00	Single Family	N
84 DANN FARM RD, Pound Ridge	Pound Ridge NY 10576	11/10/2020 0:00	Single Family	N
114 BARNEGAT RD, (& 114 A), Pound Ridge	Pound Ridge NY 10576	12/29/2020 0:00	Single Family	N
114 BARNEGAT RD, (& 114 A), Pound Ridge	Pound Ridge NY 10576	12/29/2020 0:00	Single Family	N
119 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	12/30/2020 0:00	Single Family	N
7 TRINITY PASS RD, Pound Ridge	Pound Ridge NY 10576	12/30/2020 0:00	Single Family	N
31 SHAD RD WEST, Pound Ridge	Pound Ridge NY 10576	11/30/2020 0:00	Single Family	N
48 BISHOP PARK RD, Pound Ridge	Pound Ridge NY 10576	10/28/2020 0:00	Single Family	N
11 GREAT HILL FARMS RD, Pound Ridge	Bedford NY 10506	11/17/2020 0:00	Single Family	N
11 GREAT HILL FARMS RD, Pound Ridge	Bedford NY 10506	11/17/2020 0:00	Single Family	N
24 CRADLE ROCK RD, Pound Ridge	Pound Ridge NY 10576	12/2/2020 0:00	Single Family	N
233 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	12/2/2020 0:00	Single Family	N
233 UPPER SHAD RD, Pound Ridge	Pound Ridge NY 10576	12/2/2020 0:00	Single Family	N

APPENDIX E: LAKE KITCHAWAN 2021 SAMPLING RESULTS

Lake Kitchawan Sample Results
May 27, 2021



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Sampling Plan

Legend

Lake Kitchawan Study Parcels

0 125 250 500 US Feet

N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: May 2021

Figure Exported: 5/28/2021 By: enealon Using: \\wc\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lewisboro Parcel Figure.aprx

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

June 11, 2021

Emily Nealon
Woodard & Curran Inc.
800 Westchester Avenue
Port Chester, NY 10573

RE: Project: Lake Study 5/27
Pace Project No.: 70176661

Dear Emily Nealon:

Enclosed are the analytical results for sample(s) received by the laboratory on May 27, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Nicolette M. Lovari
nicolette.lovari@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Nicolette Lovari, Pace Analytical Melville

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

CERTIFICATIONS

Project:	Lake Study 5/27
Pace Project No.:	70176661

Pace Analytical Services Long Island

Delaware Certification # NY10478	Pennsylvania Certification #: 68-00350
Delaware Certification # NY10478	Connecticut Certification #: PH-0435
Virginia Certification # 460302	Maryland Certification #: 208
575 Broad Hollow Rd, Melville, NY 11747	Rhode Island Certification #: LAO00340
New York Certification #: 10478 Primary Accrediting Body	Massachusetts Certification #: M-NY026
New Jersey Certification #: NY158	New Hampshire Certification #: 2987

Pace Analytical Services, LLC
575 Broad Hollow Road
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SAMPLE SUMMARY

Project: Lake Study 5/27
Pace Project No.: 70176661

Lab ID	Sample ID	Matrix	Date Collected	Date Received
70174666001	**1**	Water	05/27/21 08:40	05/27/21 14:50
70174666002	**2**	Water	05/27/21 07:15	05/27/21 14:50
70174666003	**3**	Water	05/27/21 09:00	05/27/21 14:50
70174666004	**4**	Water	05/27/21 07:50	05/27/21 14:50
70174666005	**5**	Water	05/27/21 08:10	05/27/21 14:50
70174666012	**13**	Drinking Water	05/27/21 09:20	05/27/21 14:50

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SAMPLE ANALYTE COUNT

Project: Lake Study 5/27
Pace Project No.: 70176661

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
70174666001	**1**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	IT1	1	PACE-MV
		SM22 2540D	IT1	1	PACE-MV
		SM22 4500-P E	HMH	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70174666002	**2**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	IT1	1	PACE-MV
		SM22 2540D	IT1	1	PACE-MV
		SM22 4500-P E	HMH	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70174666003	**3**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	IT1	1	PACE-MV
		SM22 2540D	IT1	1	PACE-MV
		SM22 4500-P E	HMH	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV

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SAMPLE ANALYTE COUNT

Project: Lake Study 5/27
Pace Project No.: 70176661

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70174666004	**4**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	IT1	1	PACE-MV
		SM22 2540D	IT1	1	PACE-MV
		SM22 4500-P E	HMH	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70174666005	**5**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	IT1	1	PACE-MV
		SM22 2540D	IT1	1	PACE-MV
		SM22 4500-P E	HMH	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70174666012	**13**	EPA 200.7	KM1	1	PACE-MV
		SM22 9223B Colilert	GFD	2	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	IT1	1	PACE-MV
		SM22 2540D	IT1	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: Lake Study 5/27
Pace Project No.: 70176661

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV

PACE-MV = Pace Analytical Services - Melville

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

SUMMARY OF DETECTION

Project: Lake Study 5/27
Pace Project No.: 70176661

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
70174666001	**1**					
SM22 9221B/E	Fecal Coliforms, MPN	310	MPN/100mL	1.8	05/27/21 16:08	
SM22 9221B/E	Total Coliforms, MPN	2,200	MPN/100mL	1.8	05/27/21 16:08	
SM 9223B-2004	E.coli	112.4	MPN/100mL	1.0	05/28/21 16:02	
EPA 180.1	Turbidity	0.65J	NTU	1.0	05/27/21 19:36	
SM22 2540B	Total Solids	480	mg/L	10.0	06/03/21 16:52	
SM22 2540D	Total Suspended Solids	244	mg/L	10.0	06/03/21 14:51	
SM22 4500-P E	Phosphorus	0.15	mg/L	0.050	06/03/21 17:20	
SM22 4500-P E	Orthophosphate as P	0.044J	mg/L	0.050	05/28/21 19:21	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			05/28/21 19:37	
SM22 4500-N	Total Nitrogen	3.9	mg/L	0.10	06/07/21 17:02	
EPA 351.2	Nitrogen, Kjeldahl, Total	1.0	mg/L	0.10	06/04/21 14:30	
EPA 353.2	Nitrate-Nitrite (as N)	2.9	mg/L	0.25	05/27/21 22:49	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.52	mg/L	0.10	06/07/21 14:16	
70174666002	**2**					
SM22 9221B/E	Fecal Coliforms, MPN	5,400	MPN/100mL	1.8	05/27/21 16:08	H1
SM22 9221B/E	Total Coliforms, MPN	9,200	MPN/100mL	1.8	05/27/21 16:08	H1
SM 9223B-2004	E.coli	1,553.1	MPN/100mL	1.0	05/28/21 16:02	H2
EPA 180.1	Turbidity	2.4	NTU	1.0	05/27/21 19:32	
SM22 2540B	Total Solids	415	mg/L	10.0	06/03/21 16:53	
SM22 2540D	Total Suspended Solids	4.0	mg/L	2.0	06/03/21 14:51	
SM22 4500-P E	Phosphorus	0.083	mg/L	0.050	06/03/21 17:20	
SM22 4500-P E	Orthophosphate as P	0.036J	mg/L	0.050	05/28/21 19:21	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			05/28/21 19:37	
SM22 4500-N	Total Nitrogen	3.0	mg/L	0.10	06/07/21 17:02	
EPA 351.2	Nitrogen, Kjeldahl, Total	1.4	mg/L	0.10	06/04/21 14:32	
EPA 353.2	Nitrate-Nitrite (as N)	1.7	mg/L	0.25	05/27/21 22:50	
70174666003	**3**					
SM22 9221B/E	Fecal Coliforms, MPN	9,200	MPN/100mL	1.8	05/27/21 16:08	
SM22 9221B/E	Total Coliforms, MPN	9,200	MPN/100mL	1.8	05/27/21 16:08	
SM 9223B-2004	E.coli	>2,419.6	MPN/100mL	1.0	05/28/21 16:02	
EPA 180.1	Turbidity	8.1	NTU	1.0	05/27/21 19:38	
SM22 2540B	Total Solids	453	mg/L	10.0	06/03/21 16:54	
SM22 2540D	Total Suspended Solids	18.4	mg/L	2.0	06/03/21 14:55	
SM22 4500-P E	Phosphorus	0.077	mg/L	0.050	06/03/21 17:20	
SM22 4500-P E	Orthophosphate as P	0.045J	mg/L	0.050	05/28/21 19:21	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			05/28/21 19:37	
SM22 4500-N	Total Nitrogen	2.3	mg/L	0.10	06/07/21 17:02	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.63	mg/L	0.10	06/04/21 14:35	
EPA 353.2	Nitrate-Nitrite (as N)	1.7	mg/L	0.25	05/27/21 22:53	
70174666004	**4**					
SM22 9221B/E	Fecal Coliforms, MPN	68	MPN/100mL	1.8	05/27/21 16:08	H1
SM22 9221B/E	Total Coliforms, MPN	490	MPN/100mL	1.8	05/27/21 16:08	H1
SM 9223B-2004	E.coli	29.5	MPN/100mL	1.0	05/28/21 16:02	H2
EPA 180.1	Turbidity	1.6	NTU	1.0	05/27/21 19:33	
SM22 2540B	Total Solids	426	mg/L	10.0	06/03/21 16:54	
SM22 2540D	Total Suspended Solids	3.2	mg/L	2.0	06/03/21 14:55	

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

SUMMARY OF DETECTION

Project: Lake Study 5/27
Pace Project No.: 70176661

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
70174666004	**4**					
SM22 4500-P E	Phosphorus	0.043J	mg/L	0.050	06/03/21 17:21	
SM22 4500-P E	Orthophosphate as P	0.012J	mg/L	0.050	05/28/21 19:21	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			05/28/21 19:37	
SM22 4500-N	Total Nitrogen	2.5	mg/L	0.10	06/07/21 17:02	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.57	mg/L	0.10	06/04/21 14:36	
EPA 353.2	Nitrate-Nitrite (as N)	1.9	mg/L	0.25	05/27/21 22:55	
70174666005	**5**					
SM22 9221B/E	Fecal Coliforms, MPN	2.0	MPN/100mL	1.8	05/27/21 16:08	
SM22 9221B/E	Total Coliforms, MPN	4.0	MPN/100mL	1.8	05/27/21 16:08	
SM 9223B-2004	E.coli	4.1	MPN/100mL	1.0	05/28/21 16:02	
EPA 180.1	Turbidity	1.7	NTU	1.0	05/27/21 19:34	
SM22 2540B	Total Solids	198	mg/L	10.0	06/03/21 16:55	
SM22 2540D	Total Suspended Solids	2.8	mg/L	2.0	06/03/21 15:01	
SM22 4500-P E	Phosphorus	0.037J	mg/L	0.050	06/03/21 17:21	
SM22 5540C	LAS Molecular Weight, g/mol	320			05/28/21 19:37	
SM22 4500-N	Total Nitrogen	0.75	mg/L	0.10	06/07/21 17:02	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.72	mg/L	0.10	06/04/21 14:37	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.072J	mg/L	0.10	06/07/21 14:28	
70174666012	**13**					
EPA 200.7	Phosphorus	30.9J	ug/L	50.0	06/01/21 19:02	N3
SM22 9223B Colilert	Total Coliforms	Present			05/28/21 11:55	
SM22 9223B Colilert	E.coli	Absent			05/28/21 11:55	
EPA 180.1	Turbidity	2.4	NTU	1.0	05/27/21 19:39	
SM22 2540B	Total Solids	337	mg/L	10.0	06/02/21 18:11	N3
SM22 2540D	Total Suspended Solids	2.0	mg/L	2.0	06/03/21 15:08	
SM22 5540C	LAS Molecular Weight, g/mol	320			05/28/21 19:37	
SM22 4500-N	Total Nitrogen	3.1	mg/L	0.10	06/08/21 16:06	
EPA 353.2	Nitrate-Nitrite (as N)	3.1	mg/L	0.25	05/27/21 22:26	

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PROJECT NARRATIVE

Project: Lake Study 5/27
Pace Project No.: 70176661

Method: **EPA 200.7**
Description: 200.7 MET ICP, Drinking Water
Client: Woodard & Curran Inc.
Date: June 11, 2021

General Information:
1 sample was analyzed for EPA 200.7 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Lake Study 5/27
Pace Project No.: 70176661

Method: **SM22 9221B/E**
Description: Fecal-Total Coliform, MPN
Client: Woodard & Curran Inc.
Date: June 11, 2021

General Information:
5 samples were analyzed for SM22 9221B/E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H1: Analysis conducted outside the EPA method holding time.
- 2 (Lab ID: 70174666002)
- 4 (Lab ID: 70174666004)

Additional Comments:

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PROJECT NARRATIVE

Project: Lake Study 5/27
Pace Project No.: 70176661

Method: **SM 9223B-2004**
Description: SM 9223B-2004
Client: Woodard & Curran Inc.
Date: June 11, 2021

General Information:
5 samples were analyzed for SM 9223B-2004 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H2: Extraction or preparation conducted outside EPA method holding time.
- 2 (Lab ID: 70174666002)
- 4 (Lab ID: 70174666004)

Sample Preparation:
The samples were prepared in accordance with SM 9223B-2004 with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project:	Lake Study 5/27
Pace Project No.:	70176661

Method: **SM22 9223B Colilert**
Description: MBIO Total Coliform DW
Client: Woodard & Curran Inc.
Date: June 11, 2021

General Information:
1 sample was analyzed for SM22 9223B Colilert by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM22 9223B Colilert with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Lake Study 5/27
Pace Project No.: 70176661

Method: **EPA 1666A**
Description: 1666 MSV
Client: Woodard & Curran Inc.
Date: June 11, 2021

General Information:
5 samples were analyzed for EPA 1666A by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Lake Study 5/27
Pace Project No.: 70176661

Method: **EPA 180.1**
Description: 180.1 Turbidity
Client: Woodard & Curran Inc.
Date: June 11, 2021

General Information:
6 samples were analyzed for EPA 180.1 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project:	Lake Study 5/27
Pace Project No.:	70176661

Method: **SM22 2540B**
Description: 2540B Total Solids DW
Client: Woodard & Curran Inc.
Date: June 11, 2021

General Information:
1 sample was analyzed for SM22 2540B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project:	Lake Study 5/27
Pace Project No.:	70176661

Method: **SM22 2540B**
Description: 2540B Total Solids
Client: Woodard & Curran Inc.
Date: June 11, 2021

General Information:
5 samples were analyzed for SM22 2540B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project:	Lake Study 5/27
Pace Project No.:	70176661

Method: **SM22 2540D**
Description: 2540D Total Suspended Solids
Client: Woodard & Curran Inc.
Date: June 11, 2021

General Information:
6 samples were analyzed for SM22 2540D by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Lake Study 5/27
Pace Project No.: 70176661

Method: **SM22 4500-P E**
Description: 4500PE Total Phosphorus
Client: Woodard & Curran Inc.
Date: June 11, 2021

General Information:
5 samples were analyzed for SM22 4500-P E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM22 4500-P B with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project:	Lake Study 5/27
Pace Project No.:	70176661

Method: **SM22 4500-P E**
Description: 4500PE Ortho Phosphorus
Client: Woodard & Curran Inc.
Date: June 11, 2021

General Information:
6 samples were analyzed for SM22 4500-P E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Lake Study 5/27
Pace Project No.: 70176661

Method: **SM22 5540C**
Description: 5540C MBAS Surfactants
Client: Woodard & Curran Inc.
Date: June 11, 2021

General Information:
6 samples were analyzed for SM22 5540C by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM22 5540C with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project:	Lake Study 5/27
Pace Project No.:	70176661

Method: **SM22 4500-N**
Description: Total Nitrogen Calculation
Client: Woodard & Curran Inc.
Date: June 11, 2021

General Information:
6 samples were analyzed for SM22 4500-N by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Lake Study 5/27
Pace Project No.: 70176661

Method: **EPA 351.2**
Description: 351.2 Total Kjeldahl Nitrogen
Client: Woodard & Curran Inc.
Date: June 11, 2021

General Information:
6 samples were analyzed for EPA 351.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 351.2 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 211654

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70174571002,70174666001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1060521)
  - Nitrogen, Kjeldahl, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 211234

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 1058104)
  - Nitrogen, Kjeldahl, Total

QC Batch: 211654

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 1060522)
  - Nitrogen, Kjeldahl, Total

Additional Comments:

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PROJECT NARRATIVE

Project: Lake Study 5/27
Pace Project No.: 70176661

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Woodard & Curran Inc.
Date: June 11, 2021

General Information:
1 sample was analyzed for EPA 353.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 210987

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70174736001,70174740001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1056261)
  - Nitrate-Nitrite (as N)

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Lake Study 5/27
Pace Project No.: 70176661

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 pres.
Client: Woodard & Curran Inc.
Date: June 11, 2021

General Information:
5 samples were analyzed for EPA 353.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Lake Study 5/27
Pace Project No.: 70176661

Method: **SM22 4500 NH3 H**
Description: 4500 Ammonia Water
Client: Woodard & Curran Inc.
Date: June 11, 2021

General Information:
6 samples were analyzed for SM22 4500 NH3 H by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: Lake Study 5/27
Pace Project No.: 70176661

Sample: 1 **Lab ID: 70174666001** Collected: 05/27/21 08:40 Received: 05/27/21 14:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**310**	MPN/100mL	1.8		1		05/27/21 16:08		
Total Coliforms, MPN	**2,200**	MPN/100mL	1.8		1		05/27/21 16:08		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**112.4**	MPN/100mL	1.0		1	05/27/21 16:02	05/28/21 16:02		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		05/27/21 20:05	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		05/27/21 20:05	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		05/27/21 20:05	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	85	%	78-114		5		05/27/21 20:05	17060-07-0	
4-Bromofluorobenzene (S)	88	%	83-111		5		05/27/21 20:05	460-00-4	
Toluene-d8 (S)	102	%	80-131		5		05/27/21 20:05	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**0.65J**	NTU	1.0	0.32	1		05/27/21 19:36		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**480**	mg/L	10.0	9.0	1		06/03/21 16:52		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**244**	mg/L	10.0	4.8	1		06/03/21 14:51		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.15**	mg/L	0.050	0.010	1	06/03/21 11:36	06/03/21 17:20	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.044J**	mg/L	0.050	0.010	1		05/28/21 19:21		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	05/28/21 19:36	05/28/21 19:37		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	05/28/21 19:36	05/28/21 19:37		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lake Study 5/27
Pace Project No.: 70176661

Sample: 1 **Lab ID: 70174666001** Collected: 05/27/21 08:40 Received: 05/27/21 14:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**3.9**	mg/L	0.10		1		06/07/21 17:02		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**1.0**	mg/L	0.10	0.094	1	06/03/21 07:24	06/04/21 14:30	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**2.9**	mg/L	0.25	0.18	5		05/27/21 22:49	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.52**	mg/L	0.10	0.053	1		06/07/21 14:16	7664-41-7	

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ANALYTICAL RESULTS

Project: Lake Study 5/27
Pace Project No.: 70176661

Sample: 2		Lab ID: 70174666002		Collected: 05/27/21 07:15			Received: 05/27/21 14:50	Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**5,400**	MPN/100mL	1.8		1		05/27/21 16:08		H1
Total Coliforms, MPN	**9,200**	MPN/100mL	1.8		1		05/27/21 16:08		H1
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**1,553.1**	MPN/100mL	1.0		1	05/27/21 16:02	05/28/21 16:02		H2
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		05/27/21 20:27	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		05/27/21 20:27	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		05/27/21 20:27	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	86	%	78-114		5		05/27/21 20:27	17060-07-0	
4-Bromofluorobenzene (S)	89	%	83-111		5		05/27/21 20:27	460-00-4	
Toluene-d8 (S)	104	%	80-131		5		05/27/21 20:27	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**2.4**	NTU	1.0	0.32	1		05/27/21 19:32		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**415**	mg/L	10.0	9.0	1		06/03/21 16:53		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**4.0**	mg/L	2.0	0.96	1		06/03/21 14:51		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.083**	mg/L	0.050	0.010	1	06/03/21 11:36	06/03/21 17:20	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.036J**	mg/L	0.050	0.010	1		05/28/21 19:21		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	05/28/21 19:36	05/28/21 19:37		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	05/28/21 19:36	05/28/21 19:37		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lake Study 5/27
Pace Project No.: 70176661

Sample: 2 **Lab ID: 70174666002** Collected: 05/27/21 07:15 Received: 05/27/21 14:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**3.0**	mg/L	0.10		1		06/07/21 17:02		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**1.4**	mg/L	0.10	0.094	1	06/03/21 07:24	06/04/21 14:32	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**1.7**	mg/L	0.25	0.18	5		05/27/21 22:50	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**<0.10**	mg/L	0.10	0.053	1		06/07/21 14:22	7664-41-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lake Study 5/27
Pace Project No.: 70176661

Sample: 3 **Lab ID: 70174666003** Collected: 05/27/21 09:00 Received: 05/27/21 14:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**9,200**	MPN/100mL	1.8		1		05/27/21 16:08		
Total Coliforms, MPN	**9,200**	MPN/100mL	1.8		1		05/27/21 16:08		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**>2,419.6**	MPN/100mL	1.0		1	05/27/21 16:02	05/28/21 16:02		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		05/27/21 20:49	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		05/27/21 20:49	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		05/27/21 20:49	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	79	%	78-114		5		05/27/21 20:49	17060-07-0	
4-Bromofluorobenzene (S)	90	%	83-111		5		05/27/21 20:49	460-00-4	
Toluene-d8 (S)	100	%	80-131		5		05/27/21 20:49	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**8.1**	NTU	1.0	0.32	1		05/27/21 19:38		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**453**	mg/L	10.0	9.0	1		06/03/21 16:54		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**18.4**	mg/L	2.0	0.96	1		06/03/21 14:55		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.077**	mg/L	0.050	0.010	1	06/03/21 11:36	06/03/21 17:20	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.045J**	mg/L	0.050	0.010	1		05/28/21 19:21		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	05/28/21 19:36	05/28/21 19:37		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	05/28/21 19:36	05/28/21 19:37		

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ANALYTICAL RESULTS

Project: Lake Study 5/27
Pace Project No.: 70176661

Sample: 3 **Lab ID: 70174666003** Collected: 05/27/21 09:00 Received: 05/27/21 14:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**2.3**	mg/L	0.10		1		06/07/21 17:02		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.63**	mg/L	0.10	0.094	1	06/03/21 07:24	06/04/21 14:35	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**1.7**	mg/L	0.25	0.18	5		05/27/21 22:53	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**<0.10**	mg/L	0.10	0.053	1		06/07/21 14:23	7664-41-7	

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ANALYTICAL RESULTS

Project: Lake Study 5/27
Pace Project No.: 70176661

Sample: 4 **Lab ID: 70174666004** Collected: 05/27/21 07:50 Received: 05/27/21 14:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**68**	MPN/100mL	1.8		1		05/27/21 16:08		H1
Total Coliforms, MPN	**490**	MPN/100mL	1.8		1		05/27/21 16:08		H1
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**29.5**	MPN/100mL	1.0		1	05/27/21 16:02	05/28/21 16:02		H2
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		06/04/21 20:47	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		06/04/21 20:47	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		06/04/21 20:47	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	108	%	78-114		5		06/04/21 20:47	17060-07-0	
4-Bromofluorobenzene (S)	92	%	83-111		5		06/04/21 20:47	460-00-4	
Toluene-d8 (S)	105	%	80-131		5		06/04/21 20:47	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.6**	NTU	1.0	0.32	1		05/27/21 19:33		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**426**	mg/L	10.0	9.0	1		06/03/21 16:54		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**3.2**	mg/L	2.0	0.96	1		06/03/21 14:55		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.043J**	mg/L	0.050	0.010	1	06/03/21 11:36	06/03/21 17:21	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.012J**	mg/L	0.050	0.010	1		05/28/21 19:21		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	05/28/21 19:36	05/28/21 19:37		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	05/28/21 19:36	05/28/21 19:37		

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ANALYTICAL RESULTS

Project: Lake Study 5/27
Pace Project No.: 70176661

Sample: 4 **Lab ID: 70174666004** Collected: 05/27/21 07:50 Received: 05/27/21 14:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**2.5**	mg/L	0.10		1		06/07/21 17:02		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.57**	mg/L	0.10	0.094	1	06/03/21 07:24	06/04/21 14:36	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**1.9**	mg/L	0.25	0.18	5		05/27/21 22:55	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**<0.10**	mg/L	0.10	0.053	1		06/07/21 14:27	7664-41-7	

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ANALYTICAL RESULTS

Project: Lake Study 5/27
Pace Project No.: 70176661

Sample: 5 **Lab ID: 70174666005** Collected: 05/27/21 08:10 Received: 05/27/21 14:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**2.0**	MPN/100mL	1.8		1		05/27/21 16:08		
Total Coliforms, MPN	**4.0**	MPN/100mL	1.8		1		05/27/21 16:08		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**4.1**	MPN/100mL	1.0		1	05/27/21 16:02	05/28/21 16:02		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		06/04/21 21:09	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		06/04/21 21:09	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		06/04/21 21:09	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	78-114		5		06/04/21 21:09	17060-07-0	
4-Bromofluorobenzene (S)	89	%	83-111		5		06/04/21 21:09	460-00-4	
Toluene-d8 (S)	102	%	80-131		5		06/04/21 21:09	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.7**	NTU	1.0	0.32	1		05/27/21 19:34		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**198**	mg/L	10.0	9.0	1		06/03/21 16:55		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**2.8**	mg/L	2.0	0.96	1		06/03/21 15:01		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.037J**	mg/L	0.050	0.010	1	06/03/21 11:36	06/03/21 17:21	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**<0.050**	mg/L	0.050	0.010	1		05/28/21 19:21		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	05/28/21 19:36	05/28/21 19:37		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	05/28/21 19:36	05/28/21 19:37		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lake Study 5/27
Pace Project No.: 70176661

Sample: 5 | **Lab ID: 70174666005** | Collected: 05/27/21 08:10 | Received: 05/27/21 14:50 | Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**0.75**	mg/L	0.10		1		06/07/21 17:02		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.72**	mg/L	0.10	0.094	1	06/03/21 07:24	06/04/21 14:37	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.25**	mg/L	0.25	0.18	5		05/27/21 22:56	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.072J**	mg/L	0.10	0.053	1		06/07/21 14:28	7664-41-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Lake Study 5/27
Pace Project No.: 70176661

Sample: 13 **Lab ID: 70174666012** Collected: 05/27/21 09:20 Received: 05/27/21 14:50 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, Drinking Water	Analytical Method: EPA 200.7 Pace Analytical Services - Melville								
Phosphorus	**30.9J**	ug/L	50.0	18.0	1		06/01/21 19:02	7723-14-0	N3
MBIO Total Coliform DW	Analytical Method: SM22 9223B Colilert Preparation Method: SM22 9223B Colilert Pace Analytical Services - Melville								
Total Coliforms	**Present**				1	05/27/21 17:55	05/28/21 11:55		
E.coli	**Absent**				1	05/27/21 17:55	05/28/21 11:55		
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**2.4**	NTU	1.0	0.32	1		05/27/21 19:39		
2540B Total Solids DW	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**337**	mg/L	10.0	9.0	1		06/02/21 18:11		N3
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**2.0**	mg/L	2.0	0.96	1		06/03/21 15:08		
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**<0.050**	mg/L	0.050	0.010	1		05/28/21 19:21		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	05/28/21 19:36	05/28/21 19:37		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	05/28/21 19:36	05/28/21 19:37		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**3.1**	mg/L	0.10		1		06/08/21 16:06		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**<0.10**	mg/L	0.10	0.094	1	06/01/21 07:42	06/02/21 14:24	7727-37-9	N3
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**3.1**	mg/L	0.25	0.18	5		05/27/21 22:26	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**<0.10**	mg/L	0.10	0.053	1		06/07/21 14:36	7664-41-7	

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch: 211359
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 MET No Prep Drinking Water
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70174666012

METHOD BLANK: 1058566
Matrix: Drinking Water
Associated Lab Samples: 70174666012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	ug/L	<50.0	50.0	18.0	06/01/21 18:14	N3

LABORATORY CONTROL SAMPLE: 1058567

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	ug/L	1000	1040	104	85-115	N3

MATRIX SPIKE SAMPLE: 1058569

Parameter	Units	70174740001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	ug/L	<50.0	1000	942	93	70-130	N3

MATRIX SPIKE SAMPLE: 1058571

Parameter	Units	70174503001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	ug/L	0.14 mg/L	1000	1100	96	70-130	N3

SAMPLE DUPLICATE: 1058568

Parameter	Units	70174740001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus	ug/L	<50.0	<50.0		20	N3

SAMPLE DUPLICATE: 1058570

Parameter	Units	70174503001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus	ug/L	0.14 mg/L	139	3	20	N3

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch: 211071
QC Batch Method: SM22 9221B/E
Analysis Method: SM22 9221B/E
Analysis Description: 9221BCE Fecal-Total Coliform, MPN
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005

METHOD BLANK: 1056492 Matrix: Water
Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fecal Coliforms, MPN	MPN/100mL	<1.8	1.8		05/27/21 10:40	
Total Coliforms, MPN	MPN/100mL	<1.8	1.8		05/27/21 10:40	

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch:	210965	Analysis Method:	SM 9223B-2004
QC Batch Method:	SM 9223B-2004	Analysis Description:	ECOLI in Waste Water
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005

METHOD BLANK: 1055708 Matrix: Water

Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
E.coli	MPN/100mL	<1.0	1.0		05/28/21 16:02	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch:	211088	Analysis Method:	SM22 9223B Colilert
QC Batch Method:	SM22 9223B Colilert	Analysis Description:	TotColDW MBIO Total Coliform
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70174666012

METHOD BLANK: 1056549 Matrix: Drinking Water

Associated Lab Samples: 70174666012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
E.coli		Absent			05/28/21 11:55	
Total Coliforms		Absent			05/28/21 11:55	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch: 210933 | Analysis Method: EPA 1666A
QC Batch Method: EPA 1666A | Analysis Description: 1666A MSV
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70174666001, 70174666002, 70174666003

METHOD BLANK: 1055518 | Matrix: Water
Associated Lab Samples: 70174666001, 70174666002, 70174666003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethyl acetate	ug/L	<10.0	10.0	3.0	05/27/21 13:31	
Isopropyl acetate	ug/L	<10.0	10.0	1.9	05/27/21 13:31	
n-amyl acetate	ug/L	<5.0	5.0	2.7	05/27/21 13:31	
1,2-Dichloroethane-d4 (S)	%	79	78-114		05/27/21 13:31	
4-Bromofluorobenzene (S)	%	85	83-111		05/27/21 13:31	
Toluene-d8 (S)	%	94	80-131		05/27/21 13:31	

LABORATORY CONTROL SAMPLE: 1055519

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethyl acetate	ug/L	50	55.6	111	60-157	
Isopropyl acetate	ug/L	50	49.1	98	70-147	
n-amyl acetate	ug/L	50	58.1	116	70-130	
1,2-Dichloroethane-d4 (S)	%			78	78-114	
4-Bromofluorobenzene (S)	%			87	83-111	
Toluene-d8 (S)	%			96	80-131	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1058763 1058764

Parameter	Units	70174215001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethyl acetate	ug/L	<50.0	250	250	253	306	101	123	49-149	19	20	
Isopropyl acetate	ug/L	<50.0	250	250	224	228	90	91	29-136	2	20	
n-amyl acetate	ug/L	<25.0	250	250	272	270	109	108	36-134	1	20	
1,2-Dichloroethane-d4 (S)	%						84	90	78-114		20	
4-Bromofluorobenzene (S)	%						90	89	83-111		20	
Toluene-d8 (S)	%						100	101	80-131		20	

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch:	212164	Analysis Method:	EPA 1666A
QC Batch Method:	EPA 1666A	Analysis Description:	1666A MSV
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70174666004, 70174666005

METHOD BLANK: 1063600 Matrix: Water

Associated Lab Samples: 70174666004, 70174666005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethyl acetate	ug/L	<10.0	10.0	3.0	06/04/21 17:53	
Isopropyl acetate	ug/L	<10.0	10.0	1.9	06/04/21 17:53	
n-amyl acetate	ug/L	<5.0	5.0	2.7	06/04/21 17:53	
1,2-Dichloroethane-d4 (S)	%	105	78-114		06/04/21 17:53	
4-Bromofluorobenzene (S)	%	92	83-111		06/04/21 17:53	
Toluene-d8 (S)	%	104	80-131		06/04/21 17:53	

LABORATORY CONTROL SAMPLE: 1063601

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethyl acetate	ug/L	50	53.2	106	60-157	
Isopropyl acetate	ug/L	50	48.9	98	70-147	
n-amyl acetate	ug/L	50	57.4	115	70-130	
1,2-Dichloroethane-d4 (S)	%			103	78-114	
4-Bromofluorobenzene (S)	%			102	83-111	
Toluene-d8 (S)	%			99	80-131	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1063602 1063603

Parameter	Units	70174666005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethyl acetate	ug/L	<50.0	250	250	238	216	95	86	49-149	10	20	
Isopropyl acetate	ug/L	<50.0	250	250	243	230	97	92	29-136	5	20	
n-amyl acetate	ug/L	<25.0	250	250	292	262	117	105	36-134	11	20	
1,2-Dichloroethane-d4 (S)	%						97	96	78-114		20	
4-Bromofluorobenzene (S)	%						97	98	83-111		20	
Toluene-d8 (S)	%						100	101	80-131		20	

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch: 210975 | Analysis Method: EPA 180.1
QC Batch Method: EPA 180.1 | Analysis Description: 180.1 Turbidity
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005, 70174666012

METHOD BLANK: 1055905 Matrix: Water
Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005, 70174666012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Turbidity	NTU	<1.0	1.0	0.32	05/27/21 19:18	

LABORATORY CONTROL SAMPLE: 1055906

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	10	10.0	100	90-110	

SAMPLE DUPLICATE: 1055907

Parameter	Units	70174582002 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	<1.0	0.75J		20	

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch: 211275
QC Batch Method: SM22 2540B
Analysis Method: SM22 2540B
Analysis Description: 2540B DW Total Solids
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70174666012

METHOD BLANK: 1058155 Matrix: Water
Associated Lab Samples: 70174666012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	mg/L	9.0J	5.0	9.0	06/02/21 18:10	N3

LABORATORY CONTROL SAMPLE: 1058156

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	700	732	105	85-115	N3

MATRIX SPIKE SAMPLE: 1058157

Parameter	Units	70174666012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	337	300	679	114	75-125	N3

SAMPLE DUPLICATE: 1058158

Parameter	Units	70174666012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	337	333	1	5	N3

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch: 211471
QC Batch Method: SM22 2540B
Analysis Method: SM22 2540B
Analysis Description: 2540B Total Solids
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005

METHOD BLANK: 1059208 Matrix: Water
Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	mg/L	ND	5.0	9.0	06/03/21 16:47	

LABORATORY CONTROL SAMPLE: 1059209

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	700	726	104	85-115	

MATRIX SPIKE SAMPLE: 1059210

Parameter	Units	70174666001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	480	300	755	92	75-125	

SAMPLE DUPLICATE: 1059211

Parameter	Units	70174666001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	480	486	1	5	

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch: 211786 — Analysis Method: SM22 2540D
QC Batch Method: SM22 2540D — Analysis Description: 2540D Total Suspended Solids
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005, 70174666012

METHOD BLANK: 1060884 Matrix: Water
Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005, 70174666012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	0.25	0.24	06/03/21 14:51	

LABORATORY CONTROL SAMPLE: 1060885

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	200	204	102	85-115	

SAMPLE DUPLICATE: 1060886

Parameter	Units	70174696002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	364	360	1	5	

SAMPLE DUPLICATE: 1060887

Parameter	Units	70174697001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	202	204	1	5	

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch: 211620
QC Batch Method: SM22 4500-P B
Analysis Method: SM22 4500-P E
Analysis Description: 4500PE Total Phosphorus
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005

METHOD BLANK: 1060186 Matrix: Water
Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.025	0.010	06/03/21 17:12	

LABORATORY CONTROL SAMPLE: 1060187

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	0.5	0.52	104	85-115	

MATRIX SPIKE SAMPLE: 1060188

Parameter	Units	70174462001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	3.3	2.5	5.9	102	75-125	

SAMPLE DUPLICATE: 1060189

Parameter	Units	70174462001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus	mg/L	3.3	3.9	17	20	

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch: 211189 | Analysis Method: SM22 4500-P E
QC Batch Method: SM22 4500-P E | Analysis Description: 4500PE Ortho Phosphorus
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005, 70174666012

METHOD BLANK: 1057245 Matrix: Water
Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005, 70174666012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.025	0.010	05/28/21 19:21	

LABORATORY CONTROL SAMPLE: 1057246

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.5	0.53	106	85-115	

MATRIX SPIKE SAMPLE: 1057247

Parameter	Units	70174666002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.036J	0.5	0.57	107	75-125	

SAMPLE DUPLICATE: 1057248

Parameter	Units	70174666002 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.036J	0.035J		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch: 211184
QC Batch Method: SM22 5540C
Analysis Method: SM22 5540C
Analysis Description: 5540C MBAS Surfactants
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005, 70174666012

METHOD BLANK: 1057234 Matrix: Water
Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005, 70174666012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
LAS Molecular Weight, g/mol		320			05/28/21 19:37	
MBAS, Calculated as LAS	mg/L	ND	0.040	0.028	05/28/21 19:37	

LABORATORY CONTROL SAMPLE: 1057235

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
LAS Molecular Weight, g/mol			320			
MBAS, Calculated as LAS	mg/L	0.24	0.23	97	85-115	

MATRIX SPIKE SAMPLE: 1057236

Parameter	Units	70174666002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
LAS Molecular Weight, g/mol				320			
MBAS, Calculated as LAS	mg/L	<0.080	0.24	0.23	96	75-125	

SAMPLE DUPLICATE: 1057237

Parameter	Units	70174666002 Result	Dup Result	RPD	Max RPD	Qualifiers
LAS Molecular Weight, g/mol		320	320			
MBAS, Calculated as LAS	mg/L	<0.080	<0.080		20	

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch: 211234
QC Batch Method: EPA 351.2
Analysis Method: EPA 351.2
Analysis Description: 351.2 TKN DW
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70174666012

METHOD BLANK: 1058101 Matrix: Drinking Water
Associated Lab Samples: 70174666012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	ND	0.094	0.094	06/02/21 14:16	N3

LABORATORY CONTROL SAMPLE: 1058102

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4	4.1	102	90-110	N3

MATRIX SPIKE SAMPLE: 1058103

Parameter	Units	70173755001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.40	4	4.2	95	90-110	N3

SAMPLE DUPLICATE: 1058104

Parameter	Units	70173755001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.40	0.14	93	20	D6,N3

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch: 211654
QC Batch Method: EPA 351.2
Analysis Method: EPA 351.2
Analysis Description: 351.2 TKN
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005

METHOD BLANK: 1060517 Matrix: Water
Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	ND	0.094	0.094	06/04/21 14:28	

LABORATORY CONTROL SAMPLE: 1060518

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4	4.0	101	90-110	

MATRIX SPIKE SAMPLE: 1060519

Parameter	Units	70174666001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.0	4	5.3	109	90-110	

MATRIX SPIKE SAMPLE: 1060521

Parameter	Units	70174571002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.61	4	1.5	22	90-110	M1

SAMPLE DUPLICATE: 1060520

Parameter	Units	70174666001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.0	0.91	10	20	

SAMPLE DUPLICATE: 1060522

Parameter	Units	70174571002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.61	1.3	74	20	D6

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch: 210989
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005

METHOD BLANK: 1056268 Matrix: Water
Associated Lab Samples: 70174666001, 70174666002, 70174666003, 70174666004, 70174666005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	ND	0.037	0.037	05/27/21 22:42	

LABORATORY CONTROL SAMPLE: 1056269

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	1.0	100	90-110	

MATRIX SPIKE SAMPLE: 1056270

Parameter	Units	70174713001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.73	2.5	3.1	96	90-110	

MATRIX SPIKE SAMPLE: 1056272

Parameter	Units	70174750001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	2.3	2.5	4.7	96	90-110	

SAMPLE DUPLICATE: 1056271

Parameter	Units	70174713001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.73	0.70	5	20	

SAMPLE DUPLICATE: 1056273

Parameter	Units	70174750001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	2.3	2.2	2	20	

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch: 210987
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate, Unpres.
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70174666012

METHOD BLANK: 1056257 Matrix: Water
Associated Lab Samples: 70174666012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	ND	0.037	0.037	05/27/21 22:08	

LABORATORY CONTROL SAMPLE: 1056258

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	0.98	98	90-110	

MATRIX SPIKE SAMPLE: 1056259

Parameter	Units	70174740001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.49	0.5	0.96	94	90-110	

MATRIX SPIKE SAMPLE: 1056261

Parameter	Units	70174736001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	6.4	2.5	8.6	89	90-110	M1

SAMPLE DUPLICATE: 1056260

Parameter	Units	70174740001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.49	0.49	1	20	

SAMPLE DUPLICATE: 1056262

Parameter	Units	70174736001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	6.4	6.4	0	20	

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch: 212214
QC Batch Method: SM22 4500 NH3 H
Analysis Method: SM22 4500 NH3 H
Analysis Description: 4500 Ammonia
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70174666001

METHOD BLANK: 1063810 Matrix: Water
Associated Lab Samples: 70174666001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.050	0.053	06/07/21 13:46	

LABORATORY CONTROL SAMPLE: 1063811

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.1	109	90-110	

MATRIX SPIKE SAMPLE: 1063812

Parameter	Units	70174666001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.52	1	1.6	109	75-125	

SAMPLE DUPLICATE: 1063813

Parameter	Units	70174666001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.52	0.53	2	20	

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QUALITY CONTROL DATA

Project: Lake Study 5/27
Pace Project No.: 70176661

QC Batch: 212237
QC Batch Method: SM22 4500 NH3 H
Analysis Method: SM22 4500 NH3 H
Analysis Description: 4500 Ammonia
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70174666002, 70174666003, 70174666004, 70174666005, 70174666012

METHOD BLANK: 1063995 Matrix: Water
Associated Lab Samples: 70174666002, 70174666003, 70174666004, 70174666005, 70174666012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.050	0.053	06/07/21 14:19	

LABORATORY CONTROL SAMPLE: 1063996

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.1	109	90-110	

MATRIX SPIKE SAMPLE: 1063997

Parameter	Units	70175681002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	30.4	10	38.7	84	75-125	

SAMPLE DUPLICATE: 1063998

Parameter	Units	70175681002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	30.4	28.6	6	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALIFIERS

Project: Lake Study 5/27
Pace Project No.: 70176661

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
F6	Sample was not filtered within 15 minutes of collection and does not meet sampling and/or regulatory requirements.
FS	The sample was filtered in the laboratory prior to analysis.
H1	Analysis conducted outside the EPA method holding time.
H2	Extraction or preparation conducted outside EPA method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N3	Accreditation is not offered by the relevant laboratory accrediting body for this parameter.

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575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Lake Study 5/27
Pace Project No.: 70176661

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70174666012	**13**	EPA 200.7	211359		
70174666001	**1**	SM22 9221B/E	211071		
70174666002	**2**	SM22 9221B/E	211071		
70174666003	**3**	SM22 9221B/E	211071		
70174666004	**4**	SM22 9221B/E	211071		
70174666005	**5**	SM22 9221B/E	211071		
70174666001	**1**	SM 9223B-2004	210965	SM 9223B-2004	211141
70174666002	**2**	SM 9223B-2004	210965	SM 9223B-2004	211141
70174666003	**3**	SM 9223B-2004	210965	SM 9223B-2004	211141
70174666004	**4**	SM 9223B-2004	210965	SM 9223B-2004	211141
70174666005	**5**	SM 9223B-2004	210965	SM 9223B-2004	211141
70174666012	**13**	SM22 9223B Colilert	211088	SM22 9223B Colilert	211101
70174666001	**1**	EPA 1666A	210933		
70174666002	**2**	EPA 1666A	210933		
70174666003	**3**	EPA 1666A	210933		
70174666004	**4**	EPA 1666A	212164		
70174666005	**5**	EPA 1666A	212164		
70174666001	**1**	EPA 180.1	210975		
70174666002	**2**	EPA 180.1	210975		
70174666003	**3**	EPA 180.1	210975		
70174666004	**4**	EPA 180.1	210975		
70174666005	**5**	EPA 180.1	210975		
70174666012	**13**	EPA 180.1	210975		
70174666012	**13**	SM22 2540B	211275		
70174666001	**1**	SM22 2540B	211471		
70174666002	**2**	SM22 2540B	211471		
70174666003	**3**	SM22 2540B	211471		
70174666004	**4**	SM22 2540B	211471		
70174666005	**5**	SM22 2540B	211471		
70174666001	**1**	SM22 2540D	211786		
70174666002	**2**	SM22 2540D	211786		
70174666003	**3**	SM22 2540D	211786		
70174666004	**4**	SM22 2540D	211786		
70174666005	**5**	SM22 2540D	211786		
70174666012	**13**	SM22 2540D	211786		
70174666001	**1**	SM22 4500-P B	211620	SM22 4500-P E	211817
70174666002	**2**	SM22 4500-P B	211620	SM22 4500-P E	211817
70174666003	**3**	SM22 4500-P B	211620	SM22 4500-P E	211817
70174666004	**4**	SM22 4500-P B	211620	SM22 4500-P E	211817
70174666005	**5**	SM22 4500-P B	211620	SM22 4500-P E	211817
70174666001	**1**	SM22 4500-P E	211189		
70174666002	**2**	SM22 4500-P E	211189		
70174666003	**3**	SM22 4500-P E	211189		

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Melville, NY 11747
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Lake Study 5/27
Pace Project No.: 70176661

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70174666004	**4**	SM22 4500-P E	211189		
70174666005	**5**	SM22 4500-P E	211189		
70174666012	**13**	SM22 4500-P E	211189		
70174666001	**1**	SM22 5540C	211184	SM22 5540C	211199
70174666002	**2**	SM22 5540C	211184	SM22 5540C	211199
70174666003	**3**	SM22 5540C	211184	SM22 5540C	211199
70174666004	**4**	SM22 5540C	211184	SM22 5540C	211199
70174666005	**5**	SM22 5540C	211184	SM22 5540C	211199
70174666012	**13**	SM22 5540C	211184	SM22 5540C	211199
70174666001	**1**	SM22 4500-N	212287		
70174666002	**2**	SM22 4500-N	212287		
70174666003	**3**	SM22 4500-N	212287		
70174666004	**4**	SM22 4500-N	212287		
70174666005	**5**	SM22 4500-N	212287		
70174666012	**13**	SM22 4500-N	212506		
70174666012	**13**	EPA 351.2	211234	EPA 351.2	211252
70174666001	**1**	EPA 351.2	211654	EPA 351.2	211663
70174666002	**2**	EPA 351.2	211654	EPA 351.2	211663
70174666003	**3**	EPA 351.2	211654	EPA 351.2	211663
70174666004	**4**	EPA 351.2	211654	EPA 351.2	211663
70174666005	**5**	EPA 351.2	211654	EPA 351.2	211663
70174666012	**13**	EPA 353.2	210987		
70174666001	**1**	EPA 353.2	210989		
70174666002	**2**	EPA 353.2	210989		
70174666003	**3**	EPA 353.2	210989		
70174666004	**4**	EPA 353.2	210989		
70174666005	**5**	EPA 353.2	210989		
70174666001	**1**	SM22 4500 NH3 H	212214		
70174666002	**2**	SM22 4500 NH3 H	212237		
70174666003	**3**	SM22 4500 NH3 H	212237		
70174666004	**4**	SM22 4500 NH3 H	212237		
70174666005	**5**	SM22 4500 NH3 H	212237		
70174666012	**13**	SM22 4500 NH3 H	212237		

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

WO# : 70174666
70174666

LAB USE ONLY - Affix Workorder/Login Label Here or List Pace Workorder Number or ... USE ONLY

Manager: NML

Company: Woodard + Curran
Address: 800 Westchester Ave Suite N507
Report To: Emily Neaion
Copy To:

Billing Information:
Email To: cneaion@woodardcurran.com
Site Collection Info/Address:

Customer Project Name/Number:
State: / County/City: Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET

Phone:
Email:
Site/Facility ID #:
Compliance Monitoring? [ ] Yes [ ] No

Collected By (print):
Purchase Order #:
Quote #:
DW PWS ID #:
DW Location Code:

Collected By (signature):
Turnaround Date Required:
Immediately Packed on Ice: [ ] Yes [ ] No

Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ______ [ ] Hold: ______
Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
Field Filtered (if applicable): [ ] Yes [ ] No
Analysis: ______

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydro... (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ______

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Analyses: See attached quote

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	Res Cl	# of Ctns
1			5/27	8:40				
2			5/27	7:15				
3			5/27	9:00				
4			5/27	7:50				
5			5/27	8:10				
6			5/27	11:15				
7			5/27	10:30				
9			5/27	12:15				
10			5/27	11:40				
11			5/27	11:25				

Lab Profile/Line:
Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles Intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples Received on Ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in Holding Time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips: HC041002			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None
Packing Material Used:
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A
Lab Tracking #: 2413010
Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: TH041
Cooler 1 Temp Upon Receipt: 3 oC
Cooler 1 Therm Corr. Factor: -0 oC
Cooler 1 Corrected Temp: 3 oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Emily Neaion	5/27/21	Pace CI	5/27/21 1450
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO
Page: ____ of: ____

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL SHADED AREAS are for LAB USE ONLY

Company: Woodard & Curran
Address: 800 Westchester Ave Suite N507
Report To: Emily Nealon
Copy To:
Billing Information:
Email To: enealon@woodardcurran.com
Site Collection Info/Address:
Customer Project Name/Number:
State: / County/City: Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET

Container Preservative Type ** | Lab Project Manager: NML

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ____

Phone: Email: 6469157419
Site/Facility ID #:
Compliance Monitoring? [ ] Yes [ ] No
Collected By (print): Emily Nealon
Purchase Order #: Quote #:
DW PWS ID #: DW Location Code:
Collected By (signature): Emily Nealon
Turnaround Date Required:
Immediately Packed on Ice: [ ] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold: ____
Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
Field Filtered (if applicable): [ ] Yes [ ] No
Analysis: ____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Analyses: See attached quote

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	Res Cl	# of Ctns
12			5/27	10:50				
13			5/27	9:20				

Lab Profile/Line:
Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA — N
Custody Signatures Present Y N NA — Y
Collector Signature Present Y N NA — Y
Bottles Intact Y N NA — Y
Correct Bottles Y N NA — Y
Sufficient Volume Y N NA — Y
Samples Received on Ice Y N NA — Y
VOA - Headspace Acceptable Y N NA — N
USDA Regulated Soils Y N NA — NA
Samples in Holding Time Y N NA — Y
Residual Chlorine Present Y N NA — NA
Cl Strips:
Sample pH Acceptable Y N NA — Y
pH Strips: HC041002
Sulfide Present Y N NA — NA
Lead Acetate Strips:

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:
Type of Ice Used: Wet Blue Dry None (Wet)
Packing Material Used:
Radchem sample(s) screened (<500 cpm): Y N NA
SHORT HOLDS PRESENT (<72 hours): Y N N/A
Lab Tracking #: 2413009
Samples received via: FEDEX UPS Client Courier Pace Courier (Client)

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: Y4Acl
Cooler 1 Temp Upon Receipt: .3 oC
Cooler 1 Therm Corr. Factor: -.0 oC
Cooler 1 Corrected Temp: .3 oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	MTJL LAB USE ONLY
Emily Nealon	5/27/21	[signature]	5/27/21 14:50	Table #: Acctnum:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Template: Prelogin:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	PM: PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO
Page: ____ of: ____

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Sample Receiving Non-Conformance Form (NCF)

Date: 5/27/21	Evaluated by: KW
Client: WWC	

Aff... W...

WO#: 70174666
PM: NML Due Date: 06/07/21
CLIENT: WWC

1. If Chain-of-Custody (COC) is not received: contact client and if necessary, fill out a COC and indicate that it was filled out by lab personnel. Note issues on this NCF.

2. If COC is incomplete, check applicable issues below and add details where appropriate:

	Collection date/time missing or incorrect		Analyses or analytes: missing or clarification needed		Samples listed on COC do not match samples received (missing, additional, etc.)
	Sample IDs on COC do not match sample labels		Required trip blanks were not received		Required signatures are missing

Comments/Details/Other Issues not listed above:

3. Sample integrity issues: check applicable issues below and add details where appropriate:

	Samples: Past holding time		Samples: Condition needs to be brought to lab personnel's attention (details below)		Preservation: Improper
	Samples: Not field filtered		Containers: Broken or compromised		Temperature: not within acceptance criteria (typically 0-6C)
	Samples: Insufficient volume received		Containers: Incorrect		Temperature: Samples arrived frozen
	Samples: Cooler damaged or compromised		Custody Seals: Missing or compromised on samples, trip blanks or coolers	X	Vials received with improper headspace
	Samples: contain chlorine or sulfides		Packing Material: Insufficient/Improper		Other:

Comments/Details:

ALL VOA Received w/ headspace.

4. If Samples not preserved properly and Sample Receiving adjusts pH, add details below:

Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:
Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:
Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:

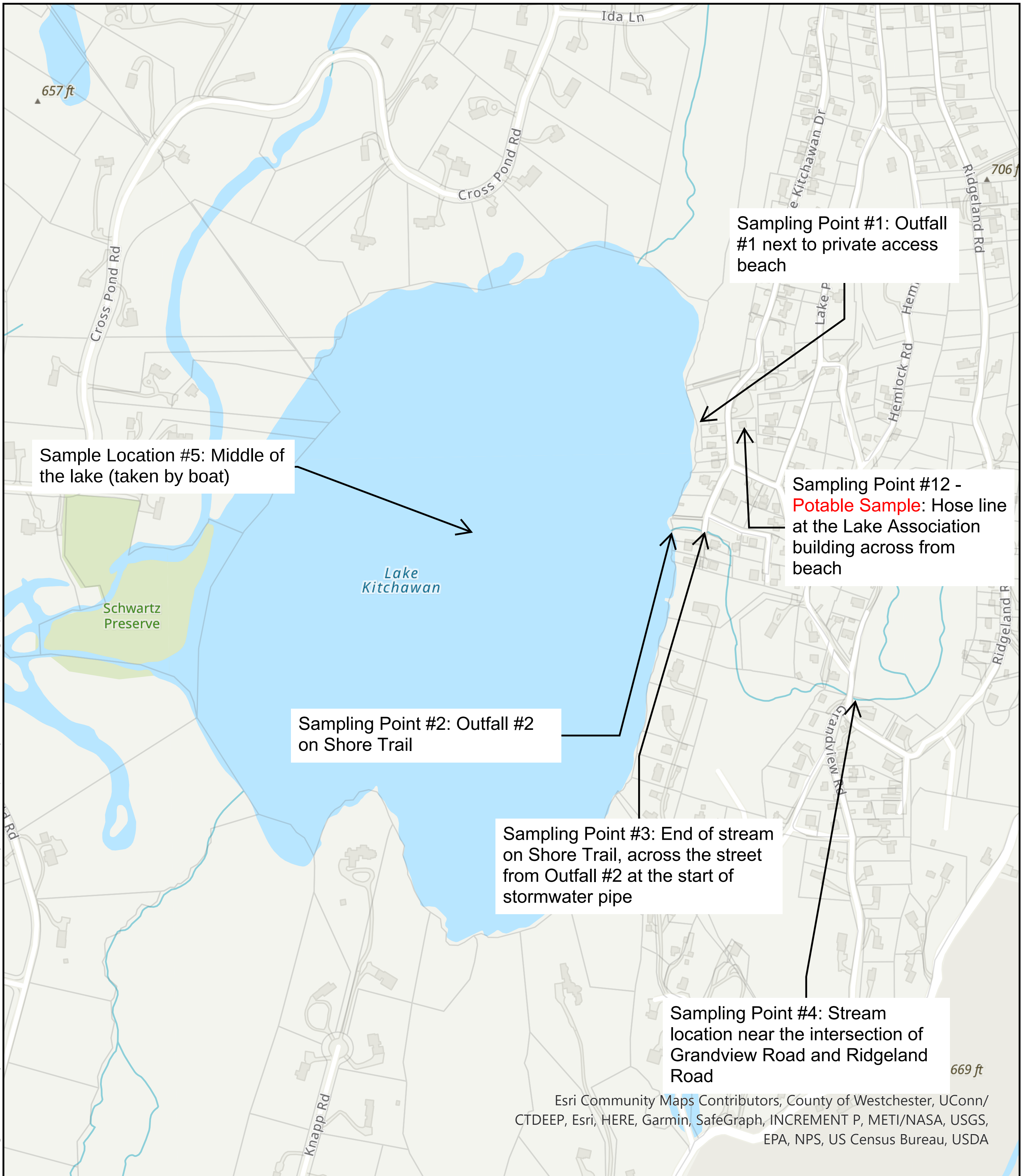
5. Client Contact: If client is contacted for any issue listed above, fill in details below:

Client:	Contacted per:	
PM Initials:	Date/Time:	

Client Comments/Instructions:

F-ALL-C-011-rev.00, 05Jul2018

Lake Kitchawan Sample Results
June 8, 2021



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Sampling Plan

Legend

Lake Kitchawan Study Parcels

0 125 250 500 US Feet

N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: May 2021

Figure Exported: 5/28/2021 By: enealon Using: \\wc\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lewisboro Parcel Figure.aprx

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

June 21, 2021

Emily Nealon
Woodard & Curran Inc.
800 Westchester Avenue
Port Chester, NY 10573

RE: Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Dear Emily Nealon:

Enclosed are the analytical results for sample(s) received by the laboratory on June 08, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville
- Pace Analytical Services - WestVirginia

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Nicolette Lovari

Nicolette M. Lovari
nicolette.lovari@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Nicolette Lovari, Pace Analytical Melville

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

CERTIFICATIONS

Project:	LAKE STUDY 6/8
Pace Project No.:	70175996

Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747
Connecticut Certification #: PH-0435
Delaware Certification # NY 10478
Maryland Certification #: 208
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987
New Jersey Certification #: NY158
New York Certification #: 10478 Primary Accrediting Body
Pennsylvania Certification #: 68-00350
Rhode Island Certification #: LAO00340
Virginia Certification # 460302

Pace Analytical Services Beaver

225 Industrial Park Drive, Beaver, WV 25813
Virginia VELAP 460148
West Virginia DEP 060
West Virginia DHHR 00412CM
North Carolina DEQ 466
Kentucky Wastewater Certification KY90039
Pennsylvania DEP 68-00839

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

SAMPLE SUMMARY

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Lab ID	Sample ID	Matrix	Date Collected	Date Received
70175996001	**1**	Water	06/08/21 08:37	06/08/21 13:46
70175996002	**2**	Water	06/08/21 07:24	06/08/21 13:46
70175996003	**3**	Water	06/08/21 07:38	06/08/21 13:46
70175996004	**4**	Water	06/08/21 07:04	06/08/21 13:46
70175996005	**5**	Water	06/08/21 08:10	06/08/21 13:46
70175996012	**12**	Drinking Water	06/08/21 08:20	06/08/21 13:46

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

SAMPLE ANALYTE COUNT

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
70175996001	**1**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	IT1	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		EPA 446.0 Rev 1.2-1997	KWS	1	PASI-BVWV
		SM22 4500-P E	HMH	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70175996002	**2**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	IT1	1	PACE-MV
		SM22 2540D	IT1	1	PACE-MV
		EPA 446.0 Rev 1.2-1997	KWS	1	PASI-BVWV
		SM22 4500-P E	HMH	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70175996003	**3**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	IT1	1	PACE-MV
		SM22 2540D	IT1	1	PACE-MV
		EPA 446.0 Rev 1.2-1997	KWS	1	PASI-BVWV
		SM22 4500-P E	HMH	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

SAMPLE ANALYTE COUNT

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70175996004	**4**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	IT1	1	PACE-MV
		SM22 2540D	IT1	1	PACE-MV
		EPA 446.0 Rev 1.2-1997	KWS	1	PASI-BVWV
		SM22 4500-P E	HMH	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70175996005	**5**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	IT1	1	PACE-MV
		SM22 2540D	IT1	1	PACE-MV
		EPA 446.0 Rev 1.2-1997	KWS	1	PASI-BVWV
		SM22 4500-P E	HMH	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70175996012	**12**	EPA 200.7	KM1	1	PACE-MV
		SM22 9223B Colilert	GFD	2	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	IT1	1	PACE-MV

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SAMPLE ANALYTE COUNT

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM22 2540D	IT1	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV

PACE-MV = Pace Analytical Services - Melville
PASI-BVWV = Pace Analytical Services - WestVirginia

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SUMMARY OF DETECTION

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
70175996001	**1**					
SM22 9221B/E	Fecal Coliforms, MPN	49	MPN/100mL	1.8	06/08/21 15:56	
SM22 9221B/E	Total Coliforms, MPN	130	MPN/100mL	1.8	06/08/21 15:56	
SM 9223B-2004	E.coli	36.9	MPN/100mL	1.0	06/09/21 15:40	
EPA 180.1	Turbidity	0.70J	NTU	1.0	06/09/21 19:12	
SM22 2540B	Total Solids	596	mg/L	10.0	06/14/21 19:02	
SM22 2540D	Total Suspended Solids	1.6J	mg/L	2.0	06/11/21 15:44	
EPA 446.0 Rev 1.2-1997	Chlorophyll a	0.22J	mg/m3	1.1	06/15/21 16:07	H3,N3
SM22 4500-P E	Phosphorus	0.043J	mg/L	0.050	06/15/21 18:46	
SM22 4500-P E	Orthophosphate as P	0.027J	mg/L	0.050	06/08/21 21:53	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			06/09/21 19:59	
SM22 4500-N	Total Nitrogen	3.1	mg/L	0.10	06/17/21 17:21	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.60	mg/L	0.10	06/16/21 14:42	M1
EPA 353.2	Nitrate-Nitrite (as N)	2.5	mg/L	0.25	06/11/21 00:57	
70175996002	**2**					
SM22 9221B/E	Fecal Coliforms, MPN	1600	MPN/100mL	1.8	06/08/21 15:56	H1
SM22 9221B/E	Total Coliforms, MPN	2400	MPN/100mL	1.8	06/08/21 15:56	H1
SM 9223B-2004	E.coli	1,119.9	MPN/100mL	1.0	06/09/21 15:40	H2
EPA 180.1	Turbidity	1.4	NTU	1.0	06/09/21 19:08	
SM22 2540B	Total Solids	443	mg/L	10.0	06/14/21 19:04	
EPA 446.0 Rev 1.2-1997	Chlorophyll a	0.85J	mg/m3	1.0	06/15/21 16:08	H3,N3
SM22 4500-P E	Phosphorus	0.037J	mg/L	0.050	06/15/21 18:46	
SM22 4500-P E	Orthophosphate as P	0.059	mg/L	0.050	06/08/21 21:52	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			06/08/21 22:40	
SM22 4500-N	Total Nitrogen	2.3	mg/L	0.10	06/16/21 17:48	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.66	mg/L	0.10	06/16/21 14:45	
EPA 353.2	Nitrate-Nitrite (as N)	1.7	mg/L	0.25	06/11/21 01:00	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.074J	mg/L	0.10	06/15/21 15:46	
70175996003	**3**					
SM22 9221B/E	Fecal Coliforms, MPN	9200	MPN/100mL	1.8	06/08/21 15:56	H1
SM22 9221B/E	Total Coliforms, MPN	9200	MPN/100mL	1.8	06/08/21 15:56	H1
SM 9223B-2004	E.coli	>2,419.6	MPN/100mL	1.0	06/09/21 15:40	H2
EPA 180.1	Turbidity	2.3	NTU	1.0	06/09/21 19:09	
SM22 2540B	Total Solids	454	mg/L	10.0	06/14/21 19:05	
SM22 2540D	Total Suspended Solids	4.4	mg/L	2.0	06/14/21 19:23	
SM22 4500-P E	Phosphorus	0.077	mg/L	0.050	06/15/21 18:46	
SM22 4500-P E	Orthophosphate as P	0.064	mg/L	0.050	06/08/21 21:53	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			06/08/21 22:41	
SM22 4500-N	Total Nitrogen	3.8	mg/L	0.10	06/16/21 17:48	
EPA 351.2	Nitrogen, Kjeldahl, Total	2.0	mg/L	0.10	06/16/21 14:47	
EPA 353.2	Nitrate-Nitrite (as N)	1.8	mg/L	0.25	06/11/21 01:01	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.12	mg/L	0.10	06/15/21 15:48	
70175996004	**4**					
SM22 9221B/E	Fecal Coliforms, MPN	33	MPN/100mL	1.8	06/08/21 15:56	H1
SM22 9221B/E	Total Coliforms, MPN	210	MPN/100mL	1.8	06/08/21 15:56	H1
SM 9223B-2004	E.coli	30.9	MPN/100mL	1.0	06/09/21 15:40	H2
EPA 180.1	Turbidity	1.8	NTU	1.0	06/09/21 19:07	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
70175996004	**4**					
SM22 2540B	Total Solids	473	mg/L	10.0	06/14/21 19:06	
SM22 2540D	Total Suspended Solids	2.4	mg/L	2.0	06/14/21 19:33	
EPA 446.0 Rev 1.2-1997	Chlorophyll a	0.10J	mg/m3	1.0	06/15/21 16:14	H3,N3
SM22 4500-P E	Phosphorus	0.046J	mg/L	0.050	06/15/21 18:46	
SM22 4500-P E	Orthophosphate as P	0.030J	mg/L	0.050	06/08/21 21:52	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			06/08/21 22:40	
SM22 4500-N	Total Nitrogen	2.7	mg/L	0.10	06/16/21 17:48	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.80	mg/L	0.10	06/16/21 14:48	
EPA 353.2	Nitrate-Nitrite (as N)	1.9	mg/L	0.25	06/11/21 01:03	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.11	mg/L	0.10	06/15/21 15:49	
70175996005	**5**					
SM22 9221B/E	Fecal Coliforms, MPN	<1.8	MPN/100mL	1.8	06/08/21 15:56	
SM22 9221B/E	Total Coliforms, MPN	1.8	MPN/100mL	1.8	06/08/21 15:56	
SM 9223B-2004	E.coli	8.5	MPN/100mL	1.0	06/09/21 15:40	
EPA 180.1	Turbidity	1.5	NTU	1.0	06/09/21 19:10	
SM22 2540B	Total Solids	225	mg/L	10.0	06/14/21 19:06	
EPA 446.0 Rev 1.2-1997	Chlorophyll a	0.12J	mg/m3	1.0	06/15/21 16:15	H3,N3
SM22 4500-P E	Phosphorus	0.022J	mg/L	0.050	06/15/21 18:46	
SM22 5540C	LAS Molecular Weight, g/mol	320			06/08/21 22:41	
SM22 4500-N	Total Nitrogen	0.90	mg/L	0.10	06/16/21 17:48	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.85	mg/L	0.10	06/16/21 14:49	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.061J	mg/L	0.10	06/15/21 15:50	
70175996012	**12**					
SM22 9223B Colilert	Total Coliforms	Absent			06/09/21 12:28	
SM22 9223B Colilert	E.coli	Absent			06/09/21 12:28	
EPA 180.1	Turbidity	0.80J	NTU	1.0	06/09/21 19:11	
SM22 2540B	Total Solids	300	mg/L	10.0	06/11/21 14:25	N3
SM22 5540C	LAS Molecular Weight, g/mol	320			06/09/21 19:59	
SM22 4500-N	Total Nitrogen	4.1	mg/L	0.10	06/17/21 17:21	
EPA 353.2	Nitrate-Nitrite (as N)	4.1	mg/L	0.25	06/09/21 00:15	

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PROJECT NARRATIVE

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Method: **EPA 200.7**
Description: 200.7 MET ICP, Drinking Water
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
1 sample was analyzed for EPA 200.7 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Method: **SM22 9221B/E**
Description: Fecal-Total Coliform, MPN
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
5 samples were analyzed for SM22 9221B/E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H1: Analysis conducted outside the EPA method holding time.
- 2 (Lab ID: 70175996002)
- 3 (Lab ID: 70175996003)
- 4 (Lab ID: 70175996004)

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Method: **SM 9223B-2004**
Description: SM 9223B-2004
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
5 samples were analyzed for SM 9223B-2004 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H2: Extraction or preparation conducted outside EPA method holding time.
- 2 (Lab ID: 70175996002)
- 3 (Lab ID: 70175996003)
- 4 (Lab ID: 70175996004)

Sample Preparation:
The samples were prepared in accordance with SM 9223B-2004 with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Method: **SM22 9223B Colilert**
Description: MBIO Total Coliform DW
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
1 sample was analyzed for SM22 9223B Colilert by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM22 9223B Colilert with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Method: **EPA 1666A**
Description: 1666 MSV
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
5 samples were analyzed for EPA 1666A by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Method: **EPA 180.1**
Description: 180.1 Turbidity
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
6 samples were analyzed for EPA 180.1 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project:	LAKE STUDY 6/8
Pace Project No.:	70175996

Method: **SM22 2540B**
Description: 2540B Total Solids DW
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
1 sample was analyzed for SM22 2540B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Method: **SM22 2540B**
Description: 2540B Total Solids
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
5 samples were analyzed for SM22 2540B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Method: **SM22 2540D**
Description: 2540D Total Suspended Solids
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
6 samples were analyzed for SM22 2540D by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 213090

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.
- DUP (Lab ID: 1069852)
  - Total Suspended Solids

QC Batch: 213414

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.
- DUP (Lab ID: 1072390)
  - Total Suspended Solids

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Method: **EPA 446.0 Rev 1.2-1997**
Description: Chlorophyll & Pheophytin
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
5 samples were analyzed for EPA 446.0 Rev 1.2-1997 by Pace Analytical Services WestVirginia. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H3: Sample was received or analysis requested beyond the recognized method holding time.
- 1 (Lab ID: 70175996001)
- 2 (Lab ID: 70175996002)
- 3 (Lab ID: 70175996003)
- 4 (Lab ID: 70175996004)
- 5 (Lab ID: 70175996005)

Sample Preparation:
The samples were prepared in accordance with EPA 446.0 Rev 1.2-1997 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Method: **SM22 4500-P E**
Description: 4500PE Total Phosphorus
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
5 samples were analyzed for SM22 4500-P E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM22 4500-P B with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Method: **SM22 4500-P E**
Description: 4500PE Ortho Phosphorus
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
6 samples were analyzed for SM22 4500-P E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Method: **SM22 5540C**
Description: 5540C MBAS Surfactants
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
6 samples were analyzed for SM22 5540C by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM22 5540C with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Method: **SM22 4500-N**
Description: Total Nitrogen Calculation
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
6 samples were analyzed for SM22 4500-N by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Method: **EPA 351.2**
Description: 351.2 Total Kjeldahl Nitrogen
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
6 samples were analyzed for EPA 351.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 351.2 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 212807

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70175341001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1068035)
  - Nitrogen, Kjeldahl, Total

QC Batch: 213443

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70175996001,70176331001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1072583)
  - Nitrogen, Kjeldahl, Total
- MS (Lab ID: 1072585)
  - Nitrogen, Kjeldahl, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 212807

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 1068036)
  - Nitrogen, Kjeldahl, Total

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
1 sample was analyzed for EPA 353.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 212544

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70175960001,70176009001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1066380)
  - Nitrate-Nitrite (as N)

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 pres.
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
5 samples were analyzed for EPA 353.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project:	LAKE STUDY 6/8
Pace Project No.:	70175996

Method: **SM22 4500 NH3 H**
Description: 4500 Ammonia Water
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
6 samples were analyzed for SM22 4500 NH3 H by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Sample: 1 **Lab ID: 70175996001** Collected: 06/08/21 08:37 Received: 06/08/21 13:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**49**	MPN/100mL	1.8		1		06/08/21 15:56		
Total Coliforms, MPN	**130**	MPN/100mL	1.8		1		06/08/21 15:56		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**36.9**	MPN/100mL	1.0		1	06/08/21 15:40	06/09/21 15:40		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		06/11/21 17:32	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		06/11/21 17:32	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		06/11/21 17:32	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	78-114		5		06/11/21 17:32	17060-07-0	
4-Bromofluorobenzene (S)	93	%	83-111		5		06/11/21 17:32	460-00-4	
Toluene-d8 (S)	102	%	80-131		5		06/11/21 17:32	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**0.70J**	NTU	1.0	0.32	1		06/09/21 19:12		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**596**	mg/L	10.0	9.0	1		06/14/21 19:02		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**1.6J**	mg/L	2.0	0.96	1		06/11/21 15:44		
Chlorophyll & Pheophytin	Analytical Method: EPA 446.0 Rev 1.2-1997 Preparation Method: EPA 446.0 Rev 1.2-1997 Pace Analytical Services - WestVirginia								
Chlorophyll a	**0.22J**	mg/m3	1.1	0.11	1	06/15/21 13:00	06/15/21 16:07		H3,N3
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.043J**	mg/L	0.050	0.010	1	06/15/21 15:38	06/15/21 18:46	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.027J**	mg/L	0.050	0.010	1		06/08/21 21:53		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	06/09/21 19:59	06/09/21 19:59		

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Sample: 1 **Lab ID: 70175996001** Collected: 06/08/21 08:37 Received: 06/08/21 13:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	06/09/21 19:59	06/09/21 19:59		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**3.1**	mg/L	0.10		1		06/17/21 17:21		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.60**	mg/L	0.10	0.094	1	06/15/21 07:29	06/16/21 14:42	7727-37-9	M1
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**2.5**	mg/L	0.25	0.18	5		06/11/21 00:57	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**<0.10**	mg/L	0.10	0.053	1		06/15/21 15:43	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Sample: 2 **Lab ID: 70175996002** Collected: 06/08/21 07:24 Received: 06/08/21 13:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**1600**	MPN/100mL	1.8		1		06/08/21 15:56		H1
Total Coliforms, MPN	**2400**	MPN/100mL	1.8		1		06/08/21 15:56		H1
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**1,119.9**	MPN/100mL	1.0		1	06/08/21 15:40	06/09/21 15:40		H2
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		06/11/21 17:54	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		06/11/21 17:54	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		06/11/21 17:54	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	107	%	78-114		5		06/11/21 17:54	17060-07-0	
4-Bromofluorobenzene (S)	97	%	83-111		5		06/11/21 17:54	460-00-4	
Toluene-d8 (S)	101	%	80-131		5		06/11/21 17:54	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.4**	NTU	1.0	0.32	1		06/09/21 19:08		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**443**	mg/L	10.0	9.0	1		06/14/21 19:04		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**<2.0**	mg/L	2.0	0.96	1		06/14/21 19:23		
Chlorophyll & Pheophytin	Analytical Method: EPA 446.0 Rev 1.2-1997 Preparation Method: EPA 446.0 Rev 1.2-1997 Pace Analytical Services - WestVirginia								
Chlorophyll a	**0.85J**	mg/m3	1.0	0.10	1	06/15/21 13:00	06/15/21 16:08		H3,N3
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.037J**	mg/L	0.050	0.010	1	06/15/21 15:38	06/15/21 18:46	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.059**	mg/L	0.050	0.010	1		06/08/21 21:52		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	06/08/21 22:33	06/08/21 22:40		

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Sample: 2 **Lab ID: 70175996002** Collected: 06/08/21 07:24 Received: 06/08/21 13:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	06/08/21 22:33	06/08/21 22:40		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**2.3**	mg/L	0.10		1		06/16/21 17:48		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.66**	mg/L	0.10	0.094	1	06/15/21 07:29	06/16/21 14:45	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**1.7**	mg/L	0.25	0.18	5		06/11/21 01:00	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.074J**	mg/L	0.10	0.053	1		06/15/21 15:46	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Sample: 3 **Lab ID: 70175996003** Collected: 06/08/21 07:38 Received: 06/08/21 13:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**9200**	MPN/100mL	1.8		1		06/08/21 15:56		H1
Total Coliforms, MPN	**9200**	MPN/100mL	1.8		1		06/08/21 15:56		H1
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**>2,419.6**	MPN/100mL	1.0		1	06/08/21 15:40	06/09/21 15:40		H2
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		06/11/21 18:16	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		06/11/21 18:16	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		06/11/21 18:16	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	107	%	78-114		5		06/11/21 18:16	17060-07-0	
4-Bromofluorobenzene (S)	97	%	83-111		5		06/11/21 18:16	460-00-4	
Toluene-d8 (S)	100	%	80-131		5		06/11/21 18:16	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**2.3**	NTU	1.0	0.32	1		06/09/21 19:09		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**454**	mg/L	10.0	9.0	1		06/14/21 19:05		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**4.4**	mg/L	2.0	0.96	1		06/14/21 19:23		
Chlorophyll & Pheophytin	Analytical Method: EPA 446.0 Rev 1.2-1997 Preparation Method: EPA 446.0 Rev 1.2-1997 Pace Analytical Services - WestVirginia								
Chlorophyll a	**<1.0**	mg/m3	1.0	0.10	1	06/15/21 13:00	06/15/21 16:13		H3,N3
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.077**	mg/L	0.050	0.010	1	06/15/21 15:38	06/15/21 18:46	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.064**	mg/L	0.050	0.010	1		06/08/21 21:53		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	06/08/21 22:33	06/08/21 22:41		

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Sample: 3 **Lab ID: 70175996003** Collected: 06/08/21 07:38 Received: 06/08/21 13:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	06/08/21 22:33	06/08/21 22:41		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**3.8**	mg/L	0.10		1		06/16/21 17:48		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**2.0**	mg/L	0.10	0.094	1	06/15/21 07:29	06/16/21 14:47	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**1.8**	mg/L	0.25	0.18	5		06/11/21 01:01	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.12**	mg/L	0.10	0.053	1		06/15/21 15:48	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Sample: 4 **Lab ID: 70175996004** Collected: 06/08/21 07:04 Received: 06/08/21 13:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**33**	MPN/100mL	1.8		1		06/08/21 15:56		H1
Total Coliforms, MPN	**210**	MPN/100mL	1.8		1		06/08/21 15:56		H1
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**30.9**	MPN/100mL	1.0		1	06/08/21 15:40	06/09/21 15:40		H2
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		06/11/21 18:37	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		06/11/21 18:37	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		06/11/21 18:37	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	78-114		5		06/11/21 18:37	17060-07-0	
4-Bromofluorobenzene (S)	94	%	83-111		5		06/11/21 18:37	460-00-4	
Toluene-d8 (S)	99	%	80-131		5		06/11/21 18:37	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.8**	NTU	1.0	0.32	1		06/09/21 19:07		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**473**	mg/L	10.0	9.0	1		06/14/21 19:06		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**2.4**	mg/L	2.0	0.96	1		06/14/21 19:33		
Chlorophyll & Pheophytin	Analytical Method: EPA 446.0 Rev 1.2-1997 Preparation Method: EPA 446.0 Rev 1.2-1997 Pace Analytical Services - WestVirginia								
Chlorophyll a	**0.10J**	mg/m3	1.0	0.10	1	06/15/21 13:00	06/15/21 16:14		H3,N3
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.046J**	mg/L	0.050	0.010	1	06/15/21 15:38	06/15/21 18:46	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.030J**	mg/L	0.050	0.010	1		06/08/21 21:52		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	06/08/21 22:33	06/08/21 22:40		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Sample: 4 **Lab ID: 70175996004** Collected: 06/08/21 07:04 Received: 06/08/21 13:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	06/08/21 22:33	06/08/21 22:40		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**2.7**	mg/L	0.10		1		06/16/21 17:48		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.80**	mg/L	0.10	0.094	1	06/15/21 07:29	06/16/21 14:48	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**1.9**	mg/L	0.25	0.18	5		06/11/21 01:03	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.11**	mg/L	0.10	0.053	1		06/15/21 15:49	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Sample: 5 | **Lab ID: 70175996005** | Collected: 06/08/21 08:10 | Received: 06/08/21 13:46 | Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E								
	Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**<1.8**	MPN/100mL	1.8		1		06/08/21 15:56		
Total Coliforms, MPN	**1.8**	MPN/100mL	1.8		1		06/08/21 15:56		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004								
	Pace Analytical Services - Melville								
E.coli	**8.5**	MPN/100mL	1.0		1	06/08/21 15:40	06/09/21 15:40		
1666 MSV	Analytical Method: EPA 1666A								
	Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		06/11/21 18:59	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		06/11/21 18:59	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		06/11/21 18:59	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	78-114		5		06/11/21 18:59	17060-07-0	
4-Bromofluorobenzene (S)	94	%	83-111		5		06/11/21 18:59	460-00-4	
Toluene-d8 (S)	100	%	80-131		5		06/11/21 18:59	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1								
	Pace Analytical Services - Melville								
Turbidity	**1.5**	NTU	1.0	0.32	1		06/09/21 19:10		
2540B Total Solids	Analytical Method: SM22 2540B								
	Pace Analytical Services - Melville								
Total Solids	**225**	mg/L	10.0	9.0	1		06/14/21 19:06		
2540D Total Suspended Solids	Analytical Method: SM22 2540D								
	Pace Analytical Services - Melville								
Total Suspended Solids	**<2.0**	mg/L	2.0	0.96	1		06/14/21 19:33		
Chlorophyll & Pheophytin	Analytical Method: EPA 446.0 Rev 1.2-1997 Preparation Method: EPA 446.0 Rev 1.2-1997								
	Pace Analytical Services - WestVirginia								
Chlorophyll a	**0.12J**	mg/m3	1.0	0.10	1	06/15/21 13:00	06/15/21 16:15		H3,N3
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B								
	Pace Analytical Services - Melville								
Phosphorus	**0.022J**	mg/L	0.050	0.010	1	06/15/21 15:38	06/15/21 18:46	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E								
	Pace Analytical Services - Melville								
Orthophosphate as P	**<0.050**	mg/L	0.050	0.010	1		06/08/21 21:53		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C								
	Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	06/08/21 22:33	06/08/21 22:41		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Sample: 5 **Lab ID: 70175996005** Collected: 06/08/21 08:10 Received: 06/08/21 13:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	06/08/21 22:33	06/08/21 22:41		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**0.90**	mg/L	0.10		1		06/16/21 17:48		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.85**	mg/L	0.10	0.094	1	06/15/21 07:29	06/16/21 14:49	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.25**	mg/L	0.25	0.18	5		06/09/21 01:33	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.061J**	mg/L	0.10	0.053	1		06/15/21 15:50	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Sample: 12 **Lab ID: 70175996012** Collected: 06/08/21 08:20 Received: 06/08/21 13:46 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, Drinking Water	Analytical Method: EPA 200.7 Pace Analytical Services - Melville								
Phosphorus	**<50.0**	ug/L	50.0	18.0	1		06/09/21 18:09	7723-14-0	N3
MBIO Total Coliform DW	Analytical Method: SM22 9223B Colilert Preparation Method: SM22 9223B Colilert Pace Analytical Services - Melville								
Total Coliforms	**Absent**				1	06/08/21 18:28	06/09/21 12:28		
E.coli	**Absent**				1	06/08/21 18:28	06/09/21 12:28		
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**0.80J**	NTU	1.0	0.32	1		06/09/21 19:11		
2540B Total Solids DW	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**300**	mg/L	10.0	9.0	1		06/11/21 14:25		N3
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**<2.0**	mg/L	2.0	0.96	1		06/14/21 19:50		
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**<0.050**	mg/L	0.050	0.010	1		06/08/21 21:53		
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	06/09/21 19:59	06/09/21 19:59		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	06/09/21 19:59	06/09/21 19:59		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**4.1**	mg/L	0.10		1		06/17/21 17:21		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**<0.10**	mg/L	0.10	0.094	1	06/10/21 07:07	06/14/21 15:53	7727-37-9	N3
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**4.1**	mg/L	0.25	0.18	5		06/09/21 00:15	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**<0.10**	mg/L	0.10	0.053	1		06/15/21 16:03	7664-41-7	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch:	212628	Analysis Method:	EPA 200.7
QC Batch Method:	EPA 200.7	Analysis Description:	200.7 MET No Prep Drinking Water
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70175996012

METHOD BLANK: 1066551 Matrix: Drinking Water

Associated Lab Samples: 70175996012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	ug/L	<50.0	50.0	18.0	06/09/21 17:10	N3

LABORATORY CONTROL SAMPLE: 1066552

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	ug/L	1000	962	96	85-115	N3

MATRIX SPIKE SAMPLE: 1066554

Parameter	Units	70175943001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	ug/L	<50.0	1000	1010	100	70-130	N3

MATRIX SPIKE SAMPLE: 1066556

Parameter	Units	70175943009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	ug/L	141	1000	1150	101	70-130	N3

SAMPLE DUPLICATE: 1066553

Parameter	Units	70175943001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus	ug/L	<50.0	<50.0		20	N3

SAMPLE DUPLICATE: 1066555

Parameter	Units	70175943009 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus	ug/L	141	145	3	20	N3

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch: 212631
QC Batch Method: SM22 9221B/E
Analysis Method: SM22 9221B/E
Analysis Description: 9221BCE Fecal-Total Coliform, MPN
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005

METHOD BLANK: 1066558
Matrix: Water
Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fecal Coliforms, MPN	MPN/100mL	<1.8	1.8		06/08/21 10:13	
Total Coliforms, MPN	MPN/100mL	<1.8	1.8		06/08/21 10:13	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch: 212516 | Analysis Method: SM 9223B-2004
QC Batch Method: SM 9223B-2004 | Analysis Description: ECOLI in Waste Water
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005

METHOD BLANK: 1065608 Matrix: Water
Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
E.coli	MPN/100mL	<1.0	1.0		06/09/21 15:40	

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch: 212616
QC Batch Method: SM22 9223B Colilert
Analysis Method: SM22 9223B Colilert
Analysis Description: TotColDW MBIO Total Coliform
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70175996012

METHOD BLANK: 1066517
Matrix: Drinking Water
Associated Lab Samples: 70175996012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
E.coli		Absent			06/09/21 12:28	
Total Coliforms		Absent			06/09/21 12:28	

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch:	213294	Analysis Method:	EPA 1666A
QC Batch Method:	EPA 1666A	Analysis Description:	1666A MSV
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005

METHOD BLANK: 1071591 Matrix: Water

Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethyl acetate	ug/L	<10.0	10.0	3.0	06/11/21 12:29	
Isopropyl acetate	ug/L	<10.0	10.0	1.9	06/11/21 12:29	
n-amyl acetate	ug/L	<5.0	5.0	2.7	06/11/21 12:29	
1,2-Dichloroethane-d4 (S)	%	99	78-114		06/11/21 12:29	
4-Bromofluorobenzene (S)	%	92	83-111		06/11/21 12:29	
Toluene-d8 (S)	%	98	80-131		06/11/21 12:29	

LABORATORY CONTROL SAMPLE: 1071592

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethyl acetate	ug/L	50	51.3	103	60-157	
Isopropyl acetate	ug/L	50	49.7	99	70-147	
n-amyl acetate	ug/L	50	58.7	117	70-130	
1,2-Dichloroethane-d4 (S)	%			92	78-114	
4-Bromofluorobenzene (S)	%			100	83-111	
Toluene-d8 (S)	%			95	80-131	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1071593 1071594

Parameter	Units	70175996010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethyl acetate	ug/L	<50.0	250	250	274	279	110	112	49-149	2	20	
Isopropyl acetate	ug/L	<50.0	250	250	247	251	99	100	29-136	2	20	
n-amyl acetate	ug/L	<25.0	250	250	282	282	113	113	36-134	0	20	
1,2-Dichloroethane-d4 (S)	%						95	105	78-114		20	
4-Bromofluorobenzene (S)	%						101	102	83-111		20	
Toluene-d8 (S)	%						96	94	80-131		20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch: 212770
QC Batch Method: EPA 180.1
Analysis Method: EPA 180.1
Analysis Description: 180.1 Turbidity
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005, 70175996012

METHOD BLANK: 1067634 Matrix: Water
Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005, 70175996012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Turbidity	NTU	<1.0	1.0	0.32	06/09/21 19:05	

LABORATORY CONTROL SAMPLE: 1067635

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	10	10.0	100	90-110	

SAMPLE DUPLICATE: 1067636

Parameter	Units	70175996005 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	1.5	1.4	7	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch: 213115
QC Batch Method: SM22 2540B
Analysis Method: SM22 2540B
Analysis Description: 2540B DW Total Solids
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70175996012

METHOD BLANK: 1070041 Matrix: Water
Associated Lab Samples: 70175996012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	mg/L	ND	5.0	9.0	06/11/21 14:23	N3

LABORATORY CONTROL SAMPLE: 1070042

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	700	740	106	85-115	N3

MATRIX SPIKE SAMPLE: 1070043

Parameter	Units	70175996011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	360	300	630	90	75-125	N3

SAMPLE DUPLICATE: 1070044

Parameter	Units	70175996011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	360	364	1	5	N3

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch: 213307 | Analysis Method: SM22 2540B
QC Batch Method: SM22 2540B | Analysis Description: 2540B Total Solids
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005

METHOD BLANK: 1071626 Matrix: Water
Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	mg/L	ND	5.0	9.0	06/14/21 19:01	

LABORATORY CONTROL SAMPLE: 1071627

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	700	708	101	85-115	

MATRIX SPIKE SAMPLE: 1071628

Parameter	Units	70175996001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	596	300	936	113	75-125	

MATRIX SPIKE SAMPLE: 1071630

Parameter	Units	70175996002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	443	300	732	96	75-125	

SAMPLE DUPLICATE: 1071629

Parameter	Units	70175996001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	596	606	2	5	

SAMPLE DUPLICATE: 1071631

Parameter	Units	70175996002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	443	448	1	5	

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch: 213090
QC Batch Method: SM22 2540D
Analysis Method: SM22 2540D
Analysis Description: 2540D Total Suspended Solids
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70175996001

METHOD BLANK: 1069849 Matrix: Water
Associated Lab Samples: 70175996001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	0.25	0.24	06/11/21 15:06	

LABORATORY CONTROL SAMPLE: 1069850

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	200	198	99	85-115	

SAMPLE DUPLICATE: 1069851

Parameter	Units	70175910001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	8.8	8.8	0	5	

SAMPLE DUPLICATE: 1069852

Parameter	Units	70175940002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	3.6	4.0	11	5	D6

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch: 213414 | Analysis Method: SM22 2540D
QC Batch Method: SM22 2540D | Analysis Description: 2540D Total Suspended Solids
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70175996002, 70175996003, 70175996004, 70175996005, 70175996012

METHOD BLANK: 1072387 Matrix: Water
Associated Lab Samples: 70175996002, 70175996003, 70175996004, 70175996005, 70175996012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	0.25	0.24	06/14/21 19:13	

LABORATORY CONTROL SAMPLE: 1072388

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	200	208	104	85-115	

SAMPLE DUPLICATE: 1072389

Parameter	Units	70176445001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	<2.0	1.2J		5	

SAMPLE DUPLICATE: 1072390

Parameter	Units	70176045001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	2.0	2.4	18	5	D6

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch:	72195	Analysis Method:	EPA 446.0 Rev 1.2-1997
QC Batch Method:	EPA 446.0 Rev 1.2-1997	Analysis Description:	Chlorophyll & Pheophytin
		Laboratory:	Pace Analytical Services - WestVirginia

Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005

METHOD BLANK: 346607 Matrix: Water

Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorophyll a	mg/m3	<1.0	1.0	0.10	06/15/21 16:46	N3

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch:	72195	Analysis Method:	EPA 446.0 Rev 1.2-1997
QC Batch Method:	EPA 446.0 Rev 1.2-1997	Analysis Description:	Chlorophyll & Pheophytin QC
		Laboratory:	Pace Analytical Services - WestVirginia

Associated Lab Samples:

LABORATORY CONTROL SAMPLE: 346606

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlorophyll a	mg/m3	2000	1880	94	70-130	

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch: 213497
QC Batch Method: SM22 4500-P B
Analysis Method: SM22 4500-P E
Analysis Description: 4500PE Total Phosphorus
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005

METHOD BLANK: 1072687 Matrix: Water
Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.025	0.010	06/15/21 18:44	

LABORATORY CONTROL SAMPLE: 1072688

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	0.5	0.48	96	85-115	

MATRIX SPIKE SAMPLE: 1072689

Parameter	Units	70175585001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	2.9	2.5	5.8	117	75-125	

SAMPLE DUPLICATE: 1072690

Parameter	Units	70175585001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus	mg/L	2.9	3.0	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch: 212536 | Analysis Method: SM22 4500-P E
QC Batch Method: SM22 4500-P E | Analysis Description: 4500PE Ortho Phosphorus
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005, 70175996012

METHOD BLANK: 1066313 Matrix: Water
Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005, 70175996012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.025	0.010	06/08/21 21:47	

LABORATORY CONTROL SAMPLE: 1066314

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.5	0.51	101	85-115	

MATRIX SPIKE SAMPLE: 1066315

Parameter	Units	70175837001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.096	0.5	0.54	89	75-125	

SAMPLE DUPLICATE: 1066316

Parameter	Units	70175837001 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.096	0.096	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch: 212537 | Analysis Method: SM22 5540C
QC Batch Method: SM22 5540C | Analysis Description: 5540C MBAS Surfactants
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70175996002, 70175996003, 70175996004, 70175996005

METHOD BLANK: 1066317 Matrix: Water
Associated Lab Samples: 70175996002, 70175996003, 70175996004, 70175996005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
LAS Molecular Weight, g/mol		320			06/08/21 22:39	
MBAS, Calculated as LAS	mg/L	ND	0.040	0.028	06/08/21 22:39	

LABORATORY CONTROL SAMPLE: 1066318

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
LAS Molecular Weight, g/mol			320			
MBAS, Calculated as LAS	mg/L	0.24	0.23	97	85-115	

MATRIX SPIKE SAMPLE: 1066319

Parameter	Units	70175853001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
LAS Molecular Weight, g/mol				320			
MBAS, Calculated as LAS	mg/L	<0.080	0.24	0.22	91	75-125	

SAMPLE DUPLICATE: 1066320

Parameter	Units	70175853001 Result	Dup Result	RPD	Max RPD	Qualifiers
LAS Molecular Weight, g/mol		320	320			
MBAS, Calculated as LAS	mg/L	<0.080	<0.080		20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch: 212783
QC Batch Method: SM22 5540C
Analysis Method: SM22 5540C
Analysis Description: 5540C MBAS Surfactants
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70175996001, 70175996012

METHOD BLANK: 1067932 Matrix: Water
Associated Lab Samples: 70175996001, 70175996012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
LAS Molecular Weight, g/mol		320			06/09/21 19:59	
MBAS, Calculated as LAS	mg/L	ND	0.040	0.028	06/09/21 19:59	

LABORATORY CONTROL SAMPLE: 1067933

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
LAS Molecular Weight, g/mol			320			
MBAS, Calculated as LAS	mg/L	0.24	0.24	99	85-115	

MATRIX SPIKE SAMPLE: 1067934

Parameter	Units	70176108005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
LAS Molecular Weight, g/mol		<0		320			
MBAS, Calculated as LAS	mg/L	<0.080	0.24	0.23	98	75-125	

SAMPLE DUPLICATE: 1067935

Parameter	Units	70176108005 Result	Dup Result	RPD	Max RPD	Qualifiers
LAS Molecular Weight, g/mol		320	320			
MBAS, Calculated as LAS	mg/L	<0.080	<0.080		20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch: 212807
QC Batch Method: EPA 351.2
Analysis Method: EPA 351.2
Analysis Description: 351.2 TKN DW
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70175996012

METHOD BLANK: 1068033 Matrix: Drinking Water
Associated Lab Samples: 70175996012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	ND	0.094	0.094	06/11/21 14:36	N3

LABORATORY CONTROL SAMPLE: 1068034

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4	4.2	104	90-110	N3

MATRIX SPIKE SAMPLE: 1068035

Parameter	Units	70175341001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.33	4	4.9	114	90-110	M1,N3

SAMPLE DUPLICATE: 1068036

Parameter	Units	70175341001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.33	0.26	23	20	D6,N3

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch: 213443 Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 Analysis Description: 351.2 TKN
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005

METHOD BLANK: 1072581 Matrix: Water
Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	ND	0.094	0.094	06/16/21 14:40	

LABORATORY CONTROL SAMPLE: 1072582

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4	4.1	102	90-110	

MATRIX SPIKE SAMPLE: 1072583

Parameter	Units	70175996001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.60	4	6.3	143	90-110	M1

MATRIX SPIKE SAMPLE: 1072585

Parameter	Units	70176331001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	2.3	4	8.6	159	90-110	M1

SAMPLE DUPLICATE: 1072584

Parameter	Units	70175996001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.60	<0.10		20	

SAMPLE DUPLICATE: 1072586

Parameter	Units	70176331001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	2.3	2.4	4	20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch: 212545
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70175996005

METHOD BLANK: 1066382 Matrix: Water
Associated Lab Samples: 70175996005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	ND	0.037	0.037	06/09/21 01:26	

LABORATORY CONTROL SAMPLE: 1066383

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	1.0	101	90-110	

SAMPLE DUPLICATE: 1066385

Parameter	Units	70175770001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.25	0.21J		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch: 213001 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004

METHOD BLANK: 1069587 Matrix: Water
Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	ND	0.037	0.037	06/11/21 00:29	

LABORATORY CONTROL SAMPLE: 1069588

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	1.0	101	90-110	

MATRIX SPIKE SAMPLE: 1069589

Parameter	Units	70176499001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.62	2.5	3.1	99	90-110	

MATRIX SPIKE SAMPLE: 1069591

Parameter	Units	70175996001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	2.5	2.5	5.1	105	90-110	

SAMPLE DUPLICATE: 1069590

Parameter	Units	70176499001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.62	0.64	3	20	

SAMPLE DUPLICATE: 1069592

Parameter	Units	70175996001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	2.5	2.5	1	20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch: 212544
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate, Unpres.
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70175996012

METHOD BLANK: 1066376 Matrix: Water
Associated Lab Samples: 70175996012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	ND	0.037	0.037	06/09/21 00:11	

LABORATORY CONTROL SAMPLE: 1066377

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	0.99	99	90-110	

MATRIX SPIKE SAMPLE: 1066378

Parameter	Units	70176009001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	4.9	2.5	7.3	96	90-110	

MATRIX SPIKE SAMPLE: 1066380

Parameter	Units	70175960001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	2.1	2.5	4.2	80	90-110	M1

SAMPLE DUPLICATE: 1066379

Parameter	Units	70176009001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	4.9	5.0	1	20	

SAMPLE DUPLICATE: 1066381

Parameter	Units	70175960001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	2.1	2.2	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

QC Batch: 213558 Analysis Method: SM22 4500 NH3 H
QC Batch Method: SM22 4500 NH3 H Analysis Description: 4500 Ammonia
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005, 70175996012

METHOD BLANK: 1072999 Matrix: Water
Associated Lab Samples: 70175996001, 70175996002, 70175996003, 70175996004, 70175996005, 70175996012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.050	0.053	06/15/21 15:37	

LABORATORY CONTROL SAMPLE: 1073000

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	100	90-110	

MATRIX SPIKE SAMPLE: 1073305

Parameter	Units	70175996010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.077J	1	1.1	100	75-125	

SAMPLE DUPLICATE: 1073306

Parameter	Units	70175996010 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.077J	0.077J		20	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
F6	Sample was not filtered within 15 minutes of collection and does not meet sampling and/or regulatory requirements.
FS	The sample was filtered in the laboratory prior to analysis.
H1	Analysis conducted outside the EPA method holding time.
H2	Extraction or preparation conducted outside EPA method holding time.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N3	Accreditation is not offered by the relevant laboratory accrediting body for this parameter.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70175996012	**12**	EPA 200.7	212628		
70175996001	**1**	SM22 9221B/E	212631		
70175996002	**2**	SM22 9221B/E	212631		
70175996003	**3**	SM22 9221B/E	212631		
70175996004	**4**	SM22 9221B/E	212631		
70175996005	**5**	SM22 9221B/E	212631		
70175996001	**1**	SM 9223B-2004	212516	SM 9223B-2004	212755
70175996002	**2**	SM 9223B-2004	212516	SM 9223B-2004	212755
70175996003	**3**	SM 9223B-2004	212516	SM 9223B-2004	212755
70175996004	**4**	SM 9223B-2004	212516	SM 9223B-2004	212755
70175996005	**5**	SM 9223B-2004	212516	SM 9223B-2004	212755
70175996012	**12**	SM22 9223B Colilert	212616	SM22 9223B Colilert	212761
70175996001	**1**	EPA 1666A	213294		
70175996002	**2**	EPA 1666A	213294		
70175996003	**3**	EPA 1666A	213294		
70175996004	**4**	EPA 1666A	213294		
70175996005	**5**	EPA 1666A	213294		
70175996001	**1**	EPA 180.1	212770		
70175996002	**2**	EPA 180.1	212770		
70175996003	**3**	EPA 180.1	212770		
70175996004	**4**	EPA 180.1	212770		
70175996005	**5**	EPA 180.1	212770		
70175996012	**12**	EPA 180.1	212770		
70175996012	**12**	SM22 2540B	213115		
70175996001	**1**	SM22 2540B	213307		
70175996002	**2**	SM22 2540B	213307		
70175996003	**3**	SM22 2540B	213307		
70175996004	**4**	SM22 2540B	213307		
70175996005	**5**	SM22 2540B	213307		
70175996001	**1**	SM22 2540D	213090		
70175996002	**2**	SM22 2540D	213414		
70175996003	**3**	SM22 2540D	213414		
70175996004	**4**	SM22 2540D	213414		
70175996005	**5**	SM22 2540D	213414		
70175996012	**12**	SM22 2540D	213414		
70175996001	**1**	EPA 446.0 Rev 1.2-1997	72195	EPA 446.0 Rev 1.2-1997	72817
70175996002	**2**	EPA 446.0 Rev 1.2-1997	72195	EPA 446.0 Rev 1.2-1997	72817
70175996003	**3**	EPA 446.0 Rev 1.2-1997	72195	EPA 446.0 Rev 1.2-1997	72817
70175996004	**4**	EPA 446.0 Rev 1.2-1997	72195	EPA 446.0 Rev 1.2-1997	72817
70175996005	**5**	EPA 446.0 Rev 1.2-1997	72195	EPA 446.0 Rev 1.2-1997	72817
70175996001	**1**	SM22 4500-P B	213497	SM22 4500-P E	213635
70175996002	**2**	SM22 4500-P B	213497	SM22 4500-P E	213635
70175996003	**3**	SM22 4500-P B	213497	SM22 4500-P E	213635

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LAKE STUDY 6/8
Pace Project No.: 70175996

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70175996004	**4**	SM22 4500-P B	213497	SM22 4500-P E	213635
70175996005	**5**	SM22 4500-P B	213497	SM22 4500-P E	213635
70175996001	**1**	SM22 4500-P E	212536		
70175996002	**2**	SM22 4500-P E	212536		
70175996003	**3**	SM22 4500-P E	212536		
70175996004	**4**	SM22 4500-P E	212536		
70175996005	**5**	SM22 4500-P E	212536		
70175996012	**12**	SM22 4500-P E	212536		
70175996001	**1**	SM22 5540C	212783	SM22 5540C	213185
70175996002	**2**	SM22 5540C	212537	SM22 5540C	212546
70175996003	**3**	SM22 5540C	212537	SM22 5540C	212546
70175996004	**4**	SM22 5540C	212537	SM22 5540C	212546
70175996005	**5**	SM22 5540C	212537	SM22 5540C	212546
70175996012	**12**	SM22 5540C	212783	SM22 5540C	213185
70175996001	**1**	SM22 4500-N	214063		
70175996002	**2**	SM22 4500-N	213835		
70175996003	**3**	SM22 4500-N	213835		
70175996004	**4**	SM22 4500-N	213835		
70175996005	**5**	SM22 4500-N	213835		
70175996012	**12**	SM22 4500-N	214063		
70175996012	**12**	EPA 351.2	212807	EPA 351.2	212818
70175996001	**1**	EPA 351.2	213443	EPA 351.2	213466
70175996002	**2**	EPA 351.2	213443	EPA 351.2	213466
70175996003	**3**	EPA 351.2	213443	EPA 351.2	213466
70175996004	**4**	EPA 351.2	213443	EPA 351.2	213466
70175996005	**5**	EPA 351.2	213443	EPA 351.2	213466
70175996012	**12**	EPA 353.2	212544		
70175996001	**1**	EPA 353.2	213001		
70175996002	**2**	EPA 353.2	213001		
70175996003	**3**	EPA 353.2	213001		
70175996004	**4**	EPA 353.2	213001		
70175996005	**5**	EPA 353.2	212545		
70175996001	**1**	SM22 4500 NH3 H	213558		
70175996002	**2**	SM22 4500 NH3 H	213558		
70175996003	**3**	SM22 4500 NH3 H	213558		
70175996004	**4**	SM22 4500 NH3 H	213558		
70175996005	**5**	SM22 4500 NH3 H	213558		
70175996012	**12**	SM22 4500 NH3 H	213558		

WO#: 70175996

70175996

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CHAIN-OF-CUSTO

The Chain-of-Custody is a LI ... tely.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace ... lard-terms.pdf.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Woodard & Curran Inc.	Report To:	~~Evan Trumpetori~~ Emily Neaion	Attention:	
Address:	800 Westchester Avenue	Copy To:		Company Name:	
	Port Chester, NY 10573			Address:	
Email:	~~etrumpetori@woodardcurran.com~~ eneaion@woodardcurran.com	Purchase Order #:		Pace Quote:	
Phone: 914-294-2414	Fax:	Project Name:	Lake Study	Pace Project Manager:	nicolette.lovari@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	7408

Regulatory Agency
State / Location
NY

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID		MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Y/N Analyses Test	Total and Fecal/ E.coli	No2/NO3 NH3, T. Phos, TKN	O. Phos, TS, TSS, MBAS, T	1666	Chlorophyll A (48 hr holding	Total Coliform Presence/ Ab	T. Phos 200.7	O. Phos, TS, TSS, MBAS, T	NO2/NO3, NH3, TKN	Residual Chlorine (Y/N)
1	1				6/8	8:37																							
2	2					7:24																							
3	3					7:38																							
4	4					7:04																							
5	5					8:10																							
6	6	WW				10:45																							
7	7					10:15																							
8	8					11:00																							
9	9					11:30																							
10	10					11:22																							
11	11	DW				10:12																							
12	12					8:20																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Emily Neaion 6/8/21 1240			[signature]	6/8/21	13:46	1.9	W	N	Y

SAMPLE CONDITIONS

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Emily Neaion

SIGNATURE of SAMPLER: Emily Neaion DATE Signed: 6/8/21

Pace Analytical®

Sample Condition Upon Receipt

WO# : 70175996
PM: NML   Due Date: 06/16/21
CLIENT: WWC

Client Name: WWC   Project

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No   Seals intact: ☐ Yes ☒ No

Temperature Blank Present: ☐ Yes ☑ No

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ Ziploc ☐ None ☐ Other

Type of Ice: Wet Blue None

Thermometer Used: TH091   Correction Factor: +0.0

☐ Samples on ice, cooling process has begun

Cooler Temperature(°C): 1.9   Cooler Temperature Corrected(°C): 1.9

Date/Time 5035A kits placed in freezer

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☐ N/A, water sample)

Date and Initials of person examining contents:

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ Yes ☐ No

Did samples orignate from a foreign source including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑ Yes	☐ No		1.
Chain of Custody Filled Out:	☑ Yes	☐ No		2.
Chain of Custody Relinquished:	☑ Yes	☐ No		3.
Sampler Name & Signature on COC:	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time:	☑ Yes	☐ No		5.
Short Hold Time Analysis (<72hr):	☑ Yes	☐ No		6.
Rush Turn Around Time Requested:	☐ Yes	☑ No		7.
Sufficient Volume: (Triple volume provided for	☑ Yes	☐ No		8.
Correct Containers Used:	☑ Yes	☐ No		9.
-Pace Containers Used:	☑ Yes	☐ No		
Containers Intact:	☑ Yes	☐ No		10.
Filtered volume received for Dissolved tests	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	☑ Yes	☐ No		12.
-Includes date/time/ID, Matrix: SL WT OIL				
All containers needing preservation have been checked?	☑ Yes	☐ No	☐ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
pH paper Lot # HC025486				Sample #
All containers needing preservation are found to be in compliance with method recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide)	☑ Yes	☐ No	☐ N/A	
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis				Initial when completed: / Lot # of added preservative: / Date/Time preservative added:
Samples checked for dechlorination: KI starch test strips Lot # Residual chlorine strips Lot #	☐ Yes	☐ No	☑ N/A	14. Positive for Res. Chlorine? Y N
SM 4500 CN samples checked for sulfide? Lead Acetate Strips Lot #	☐ Yes	☐ No	☑ N/A	15.
Headspace in VOA Vials (>6mm):	☒ Yes	☐ No	☐ N/A	16. Headspace in all vials
Trip Blank Present:	☐ Yes	☒ No	☐ N/A	17.
Trip Blank Custody Seals Present	☐ Yes	☐ No	☒ N/A	
Pace Trip Blank Lot # (if applicable):___________				

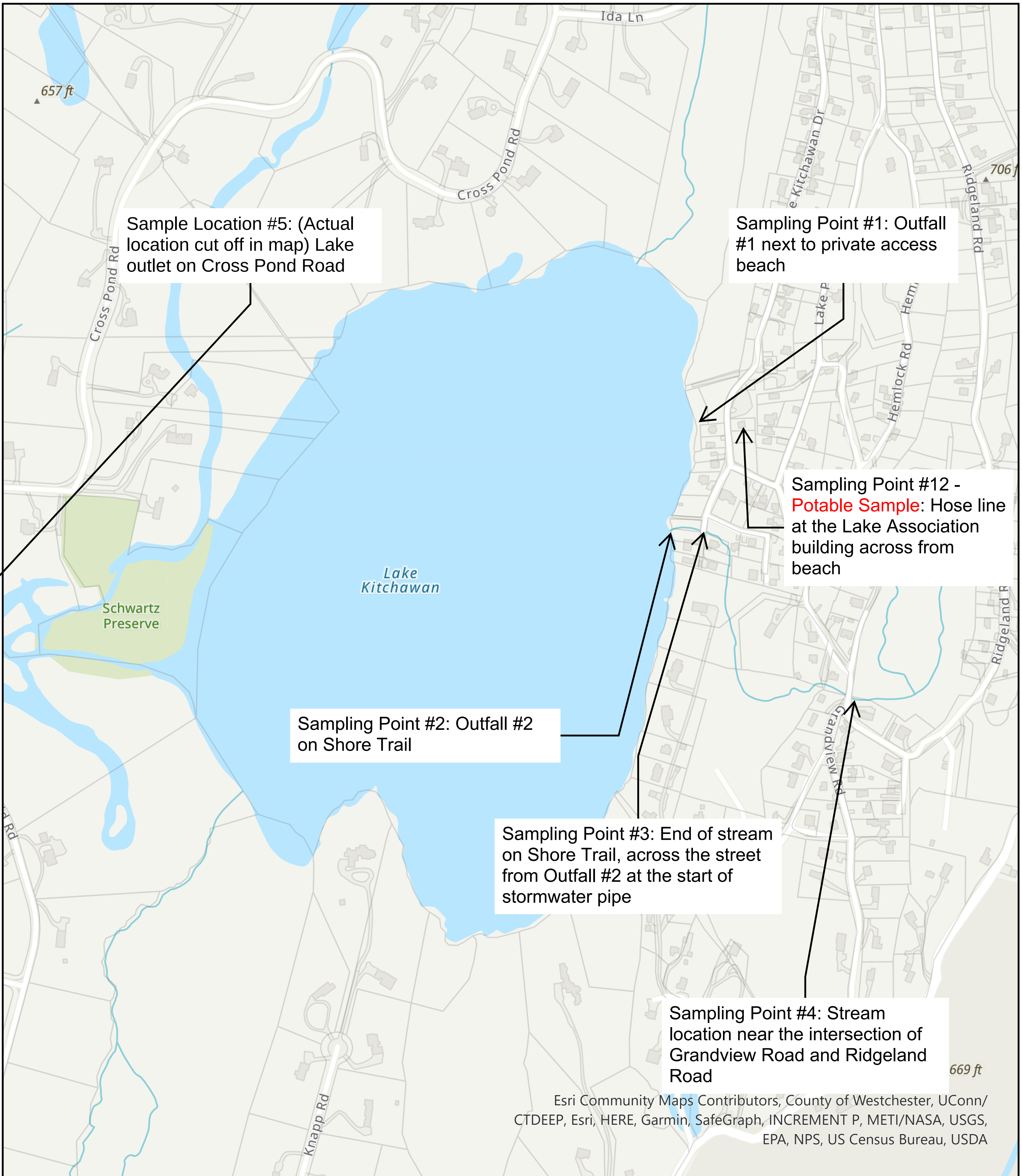
Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution: ANALYSIS logged based on previous WO. WO# 70174666

* PM (Project Manager) review is documented electronically in LIMS.

Lake Kitchawan Sample Results
June 9, 2021



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Sampling Plan

Legend

Lake Kitchawan Study Parcels

0 125 250 500 US Feet

N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: May 2021

Figure Exported: 5/28/2021 By: enealon Using: \\wc\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lewisboro Parcel Figure.aprx

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

June 21, 2021

Emily Nealon
Woodard & Curran Inc.
800 Westchester Avenue
Port Chester, NY 10573

RE: Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Dear Emily Nealon:

Enclosed are the analytical results for sample(s) received by the laboratory on June 09, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville
- Pace Analytical Services - WestVirginia

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Nicolette Lovari

Nicolette M. Lovari
nicolette.lovari@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Nicolette Lovari, Pace Analytical Melville

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

CERTIFICATIONS

Project:	LAKE STUDY 6/9
Pace Project No.:	70176165

Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747
Connecticut Certification #: PH-0435
Delaware Certification # NY 10478
Maryland Certification #: 208
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987
New Jersey Certification #: NY158
New York Certification #: 10478 Primary Accrediting Body
Pennsylvania Certification #: 68-00350
Rhode Island Certification #: LAO00340
Virginia Certification # 460302

Pace Analytical Services Beaver

225 Industrial Park Drive, Beaver, WV 25813
Virginia VELAP 460148
West Virginia DEP 060
West Virginia DHHR 00412CM
North Carolina DEQ 466
Kentucky Wastewater Certification KY90039
Pennsylvania DEP 68-00839

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

SAMPLE SUMMARY

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Lab ID	Sample ID	Matrix	Date Collected	Date Received
70176165001	**1**	Water	06/09/21 07:10	06/09/21 12:55
70176165002	**2**	Water	06/09/21 07:30	06/09/21 12:55
70176165003	**3**	Water	06/09/21 07:43	06/09/21 12:55
70176165004	**4**	Water	06/09/21 08:00	06/09/21 12:55
70176165005	**5**	Water	06/09/21 08:30	06/09/21 12:55
70176165011	**12**	Drinking Water	06/09/21 06:55	06/09/21 12:55

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SAMPLE ANALYTE COUNT

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
70176165001	**1**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	HA1	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		EPA 446.0 Rev 1.2-1997	KWS	1	PASI-BVWV
		SM22 4500-P E	HMH	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70176165002	**2**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	HA1	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		EPA 446.0 Rev 1.2-1997	KWS	1	PASI-BVWV
		SM22 4500-P E	HMH	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70176165003	**3**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	HA1	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		EPA 446.0 Rev 1.2-1997	KWS	1	PASI-BVWV
		SM22 4500-P E	HMH	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV

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SAMPLE ANALYTE COUNT

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70176165004	**4**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	HA1	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		EPA 446.0 Rev 1.2-1997	KWS	1	PASI-BVWV
		SM22 4500-P E	HMH	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70176165005	**5**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	HA1	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		EPA 446.0 Rev 1.2-1997	KWS	1	PASI-BVWV
		SM22 4500-P E	HMH	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70176165011	**12**	EPA 200.7	KM1	1	PACE-MV
		SM22 9223B Colilert	GFD	2	PACE-MV
		EPA 180.1	HA1	1	PACE-MV
		SM22 2540B	IT1	1	PACE-MV

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SAMPLE ANALYTE COUNT

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV

PACE-MV = Pace Analytical Services - Melville
PASI-BVWV = Pace Analytical Services - WestVirginia

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Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

SUMMARY OF DETECTION

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
70176165001	**1**					
SM22 9221B/E	Fecal Coliforms, MPN	2400	MPN/100mL	1.8	06/09/21 13:42	
SM22 9221B/E	Total Coliforms, MPN	>16000	MPN/100mL	1.8	06/09/21 13:42	
SM 9223B-2004	E.coli	1011.2	MPN/100mL	1.0	06/10/21 13:42	
EPA 180.1	Turbidity	1.7	NTU	1.0	06/10/21 13:23	
SM22 2540B	Total Solids	609	mg/L	10.0	06/16/21 18:18	
SM22 2540D	Total Suspended Solids	1.2J	mg/L	2.0	06/15/21 19:02	
EPA 446.0 Rev 1.2-1997	Chlorophyll a	0.53J	mg/m3	1.0	06/15/21 16:33	H3,N3
SM22 4500-P E	Phosphorus	0.022J	mg/L	0.050	06/18/21 19:34	
SM22 4500-P E	Orthophosphate as P	0.048J	mg/L	0.050	06/10/21 22:17	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			06/10/21 11:44	
SM22 4500-N	Total Nitrogen	3.3	mg/L	0.10	06/17/21 17:21	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.71	mg/L	0.10	06/17/21 15:54	
EPA 353.2	Nitrate-Nitrite (as N)	2.6	mg/L	0.25	06/10/21 03:02	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.074J	mg/L	0.10	06/18/21 14:38	
70176165002	**2**					
SM22 9221B/E	Fecal Coliforms, MPN	2400	MPN/100mL	1.8	06/09/21 13:42	
SM22 9221B/E	Total Coliforms, MPN	9200	MPN/100mL	1.8	06/09/21 13:42	
SM 9223B-2004	E.coli	791.5	MPN/100mL	1.0	06/10/21 13:42	
EPA 180.1	Turbidity	0.45J	NTU	1.0	06/10/21 13:25	
SM22 2540B	Total Solids	383	mg/L	10.0	06/16/21 18:20	
SM22 2540D	Total Suspended Solids	1.2J	mg/L	2.0	06/15/21 19:02	
EPA 446.0 Rev 1.2-1997	Chlorophyll a	0.72J	mg/m3	1.0	06/15/21 16:35	H3,N3
SM22 4500-P E	Phosphorus	0.043J	mg/L	0.050	06/18/21 19:34	
SM22 4500-P E	Orthophosphate as P	0.052	mg/L	0.050	06/10/21 22:17	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			06/10/21 11:44	
SM22 4500-N	Total Nitrogen	2.3	mg/L	0.10	06/17/21 17:21	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.84	mg/L	0.10	06/17/21 15:55	
EPA 353.2	Nitrate-Nitrite (as N)	1.5	mg/L	0.25	06/10/21 03:07	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.10	mg/L	0.10	06/18/21 14:39	
70176165003	**3**					
SM22 9221B/E	Fecal Coliforms, MPN	1100	MPN/100mL	1.8	06/09/21 13:42	
SM22 9221B/E	Total Coliforms, MPN	16000	MPN/100mL	1.8	06/09/21 13:42	
SM 9223B-2004	E.coli	913.9	MPN/100mL	1.0	06/10/21 13:42	
EPA 180.1	Turbidity	1.3	NTU	1.0	06/10/21 13:33	
SM22 2540B	Total Solids	384	mg/L	10.0	06/16/21 18:21	
SM22 2540D	Total Suspended Solids	6.8	mg/L	2.0	06/15/21 19:02	
EPA 446.0 Rev 1.2-1997	Chlorophyll a	1.6	mg/m3	1.0	06/15/21 16:36	H3,N3
SM22 4500-P E	Phosphorus	0.052	mg/L	0.050	06/18/21 19:34	
SM22 4500-P E	Orthophosphate as P	0.074	mg/L	0.050	06/10/21 22:17	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			06/10/21 11:44	
SM22 4500-N	Total Nitrogen	2.3	mg/L	0.10	06/17/21 17:21	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.78	mg/L	0.10	06/17/21 15:55	
EPA 353.2	Nitrate-Nitrite (as N)	1.5	mg/L	0.25	06/10/21 03:10	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.11	mg/L	0.10	06/18/21 14:41	
70176165004	**4**					
SM22 9221B/E	Fecal Coliforms, MPN	49	MPN/100mL	1.8	06/09/21 13:42	

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

SUMMARY OF DETECTION

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
70176165004	**4**					
SM22 9221B/E	Total Coliforms, MPN	240	MPN/100mL	1.8	06/09/21 13:42	
SM 9223B-2004	E.coli	78.9	MPN/100mL	1.0	06/10/21 13:42	
EPA 180.1	Turbidity	0.90J	NTU	1.0	06/10/21 13:46	
SM22 2540B	Total Solids	408	mg/L	10.0	06/16/21 18:22	
SM22 2540D	Total Suspended Solids	3.2	mg/L	2.0	06/15/21 19:07	
EPA 446.0 Rev 1.2-1997	Chlorophyll a	1.6	mg/m3	1.0	06/15/21 16:38	H3,N3
SM22 4500-P E	Phosphorus	0.031J	mg/L	0.050	06/18/21 19:34	
SM22 4500-P E	Orthophosphate as P	0.032J	mg/L	0.050	06/10/21 22:17	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			06/10/21 11:44	
SM22 4500-N	Total Nitrogen	2.4	mg/L	0.10	06/17/21 17:21	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.73	mg/L	0.10	06/17/21 15:56	
EPA 353.2	Nitrate-Nitrite (as N)	1.7	mg/L	0.25	06/10/21 03:11	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.10	mg/L	0.10	06/18/21 14:44	
70176165005	**5**					
SM22 9221B/E	Fecal Coliforms, MPN	49	MPN/100mL	1.8	06/09/21 13:42	
SM22 9221B/E	Total Coliforms, MPN	79	MPN/100mL	1.8	06/09/21 13:42	
SM 9223B-2004	E.coli	36.9	MPN/100mL	1.0	06/10/21 13:42	
EPA 180.1	Turbidity	1.1	NTU	1.0	06/10/21 13:55	
SM22 2540B	Total Solids	206	mg/L	10.0	06/16/21 18:23	
SM22 2540D	Total Suspended Solids	2.0	mg/L	2.0	06/15/21 19:07	
EPA 446.0 Rev 1.2-1997	Chlorophyll a	3.3	mg/m3	1.0	06/15/21 16:39	H3,N3
SM22 4500-P E	Phosphorus	0.016J	mg/L	0.050	06/18/21 19:34	
SM22 4500-P E	Orthophosphate as P	0.021J	mg/L	0.050	06/10/21 22:17	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			06/10/21 11:44	
SM22 4500-N	Total Nitrogen	1.1	mg/L	0.10	06/17/21 17:21	
EPA 351.2	Nitrogen, Kjeldahl, Total	1.0	mg/L	0.10	06/17/21 15:59	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.17	mg/L	0.10	06/18/21 14:45	
70176165011	**12**					
EPA 200.7	Phosphorus	38.4J	ug/L	50.0	06/11/21 17:08	N3
SM22 9223B Colilert	Total Coliforms	Absent			06/10/21 12:48	
SM22 9223B Colilert	E.coli	Absent			06/10/21 12:48	
EPA 180.1	Turbidity	1.7	NTU	1.0	06/10/21 13:15	
SM22 2540B	Total Solids	320	mg/L	10.0	06/11/21 14:26	N3
SM22 2540D	Total Suspended Solids	3.2	mg/L	2.0	06/15/21 19:23	
SM22 4500-P E	Orthophosphate as P	0.041J	mg/L	0.050	06/10/21 22:17	
SM22 5540C	LAS Molecular Weight, g/mol	320			06/10/21 11:44	
SM22 4500-N	Total Nitrogen	0.76	mg/L	0.10	06/17/21 17:25	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.63	mg/L	0.10	06/16/21 16:38	N3
EPA 353.2	Nitrate-Nitrite (as N)	0.13	mg/L	0.050	06/10/21 01:51	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Method: **EPA 200.7**
Description: 200.7 MET ICP, Drinking Water
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
1 sample was analyzed for EPA 200.7 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project:	LAKE STUDY 6/9
Pace Project No.:	70176165

Method: **SM22 9221B/E**
Description: Fecal-Total Coliform, MPN
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
5 samples were analyzed for SM22 9221B/E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Method: **SM 9223B-2004**
Description: SM 9223B-2004
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
5 samples were analyzed for SM 9223B-2004 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM 9223B-2004 with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Method: **SM22 9223B Colilert**
Description: MBIO Total Coliform DW
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
1 sample was analyzed for SM22 9223B Colilert by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM22 9223B Colilert with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Method: **EPA 1666A**
Description: 1666 MSV
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
5 samples were analyzed for EPA 1666A by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Method: **EPA 180.1**
Description: 180.1 Turbidity
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
6 samples were analyzed for EPA 180.1 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Method: **SM22 2540B**
Description: 2540B Total Solids DW
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
1 sample was analyzed for SM22 2540B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project:	LAKE STUDY 6/9
Pace Project No.:	70176165

Method: **SM22 2540B**
Description: 2540B Total Solids
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
5 samples were analyzed for SM22 2540B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Method: **SM22 2540D**
Description: 2540D Total Suspended Solids
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
6 samples were analyzed for SM22 2540D by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 213586

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 1073141)
  - Total Suspended Solids

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Method: **EPA 446.0 Rev 1.2-1997**
Description: Chlorophyll & Pheophytin
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
5 samples were analyzed for EPA 446.0 Rev 1.2-1997 by Pace Analytical Services WestVirginia. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H3: Sample was received or analysis requested beyond the recognized method holding time.
- 1 (Lab ID: 70176165001)
- 2 (Lab ID: 70176165002)
- 3 (Lab ID: 70176165003)
- 4 (Lab ID: 70176165004)
- 5 (Lab ID: 70176165005)

Sample Preparation:
The samples were prepared in accordance with EPA 446.0 Rev 1.2-1997 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Method: **SM22 4500-P E**
Description: 4500PE Total Phosphorus
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
5 samples were analyzed for SM22 4500-P E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM22 4500-P B with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project:	LAKE STUDY 6/9
Pace Project No.:	70176165

Method: **SM22 4500-P E**
Description: 4500PE Ortho Phosphorus
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
6 samples were analyzed for SM22 4500-P E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 213006

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70176226002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1069615)
  - Orthophosphate as P

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Method: **SM22 5540C**
Description: 5540C MBAS Surfactants
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
6 samples were analyzed for SM22 5540C by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM22 5540C with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Method: **SM22 4500-N**
Description: Total Nitrogen Calculation
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
6 samples were analyzed for SM22 4500-N by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Method: **EPA 351.2**
Description: 351.2 Total Kjeldahl Nitrogen
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
6 samples were analyzed for EPA 351.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 351.2 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 213876

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70176165009,70176363001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 1074990)
  - Nitrogen, Kjeldahl, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 213757

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.
- DUP (Lab ID: 1074065)
  - Nitrogen, Kjeldahl, Total

QC Batch: 213876

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.
- DUP (Lab ID: 1074991)
  - Nitrogen, Kjeldahl, Total

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
1 sample was analyzed for EPA 353.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 212796

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70176113001,70176279001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1067989)
  - Nitrate-Nitrite (as N)

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 pres.
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
5 samples were analyzed for EPA 353.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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Melville, NY 11747
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PROJECT NARRATIVE

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Method: **SM22 4500 NH3 H**
Description: 4500 Ammonia Water
Client: Woodard & Curran Inc.
Date: June 21, 2021

General Information:
6 samples were analyzed for SM22 4500 NH3 H by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Sample: 1 **Lab ID: 70176165001** Collected: 06/09/21 07:10 Received: 06/09/21 12:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**2400**	MPN/100mL	1.8		1		06/09/21 13:42		
Total Coliforms, MPN	**>16000**	MPN/100mL	1.8		1		06/09/21 13:42		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**1011.2**	MPN/100mL	1.0		1	06/09/21 13:42	06/10/21 13:42		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		06/16/21 16:40	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		06/16/21 16:40	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		06/16/21 16:40	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	78-114		5		06/16/21 16:40	17060-07-0	
4-Bromofluorobenzene (S)	86	%	83-111		5		06/16/21 16:40	460-00-4	
Toluene-d8 (S)	97	%	80-131		5		06/16/21 16:40	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.7**	NTU	1.0	0.32	1		06/10/21 13:23		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**609**	mg/L	10.0	9.0	1		06/16/21 18:18		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**1.2J**	mg/L	2.0	0.96	1		06/15/21 19:02		
Chlorophyll & Pheophytin	Analytical Method: EPA 446.0 Rev 1.2-1997 Preparation Method: EPA 446.0 Rev 1.2-1997 Pace Analytical Services - WestVirginia								
Chlorophyll a	**0.53J**	mg/m3	1.0	0.10	1	06/13/21 14:20	06/15/21 16:33		H3,N3
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.022J**	mg/L	0.050	0.010	1	06/18/21 15:28	06/18/21 19:34	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.048J**	mg/L	0.050	0.010	1		06/10/21 22:17		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	06/10/21 11:43	06/10/21 11:44		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Sample: 1 **Lab ID: 70176165001** Collected: 06/09/21 07:10 Received: 06/09/21 12:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	06/10/21 11:43	06/10/21 11:44		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**3.3**	mg/L	0.10		1		06/17/21 17:21		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.71**	mg/L	0.10	0.094	1	06/17/21 06:50	06/17/21 15:54	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**2.6**	mg/L	0.25	0.18	5		06/10/21 03:02	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.074J**	mg/L	0.10	0.053	1		06/18/21 14:38	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Sample: 2 **Lab ID: 70176165002** Collected: 06/09/21 07:30 Received: 06/09/21 12:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**2400**	MPN/100mL	1.8		1		06/09/21 13:42		
Total Coliforms, MPN	**9200**	MPN/100mL	1.8		1		06/09/21 13:42		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**791.5**	MPN/100mL	1.0		1	06/09/21 13:42	06/10/21 13:42		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		06/16/21 17:02	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		06/16/21 17:02	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		06/16/21 17:02	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	96	%	78-114		5		06/16/21 17:02	17060-07-0	
4-Bromofluorobenzene (S)	86	%	83-111		5		06/16/21 17:02	460-00-4	
Toluene-d8 (S)	99	%	80-131		5		06/16/21 17:02	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**0.45J**	NTU	1.0	0.32	1		06/10/21 13:25		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**383**	mg/L	10.0	9.0	1		06/16/21 18:20		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**1.2J**	mg/L	2.0	0.96	1		06/15/21 19:02		
Chlorophyll & Pheophytin	Analytical Method: EPA 446.0 Rev 1.2-1997 Preparation Method: EPA 446.0 Rev 1.2-1997 Pace Analytical Services - WestVirginia								
Chlorophyll a	**0.72J**	mg/m3	1.0	0.10	1	06/15/21 13:00	06/15/21 16:35		H3,N3
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.043J**	mg/L	0.050	0.010	1	06/18/21 15:28	06/18/21 19:34	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.052**	mg/L	0.050	0.010	1		06/10/21 22:17		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	06/10/21 11:43	06/10/21 11:44		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Sample: 2 **Lab ID: 70176165002** Collected: 06/09/21 07:30 Received: 06/09/21 12:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	06/10/21 11:43	06/10/21 11:44		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**2.3**	mg/L	0.10		1		06/17/21 17:21		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.84**	mg/L	0.10	0.094	1	06/17/21 06:50	06/17/21 15:55	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**1.5**	mg/L	0.25	0.18	5		06/10/21 03:07	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.10**	mg/L	0.10	0.053	1		06/18/21 14:39	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Sample: 3 **Lab ID: 70176165003** Collected: 06/09/21 07:43 Received: 06/09/21 12:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E								
	Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**1100**	MPN/100mL	1.8		1		06/09/21 13:42		
Total Coliforms, MPN	**16000**	MPN/100mL	1.8		1		06/09/21 13:42		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004								
	Pace Analytical Services - Melville								
E.coli	**913.9**	MPN/100mL	1.0		1	06/09/21 13:42	06/10/21 13:42		
1666 MSV	Analytical Method: EPA 1666A								
	Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		06/16/21 17:24	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		06/16/21 17:24	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		06/16/21 17:24	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	78-114		5		06/16/21 17:24	17060-07-0	
4-Bromofluorobenzene (S)	92	%	83-111		5		06/16/21 17:24	460-00-4	
Toluene-d8 (S)	95	%	80-131		5		06/16/21 17:24	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1								
	Pace Analytical Services - Melville								
Turbidity	**1.3**	NTU	1.0	0.32	1		06/10/21 13:33		
2540B Total Solids	Analytical Method: SM22 2540B								
	Pace Analytical Services - Melville								
Total Solids	**384**	mg/L	10.0	9.0	1		06/16/21 18:21		
2540D Total Suspended Solids	Analytical Method: SM22 2540D								
	Pace Analytical Services - Melville								
Total Suspended Solids	**6.8**	mg/L	2.0	0.96	1		06/15/21 19:02		
Chlorophyll & Pheophytin	Analytical Method: EPA 446.0 Rev 1.2-1997 Preparation Method: EPA 446.0 Rev 1.2-1997								
	Pace Analytical Services - WestVirginia								
Chlorophyll a	**1.6**	mg/m3	1.0	0.10	1	06/15/21 13:00	06/15/21 16:36		H3,N3
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B								
	Pace Analytical Services - Melville								
Phosphorus	**0.052**	mg/L	0.050	0.010	1	06/18/21 15:28	06/18/21 19:34	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E								
	Pace Analytical Services - Melville								
Orthophosphate as P	**0.074**	mg/L	0.050	0.010	1		06/10/21 22:17		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C								
	Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	06/10/21 11:43	06/10/21 11:44		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Sample: 3 **Lab ID: 70176165003** Collected: 06/09/21 07:43 Received: 06/09/21 12:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	06/10/21 11:43	06/10/21 11:44		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**2.3**	mg/L	0.10		1		06/17/21 17:21		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.78**	mg/L	0.10	0.094	1	06/17/21 06:50	06/17/21 15:55	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**1.5**	mg/L	0.25	0.18	5		06/10/21 03:10	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.11**	mg/L	0.10	0.053	1		06/18/21 14:41	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Sample: 4 **Lab ID: 70176165004** Collected: 06/09/21 08:00 Received: 06/09/21 12:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**49**	MPN/100mL	1.8		1		06/09/21 13:42		
Total Coliforms, MPN	**240**	MPN/100mL	1.8		1		06/09/21 13:42		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**78.9**	MPN/100mL	1.0		1	06/09/21 13:42	06/10/21 13:42		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		06/16/21 17:46	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		06/16/21 17:46	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		06/16/21 17:46	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	78-114		5		06/16/21 17:46	17060-07-0	
4-Bromofluorobenzene (S)	92	%	83-111		5		06/16/21 17:46	460-00-4	
Toluene-d8 (S)	98	%	80-131		5		06/16/21 17:46	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**0.90J**	NTU	1.0	0.32	1		06/10/21 13:46		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**408**	mg/L	10.0	9.0	1		06/16/21 18:22		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**3.2**	mg/L	2.0	0.96	1		06/15/21 19:07		
Chlorophyll & Pheophytin	Analytical Method: EPA 446.0 Rev 1.2-1997 Preparation Method: EPA 446.0 Rev 1.2-1997 Pace Analytical Services - WestVirginia								
Chlorophyll a	**1.6**	mg/m3	1.0	0.10	1	06/15/21 13:00	06/15/21 16:38		H3,N3
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.031J**	mg/L	0.050	0.010	1	06/18/21 15:28	06/18/21 19:34	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.032J**	mg/L	0.050	0.010	1		06/10/21 22:17		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	06/10/21 11:43	06/10/21 11:44		

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Sample: 4 **Lab ID: 70176165004** Collected: 06/09/21 08:00 Received: 06/09/21 12:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	06/10/21 11:43	06/10/21 11:44		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**2.4**	mg/L	0.10		1		06/17/21 17:21		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.73**	mg/L	0.10	0.094	1	06/17/21 06:50	06/17/21 15:56	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**1.7**	mg/L	0.25	0.18	5		06/10/21 03:11	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.10**	mg/L	0.10	0.053	1		06/18/21 14:44	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Sample: 5 **Lab ID: 70176165005** Collected: 06/09/21 08:30 Received: 06/09/21 12:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**49**	MPN/100mL	1.8		1		06/09/21 13:42		
Total Coliforms, MPN	**79**	MPN/100mL	1.8		1		06/09/21 13:42		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**36.9**	MPN/100mL	1.0		1	06/09/21 13:42	06/10/21 13:42		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		06/16/21 18:07	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		06/16/21 18:07	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		06/16/21 18:07	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	78-114		5		06/16/21 18:07	17060-07-0	
4-Bromofluorobenzene (S)	91	%	83-111		5		06/16/21 18:07	460-00-4	
Toluene-d8 (S)	98	%	80-131		5		06/16/21 18:07	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.1**	NTU	1.0	0.32	1		06/10/21 13:55		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**206**	mg/L	10.0	9.0	1		06/16/21 18:23		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**2.0**	mg/L	2.0	0.96	1		06/15/21 19:07		
Chlorophyll & Pheophytin	Analytical Method: EPA 446.0 Rev 1.2-1997 Preparation Method: EPA 446.0 Rev 1.2-1997 Pace Analytical Services - WestVirginia								
Chlorophyll a	**3.3**	mg/m3	1.0	0.10	1	06/15/21 13:00	06/15/21 16:39		H3,N3
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.016J**	mg/L	0.050	0.010	1	06/18/21 15:28	06/18/21 19:34	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.021J**	mg/L	0.050	0.010	1		06/10/21 22:17		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	06/10/21 11:43	06/10/21 11:44		

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Sample: 5 **Lab ID: 70176165005** Collected: 06/09/21 08:30 Received: 06/09/21 12:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	06/10/21 11:43	06/10/21 11:44		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**1.1**	mg/L	0.10		1		06/17/21 17:21		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**1.0**	mg/L	0.10	0.094	1	06/17/21 06:50	06/17/21 15:59	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.25**	mg/L	0.25	0.18	5		06/10/21 03:14	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.17**	mg/L	0.10	0.053	1		06/18/21 14:45	7664-41-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Sample: 12 **Lab ID: 70176165011** Collected: 06/09/21 06:55 Received: 06/09/21 12:55 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, Drinking Water	Analytical Method: EPA 200.7								
	Pace Analytical Services - Melville								
Phosphorus	**38.4J**	ug/L	50.0	18.0	1		06/11/21 17:08	7723-14-0	N3
MBIO Total Coliform DW	Analytical Method: SM22 9223B Colilert Preparation Method: SM22 9223B Colilert								
	Pace Analytical Services - Melville								
Total Coliforms	**Absent**				1	06/09/21 18:48	06/10/21 12:48		
E.coli	**Absent**				1	06/09/21 18:48	06/10/21 12:48		
180.1 Turbidity	Analytical Method: EPA 180.1								
	Pace Analytical Services - Melville								
Turbidity	**1.7**	NTU	1.0	0.32	1		06/10/21 13:15		
2540B Total Solids DW	Analytical Method: SM22 2540B								
	Pace Analytical Services - Melville								
Total Solids	**320**	mg/L	10.0	9.0	1		06/11/21 14:26		N3
2540D Total Suspended Solids	Analytical Method: SM22 2540D								
	Pace Analytical Services - Melville								
Total Suspended Solids	**3.2**	mg/L	2.0	0.96	1		06/15/21 19:23		
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E								
	Pace Analytical Services - Melville								
Orthophosphate as P	**0.041J**	mg/L	0.050	0.010	1		06/10/21 22:17		
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C								
	Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	06/10/21 11:43	06/10/21 11:44		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	06/10/21 11:43	06/10/21 11:44		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N								
	Pace Analytical Services - Melville								
Total Nitrogen	**0.76**	mg/L	0.10		1		06/17/21 17:25		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
	Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.63**	mg/L	0.10	0.094	1	06/16/21 06:17	06/16/21 16:38	7727-37-9	N3
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2								
	Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**0.13**	mg/L	0.050	0.037	1		06/10/21 01:51	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H								
	Pace Analytical Services - Melville								
Nitrogen, Ammonia	**<0.10**	mg/L	0.10	0.053	1		06/18/21 15:07	7664-41-7	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 213094
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 MET No Prep Drinking Water
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70176165011

METHOD BLANK: 1069867 Matrix: Drinking Water
Associated Lab Samples: 70176165011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	ug/L	<50.0	50.0	18.0	06/11/21 16:44	N3

LABORATORY CONTROL SAMPLE: 1069868

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	ug/L	1000	994	99	85-115	N3

MATRIX SPIKE SAMPLE: 1069871

Parameter	Units	70176451001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	ug/L	<50.0	1000	971	97	70-130	N3

MATRIX SPIKE SAMPLE: 1069873

Parameter	Units	70176462001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	ug/L	<50.0	1000	996	99	70-130	N3

SAMPLE DUPLICATE: 1069870

Parameter	Units	70176451001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus	ug/L	<50.0	<50.0		20	N3

SAMPLE DUPLICATE: 1069872

Parameter	Units	70176462001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus	ug/L	<50.0	<50.0		20	N3

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch:	212905	Analysis Method:	SM22 9221B/E
QC Batch Method:	SM22 9221B/E	Analysis Description:	9221BCE Fecal-Total Coliform, MPN
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

METHOD BLANK: 1068615 Matrix: Water

Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fecal Coliforms, MPN	MPN/100mL	<1.8	1.8		06/09/21 13:42	
Total Coliforms, MPN	MPN/100mL	<1.8	1.8		06/09/21 13:42	

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 212896
QC Batch Method: SM 9223B-2004
Analysis Method: SM 9223B-2004
Analysis Description: ECOLI in Waste Water
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

METHOD BLANK: 1068485 Matrix: Water
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
E.coli	MPN/100mL	<1.0	1.0		06/10/21 13:42	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 212866
QC Batch Method: SM22 9223B Colilert
Analysis Method: SM22 9223B Colilert
Analysis Description: TotColDW MBIO Total Coliform
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70176165011

METHOD BLANK: 1068181
Matrix: Drinking Water
Associated Lab Samples: 70176165011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
E.coli		Absent			06/10/21 12:48	
Total Coliforms		Absent			06/10/21 12:48	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 213803 | Analysis Method: EPA 1666A
QC Batch Method: EPA 1666A | Analysis Description: 1666A MSV
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

METHOD BLANK: 1074307 | Matrix: Water
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethyl acetate	ug/L	<10.0	10.0	3.0	06/16/21 11:41	
Isopropyl acetate	ug/L	<10.0	10.0	1.9	06/16/21 11:41	
n-amyl acetate	ug/L	<5.0	5.0	2.7	06/16/21 11:41	
1,2-Dichloroethane-d4 (S)	%	102	78-114		06/16/21 11:41	
4-Bromofluorobenzene (S)	%	86	83-111		06/16/21 11:41	
Toluene-d8 (S)	%	96	80-131		06/16/21 11:41	

LABORATORY CONTROL SAMPLE: 1074308

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethyl acetate	ug/L	50	64.6	129	60-157	
Isopropyl acetate	ug/L	50	52.3	105	70-147	
n-amyl acetate	ug/L	50	57.1	114	70-130	
1,2-Dichloroethane-d4 (S)	%			94	78-114	
4-Bromofluorobenzene (S)	%			96	83-111	
Toluene-d8 (S)	%			93	80-131	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1075187 1075188

Parameter	Units	70176165009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethyl acetate	ug/L	<50.0	250	250	323	271	129	108	49-149	17	20	
Isopropyl acetate	ug/L	<50.0	250	250	237	239	95	96	29-136	1	20	
n-amyl acetate	ug/L	<25.0	250	250	253	274	101	109	36-134	8	20	
1,2-Dichloroethane-d4 (S)	%						98	100	78-114		20	
4-Bromofluorobenzene (S)	%						92	98	83-111		20	
Toluene-d8 (S)	%						83	93	80-131		20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 212887 | Analysis Method: EPA 180.1
QC Batch Method: EPA 180.1 | Analysis Description: 180.1 Turbidity
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005, 70176165011

METHOD BLANK: 1068360 Matrix: Water
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005, 70176165011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Turbidity	NTU	<1.0	1.0	0.32	06/10/21 12:45	

LABORATORY CONTROL SAMPLE: 1068361

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	10	10.0	100	90-110	

SAMPLE DUPLICATE: 1068362

Parameter	Units	70176066001 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	<1.0	<1.0		20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 213115
QC Batch Method: SM22 2540B
Analysis Method: SM22 2540B
Analysis Description: 2540B DW Total Solids
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70176165011

METHOD BLANK: 1070041 Matrix: Water
Associated Lab Samples: 70176165011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	mg/L	ND	5.0	9.0	06/11/21 14:23	N3

LABORATORY CONTROL SAMPLE: 1070042

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	700	740	106	85-115	N3

MATRIX SPIKE SAMPLE: 1070043

Parameter	Units	70175996011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	360	300	630	90	75-125	N3

SAMPLE DUPLICATE: 1070044

Parameter	Units	70175996011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	360	364	1	5	N3

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 213833 | Analysis Method: SM22 2540B
QC Batch Method: SM22 2540B | Analysis Description: 2540B Total Solids
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

METHOD BLANK: 1074642 Matrix: Water
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	mg/L	ND	5.0	9.0	06/16/21 18:17	

LABORATORY CONTROL SAMPLE: 1074643

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	700	744	106	85-115	

MATRIX SPIKE SAMPLE: 1074644

Parameter	Units	70176165001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	609	300	865	85	75-125	

MATRIX SPIKE SAMPLE: 1074646

Parameter	Units	70176165003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	384	300	687	101	75-125	

SAMPLE DUPLICATE: 1074645

Parameter	Units	70176165001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	609	612	0	5	

SAMPLE DUPLICATE: 1074647

Parameter	Units	70176165003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	384	397	3	5	

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 213586
QC Batch Method: SM22 2540D
Analysis Method: SM22 2540D
Analysis Description: 2540D Total Suspended Solids
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

METHOD BLANK: 1073139 Matrix: Water
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	0.25	0.24	06/15/21 18:10	

LABORATORY CONTROL SAMPLE: 1073140

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	200	198	99	85-115	

SAMPLE DUPLICATE: 1073141

Parameter	Units	70176348001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	4.0	4.4	10	5	D6

SAMPLE DUPLICATE: 1073142

Parameter	Units	70176879001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	3.2	3.2	0	5	

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 213624
QC Batch Method: SM22 2540D
Analysis Method: SM22 2540D
Analysis Description: 2540D Total Suspended Solids
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70176165011

METHOD BLANK: 1073443 Matrix: Water
Associated Lab Samples: 70176165011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	0.25	0.24	06/15/21 19:11	

LABORATORY CONTROL SAMPLE: 1073444

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	200	198	99	85-115	

SAMPLE DUPLICATE: 1073445

Parameter	Units	70176165006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	7.6	8.0	5	5	

SAMPLE DUPLICATE: 1073446

Parameter	Units	70176165007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	934	904	3	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 72195 Analysis Method: EPA 446.0 Rev 1.2-1997
QC Batch Method: EPA 446.0 Rev 1.2-1997 Analysis Description: Chlorophyll & Pheophytin
Laboratory: Pace Analytical Services - WestVirginia
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

METHOD BLANK: 346607 Matrix: Water
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorophyll a	mg/m3	<1.0	1.0	0.10	06/15/21 16:46	N3

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch:	72195	Analysis Method:	EPA 446.0 Rev 1.2-1997
QC Batch Method:	EPA 446.0 Rev 1.2-1997	Analysis Description:	Chlorophyll & Pheophytin QC
		Laboratory:	Pace Analytical Services - WestVirginia

Associated Lab Samples:

LABORATORY CONTROL SAMPLE: 346606

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlorophyll a	mg/m3	2000	1880	94	70-130	

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 213685
QC Batch Method: SM22 4500-P B
Analysis Method: SM22 4500-P E
Analysis Description: 4500PE Total Phosphorus
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

METHOD BLANK: 1073896 Matrix: Water
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.025	0.010	06/18/21 19:33	

LABORATORY CONTROL SAMPLE: 1073897

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	0.5	0.50	101	85-115	

MATRIX SPIKE SAMPLE: 1073898

Parameter	Units	70176339001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	2.2	2.5	4.9	106	75-125	

SAMPLE DUPLICATE: 1073899

Parameter	Units	70176339001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus	mg/L	2.2	2.2	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 213006
QC Batch Method: SM22 4500-P E
Analysis Method: SM22 4500-P E
Analysis Description: 4500PE Ortho Phosphorus
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005, 70176165011

METHOD BLANK: 1069613 Matrix: Water
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005, 70176165011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.025	0.010	06/10/21 22:17	

LABORATORY CONTROL SAMPLE: 1069614

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.5	0.50	100	85-115	

MATRIX SPIKE SAMPLE: 1069615

Parameter	Units	70176226002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	1.1	1	1.8	72	75-125	M1

SAMPLE DUPLICATE: 1069616

Parameter	Units	70176226002 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	1.1	1.1	0	20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 213004 | Analysis Method: SM22 5540C
QC Batch Method: SM22 5540C | Analysis Description: 5540C MBAS Surfactants
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005, 70176165011

METHOD BLANK: 1069605 Matrix: Water

Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005, 70176165011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
LAS Molecular Weight, g/mol		320			06/10/21 11:43	
MBAS, Calculated as LAS	mg/L	ND	0.040	0.028	06/10/21 11:43	

LABORATORY CONTROL SAMPLE: 1069606

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
LAS Molecular Weight, g/mol			320			
MBAS, Calculated as LAS	mg/L	0.24	0.25	103	85-115	

MATRIX SPIKE SAMPLE: 1069607

Parameter	Units	70176280009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
LAS Molecular Weight, g/mol				320			
MBAS, Calculated as LAS	mg/L	<0.080	0.24	0.20	84	75-125	

SAMPLE DUPLICATE: 1069608

Parameter	Units	70176280009 Result	Dup Result	RPD	Max RPD	Qualifiers
LAS Molecular Weight, g/mol		320	320			
MBAS, Calculated as LAS	mg/L	<0.080	<0.080		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 213757
QC Batch Method: EPA 351.2
Analysis Method: EPA 351.2
Analysis Description: 351.2 TKN DW
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70176165011

METHOD BLANK: 1074062 Matrix: Drinking Water
Associated Lab Samples: 70176165011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	ND	0.094	0.094	06/16/21 16:32	N3

LABORATORY CONTROL SAMPLE: 1074063

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4	4.0	99	90-110	N3

MATRIX SPIKE SAMPLE: 1074064

Parameter	Units	70176165010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.91	4	5.1	104	90-110	N3

SAMPLE DUPLICATE: 1074065

Parameter	Units	70176165010 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.91	0.37	85	20	D6,N3

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QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 213876 | Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 | Analysis Description: 351.2 TKN
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

METHOD BLANK: 1074988 Matrix: Water
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	ND	0.094	0.094	06/17/21 15:52	

LABORATORY CONTROL SAMPLE: 1074989

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4	3.9	98	90-110	

MATRIX SPIKE SAMPLE: 1074990

Parameter	Units	70176165009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.1	4	5.9	121	90-110	M1

MATRIX SPIKE SAMPLE: 1074992

Parameter	Units	70176363001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.50	20	21.9	107	90-110	

SAMPLE DUPLICATE: 1074991

Parameter	Units	70176165009 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.1	0.88	23	20	D6

SAMPLE DUPLICATE: 1074993

Parameter	Units	70176363001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.50	<0.50		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 212798
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

METHOD BLANK: 1067997 Matrix: Water
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	ND	0.037	0.037	06/10/21 02:50	

LABORATORY CONTROL SAMPLE: 1067998

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	1.0	101	90-110	

MATRIX SPIKE SAMPLE: 1067999

Parameter	Units	70175862001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.25	2.5	2.4	93	90-110	

MATRIX SPIKE SAMPLE: 1068001

Parameter	Units	70176165001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	2.6	2.5	5.0	94	90-110	

SAMPLE DUPLICATE: 1068000

Parameter	Units	70175862001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.25	<0.25		20	

SAMPLE DUPLICATE: 1068002

Parameter	Units	70176165001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	2.6	2.7	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 212796
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate, Unpres.
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70176165011

METHOD BLANK: 1067985 Matrix: Water
Associated Lab Samples: 70176165011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	ND	0.037	0.037	06/10/21 01:49	

LABORATORY CONTROL SAMPLE: 1067986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	1.0	101	90-110	

MATRIX SPIKE SAMPLE: 1067987

Parameter	Units	70176113001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	0.5	0.50	97	90-110	

MATRIX SPIKE SAMPLE: 1067989

Parameter	Units	70176279001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	0.5	0.47	84	90-110	M1

SAMPLE DUPLICATE: 1067988

Parameter	Units	70176113001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	<0.050		20	

SAMPLE DUPLICATE: 1067990

Parameter	Units	70176279001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	0.046J		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 214188
QC Batch Method: SM22 4500 NH3 H
Analysis Method: SM22 4500 NH3 H
Analysis Description: 4500 Ammonia
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

METHOD BLANK: 1076930 Matrix: Water
Associated Lab Samples: 70176165001, 70176165002, 70176165003, 70176165004, 70176165005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.050	0.053	06/18/21 14:13	

LABORATORY CONTROL SAMPLE: 1076931

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	100	90-110	

MATRIX SPIKE SAMPLE: 1076932

Parameter	Units	70176005001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	13.3	10	22.6	93	75-125	

SAMPLE DUPLICATE: 1076933

Parameter	Units	70176005001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	13.3	12.3	7	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

QC Batch: 214189
QC Batch Method: SM22 4500 NH3 H
Analysis Method: SM22 4500 NH3 H
Analysis Description: 4500 Ammonia
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70176165011

METHOD BLANK: 1076945 Matrix: Water
Associated Lab Samples: 70176165011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.050	0.053	06/18/21 14:54	

LABORATORY CONTROL SAMPLE: 1076946

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	104	90-110	

MATRIX SPIKE SAMPLE: 1076947

Parameter	Units	70176165008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.15	1	1.1	98	75-125	

SAMPLE DUPLICATE: 1076948

Parameter	Units	70176165008 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.15	0.15	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALIFIERS

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
F6	Sample was not filtered within 15 minutes of collection and does not meet sampling and/or regulatory requirements.
FS	The sample was filtered in the laboratory prior to analysis.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N3	Accreditation is not offered by the relevant laboratory accrediting body for this parameter.

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70176165011	12	EPA 200.7	213094		
70176165001	1	SM22 9221B/E	212905		
70176165002	2	SM22 9221B/E	212905		
70176165003	3	SM22 9221B/E	212905		
70176165004	4	SM22 9221B/E	212905		
70176165005	5	SM22 9221B/E	212905		
70176165001	1	SM 9223B-2004	212896	SM 9223B-2004	212984
70176165002	2	SM 9223B-2004	212896	SM 9223B-2004	212984
70176165003	3	SM 9223B-2004	212896	SM 9223B-2004	212984
70176165004	4	SM 9223B-2004	212896	SM 9223B-2004	212984
70176165005	5	SM 9223B-2004	212896	SM 9223B-2004	212984
70176165011	12	SM22 9223B Colilert	212866	SM22 9223B Colilert	212978
70176165001	1	EPA 1666A	213803		
70176165002	2	EPA 1666A	213803		
70176165003	3	EPA 1666A	213803		
70176165004	4	EPA 1666A	213803		
70176165005	5	EPA 1666A	213803		
70176165001	1	EPA 180.1	212887		
70176165002	2	EPA 180.1	212887		
70176165003	3	EPA 180.1	212887		
70176165004	4	EPA 180.1	212887		
70176165005	5	EPA 180.1	212887		
70176165011	12	EPA 180.1	212887		
70176165011	12	SM22 2540B	213115		
70176165001	1	SM22 2540B	213833		
70176165002	2	SM22 2540B	213833		
70176165003	3	SM22 2540B	213833		
70176165004	4	SM22 2540B	213833		
70176165005	5	SM22 2540B	213833		
70176165001	1	SM22 2540D	213586		
70176165002	2	SM22 2540D	213586		
70176165003	3	SM22 2540D	213586		
70176165004	4	SM22 2540D	213586		
70176165005	5	SM22 2540D	213586		
70176165011	12	SM22 2540D	213624		
70176165001	1	EPA 446.0 Rev 1.2-1997	72195	EPA 446.0 Rev 1.2-1997	72817
70176165002	2	EPA 446.0 Rev 1.2-1997	72195	EPA 446.0 Rev 1.2-1997	72817
70176165003	3	EPA 446.0 Rev 1.2-1997	72195	EPA 446.0 Rev 1.2-1997	72817
70176165004	4	EPA 446.0 Rev 1.2-1997	72195	EPA 446.0 Rev 1.2-1997	72817
70176165005	5	EPA 446.0 Rev 1.2-1997	72195	EPA 446.0 Rev 1.2-1997	72817
70176165001	1	SM22 4500-P B	213685	SM22 4500-P E	214280
70176165002	2	SM22 4500-P B	213685	SM22 4500-P E	214280
70176165003	3	SM22 4500-P B	213685	SM22 4500-P E	214280

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LAKE STUDY 6/9
Pace Project No.: 70176165

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70176165004	4	SM22 4500-P B	213685	SM22 4500-P E	214280
70176165005	5	SM22 4500-P B	213685	SM22 4500-P E	214280
70176165001	1	SM22 4500-P E	213006		
70176165002	2	SM22 4500-P E	213006		
70176165003	3	SM22 4500-P E	213006		
70176165004	4	SM22 4500-P E	213006		
70176165005	5	SM22 4500-P E	213006		
70176165011	12	SM22 4500-P E	213006		
70176165001	1	SM22 5540C	213004	SM22 5540C	213217
70176165002	2	SM22 5540C	213004	SM22 5540C	213217
70176165003	3	SM22 5540C	213004	SM22 5540C	213217
70176165004	4	SM22 5540C	213004	SM22 5540C	213217
70176165005	5	SM22 5540C	213004	SM22 5540C	213217
70176165011	12	SM22 5540C	213004	SM22 5540C	213217
70176165001	1	SM22 4500-N	214063		
70176165002	2	SM22 4500-N	214063		
70176165003	3	SM22 4500-N	214063		
70176165004	4	SM22 4500-N	214063		
70176165005	5	SM22 4500-N	214063		
70176165011	12	SM22 4500-N	214064		
70176165011	12	EPA 351.2	213757	EPA 351.2	213765
70176165001	1	EPA 351.2	213876	EPA 351.2	213900
70176165002	2	EPA 351.2	213876	EPA 351.2	213900
70176165003	3	EPA 351.2	213876	EPA 351.2	213900
70176165004	4	EPA 351.2	213876	EPA 351.2	213900
70176165005	5	EPA 351.2	213876	EPA 351.2	213900
70176165011	12	EPA 353.2	212796		
70176165001	1	EPA 353.2	212798		
70176165002	2	EPA 353.2	212798		
70176165003	3	EPA 353.2	212798		
70176165004	4	EPA 353.2	212798		
70176165005	5	EPA 353.2	212798		
70176165001	1	SM22 4500 NH3 H	214188		
70176165002	2	SM22 4500 NH3 H	214188		
70176165003	3	SM22 4500 NH3 H	214188		
70176165004	4	SM22 4500 NH3 H	214188		
70176165005	5	SM22 4500 NH3 H	214188		
70176165011	12	SM22 4500 NH3 H	214189		

Emily Nealon
enealon@woodardcurran.com
646-915-7419

Pace Analytical®
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request Docu

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be c

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at https://info.pacelabs.com/h

WO# : 70176165

70176165

ection A — equired Client Information:		Section B — Required Project Information:		Section C — Invoice Information:	
ompany:	Woodard & Curran Inc.	Report To:	~~Evan Trumpatori~~ Emily Nealon	Attention:	
ddress:	800 Westchester Avenue	Copy To:		Company Name:	
rt Chester, NY 10573	enealon@woodardcurran.com			Address:	
nail:	~~etrumpatori@woodardcurran.com~~	Purchase Order #:		Pace Quote:	
one:	~~914-294-2414~~ Fax:	Project Name:	Lake Study	Pace Project Manager:	nicolette.lovari@pacelabs.com,
equested Due Date:	646-915-7419	Project #:		Pace Profile #:	7408

Regulatory Agency

State / Location: NY

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

COLLECTED — START / END; Preservatives; Requested Analysis Filtered (Y/N); Y/N

ITEM #	SAMPLE ID	MATRIX (see	(G=	START DATE	START TIME	END DATE	END TIME	P AT	CONT	reserv	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses	Fe	H3, T	TSS	1666	(48 H	Preshos 2		TSS	03, N	Chlo
1	1	WT		6/9	7:10														X	X	X	X	X					
2	2	WT		6/9	7:30														X	X	X	X	X					
3	3	WT		6/9	7:43														X	X	X	X	X					
4	4	WT		6/9	8:00														X	X	X	X	X					
5	5	WT		6/9	8:30														X	X	X	X	X					
6	6	WT		6/9	10:55														X	X	X	X	X					
7	7	WT																	X	X	X	X	X					
8	8	WT		6/9	10:25														X	X	X	X	X					
9	9	WT		6/9	9:45														X	X	X	X	X					
10	10	WT		6/9	10:00														X	X	X	X	X					
11	11	DW		6/9	10:40																			X	X	X	X	
12	12	DW		6/9	10:55																			X	X	X	X	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
our holding time bring samples 1 through 10 to bacteria lab	Emily Nealon 6/9 12:58			[signature]	6/9/21	1255	1.3	W	N	Y

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Sample Intact (Y/N)
PRINT Name of SAMPLER: Emily Nealon						
SIGNATURE of SAMPLER: Emily Nealon	DATE Signed: 6/9/21					

WO#: 70176165
PM: NML Due Date: 06/17/21
CLIENT: WWC

Pace Analytical®

Sample Condition Upon Rec

WO#: 70176165

PM: NML **Due Date: 06/17/21**

CLIENT: WWC

Client Name: Woodard

Proje

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No Seals intact: ☐ Yes ☑ No

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ Ziploc ☑ None ☐ Other

Thermometer Used: TH091 Correction Factor: +0.0

Cooler Temperature(°C): 1.3 Cooler Temperature Corrected(°C): 1.3

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☐ N/A, water sample)

Temperature Blank Present: ☐ Yes ☑ No

Type of Ice: Wet Blue None

☐ Samples on ice, cooling process has begun

Date/Time 5035A kits placed in freezer

Date and Initials of person examining contents: MS 6/9/21

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ Yes ☐ No

Did samples orignate from a foreign source including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑Yes	☐No		1.
Chain of Custody Filled Out:	☑Yes	☐No		2.
Chain of Custody Relinquished:	☑Yes	☐No		3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No		5.
Short Hold Time Analysis (<72hr):	☑Yes	☐No		6.
Rush Turn Around Time Requested:	☐Yes	☑No		7.
Sufficient Volume: (Triple volume provided for	☑Yes	☐No		8.
Correct Containers Used:	☑Yes	☐No		9.
-Pace Containers Used:	☑Yes	☐No		
Containers Intact:	☑Yes	☐No		10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	☑Yes	☐No		12.
-Includes date/time/ID, Matrix: SL WT OIL				
All containers needing preservation have been checked?	☑Yes	☐No	☐N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
pH paper Lot # HC041002				Sample #
All containers needing preservation are found to be in compliance with method recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide)	☑Yes	☐No	☐N/A	
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis				Initial when completed: / Lot # of added preservative: / Date/Time preservative added:
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
KI starch test strips Lot #				
Residual chlorine strips Lot #				Positive for Res. Chlorine? Y N
SM 4500 CN samples checked for sulfide?	☐Yes	☐No	☑N/A	15.
Lead Acetate Strips Lot #				
Headspace in VOA Vials (>6mm):	☑Yes	☐No	☐N/A	16.
Trip Blank Present:	☐Yes	☑No	☐N/A	17.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if applicable):________				

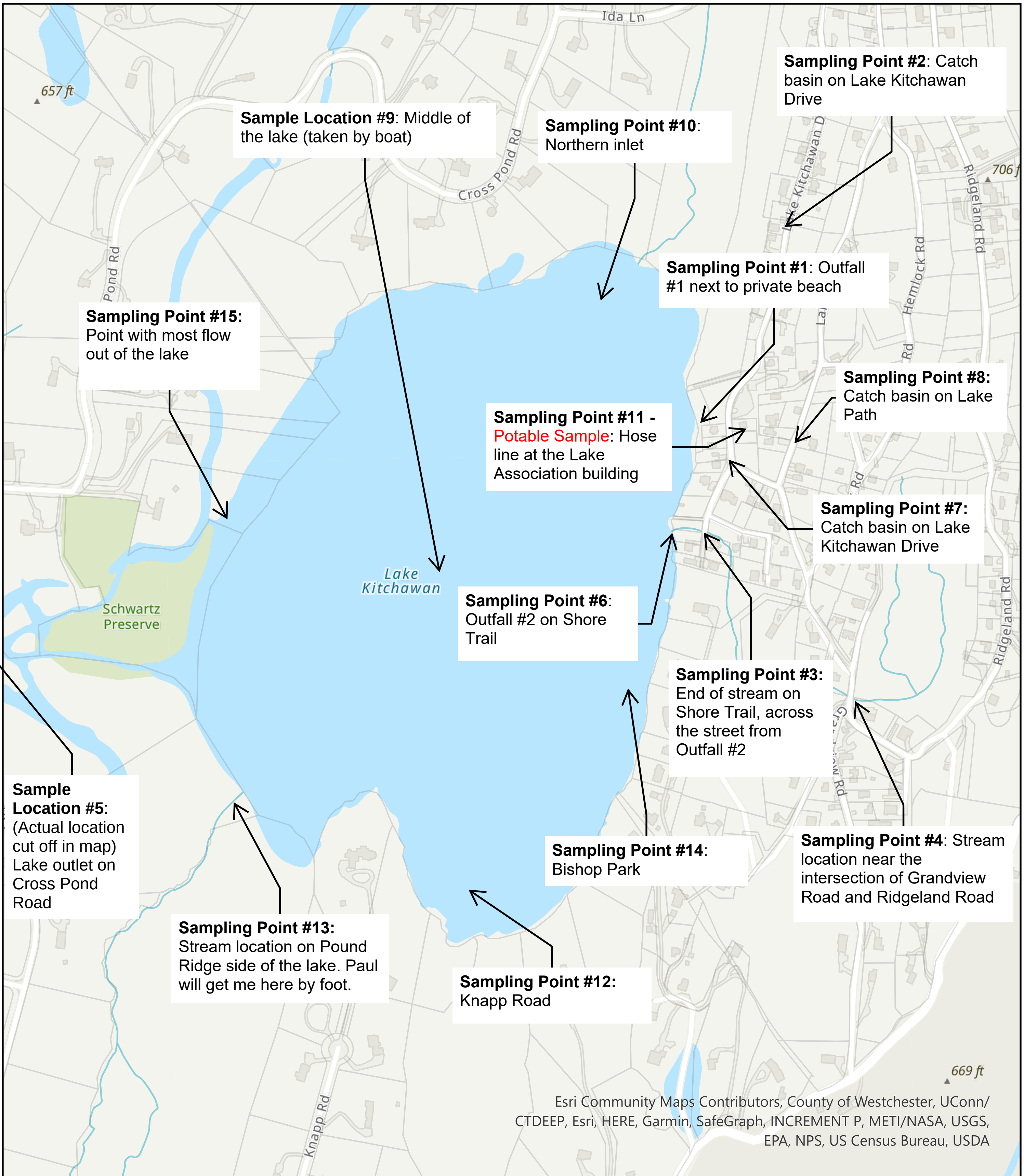
Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS

Lake Kitchawan Sample Results
July 8, 2021



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Sampling Plan

Legend

Lake Kitchawan Study Parcels

0 125 250 500 US Feet

N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: May 2021

Figure Exported: 5/28/2021 By: enealon Using: \\wc\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lewisboro Parcel Figure.aprx

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

July 29, 2021

Emily Nealon
Woodard & Curran Inc.
800 Westchester Avenue
Port Chester, NY 10573

RE: Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Dear Emily Nealon:

Enclosed are the analytical results for sample(s) received by the laboratory on July 08, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville
- Pace Analytical Services - Ormond Beach

Samples 5-8 were received after the rest of the samples. The were received out of hold and out of temperature.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Nicolette Lovari

Nicolette M. Lovari
nicolette.lovari@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Nicolette Lovari, Pace Analytical Melville

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

CERTIFICATIONS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Pace Analytical Services Ormond Beach

8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
Arizona Certification# AZ0819
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Ohio DEP 87780
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747
Connecticut Certification #: PH-0435
Delaware Certification # NY 10478
Maryland Certification #: 208
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987
New Jersey Certification #: NY158
New York Certification #: 10478 Primary Accrediting Body
Pennsylvania Certification #: 68-00350
Rhode Island Certification #: LAO00340
Virginia Certification # 460302

Pace Analytical Services, LLC
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SAMPLE SUMMARY

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Lab ID	Sample ID	Matrix	Date Collected	Date Received
70179703001	**1**	Water	07/08/21 12:20	07/08/21 15:15
70179703002	**2**	Water	07/08/21 12:00	07/08/21 15:15
70179703003	**3**	Water	07/08/21 11:10	07/08/21 15:15
70179703004	**4**	Water	07/08/21 10:40	07/08/21 15:15
70179703005	**5**	Water	07/08/21 12:50	07/08/21 15:15
70179703006	**6**	Water	07/08/21 10:50	07/08/21 15:15
70179703007	**7**	Water	07/08/21 11:30	07/08/21 15:15
70179703008	**8**	Water	07/08/21 10:15	07/08/21 15:15
70179703009	**9**	Water	07/08/21 09:10	07/08/21 15:15
70179703010	**10**	Water	07/08/21 09:18	07/08/21 15:15
70179703011	**11**	Drinking Water	07/08/21 09:18	07/08/21 15:15
70179703012	**12**	Water	07/08/21 08:50	07/08/21 15:15
70179703013	**13**	Water	07/08/21 08:15	07/08/21 15:15
70179703014	**14**	Water	07/08/21 08:40	07/08/21 15:15
70179703015	**15**	Water	07/08/21 09:00	07/08/21 15:15

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SAMPLE ANALYTE COUNT

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
70179703001	**1**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM10200	EM2	1	PASI-O
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70179703002	**2**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM10200	EM2	1	PASI-O
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70179703003	**3**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV

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SAMPLE ANALYTE COUNT

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM10200	EM2	1	PASI-O
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70179703004	**4**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM10200	EM2	1	PASI-O
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70179703005	**5**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	DJM	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM10200	EM2	1	PASI-O
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70179703006	**6**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV

REPORT OF LABORATORY ANALYSIS

Pace Analytical www.pacelabs.com

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SAMPLE ANALYTE COUNT

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM10200	EM2	1	PASI-O
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70179703007	**7**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM10200	EM2	1	PASI-O
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70179703008	**8**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM10200	EM2	1	PASI-O
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV

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SAMPLE ANALYTE COUNT

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM22 4500 NH3 H	BNK	1	PACE-MV
70179703009	**9**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM10200	EM2	1	PASI-O
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70179703010	**10**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM10200	EM2	1	PASI-O
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70179703011	**11**	EPA 200.7	CAM	1	PACE-MV
		SM22 9223B Colilert	GFD	2	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM22 4500-N	AKS	1	PACE-MV

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SAMPLE ANALYTE COUNT

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	AKS	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70179703012	**12**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM10200	EM2	1	PASI-O
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70179703013	**13**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM10200	EM2	1	PASI-O
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70179703014	**14**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV

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SAMPLE ANALYTE COUNT

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM10200	EM2	1	PASI-O
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70179703015	**15**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	DJM	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 5540C	DJM	2	PACE-MV
		SM10200	EM2	1	PASI-O
		SM22 4500-N	AKS	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	PGL	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV

PACE-MV = Pace Analytical Services - Melville
PASI-O = Pace Analytical Services - Ormond Beach

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SUMMARY OF DETECTION

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
70179703001	**1**					
SM22 9221B/E	Fecal Coliforms, MPN	2,400	MPN/100mL	1.8	07/08/21 15:55	
SM22 9221B/E	Total Coliforms, MPN	9,200	MPN/100mL	1.8	07/08/21 15:55	
SM 9223B-2004	E.coli	770.1	MPN/100mL	1.0	07/09/21 15:44	
EPA 180.1	Turbidity	2.3	NTU	1.0	07/08/21 21:18	
SM22 2540B	Total Solids	434	mg/L	10.0	07/12/21 19:27	
SM22 2540D	Total Suspended Solids	2.0	mg/L	2.0	07/14/21 17:07	
SM22 4500-P E	Phosphorus	0.14	mg/L	0.050	07/12/21 18:08	
SM22 4500-P E	Orthophosphate as P	0.064	mg/L	0.050	07/09/21 22:41	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	3.6	mg/L	0.10	07/16/21 15:50	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.72	mg/L	0.10	07/14/21 16:09	M1
EPA 353.2	Nitrate-Nitrite (as N)	2.9	mg/L	0.25	07/13/21 00:00	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.083J	mg/L	0.10	07/18/21 11:53	
70179703002	**2**					
SM22 9221B/E	Fecal Coliforms, MPN	>16,000	MPN/100mL	1.8	07/08/21 15:55	
SM22 9221B/E	Total Coliforms, MPN	>16,000	MPN/100mL	1.8	07/08/21 15:55	
SM 9223B-2004	E.coli	>2419.6	MPN/100mL	1.0	07/09/21 15:44	
EPA 180.1	Turbidity	8.5	NTU	1.0	07/08/21 21:18	
SM22 2540B	Total Solids	287	mg/L	10.0	07/12/21 19:28	
SM22 2540D	Total Suspended Solids	30.0	mg/L	10.0	07/14/21 17:23	
SM22 4500-P E	Phosphorus	0.60	mg/L	0.050	07/12/21 18:09	
SM22 4500-P E	Orthophosphate as P	0.30	mg/L	0.050	07/09/21 22:41	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	4.9	mg/L	0.10	07/16/21 15:50	
EPA 351.2	Nitrogen, Kjeldahl, Total	4.9	mg/L	0.50	07/14/21 16:12	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.78	mg/L	0.10	07/18/21 11:54	
70179703003	**3**					
SM22 9221B/E	Fecal Coliforms, MPN	1,700	MPN/100mL	1.8	07/08/21 15:55	
SM22 9221B/E	Total Coliforms, MPN	5,400	MPN/100mL	1.8	07/08/21 15:55	
SM 9223B-2004	E.coli	1553.1	MPN/100mL	1.0	07/09/21 15:44	
EPA 180.1	Turbidity	3.4	NTU	1.0	07/08/21 21:16	
SM22 2540B	Total Solids	438	mg/L	10.0	07/12/21 19:28	
SM22 2540D	Total Suspended Solids	3.2	mg/L	2.0	07/14/21 17:23	
SM22 4500-P E	Phosphorus	0.16	mg/L	0.050	07/12/21 18:09	
SM22 4500-P E	Orthophosphate as P	0.12	mg/L	0.050	07/09/21 13:08	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	2.8	mg/L	0.10	07/16/21 15:50	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.90	mg/L	0.10	07/14/21 16:13	
EPA 353.2	Nitrate-Nitrite (as N)	1.9	mg/L	0.25	07/13/21 00:05	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.17	mg/L	0.10	07/18/21 11:56	
70179703004	**4**					
SM22 9221B/E	Fecal Coliforms, MPN	230	MPN/100mL	1.8	07/08/21 15:55	
SM22 9221B/E	Total Coliforms, MPN	330	MPN/100mL	1.8	07/08/21 15:55	
SM 9223B-2004	E.coli	98.5	MPN/100mL	1.0	07/09/21 15:44	
EPA 180.1	Turbidity	2.3	NTU	1.0	07/08/21 21:15	
SM22 2540B	Total Solids	450	mg/L	10.0	07/12/21 19:30	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
70179703004	**4**					
SM22 2540D	Total Suspended Solids	2.8	mg/L	2.0	07/14/21 17:23	
SM22 4500-P E	Phosphorus	0.098	mg/L	0.050	07/12/21 18:10	
SM22 4500-P E	Orthophosphate as P	0.065	mg/L	0.050	07/27/21 20:44	F6,FS,H1
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	2.6	mg/L	0.10	07/16/21 15:50	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.53	mg/L	0.10	07/14/21 16:14	
EPA 353.2	Nitrate-Nitrite (as N)	2.1	mg/L	0.25	07/13/21 00:06	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.12	mg/L	0.10	07/18/21 11:57	
70179703005	**5**					
SM22 9221B/E	Fecal Coliforms, MPN	45	MPN/100mL	1.8	07/08/21 15:55	
SM22 9221B/E	Total Coliforms, MPN	310	MPN/100mL	1.8	07/08/21 15:55	
SM 9223B-2004	E.coli	43.5	MPN/100mL	1.0	07/09/21 15:44	
EPA 180.1	Turbidity	1.3	NTU	1.0	07/08/21 21:19	
SM22 2540B	Total Solids	203	mg/L	10.0	07/12/21 19:30	
SM22 2540D	Total Suspended Solids	3.2	mg/L	2.0	07/14/21 17:23	
SM22 4500-P E	Phosphorus	0.037J	mg/L	0.050	07/12/21 18:10	
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	0.84	mg/L	0.10	07/16/21 15:50	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.80	mg/L	0.10	07/14/21 16:15	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.070J	mg/L	0.10	07/18/21 12:00	
70179703006	**6**					
SM22 9221B/E	Fecal Coliforms, MPN	2,400	MPN/100mL	1.8	07/08/21 15:55	
SM22 9221B/E	Total Coliforms, MPN	9,200	MPN/100mL	1.8	07/08/21 15:55	
SM 9223B-2004	E.coli	>2419.6	MPN/100mL	1.0	07/09/21 15:44	
EPA 180.1	Turbidity	0.95J	NTU	1.0	07/08/21 21:16	
SM22 2540B	Total Solids	457	mg/L	10.0	07/14/21 18:03	
SM22 2540D	Total Suspended Solids	2.0	mg/L	2.0	07/14/21 17:24	
SM22 4500-P E	Phosphorus	0.083	mg/L	0.050	07/12/21 18:11	
SM22 4500-P E	Orthophosphate as P	0.28	mg/L	0.050	07/09/21 13:07	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	2.9	mg/L	0.10	07/16/21 15:50	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.75	mg/L	0.10	07/14/21 16:15	
EPA 353.2	Nitrate-Nitrite (as N)	2.1	mg/L	0.25	07/13/21 00:08	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.18	mg/L	0.10	07/18/21 12:02	
70179703007	**7**					
SM22 9221B/E	Fecal Coliforms, MPN	2,400	MPN/100mL	1.8	07/08/21 15:55	
SM22 9221B/E	Total Coliforms, MPN	16,000	MPN/100mL	1.8	07/08/21 15:55	
SM 9223B-2004	E.coli	>2419.6	MPN/100mL	1.0	07/09/21 15:44	
EPA 180.1	Turbidity	2.5	NTU	1.0	07/08/21 21:17	
SM22 2540B	Total Solids	465	mg/L	10.0	07/14/21 18:04	
SM22 2540D	Total Suspended Solids	2.4	mg/L	2.0	07/14/21 17:25	
SM22 4500-P E	Phosphorus	0.21	mg/L	0.050	07/12/21 18:11	
SM22 4500-P E	Orthophosphate as P	0.088	mg/L	0.050	07/09/21 13:08	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	4.2	mg/L	0.10	07/16/21 15:53	
EPA 351.2	Nitrogen, Kjeldahl, Total	1.1	mg/L	0.10	07/14/21 16:16	

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SUMMARY OF DETECTION

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
70179703007	**7**					
EPA 353.2	Nitrate-Nitrite (as N)	3.1	mg/L	0.25	07/13/21 00:10	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.32	mg/L	0.10	07/18/21 12:03	
70179703008	**8**					
SM22 9221B/E	Fecal Coliforms, MPN	790	MPN/100mL	1.8	07/08/21 15:55	
SM22 9221B/E	Total Coliforms, MPN	9,200	MPN/100mL	1.8	07/08/21 15:55	
SM 9223B-2004	E.coli	478.6	MPN/100mL	1.0	07/09/21 15:44	
EPA 180.1	Turbidity	5.3	NTU	1.0	07/08/21 21:14	
SM22 2540B	Total Solids	337	mg/L	10.0	07/14/21 18:06	
SM22 2540D	Total Suspended Solids	4.8	mg/L	2.0	07/15/21 12:10	
SM22 4500-P E	Phosphorus	0.077	mg/L	0.050	07/12/21 18:11	
SM22 4500-P E	Orthophosphate as P	0.14	mg/L	0.050	07/09/21 13:04	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	3.6	mg/L	0.10	07/16/21 15:53	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.60	mg/L	0.10	07/14/21 16:17	
EPA 353.2	Nitrate-Nitrite (as N)	3.0	mg/L	0.25	07/13/21 00:11	
70179703009	**9**					
SM22 9221B/E	Fecal Coliforms, MPN	1.8	MPN/100mL	1.8	07/08/21 15:55	
SM22 9221B/E	Total Coliforms, MPN	12	MPN/100mL	1.8	07/08/21 15:55	
SM 9223B-2004	E.coli	5.2	MPN/100mL	1.0	07/09/21 15:44	
EPA 180.1	Turbidity	1.4	NTU	1.0	07/08/21 21:12	
SM22 2540B	Total Solids	229	mg/L	10.0	07/14/21 18:07	
SM22 2540D	Total Suspended Solids	1.2J	mg/L	2.0	07/15/21 12:10	
SM22 4500-P E	Phosphorus	0.034J	mg/L	0.050	07/12/21 18:12	
SM22 4500-P E	Orthophosphate as P	0.13	mg/L	0.050	07/09/21 13:00	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	0.90	mg/L	0.10	07/16/21 15:53	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.88	mg/L	0.10	07/14/21 16:20	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.058J	mg/L	0.10	07/18/21 12:08	
70179703010	**10**					
SM22 9221B/E	Fecal Coliforms, MPN	13	MPN/100mL	1.8	07/08/21 15:55	
SM22 9221B/E	Total Coliforms, MPN	49	MPN/100mL	1.8	07/08/21 15:55	
SM 9223B-2004	E.coli	3.1	MPN/100mL	1.0	07/09/21 15:44	
EPA 180.1	Turbidity	1.9	NTU	1.0	07/08/21 21:13	
SM22 2540B	Total Solids	278	mg/L	10.0	07/15/21 17:36	
SM22 2540D	Total Suspended Solids	2.0	mg/L	2.0	07/15/21 12:29	
SM22 4500-P E	Phosphorus	0.080	mg/L	0.050	07/12/21 18:13	
SM22 4500-P E	Orthophosphate as P	0.094	mg/L	0.050	07/09/21 13:01	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	1.1	mg/L	0.10	07/16/21 15:53	
EPA 351.2	Nitrogen, Kjeldahl, Total	1.1	mg/L	0.10	07/14/21 16:21	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.063J	mg/L	0.10	07/18/21 12:09	
70179703011	**11**					
SM22 9223B Colilert	Total Coliforms	Present			07/09/21 12:00	
SM22 9223B Colilert	E.coli	Present			07/09/21 12:00	
EPA 180.1	Turbidity	0.85J	NTU	1.0	07/08/21 21:13	

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SUMMARY OF DETECTION

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
70179703011	**11**					
SM22 2540B	Total Solids	492	mg/L	10.0	07/14/21 17:39	N3
SM22 4500-P E	Orthophosphate as P	0.064	mg/L	0.050	07/09/21 13:04	
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	3.3	mg/L	0.10	07/16/21 15:53	
EPA 353.2	Nitrate-Nitrite (as N)	3.3	mg/L	0.25	07/09/21 02:52	
70179703012	**12**					
SM22 9221B/E	Fecal Coliforms, MPN	6.8	MPN/100mL	1.8	07/08/21 15:55	
SM22 9221B/E	Total Coliforms, MPN	49	MPN/100mL	1.8	07/08/21 15:55	
SM 9223B-2004	E.coli	29.2	MPN/100mL	1.0	07/09/21 15:44	
EPA 180.1	Turbidity	1.1	NTU	1.0	07/08/21 21:11	
SM22 2540B	Total Solids	242	mg/L	10.0	07/15/21 17:37	
SM22 4500-P E	Phosphorus	0.037J	mg/L	0.050	07/12/21 18:13	
SM22 4500-P E	Orthophosphate as P	0.070	mg/L	0.050	07/09/21 12:55	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:47	
SM22 4500-N	Total Nitrogen	2.1	mg/L	0.10	07/16/21 15:53	
EPA 351.2	Nitrogen, Kjeldahl, Total	2.1	mg/L	0.10	07/14/21 16:21	
70179703013	**13**					
SM22 9221B/E	Fecal Coliforms, MPN	230	MPN/100mL	1.8	07/08/21 15:55	
SM22 9221B/E	Total Coliforms, MPN	2,400	MPN/100mL	1.8	07/08/21 15:55	
SM 9223B-2004	E.coli	165.0	MPN/100mL	1.0	07/09/21 15:44	
EPA 180.1	Turbidity	1.3	NTU	1.0	07/08/21 21:09	
SM22 2540B	Total Solids	409	mg/L	10.0	07/15/21 17:38	
SM22 2540D	Total Suspended Solids	6.0J	mg/L	10.0	07/15/21 12:30	
SM22 4500-P E	Phosphorus	0.083	mg/L	0.050	07/12/21 18:14	
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:47	
SM22 4500-N	Total Nitrogen	1.1	mg/L	0.10	07/16/21 15:53	
EPA 351.2	Nitrogen, Kjeldahl, Total	1.1	mg/L	0.10	07/14/21 16:22	
70179703014	**14**					
SM22 9221B/E	Fecal Coliforms, MPN	7.8	MPN/100mL	1.8	07/08/21 15:55	
SM22 9221B/E	Total Coliforms, MPN	23	MPN/100mL	1.8	07/08/21 15:55	
SM 9223B-2004	E.coli	27.8	MPN/100mL	1.0	07/09/21 15:44	
EPA 180.1	Turbidity	2.1	NTU	1.0	07/08/21 21:10	
SM22 2540B	Total Solids	263	mg/L	10.0	07/15/21 17:38	
SM22 2540D	Total Suspended Solids	2.0	mg/L	2.0	07/15/21 12:30	
SM22 4500-P E	Phosphorus	0.067	mg/L	0.050	07/12/21 18:14	
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:47	
SM22 4500-N	Total Nitrogen	1.4	mg/L	0.10	07/16/21 15:53	
EPA 351.2	Nitrogen, Kjeldahl, Total	1.4	mg/L	0.10	07/14/21 16:23	
70179703015	**15**					
SM22 9221B/E	Fecal Coliforms, MPN	4.5	MPN/100mL	1.8	07/08/21 15:55	
SM22 9221B/E	Total Coliforms, MPN	33	MPN/100mL	1.8	07/08/21 15:55	
SM 9223B-2004	E.coli	23.5	MPN/100mL	1.0	07/09/21 15:44	
EPA 180.1	Turbidity	1.1	NTU	1.0	07/08/21 21:11	
SM22 2540B	Total Solids	245	mg/L	10.0	07/15/21 17:39	
SM22 2540D	Total Suspended Solids	1.6J	mg/L	2.0	07/15/21 12:30	

REPORT OF LABORATORY ANALYSIS

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(631)694-3040

SUMMARY OF DETECTION

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
70179703015	**15**					
SM22 4500-P E	Phosphorus	0.052	mg/L	0.050	07/12/21 18:15	
SM22 4500-P E	Orthophosphate as P	0.097	mg/L	0.050	07/09/21 12:57	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	0.80	mg/L	0.10	07/16/21 15:53	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.80	mg/L	0.10	07/14/21 16:24	

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PROJECT NARRATIVE

Project:	LAKE STUDY 7/8
Pace Project No.:	70179703

Method: **EPA 200.7**
Description: 200.7 MET ICP, Drinking Water
Client: Woodard & Curran Inc.
Date: July 29, 2021

General Information:
1 sample was analyzed for EPA 200.7 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Method: **SM22 9221B/E**
Description: Fecal-Total Coliform, MPN
Client: Woodard & Curran Inc.
Date: July 29, 2021

General Information:
14 samples were analyzed for SM22 9221B/E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Method: **SM 9223B-2004**
Description: SM 9223B-2004
Client: Woodard & Curran Inc.
Date: July 29, 2021

General Information:
14 samples were analyzed for SM 9223B-2004 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM 9223B-2004 with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Method: **SM22 9223B Colilert**
Description: MBIO Total Coliform DW
Client: Woodard & Curran Inc.
Date: July 29, 2021

General Information:
1 sample was analyzed for SM22 9223B Colilert by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM22 9223B Colilert with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Method: **EPA 1666A**
Description: 1666 MSV
Client: Woodard & Curran Inc.
Date: July 29, 2021

General Information:
14 samples were analyzed for EPA 1666A by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Method: **EPA 180.1**
Description: 180.1 Turbidity
Client: Woodard & Curran Inc.
Date: July 29, 2021

General Information:
15 samples were analyzed for EPA 180.1 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Method: **SM22 2540B**
Description: 2540B Total Solids DW
Client: Woodard & Curran Inc.
Date: July 29, 2021

General Information:
1 sample was analyzed for SM22 2540B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Method: **SM22 2540B**
Description: 2540B Total Solids
Client: Woodard & Curran Inc.
Date: July 29, 2021

General Information:
14 samples were analyzed for SM22 2540B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Method: **SM22 2540D**
Description: 2540D Total Suspended Solids
Client: Woodard & Curran Inc.
Date: July 29, 2021

General Information:
15 samples were analyzed for SM22 2540D by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Method: **SM22 4500-P E**
Description: 4500PE Total Phosphorus
Client: Woodard & Curran Inc.
Date: July 29, 2021

General Information:
14 samples were analyzed for SM22 4500-P E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM22 4500-P B with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Method: **SM22 4500-P E**
Description: 4500PE Ortho Phosphorus
Client: Woodard & Curran Inc.
Date: July 29, 2021

General Information:
15 samples were analyzed for SM22 4500-P E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H1: Analysis conducted outside the EPA method holding time.
- 4 (Lab ID: 70179703004)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 217042

E: Analyte concentration exceeded the calibration range. The reported result is estimated.
- MS (Lab ID: 1093676)
  - Orthophosphate as P

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PROJECT NARRATIVE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Method: **SM22 5540C**
Description: 5540C MBAS Surfactants
Client: Woodard & Curran Inc.
Date: July 29, 2021

General Information:
15 samples were analyzed for SM22 5540C by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM22 5540C with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project:	LAKE STUDY 7/8
Pace Project No.:	70179703

Method: **SM10200**
Description: Chlorophyll & Pheophytin
Client: Woodard & Curran Inc.
Date: July 29, 2021

General Information:
14 samples were analyzed for SM10200 by Pace Analytical Services Ormond Beach. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H3: Sample was received or analysis requested beyond the recognized method holding time.
- 5 (Lab ID: 70179703005)
- 6 (Lab ID: 70179703006)
- 7 (Lab ID: 70179703007)
- 8 (Lab ID: 70179703008)

Sample Preparation:
The samples were prepared in accordance with SM10200 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Method: **SM22 4500-N**
Description: Total Nitrogen Calculation
Client: Woodard & Curran Inc.
Date: July 29, 2021

General Information:
15 samples were analyzed for SM22 4500-N by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Method: **EPA 351.2**
Description: 351.2 Total Kjeldahl Nitrogen
Client: Woodard & Curran Inc.
Date: July 29, 2021

General Information:
15 samples were analyzed for EPA 351.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 351.2 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 217356

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70179703001,70179751002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1095526)
  - Nitrogen, Kjeldahl, Total
- MS (Lab ID: 1095528)
  - Nitrogen, Kjeldahl, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project:	LAKE STUDY 7/8
Pace Project No.:	70179703

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Woodard & Curran Inc.
Date: July 29, 2021

General Information:
1 sample was analyzed for EPA 353.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 pres.
Client: Woodard & Curran Inc.
Date: July 29, 2021

General Information:
14 samples were analyzed for EPA 353.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 216985

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70179695001,70179703001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1093515)
  - Nitrate-Nitrite (as N)

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Method: **SM22 4500 NH3 H**
Description: 4500 Ammonia Water
Client: Woodard & Curran Inc.
Date: July 29, 2021

General Information:
15 samples were analyzed for SM22 4500 NH3 H by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 1 **Lab ID: 70179703001** Collected: 07/08/21 12:20 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**2,400**	MPN/100mL	1.8		1		07/08/21 15:55		
Total Coliforms, MPN	**9,200**	MPN/100mL	1.8		1		07/08/21 15:55		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**770.1**	MPN/100mL	1.0		1	07/08/21 15:44	07/09/21 15:44		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/13/21 19:02	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/13/21 19:02	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/13/21 19:02	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	109	%	78-114		5		07/13/21 19:02	17060-07-0	
4-Bromofluorobenzene (S)	97	%	83-111		5		07/13/21 19:02	460-00-4	
Toluene-d8 (S)	109	%	80-131		5		07/13/21 19:02	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**2.3**	NTU	1.0	0.32	1		07/08/21 21:18		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**434**	mg/L	10.0	9.0	1		07/12/21 19:27		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**2.0**	mg/L	2.0	0.96	1		07/14/21 17:07		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.14**	mg/L	0.050	0.010	1	07/12/21 15:04	07/12/21 18:08	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.064**	mg/L	0.050	0.010	1		07/09/21 22:41		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 1 **Lab ID: 70179703001** Collected: 07/08/21 12:20 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<5.0**	mg/m3	5.0	1.0	1	07/10/21 07:06	07/14/21 15:03		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**3.6**	mg/L	0.10		1		07/16/21 15:50		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.72**	mg/L	0.10	0.094	1	07/13/21 06:49	07/14/21 16:09	7727-37-9	M1
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**2.9**	mg/L	0.25	0.18	5		07/13/21 00:00	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.083J**	mg/L	0.10	0.053	1		07/18/21 11:53	7664-41-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8

Pace Project No.: 70179703

Sample: 2 **Lab ID: 70179703002** Collected: 07/08/21 12:00 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**>16,000**	MPN/100mL	1.8		1		07/08/21 15:55		
Total Coliforms, MPN	**>16,000**	MPN/100mL	1.8		1		07/08/21 15:55		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**>2419.6**	MPN/100mL	1.0		1	07/08/21 15:44	07/09/21 15:44		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/13/21 19:24	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/13/21 19:24	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/13/21 19:24	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	111	%	78-114		5		07/13/21 19:24	17060-07-0	
4-Bromofluorobenzene (S)	100	%	83-111		5		07/13/21 19:24	460-00-4	
Toluene-d8 (S)	108	%	80-131		5		07/13/21 19:24	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**8.5**	NTU	1.0	0.32	1		07/08/21 21:18		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**287**	mg/L	10.0	9.0	1		07/12/21 19:28		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**30.0**	mg/L	10.0	4.8	1		07/14/21 17:23		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.60**	mg/L	0.050	0.010	1	07/12/21 15:04	07/12/21 18:09	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.30**	mg/L	0.050	0.010	1		07/09/21 22:41		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 2 **Lab ID: 70179703002** Collected: 07/08/21 12:00 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<6.7**	mg/m3	6.7	1.3	1	07/10/21 07:06	07/14/21 15:05		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**4.9**	mg/L	0.10		1		07/16/21 15:50		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**4.9**	mg/L	0.50	0.47	1	07/13/21 06:49	07/14/21 16:12	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	0.037	1		07/13/21 00:22	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.78**	mg/L	0.10	0.053	1		07/18/21 11:54	7664-41-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 3 **Lab ID: 70179703003** Collected: 07/08/21 11:10 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**1,700**	MPN/100mL	1.8		1		07/08/21 15:55		
Total Coliforms, MPN	**5,400**	MPN/100mL	1.8		1		07/08/21 15:55		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**1553.1**	MPN/100mL	1.0		1	07/08/21 15:44	07/09/21 15:44		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/13/21 19:46	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/13/21 19:46	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/13/21 19:46	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	110	%	78-114		5		07/13/21 19:46	17060-07-0	
4-Bromofluorobenzene (S)	100	%	83-111		5		07/13/21 19:46	460-00-4	
Toluene-d8 (S)	115	%	80-131		5		07/13/21 19:46	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**3.4**	NTU	1.0	0.32	1		07/08/21 21:16		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**438**	mg/L	10.0	9.0	1		07/12/21 19:28		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**3.2**	mg/L	2.0	0.96	1		07/14/21 17:23		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.16**	mg/L	0.050	0.010	1	07/12/21 15:04	07/12/21 18:09	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.12**	mg/L	0.050	0.010	1		07/09/21 13:08		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 3 **Lab ID: 70179703003** Collected: 07/08/21 11:10 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<5.0**	mg/m3	5.0	1.0	1	07/10/21 07:34	07/14/21 15:08		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**2.8**	mg/L	0.10		1		07/16/21 15:50		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.90**	mg/L	0.10	0.094	1	07/13/21 06:49	07/14/21 16:13	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**1.9**	mg/L	0.25	0.18	5		07/13/21 00:05	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.17**	mg/L	0.10	0.053	1		07/18/21 11:56	7664-41-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 4 **Lab ID: 70179703004** Collected: 07/08/21 10:40 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**230**	MPN/100mL	1.8		1		07/08/21 15:55		
Total Coliforms, MPN	**330**	MPN/100mL	1.8		1		07/08/21 15:55		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**98.5**	MPN/100mL	1.0		1	07/08/21 15:44	07/09/21 15:44		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/13/21 20:07	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/13/21 20:07	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/13/21 20:07	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	110	%	78-114		5		07/13/21 20:07	17060-07-0	
4-Bromofluorobenzene (S)	96	%	83-111		5		07/13/21 20:07	460-00-4	
Toluene-d8 (S)	114	%	80-131		5		07/13/21 20:07	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**2.3**	NTU	1.0	0.32	1		07/08/21 21:15		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**450**	mg/L	10.0	9.0	1		07/12/21 19:30		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**2.8**	mg/L	2.0	0.96	1		07/14/21 17:23		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.098**	mg/L	0.050	0.010	1	07/12/21 15:04	07/12/21 18:10	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.065**	mg/L	0.050	0.010	1		07/27/21 20:44		F6,FS, H1
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 4 **Lab ID: 70179703004** Collected: 07/08/21 10:40 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<5.0**	mg/m3	5.0	1.0	1	07/10/21 07:34	07/14/21 15:11		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**2.6**	mg/L	0.10		1		07/16/21 15:50		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.53**	mg/L	0.10	0.094	1	07/13/21 06:49	07/14/21 16:14	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**2.1**	mg/L	0.25	0.18	5		07/13/21 00:06	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.12**	mg/L	0.10	0.053	1		07/18/21 11:57	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 5 **Lab ID: 70179703005** Collected: 07/08/21 12:50 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E								
	Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**45**	MPN/100mL	1.8		1		07/08/21 15:55		
Total Coliforms, MPN	**310**	MPN/100mL	1.8		1		07/08/21 15:55		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004								
	Pace Analytical Services - Melville								
E.coli	**43.5**	MPN/100mL	1.0		1	07/08/21 15:44	07/09/21 15:44		
1666 MSV	Analytical Method: EPA 1666A								
	Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/13/21 20:29	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/13/21 20:29	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/13/21 20:29	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	107	%	78-114		5		07/13/21 20:29	17060-07-0	
4-Bromofluorobenzene (S)	95	%	83-111		5		07/13/21 20:29	460-00-4	
Toluene-d8 (S)	111	%	80-131		5		07/13/21 20:29	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1								
	Pace Analytical Services - Melville								
Turbidity	**1.3**	NTU	1.0	0.32	1		07/08/21 21:19		
2540B Total Solids	Analytical Method: SM22 2540B								
	Pace Analytical Services - Melville								
Total Solids	**203**	mg/L	10.0	9.0	1		07/12/21 19:30		
2540D Total Suspended Solids	Analytical Method: SM22 2540D								
	Pace Analytical Services - Melville								
Total Suspended Solids	**3.2**	mg/L	2.0	0.96	1		07/14/21 17:23		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B								
	Pace Analytical Services - Melville								
Phosphorus	**0.037J**	mg/L	0.050	0.010	1	07/12/21 15:04	07/12/21 18:10	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E								
	Pace Analytical Services - Melville								
Orthophosphate as P	**<0.050**	mg/L	0.050	0.010	1		07/09/21 22:42		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C								
	Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 5 **Lab ID: 70179703005** Collected: 07/08/21 12:50 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<5.0**	mg/m3	5.0	1.0	1	07/15/21 10:58	07/21/21 14:34		H3
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**0.84**	mg/L	0.10		1		07/16/21 15:50		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.80**	mg/L	0.10	0.094	1	07/13/21 06:49	07/14/21 16:15	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	0.037	1		07/13/21 00:23	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.070J**	mg/L	0.10	0.053	1		07/18/21 12:00	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 6 **Lab ID: 70179703006** Collected: 07/08/21 10:50 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**2,400**	MPN/100mL	1.8		1		07/08/21 15:55		
Total Coliforms, MPN	**9,200**	MPN/100mL	1.8		1		07/08/21 15:55		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**>2419.6**	MPN/100mL	1.0		1	07/08/21 15:44	07/09/21 15:44		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/13/21 20:51	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/13/21 20:51	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/13/21 20:51	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	78-114		5		07/13/21 20:51	17060-07-0	
4-Bromofluorobenzene (S)	98	%	83-111		5		07/13/21 20:51	460-00-4	
Toluene-d8 (S)	110	%	80-131		5		07/13/21 20:51	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**0.95J**	NTU	1.0	0.32	1		07/08/21 21:16		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**457**	mg/L	10.0	9.0	1		07/14/21 18:03		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**2.0**	mg/L	2.0	0.96	1		07/14/21 17:24		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.083**	mg/L	0.050	0.010	1	07/12/21 15:04	07/12/21 18:11	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.28**	mg/L	0.050	0.010	1		07/09/21 13:07		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 6 **Lab ID: 70179703006** Collected: 07/08/21 10:50 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<5.0**	mg/m3	5.0	1.0	1	07/15/21 10:58	07/21/21 14:39		H3
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**2.9**	mg/L	0.10		1		07/16/21 15:50		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.75**	mg/L	0.10	0.094	1	07/13/21 06:49	07/14/21 16:15	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**2.1**	mg/L	0.25	0.18	5		07/13/21 00:08	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.18**	mg/L	0.10	0.053	1		07/18/21 12:02	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 7 **Lab ID: 70179703007** Collected: 07/08/21 11:30 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E								
	Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**2,400**	MPN/100mL	1.8		1		07/08/21 15:55		
Total Coliforms, MPN	**16,000**	MPN/100mL	1.8		1		07/08/21 15:55		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004								
	Pace Analytical Services - Melville								
E.coli	**>2419.6**	MPN/100mL	1.0		1	07/08/21 15:44	07/09/21 15:44		
1666 MSV	Analytical Method: EPA 1666A								
	Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/13/21 21:12	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/13/21 21:12	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/13/21 21:12	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	110	%	78-114		5		07/13/21 21:12	17060-07-0	
4-Bromofluorobenzene (S)	100	%	83-111		5		07/13/21 21:12	460-00-4	
Toluene-d8 (S)	113	%	80-131		5		07/13/21 21:12	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1								
	Pace Analytical Services - Melville								
Turbidity	**2.5**	NTU	1.0	0.32	1		07/08/21 21:17		
2540B Total Solids	Analytical Method: SM22 2540B								
	Pace Analytical Services - Melville								
Total Solids	**465**	mg/L	10.0	9.0	1		07/14/21 18:04		
2540D Total Suspended Solids	Analytical Method: SM22 2540D								
	Pace Analytical Services - Melville								
Total Suspended Solids	**2.4**	mg/L	2.0	0.96	1		07/14/21 17:25		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B								
	Pace Analytical Services - Melville								
Phosphorus	**0.21**	mg/L	0.050	0.010	1	07/12/21 15:04	07/12/21 18:11	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E								
	Pace Analytical Services - Melville								
Orthophosphate as P	**0.088**	mg/L	0.050	0.010	1		07/09/21 13:08		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C								
	Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 7 **Lab ID: 70179703007** Collected: 07/08/21 11:30 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<5.0**	mg/m3	5.0	1.0	1	07/15/21 10:58	07/21/21 14:49		H3
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**4.2**	mg/L	0.10		1		07/16/21 15:53		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**1.1**	mg/L	0.10	0.094	1	07/13/21 06:49	07/14/21 16:16	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**3.1**	mg/L	0.25	0.18	5		07/13/21 00:10	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.32**	mg/L	0.10	0.053	1		07/18/21 12:03	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 8 **Lab ID: 70179703008** Collected: 07/08/21 10:15 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**790**	MPN/100mL	1.8		1		07/08/21 15:55		
Total Coliforms, MPN	**9,200**	MPN/100mL	1.8		1		07/08/21 15:55		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**478.6**	MPN/100mL	1.0		1	07/08/21 15:44	07/09/21 15:44		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/13/21 21:34	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/13/21 21:34	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/13/21 21:34	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	78-114		5		07/13/21 21:34	17060-07-0	
4-Bromofluorobenzene (S)	98	%	83-111		5		07/13/21 21:34	460-00-4	
Toluene-d8 (S)	114	%	80-131		5		07/13/21 21:34	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**5.3**	NTU	1.0	0.32	1		07/08/21 21:14		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**337**	mg/L	10.0	9.0	1		07/14/21 18:06		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**4.8**	mg/L	2.0	0.96	1		07/15/21 12:10		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.077**	mg/L	0.050	0.010	1	07/12/21 15:04	07/12/21 18:11	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.14**	mg/L	0.050	0.010	1		07/09/21 13:04		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 8 **Lab ID: 70179703008** Collected: 07/08/21 10:15 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<5.0**	mg/m3	5.0	1.0	1	07/15/21 11:21	07/21/21 14:51		H3
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**3.6**	mg/L	0.10		1		07/16/21 15:53		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.60**	mg/L	0.10	0.094	1	07/13/21 06:49	07/14/21 16:17	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**3.0**	mg/L	0.25	0.18	5		07/13/21 00:11	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**<0.10**	mg/L	0.10	0.053	1		07/18/21 12:06	7664-41-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 9 **Lab ID: 70179703009** Collected: 07/08/21 09:10 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**1.8**	MPN/100mL	1.8		1		07/08/21 15:55		
Total Coliforms, MPN	**12**	MPN/100mL	1.8		1		07/08/21 15:55		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**5.2**	MPN/100mL	1.0		1	07/08/21 15:44	07/09/21 15:44		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/13/21 21:56	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/13/21 21:56	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/13/21 21:56	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	78-114		5		07/13/21 21:56	17060-07-0	
4-Bromofluorobenzene (S)	94	%	83-111		5		07/13/21 21:56	460-00-4	
Toluene-d8 (S)	113	%	80-131		5		07/13/21 21:56	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.4**	NTU	1.0	0.32	1		07/08/21 21:12		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**229**	mg/L	10.0	9.0	1		07/14/21 18:07		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**1.2J**	mg/L	2.0	0.96	1		07/15/21 12:10		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.034J**	mg/L	0.050	0.010	1	07/12/21 15:04	07/12/21 18:12	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.13**	mg/L	0.050	0.010	1		07/09/21 13:00		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 9 **Lab ID: 70179703009** Collected: 07/08/21 09:10 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<5.0**	mg/m3	5.0	1.0	1	07/10/21 07:34	07/14/21 15:14		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**0.90**	mg/L	0.10		1		07/16/21 15:53		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.88**	mg/L	0.10	0.094	1	07/13/21 06:49	07/14/21 16:20	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	0.037	1		07/13/21 00:24	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.058J**	mg/L	0.10	0.053	1		07/18/21 12:08	7664-41-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 10 **Lab ID: 70179703010** Collected: 07/08/21 09:18 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**13**	MPN/100mL	1.8		1		07/08/21 15:55		
Total Coliforms, MPN	**49**	MPN/100mL	1.8		1		07/08/21 15:55		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**3.1**	MPN/100mL	1.0		1	07/08/21 15:44	07/09/21 15:44		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/13/21 22:18	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/13/21 22:18	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/13/21 22:18	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	107	%	78-114		5		07/13/21 22:18	17060-07-0	
4-Bromofluorobenzene (S)	97	%	83-111		5		07/13/21 22:18	460-00-4	
Toluene-d8 (S)	113	%	80-131		5		07/13/21 22:18	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.9**	NTU	1.0	0.32	1		07/08/21 21:13		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**278**	mg/L	10.0	9.0	1		07/15/21 17:36		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**2.0**	mg/L	2.0	0.96	1		07/15/21 12:29		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.080**	mg/L	0.050	0.010	1	07/12/21 15:04	07/12/21 18:13	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.094**	mg/L	0.050	0.010	1		07/09/21 13:01		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 10 **Lab ID: 70179703010** Collected: 07/08/21 09:18 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<5.0**	mg/m3	5.0	1.0	1	07/10/21 07:34	07/14/21 15:16		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**1.1**	mg/L	0.10		1		07/16/21 15:53		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**1.1**	mg/L	0.10	0.094	1	07/13/21 06:49	07/14/21 16:21	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	0.037	1		07/13/21 00:25	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.063J**	mg/L	0.10	0.053	1		07/18/21 12:09	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 11 **Lab ID: 70179703011** Collected: 07/08/21 09:18 Received: 07/08/21 15:15 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, Drinking Water	Analytical Method: EPA 200.7 Pace Analytical Services - Melville								
Phosphorus	**<50.0**	ug/L	50.0	18.0	1		07/19/21 13:00	7723-14-0	N3
MBIO Total Coliform DW	Analytical Method: SM22 9223B Colilert Preparation Method: SM22 9223B Colilert Pace Analytical Services - Melville								
Total Coliforms	**Present**				1	07/08/21 18:00	07/09/21 12:00		
E.coli	**Present**				1	07/08/21 18:00	07/09/21 12:00		
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**0.85J**	NTU	1.0	0.32	1		07/08/21 21:13		
2540B Total Solids DW	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**492**	mg/L	10.0	9.0	1		07/14/21 17:39		N3
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**<2.0**	mg/L	2.0	0.96	1		07/15/21 12:29		
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.064**	mg/L	0.050	0.010	1		07/09/21 13:04		
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**3.3**	mg/L	0.10		1		07/16/21 15:53		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**<0.10**	mg/L	0.10	0.094	1	07/15/21 06:32	07/16/21 14:02	7727-37-9	N3
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**3.3**	mg/L	0.25	0.18	5		07/09/21 02:52	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**<0.10**	mg/L	0.10	0.053	1		07/18/21 12:10	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 12 **Lab ID: 70179703012** Collected: 07/08/21 08:50 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**6.8**	MPN/100mL	1.8		1		07/08/21 15:55		
Total Coliforms, MPN	**49**	MPN/100mL	1.8		1		07/08/21 15:55		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**29.2**	MPN/100mL	1.0		1	07/08/21 15:44	07/09/21 15:44		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/13/21 22:39	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/13/21 22:39	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/13/21 22:39	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	78-114		5		07/13/21 22:39	17060-07-0	
4-Bromofluorobenzene (S)	102	%	83-111		5		07/13/21 22:39	460-00-4	
Toluene-d8 (S)	117	%	80-131		5		07/13/21 22:39	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.1**	NTU	1.0	0.32	1		07/08/21 21:11		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**242**	mg/L	10.0	9.0	1		07/15/21 17:37		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**<2.0**	mg/L	2.0	0.96	1		07/15/21 12:29		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.037J**	mg/L	0.050	0.010	1	07/12/21 15:04	07/12/21 18:13	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.070**	mg/L	0.050	0.010	1		07/09/21 12:55		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:47		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:47		

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 12 **Lab ID: 70179703012** Collected: 07/08/21 08:50 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<5.0**	mg/m3	5.0	1.0	1	07/10/21 07:34	07/14/21 15:20		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**2.1**	mg/L	0.10		1		07/16/21 15:53		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**2.1**	mg/L	0.10	0.094	1	07/13/21 06:49	07/14/21 16:21	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	0.037	1		07/13/21 00:29	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**<0.10**	mg/L	0.10	0.053	1		07/18/21 12:11	7664-41-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 13 **Lab ID: 70179703013** Collected: 07/08/21 08:15 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**230**	MPN/100mL	1.8		1		07/08/21 15:55		
Total Coliforms, MPN	**2,400**	MPN/100mL	1.8		1		07/08/21 15:55		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**165.0**	MPN/100mL	1.0		1	07/08/21 15:44	07/09/21 15:44		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/15/21 16:01	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/15/21 16:01	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/15/21 16:01	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	78-114		5		07/15/21 16:01	17060-07-0	
4-Bromofluorobenzene (S)	95	%	83-111		5		07/15/21 16:01	460-00-4	
Toluene-d8 (S)	112	%	80-131		5		07/15/21 16:01	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.3**	NTU	1.0	0.32	1		07/08/21 21:09		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**409**	mg/L	10.0	9.0	1		07/15/21 17:38		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**6.0J**	mg/L	10.0	4.8	1		07/15/21 12:30		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.083**	mg/L	0.050	0.010	1	07/12/21 15:04	07/12/21 18:14	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**<0.050**	mg/L	0.050	0.010	1		07/09/21 12:53		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:47		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:47		

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 13 **Lab ID: 70179703013** Collected: 07/08/21 08:15 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<5.0**	mg/m3	5.0	1.0	1	07/10/21 07:34	07/14/21 15:24		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**1.1**	mg/L	0.10		1		07/16/21 15:53		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**1.1**	mg/L	0.10	0.094	1	07/13/21 06:49	07/14/21 16:22	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	0.037	1		07/13/21 00:30	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**<0.10**	mg/L	0.10	0.053	1		07/18/21 12:12	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 14 **Lab ID: 70179703014** Collected: 07/08/21 08:40 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**7.8**	MPN/100mL	1.8		1		07/08/21 15:55		
Total Coliforms, MPN	**23**	MPN/100mL	1.8		1		07/08/21 15:55		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**27.8**	MPN/100mL	1.0		1	07/08/21 15:44	07/09/21 15:44		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/15/21 16:44	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/15/21 16:44	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/15/21 16:44	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%	78-114		5		07/15/21 16:44	17060-07-0	
4-Bromofluorobenzene (S)	89	%	83-111		5		07/15/21 16:44	460-00-4	
Toluene-d8 (S)	115	%	80-131		5		07/15/21 16:44	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**2.1**	NTU	1.0	0.32	1		07/08/21 21:10		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**263**	mg/L	10.0	9.0	1		07/15/21 17:38		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**2.0**	mg/L	2.0	0.96	1		07/15/21 12:30		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.067**	mg/L	0.050	0.010	1	07/12/21 15:04	07/12/21 18:14	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**<0.050**	mg/L	0.050	0.010	1		07/09/21 12:55		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:47		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:47		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 14 **Lab ID: 70179703014** Collected: 07/08/21 08:40 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<6.2**	mg/m3	6.2	1.3	1	07/10/21 07:59	07/14/21 15:27		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**1.4**	mg/L	0.10		1		07/16/21 15:53		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**1.4**	mg/L	0.10	0.094	1	07/13/21 06:49	07/14/21 16:23	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	0.037	1		07/13/21 00:31	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**<0.10**	mg/L	0.10	0.053	1		07/18/21 12:13	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 15 **Lab ID: 70179703015** Collected: 07/08/21 09:00 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**4.5**	MPN/100mL	1.8		1		07/08/21 15:55		
Total Coliforms, MPN	**33**	MPN/100mL	1.8		1		07/08/21 15:55		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**23.5**	MPN/100mL	1.0		1	07/08/21 15:44	07/09/21 15:44		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/15/21 17:06	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/15/21 17:06	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/15/21 17:06	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	108	%	78-114		5		07/15/21 17:06	17060-07-0	
4-Bromofluorobenzene (S)	93	%	83-111		5		07/15/21 17:06	460-00-4	
Toluene-d8 (S)	114	%	80-131		5		07/15/21 17:06	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.1**	NTU	1.0	0.32	1		07/08/21 21:11		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**245**	mg/L	10.0	9.0	1		07/15/21 17:39		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**1.6J**	mg/L	2.0	0.96	1		07/15/21 12:30		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.052**	mg/L	0.050	0.010	1	07/12/21 15:04	07/12/21 18:15	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.097**	mg/L	0.050	0.010	1		07/09/21 12:57		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Sample: 15 **Lab ID: 70179703015** Collected: 07/08/21 09:00 Received: 07/08/21 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<6.2**	mg/m3	6.2	1.3	1	07/10/21 07:59	07/14/21 15:32		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**0.80**	mg/L	0.10		1		07/16/21 15:53		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.80**	mg/L	0.10	0.094	1	07/13/21 06:49	07/14/21 16:24	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	0.037	1		07/13/21 00:32	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**<0.10**	mg/L	0.10	0.053	1		07/18/21 12:15	7664-41-7	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 218234
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 MET No Prep Drinking Water
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70179703011

METHOD BLANK: 1100255 Matrix: Drinking Water
Associated Lab Samples: 70179703011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	ug/L	<50.0	50.0	18.0	07/19/21 12:56	N3

LABORATORY CONTROL SAMPLE: 1100256

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	ug/L	12500	12300	98	85-115	N3

MATRIX SPIKE SAMPLE: 1100259

Parameter	Units	70179703011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	ug/L	<50.0	5000	6050	121	70-130	N3

MATRIX SPIKE SAMPLE: 1100261

Parameter	Units	70179795001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	ug/L	<50.0	5000	6450	129	70-130	N3

SAMPLE DUPLICATE: 1100258

Parameter	Units	70179703011 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus	ug/L	<50.0	<50.0		20	N3

SAMPLE DUPLICATE: 1100260

Parameter	Units	70179795001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus	ug/L	<50.0	18.3J		20	N3

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch:	217067	Analysis Method:	SM22 9221B/E
QC Batch Method:	SM22 9221B/E	Analysis Description:	9221BCE Fecal-Total Coliform, MPN
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703012, 70179703013, 70179703014, 70179703015

METHOD BLANK: 1093756 Matrix: Water

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703012, 70179703013, 70179703014, 70179703015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fecal Coliforms, MPN	MPN/100mL	<1.8	1.8		07/08/21 12:30	
Total Coliforms, MPN	MPN/100mL	<1.8	1.8		07/08/21 12:30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 216934 | Analysis Method: SM 9223B-2004
QC Batch Method: SM 9223B-2004 | Analysis Description: ECOLI in Waste Water
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703012, 70179703013, 70179703014, 70179703015

METHOD BLANK: 1092738 Matrix: Water

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703012, 70179703013, 70179703014, 70179703015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
E.coli	MPN/100mL	<1.0	1.0		07/09/21 15:44	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 217068
QC Batch Method: SM22 9223B Colilert
Analysis Method: SM22 9223B Colilert
Analysis Description: TotColDW MBIO Total Coliform
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70179703011

METHOD BLANK: 1093757
Matrix: Drinking Water

Associated Lab Samples: 70179703011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
E.coli		Absent			07/09/21 12:00	
Total Coliforms		Absent			07/09/21 12:00	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 217601 | Analysis Method: EPA 1666A
QC Batch Method: EPA 1666A | Analysis Description: 1666A MSV
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703012

METHOD BLANK: 1096786 Matrix: Water

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethyl acetate	ug/L	<10.0	10.0	3.0	07/13/21 14:38	
Isopropyl acetate	ug/L	<10.0	10.0	1.9	07/13/21 14:38	
n-amyl acetate	ug/L	<5.0	5.0	2.7	07/13/21 14:38	
1,2-Dichloroethane-d4 (S)	%	109	78-114		07/13/21 14:38	
4-Bromofluorobenzene (S)	%	94	83-111		07/13/21 14:38	
Toluene-d8 (S)	%	109	80-131		07/13/21 14:38	

LABORATORY CONTROL SAMPLE: 1096787

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethyl acetate	ug/L	50	50.8	102	60-157	
Isopropyl acetate	ug/L	50	54.0	108	70-147	
n-amyl acetate	ug/L	50	59.1	118	70-130	
1,2-Dichloroethane-d4 (S)	%			99	78-114	
4-Bromofluorobenzene (S)	%			110	83-111	
Toluene-d8 (S)	%			109	80-131	

MATRIX SPIKE SAMPLE: 1096788

Parameter	Units	70179703012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Ethyl acetate	ug/L	<50.0	250	227	91	49-149	
Isopropyl acetate	ug/L	<50.0	250	241	96	29-136	
n-amyl acetate	ug/L	<25.0	250	268	107	36-134	
1,2-Dichloroethane-d4 (S)	%				97	78-114	
4-Bromofluorobenzene (S)	%				110	83-111	
Toluene-d8 (S)	%				111	80-131	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 218006
QC Batch Method: EPA 1666A
Analysis Method: EPA 1666A
Analysis Description: 1666A MSV
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179703013, 70179703014, 70179703015

METHOD BLANK: 1098850 Matrix: Water
Associated Lab Samples: 70179703013, 70179703014, 70179703015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethyl acetate	ug/L	<10.0	10.0	3.0	07/15/21 12:27	
Isopropyl acetate	ug/L	<10.0	10.0	1.9	07/15/21 12:27	
n-amyl acetate	ug/L	<5.0	5.0	2.7	07/15/21 12:27	
1,2-Dichloroethane-d4 (S)	%	101	78-114		07/15/21 12:27	
4-Bromofluorobenzene (S)	%	92	83-111		07/15/21 12:27	
Toluene-d8 (S)	%	110	80-131		07/15/21 12:27	

LABORATORY CONTROL SAMPLE: 1098851

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethyl acetate	ug/L	50	60.4	121	60-157	
Isopropyl acetate	ug/L	50	55.1	110	70-147	
n-amyl acetate	ug/L	50	59.9	120	70-130	
1,2-Dichloroethane-d4 (S)	%			97	78-114	
4-Bromofluorobenzene (S)	%			107	83-111	
Toluene-d8 (S)	%			105	80-131	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1098852 1098853

Parameter	Units	70179910001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethyl acetate	ug/L	<50.0	250	250	282	246	113	99	49-149	14	20	
Isopropyl acetate	ug/L	<50.0	250	250	253	249	101	100	29-136	2	20	
n-amyl acetate	ug/L	<25.0	250	250	276	266	110	106	36-134	4	20	
1,2-Dichloroethane-d4 (S)	%						98	94	78-114		20	
4-Bromofluorobenzene (S)	%						107	104	83-111		20	
Toluene-d8 (S)	%						109	103	80-131		20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 216973
QC Batch Method: EPA 180.1
Analysis Method: EPA 180.1
Analysis Description: 180.1 Turbidity
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703011, 70179703012, 70179703013, 70179703014, 70179703015

METHOD BLANK: 1093045 Matrix: Water

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703011, 70179703012, 70179703013, 70179703014, 70179703015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Turbidity	NTU	<1.0	1.0	0.32	07/08/21 21:00	

LABORATORY CONTROL SAMPLE: 1093046

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	10	10.0	100	90-110	

SAMPLE DUPLICATE: 1093047

Parameter	Units	70179703014 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	2.1	2.1	0	20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 217604
QC Batch Method: SM22 2540B
Analysis Method: SM22 2540B
Analysis Description: 2540B DW Total Solids
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179703011

METHOD BLANK: 1096794 Matrix: Water
Associated Lab Samples: 70179703011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	mg/L	ND	5.0	9.0	07/14/21 17:36	N3

LABORATORY CONTROL SAMPLE: 1096795

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	700	784	112	85-115	N3

MATRIX SPIKE SAMPLE: 1096796

Parameter	Units	70179703011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	492	300	805	104	75-125	N3

SAMPLE DUPLICATE: 1096797

Parameter	Units	70179703011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	492	495	1	5	N3

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 217228 | Analysis Method: SM22 2540B
QC Batch Method: SM22 2540B | Analysis Description: 2540B Total Solids
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005

METHOD BLANK: 1094768 Matrix: Water
Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	mg/L	ND	5.0	9.0	07/12/21 19:22	

LABORATORY CONTROL SAMPLE: 1094769

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	700	748	107	85-115	

MATRIX SPIKE SAMPLE: 1094770

Parameter	Units	70179493001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	26.0		305			

SAMPLE DUPLICATE: 1094771

Parameter	Units	70179493001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	26.0	26.0	0	5	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 217602
QC Batch Method: SM22 2540B
Analysis Method: SM22 2540B
Analysis Description: 2540B Total Solids
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179703006, 70179703007, 70179703008, 70179703009

METHOD BLANK: 1096790 Matrix: Water
Associated Lab Samples: 70179703006, 70179703007, 70179703008, 70179703009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	mg/L	ND	5.0	9.0	07/14/21 17:58	

LABORATORY CONTROL SAMPLE: 1096791

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	700	744	106	85-115	

MATRIX SPIKE SAMPLE: 1097600

Parameter	Units	70180018001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	37900	6000	44700	114	75-125	

SAMPLE DUPLICATE: 1097601

Parameter	Units	70180018001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	37900	37900	0	5	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 217820
QC Batch Method: SM22 2540B
Analysis Method: SM22 2540B
Analysis Description: 2540B Total Solids
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179703010, 70179703012, 70179703013, 70179703014, 70179703015

METHOD BLANK: 1097935 Matrix: Water
Associated Lab Samples: 70179703010, 70179703012, 70179703013, 70179703014, 70179703015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	mg/L	ND	5.0	9.0	07/15/21 17:35	

LABORATORY CONTROL SAMPLE: 1097936

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	700	778	111	85-115	

MATRIX SPIKE SAMPLE: 1097937

Parameter	Units	70179703010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	278	300	567	96	75-125	

SAMPLE DUPLICATE: 1097938

Parameter	Units	70179703010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	278	277	0	5	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 217623
QC Batch Method: SM22 2540D
Analysis Method: SM22 2540D
Analysis Description: 2540D Total Suspended Solids
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007

METHOD BLANK: 1096825 Matrix: Water
Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	0.25	0.24	07/14/21 15:26	

LABORATORY CONTROL SAMPLE: 1096826

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	200	202	101	85-115	

SAMPLE DUPLICATE: 1096827

Parameter	Units	70179694001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	12.0	12.0	0	5	

SAMPLE DUPLICATE: 1096828

Parameter	Units	70179702002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	<2.0	<2.0		5	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 217825
QC Batch Method: SM22 2540D
Analysis Method: SM22 2540D
Analysis Description: 2540D Total Suspended Solids
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70179703008, 70179703009, 70179703010, 70179703011, 70179703012, 70179703013, 70179703014, 70179703015

METHOD BLANK: 1097951 Matrix: Water

Associated Lab Samples: 70179703008, 70179703009, 70179703010, 70179703011, 70179703012, 70179703013, 70179703014, 70179703015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	0.25	0.24	07/15/21 12:10	

LABORATORY CONTROL SAMPLE: 1097952

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	200	180	90	85-115	

SAMPLE DUPLICATE: 1097953

Parameter	Units	70179703008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	4.8	4.8	0	5	

SAMPLE DUPLICATE: 1097954

Parameter	Units	70179703009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	1.2J	1.2J		5	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch:	217221	Analysis Method:	SM22 4500-P E
QC Batch Method:	SM22 4500-P B	Analysis Description:	4500PE Total Phosphorus
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703012, 70179703013, 70179703014, 70179703015

METHOD BLANK: 1094745 Matrix: Water

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703012, 70179703013, 70179703014, 70179703015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.025	0.010	07/12/21 18:05	

LABORATORY CONTROL SAMPLE: 1094746

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	0.5	0.53	106	85-115	

MATRIX SPIKE SAMPLE: 1094747

Parameter	Units	70179703001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	0.14	0.5	0.65	102	75-125	

SAMPLE DUPLICATE: 1094748

Parameter	Units	70179703001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus	mg/L	0.14	0.16	8	20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 217042
QC Batch Method: SM22 4500-P E
Analysis Method: SM22 4500-P E
Analysis Description: 4500PE Ortho Phosphorus
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70179703003, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703011, 70179703012, 70179703013, 70179703014, 70179703015

METHOD BLANK: 1093674 Matrix: Water

Associated Lab Samples: 70179703003, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703011, 70179703012, 70179703013, 70179703014, 70179703015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.025	0.010	07/09/21 11:46	

LABORATORY CONTROL SAMPLE: 1093675

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.5	0.50	101	85-115	

MATRIX SPIKE SAMPLE: 1093676

Parameter	Units	70179740017 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	191	200	399	104	75-125	E,F6,FS

SAMPLE DUPLICATE: 1093677

Parameter	Units	70179740017 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	191	230	19	20	F6,FS

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 217166
QC Batch Method: SM22 4500-P E
Analysis Method: SM22 4500-P E
Analysis Description: 4500PE Ortho Phosphorus
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179703001, 70179703002, 70179703005

METHOD BLANK: 1094367 Matrix: Water
Associated Lab Samples: 70179703001, 70179703002, 70179703005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.025	0.010	07/09/21 22:41	

LABORATORY CONTROL SAMPLE: 1094368

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.5	0.50	99	85-115	

MATRIX SPIKE SAMPLE: 1094369

Parameter	Units	70179703002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.30	0.5	0.76	91	75-125	

SAMPLE DUPLICATE: 1094370

Parameter	Units	70179703002 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.30	0.30	0	20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 219380
QC Batch Method: SM22 4500-P E
Analysis Method: SM22 4500-P E
Analysis Description: 4500PE Ortho Phosphorus
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179703004

METHOD BLANK: 1106246 Matrix: Water
Associated Lab Samples: 70179703004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.025	0.010	07/27/21 20:43	

LABORATORY CONTROL SAMPLE: 1106247

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.5	0.48	95	85-115	

MATRIX SPIKE SAMPLE: 1106248

Parameter	Units	70181780001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.18	0.5	0.62	88	75-125	

SAMPLE DUPLICATE: 1106249

Parameter	Units	70181780001 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.18	0.19	2	20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 217168 | Analysis Method: SM22 5540C
QC Batch Method: SM22 5540C | Analysis Description: 5540C MBAS Surfactants
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703011, 70179703012, 70179703013, 70179703014, 70179703015

METHOD BLANK: 1094374 Matrix: Water

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703011, 70179703012, 70179703013, 70179703014, 70179703015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
LAS Molecular Weight, g/mol		320			07/09/21 21:47	
MBAS, Calculated as LAS	mg/L	ND	0.040	0.028	07/09/21 21:47	

LABORATORY CONTROL SAMPLE: 1094375

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
LAS Molecular Weight, g/mol			320			
MBAS, Calculated as LAS	mg/L	0.24	0.24	101	85-115	

MATRIX SPIKE SAMPLE: 1094376

Parameter	Units	70179703013 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
LAS Molecular Weight, g/mol				320			
MBAS, Calculated as LAS	mg/L	<0.080	0.24	0.19	78	75-125	

SAMPLE DUPLICATE: 1094377

Parameter	Units	70179703013 Result	Dup Result	RPD	Max RPD	Qualifiers
LAS Molecular Weight, g/mol		320	320			
MBAS, Calculated as LAS	mg/L	<0.080	<0.080		20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 744279 — Analysis Method: SM10200
QC Batch Method: SM10200 — Analysis Description: Chlorophyll & Pheophytin
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703009, 70179703010, 70179703012, 70179703013, 70179703014, 70179703015

METHOD BLANK: 4062407 — Matrix: Water

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703009, 70179703010, 70179703012, 70179703013, 70179703014, 70179703015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorophyll a (Corrected)	mg/m3	<5.0	5.0	1.0	07/14/21 14:40	

SAMPLE DUPLICATE: 4062409

Parameter	Units	70179703014 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a (Corrected)	mg/m3	<6.2	4.3J		40	

SAMPLE DUPLICATE: 4062410

Parameter	Units	70179703015 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a (Corrected)	mg/m3	<6.2	5.7J		40	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch:	745557	Analysis Method:	SM10200
QC Batch Method:	SM10200	Analysis Description:	Chlorophyll & Pheophytin
		Laboratory:	Pace Analytical Services - Ormond Beach

Associated Lab Samples: 70179703005, 70179703006, 70179703007, 70179703008

METHOD BLANK: 4069529 Matrix: Water

Associated Lab Samples: 70179703005, 70179703006, 70179703007, 70179703008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorophyll a (Corrected)	mg/m3	<5.0	5.0	1.0	07/21/21 12:30	

SAMPLE DUPLICATE: 4069632

Parameter	Units	35646997001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a (Corrected)	mg/m3	1.3U	4.3J		40	

SAMPLE DUPLICATE: 4069633

Parameter	Units	35646997002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a (Corrected)	mg/m3	1.3U	<6.2		40	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 217776
QC Batch Method: EPA 351.2
Analysis Method: EPA 351.2
Analysis Description: 351.2 TKN DW
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179703011

METHOD BLANK: 1097817 Matrix: Drinking Water
Associated Lab Samples: 70179703011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	ND	0.094	0.094	07/16/21 14:00	N3

LABORATORY CONTROL SAMPLE: 1097818

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4	3.9	98	90-110	N3

MATRIX SPIKE SAMPLE: 1097819

Parameter	Units	70179703011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.10	4	4.3	108	90-110	N3

SAMPLE DUPLICATE: 1097820

Parameter	Units	70179703011 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.10	<0.10		20	N3

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 217356
QC Batch Method: EPA 351.2
Analysis Method: EPA 351.2
Analysis Description: 351.2 TKN
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703012, 70179703013, 70179703014, 70179703015

METHOD BLANK: 1095524 Matrix: Water

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703012, 70179703013, 70179703014, 70179703015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	ND	0.94	0.94	07/14/21 16:33	

LABORATORY CONTROL SAMPLE: 1095525

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4	4.0	100	90-110	

MATRIX SPIKE SAMPLE: 1095526

Parameter	Units	70179703001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.72	4	5.3	114	90-110	M1

MATRIX SPIKE SAMPLE: 1095528

Parameter	Units	70179751002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	5.4	4	10.0	116	90-110	M1

SAMPLE DUPLICATE: 1095527

Parameter	Units	70179703001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.72	0.84	15	20	

SAMPLE DUPLICATE: 1095529

Parameter	Units	70179751002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	5.4	4.5	18	20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 216985 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703012, 70179703013, 70179703014, 70179703015

METHOD BLANK: 1093511 Matrix: Water

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703012, 70179703013, 70179703014, 70179703015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	ND	0.037	0.037	07/12/21 23:53	

LABORATORY CONTROL SAMPLE: 1093512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	1.0	102	90-110	

MATRIX SPIKE SAMPLE: 1093513

Parameter	Units	70179703001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	2.9	2.5	5.3	96	90-110	

MATRIX SPIKE SAMPLE: 1093515

Parameter	Units	70179695001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	0.5	<0.050	1	90-110	M1

SAMPLE DUPLICATE: 1093514

Parameter	Units	70179703001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	2.9	2.9	0	20	

SAMPLE DUPLICATE: 1093516

Parameter	Units	70179695001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	0.50		20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 216982
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate, Unpres.
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70179703011

METHOD BLANK: 1093493 Matrix: Water
Associated Lab Samples: 70179703011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	ND	0.037	0.037	07/09/21 02:29	

LABORATORY CONTROL SAMPLE: 1093494

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	0.99	99	90-110	

MATRIX SPIKE SAMPLE: 1093495

Parameter	Units	70179755001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	10.2	2.5	12.5	92	90-110	

MATRIX SPIKE SAMPLE: 1093497

Parameter	Units	70179810001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	1	0.96	96	90-110	

SAMPLE DUPLICATE: 1093496

Parameter	Units	70179755001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	10.2	10.1	2	20	

SAMPLE DUPLICATE: 1093498

Parameter	Units	70179810001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	<0.050		20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

QC Batch: 218161
QC Batch Method: SM22 4500 NH3 H
Analysis Method: SM22 4500 NH3 H
Analysis Description: 4500 Ammonia
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703011, 70179703012, 70179703013, 70179703014, 70179703015

METHOD BLANK: 1100055 Matrix: Water

Associated Lab Samples: 70179703001, 70179703002, 70179703003, 70179703004, 70179703005, 70179703006, 70179703007, 70179703008, 70179703009, 70179703010, 70179703011, 70179703012, 70179703013, 70179703014, 70179703015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.050	0.053	07/18/21 11:46	

LABORATORY CONTROL SAMPLE: 1100056

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	100	90-110	

MATRIX SPIKE SAMPLE: 1100057

Parameter	Units	70179703004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.12	1	1.1	97	75-125	

SAMPLE DUPLICATE: 1100058

Parameter	Units	70179703004 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.12	0.12	1	20	

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QUALIFIERS

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
F6	Sample was not filtered within 15 minutes of collection and does not meet sampling and/or regulatory requirements.
FS	The sample was filtered in the laboratory prior to analysis.
H1	Analysis conducted outside the EPA method holding time.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N3	Accreditation is not offered by the relevant laboratory accrediting body for this parameter.

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70179703011	11	EPA 200.7	218234		
70179703001	1	SM22 9221B/E	217067		
70179703002	2	SM22 9221B/E	217067		
70179703003	3	SM22 9221B/E	217067		
70179703004	4	SM22 9221B/E	217067		
70179703005	5	SM22 9221B/E	217067		
70179703006	6	SM22 9221B/E	217067		
70179703007	7	SM22 9221B/E	217067		
70179703008	8	SM22 9221B/E	217067		
70179703009	9	SM22 9221B/E	217067		
70179703010	10	SM22 9221B/E	217067		
70179703012	12	SM22 9221B/E	217067		
70179703013	13	SM22 9221B/E	217067		
70179703014	14	SM22 9221B/E	217067		
70179703015	15	SM22 9221B/E	217067		
70179703001	1	SM 9223B-2004	216934	SM 9223B-2004	217148
70179703002	2	SM 9223B-2004	216934	SM 9223B-2004	217148
70179703003	3	SM 9223B-2004	216934	SM 9223B-2004	217148
70179703004	4	SM 9223B-2004	216934	SM 9223B-2004	217148
70179703005	5	SM 9223B-2004	216934	SM 9223B-2004	217148
70179703006	6	SM 9223B-2004	216934	SM 9223B-2004	217148
70179703007	7	SM 9223B-2004	216934	SM 9223B-2004	217148
70179703008	8	SM 9223B-2004	216934	SM 9223B-2004	217148
70179703009	9	SM 9223B-2004	216934	SM 9223B-2004	217148
70179703010	10	SM 9223B-2004	216934	SM 9223B-2004	217148
70179703012	12	SM 9223B-2004	216934	SM 9223B-2004	217148
70179703013	13	SM 9223B-2004	216934	SM 9223B-2004	217148
70179703014	14	SM 9223B-2004	216934	SM 9223B-2004	217148
70179703015	15	SM 9223B-2004	216934	SM 9223B-2004	217148
70179703011	11	SM22 9223B Colilert	217068	SM22 9223B Colilert	217146
70179703001	1	EPA 1666A	217601		
70179703002	2	EPA 1666A	217601		
70179703003	3	EPA 1666A	217601		
70179703004	4	EPA 1666A	217601		
70179703005	5	EPA 1666A	217601		
70179703006	6	EPA 1666A	217601		
70179703007	7	EPA 1666A	217601		
70179703008	8	EPA 1666A	217601		
70179703009	9	EPA 1666A	217601		
70179703010	10	EPA 1666A	217601		
70179703012	12	EPA 1666A	217601		
70179703013	13	EPA 1666A	218006		
70179703014	14	EPA 1666A	218006		
70179703015	15	EPA 1666A	218006		
70179703001	1	EPA 180.1	216973		
70179703002	2	EPA 180.1	216973		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70179703003	3	EPA 180.1	216973		
70179703004	4	EPA 180.1	216973		
70179703005	5	EPA 180.1	216973		
70179703006	6	EPA 180.1	216973		
70179703007	7	EPA 180.1	216973		
70179703008	8	EPA 180.1	216973		
70179703009	9	EPA 180.1	216973		
70179703010	10	EPA 180.1	216973		
70179703011	11	EPA 180.1	216973		
70179703012	12	EPA 180.1	216973		
70179703013	13	EPA 180.1	216973		
70179703014	14	EPA 180.1	216973		
70179703015	15	EPA 180.1	216973		
70179703011	11	SM22 2540B	217604		
70179703001	1	SM22 2540B	217228		
70179703002	2	SM22 2540B	217228		
70179703003	3	SM22 2540B	217228		
70179703004	4	SM22 2540B	217228		
70179703005	5	SM22 2540B	217228		
70179703006	6	SM22 2540B	217602		
70179703007	7	SM22 2540B	217602		
70179703008	8	SM22 2540B	217602		
70179703009	9	SM22 2540B	217602		
70179703010	10	SM22 2540B	217820		
70179703012	12	SM22 2540B	217820		
70179703013	13	SM22 2540B	217820		
70179703014	14	SM22 2540B	217820		
70179703015	15	SM22 2540B	217820		
70179703001	1	SM22 2540D	217623		
70179703002	2	SM22 2540D	217623		
70179703003	3	SM22 2540D	217623		
70179703004	4	SM22 2540D	217623		
70179703005	5	SM22 2540D	217623		
70179703006	6	SM22 2540D	217623		
70179703007	7	SM22 2540D	217623		
70179703008	8	SM22 2540D	217825		
70179703009	9	SM22 2540D	217825		
70179703010	10	SM22 2540D	217825		
70179703011	11	SM22 2540D	217825		
70179703012	12	SM22 2540D	217825		
70179703013	13	SM22 2540D	217825		
70179703014	14	SM22 2540D	217825		
70179703015	15	SM22 2540D	217825		
70179703001	1	SM22 4500-P B	217221	SM22 4500-P E	217337
70179703002	2	SM22 4500-P B	217221	SM22 4500-P E	217337

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70179703003	**3**	SM22 4500-P B	217221	SM22 4500-P E	217337
70179703004	**4**	SM22 4500-P B	217221	SM22 4500-P E	217337
70179703005	**5**	SM22 4500-P B	217221	SM22 4500-P E	217337
70179703006	**6**	SM22 4500-P B	217221	SM22 4500-P E	217337
70179703007	**7**	SM22 4500-P B	217221	SM22 4500-P E	217337
70179703008	**8**	SM22 4500-P B	217221	SM22 4500-P E	217337
70179703009	**9**	SM22 4500-P B	217221	SM22 4500-P E	217337
70179703010	**10**	SM22 4500-P B	217221	SM22 4500-P E	217337
70179703012	**12**	SM22 4500-P B	217221	SM22 4500-P E	217337
70179703013	**13**	SM22 4500-P B	217221	SM22 4500-P E	217337
70179703014	**14**	SM22 4500-P B	217221	SM22 4500-P E	217337
70179703015	**15**	SM22 4500-P B	217221	SM22 4500-P E	217337
70179703001	**1**	SM22 4500-P E	217166		
70179703002	**2**	SM22 4500-P E	217166		
70179703003	**3**	SM22 4500-P E	217042		
70179703004	**4**	SM22 4500-P E	219380		
70179703005	**5**	SM22 4500-P E	217166		
70179703006	**6**	SM22 4500-P E	217042		
70179703007	**7**	SM22 4500-P E	217042		
70179703008	**8**	SM22 4500-P E	217042		
70179703009	**9**	SM22 4500-P E	217042		
70179703010	**10**	SM22 4500-P E	217042		
70179703011	**11**	SM22 4500-P E	217042		
70179703012	**12**	SM22 4500-P E	217042		
70179703013	**13**	SM22 4500-P E	217042		
70179703014	**14**	SM22 4500-P E	217042		
70179703015	**15**	SM22 4500-P E	217042		
70179703001	**1**	SM22 5540C	217168	SM22 5540C	217187
70179703002	**2**	SM22 5540C	217168	SM22 5540C	217187
70179703003	**3**	SM22 5540C	217168	SM22 5540C	217187
70179703004	**4**	SM22 5540C	217168	SM22 5540C	217187
70179703005	**5**	SM22 5540C	217168	SM22 5540C	217187
70179703006	**6**	SM22 5540C	217168	SM22 5540C	217187
70179703007	**7**	SM22 5540C	217168	SM22 5540C	217187
70179703008	**8**	SM22 5540C	217168	SM22 5540C	217187
70179703009	**9**	SM22 5540C	217168	SM22 5540C	217187
70179703010	**10**	SM22 5540C	217168	SM22 5540C	217187
70179703011	**11**	SM22 5540C	217168	SM22 5540C	217187
70179703012	**12**	SM22 5540C	217168	SM22 5540C	217187
70179703013	**13**	SM22 5540C	217168	SM22 5540C	217187
70179703014	**14**	SM22 5540C	217168	SM22 5540C	217187
70179703015	**15**	SM22 5540C	217168	SM22 5540C	217187
70179703001	**1**	SM10200	744279	SM10200	745225
70179703002	**2**	SM10200	744279	SM10200	745225
70179703003	**3**	SM10200	744279	SM10200	745225

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70179703004	**4**	SM10200	744279	SM10200	745225
70179703005	**5**	SM10200	745557	SM10200	746995
70179703006	**6**	SM10200	745557	SM10200	746995
70179703007	**7**	SM10200	745557	SM10200	746995
70179703008	**8**	SM10200	745557	SM10200	746995
70179703009	**9**	SM10200	744279	SM10200	745225
70179703010	**10**	SM10200	744279	SM10200	745225
70179703012	**12**	SM10200	744279	SM10200	745225
70179703013	**13**	SM10200	744279	SM10200	745225
70179703014	**14**	SM10200	744279	SM10200	745225
70179703015	**15**	SM10200	744279	SM10200	745225
70179703001	**1**	SM22 4500-N	218093		
70179703002	**2**	SM22 4500-N	218093		
70179703003	**3**	SM22 4500-N	218093		
70179703004	**4**	SM22 4500-N	218093		
70179703005	**5**	SM22 4500-N	218093		
70179703006	**6**	SM22 4500-N	218093		
70179703007	**7**	SM22 4500-N	218095		
70179703008	**8**	SM22 4500-N	218095		
70179703009	**9**	SM22 4500-N	218095		
70179703010	**10**	SM22 4500-N	218095		
70179703011	**11**	SM22 4500-N	218095		
70179703012	**12**	SM22 4500-N	218095		
70179703013	**13**	SM22 4500-N	218095		
70179703014	**14**	SM22 4500-N	218095		
70179703015	**15**	SM22 4500-N	218095		
70179703011	**11**	EPA 351.2	217776	EPA 351.2	217783
70179703001	**1**	EPA 351.2	217356	EPA 351.2	217365
70179703002	**2**	EPA 351.2	217356	EPA 351.2	217365
70179703003	**3**	EPA 351.2	217356	EPA 351.2	217365
70179703004	**4**	EPA 351.2	217356	EPA 351.2	217365
70179703005	**5**	EPA 351.2	217356	EPA 351.2	217365
70179703006	**6**	EPA 351.2	217356	EPA 351.2	217365
70179703007	**7**	EPA 351.2	217356	EPA 351.2	217365
70179703008	**8**	EPA 351.2	217356	EPA 351.2	217365
70179703009	**9**	EPA 351.2	217356	EPA 351.2	217365
70179703010	**10**	EPA 351.2	217356	EPA 351.2	217365
70179703012	**12**	EPA 351.2	217356	EPA 351.2	217365
70179703013	**13**	EPA 351.2	217356	EPA 351.2	217365
70179703014	**14**	EPA 351.2	217356	EPA 351.2	217365
70179703015	**15**	EPA 351.2	217356	EPA 351.2	217365
70179703011	**11**	EPA 353.2	216982		
70179703001	**1**	EPA 353.2	216985		
70179703002	**2**	EPA 353.2	216985		
70179703003	**3**	EPA 353.2	216985		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LAKE STUDY 7/8
Pace Project No.: 70179703

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70179703004	**4**	EPA 353.2	216985		
70179703005	**5**	EPA 353.2	216985		
70179703006	**6**	EPA 353.2	216985		
70179703007	**7**	EPA 353.2	216985		
70179703008	**8**	EPA 353.2	216985		
70179703009	**9**	EPA 353.2	216985		
70179703010	**10**	EPA 353.2	216985		
70179703012	**12**	EPA 353.2	216985		
70179703013	**13**	EPA 353.2	216985		
70179703014	**14**	EPA 353.2	216985		
70179703015	**15**	EPA 353.2	216985		
70179703001	**1**	SM22 4500 NH3 H	218161		
70179703002	**2**	SM22 4500 NH3 H	218161		
70179703003	**3**	SM22 4500 NH3 H	218161		
70179703004	**4**	SM22 4500 NH3 H	218161		
70179703005	**5**	SM22 4500 NH3 H	218161		
70179703006	**6**	SM22 4500 NH3 H	218161		
70179703007	**7**	SM22 4500 NH3 H	218161		
70179703008	**8**	SM22 4500 NH3 H	218161		
70179703009	**9**	SM22 4500 NH3 H	218161		
70179703010	**10**	SM22 4500 NH3 H	218161		
70179703011	**11**	SM22 4500 NH3 H	218161		
70179703012	**12**	SM22 4500 NH3 H	218161		
70179703013	**13**	SM22 4500 NH3 H	218161		
70179703014	**14**	SM22 4500 NH3 H	218161		
70179703015	**15**	SM22 4500 NH3 H	218161		

WO# : 70179703

70179703

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms

Page : 1 Of 1

Section A — Required Client Information:		Section B — Required Project Information:		Section C — Invoice Information:	
Company:	Woodard & Curran Inc.	Report To:	Emily Nealon	Attention:	
Address:	800 Westchester Avenue	Copy To:		Company Name:	
	Rye Brook/Port Chester, NY 10573			Address:	
Email:	Enealon@woodardcurran.com	Purchase Order #:		Pace Quote:	
Phone:	914-294-2478 Fax:	Project Name:	Lake Study	Pace Project Manager:	nicolette.lovari@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	9073

Regulatory Agency

State / Location: NY

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

Preservatives: Unpreserved, H2SO4, HNO3, HCl, NaOH, Na2S2O3, Methanol, Other

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE	START DATE	START TIME	END DATE	END TIME	Fe	H3, T	TSS	1666	48 h	Pres	hos 2	TS	S03	N	Chlo
1	1	WT	7/8	12:20			X	X	X	X	X						
2	2	WT		12:00			X	X	X	X	X						
3	3	WT		11:10			X	X	X	X	X						
4	4	WT		10:40			X	X	X	X	X						
5	5	WT		12:50			X	X	X	X	X						
6	6	WT		10:50			X	X	X	X	X						
7	7	WT		11:30			X	X	X	X	X						
8	8	WT		10:15			X	X	X	X	X						
9	9	WT		9:10			X	X	X	X	X						
10	10	WT		9:18			X	X	X	X	X						
11	11	DW		9:35								X	X	X	X		
12	12	WT		8:50			X	X	X	X	X						
13	13	WT		7:15			X	X	X	X	X						
14	14	WT		8:40			X	X	X	X	X						
15	15	WT		9:10			X	X	X	X	X						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
our holding time bring all samples except #11 to bacteria lab	Emily Nealon	7/8/21	3:15	[signature] Pace	7/8/21	15:15	4.1	Y	N	Y

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Emily Nealon
SIGNATURE of SAMPLER:
DATE Signed:

1

Pace Analytical®

Sample Condition Upon Receipt

Client Name: WWC

Project

WO#:70179703

PM: NML **Due Date: 07/16/21**

CLIENT: WWC

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No Seals intact: ☐ Yes ☑ No

Temperature Blank Present: ☐ Yes ☑ No

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ Ziploc ☐ None ☐ Other

Type of Ice: Wet Blue None

Thermometer Used: TH091 Correction Factor: +0.0

☐ Samples on ice, cooling process has begun

Cooler Temperature(°C): 4.1 Cooler Temperature Corrected(°C): 4.1

Date/Time 5035A kits placed in freezer

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☑ N/A, water sample)

Date and Initials of person examining contents: KW 7/8/21

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ Yes ☐ No

Did samples orignate from a foreign source including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑ Yes	☐ No		1.
Chain of Custody Filled Out:	☑ Yes	☐ No		2.
Chain of Custody Relinquished:	☑ Yes	☐ No		3.
Sampler Name & Signature on COC:	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time:	☑ Yes	☐ No		5.
Short Hold Time Analysis (<72hr):	☑ Yes	☐ No		6.
Rush Turn Around Time Requested:	☐ Yes	☑ No		7.
Sufficient Volume: (Triple volume provided for	☑ Yes	☐ No		8.
Correct Containers Used:	☑ Yes	☐ No		9.
-Pace Containers Used:	☑ Yes	☐ No		
Containers Intact:	☑ Yes	☐ No		10.
Filtered volume received for Dissolved tests	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC: -Includes date/time/ID, Matrix: SL WT OIL	☑ Yes	☐ No		12.
All containers needing preservation have been checked? pH paper Lot # HC155465 All containers needing preservation are found to be in compliance with method recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	☑ Yes ☑ Yes	☐ No ☐ No	☐ N/A ☐ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl Sample # Initial when completed: / Lot # of added preservative: / Date/Time preservative added:
Samples checked for dechlorination: KI starch test strips Lot # Residual chlorine strips Lot #	☐ Yes	☐ No	☑ N/A	14. Positive for Res. Chlorine? Y N
SM 4500 CN samples checked for sulfide? Lead Acetate Strips Lot #	☐ Yes	☐ No	☑ N/A	15.
Headspace in VOA Vials (>6mm):	☑ Yes	☐ No	☐ N/A	16.
Trip Blank Present:	☐ Yes	☑ No	☐ N/A	17.
Trip Blank Custody Seals Present Pace Trip Blank Lot # (if applicable):______	☐ Yes	☐ No	☑ N/A	

Client Notification/ Resolution:

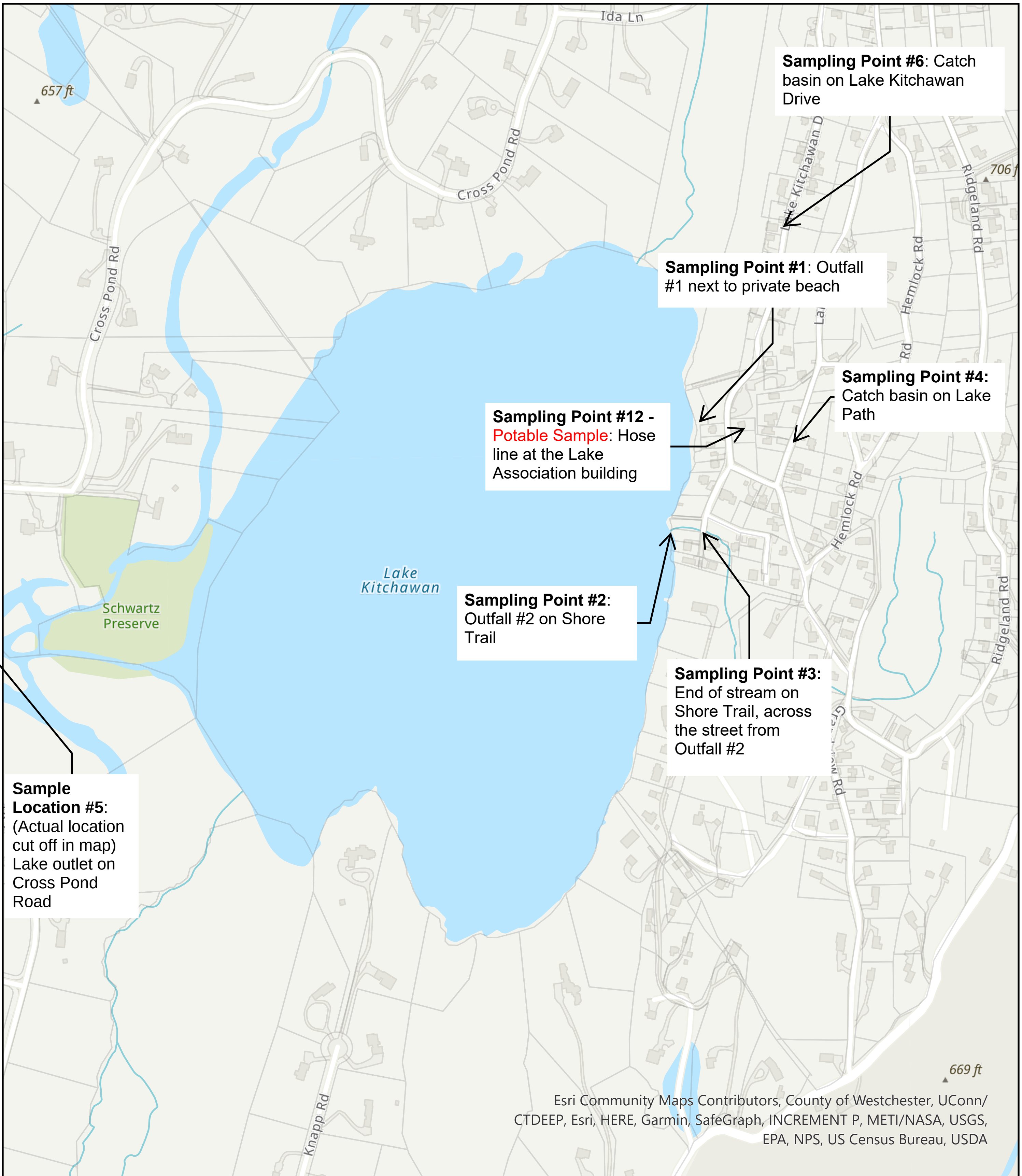
Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS.

Lake Kitchawan Sample Results
July 9, 2021



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Sampling Plan

Legend

Lake Kitchawan Study Parcels

0 125 250 500 US Feet

N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: May 2021

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

July 20, 2021

Emily Nealon
Woodard & Curran Inc.
800 Westchester Avenue
Port Chester, NY 10573

RE: Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Dear Emily Nealon:

Enclosed are the analytical results for sample(s) received by the laboratory on July 09, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Nicolette Lovari

Nicolette M. Lovari
nicolette.lovari@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Nicolette Lovari, Pace Analytical Melville

CERTIFICATIONS

Project:	LAKE STUDY 7/9
Pace Project No.:	70179910

Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747
Connecticut Certification #: PH-0435
Delaware Certification # NY 10478
Maryland Certification #: 208
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987
New Jersey Certification #: NY158
New York Certification #: 10478 Primary Accrediting Body
Pennsylvania Certification #: 68-00350
Rhode Island Certification #: LAO00340
Virginia Certification # 460302

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

SAMPLE SUMMARY

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Lab ID	Sample ID	Matrix	Date Collected	Date Received
70179910001	**1**	Water	07/09/21 10:45	07/09/21 14:08
70179910002	**2**	Water	07/09/21 10:55	07/09/21 14:08
70179910003	**3**	Water	07/09/21 11:00	07/09/21 14:08
70179910004	**4**	Water	07/09/21 11:20	07/09/21 14:08
70179910005	**5**	Water	07/09/21 10:10	07/09/21 14:08
70179910006	**6**	Water	07/09/21 11:45	07/09/21 14:08
70179910007	**12**	Drinking Water	07/09/21 10:35	07/09/21 14:08

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(631)694-3040

SAMPLE ANALYTE COUNT

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Lab ID	Sample ID	Method	Analysts	Analytes Reported
70179910001	**1**	SM22 9221B/E	GFD	2
		SM 9223B-2004	GFD	1
		EPA 1666A	MJF	6
		EPA 180.1	DJM	1
		SM22 2540B	CEA	1
		SM22 2540D	CEA	1
		SM22 4500-P E	HA1	1
		SM22 4500-P E	DJM	1
		SM22 5540C	DJM	2
		SM22 4500-N	AKS	1
		EPA 351.2	AKS	1
		EPA 353.2	PGL	1
		SM22 4500 NH3 H	BNK	1
70179910002	**2**	SM22 9221B/E	GFD	2
		SM 9223B-2004	GFD	1
		EPA 1666A	MJF	6
		EPA 180.1	DJM	1
		SM22 2540B	CEA	1
		SM22 2540D	CEA	1
		SM22 4500-P E	HA1	1
		SM22 4500-P E	DJM	1
		SM22 5540C	DJM	2
		SM22 4500-N	AKS	1
		EPA 351.2	AKS	1
		EPA 353.2	PGL	1
		SM22 4500 NH3 H	BNK	1
70179910003	**3**	SM22 9221B/E	GFD	2
		SM 9223B-2004	GFD	1
		EPA 1666A	MJF	6
		EPA 180.1	DJM	1
		SM22 2540B	CEA	1
		SM22 2540D	CEA	1
		SM22 4500-P E	HA1	1
		SM22 4500-P E	DJM	1
		SM22 5540C	DJM	2
		SM22 4500-N	AKS	1
		EPA 351.2	AKS	1

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SAMPLE ANALYTE COUNT

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 353.2	PGL	1
		SM22 4500 NH3 H	BNK	1
70179910004	**4**	SM22 9221B/E	GFD	2
		SM 9223B-2004	GFD	1
		EPA 1666A	MJF	6
		EPA 180.1	DJM	1
		SM22 2540B	CEA	1
		SM22 2540D	CEA	1
		SM22 4500-P E	HA1	1
		SM22 4500-P E	DJM	1
		SM22 5540C	DJM	2
		SM22 4500-N	AKS	1
		EPA 351.2	AKS	1
		EPA 353.2	PGL	1
		SM22 4500 NH3 H	BNK	1
70179910005	**5**	SM22 9221B/E	GFD	2
		SM 9223B-2004	GFD	1
		EPA 1666A	MJF	6
		EPA 180.1	DJM	1
		SM22 2540B	CEA	1
		SM22 2540D	CEA	1
		SM22 4500-P E	HA1	1
		SM22 4500-P E	DJM	1
		SM22 5540C	DJM	2
		SM22 4500-N	AKS	1
		EPA 351.2	AKS	1
		EPA 353.2	PGL	1
		SM22 4500 NH3 H	BNK	1
70179910006	**6**	SM22 9221B/E	GFD	2
		SM 9223B-2004	GFD	1
		EPA 1666A	MJF	6
		EPA 180.1	DJM	1
		SM22 2540B	CEA	1
		SM22 2540D	CEA	1
		SM22 4500-P E	HA1	1
		SM22 4500-P E	DJM	1
		SM22 5540C	DJM	2

REPORT OF LABORATORY ANALYSIS

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575 Broad Hollow Road
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SAMPLE ANALYTE COUNT

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		SM22 4500-N	AKS	1
		EPA 351.2	AKS	1
		EPA 353.2	PGL	1
		SM22 4500 NH3 H	BNK	1
70179910007	**12**	EPA 200.7	CAM	1
		SM22 9223B Colilert	GFD	2
		EPA 180.1	DJM	1
		SM22 2540B	CEA	1
		SM22 2540D	CEA	1
		SM22 4500-P E	DJM	1
		SM22 5540C	DJM	2
		SM22 4500-N	AKS	1
		EPA 351.2	AKS	1
		EPA 353.2	PGL	1
		SM22 4500 NH3 H	BNK	1

PACE-MV = Pace Analytical Services - Melville

Pace Analytical Services, LLC
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(631)694-3040

SUMMARY OF DETECTION

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
70179910001	**1**					
SM22 9221B/E	Fecal Coliforms, MPN	>16,000	MPN/100mL	1.8	07/09/21 14:30	
SM22 9221B/E	Total Coliforms, MPN	>16,000	MPN/100mL	1.8	07/09/21 14:30	
SM 9223B-2004	E.coli	>2,419.6	MPN/100mL	1.0	07/10/21 14:35	
EPA 180.1	Turbidity	20.0	NTU	1.0	07/09/21 21:14	
SM22 2540B	Total Solids	213	mg/L	10.0	07/15/21 17:40	
SM22 2540D	Total Suspended Solids	1.2J	mg/L	2.0	07/16/21 12:10	
SM22 4500-P E	Phosphorus	0.26	mg/L	0.050	07/13/21 14:43	
SM22 4500-P E	Orthophosphate as P	0.18	mg/L	0.050	07/09/21 22:43	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	3.8	mg/L	0.10	07/19/21 19:16	
EPA 351.2	Nitrogen, Kjeldahl, Total	3.0	mg/L	0.50	07/15/21 17:21	
EPA 353.2	Nitrate-Nitrite (as N)	0.77	mg/L	0.25	07/17/21 01:51	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.19	mg/L	0.10	07/19/21 14:47	
70179910002	**2**					
SM22 9221B/E	Fecal Coliforms, MPN	>16,000	MPN/100mL	1.8	07/09/21 14:30	
SM22 9221B/E	Total Coliforms, MPN	>16,000	MPN/100mL	1.8	07/09/21 14:30	
SM 9223B-2004	E.coli	>2,419.6	MPN/100mL	1.0	07/10/21 14:35	
EPA 180.1	Turbidity	26.0	NTU	2.0	07/09/21 21:14	
SM22 2540B	Total Solids	188	mg/L	20.0	07/16/21 15:57	
SM22 2540D	Total Suspended Solids	44.0	mg/L	10.0	07/16/21 12:10	
SM22 4500-P E	Phosphorus	0.24	mg/L	0.050	07/13/21 14:43	
SM22 4500-P E	Orthophosphate as P	0.12	mg/L	0.050	07/09/21 22:43	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	4.6	mg/L	0.10	07/19/21 19:14	
EPA 351.2	Nitrogen, Kjeldahl, Total	4.0	mg/L	0.50	07/15/21 17:22	
EPA 353.2	Nitrate-Nitrite (as N)	0.58	mg/L	0.25	07/17/21 01:54	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.11	mg/L	0.10	07/19/21 14:57	
70179910003	**3**					
SM22 9221B/E	Fecal Coliforms, MPN	5,400	MPN/100mL	1.8	07/09/21 14:30	
SM22 9221B/E	Total Coliforms, MPN	>16,000	MPN/100mL	1.8	07/09/21 14:30	
SM 9223B-2004	E.coli	>2,419.6	MPN/100mL	1.0	07/10/21 14:35	
EPA 180.1	Turbidity	26.0	NTU	2.0	07/09/21 21:14	
SM22 2540B	Total Solids	182	mg/L	20.0	07/16/21 15:58	
SM22 2540D	Total Suspended Solids	34.0	mg/L	10.0	07/16/21 12:10	
SM22 4500-P E	Phosphorus	0.28	mg/L	0.050	07/13/21 14:44	
SM22 4500-P E	Orthophosphate as P	0.11	mg/L	0.050	07/09/21 22:44	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	3.5	mg/L	0.10	07/19/21 19:14	
EPA 351.2	Nitrogen, Kjeldahl, Total	3.0	mg/L	0.50	07/15/21 17:23	
EPA 353.2	Nitrate-Nitrite (as N)	0.52	mg/L	0.25	07/17/21 01:56	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.11	mg/L	0.10	07/19/21 14:58	
70179910004	**4**					
SM22 9221B/E	Fecal Coliforms, MPN	1,400	MPN/100mL	1.8	07/09/21 14:30	
SM22 9221B/E	Total Coliforms, MPN	5,400	MPN/100mL	1.8	07/09/21 14:30	
SM 9223B-2004	E.coli	1,986.3	MPN/100mL	1.0	07/10/21 14:35	
EPA 180.1	Turbidity	8.1	NTU	1.0	07/09/21 21:14	

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SUMMARY OF DETECTION

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
70179910004	**4**					
SM22 2540B	Total Solids	242	mg/L	20.0	07/16/21 15:59	
SM22 2540D	Total Suspended Solids	12.0	mg/L	10.0	07/16/21 12:10	
SM22 4500-P E	Phosphorus	0.20	mg/L	0.050	07/13/21 14:44	
SM22 4500-P E	Orthophosphate as P	0.15	mg/L	0.050	07/09/21 22:44	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	4.0	mg/L	0.10	07/19/21 19:14	
EPA 351.2	Nitrogen, Kjeldahl, Total	2.1	mg/L	0.50	07/15/21 17:24	
EPA 353.2	Nitrate-Nitrite (as N)	1.8	mg/L	0.25	07/17/21 01:57	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.22	mg/L	0.10	07/19/21 14:59	
70179910005	**5**					
SM22 9221B/E	Fecal Coliforms, MPN	1,700	MPN/100mL	1.8	07/09/21 14:30	
SM22 9221B/E	Total Coliforms, MPN	9,200	MPN/100mL	1.8	07/09/21 14:30	
SM 9223B-2004	E.coli	686.7	MPN/100mL	1.0	07/10/21 14:35	
EPA 180.1	Turbidity	1.5	NTU	1.0	07/09/21 21:14	
SM22 2540B	Total Solids	180	mg/L	20.0	07/16/21 16:00	
SM22 4500-P E	Phosphorus	0.031J	mg/L	0.050	07/13/21 14:44	
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	1.1	mg/L	0.10	07/19/21 19:14	
EPA 351.2	Nitrogen, Kjeldahl, Total	1.1	mg/L	0.10	07/15/21 17:26	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.13	mg/L	0.10	07/19/21 15:00	
70179910006	**6**					
SM22 9221B/E	Fecal Coliforms, MPN	16,000	MPN/100mL	1.8	07/09/21 14:30	
SM22 9221B/E	Total Coliforms, MPN	>16,000	MPN/100mL	1.8	07/09/21 14:30	
SM 9223B-2004	E.coli	>2,419.6	MPN/100mL	1.0	07/10/21 14:35	
EPA 180.1	Turbidity	4.5	NTU	1.0	07/09/21 21:14	
SM22 2540B	Total Solids	132	mg/L	20.0	07/16/21 16:01	
SM22 2540D	Total Suspended Solids	14.0	mg/L	10.0	07/16/21 12:10	
SM22 4500-P E	Phosphorus	0.20	mg/L	0.050	07/13/21 14:45	
SM22 4500-P E	Orthophosphate as P	0.17	mg/L	0.050	07/09/21 22:45	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	1.0	mg/L	0.10	07/19/21 19:14	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.92	mg/L	0.10	07/15/21 17:27	
EPA 353.2	Nitrate-Nitrite (as N)	0.10	mg/L	0.050	07/17/21 01:59	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.063J	mg/L	0.10	07/19/21 15:02	
70179910007	**12**					
SM22 9223B Colilert	Total Coliforms	Present			07/10/21 08:33	
SM22 9223B Colilert	E.coli	Present			07/10/21 08:33	
EPA 180.1	Turbidity	0.35J	NTU	1.0	07/09/21 21:14	
SM22 2540B	Total Solids	501	mg/L	10.0	07/14/21 17:42	N3
SM22 2540D	Total Suspended Solids	1.6J	mg/L	2.0	07/16/21 12:53	
SM22 5540C	LAS Molecular Weight, g/mol	320			07/09/21 21:48	
SM22 4500-N	Total Nitrogen	3.3	mg/L	0.10	07/19/21 19:17	
EPA 353.2	Nitrate-Nitrite (as N)	3.3	mg/L	0.25	07/10/21 01:15	

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(631)694-3040

PROJECT NARRATIVE

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Method: **EPA 200.7**
Description: 200.7 MET ICP, Drinking Water
Client: Woodard & Curran Inc.
Date: July 20, 2021

General Information:
1 sample was analyzed for EPA 200.7 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 218235

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70180153001,70180155001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1100267)
    - Phosphorus

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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(631)694-3040

PROJECT NARRATIVE

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Method: **SM22 9221B/E**
Description: Fecal-Total Coliform, MPN
Client: Woodard & Curran Inc.
Date: July 20, 2021

General Information:
6 samples were analyzed for SM22 9221B/E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project:	LAKE STUDY 7/9
Pace Project No.:	70179910

Method: **SM 9223B-2004**
Description: SM 9223B-2004
Client: Woodard & Curran Inc.
Date: July 20, 2021

General Information:
6 samples were analyzed for SM 9223B-2004 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM 9223B-2004 with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Method: **SM22 9223B Colilert**
Description: MBIO Total Coliform DW
Client: Woodard & Curran Inc.
Date: July 20, 2021

General Information:
1 sample was analyzed for SM22 9223B Colilert by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM22 9223B Colilert with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Method: **EPA 1666A**
Description: 1666 MSV
Client: Woodard & Curran Inc.
Date: July 20, 2021

General Information:
6 samples were analyzed for EPA 1666A by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Method: **EPA 180.1**
Description: 180.1 Turbidity
Client: Woodard & Curran Inc.
Date: July 20, 2021

General Information:
7 samples were analyzed for EPA 180.1 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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Melville, NY 11747
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PROJECT NARRATIVE

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Method: **SM22 2540B**
Description: 2540B Total Solids DW
Client: Woodard & Curran Inc.
Date: July 20, 2021

General Information:
1 sample was analyzed for SM22 2540B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Method: **SM22 2540B**
Description: 2540B Total Solids
Client: Woodard & Curran Inc.
Date: July 20, 2021

General Information:
6 samples were analyzed for SM22 2540B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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Melville, NY 11747
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PROJECT NARRATIVE

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Method: **SM22 2540D**
Description: 2540D Total Suspended Solids
Client: Woodard & Curran Inc.
Date: July 20, 2021

General Information:
7 samples were analyzed for SM22 2540D by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 218009

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 1098864)
  - Total Suspended Solids

Additional Comments:

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Method: **SM22 4500-P E**
Description: 4500PE Total Phosphorus
Client: Woodard & Curran Inc.
Date: July 20, 2021

General Information:
6 samples were analyzed for SM22 4500-P E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM22 4500-P B with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
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(631)694-3040

PROJECT NARRATIVE

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Method: **SM22 4500-P E**
Description: 4500PE Ortho Phosphorus
Client: Woodard & Curran Inc.
Date: July 20, 2021

General Information:
7 samples were analyzed for SM22 4500-P E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Method: **SM22 5540C**
Description: 5540C MBAS Surfactants
Client: Woodard & Curran Inc.
Date: July 20, 2021

General Information:
7 samples were analyzed for SM22 5540C by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM22 5540C with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project:	LAKE STUDY 7/9
Pace Project No.:	70179910

Method: **SM22 4500-N**
Description: Total Nitrogen Calculation
Client: Woodard & Curran Inc.
Date: July 20, 2021

General Information:
7 samples were analyzed for SM22 4500-N by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Method: **EPA 351.2**
Description: 351.2 Total Kjeldahl Nitrogen
Client: Woodard & Curran Inc.
Date: July 20, 2021

General Information:
7 samples were analyzed for EPA 351.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 351.2 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 217548

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70179930004,70180157001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1096663)
  - Nitrogen, Kjeldahl, Total
- MS (Lab ID: 1096665)
  - Nitrogen, Kjeldahl, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Woodard & Curran Inc.
Date: July 20, 2021

General Information:
1 sample was analyzed for EPA 353.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 pres.
Client: Woodard & Curran Inc.
Date: July 20, 2021

General Information:
6 samples were analyzed for EPA 353.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Method: **SM22 4500 NH3 H**
Description: 4500 Ammonia Water
Client: Woodard & Curran Inc.
Date: July 20, 2021

General Information:
7 samples were analyzed for SM22 4500 NH3 H by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Sample: 1 **Lab ID: 70179910001** Collected: 07/09/21 10:45 Received: 07/09/21 14:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**>16,000**	MPN/100mL	1.8		1		07/09/21 14:30		
Total Coliforms, MPN	**>16,000**	MPN/100mL	1.8		1		07/09/21 14:30		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**>2,419.6**	MPN/100mL	1.0		1	07/09/21 14:35	07/10/21 14:35		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/15/21 17:27	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/15/21 17:27	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/15/21 17:27	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	78-114		5		07/15/21 17:27	17060-07-0	
4-Bromofluorobenzene (S)	93	%	83-111		5		07/15/21 17:27	460-00-4	
Toluene-d8 (S)	111	%	80-131		5		07/15/21 17:27	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**20.0**	NTU	1.0	0.32	1		07/09/21 21:14		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**213**	mg/L	10.0	9.0	1		07/15/21 17:40		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**1.2J**	mg/L	2.0	0.96	1		07/16/21 12:10		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.26**	mg/L	0.050	0.010	1	07/13/21 10:41	07/13/21 14:43	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.18**	mg/L	0.050	0.010	1		07/09/21 22:43		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Sample: 1 **Lab ID: 70179910001** Collected: 07/09/21 10:45 Received: 07/09/21 14:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**3.8**	mg/L	0.10		1		07/19/21 19:16		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**3.0**	mg/L	0.50	0.47	1	07/14/21 07:25	07/15/21 17:21	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**0.77**	mg/L	0.25	0.18	5		07/17/21 01:51	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.19**	mg/L	0.10	0.053	1		07/19/21 14:47	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Sample: 2 **Lab ID: 70179910002** Collected: 07/09/21 10:55 Received: 07/09/21 14:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**>16,000**	MPN/100mL	1.8		1		07/09/21 14:30		
Total Coliforms, MPN	**>16,000**	MPN/100mL	1.8		1		07/09/21 14:30		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**>2,419.6**	MPN/100mL	1.0		1	07/09/21 14:35	07/10/21 14:35		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/15/21 17:49	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/15/21 17:49	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/15/21 17:49	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	78-114		5		07/15/21 17:49	17060-07-0	
4-Bromofluorobenzene (S)	93	%	83-111		5		07/15/21 17:49	460-00-4	
Toluene-d8 (S)	109	%	80-131		5		07/15/21 17:49	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**26.0**	NTU	2.0	0.63	2		07/09/21 21:14		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**188**	mg/L	20.0	18.0	1		07/16/21 15:57		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**44.0**	mg/L	10.0	4.8	1		07/16/21 12:10		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.24**	mg/L	0.050	0.010	1	07/13/21 10:41	07/13/21 14:43	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.12**	mg/L	0.050	0.010	1		07/09/21 22:43		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Sample: 2 **Lab ID: 70179910002** Collected: 07/09/21 10:55 Received: 07/09/21 14:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**4.6**	mg/L	0.10		1		07/19/21 19:14		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**4.0**	mg/L	0.50	0.47	1	07/14/21 07:25	07/15/21 17:22	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**0.58**	mg/L	0.25	0.18	5		07/17/21 01:54	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.11**	mg/L	0.10	0.053	1		07/19/21 14:57	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Sample: 3 **Lab ID: 70179910003** Collected: 07/09/21 11:00 Received: 07/09/21 14:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**5,400**	MPN/100mL	1.8		1		07/09/21 14:30		
Total Coliforms, MPN	**>16,000**	MPN/100mL	1.8		1		07/09/21 14:30		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**>2,419.6**	MPN/100mL	1.0		1	07/09/21 14:35	07/10/21 14:35		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/15/21 18:11	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/15/21 18:11	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/15/21 18:11	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	78-114		5		07/15/21 18:11	17060-07-0	
4-Bromofluorobenzene (S)	89	%	83-111		5		07/15/21 18:11	460-00-4	
Toluene-d8 (S)	109	%	80-131		5		07/15/21 18:11	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**26.0**	NTU	2.0	0.63	2		07/09/21 21:14		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**182**	mg/L	20.0	18.0	1		07/16/21 15:58		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**34.0**	mg/L	10.0	4.8	1		07/16/21 12:10		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.28**	mg/L	0.050	0.010	1	07/13/21 10:41	07/13/21 14:44	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.11**	mg/L	0.050	0.010	1		07/09/21 22:44		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Sample: 3 **Lab ID: 70179910003** Collected: 07/09/21 11:00 Received: 07/09/21 14:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**3.5**	mg/L	0.10		1		07/19/21 19:14		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**3.0**	mg/L	0.50	0.47	1	07/14/21 07:25	07/15/21 17:23	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**0.52**	mg/L	0.25	0.18	5		07/17/21 01:56	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.11**	mg/L	0.10	0.053	1		07/19/21 14:58	7664-41-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
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(631)694-3040

ANALYTICAL RESULTS

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Sample: 4 **Lab ID: 70179910004** Collected: 07/09/21 11:20 Received: 07/09/21 14:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**1,400**	MPN/100mL	1.8		1		07/09/21 14:30		
Total Coliforms, MPN	**5,400**	MPN/100mL	1.8		1		07/09/21 14:30		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**1,986.3**	MPN/100mL	1.0		1	07/09/21 14:35	07/10/21 14:35		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/15/21 18:33	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/15/21 18:33	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/15/21 18:33	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%	78-114		5		07/15/21 18:33	17060-07-0	
4-Bromofluorobenzene (S)	92	%	83-111		5		07/15/21 18:33	460-00-4	
Toluene-d8 (S)	115	%	80-131		5		07/15/21 18:33	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**8.1**	NTU	1.0	0.32	1		07/09/21 21:14		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**242**	mg/L	20.0	18.0	1		07/16/21 15:59		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**12.0**	mg/L	10.0	4.8	1		07/16/21 12:10		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.20**	mg/L	0.050	0.010	1	07/13/21 10:41	07/13/21 14:44	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.15**	mg/L	0.050	0.010	1		07/09/21 22:44		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Sample: 4 **Lab ID: 70179910004** Collected: 07/09/21 11:20 Received: 07/09/21 14:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**4.0**	mg/L	0.10		1		07/19/21 19:14		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**2.1**	mg/L	0.50	0.47	1	07/14/21 07:25	07/15/21 17:24	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**1.8**	mg/L	0.25	0.18	5		07/17/21 01:57	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.22**	mg/L	0.10	0.053	1		07/19/21 14:59	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Sample: 5 **Lab ID: 70179910005** Collected: 07/09/21 10:10 Received: 07/09/21 14:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**1,700**	MPN/100mL	1.8		1		07/09/21 14:30		
Total Coliforms, MPN	**9,200**	MPN/100mL	1.8		1		07/09/21 14:30		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**686.7**	MPN/100mL	1.0		1	07/09/21 14:35	07/10/21 14:35		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/15/21 18:54	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/15/21 18:54	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/15/21 18:54	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	78-114		5		07/15/21 18:54	17060-07-0	
4-Bromofluorobenzene (S)	92	%	83-111		5		07/15/21 18:54	460-00-4	
Toluene-d8 (S)	110	%	80-131		5		07/15/21 18:54	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.5**	NTU	1.0	0.32	1		07/09/21 21:14		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**180**	mg/L	20.0	18.0	1		07/16/21 16:00		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**<10.0**	mg/L	10.0	4.8	1		07/16/21 12:10		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.031J**	mg/L	0.050	0.010	1	07/13/21 10:41	07/13/21 14:44	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**<0.050**	mg/L	0.050	0.010	1		07/09/21 22:42		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Sample: 5 **Lab ID: 70179910005** Collected: 07/09/21 10:10 Received: 07/09/21 14:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**1.1**	mg/L	0.10		1		07/19/21 19:14		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**1.1**	mg/L	0.10	0.094	1	07/14/21 07:25	07/15/21 17:26	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	0.037	1		07/17/21 01:58	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.13**	mg/L	0.10	0.053	1		07/19/21 15:00	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Sample: 6 **Lab ID: 70179910006** Collected: 07/09/21 11:45 Received: 07/09/21 14:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**16,000**	MPN/100mL	1.8		1		07/09/21 14:30		
Total Coliforms, MPN	**>16,000**	MPN/100mL	1.8		1		07/09/21 14:30		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**>2,419.6**	MPN/100mL	1.0		1	07/09/21 14:35	07/10/21 14:35		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		07/15/21 19:16	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		07/15/21 19:16	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		07/15/21 19:16	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%	78-114		5		07/15/21 19:16	17060-07-0	
4-Bromofluorobenzene (S)	96	%	83-111		5		07/15/21 19:16	460-00-4	
Toluene-d8 (S)	109	%	80-131		5		07/15/21 19:16	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**4.5**	NTU	1.0	0.32	1		07/09/21 21:14		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**132**	mg/L	20.0	18.0	1		07/16/21 16:01		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**14.0**	mg/L	10.0	4.8	1		07/16/21 12:10		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.20**	mg/L	0.050	0.010	1	07/13/21 10:41	07/13/21 14:45	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.17**	mg/L	0.050	0.010	1		07/09/21 22:45		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Sample: 6 **Lab ID: 70179910006** Collected: 07/09/21 11:45 Received: 07/09/21 14:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**1.0**	mg/L	0.10		1		07/19/21 19:14		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.92**	mg/L	0.10	0.094	1	07/14/21 07:25	07/15/21 17:27	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**0.10**	mg/L	0.050	0.037	1		07/17/21 01:59	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.063J**	mg/L	0.10	0.053	1		07/19/21 15:02	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Sample: 12 **Lab ID: 70179910007** Collected: 07/09/21 10:35 Received: 07/09/21 14:08 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, Drinking Water	Analytical Method: EPA 200.7 Pace Analytical Services - Melville								
Phosphorus	**<50.0**	ug/L	50.0	18.0	1		07/19/21 14:48	7723-14-0	N3
MBIO Total Coliform DW	Analytical Method: SM22 9223B Colilert Preparation Method: SM22 9223B Colilert Pace Analytical Services - Melville								
Total Coliforms	**Present**				1	07/09/21 14:33	07/10/21 08:33		
E.coli	**Present**				1	07/09/21 14:33	07/10/21 08:33		
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**0.35J**	NTU	1.0	0.32	1		07/09/21 21:14		
2540B Total Solids DW	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**501**	mg/L	10.0	9.0	1		07/14/21 17:42		N3
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**1.6J**	mg/L	2.0	0.96	1		07/16/21 12:53		
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**<0.050**	mg/L	0.050	0.010	1		07/09/21 22:42		
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	07/09/21 21:44	07/09/21 21:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	07/09/21 21:44	07/09/21 21:48		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**3.3**	mg/L	0.10		1		07/19/21 19:17		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**<0.10**	mg/L	0.10	0.094	1	07/15/21 06:32	07/16/21 14:04	7727-37-9	N3
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**3.3**	mg/L	0.25	0.18	5		07/10/21 01:15	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**<0.10**	mg/L	0.10	0.053	1		07/19/21 15:03	7664-41-7	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch: 218235
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 MET No Prep Drinking Water
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179910007

METHOD BLANK: 1100262 Matrix: Drinking Water
Associated Lab Samples: 70179910007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	ug/L	<50.0	50.0	18.0	07/19/21 14:03	N3

LABORATORY CONTROL SAMPLE: 1100263

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	ug/L	12500	12100	97	85-115	N3

MATRIX SPIKE SAMPLE: 1100265

Parameter	Units	70180153001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	ug/L	<50.0	5000	6190	123	70-130	N3

MATRIX SPIKE SAMPLE: 1100267

Parameter	Units	70180155001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	ug/L	<50.0	5000	6820	136	70-130	M1,N3

SAMPLE DUPLICATE: 1100264

Parameter	Units	70180153001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus	ug/L	<50.0	18.0J		20	N3

SAMPLE DUPLICATE: 1100266

Parameter	Units	70180155001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus	ug/L	<50.0	<50.0		20	N3

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch: 217265
QC Batch Method: SM22 9221B/E
Analysis Method: SM22 9221B/E
Analysis Description: 9221BCE Fecal-Total Coliform, MPN
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006

METHOD BLANK: 1094895 Matrix: Water
Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fecal Coliforms, MPN	MPN/100mL	<1.8	1.8		07/09/21 14:30	
Total Coliforms, MPN	MPN/100mL	<1.8	1.8		07/09/21 14:30	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch:	217266	Analysis Method:	SM 9223B-2004
QC Batch Method:	SM 9223B-2004	Analysis Description:	ECOLI in Waste Water
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006

METHOD BLANK: 1094897 Matrix: Water

Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
E.coli	MPN/100mL	<1.0	1.0		07/10/21 14:35	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch: 217179
QC Batch Method: SM22 9223B Colilert
Analysis Method: SM22 9223B Colilert
Analysis Description: TotColDW MBIO Total Coliform
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70179910007

METHOD BLANK: 1094411
Matrix: Drinking Water

Associated Lab Samples: 70179910007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
E.coli		Absent			07/10/21 08:33	
Total Coliforms		Absent			07/10/21 08:33	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch: 218006
QC Batch Method: EPA 1666A
Analysis Method: EPA 1666A
Analysis Description: 1666A MSV
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006

METHOD BLANK: 1098850 Matrix: Water
Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethyl acetate	ug/L	<10.0	10.0	3.0	07/15/21 12:27	
Isopropyl acetate	ug/L	<10.0	10.0	1.9	07/15/21 12:27	
n-amyl acetate	ug/L	<5.0	5.0	2.7	07/15/21 12:27	
1,2-Dichloroethane-d4 (S)	%	101	78-114		07/15/21 12:27	
4-Bromofluorobenzene (S)	%	92	83-111		07/15/21 12:27	
Toluene-d8 (S)	%	110	80-131		07/15/21 12:27	

LABORATORY CONTROL SAMPLE: 1098851

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethyl acetate	ug/L	50	60.4	121	60-157	
Isopropyl acetate	ug/L	50	55.1	110	70-147	
n-amyl acetate	ug/L	50	59.9	120	70-130	
1,2-Dichloroethane-d4 (S)	%			97	78-114	
4-Bromofluorobenzene (S)	%			107	83-111	
Toluene-d8 (S)	%			105	80-131	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1098852 1098853

Parameter	Units	70179910001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethyl acetate	ug/L	<50.0	250	250	282	246	113	99	49-149	14	20	
Isopropyl acetate	ug/L	<50.0	250	250	253	249	101	100	29-136	2	20	
n-amyl acetate	ug/L	<25.0	250	250	276	266	110	106	36-134	4	20	
1,2-Dichloroethane-d4 (S)	%						98	94	78-114		20	
4-Bromofluorobenzene (S)	%						107	104	83-111		20	
Toluene-d8 (S)	%						109	103	80-131		20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch: 217164
QC Batch Method: EPA 180.1
Analysis Method: EPA 180.1
Analysis Description: 180.1 Turbidity
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006, 70179910007

METHOD BLANK: 1094363 Matrix: Water
Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006, 70179910007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Turbidity	NTU	<1.0	1.0	0.32	07/09/21 21:14	

LABORATORY CONTROL SAMPLE: 1094364

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	10	10.0	100	90-110	

SAMPLE DUPLICATE: 1094365

Parameter	Units	70179954002 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	<1.0	0.45J		20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch: 217604
QC Batch Method: SM22 2540B
Analysis Method: SM22 2540B
Analysis Description: 2540B DW Total Solids
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70179910007

METHOD BLANK: 1096794 Matrix: Water
Associated Lab Samples: 70179910007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	mg/L	ND	5.0	9.0	07/14/21 17:36	N3

LABORATORY CONTROL SAMPLE: 1096795

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	700	784	112	85-115	N3

MATRIX SPIKE SAMPLE: 1096796

Parameter	Units	70179703011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	492	300	805	104	75-125	N3

SAMPLE DUPLICATE: 1096797

Parameter	Units	70179703011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	492	495	1	5	N3

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch: 217820
QC Batch Method: SM22 2540B
Analysis Method: SM22 2540B
Analysis Description: 2540B Total Solids
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70179910001

METHOD BLANK: 1097935 Matrix: Water
Associated Lab Samples: 70179910001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	mg/L	ND	5.0	9.0	07/15/21 17:35	

LABORATORY CONTROL SAMPLE: 1097936

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	700	778	111	85-115	

MATRIX SPIKE SAMPLE: 1097937

Parameter	Units	70179703010 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	278	300	567	96	75-125	

SAMPLE DUPLICATE: 1097938

Parameter	Units	70179703010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	278	277	0	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch: 218007
QC Batch Method: SM22 2540B
Analysis Method: SM22 2540B
Analysis Description: 2540B Total Solids
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179910002, 70179910003, 70179910004, 70179910005, 70179910006

METHOD BLANK: 1098854 Matrix: Water
Associated Lab Samples: 70179910002, 70179910003, 70179910004, 70179910005, 70179910006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	mg/L	ND	5.0	9.0	07/16/21 15:56	

LABORATORY CONTROL SAMPLE: 1098855

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	700	706	101	85-115	

MATRIX SPIKE SAMPLE: 1098856

Parameter	Units	70179910002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	188	600	786	100	75-125	

SAMPLE DUPLICATE: 1098857

Parameter	Units	70179910002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	188	188	0	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch: 218009
QC Batch Method: SM22 2540D
Analysis Method: SM22 2540D
Analysis Description: 2540D Total Suspended Solids
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006, 70179910007

METHOD BLANK: 1098862 Matrix: Water
Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006, 70179910007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	0.25	0.24	07/16/21 12:01	

LABORATORY CONTROL SAMPLE: 1098863

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	200	196	98	85-115	

SAMPLE DUPLICATE: 1098864

Parameter	Units	70179914002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	17.2	15.6	10	5	D6

SAMPLE DUPLICATE: 1098865

Parameter	Units	70179975001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	24.0	24.0	0	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch: 217385 | Analysis Method: SM22 4500-P E
QC Batch Method: SM22 4500-P B | Analysis Description: 4500PE Total Phosphorus
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006

METHOD BLANK: 1095594 Matrix: Water
Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.025	0.010	07/13/21 14:33	

LABORATORY CONTROL SAMPLE: 1095595

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	0.5	0.54	109	85-115	

MATRIX SPIKE SAMPLE: 1095596

Parameter	Units	70179695002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	0.55	0.5	0.92	75	75-125	

SAMPLE DUPLICATE: 1095597

Parameter	Units	70179695002 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus	mg/L	0.55	0.52	5	20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch: 217166 | Analysis Method: SM22 4500-P E
QC Batch Method: SM22 4500-P E | Analysis Description: 4500PE Ortho Phosphorus
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006, 70179910007

METHOD BLANK: 1094367 Matrix: Water
Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006, 70179910007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.025	0.010	07/09/21 22:41	

LABORATORY CONTROL SAMPLE: 1094368

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.5	0.50	99	85-115	

MATRIX SPIKE SAMPLE: 1094369

Parameter	Units	70179703002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.30	0.5	0.76	91	75-125	

SAMPLE DUPLICATE: 1094370

Parameter	Units	70179703002 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	0.30	0.30	0	20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch: 217169 | Analysis Method: SM22 5540C
QC Batch Method: SM22 5540C | Analysis Description: 5540C MBAS Surfactants
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006, 70179910007

METHOD BLANK: 1094378 Matrix: Water

Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006, 70179910007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
LAS Molecular Weight, g/mol		320			07/09/21 21:48	
MBAS, Calculated as LAS	mg/L	ND	0.040	0.028	07/09/21 21:48	

LABORATORY CONTROL SAMPLE: 1094379

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
LAS Molecular Weight, g/mol			320			
MBAS, Calculated as LAS	mg/L	0.24	0.25	102	85-115	

MATRIX SPIKE SAMPLE: 1094380

Parameter	Units	70179957001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
LAS Molecular Weight, g/mol		<0		320			
MBAS, Calculated as LAS	mg/L	<0.080	0.24	0.19	80	75-125	

SAMPLE DUPLICATE: 1094381

Parameter	Units	70179957001 Result	Dup Result	RPD	Max RPD	Qualifiers
LAS Molecular Weight, g/mol		320	320			
MBAS, Calculated as LAS	mg/L	<0.080	<0.080		20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch: 217776
QC Batch Method: EPA 351.2
Analysis Method: EPA 351.2
Analysis Description: 351.2 TKN DW
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179910007

METHOD BLANK: 1097817
Matrix: Drinking Water
Associated Lab Samples: 70179910007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	ND	0.094	0.094	07/16/21 14:00	N3

LABORATORY CONTROL SAMPLE: 1097818

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4	3.9	98	90-110	N3

MATRIX SPIKE SAMPLE: 1097819

Parameter	Units	70179703011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.10	4	4.3	108	90-110	N3

SAMPLE DUPLICATE: 1097820

Parameter	Units	70179703011 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.10	<0.10		20	N3

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch: 217548 — Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 — Analysis Description: 351.2 TKN
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006

METHOD BLANK: 1096661 — Matrix: Water
Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	ND	0.094	0.094	07/15/21 17:20	

LABORATORY CONTROL SAMPLE: 1096662

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4	4.0	99	90-110	

MATRIX SPIKE SAMPLE: 1096663

Parameter	Units	70179930004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4.4	4	11.1	168	90-110	M1

MATRIX SPIKE SAMPLE: 1096665

Parameter	Units	70180157001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.62	4	8.6	200	90-110	M1

SAMPLE DUPLICATE: 1096664

Parameter	Units	70179930004 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4.4	5.0	11	20	

SAMPLE DUPLICATE: 1096666

Parameter	Units	70180157001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.62	0.69	11	20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch: 218128
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006

METHOD BLANK: 1099572 Matrix: Water
Associated Lab Samples: 70179910001, 70179910002, 70179910003, 70179910004, 70179910005, 70179910006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	ND	0.037	0.037	07/17/21 01:46	

LABORATORY CONTROL SAMPLE: 1099573

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	0.99	99	90-110	

MATRIX SPIKE SAMPLE: 1099574

Parameter	Units	70179910001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.77	2.5	3.0	90	90-110	

MATRIX SPIKE SAMPLE: 1099576

Parameter	Units	70179929001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.075	0.5	0.56	96	90-110	

SAMPLE DUPLICATE: 1099575

Parameter	Units	70179910001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.77	0.72	6	20	

SAMPLE DUPLICATE: 1099577

Parameter	Units	70179929001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.075	0.069	8	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch: 217172
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate, Unpres.
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179910007

METHOD BLANK: 1094392 Matrix: Water
Associated Lab Samples: 70179910007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	ND	0.037	0.037	07/10/21 00:55	

LABORATORY CONTROL SAMPLE: 1094393

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	1.0	100	90-110	

MATRIX SPIKE SAMPLE: 1094394

Parameter	Units	70179936001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	5.5	2.5	8.0	102	90-110	

MATRIX SPIKE SAMPLE: 1094396

Parameter	Units	70179948001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	5.5	2.5	8.0	100	90-110	

SAMPLE DUPLICATE: 1094395

Parameter	Units	70179936001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	5.5	5.5	1	20	

SAMPLE DUPLICATE: 1094397

Parameter	Units	70179948001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	5.5	5.5	0	20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch: 218243
QC Batch Method: SM22 4500 NH3 H
Analysis Method: SM22 4500 NH3 H
Analysis Description: 4500 Ammonia
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179910001

METHOD BLANK: 1100302 Matrix: Water
Associated Lab Samples: 70179910001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.050	0.053	07/19/21 14:15	

LABORATORY CONTROL SAMPLE: 1100303

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	0.97	97	90-110	

MATRIX SPIKE SAMPLE: 1100304

Parameter	Units	70179779001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	19.1	10	28.1	89	75-125	

SAMPLE DUPLICATE: 1100305

Parameter	Units	70179779001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	19.1	20.6	7	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

QC Batch: 218245
QC Batch Method: SM22 4500 NH3 H
Analysis Method: SM22 4500 NH3 H
Analysis Description: 4500 Ammonia
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70179910002, 70179910003, 70179910004, 70179910005, 70179910006, 70179910007

METHOD BLANK: 1100313 Matrix: Water
Associated Lab Samples: 70179910002, 70179910003, 70179910004, 70179910005, 70179910006, 70179910007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.050	0.053	07/19/21 14:54	

LABORATORY CONTROL SAMPLE: 1100314

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	0.97	97	90-110	

MATRIX SPIKE SAMPLE: 1100315

Parameter	Units	70180257001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	<0.10	1	0.92	89	75-125	

SAMPLE DUPLICATE: 1100316

Parameter	Units	70180257001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	<0.10	<0.10		20	

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QUALIFIERS

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
F6	Sample was not filtered within 15 minutes of collection and does not meet sampling and/or regulatory requirements.
FS	The sample was filtered in the laboratory prior to analysis.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N3	Accreditation is not offered by the relevant laboratory accrediting body for this parameter.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70179910007	**12**	EPA 200.7	218235		
70179910001	**1**	SM22 9221B/E	217265		
70179910002	**2**	SM22 9221B/E	217265		
70179910003	**3**	SM22 9221B/E	217265		
70179910004	**4**	SM22 9221B/E	217265		
70179910005	**5**	SM22 9221B/E	217265		
70179910006	**6**	SM22 9221B/E	217265		
70179910001	**1**	SM 9223B-2004	217266	SM 9223B-2004	217330
70179910002	**2**	SM 9223B-2004	217266	SM 9223B-2004	217330
70179910003	**3**	SM 9223B-2004	217266	SM 9223B-2004	217330
70179910004	**4**	SM 9223B-2004	217266	SM 9223B-2004	217330
70179910005	**5**	SM 9223B-2004	217266	SM 9223B-2004	217330
70179910006	**6**	SM 9223B-2004	217266	SM 9223B-2004	217330
70179910007	**12**	SM22 9223B Colilert	217179	SM22 9223B Colilert	217329
70179910001	**1**	EPA 1666A	218006		
70179910002	**2**	EPA 1666A	218006		
70179910003	**3**	EPA 1666A	218006		
70179910004	**4**	EPA 1666A	218006		
70179910005	**5**	EPA 1666A	218006		
70179910006	**6**	EPA 1666A	218006		
70179910001	**1**	EPA 180.1	217164		
70179910002	**2**	EPA 180.1	217164		
70179910003	**3**	EPA 180.1	217164		
70179910004	**4**	EPA 180.1	217164		
70179910005	**5**	EPA 180.1	217164		
70179910006	**6**	EPA 180.1	217164		
70179910007	**12**	EPA 180.1	217164		
70179910007	**12**	SM22 2540B	217604		
70179910001	**1**	SM22 2540B	217820		
70179910002	**2**	SM22 2540B	218007		
70179910003	**3**	SM22 2540B	218007		
70179910004	**4**	SM22 2540B	218007		
70179910005	**5**	SM22 2540B	218007		
70179910006	**6**	SM22 2540B	218007		
70179910001	**1**	SM22 2540D	218009		
70179910002	**2**	SM22 2540D	218009		
70179910003	**3**	SM22 2540D	218009		
70179910004	**4**	SM22 2540D	218009		
70179910005	**5**	SM22 2540D	218009		
70179910006	**6**	SM22 2540D	218009		
70179910007	**12**	SM22 2540D	218009		
70179910001	**1**	SM22 4500-P B	217385	SM22 4500-P E	217466
70179910002	**2**	SM22 4500-P B	217385	SM22 4500-P E	217466
70179910003	**3**	SM22 4500-P B	217385	SM22 4500-P E	217466

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70179910004	**4**	SM22 4500-P B	217385	SM22 4500-P E	217466
70179910005	**5**	SM22 4500-P B	217385	SM22 4500-P E	217466
70179910006	**6**	SM22 4500-P B	217385	SM22 4500-P E	217466
70179910001	**1**	SM22 4500-P E	217166		
70179910002	**2**	SM22 4500-P E	217166		
70179910003	**3**	SM22 4500-P E	217166		
70179910004	**4**	SM22 4500-P E	217166		
70179910005	**5**	SM22 4500-P E	217166		
70179910006	**6**	SM22 4500-P E	217166		
70179910007	**12**	SM22 4500-P E	217166		
70179910001	**1**	SM22 5540C	217169	SM22 5540C	217188
70179910002	**2**	SM22 5540C	217169	SM22 5540C	217188
70179910003	**3**	SM22 5540C	217169	SM22 5540C	217188
70179910004	**4**	SM22 5540C	217169	SM22 5540C	217188
70179910005	**5**	SM22 5540C	217169	SM22 5540C	217188
70179910006	**6**	SM22 5540C	217169	SM22 5540C	217188
70179910007	**12**	SM22 5540C	217169	SM22 5540C	217188
70179910001	**1**	SM22 4500-N			
70179910002	**2**	SM22 4500-N	218296		
70179910003	**3**	SM22 4500-N	218296		
70179910004	**4**	SM22 4500-N	218296		
70179910005	**5**	SM22 4500-N	218296		
70179910006	**6**	SM22 4500-N	218296		
70179910007	**12**	SM22 4500-N			
70179910007	**12**	EPA 351.2	217776	EPA 351.2	217783
70179910001	**1**	EPA 351.2	217548	EPA 351.2	217557
70179910002	**2**	EPA 351.2	217548	EPA 351.2	217557
70179910003	**3**	EPA 351.2	217548	EPA 351.2	217557
70179910004	**4**	EPA 351.2	217548	EPA 351.2	217557
70179910005	**5**	EPA 351.2	217548	EPA 351.2	217557
70179910006	**6**	EPA 351.2	217548	EPA 351.2	217557
70179910007	**12**	EPA 353.2	217172		
70179910001	**1**	EPA 353.2	218128		
70179910002	**2**	EPA 353.2	218128		
70179910003	**3**	EPA 353.2	218128		
70179910004	**4**	EPA 353.2	218128		
70179910005	**5**	EPA 353.2	218128		
70179910006	**6**	EPA 353.2	218128		
70179910001	**1**	SM22 4500 NH3 H	218243		
70179910002	**2**	SM22 4500 NH3 H	218245		
70179910003	**3**	SM22 4500 NH3 H	218245		
70179910004	**4**	SM22 4500 NH3 H	218245		
70179910005	**5**	SM22 4500 NH3 H	218245		

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LAKE STUDY 7/9
Pace Project No.: 70179910

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70179910006	**6**	SM22 4500 NH3 H	218245		
70179910007	**12**	SM22 4500 NH3 H	218245		

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WWW.PACELABS.COM

CHAIN-OF-CUSTODY /

The Chain-of-Custody is a LEGAL D

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms ar ...s.pdf.

WO#: 70179910

70179910

Page : 1 Of 1

ection A equired Client Information:	Section B Required Project Information:	Section C Invoice Information:	
ompany: Woodard & Curran Inc.	Report To: Emily Nealon	Attention:	
ddress: 800 Westchester Avenue	Copy To:	Company Name:	
ort Chester, NY 10573		Address:	Regulatory Agency
mail: Enealon@woodardcurran.com	Purchase Order #:	Pace Quote:	
hone: 914-294-2478 Fax:	Project Name: Lake Study	Pace Project Manager: nicolette.lovari@pacelabs.com,	State / Location
equested Due Date:	Project #:	Pace Profile #: 9073	NY

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analyses Test Y/N	Total and Fecal/ E.coli	No2/NO3 NH3, T. Phos, TKN	O. Phos, TS, TSS, MBAS, Turb	1666	Chlorophyll A (48 hr holding time)	Total Coliform Presence/ Absence	T. Phos 200.7	O. Phos, TS, TSS, MBAS, Turb	NO2/NO3, NH3, TKN	Residual Chlorine (Y/N)
1	1	WT		7/9	10:45														X	X	X	X	X					
2	2	WT			10:55														X	X	X	X	X					
3	3	WT			11:00														X	X	X	X	X					
4	4	WT			11:20														X	X	X	X	X					
5	5	WT			10:10														X	X	X	X	X					
6	6	WT			11:45														X	X	X	X	X					
12	12	DW ~~WT~~			10:35														~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	X	X	X	X	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
hour holding time bring all samples except #12 to bacteria lab				[signature]	7/9/21	14:08	1.9	Y	N	Y
							TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Emily Nealon

SIGNATURE of SAMPLER: Emily Nealon   DATE Signed: 7/9/21

Sample Condition Upon Receipt

Pace Analytical®

WO# : 70179910
PM: NML Due Date: 07/19/21
CLIENT: WWC

Client Name: Woodard + Curran Inc Project

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No Seals intact: ☐ Yes ☑ No

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ Ziploc ☑ None ☐ Other

Thermometer Used: TH091 Correction Factor: +0.0

Cooler Temperature(°C): 1.9 Cooler Temperature Corrected(°C): 1.9

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☐ N/A, water sample)

Temperature Blank Present: ☐ Yes ☑ No

Type of Ice: Wet Blue None

☐ Samples on ice, cooling process has begun

Date/Time 5035A kits placed in freezer

Date and Initials of person examining contents: MN 7/9/21

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ Yes ☐ No

Did samples orignate from a foreign source including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑ Yes	☐ No		1.
Chain of Custody Filled Out:	☑ Yes	☐ No		2.
Chain of Custody Relinquished:	☑ Yes	☐ No		3.
Sampler Name & Signature on COC:	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time:	☑ Yes	☐ No		5.
Short Hold Time Analysis (<72hr):	☑ Yes	☐ No		6.
Rush Turn Around Time Requested:	☐ Yes	☑ No		7.
Sufficient Volume: (Triple volume provided for	☑ Yes	☐ No		8.
Correct Containers Used:	☑ Yes	☐ No		9.
-Pace Containers Used:	☑ Yes	☐ No		
Containers Intact:	☑ Yes	☐ No		10.
Filtered volume received for Dissolved tests	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	MN ~~☑ Yes~~	☑ No ?		12. Missing one vial for sample 5
-Includes date/time/ID, Matrix: SL ~~WT~~ OIL				
All containers needing preservation have been checked?	☑ Yes	☐ No	☐ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
pH paper Lot # HC155968				Sample #
All containers needing preservation are found to be in compliance with method recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide)	☑ Yes	☐ No	☐ N/A	
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water).				Initial when completed: / Lot # of added preservative: / Date/Time preservative added:
Per Method, VOA pH is checked after analysis				
Samples checked for dechlorination:	☐ Yes	☐ No	☑ N/A	14.
KI starch test strips Lot #				
Residual chlorine strips Lot #				Positive for Res. Chlorine? Y N
SM 4500 CN samples checked for sulfide?	☐ Yes	☐ No	☑ N/A	15.
Lead Acetate Strips Lot #				
Headspace in VOA Vials (>6mm):	☑ Yes	~~☑ No~~ MN	☐ N/A	16.
Trip Blank Present:	☐ Yes	☐ No	☑ N/A	17.
Trip Blank Custody Seals Present	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if applicable):				

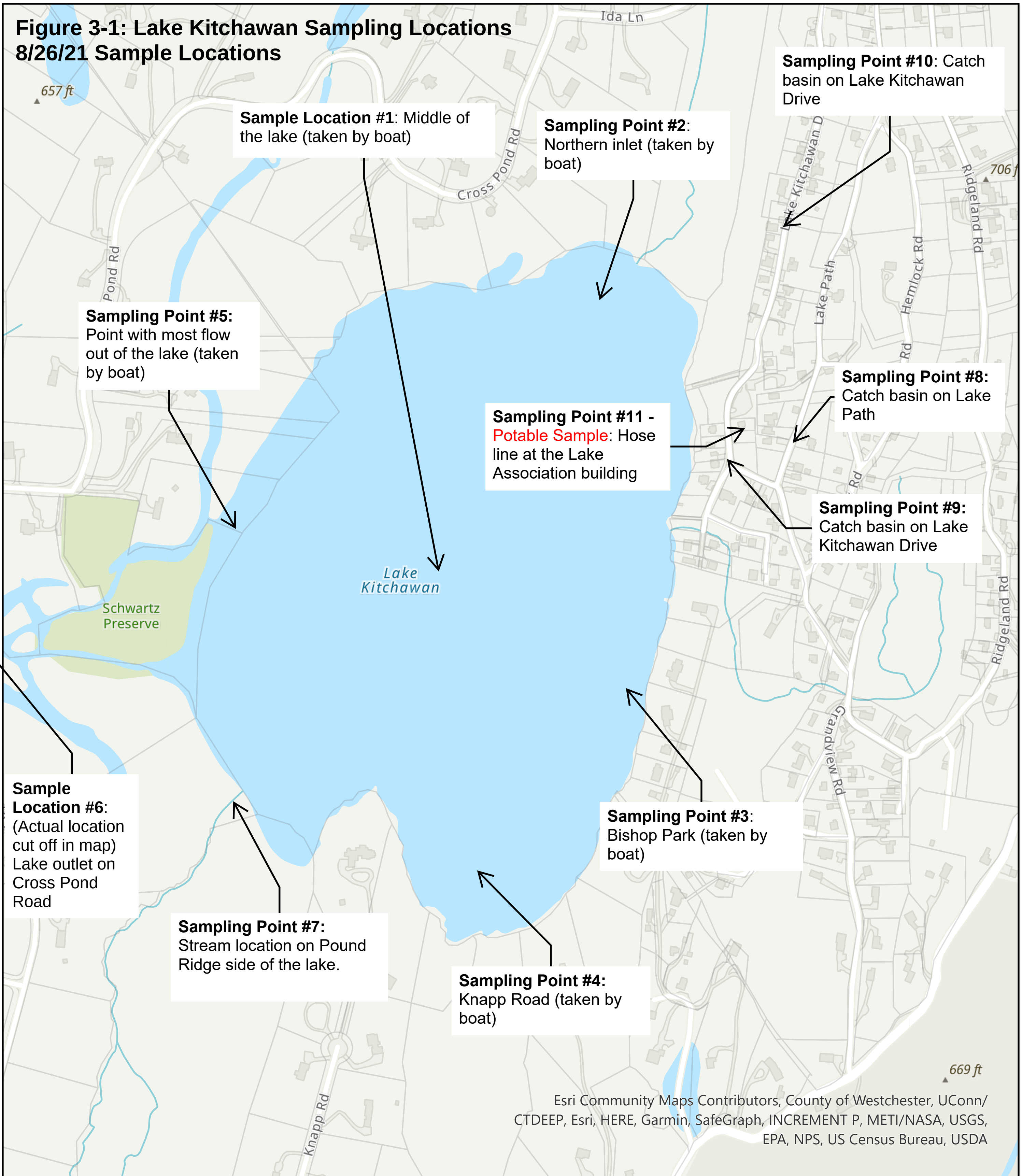
Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS.

Lake Kitchawan Sample Results
August 26, 2021



Lake Kitchawan Wastewater Study

Town of Lewisboro, NY

Sampling Plan

Legend

Lake Kitchawan Study Parcels

0 125 250 500 US Feet

N

WOODARD & CURRAN

Project #: 0214731.00
Map Created: May 2021

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**

Figure Exported: 5/28/2021 By: enealon Using: \\wc\shared\Projects\0214731.00 Town of Lewisboro - EOH Community Wastewater\wip\GIS\Project\Lewisboro Parcel Figure.aprx

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

September 13, 2021

Emily Nealon
Woodard & Curran Inc.
800 Westchester Avenue
Port Chester, NY 10573

RE: Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Dear Emily Nealon:

Enclosed are the analytical results for sample(s) received by the laboratory on August 26, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville
- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Nicolette Lovari

Nicolette M. Lovari
nicolette.lovari@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Nicolette Lovari, Pace Analytical Melville

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

CERTIFICATIONS

Project:	LAKE STUDY 8/26
Pace Project No.:	70185358

Pace Analytical Services Ormond Beach

8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maine Certification #: FL01264
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Ohio DEP 87780
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747
Connecticut Certification #: PH-0435
Delaware Certification # NY 10478
Maryland Certification #: 208
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987
New Jersey Certification #: NY158
New York Certification #: 10478 Primary Accrediting Body
Pennsylvania Certification #: 68-00350
Rhode Island Certification #: LAO00340
Virginia Certification # 460302

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

SAMPLE SUMMARY

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Lab ID	Sample ID	Matrix	Date Collected	Date Received
70185358001	**1**	Water	08/26/21 08:38	08/26/21 14:00
70185358002	**2**	Water	08/26/21 08:45	08/26/21 14:00
70185358003	**3**	Water	08/26/21 08:15	08/26/21 14:00
70185358004	**4**	Water	08/26/21 08:24	08/26/21 14:00
70185358005	**5**	Water	08/26/21 08:30	08/26/21 14:00
70185358006	**6**	Water	08/26/21 10:55	08/26/21 14:00
70185358007	**7**	Water	08/26/21 10:35	08/26/21 14:00
70185358008	**8**	Water	08/26/21 10:10	08/26/21 14:00
70185358009	**9**	Water	08/26/21 09:45	08/26/21 14:00
70185358010	**10**	Water	08/26/21 09:30	08/26/21 14:00
70185358011	**11**	Drinking Water	08/26/21 09:10	08/26/21 14:00

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575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

SAMPLE ANALYTE COUNT

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
70185358001	**1**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	ODL	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	ODL	1	PACE-MV
		SM22 5540C	JWT	2	PACE-MV
		SM10200	WW1	1	PASI-O
		SM22 4500-N	MEM1	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	DJM	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70185358002	**2**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	ODL	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	ODL	1	PACE-MV
		SM22 5540C	JWT	2	PACE-MV
		SM10200	WW1	1	PASI-O
		SM22 4500-N	MEM1	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	DJM	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70185358003	**3**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	ODL	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	ODL	1	PACE-MV
		SM22 5540C	JWT	2	PACE-MV

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SAMPLE ANALYTE COUNT

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM10200	WW1	1	PASI-O
		SM22 4500-N	MEM1	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	DJM	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70185358004	**4**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	ODL	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	ODL	1	PACE-MV
		SM22 5540C	JWT	2	PACE-MV
		SM10200	WW1	1	PASI-O
		SM22 4500-N	MEM1	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	DJM	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70185358005	**5**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	ODL	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	ODL	1	PACE-MV
		SM22 5540C	JWT	2	PACE-MV
		SM10200	WW1	1	PASI-O
		SM22 4500-N	MEM1	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	DJM	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70185358006	**6**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	ODL	1	PACE-MV

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

SAMPLE ANALYTE COUNT

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	ODL	1	PACE-MV
		SM22 5540C	JWT	2	PACE-MV
		SM10200	WW1	1	PASI-O
		SM22 4500-N	MEM1	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	DJM	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70185358007	**7**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	ODL	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	ODL	1	PACE-MV
		SM22 5540C	JWT	2	PACE-MV
		SM10200	WW1	1	PASI-O
		SM22 4500-N	MEM1	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	DJM	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70185358008	**8**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	ODL	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	ODL	1	PACE-MV
		SM22 5540C	JWT	2	PACE-MV
		SM10200	WW1	1	PASI-O
		SM22 4500-N	MEM1	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	DJM	1	PACE-MV

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(631)694-3040

SAMPLE ANALYTE COUNT

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM22 4500 NH3 H	BNK	1	PACE-MV
70185358009	**9**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	ODL	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	ODL	1	PACE-MV
		SM22 5540C	JWT	2	PACE-MV
		SM10200	WW1	1	PASI-O
		SM22 4500-N	MEM1	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	DJM	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70185358010	**10**	SM22 9221B/E	GFD	2	PACE-MV
		SM 9223B-2004	GFD	1	PACE-MV
		EPA 1666A	MJF	6	PACE-MV
		EPA 180.1	ODL	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	HA1	1	PACE-MV
		SM22 4500-P E	ODL	1	PACE-MV
		SM22 5540C	JWT	2	PACE-MV
		SM10200	WW1	1	PASI-O
		SM22 4500-N	MEM1	1	PACE-MV
		EPA 351.2	AKS	1	PACE-MV
		EPA 353.2	DJM	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
70185358011	**11**	EPA 200.7	CAM	1	PACE-MV
		SM22 9223B Colilert	GFD	2	PACE-MV
		EPA 180.1	ODL	1	PACE-MV
		SM22 2540B	CEA	1	PACE-MV
		SM22 2540D	CEA	1	PACE-MV
		SM22 4500-P E	ODL	1	PACE-MV
		SM22 5540C	JWT	2	PACE-MV
		EPA 351.2	AKS	1	PACE-MV

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SAMPLE ANALYTE COUNT

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 353.2	DJM	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV

PACE-MV = Pace Analytical Services - Melville
PASI-O = Pace Analytical Services - Ormond Beach

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SUMMARY OF DETECTION

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
70185358001	**1**					
SM22 9221B/E	Fecal Coliforms, MPN	<1.8	MPN/100mL	1.8	08/26/21 14:28	
SM22 9221B/E	Total Coliforms, MPN	79	MPN/100mL	1.8	08/26/21 14:28	
SM 9223B-2004	E.coli	3.0	MPN/100mL	1.0	08/27/21 14:25	
EPA 180.1	Turbidity	1.4	NTU	1.0	08/27/21 21:02	
SM22 2540B	Total Solids	372	mg/L	20.0	08/31/21 16:22	
SM22 2540D	Total Suspended Solids	2.0	mg/L	2.0	08/31/21 11:20	
SM22 4500-P E	Phosphorus	0.016J	mg/L	0.050	08/30/21 16:13	
SM22 5540C	LAS Molecular Weight, g/mol	320			08/27/21 18:49	
SM10200	Chlorophyll a (Corrected)	2.9J	mg/m3	5.0	09/09/21 07:08	
SM22 4500-N	Total Nitrogen	0.98	mg/L	0.10	09/02/21 08:00	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.97	mg/L	0.10	08/31/21 14:24	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.092J	mg/L	0.10	09/01/21 11:06	
70185358002	**2**					
SM22 9221B/E	Fecal Coliforms, MPN	2.0	MPN/100mL	1.8	08/26/21 14:28	
SM22 9221B/E	Total Coliforms, MPN	31	MPN/100mL	1.8	08/26/21 14:28	
SM 9223B-2004	E.coli	2.0	MPN/100mL	1.0	08/27/21 14:25	
EPA 180.1	Turbidity	1.7	NTU	1.0	08/27/21 21:02	
SM22 2540B	Total Solids	360	mg/L	20.0	08/31/21 16:25	
SM22 2540D	Total Suspended Solids	2.0	mg/L	2.0	08/31/21 11:20	
SM22 4500-P E	Phosphorus	0.041J	mg/L	0.050	08/30/21 16:13	
SM22 5540C	LAS Molecular Weight, g/mol	320			08/27/21 18:49	
SM22 4500-N	Total Nitrogen	0.82	mg/L	0.10	09/02/21 08:00	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.80	mg/L	0.10	08/31/21 14:25	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.13	mg/L	0.10	09/01/21 11:10	
70185358003	**3**					
SM22 9221B/E	Fecal Coliforms, MPN	6.8	MPN/100mL	1.8	08/26/21 14:28	
SM22 9221B/E	Total Coliforms, MPN	110	MPN/100mL	1.8	08/26/21 14:28	
SM 9223B-2004	E.coli	5.2	MPN/100mL	1.0	08/27/21 14:25	
EPA 180.1	Turbidity	1.5	NTU	1.0	08/27/21 20:02	
SM22 2540B	Total Solids	332	mg/L	20.0	08/31/21 16:26	
SM22 2540D	Total Suspended Solids	2.0	mg/L	2.0	08/31/21 11:20	
SM22 5540C	LAS Molecular Weight, g/mol	320			08/27/21 18:48	
SM10200	Chlorophyll a (Corrected)	2.8J	mg/m3	5.0	09/09/21 07:08	
SM22 4500-N	Total Nitrogen	0.87	mg/L	0.10	09/02/21 08:00	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.86	mg/L	0.10	08/31/21 14:28	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.099J	mg/L	0.10	09/01/21 11:11	
70185358004	**4**					
SM22 9221B/E	Fecal Coliforms, MPN	2.0	MPN/100mL	1.8	08/26/21 14:28	
SM22 9221B/E	Total Coliforms, MPN	490	MPN/100mL	1.8	08/26/21 14:28	
SM 9223B-2004	E.coli	9.7	MPN/100mL	1.0	08/27/21 14:25	
EPA 180.1	Turbidity	1.6	NTU	1.0	08/27/21 20:02	
SM22 2540B	Total Solids	296	mg/L	20.0	08/31/21 16:27	
SM22 2540D	Total Suspended Solids	3.2	mg/L	2.0	08/31/21 11:20	
SM22 5540C	LAS Molecular Weight, g/mol	320			08/27/21 18:49	
SM10200	Chlorophyll a (Corrected)	3.3J	mg/m3	5.0	09/09/21 07:08	
SM22 4500-N	Total Nitrogen	0.69	mg/L	0.10	09/02/21 08:00	

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SUMMARY OF DETECTION

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
70185358004	**4**					
EPA 351.2	Nitrogen, Kjeldahl, Total	0.68	mg/L	0.10	08/31/21 14:29	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.078J	mg/L	0.10	09/01/21 11:12	
70185358005	**5**					
SM22 9221B/E	Fecal Coliforms, MPN	<1.8	MPN/100mL	1.8	08/26/21 14:28	
SM22 9221B/E	Total Coliforms, MPN	22	MPN/100mL	1.8	08/26/21 14:28	
SM 9223B-2004	E.coli	3.1	MPN/100mL	1.0	08/27/21 14:25	
EPA 180.1	Turbidity	1.7	NTU	1.0	08/27/21 20:02	
SM22 2540B	Total Solids	300	mg/L	20.0	08/31/21 16:29	
SM22 2540D	Total Suspended Solids	3.2	mg/L	2.0	08/31/21 15:18	
SM22 4500-P E	Phosphorus	0.019J	mg/L	0.050	08/30/21 16:15	
SM22 5540C	LAS Molecular Weight, g/mol	320			08/27/21 18:49	
SM22 4500-N	Total Nitrogen	1.1	mg/L	0.10	09/02/21 08:00	
EPA 351.2	Nitrogen, Kjeldahl, Total	1.1	mg/L	0.10	08/31/21 14:30	M1
SM22 4500 NH3 H	Nitrogen, Ammonia	0.084J	mg/L	0.10	09/01/21 11:14	
70185358006	**6**					
SM22 9221B/E	Fecal Coliforms, MPN	17	MPN/100mL	1.8	08/26/21 14:28	
SM22 9221B/E	Total Coliforms, MPN	540	MPN/100mL	1.8	08/26/21 14:28	
SM 9223B-2004	E.coli	19.9	MPN/100mL	1.0	08/27/21 14:25	
EPA 180.1	Turbidity	1.1	NTU	1.0	08/27/21 21:05	
SM22 2540B	Total Solids	320	mg/L	20.0	08/31/21 16:32	
SM22 2540D	Total Suspended Solids	4.0	mg/L	2.0	08/31/21 15:19	
SM22 4500-P E	Phosphorus	0.013J	mg/L	0.050	08/30/21 16:15	
SM22 5540C	LAS Molecular Weight, g/mol	320			08/27/21 20:21	
SM22 4500-N	Total Nitrogen	0.81	mg/L	0.10	09/02/21 08:00	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.81	mg/L	0.10	08/31/21 14:32	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.13	mg/L	0.10	09/01/21 11:15	
70185358007	**7**					
SM22 9221B/E	Fecal Coliforms, MPN	230	MPN/100mL	1.8	08/26/21 14:28	
SM22 9221B/E	Total Coliforms, MPN	3,500	MPN/100mL	1.8	08/26/21 14:28	
SM 9223B-2004	E.coli	410.6	MPN/100mL	1.0	08/27/21 14:25	
EPA 180.1	Turbidity	2.7	NTU	1.0	08/27/21 21:05	
SM22 2540B	Total Solids	554	mg/L	20.0	08/31/21 16:33	
SM22 2540D	Total Suspended Solids	15.2	mg/L	2.0	08/31/21 15:19	
SM22 4500-P E	Phosphorus	0.29	mg/L	0.050	08/30/21 16:16	
SM22 5540C	LAS Molecular Weight, g/mol	320			08/27/21 20:21	
SM22 4500-N	Total Nitrogen	0.77	mg/L	0.10	09/02/21 08:00	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.73	mg/L	0.10	08/31/21 14:33	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.11	mg/L	0.10	09/01/21 11:16	
70185358008	**8**					
SM22 9221B/E	Fecal Coliforms, MPN	230	MPN/100mL	1.8	08/26/21 14:28	
SM22 9221B/E	Total Coliforms, MPN	3,500	MPN/100mL	1.8	08/26/21 14:28	
SM 9223B-2004	E.coli	261.3	MPN/100mL	1.0	08/27/21 14:25	
EPA 180.1	Turbidity	1.5	NTU	1.0	08/27/21 21:05	
SM22 2540B	Total Solids	378	mg/L	20.0	08/31/21 16:34	
SM22 2540D	Total Suspended Solids	2.4	mg/L	2.0	08/31/21 15:19	

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SUMMARY OF DETECTION

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
70185358008	**8**					
SM22 4500-P E	Phosphorus	0.041J	mg/L	0.050	08/30/21 16:16	
SM22 4500-P E	Orthophosphate as P	0.054	mg/L	0.050	08/27/21 17:23	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			08/27/21 18:54	
SM22 4500-N	Total Nitrogen	2.5	mg/L	0.10	09/02/21 08:00	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.47	mg/L	0.10	08/31/21 14:34	
EPA 353.2	Nitrate-Nitrite (as N)	2.0	mg/L	0.050	08/27/21 22:40	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.073J	mg/L	0.10	09/01/21 11:17	
70185358009	**9**					
SM22 9221B/E	Fecal Coliforms, MPN	700	MPN/100mL	1.8	08/26/21 14:28	
SM22 9221B/E	Total Coliforms, MPN	9,200	MPN/100mL	1.8	08/26/21 14:28	
SM 9223B-2004	E.coli	435.2	MPN/100mL	1.0	08/27/21 14:25	
EPA 180.1	Turbidity	0.95J	NTU	1.0	08/27/21 21:03	
SM22 2540B	Total Solids	564	mg/L	20.0	08/31/21 16:34	
SM22 2540D	Total Suspended Solids	3.2	mg/L	2.0	08/31/21 15:19	
SM22 4500-P E	Phosphorus	0.073	mg/L	0.050	08/30/21 16:17	
SM22 4500-P E	Orthophosphate as P	0.048J	mg/L	0.050	08/27/21 17:00	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			08/27/21 18:52	
SM22 4500-N	Total Nitrogen	4.7	mg/L	0.10	09/02/21 08:00	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.61	mg/L	0.10	08/31/21 14:35	
EPA 353.2	Nitrate-Nitrite (as N)	4.1	mg/L	0.25	08/27/21 22:42	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.26	mg/L	0.10	09/01/21 11:21	
70185358010	**10**					
SM22 9221B/E	Fecal Coliforms, MPN	940	MPN/100mL	1.8	08/26/21 14:28	
SM22 9221B/E	Total Coliforms, MPN	16,000	MPN/100mL	1.8	08/26/21 14:28	
SM 9223B-2004	E.coli	1986.3	MPN/100mL	1.0	08/27/21 14:25	
EPA 180.1	Turbidity	3.7	NTU	1.0	08/27/21 21:03	
SM22 2540B	Total Solids	276	mg/L	20.0	08/31/21 16:35	
SM22 2540D	Total Suspended Solids	5.2	mg/L	2.0	08/31/21 15:19	
SM22 4500-P E	Phosphorus	0.35	mg/L	0.050	08/30/21 16:17	
SM22 4500-P E	Orthophosphate as P	0.30	mg/L	0.050	08/27/21 17:00	F6,FS
SM22 5540C	LAS Molecular Weight, g/mol	320			08/27/21 18:52	
SM22 4500-N	Total Nitrogen	2.2	mg/L	0.10	09/02/21 08:00	
EPA 351.2	Nitrogen, Kjeldahl, Total	2.2	mg/L	0.10	08/31/21 14:36	
EPA 353.2	Nitrate-Nitrite (as N)	0.047J	mg/L	0.050	08/27/21 22:43	
SM22 4500 NH3 H	Nitrogen, Ammonia	1.2	mg/L	0.10	09/01/21 11:22	
70185358011	**11**					
SM22 9223B Colilert	Total Coliforms	Absent			08/27/21 09:35	
SM22 9223B Colilert	E.coli	Absent			08/27/21 09:35	
EPA 180.1	Turbidity	1.5	NTU	1.0	08/27/21 21:03	
SM22 2540B	Total Solids	618	mg/L	20.0	09/02/21 14:59	N3
SM22 2540D	Total Suspended Solids	3.2	mg/L	2.0	08/31/21 15:20	
SM22 5540C	LAS Molecular Weight, g/mol	320			08/27/21 18:52	
EPA 353.2	Nitrate-Nitrite (as N)	3.4	mg/L	0.25	08/27/21 10:02	
SM22 4500 NH3 H	Nitrogen, Ammonia	0.055J	mg/L	0.10	09/01/21 11:29	

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PROJECT NARRATIVE

Project:	LAKE STUDY 8/26
Pace Project No.:	70185358

Method: **EPA 200.7**
Description: 200.7 MET ICP, Drinking Water
Client: Woodard & Curran Inc.
Date: September 13, 2021

General Information:
1 sample was analyzed for EPA 200.7 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Method: **SM22 9221B/E**
Description: Fecal-Total Coliform, MPN
Client: Woodard & Curran Inc.
Date: September 13, 2021

General Information:
10 samples were analyzed for SM22 9221B/E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project:	LAKE STUDY 8/26
Pace Project No.:	70185358

Method: **SM 9223B-2004**
Description: SM 9223B-2004
Client: Woodard & Curran Inc.
Date: September 13, 2021

General Information:
10 samples were analyzed for SM 9223B-2004 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM 9223B-2004 with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Method: **SM22 9223B Colilert**
Description: MBIO Total Coliform DW
Client: Woodard & Curran Inc.
Date: September 13, 2021

General Information:
1 sample was analyzed for SM22 9223B Colilert by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM22 9223B Colilert with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Method: **EPA 1666A**
Description: 1666 MSV
Client: Woodard & Curran Inc.
Date: September 13, 2021

General Information:
10 samples were analyzed for EPA 1666A by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Method: **EPA 180.1**
Description: 180.1 Turbidity
Client: Woodard & Curran Inc.
Date: September 13, 2021

General Information:
11 samples were analyzed for EPA 180.1 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project:	LAKE STUDY 8/26
Pace Project No.:	70185358

Method: **SM22 2540B**
Description: 2540B Total Solids DW
Client: Woodard & Curran Inc.
Date: September 13, 2021

General Information:
1 sample was analyzed for SM22 2540B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Method: **SM22 2540B**
Description: 2540B Total Solids
Client: Woodard & Curran Inc.
Date: September 13, 2021

General Information:
10 samples were analyzed for SM22 2540B by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Method: **SM22 2540D**
Description: 2540D Total Suspended Solids
Client: Woodard & Curran Inc.
Date: September 13, 2021

General Information:
11 samples were analyzed for SM22 2540D by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 223947

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 1128930)
  - Total Suspended Solids

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Method: **SM22 4500-P E**
Description: 4500PE Total Phosphorus
Client: Woodard & Curran Inc.
Date: September 13, 2021

General Information:
10 samples were analyzed for SM22 4500-P E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM22 4500-P B with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Method: **SM22 4500-P E**
Description: 4500PE Ortho Phosphorus
Client: Woodard & Curran Inc.
Date: September 13, 2021

General Information:
11 samples were analyzed for SM22 4500-P E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 223665

- 11 (Lab ID: 70185358011)
  - Orthophosphate as P

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(631)694-3040

PROJECT NARRATIVE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Method: **SM22 5540C**
Description: 5540C MBAS Surfactants
Client: Woodard & Curran Inc.
Date: September 13, 2021

General Information:
11 samples were analyzed for SM22 5540C by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM22 5540C with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Method: **SM10200**
Description: Chlorophyll & Pheophytin
Client: Woodard & Curran Inc.
Date: September 13, 2021

General Information:
10 samples were analyzed for SM10200 by Pace Analytical Services Ormond Beach. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM10200 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Method: **SM22 4500-N**
Description: Total Nitrogen Calculation
Client: Woodard & Curran Inc.
Date: September 13, 2021

General Information:
10 samples were analyzed for SM22 4500-N by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Method: **EPA 351.2**
Description: 351.2 Total Kjeldahl Nitrogen
Client: Woodard & Curran Inc.
Date: September 13, 2021

General Information:
11 samples were analyzed for EPA 351.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 351.2 with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 223744

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70183511002,70185358005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1128210)
  - Nitrogen, Kjeldahl, Total
- MS (Lab ID: 1128212)
  - Nitrogen, Kjeldahl, Total

QC Batch: 224140

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70185358011

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1129663)
  - Nitrogen, Kjeldahl, Total

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 unpres
Client: Woodard & Curran Inc.
Date: September 13, 2021

General Information:
1 sample was analyzed for EPA 353.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Method: **EPA 353.2**
Description: 353.2 Nitrogen, NO2/NO3 pres.
Client: Woodard & Curran Inc.
Date: September 13, 2021

General Information:
10 samples were analyzed for EPA 353.2 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 223352

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 70185093001,70185284004

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1125857)
  - Nitrate-Nitrite (as N)
- MS (Lab ID: 1126351)
  - Nitrate-Nitrite (as N)

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Method: **SM22 4500 NH3 H**
Description: 4500 Ammonia Water
Client: Woodard & Curran Inc.
Date: September 13, 2021

General Information:
11 samples were analyzed for SM22 4500 NH3 H by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 1 **Lab ID: 70185358001** Collected: 08/26/21 08:38 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**<1.8**	MPN/100mL	1.8		1		08/26/21 14:28		
Total Coliforms, MPN	**79**	MPN/100mL	1.8		1		08/26/21 14:28		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**3.0**	MPN/100mL	1.0		1	08/26/21 14:25	08/27/21 14:25		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		08/31/21 17:21	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		08/31/21 17:21	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		08/31/21 17:21	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	78-114		5		08/31/21 17:21	17060-07-0	
4-Bromofluorobenzene (S)	106	%	83-111		5		08/31/21 17:21	460-00-4	
Toluene-d8 (S)	116	%	80-131		5		08/31/21 17:21	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.4**	NTU	1.0	0.32	1		08/27/21 21:02		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**372**	mg/L	20.0	18.0	1		08/31/21 16:22		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**2.0**	mg/L	2.0	0.96	1		08/31/21 11:20		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.016J**	mg/L	0.050	0.010	1	08/30/21 11:13	08/30/21 16:13	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**<0.050**	mg/L	0.050	0.010	1		08/27/21 17:00		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	08/27/21 18:33	08/27/21 18:49		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	08/27/21 18:33	08/27/21 18:49		

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 1 **Lab ID: 70185358001** Collected: 08/26/21 08:38 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**2.9J**	mg/m3	5.0	1.0	1	08/28/21 08:10	09/09/21 07:08		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**0.98**	mg/L	0.10		1		09/02/21 08:00		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.97**	mg/L	0.10	0.094	1	08/30/21 07:23	08/31/21 14:24	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	0.037	1		08/27/21 22:22	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.092J**	mg/L	0.10	0.053	1		09/01/21 11:06	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 2 **Lab ID: 70185358002** Collected: 08/26/21 08:45 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**2.0**	MPN/100mL	1.8		1		08/26/21 14:28		
Total Coliforms, MPN	**31**	MPN/100mL	1.8		1		08/26/21 14:28		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**2.0**	MPN/100mL	1.0		1	08/26/21 14:25	08/27/21 14:25		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		08/31/21 17:42	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		08/31/21 17:42	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		08/31/21 17:42	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%	78-114		5		08/31/21 17:42	17060-07-0	
4-Bromofluorobenzene (S)	104	%	83-111		5		08/31/21 17:42	460-00-4	
Toluene-d8 (S)	113	%	80-131		5		08/31/21 17:42	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.7**	NTU	1.0	0.32	1		08/27/21 21:02		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**360**	mg/L	20.0	18.0	1		08/31/21 16:25		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**2.0**	mg/L	2.0	0.96	1		08/31/21 11:20		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.041J**	mg/L	0.050	0.010	1	08/30/21 11:13	08/30/21 16:13	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**<0.050**	mg/L	0.050	0.010	1		08/27/21 17:00		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	08/27/21 18:33	08/27/21 18:49		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	08/27/21 18:33	08/27/21 18:49		

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 2 **Lab ID: 70185358002** Collected: 08/26/21 08:45 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<5.0**	mg/m3	5.0	1.0	1	08/28/21 08:10	09/09/21 07:08		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**0.82**	mg/L	0.10		1		09/02/21 08:00		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.80**	mg/L	0.10	0.094	1	08/30/21 07:23	08/31/21 14:25	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	0.037	1		08/27/21 22:26	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.13**	mg/L	0.10	0.053	1		09/01/21 11:10	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 3 **Lab ID: 70185358003** Collected: 08/26/21 08:15 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**6.8**	MPN/100mL	1.8		1		08/26/21 14:28		
Total Coliforms, MPN	**110**	MPN/100mL	1.8		1		08/26/21 14:28		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**5.2**	MPN/100mL	1.0		1	08/26/21 14:25	08/27/21 14:25		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		08/31/21 18:04	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		08/31/21 18:04	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		08/31/21 18:04	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	96	%	78-114		5		08/31/21 18:04	17060-07-0	
4-Bromofluorobenzene (S)	96	%	83-111		5		08/31/21 18:04	460-00-4	
Toluene-d8 (S)	109	%	80-131		5		08/31/21 18:04	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.5**	NTU	1.0	0.32	1		08/27/21 20:02		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**332**	mg/L	20.0	18.0	1		08/31/21 16:26		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**2.0**	mg/L	2.0	0.96	1		08/31/21 11:20		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**<0.050**	mg/L	0.050	0.010	1	08/30/21 11:13	08/30/21 16:14	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**<0.050**	mg/L	0.050	0.010	1		08/27/21 17:00		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	08/27/21 18:33	08/27/21 18:48		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	08/27/21 18:33	08/27/21 18:48		

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 3 **Lab ID: 70185358003** Collected: 08/26/21 08:15 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**2.8J**	mg/m3	5.0	1.0	1	08/28/21 08:10	09/09/21 07:08		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**0.87**	mg/L	0.10		1		09/02/21 08:00		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.86**	mg/L	0.10	0.094	1	08/30/21 07:23	08/31/21 14:28	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	0.037	1		08/27/21 22:27	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.099J**	mg/L	0.10	0.053	1		09/01/21 11:11	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 4 **Lab ID: 70185358004** Collected: 08/26/21 08:24 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**2.0**	MPN/100mL	1.8		1		08/26/21 14:28		
Total Coliforms, MPN	**490**	MPN/100mL	1.8		1		08/26/21 14:28		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**9.7**	MPN/100mL	1.0		1	08/26/21 14:25	08/27/21 14:25		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		08/31/21 18:26	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		08/31/21 18:26	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		08/31/21 18:26	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%	78-114		5		08/31/21 18:26	17060-07-0	
4-Bromofluorobenzene (S)	96	%	83-111		5		08/31/21 18:26	460-00-4	
Toluene-d8 (S)	112	%	80-131		5		08/31/21 18:26	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.6**	NTU	1.0	0.32	1		08/27/21 20:02		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**296**	mg/L	20.0	18.0	1		08/31/21 16:27		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**3.2**	mg/L	2.0	0.96	1		08/31/21 11:20		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**<0.050**	mg/L	0.050	0.010	1	08/30/21 11:13	08/30/21 16:14	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**<0.050**	mg/L	0.050	0.010	1		08/27/21 17:00		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	08/27/21 18:33	08/27/21 18:49		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	08/27/21 18:33	08/27/21 18:49		

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 4 | **Lab ID: 70185358004** | Collected: 08/26/21 08:24 | Received: 08/26/21 14:00 | Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**3.3J**	mg/m3	5.0	1.0	1	08/28/21 08:21	09/09/21 07:08		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**0.69**	mg/L	0.10		1		09/02/21 08:00		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.68**	mg/L	0.10	0.094	1	08/30/21 07:23	08/31/21 14:29	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	0.037	1		08/27/21 22:28	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.078J**	mg/L	0.10	0.053	1		09/01/21 11:12	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 5 **Lab ID: 70185358005** Collected: 08/26/21 08:30 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**<1.8**	MPN/100mL	1.8		1		08/26/21 14:28		
Total Coliforms, MPN	**22**	MPN/100mL	1.8		1		08/26/21 14:28		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**3.1**	MPN/100mL	1.0		1	08/26/21 14:25	08/27/21 14:25		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		08/31/21 18:48	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		08/31/21 18:48	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		08/31/21 18:48	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	78-114		5		08/31/21 18:48	17060-07-0	
4-Bromofluorobenzene (S)	92	%	83-111		5		08/31/21 18:48	460-00-4	
Toluene-d8 (S)	111	%	80-131		5		08/31/21 18:48	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.7**	NTU	1.0	0.32	1		08/27/21 20:02		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**300**	mg/L	20.0	18.0	1		08/31/21 16:29		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**3.2**	mg/L	2.0	0.96	1		08/31/21 15:18		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.019J**	mg/L	0.050	0.010	1	08/30/21 11:13	08/30/21 16:15	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**<0.050**	mg/L	0.050	0.010	1		08/27/21 17:00		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	08/27/21 18:33	08/27/21 18:49		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	08/27/21 18:33	08/27/21 18:49		

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 5 **Lab ID: 70185358005** Collected: 08/26/21 08:30 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<5.0**	mg/m3	5.0	1.0	1	08/28/21 08:21	09/09/21 07:08		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**1.1**	mg/L	0.10		1		09/02/21 08:00		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**1.1**	mg/L	0.10	0.094	1	08/30/21 07:23	08/31/21 14:30	7727-37-9	M1
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	0.037	1		08/27/21 22:32	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.084J**	mg/L	0.10	0.053	1		09/01/21 11:14	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 6 **Lab ID: 70185358006** Collected: 08/26/21 10:55 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**17**	MPN/100mL	1.8		1		08/26/21 14:28		
Total Coliforms, MPN	**540**	MPN/100mL	1.8		1		08/26/21 14:28		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**19.9**	MPN/100mL	1.0		1	08/26/21 14:25	08/27/21 14:25		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		08/31/21 19:09	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		08/31/21 19:09	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		08/31/21 19:09	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	78-114		5		08/31/21 19:09	17060-07-0	
4-Bromofluorobenzene (S)	100	%	83-111		5		08/31/21 19:09	460-00-4	
Toluene-d8 (S)	111	%	80-131		5		08/31/21 19:09	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.1**	NTU	1.0	0.32	1		08/27/21 21:05		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**320**	mg/L	20.0	18.0	1		08/31/21 16:32		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**4.0**	mg/L	2.0	0.96	1		08/31/21 15:19		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.013J**	mg/L	0.050	0.010	1	08/30/21 11:13	08/30/21 16:15	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**<0.050**	mg/L	0.050	0.010	1		08/27/21 18:59		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	08/27/21 20:08	08/27/21 20:21		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	08/27/21 20:08	08/27/21 20:21		

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 6 **Lab ID: 70185358006** Collected: 08/26/21 10:55 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<5.0**	mg/m3	5.0	1.0	1	08/28/21 08:21	09/09/21 07:08		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**0.81**	mg/L	0.10		1		09/02/21 08:00		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.81**	mg/L	0.10	0.094	1	08/30/21 07:23	08/31/21 14:32	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	0.037	1		08/27/21 22:36	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.13**	mg/L	0.10	0.053	1		09/01/21 11:15	7664-41-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 7 **Lab ID: 70185358007** Collected: 08/26/21 10:35 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**230**	MPN/100mL	1.8		1		08/26/21 14:28		
Total Coliforms, MPN	**3,500**	MPN/100mL	1.8		1		08/26/21 14:28		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**410.6**	MPN/100mL	1.0		1	08/26/21 14:25	08/27/21 14:25		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		08/31/21 19:31	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		08/31/21 19:31	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		08/31/21 19:31	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	108	%	78-114		5		08/31/21 19:31	17060-07-0	
4-Bromofluorobenzene (S)	106	%	83-111		5		08/31/21 19:31	460-00-4	
Toluene-d8 (S)	116	%	80-131		5		08/31/21 19:31	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**2.7**	NTU	1.0	0.32	1		08/27/21 21:05		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**554**	mg/L	20.0	18.0	1		08/31/21 16:33		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**15.2**	mg/L	2.0	0.96	1		08/31/21 15:19		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.29**	mg/L	0.050	0.010	1	08/30/21 11:13	08/30/21 16:16	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**<0.050**	mg/L	0.050	0.010	1		08/27/21 18:56		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	08/27/21 20:08	08/27/21 20:21		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	08/27/21 20:08	08/27/21 20:21		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 7 **Lab ID: 70185358007** Collected: 08/26/21 10:35 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<5.0**	mg/m3	5.0	1.0	1	08/28/21 08:21	09/09/21 07:08		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**0.77**	mg/L	0.10		1		09/02/21 08:00		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.73**	mg/L	0.10	0.094	1	08/30/21 07:23	08/31/21 14:33	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**<0.050**	mg/L	0.050	0.037	1		08/27/21 22:37	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.11**	mg/L	0.10	0.053	1		09/01/21 11:16	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 8 **Lab ID: 70185358008** Collected: 08/26/21 10:10 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**230**	MPN/100mL	1.8		1		08/26/21 14:28		
Total Coliforms, MPN	**3,500**	MPN/100mL	1.8		1		08/26/21 14:28		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**261.3**	MPN/100mL	1.0		1	08/26/21 14:25	08/27/21 14:25		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		08/31/21 19:53	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		08/31/21 19:53	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		08/31/21 19:53	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	78-114		5		08/31/21 19:53	17060-07-0	
4-Bromofluorobenzene (S)	94	%	83-111		5		08/31/21 19:53	460-00-4	
Toluene-d8 (S)	107	%	80-131		5		08/31/21 19:53	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.5**	NTU	1.0	0.32	1		08/27/21 21:05		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**378**	mg/L	20.0	18.0	1		08/31/21 16:34		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**2.4**	mg/L	2.0	0.96	1		08/31/21 15:19		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.041J**	mg/L	0.050	0.010	1	08/30/21 11:13	08/30/21 16:16	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.054**	mg/L	0.050	0.010	1		08/27/21 17:23		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	08/27/21 18:33	08/27/21 18:54		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	08/27/21 18:33	08/27/21 18:54		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 8 **Lab ID: 70185358008** Collected: 08/26/21 10:10 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<5.0**	mg/m3	5.0	1.0	1	08/28/21 08:21	09/09/21 07:08		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**2.5**	mg/L	0.10		1		09/02/21 08:00		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.47**	mg/L	0.10	0.094	1	08/30/21 07:23	08/31/21 14:34	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**2.0**	mg/L	0.050	0.037	1		08/27/21 22:40	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.073J**	mg/L	0.10	0.053	1		09/01/21 11:17	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 9 **Lab ID: 70185358009** Collected: 08/26/21 09:45 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**700**	MPN/100mL	1.8		1		08/26/21 14:28		
Total Coliforms, MPN	**9,200**	MPN/100mL	1.8		1		08/26/21 14:28		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**435.2**	MPN/100mL	1.0		1	08/26/21 14:25	08/27/21 14:25		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		08/31/21 20:14	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		08/31/21 20:14	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		08/31/21 20:14	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	78-114		5		08/31/21 20:14	17060-07-0	
4-Bromofluorobenzene (S)	102	%	83-111		5		08/31/21 20:14	460-00-4	
Toluene-d8 (S)	113	%	80-131		5		08/31/21 20:14	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**0.95J**	NTU	1.0	0.32	1		08/27/21 21:03		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**564**	mg/L	20.0	18.0	1		08/31/21 16:34		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**3.2**	mg/L	2.0	0.96	1		08/31/21 15:19		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.073**	mg/L	0.050	0.010	1	08/30/21 11:13	08/30/21 16:17	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.048J**	mg/L	0.050	0.010	1		08/27/21 17:00		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	08/27/21 18:33	08/27/21 18:52		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	08/27/21 18:33	08/27/21 18:52		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 9 **Lab ID: 70185358009** Collected: 08/26/21 09:45 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<6.2**	mg/m3	6.2	1.3	1	08/28/21 09:05	09/09/21 07:08		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**4.7**	mg/L	0.10		1		09/02/21 08:00		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**0.61**	mg/L	0.10	0.094	1	08/30/21 07:23	08/31/21 14:35	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**4.1**	mg/L	0.25	0.18	5		08/27/21 22:42	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.26**	mg/L	0.10	0.053	1		09/01/21 11:21	7664-41-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 10 **Lab ID: 70185358010** Collected: 08/26/21 09:30 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Fecal-Total Coliform, MPN	Analytical Method: SM22 9221B/E Pace Analytical Services - Melville								
Fecal Coliforms, MPN	**940**	MPN/100mL	1.8		1		08/26/21 14:28		
Total Coliforms, MPN	**16,000**	MPN/100mL	1.8		1		08/26/21 14:28		
SM 9223B-2004	Analytical Method: SM 9223B-2004 Preparation Method: SM 9223B-2004 Pace Analytical Services - Melville								
E.coli	**1986.3**	MPN/100mL	1.0		1	08/26/21 14:25	08/27/21 14:25		
1666 MSV	Analytical Method: EPA 1666A Pace Analytical Services - Melville								
Ethyl acetate	**<50.0**	ug/L	50.0	15.1	5		08/31/21 20:36	141-78-6	
Isopropyl acetate	**<50.0**	ug/L	50.0	9.3	5		08/31/21 20:36	108-21-4	
n-amyl acetate	**<25.0**	ug/L	25.0	13.4	5		08/31/21 20:36	628-63-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%	78-114		5		08/31/21 20:36	17060-07-0	
4-Bromofluorobenzene (S)	96	%	83-111		5		08/31/21 20:36	460-00-4	
Toluene-d8 (S)	111	%	80-131		5		08/31/21 20:36	2037-26-5	
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**3.7**	NTU	1.0	0.32	1		08/27/21 21:03		
2540B Total Solids	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**276**	mg/L	20.0	18.0	1		08/31/21 16:35		
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**5.2**	mg/L	2.0	0.96	1		08/31/21 15:19		
4500PE Total Phosphorus	Analytical Method: SM22 4500-P E Preparation Method: SM22 4500-P B Pace Analytical Services - Melville								
Phosphorus	**0.35**	mg/L	0.050	0.010	1	08/30/21 11:13	08/30/21 16:17	7723-14-0	
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**0.30**	mg/L	0.050	0.010	1		08/27/21 17:00		F6,FS
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	08/27/21 18:33	08/27/21 18:52		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	08/27/21 18:33	08/27/21 18:52		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 10 **Lab ID: 70185358010** Collected: 08/26/21 09:30 Received: 08/26/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Chlorophyll & Pheophytin	Analytical Method: SM10200 Preparation Method: SM10200 Pace Analytical Services - Ormond Beach								
Chlorophyll a (Corrected)	**<7.7**	mg/m3	7.7	1.6	1	08/28/21 09:05	09/09/21 07:08		
Total Nitrogen Calculation	Analytical Method: SM22 4500-N Pace Analytical Services - Melville								
Total Nitrogen	**2.2**	mg/L	0.10		1		09/02/21 08:00		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**2.2**	mg/L	0.10	0.094	1	08/30/21 07:23	08/31/21 14:36	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**0.047J**	mg/L	0.050	0.037	1		08/27/21 22:43	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**1.2**	mg/L	0.10	0.053	1		09/01/21 11:22	7664-41-7	

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ANALYTICAL RESULTS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Sample: 11 **Lab ID: 70185358011** Collected: 08/26/21 09:10 Received: 08/26/21 14:00 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, Drinking Water	Analytical Method: EPA 200.7 Pace Analytical Services - Melville								
Phosphorus	**<50.0**	ug/L	50.0	18.0	1		08/30/21 22:54	7723-14-0	N3
MBIO Total Coliform DW	Analytical Method: SM22 9223B Colilert Preparation Method: SM22 9223B Colilert Pace Analytical Services - Melville								
Total Coliforms	**Absent**				1	08/26/21 15:35	08/27/21 09:35		
E.coli	**Absent**				1	08/26/21 15:35	08/27/21 09:35		
180.1 Turbidity	Analytical Method: EPA 180.1 Pace Analytical Services - Melville								
Turbidity	**1.5**	NTU	1.0	0.32	1		08/27/21 21:03		
2540B Total Solids DW	Analytical Method: SM22 2540B Pace Analytical Services - Melville								
Total Solids	**618**	mg/L	20.0	18.0	1		09/02/21 14:59		N3
2540D Total Suspended Solids	Analytical Method: SM22 2540D Pace Analytical Services - Melville								
Total Suspended Solids	**3.2**	mg/L	2.0	0.96	1		08/31/21 15:20		
4500PE Ortho Phosphorus	Analytical Method: SM22 4500-P E Pace Analytical Services - Melville								
Orthophosphate as P	**<0.050**	mg/L	0.050	0.010	1		08/27/21 17:00		
5540C MBAS Surfactants	Analytical Method: SM22 5540C Preparation Method: SM22 5540C Pace Analytical Services - Melville								
LAS Molecular Weight, g/mol	**320**				1	08/27/21 18:33	08/27/21 18:52		
MBAS, Calculated as LAS	**<0.080**	mg/L	0.080	0.028	1	08/27/21 18:33	08/27/21 18:52		
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Melville								
Nitrogen, Kjeldahl, Total	**<0.10**	mg/L	0.10	0.094	1	09/01/21 07:36	09/03/21 12:44	7727-37-9	M1,N3
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Melville								
Nitrate-Nitrite (as N)	**3.4**	mg/L	0.25	0.18	5		08/27/21 10:02	7727-37-9	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H Pace Analytical Services - Melville								
Nitrogen, Ammonia	**0.055J**	mg/L	0.10	0.053	1		09/01/21 11:29	7664-41-7	

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch: 223796
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 MET No Prep Drinking Water
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70185358011

METHOD BLANK: 1128342 Matrix: Drinking Water
Associated Lab Samples: 70185358011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	ug/L	<50.0	50.0	18.0	08/30/21 22:08	N3

LABORATORY CONTROL SAMPLE: 1128343

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	ug/L	12500	12600	101	85-115	N3

MATRIX SPIKE SAMPLE: 1128345

Parameter	Units	70185210001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	ug/L	0.050 U mg/L	12500	15700	126	70-130	N3

MATRIX SPIKE SAMPLE: 1128347

Parameter	Units	70185210002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	ug/L	0.050 U mg/L	12500	12800	102	70-130	N3

SAMPLE DUPLICATE: 1128344

Parameter	Units	70185210001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus	ug/L	0.050 U mg/L	<50.0		20	N3

SAMPLE DUPLICATE: 1128346

Parameter	Units	70185210002 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus	ug/L	0.050 U mg/L	<50.0		20	N3

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch: 223612
QC Batch Method: SM22 9221B/E
Analysis Method: SM22 9221B/E
Analysis Description: 9221BCE Fecal-Total Coliform, MPN
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010

METHOD BLANK: 1127341 Matrix: Water

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fecal Coliforms, MPN	MPN/100mL	<1.8	1.8		08/26/21 10:30	
Total Coliforms, MPN	MPN/100mL	<1.8	1.8		08/26/21 10:30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch:	223643	Analysis Method:	SM 9223B-2004
QC Batch Method:	SM 9223B-2004	Analysis Description:	ECOLI in Waste Water
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010

METHOD BLANK: 1127430 Matrix: Water

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
E.coli	MPN/100mL	<1.0	1.0		08/27/21 14:25	

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch: 223493
QC Batch Method: SM22 9223B Colilert
Analysis Method: SM22 9223B Colilert
Analysis Description: TotColDW MBIO Total Coliform
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70185358011

METHOD BLANK: 1126706
Matrix: Drinking Water
Associated Lab Samples: 70185358011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
E.coli		Absent			08/27/21 09:35	
Total Coliforms		Absent			08/27/21 09:35	

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch: 224090
QC Batch Method: EPA 1666A
Analysis Method: EPA 1666A
Analysis Description: 1666A MSV
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010

METHOD BLANK: 1129470 Matrix: Water
Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethyl acetate	ug/L	<10.0	10.0	3.0	08/31/21 12:16	
Isopropyl acetate	ug/L	<10.0	10.0	1.9	08/31/21 12:16	
n-amyl acetate	ug/L	<5.0	5.0	2.7	08/31/21 12:16	
1,2-Dichloroethane-d4 (S)	%	108	78-114		08/31/21 12:16	
4-Bromofluorobenzene (S)	%	106	83-111		08/31/21 12:16	
Toluene-d8 (S)	%	106	80-131		08/31/21 12:16	

LABORATORY CONTROL SAMPLE: 1129471

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethyl acetate	ug/L	50	50.8	102	60-157	
Isopropyl acetate	ug/L	50	53.3	107	70-147	
n-amyl acetate	ug/L	50	58.6	117	70-130	
1,2-Dichloroethane-d4 (S)	%			101	78-114	
4-Bromofluorobenzene (S)	%			110	83-111	
Toluene-d8 (S)	%			106	80-131	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1129472 1129473

Parameter	Units	70185358001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethyl acetate	ug/L	<50.0	250	250	264	249	106	100	49-149	6	20	
Isopropyl acetate	ug/L	<50.0	250	250	262	264	105	106	29-136	1	20	
n-amyl acetate	ug/L	<25.0	250	250	274	275	110	110	36-134	0	20	
1,2-Dichloroethane-d4 (S)	%						89	89	78-114		20	
4-Bromofluorobenzene (S)	%						106	104	83-111		20	
Toluene-d8 (S)	%						105	108	80-131		20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch: 223609
QC Batch Method: EPA 180.1
Analysis Method: EPA 180.1
Analysis Description: 180.1 Turbidity
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010, 70185358011

METHOD BLANK: 1127335 Matrix: Water

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010, 70185358011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Turbidity	NTU	<1.0	1.0	0.32	08/27/21 19:50	

LABORATORY CONTROL SAMPLE: 1127336

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	10	9.6	96	90-110	

SAMPLE DUPLICATE: 1127337

Parameter	Units	70185358005 Result	Dup Result	RPD	Max RPD	Qualifiers
Turbidity	NTU	1.7	1.6	6	20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch: 224230
QC Batch Method: SM22 2540B
Analysis Method: SM22 2540B
Analysis Description: 2540B DW Total Solids
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70185358011

METHOD BLANK: 1130361 Matrix: Water
Associated Lab Samples: 70185358011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	mg/L	ND	5.0	9.0	09/02/21 14:59	N3

LABORATORY CONTROL SAMPLE: 1130362

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	700	732	105	85-115	N3

MATRIX SPIKE SAMPLE: 1130363

Parameter	Units	70185358011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	618	600	1290	112	75-125	N3

SAMPLE DUPLICATE: 1130364

Parameter	Units	70185358011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	618	616	0	5	N3

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch: 223944
QC Batch Method: SM22 2540B
Analysis Method: SM22 2540B
Analysis Description: 2540B Total Solids
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010

METHOD BLANK: 1128917 Matrix: Water

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	mg/L	ND	5.0	9.0	08/31/21 16:21	

LABORATORY CONTROL SAMPLE: 1128918

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	700	678	97	85-115	

MATRIX SPIKE SAMPLE: 1128919

Parameter	Units	70185358001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	372	600	946	96	75-125	

SAMPLE DUPLICATE: 1128920

Parameter	Units	70185358001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	372	370	1	5	

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch:	223947	Analysis Method:	SM22 2540D
QC Batch Method:	SM22 2540D	Analysis Description:	2540D Total Suspended Solids
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004

METHOD BLANK: 1128927 Matrix: Water
Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	0.25	0.24	08/31/21 11:17	

LABORATORY CONTROL SAMPLE: 1128928

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	200	186	93	85-115	

SAMPLE DUPLICATE: 1128929

Parameter	Units	70185674001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	190	192	1	5	

SAMPLE DUPLICATE: 1128930

Parameter	Units	70185674002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	13.2	14.0	6	5	D6

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch:	223948	Analysis Method:	SM22 2540D
QC Batch Method:	SM22 2540D	Analysis Description:	2540D Total Suspended Solids
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010, 70185358011

METHOD BLANK: 1128931 Matrix: Water

Associated Lab Samples: 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010, 70185358011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	0.25	0.24	08/31/21 15:18	

LABORATORY CONTROL SAMPLE: 1128932

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	200	188	94	85-115	

SAMPLE DUPLICATE: 1128933

Parameter	Units	70185358005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	3.2	3.2	0	5	

SAMPLE DUPLICATE: 1128934

Parameter	Units	70185358006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	4.0	4.0	0	5	

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch: 223753 | Analysis Method: SM22 4500-P E
QC Batch Method: SM22 4500-P B | Analysis Description: 4500PE Total Phosphorus
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010

METHOD BLANK: 1128232 Matrix: Water

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.025	0.010	08/30/21 16:03	

LABORATORY CONTROL SAMPLE: 1128233

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	0.5	0.53	107	85-115	

MATRIX SPIKE SAMPLE: 1128234

Parameter	Units	70183820004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	2.9	0.5	3.3	82	75-125	

SAMPLE DUPLICATE: 1128235

Parameter	Units	70183820004 Result	Dup Result	RPD	Max RPD	Qualifiers
Phosphorus	mg/L	2.9	3.0	3	20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch: 223665
QC Batch Method: SM22 4500-P E
Analysis Method: SM22 4500-P E
Analysis Description: 4500PE Ortho Phosphorus
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010, 70185358011

METHOD BLANK: 1127717 Matrix: Water

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010, 70185358011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	ND	0.025	0.010	08/27/21 16:59	

LABORATORY CONTROL SAMPLE: 1127718

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.5	0.48	97	85-115	

MATRIX SPIKE SAMPLE: 1127735

Parameter	Units	70185358003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	<0.050	0.5	0.44	88	75-125	

SAMPLE DUPLICATE: 1127736

Parameter	Units	70185358003 Result	Dup Result	RPD	Max RPD	Qualifiers
Orthophosphate as P	mg/L	<0.050	<0.050		20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch: 223642
QC Batch Method: SM22 5540C
Analysis Method: SM22 5540C
Analysis Description: 5540C MBAS Surfactants
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358008, 70185358009, 70185358010, 70185358011

METHOD BLANK: 1127426 Matrix: Water
Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358008, 70185358009, 70185358010, 70185358011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
LAS Molecular Weight, g/mol		320			08/27/21 18:47	
MBAS, Calculated as LAS	mg/L	ND	0.040	0.028	08/27/21 18:47	

LABORATORY CONTROL SAMPLE: 1127427

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
LAS Molecular Weight, g/mol			320			
MBAS, Calculated as LAS	mg/L	0.24	0.24	98	85-115	

MATRIX SPIKE SAMPLE: 1127428

Parameter	Units	70185417001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
LAS Molecular Weight, g/mol		<0		320			
MBAS, Calculated as LAS	mg/L	<0.080	0.24	0.21	86	75-125	

SAMPLE DUPLICATE: 1127429

Parameter	Units	70185417001 Result	Dup Result	RPD	Max RPD	Qualifiers
LAS Molecular Weight, g/mol		320	320			
MBAS, Calculated as LAS	mg/L	<0.080	<0.080		20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch: 223701
QC Batch Method: SM22 5540C
Analysis Method: SM22 5540C
Analysis Description: 5540C MBAS Surfactants
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70185358006, 70185358007

METHOD BLANK: 1127990
Matrix: Water
Associated Lab Samples: 70185358006, 70185358007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
LAS Molecular Weight, g/mol		320			08/27/21 20:19	
MBAS, Calculated as LAS	mg/L	ND	0.040	0.028	08/27/21 20:19	

LABORATORY CONTROL SAMPLE: 1127991

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
LAS Molecular Weight, g/mol			320			
MBAS, Calculated as LAS	mg/L	0.24	0.24	101	85-115	

MATRIX SPIKE SAMPLE: 1127992

Parameter	Units	70185448001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
LAS Molecular Weight, g/mol				320			
MBAS, Calculated as LAS	mg/L	<0.080	0.24	0.20	82	75-125	

SAMPLE DUPLICATE: 1127993

Parameter	Units	70185448001 Result	Dup Result	RPD	Max RPD	Qualifiers
LAS Molecular Weight, g/mol		320	320			
MBAS, Calculated as LAS	mg/L	<0.080	<0.080		20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch: 757673
Analysis Method: SM10200
QC Batch Method: SM10200
Analysis Description: Chlorophyll & Pheophytin
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010

METHOD BLANK: 4140416 Matrix: Water

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorophyll a (Corrected)	mg/m3	<5.0	5.0	1.0	09/09/21 07:08	

SAMPLE DUPLICATE: 4140418

Parameter	Units	70185358009 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a (Corrected)	mg/m3	<6.2	<6.2		40	

SAMPLE DUPLICATE: 4140419

Parameter	Units	70185358010 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorophyll a (Corrected)	mg/m3	<7.7	<7.7		40	

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch:	224140	Analysis Method:	EPA 351.2
QC Batch Method:	EPA 351.2	Analysis Description:	351.2 TKN DW
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70185358011

METHOD BLANK: 1129661 Matrix: Drinking Water
Associated Lab Samples: 70185358011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	ND	0.094	0.094	09/03/21 12:42	N3

LABORATORY CONTROL SAMPLE: 1129662

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4	4.1	102	90-110	N3

MATRIX SPIKE SAMPLE: 1129663

Parameter	Units	70185358011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.10	4	2.4	60	90-110	M1,N3

SAMPLE DUPLICATE: 1129664

Parameter	Units	70185358011 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.10	<0.10		20	N3

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch: 223744
QC Batch Method: EPA 351.2
Analysis Method: EPA 351.2
Analysis Description: 351.2 TKN
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010

METHOD BLANK: 1128208 Matrix: Water

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	ND	0.094	0.094	08/31/21 14:11	

LABORATORY CONTROL SAMPLE: 1128209

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4	4.2	106	90-110	

MATRIX SPIKE SAMPLE: 1128210

Parameter	Units	70183511002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	2.2	4	6.9	117	90-110	M1

MATRIX SPIKE SAMPLE: 1128212

Parameter	Units	70185358005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.1	4	4.6	87	90-110	M1

SAMPLE DUPLICATE: 1128211

Parameter	Units	70183511002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	2.2	2.2	3	20	

SAMPLE DUPLICATE: 1128213

Parameter	Units	70185358005 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.1	1.1	1	20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch: 223352
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004

METHOD BLANK: 1125855 Matrix: Water
Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	ND	0.037	0.037	08/27/21 21:51	

LABORATORY CONTROL SAMPLE: 1125856

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	0.99	99	90-110	

MATRIX SPIKE SAMPLE: 1125857

Parameter	Units	70185093001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	2.3	2.5	3.2	35	90-110	M1

MATRIX SPIKE SAMPLE: 1126351

Parameter	Units	70185284004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	5.9	2.5	9.3	136	90-110	M1

SAMPLE DUPLICATE: 1125858

Parameter	Units	70185093001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	2.3	2.0	12	20	

SAMPLE DUPLICATE: 1126352

Parameter	Units	70185284004 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	5.9	5.2	13	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch: 223524
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010

METHOD BLANK: 1127003 Matrix: Water
Associated Lab Samples: 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	ND	0.037	0.037	08/27/21 22:30	

LABORATORY CONTROL SAMPLE: 1127004

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	0.99	99	90-110	

MATRIX SPIKE SAMPLE: 1127005

Parameter	Units	70185358005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	0.5	0.47	91	90-110	

MATRIX SPIKE SAMPLE: 1127988

Parameter	Units	70185464003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	3.5	2.5	5.8	93	90-110	

SAMPLE DUPLICATE: 1127006

Parameter	Units	70185358005 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	<0.050		20	

SAMPLE DUPLICATE: 1127989

Parameter	Units	70185464003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	3.5	3.2	8	20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch: 223523
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate, Unpres.
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70185358011

METHOD BLANK: 1126988 Matrix: Water
Associated Lab Samples: 70185358011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	ND	0.037	0.037	08/27/21 00:22	

LABORATORY CONTROL SAMPLE: 1126989

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	1.1	106	90-110	

MATRIX SPIKE SAMPLE: 1126990

Parameter	Units	70185296002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1.2	0.5	1.7	106	90-110	

MATRIX SPIKE SAMPLE: 1126992

Parameter	Units	70185417001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.23	0.5	0.78	110	90-110	

SAMPLE DUPLICATE: 1126991

Parameter	Units	70185296002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1.2	1.2	1	20	

SAMPLE DUPLICATE: 1126993

Parameter	Units	70185417001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.23	0.22	4	20	

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch: 224076
QC Batch Method: SM22 4500 NH3 H
Analysis Method: SM22 4500 NH3 H
Analysis Description: 4500 Ammonia
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010

METHOD BLANK: 1129452 Matrix: Water

Associated Lab Samples: 70185358001, 70185358002, 70185358003, 70185358004, 70185358005, 70185358006, 70185358007, 70185358008, 70185358009, 70185358010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.050	0.053	09/01/21 10:50	

LABORATORY CONTROL SAMPLE: 1129453

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	102	90-110	

MATRIX SPIKE SAMPLE: 1129454

Parameter	Units	70185358001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.092J	1	1.3	116	75-125	

SAMPLE DUPLICATE: 1129455

Parameter	Units	70185358001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.092J	0.095J		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

QC Batch: 224079
QC Batch Method: SM22 4500 NH3 H
Analysis Method: SM22 4500 NH3 H
Analysis Description: 4500 Ammonia
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70185358011

METHOD BLANK: 1129457 Matrix: Water
Associated Lab Samples: 70185358011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.050	0.053	09/01/21 11:27	

LABORATORY CONTROL SAMPLE: 1129458

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	101	90-110	

MATRIX SPIKE SAMPLE: 1129459

Parameter	Units	70185439004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	<0.10	1	1.2	115	75-125	

SAMPLE DUPLICATE: 1129460

Parameter	Units	70185439004 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	<0.10	<0.10		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALIFIERS

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
F6	Sample was not filtered within 15 minutes of collection and does not meet sampling and/or regulatory requirements.
FS	The sample was filtered in the laboratory prior to analysis.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N3	Accreditation is not offered by the relevant laboratory accrediting body for this parameter.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70185358011	11	EPA 200.7	223796		
70185358001	1	SM22 9221B/E	223612		
70185358002	2	SM22 9221B/E	223612		
70185358003	3	SM22 9221B/E	223612		
70185358004	4	SM22 9221B/E	223612		
70185358005	5	SM22 9221B/E	223612		
70185358006	6	SM22 9221B/E	223612		
70185358007	7	SM22 9221B/E	223612		
70185358008	8	SM22 9221B/E	223612		
70185358009	9	SM22 9221B/E	223612		
70185358010	10	SM22 9221B/E	223612		
70185358001	1	SM 9223B-2004	223643	SM 9223B-2004	223675
70185358002	2	SM 9223B-2004	223643	SM 9223B-2004	223675
70185358003	3	SM 9223B-2004	223643	SM 9223B-2004	223675
70185358004	4	SM 9223B-2004	223643	SM 9223B-2004	223675
70185358005	5	SM 9223B-2004	223643	SM 9223B-2004	223675
70185358006	6	SM 9223B-2004	223643	SM 9223B-2004	223675
70185358007	7	SM 9223B-2004	223643	SM 9223B-2004	223675
70185358008	8	SM 9223B-2004	223643	SM 9223B-2004	223675
70185358009	9	SM 9223B-2004	223643	SM 9223B-2004	223675
70185358010	10	SM 9223B-2004	223643	SM 9223B-2004	223675
70185358011	11	SM22 9223B Colilert	223493	SM22 9223B Colilert	223640
70185358001	1	EPA 1666A	224090		
70185358002	2	EPA 1666A	224090		
70185358003	3	EPA 1666A	224090		
70185358004	4	EPA 1666A	224090		
70185358005	5	EPA 1666A	224090		
70185358006	6	EPA 1666A	224090		
70185358007	7	EPA 1666A	224090		
70185358008	8	EPA 1666A	224090		
70185358009	9	EPA 1666A	224090		
70185358010	10	EPA 1666A	224090		
70185358001	1	EPA 180.1	223609		
70185358002	2	EPA 180.1	223609		
70185358003	3	EPA 180.1	223609		
70185358004	4	EPA 180.1	223609		
70185358005	5	EPA 180.1	223609		
70185358006	6	EPA 180.1	223609		
70185358007	7	EPA 180.1	223609		
70185358008	8	EPA 180.1	223609		
70185358009	9	EPA 180.1	223609		
70185358010	10	EPA 180.1	223609		
70185358011	11	EPA 180.1	223609		
70185358011	11	SM22 2540B	224230		
70185358001	1	SM22 2540B	223944		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70185358002	**2**	SM22 2540B	223944		
70185358003	**3**	SM22 2540B	223944		
70185358004	**4**	SM22 2540B	223944		
70185358005	**5**	SM22 2540B	223944		
70185358006	**6**	SM22 2540B	223944		
70185358007	**7**	SM22 2540B	223944		
70185358008	**8**	SM22 2540B	223944		
70185358009	**9**	SM22 2540B	223944		
70185358010	**10**	SM22 2540B	223944		
70185358001	**1**	SM22 2540D	223947		
70185358002	**2**	SM22 2540D	223947		
70185358003	**3**	SM22 2540D	223947		
70185358004	**4**	SM22 2540D	223947		
70185358005	**5**	SM22 2540D	223948		
70185358006	**6**	SM22 2540D	223948		
70185358007	**7**	SM22 2540D	223948		
70185358008	**8**	SM22 2540D	223948		
70185358009	**9**	SM22 2540D	223948		
70185358010	**10**	SM22 2540D	223948		
70185358011	**11**	SM22 2540D	223948		
70185358001	**1**	SM22 4500-P B	223753	SM22 4500-P E	223855
70185358002	**2**	SM22 4500-P B	223753	SM22 4500-P E	223855
70185358003	**3**	SM22 4500-P B	223753	SM22 4500-P E	223855
70185358004	**4**	SM22 4500-P B	223753	SM22 4500-P E	223855
70185358005	**5**	SM22 4500-P B	223753	SM22 4500-P E	223855
70185358006	**6**	SM22 4500-P B	223753	SM22 4500-P E	223855
70185358007	**7**	SM22 4500-P B	223753	SM22 4500-P E	223855
70185358008	**8**	SM22 4500-P B	223753	SM22 4500-P E	223855
70185358009	**9**	SM22 4500-P B	223753	SM22 4500-P E	223855
70185358010	**10**	SM22 4500-P B	223753	SM22 4500-P E	223855
70185358001	**1**	SM22 4500-P E	223665		
70185358002	**2**	SM22 4500-P E	223665		
70185358003	**3**	SM22 4500-P E	223665		
70185358004	**4**	SM22 4500-P E	223665		
70185358005	**5**	SM22 4500-P E	223665		
70185358006	**6**	SM22 4500-P E	223665		
70185358007	**7**	SM22 4500-P E	223665		
70185358008	**8**	SM22 4500-P E	223665		
70185358009	**9**	SM22 4500-P E	223665		
70185358010	**10**	SM22 4500-P E	223665		
70185358011	**11**	SM22 4500-P E	223665		
70185358001	**1**	SM22 5540C	223642	SM22 5540C	223695
70185358002	**2**	SM22 5540C	223642	SM22 5540C	223695
70185358003	**3**	SM22 5540C	223642	SM22 5540C	223695
70185358004	**4**	SM22 5540C	223642	SM22 5540C	223695
70185358005	**5**	SM22 5540C	223642	SM22 5540C	223695

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70185358006	**6**	SM22 5540C	223701	SM22 5540C	223702
70185358007	**7**	SM22 5540C	223701	SM22 5540C	223702
70185358008	**8**	SM22 5540C	223642	SM22 5540C	223695
70185358009	**9**	SM22 5540C	223642	SM22 5540C	223695
70185358010	**10**	SM22 5540C	223642	SM22 5540C	223695
70185358011	**11**	SM22 5540C	223642	SM22 5540C	223695
70185358001	**1**	SM10200	757673	SM10200	760245
70185358002	**2**	SM10200	757673	SM10200	760245
70185358003	**3**	SM10200	757673	SM10200	760245
70185358004	**4**	SM10200	757673	SM10200	760245
70185358005	**5**	SM10200	757673	SM10200	760245
70185358006	**6**	SM10200	757673	SM10200	760245
70185358007	**7**	SM10200	757673	SM10200	760245
70185358008	**8**	SM10200	757673	SM10200	760245
70185358009	**9**	SM10200	757673	SM10200	760245
70185358010	**10**	SM10200	757673	SM10200	760245
70185358001	**1**	SM22 4500-N	224372		
70185358002	**2**	SM22 4500-N	224372		
70185358003	**3**	SM22 4500-N	224372		
70185358004	**4**	SM22 4500-N	224372		
70185358005	**5**	SM22 4500-N	224372		
70185358006	**6**	SM22 4500-N	224372		
70185358007	**7**	SM22 4500-N	224372		
70185358008	**8**	SM22 4500-N	224372		
70185358009	**9**	SM22 4500-N	224372		
70185358010	**10**	SM22 4500-N	224372		
70185358011	**11**	EPA 351.2	224140	EPA 351.2	224144
70185358001	**1**	EPA 351.2	223744	EPA 351.2	223776
70185358002	**2**	EPA 351.2	223744	EPA 351.2	223776
70185358003	**3**	EPA 351.2	223744	EPA 351.2	223776
70185358004	**4**	EPA 351.2	223744	EPA 351.2	223776
70185358005	**5**	EPA 351.2	223744	EPA 351.2	223776
70185358006	**6**	EPA 351.2	223744	EPA 351.2	223776
70185358007	**7**	EPA 351.2	223744	EPA 351.2	223776
70185358008	**8**	EPA 351.2	223744	EPA 351.2	223776
70185358009	**9**	EPA 351.2	223744	EPA 351.2	223776
70185358010	**10**	EPA 351.2	223744	EPA 351.2	223776
70185358011	**11**	EPA 353.2	223523		
70185358001	**1**	EPA 353.2	223352		
70185358002	**2**	EPA 353.2	223352		
70185358003	**3**	EPA 353.2	223352		
70185358004	**4**	EPA 353.2	223352		
70185358005	**5**	EPA 353.2	223524		
70185358006	**6**	EPA 353.2	223524		
70185358007	**7**	EPA 353.2	223524		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LAKE STUDY 8/26
Pace Project No.: 70185358

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70185358008	**8**	EPA 353.2	223524		
70185358009	**9**	EPA 353.2	223524		
70185358010	**10**	EPA 353.2	223524		
70185358001	**1**	SM22 4500 NH3 H	224076		
70185358002	**2**	SM22 4500 NH3 H	224076		
70185358003	**3**	SM22 4500 NH3 H	224076		
70185358004	**4**	SM22 4500 NH3 H	224076		
70185358005	**5**	SM22 4500 NH3 H	224076		
70185358006	**6**	SM22 4500 NH3 H	224076		
70185358007	**7**	SM22 4500 NH3 H	224076		
70185358008	**8**	SM22 4500 NH3 H	224076		
70185358009	**9**	SM22 4500 NH3 H	224076		
70185358010	**10**	SM22 4500 NH3 H	224076		
70185358011	**11**	SM22 4500 NH3 H	224079		

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CHAIN-OF-CUSTODY / A

The Chain-of-Custody is a LEGAL DO

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and ... pdf.

WO# : 70185358

70185358

Page 1 Of 1

Section A
Required Client Information:

Company:	Woodard & Curran Inc.
Address:	800 Westchester Avenue
	Port Chester, NY 10573
Email:	enealon@woodardcurran.com
Phone:	646-915-7419
Fax:	
Requested Due Date:	

Section B
Required Project Information:

Report To:	Emily Nealon
Copy To:	
Purchase Order #:	
Project Name:	Lake Study
Project #:	

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	nicolette.lovari@pacelabs.com,
Pace Profile #:	7408

Regulatory Agency
State / Location
NY

MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

SAMPLE ID — One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Y/N Analyses Test	Total and Fecal/ E.coli	No2/NO3 NH3, T. Phos, TKN	O. Phos, TS, TSS, MBAS, T	1666	Chlorophyll A (48 hr holding	Total Coliform presence/absence	T. Phos 200.7	OPhos, TS, TSS, MBAS, Turb	NO2/NO3 NH3, TKN				Residual Chlorine (Y/N)	
1	1	WT		8/26	8:38														X	X	X	X	X									
2	2	WT		8/26	8:45														X	X	X	X	X									
3	3	WT		8/26	8:15														X	X	X	X	X									
4	4	WT		8/26	8:24														X	X	X	X	X									
5	5	WT		8/26	8:30														X	X	X	X	X									
6	6	WT		8/26	10:55														X	X	X	X	X									
7	7	WT		8/26	10:35														X	X	X	X	X									
8	8	WT		8/26	10:10														X	X	X	X	X									
9	9	WT		8/26	10:40		9:45												X	X	X	X	X									
10	10	WT		8/26	9:30														X	X	X	X	X									
11	11	DW		8/26	9:10																			X	X	X	X					
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Emily Nealon	8/26	2:00	[illegible] Pace L.I.	8/26/11	14:00	1.6	W	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER:

DATE Signed:

Sample Condition Upon Receipt

Pace Analytical®

WO#: 70185358
PM: NML Due Date: 09/03/21
CLIENT: WWC

Client Name: WWC Project

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ Yes ☒ No Seals intact: ☐ Yes ☒ No

Temperature Blank Present: ☐ Yes ☒ No

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ Ziploc ☐ None ☐ Other

Type of Ice: Wet Blue None

Thermometer Used: TH09 Correction Factor: +0.0

☐ Samples on ice, cooling process has begun

Cooler Temperature(°C): 1.6 Cooler Temperature Corrected(°C): 1.6

Date/Time 5035A kits placed in freezer

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☒ N/A, water sample)

Date and Initials of person examining contents: 8/26/21 JP

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ Yes ☐ No

Did samples orignate from a foreign source including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☒ Yes	☐ No		1.
Chain of Custody Filled Out:	☒ Yes	☐ No		2.
Chain of Custody Relinquished:	☒ Yes	☐ No		3.
Sampler Name & Signature on COC:	☐ Yes	☒ No	☐ N/A	4.
Samples Arrived within Hold Time:	☒ Yes	☐ No		5.
Short Hold Time Analysis (<72hr):	☒ Yes	☐ No		6.
Rush Turn Around Time Requested:	☐ Yes	☒ No		7.
Sufficient Volume: (Triple volume provided for	☒ Yes	☐ No		8.
Correct Containers Used:	☒ Yes	☐ No		9.
-Pace Containers Used:	☒ Yes	☐ No		
Containers Intact:	☒ Yes	☐ No		10.
Filtered volume received for Dissolved tests	☐ Yes	☐ No	☒ N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC: -Includes date/time/ID, Matrix: SL WT OIL	☒ Yes	☐ No		12.
All containers needing preservation have been checked? pH paper Lot # HC025486	☒ Yes	☐ No	☐ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl Sample #
All containers needing preservation are found to be in compliance with method recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	☒ Yes	☐ No	☐ N/A	Initial when completed: / Lot # of added preservative: / Date/Time preservative added:
Samples checked for dechlorination: KI starch test strips Lot # Residual chlorine strips Lot #	☐ Yes	☐ No	☒ N/A	14. Positive for Res. Chlorine? Y N
SM 4500 CN samples checked for sulfide? Lead Acetate Strips Lot #	☐ Yes	☐ No	☒ N/A	15.
Headspace in VOA Vials (>6mm):	☒ Yes	☐ No	☐ N/A	16.
Trip Blank Present:	☐ Yes	☒ No	☐ N/A	17.
Trip Blank Custody Seals Present	☐ Yes	☐ No	☒ N/A	
Pace Trip Blank Lot # (if applicable):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

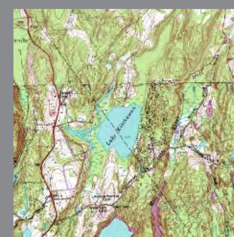
Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS.

APPENDIX F: LAKE KITCHAWAN WATERSHED MANAGEMENT PLAN (2008)

Prepared for:
Lake Kitchawan Conservation Committee
Pound Ridge, New York




Lake/Lagoon and Watershed Management Plan for Lake Kitchawan – Pound Ridge, NY

Final

ENSR Corporation
March 2008
Document No.: 12567-002-100

Prepared for:
Lake Kitchawan Conservation Committee
Pound Ridge, New York

Lake/Lagoon and Watershed Management Plan for Lake Kitchawan – Pound Ridge, NY

Final

Prepared By

Reviewed By

ENSR Corporation
March 2008
Document No.: 12567-002-100

ENSR | AECOM

Contents

List of Appendices

List of Tables

1.0 Introduction

Lake Kitchawan (including lagoon areas) is a 106.5-acre waterbody located in Westchester County, New York. The lake has significant problems with rooted aquatic plant growth, and is very shallow. The New York City Department of Environmental Protection has identified septic systems and stormwater runoff as likely sources of elevated nutrient concentrations in Lake Kitchawan (NYCDEP, date).

The lake residents have pursued a variety of options to address the dense aquatic plant growths that currently impair uses of the lake. One such step was to secure funding through the Towns of Pound Ridge and Lewisboro, via a New York State Department of Environmental Conservation (NYSDEC) grant, as well as additional funding by the lake residents to fund an assessment of the lake, and development of a comprehensive Lake Management Plan. This Lake Kitchawan study will be included in a town wide lake management plan being performed by "Ecologic" from upstate NY (funded by NYSDEC grant and the town of Lewisboro).

The purpose of this report is to document the findings of the lake assessment and the evaluation of management options, as well as to present the comprehensive lake and lagoon management plan to the Lake Kitchawan Conservation Committee (LKCC). The intent of the Lake Management Plan is to identify and prioritize management strategies that will satisfy the objectives of the LKCC. LKCC's goal is to provide a swimmable, boatable, and fishable lake that is aesthetically acceptable. The LKCC objectives to achieve this goal are to 1) reduce/manage the amount of submerged aquatic vegetation; 2) Increase the water quality of the lake and lagoons by decreasing the levels of nutrients; and 3) Restore recreational accessibility to the lake and lagoon system.

This Lake Management Plan provides information in sufficient detail to support LKCC's efforts to begin to implement management actions. Management options were selected based on data collected in the 2007 Diagnostic Study (summarized herein), the objectives of LKCC, current New York regulatory requirements, geomorphology of the lake/lagoon system, and feasibility and cost-effectiveness of management options. It is important to recognize the lake management is an ongoing and iterative process rather than a one-time action. Accordingly, the Lake Management Plan must be a "living" document, updated and refined as new information becomes available and actions are undertaken.

The remainder of this document is organized as follows:

Section 2 provides a brief overview of Lake Kitchawan (including lagoons) and its watershed

Section 3 summarizes the methodology and results of the 2007 Lake Kitchawan diagnostic assessment;

Section 4 provides a diagnostic summary;

Section 5 describes the screening and evaluation of management options;

Section 6 describes the recommended Lake/Lagoon Management Plan; and

Section 7 identifies potential funding sources for implementation.

2.0 Description of Lake/Lagoon System and the Lake Kitchawan Watershed

2.1 Lake Kitchawan and Lagoon System

Lake Kitchawan is located in Westchester County, New York and is jurisdictionally bisected by the towns of Pound Ridge and Lewisboro. Collectively, Lake Kitchawan and its lagoon system are approximately 106.5 acres in area. Surface area includes a 97-acre open-water lake and a 9.5-acre lagoon system connected to the southwestern and northwestern quadrants of the waterbody (Figure 1). Water depth ranges from 0.5 feet in the lagoons to approximately 14 feet within the deepest area of the lake. Extensive NYSDEC regulated wetlands border significant portions of the northern and western shorelines. In addition, portions of the riparian shoreline have small populations of Purple Loosestrife and Phragmites.

Approximately 80 to 85% of the lake and 95% to 100% of the lagoon system (seasonally dependent) consist of submerged vegetation (SAV) providing limited accessibility by boat. Invasive vegetative species known to exist within the waterbody include Illinois Pondweed and Eurasian Milfoil. Sediment depth is deep (greater than 18 feet deep in most places). The lake supports a typical warmwater fish community; species known to exist within the lake include largemouth bass, sunfish, and other recreational species.

Lake Kitchawan is listed in the NYSDEC 2000 State Water Quality Report as impaired (NYSDEC, 2000) and is further categorized with an impaired severity of stressed caused by suspected failing of on-site septic systems. In addition, the lake was also listed on the 1996 and 1999 NYSDEC Priority Waterbodies List (PWL) for high nutrient loads and the NYS 303d list in 1998. Section 303d of the Clean Water Act requires States to identify waterbodies that are impaired for Total Maximum Daily Load (TMDL) development. Phosphorous was identified as the primary known source for impairment for Lake Kitchawan (WCDP, 2007). The lake's primary recreational use, as characterized by the New York State Department of Environmental Conservation (NYSDEC) is swimming.

2.2 Lake Kitchawan Watershed Description

Lake Kitchawan and its adjacent lagoons are located within the Cross River basin, a sub-watershed of the Croton Reservoir Watershed. In Westchester County, the Croton Watershed covers ten (10) municipalities and contains 400 miles of streams and 65 lakes and ponds. The primary sources associated with nutrient loading of most impacted waterbodies (including Lake Kitchawan) within the Croton Watershed include failing on-site septic systems and urban runoff (Lower Hudson Coalition of Conservation Districts, 2003).

The Cross River sub-watershed is approximately 19,200 acres in size (17,241 acres located in Westchester County) with 45% of the land use being residential (WCDP, 2002). A total of four (4) wastewater treatment plants are located within the sub-watershed and, along with other minor sources, contribute to the overall phosphorus load of 717 kg/yr. The Total Maximum Daily Load (TMDL) of phosphorus for the Cross River Basin as determined by the New York City Department of Environmental Protection (NYCDEP) is 1,007kg/yr (WCDP, 2002). The current phosphorus load of the Cross River sub-watershed is well below the available load (WCDP, 2002).

Lake Kitchawan and its lagoons are located within the Metropolitan Conservation Alliance (MCA) Eastern Westchester Biotic Corridor and represent approximately 19% of the total area of the Cross River sub-watershed. The Lake Kitchawan Watershed is approximately 910 acres in area and receives stormwater runoff from approximately 880 acres of surrounding properties (Figure 1). Surrounding areas are primarily considered light (low density) residential and have significant tracts of wetlands. Four tributaries discharge to Lake

Kitchawan or its lagoon areas; one from the north, south, east and west (WCDP, 2007). Primary outflow is through a tributary connected to the Cross River.

The topography of the Kitchawan Lake watershed drainage area is generally characterized by rolling and steep hills with numerous valleys and wetlands. Soil types in the watershed are predominantly Charlton-Chatfield Complex – rolling very rocky (28%), Carlisle Muck (10%), and Charlton-Chatfield Complex – hilly, very rocky (10%). Soil type locations are given in Figure 2. Table 2-1 lists the soil type acreage. The Charlton-Chatfield Complex is classified as a well drained to excessively drained soil of varying slope with surface runoff medium too rapid.

The Charlton-Chatfield complex has a poor suitability for septic systems because of the shallow depth to bedrock and steep slopes.

Table 2-1 Lake Kitchawan/Lagoon Watershed Soil Composition

Soil	Lake Watershed	Lagoon Watershed	
Class	Total per Soil Class (in Acres)	Total per Soil Class (in Acres)	Total
Ce	54.899	32.985	**87.884**
ChB	13.298	2.555	**15.853**
ChC	8.696	3.453	**12.149**
ChD	21.921		**21.921**
ChE	4.782		**4.782**
CrC	154.776	116.222	**270.998**
CsD	55.364	75.395	**130.759**
CtC	35.593	32.814	**68.407**
CuD	30.247	17.284	**47.531**
HrF	13.544		**13.544**
LcB	7.764	17.926	**25.690**
Pa	0.021	28.886	**28.907**
PnC	22.265		**22.265**
Pc		1.658	**1.658**
PnB		7.923	**7.923**
RhB	4.977		**4.977**
RhD	0.935		**0.935**
Sh	7.894	8.820	**16.714**
Sm		1.763	**1.763**
SuB	12.865	3.101	**15.966**
W	98.205	10.722	**108.927**
WdB		0.512	**0.512**
Total	**548.046**	**362.019**	**910.065**

Source: USGS, 1999
See Figure2 for key to soil class codes

2.2.1 Watershed Land Use

As stated previously, Lake Kitchawan is jurisdictionally subdivided by the towns of Pound Ridge and Lewisboro. According to the 1985 Lewisboro Master Plan, land use along the northern portion of the Lake primarily consists of very poorly drained soils (NYS regulated contiguous wetlands) and low intensity residential development (one house per every 2 acres). The northeastern portion of the watershed is predominantly moderate intensity residential (one to three houses per acre) and the southeastern portion is categorized as low intensity residential. The southern portions of the watershed consist of open space, wetlands, and low intensity residential areas. A portion of the Leon Levy Preserve, a 386-acre parcel consisting of woodland trails, forests, and wetlands, is located within the watershed to the north; and the Schwartz Preserve, an 8-acre undeveloped parcel located consisting of DEC wetlands and some forest, is located within the northern portion of the lagoon system. Overall, the majority of the Kitchawan Lake/Lagoon watershed can be largely characterized as low intensity residential (47%) with substantial open space and contiguous wetlands surrounding the lake. In addition, the watershed has 6% impervious surfaces, 4% of that total attributed to roads, driveways, parking lots, and public sidewalks (WCDP, 2007). Table 2-2 contains a summary of the land use for Lake Kitchawan and its adjacent lagoons. Locations of various land use areas are given in Figure 3.

Table 2-2 Lake Kitchawan Land Use Summary

Land Use Class	Lake Watershed Area (acres)	Lagoon Watershed Area (acres)	Total (acres)	Percent of Total (%)
Low Density Residential	180.2	245.4	**425.6**	47%
High Density Residential	65.3	0.0	**65.3**	7%
Utility	2.3	15.8	**18.0**	2%
DEC wetlands (excludes 9.5 acres of lagoon and 1.2 acres of the lake area mapped as DEC wetland)	73.1	51.1	**124.2**	14%
Other Wetland	5.6	0.0	**5.6**	1%
Park (outside DEC wetlands)	0.0	2.3	**2.3**	0%
Lake/lagoon	97.0	9.5	**106.5**	12%
Undeveloped	124.9	38.3	**163.1**	18%
	548.3	**362.3**	**910.5**	100%

Source: 1999 landuse from Mapping Westchester County
http://giswww.westchestergov.com/consolidatedemap/default.aspx

3.0 Lake Kitchawan and Lagoon System Diagnostic Study

The Lake Kitchawan Diagnostic Study was implemented due to the growing concerns of adjacent municipalities, homeowners, and the Lake Kitchawan Conservation Committee (LKCC) relative to:

- noticeable increases in abundance of native and nuisance submerged aquatic vegetation (SAV) within the Kitchawan lake and lagoon system;
- limited recreational accessibility within the lake and lagoons; and the
- absence of sufficient water quality, nutrient loading, and physical data.

In response to the aforementioned, the Town of Pound Ridge, in association with the LKCC, sought funding that would assist in determining the current condition of the lake and lagoon system and provide useable data that could be used in determining and implementing management strategies. In November 2006, the Town of Pound Ridge was awarded a Water Quality Planning and Implementation Grant for New York City Watershed Communities to perform a Comprehensive Watershed Study of Lake Kitchawan. Based on the conditions of the grant, the study would assess the causes of this impaired body of water, determine the amount, type and source of nutrients and/or pollutants flowing into the lake, and would recommend the best methods to control and eliminate the nutrients or the pollutants without harming the endangered species and wildlife near the lake.

In March 2007, ENSR was contracted by Town of Pound Ridge in association with the Lake Kitchawan Conservation Committee (LKCC) to perform a baseline diagnostic study of Lake Kitchawan and its lagoon system. The primary objective of the diagnostic study was to satisfy the conditions of the grant; identify, quantify, and determine existing physical parameters within Lake Kitchawan and the lagoons, and use collected data to develop and support the preparation of a Lake/Lagoon Management Plan. The approved diagnostic study was developed based on discussions with the LKCC and local residents; current objectives of the LKCC and grant conditions; existing data gaps pertaining to water quality, sediment depth, nutrient loading, and vegetative cover type within the watershed; information not obtained within the joint permit application prepared by Allied Biological; and past and on-site observations. The Diagnostic Study was performed in May and July 2007 and included the following five (5) elements: Physical Assessment, Surface Water Assessment, Aquatic Vegetation Mapping, Watershed Assessment and Mapping, and Lake/Watershed Modeling. The Watershed Assessment and Mapping tasks were discussed in Section 2.2. and watershed boundaries, soil types, land use are given in Figures 1-3. The following sections provide further description of each task (with the exception of Watershed Assessment and Mapping) and include methodology and results.

3.1 Physical Lake Assessment

ENSR initiated the Physical Lake Assessment at Lake Kitchawan on May 30, 2007. Components of the Physical Assessment included assessing water and sediment depth, calculating volume of the lake and lagoon system, visually assessing surficial sediment composition, determining mean and maximum depth, and defining the lake and lagoon surface area. Sediment and depth data were further incorporated into a GIS format to create a bathymetry and sediment map. Bathymetry data was collected during the July sampling event.

The Physical Assessment consisted of a bathymetric and sediment mapping component and a surficial sediment assessment component. Data for the mapping portion was collected using a graduated rod to determine water depth to substrate and depth of sediment to first refusal. Visual sediment assessment was performed at four (4) locations using a ponar dredge. In addition to the above components, other tasks (i.e. surface water quality measurements, vegetative analysis, etc.) were conducted concurrently. Each task and corresponding results will be discussed in the following sections. The following described the methodology and result for the two components of the Physical Lake Assessment.

3.1.1 Bathymetric and Sediment Mapping

Forty-three (43) water and sediment depth measurements were taken along one (1) north-south transect and three (3) east-west transects. In addition, two (2) points of measurement were collected in the main lagoon and three (3) points in the north lagoon (Figure 4). Overall collected measurements provided data that presented the bathymetric contours and overall basin shape of Lake Kitchawan. The main waterbody transects were labeled A-D and lagoon points were labeled E (southern lagoon) and F (northern lagoon). Each site was identified numerically along the corresponding transect. Eight (8) to eleven (11) points of data were taken per transect with the distance between points being closer in the littoral zone and farther apart in lotic portion of the lake. Sediment depth was collected concurrently with water depth at each site. As stated previously, water and sediment depth were taken using an 18-foot rod calibrated in feet. Each sample site was recorded using a Trimble Pro XRS GPS unit. Water depth was determined by lowering the graduated rod into the water until reaching the substrate. In areas of extremely soft sediment where depth determination was difficult by rod, a Secchi disk attached to graduated line was deployed and lowered to the bottom to confirm water depth and substrate origin. Sediment depth was determined by pushing the graduated rod into the substrate until first refusal. Actual sediment depth was determined by calculating the difference between water depth and first refusal measurements. Any measurement over 18 feet was recorded as greater than (>18ft). Measurement data was also recorded manually in a log book.

Table 3-1 gives depth measurements for water and sediment within Lake Kitchawan and the lagoon system. The majority of the lake consisted of relatively soft sediment with measurements ranging from 1.7 feet to over 18 feet. Sediment depths closest to the lake shoreline were shallowest (averaging a few feet in depth), however only 3 locations had sediment depths less than 2.5 feet (3 of 43 sites; 7%). The majority of sediment depths within the lake were greater than 18 feet (67% of measurement locations). Sediment depths within the southern lagoon (Transect E) were all greater than 18 feet, whereas sediment depths in the northern lagoon (Transect F) averaged 8.2 feet (2.5 m).

Figures 5 and 6 show the bathymetric (water depth) contours and sediment depths within the lake and lagoons. The GIS data used to create the bathymetric map (Figure 5) were used to calculate lake surface area and total lake volume. Total surface area for the lake and lagoon system was calculated as 106.4 acres (Table 3-2). The lake has an estimated volume of approximately 535 acre-feet, and average depth of 5.7 feet, and a maximum depth of 14.2 feet (Table 3-2). The lagoons are extremely shallow with an estimated average depth of 1 foot and a maximum depth of 4.2 feet. The estimated volume of the lagoon is 9.5 acre-feet (Table 3-2).

3.1.2 Visual Surficial Sediment Assessment

Visual sediment assessment data was collected at four (4) sites, three (3) in the main body of the lake and one (1) in the main lagoon (Figure 4). Sediment samples were retrieved by deploying/retrieving a 6”x6”x6” stainless steel Ponar dredge from a 12-foot aluminum skiff and evaluating the composition.

Sites 1 and 2 were of similar composition, both comprised of approximately 80% soft muck/silt sediment with the remainder being detritus/organic. Site 3 consisted of approximately 78% various root systems, followed by 20% fine silt sediment and 2% leaf debris. Site 4, located in the lagoon, was 90% root system with the remainder being muck/silt sediment. The majority of samples were collected in soft, organic sediment. Site 5 was not sampled.

Table 3-1 Water and Sediment Depths of Lake Kitchawan and Adjacent Lagoons

Transect	Location Transect/Sample ID	Water Depth (ft)	Sediment Depth (ft)	Transect	Location Transect/Sample ID	Water Depth (ft)	Sediment Depth (ft)
A	A1	4' 2"	>18'	C	C1	3' 7"	>18'
	A2	6' 3"	>18'		C2	2' 6"	>18'
	A3	14' 2"	>18'		C3	2' 0"	>18'
	A4	12' 10"	>18'		C4	3' 7"	>18'
	A5	9' 6"	>18'		C5	4' 1"	>18'
	A6	14' 0"	>18'		C6	6' 3"	>18'
	A7	11' 4"	>18'		C7	12' 0"	>18'
	A8	4' 4"	>18'		C8	6' 0"	16' 2"
	A9	4' 1"	>18'		C9	1' 6"	1' 7"
	A10	4' 3"	>18'	D	D1	3' 1"	3' 7"
	A11	2' 3"	2' 4"		D2	5' 11"	>18'
B	B1	2' 4"	2' 5"		D3	13' 1"	>18'
	B2	8' 9"	>18'		D4	5' 11"	>18'
	B3	8' 6"	>18'		D5	3' 7"	>18'
	B4	5' 6"	>18'		D6	3' 2"	>18'
	B5	6' 0"	>18'		D7	3' 10"	12' 8"
	B6	5' 0"	14' 4"		D8	3' 1"	3' 4"
	B7	3' 9"	13' 4"	E	E1	1' 2"	>18'
	B8	3' 2"	7' 1"		E2	0' 4"	>18'
	B9	3' 9"	3' 10"	F	F1	3' 0"	11' 4"
	B10	3' 5"	>18'		F2	4' 2"	9' 9"
					F3	2' 4"	3' 5"

Table 3-2 Lake Kitchawan Physical Characteristics

Characteristics	Lake	Lagoon
Surface Area (acres)	97.0	9.5
Volume (acre-ft)	534.9	9.5
Average Depth (ft)	5.7	1.0
Maximum Depth (ft)	14.2	4.2

3.2 Surface Water/Water Quality Assessment

ENSR performed a surface water and water quality assessment of Lake Kitchawan with sampling events on May 30, 2007 and July 26, 2007. The assessment was performed at four (4) sample locations in May and five (5) in July using a YSI multi-parameter sonde and data logger. In addition, samples were physically collected at each of the sites for further laboratory analysis (Figure 4)[1].

- Site 1 – Lake northern inlet
- Site 2 – Mid-lake
- Site 3 – Southern lagoon[2]
- Site 4 – Lake – southern rock
- Site 5 – North lagoon (sampled only in July)

The following discusses the results of the YSI water quality sampling and laboratory analysis. In addition to the aforementioned, a stormwater sampling event took place on November 15, 2007 and is discussed in more detail in Section 3.2.3.

3.2.1 YSI Water Quality Sampling

As previously stated, YSI water quality field measurements were taken at four (4) sample locations on May 30 and July 26, 2007 with an additional site added in the northern lagoon during the July sampling event. Water quality data was collected using a YSI 6920 multi-parameter sonde and data was recorded on a 650 MDS Data Logger. YSI water quality measurements included temperature, specific conductivity, conductivity, dissolved oxygen, pH, and turbidity.

Three of the sample sites (1, 2 and 4) were located within the lake and the other two sites (3 and 5) were located in the southern and northern lagoon, respectively (Figure 4). Surface readings were taken within the epilimnion (approximately 1 meter depth) at all sites. In addition, YSI Measurements at Site 2 (mid-lake) were also taken from surface to bottom at 0.5 meter intervals (hypolimnion). Water quality data for each parameter taken with the YSI are listed in Table 3-3. Sample site locations are shown in Figure 4.

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[1] Sample site number on July laboratory report different than presented in this report; July analytical data report sample numbers 4, 3, 1, and 2 correspond to May sample sites 1, 2, 3, and 4 respectively (as shown in Fig 4).

[2] Lagoon station was sampled during July at a location farther to the east of the May location because of inaccessibility.

Table 3-3 YSI Water Quality Measurements for Lake Kitchawan – May and July 2007

May Event Location	Date	Time	Temp (C°)	SpCond uS/cm	DO %	DO Conc mg/L	pH
Site 1	5/30/2007	10:40	23.77	275	138.3	11.69	9.06
Site 2 (depth: 0.5 meter)	5/30/2007	11:15	24.06	264	130.3	10.95	8.9
Site 2 (1.0 meter)	5/30/2007	11:16	23.39	265	133.6	11.37	8.86
Site 2 (1.5 meters)	5/30/2007	11:16	22.99	264	130.0	11.14	8.84
Site 2 (2.0 meters)	5/30/2007	11:20	22.87	265	125.5	10.78	8.76
Site 2 (2.5 meters)	5/30/2007	11:21	20.68	257	182.5	16.36	8.84
Site 2 (3.0 meters)	5/30/2007	11:22	18.12	268	160.2	15.12	8.69
Site 2 (3.5 meters)	5/30/2007	11:23	17.88	269	156.9	14.89	8.69
Site 3	5/30/2007	13:25	25.61	274	113.0	9.23	7.81
Site 4	5/30/2007	12:35	24.63	282	68.0	5.66	8.06
July Event Location	**Date**	**Time**	**Temp (C°)**	**SpCond uS/cm**	**DO %**	**DO Conc mg/L**	**pH**
Site 1	7/26/2007	9:45	25.31	248	86.9%	7.14	8.14
Site 2 (1.0 meter)	7/26/2007	8:34	23.79	256	100.4	8.48	8.49
Site 2 (1.5 meters)	7/26/2007	8:37	22.82	258	83.5	7.18	8.11
Site 2 (2.0 meters)	7/26/2007	8:38	22.23	258	69.1	6.01	7.9
Site 2 (2.5 meters)	7/26/2007	8:39	21.79	260	35.2	3.09	7.66
Site 2 (3.0 meters)	7/26/2007	8:40	20.93	321	3.1	0.26	6.98
Site 3	7/26/2007	7:34	20.06	268	12.0	1.09	7.12
Site 4	7/26/2007	8:13	22.97	254	81.0	6.95	7.82
Site 5	7/26/2007	11:43	20.83	404	4.4	0.39	7.03

All measurements taken at just below surface water level except where indicated.

3.2.1.1 Temperature

Lake Kitchawan water temperature results are indicative of normal summer lake temperatures for this geographical area. The shallow overall depth of Lake Kitchawan as well as temperatures measured at Site 2, taken at various depths, do not indicate thermal stratification.

3.2.1.2 Dissolved Oxygen

Dissolved oxygen levels for the main lake body were relatively high, averaging 9.4 mg/L at the surface in May. Dissolved oxygen readings remained at or above 6 mg/L in the upper meter (3.3 ft) of water but levels decreased quickly by depth at Site 2 (mid-lake) in July where nearly anoxic (very low to no oxygen) levels were encountered (0.26 mg/L). Low levels of dissolved oxygen (0.39 – 1.09 mg/L) were also observed in the lagoon areas where water depth was extremely shallow and little or no mixing occurs. Concentrations less than 4 mg/L may have adverse impacts on fish populations, causing fish to move to up level waters where sufficient oxygen is present. Low oxygen levels in the lagoon, are likely associated with significant decomposition of organic plant matter combined with poor mixing associated with dense plant growth. Because low oxygen levels were observed at some locations during the day time when aquatic plants would be actively producing oxygen, it is likely that lower dissolved oxygen concentrations may occur at night over a larger area of the lagoon and lake.

3.2.1.3 pH/Alkalinity

Average pH for Lake Kitchawan surface waters was 8.1. Average pH for surface water in May was 8.46 whereas average surface pH in July was 7.72. Readings taken at 0.5 meter intervals within the water column at Sample Site 2 ranged from 8.9 at the surface to 8.69 at 3.5 meters in May and 8.49 to 6.98 at 3 meters in July.

Total alkalinity concentrations ranged from 58.9 to 160 mg/L (Table 2-6). Values greater than 25 mg/L are generally indicative of waters that are moderately buffered and are not highly susceptible to acid precipitation.

3.2.1.4 Conductivity

Lake Kitchawan specific conductivity (conductivity adjusted for water temperature) values were moderately high but remained under 300 µs/cm. Highest readings were recorded in the north lagoon (404 µs/cm) during the July sampling event. Conductivity is strongly influenced by watershed soils, as well as the presence of other pollutants. Values over 300 uS/cm indicate the presence of pollutants from sources such as road salts, septic systems, and naturally occurring salts and minerals.

3.2.2 Water Quality Laboratory Analysis

In addition to YSI measurements, water samples were collected for laboratory analysis using a Kemmerer sampler. Samples were collected at Sites 1 – 4 in May, and at Sites 1 – 5 in July (Figure 4). Analysis of surface samples included total dissolved phosphorus, total phosphorus, total Kjeldahl nitrogen, nitrates, ammonia, fecal coliform, alkalinity, total suspended solids (TSS), and chlorophyll. A bottom (hypolimnion) sample was also taken at Site 2 and included total dissolved phosphorus, total phosphorus, total Kjeldahl nitrogen, nitrates, ammonia, alkalinity, and TSS. Tables 3-4 and 3-5 give the results of the laboratory analysis. Further discussion of results is given following the tables.

3.2.2.1 Nitrogen

Nitrate-nitrite, ammonia, and Total Kjeldahl nitrogen (TKN) levels were analyzed during both sampling events. Nitrate-nitrite concentrations were below analytical detection limits (<0.007 mg/L) at all sampling sites in May. Concentrations were above detection limits during the July sampling event, but were still considered low.

Table 3-4 Water Quality Laboratory Analysis for Lake Kitchawan – May and July 2007

	Nitrogen					
	Nitrate-Nitrite (mg/L)		**Ammonia** (mg/L)		**Total Kjeldahl** (mg/L)	
Sample Site	May Sampling Event 5/30/2007	July Sampling Event 7/26/2007	May Sampling Event 5/30/2007	July Sampling Event 7/26/2007	May Sampling Event 5/30/2007	July Sampling Event 7/26/2007
Site 1	<0.007	0.062	<0.032	0.066	0.57	0.72
Site 2 Surface	<0.007	0.027	<0.032	0.049	0.37	0.65
Site 2 Surface (Duplicate)	<0.007	0.024	<0.032	0.15	0.39	0.67
Site 2 Bottom	0.007	0.008	<0.032	0.13	0.27	0.81
Site 3	<0.007	0.022	<0.032	0.11	0.46	01.2
Site 4	<0.007	0.028	<0.032	0.086	0.48	0.68
Site 5	n/a	<0.007	n/a	0.22	n/a	n/a

	Phosphorus			
	Total (mg/L)		**Dissolved** (mg/L)	
Sample Site	May Sampling Event 5/30/2007	July Sampling Event 7/26/2007	May Sampling Event 5/30/2007	July Sampling Event 7/26/2007
Site 1	0.085	0.029	0.026	<0.005
Site 2 Surface	0.047	0.012	0.035	0.012
Site 2 Surface (Duplicate)	0.033	0.018	0.005	0.016
Site 2 Bottom	0.011	0.023	0.009	0.021
Site 3	0.035	0.033	0.033	0.086
Site 4	0.021	0.031	0.014	0.025
Site 5	n/a	0.12	n/a	0.15

	Fecal Coliform (col/100ml)		**Alkalinity** (mg/L)		**Total Suspended Solids** (mg/L)	
Sample Site	May Sampling Event 5/30/2007	July Sampling Event 7/26/2007	May Sampling Event 5/30/2007	July Sampling Event 7/26/2007	May Sampling Event 5/30/2007	July Sampling Event 7/26/2007
Site 1	30	46	160	63.9	5.0	<3.9
Site 2 Surface	<2	6	58.9	60.4	3.9	5.0
Site 2 Surface (Duplicate)	6	6	58.9	60.4	3.9	<3.9
Site 2 Bottom	n/a	n/a	85.9	64.9	6	<3.9
Site 3	52	240	64.4	63.9	<3.9	5.0
Site 4	10	4	59.9	61.9	<3.9	NA
Site 5	n/a	210	n/a	94.9	n/a	NA

Note: dissolved phosphorus (DP) reported in excess of total phosphorus for Stations 3 and 5 during the July event; total DP should be equal to or less than total P. Discrepancy may be associated with lab error, the fact that analyses were completed on samples drawn from separate bottles, or potential breakdown of particulate P (e.g., contained in algal cells) during filtration.; NA-analysis not completed

Concentrations of ammonia were less than analytical detection limits in May. The ammonia concentrations in the main lake-body ranged between 0.086 to 0.15 mg/L. Highest values were obtained in the southern lagoon (0.11 mg/L), northern lagoon (0.22 mg/L). There was poor correlation between the duplicate surface samples for ammonia, which may be associated with laboratory error.

Total Kjeldahl nitrogen (TKN), includes ammonium nitrogen and organically bound nitrogen, ranged from 0.27 to 0.57 mg/L during the May event and 0.65 to 1.2 mg/L during the July event. Higher values were evident in the July event with Site 3 (southern lagoon) having the highest reading of 1.2 mg/L followed by Site 2 (mid-lake) bottom (0.81 mg/L).

3.2.2.2 Phosphorus

Total phosphorus values exceeding 0.025 mg/L are generally considered elevated and may be indicative of eutrophic conditions. Lake Kitchawan concentrations of total phosphorus ranged from 0.011 to 0.085 mg/L in May and 0.012 to 0.12 in July. Site 1, located near a swan nest and small tributary, had the highest value in May and Site 5, located in the northern lagoon was highest in July. Concentrations increased at Sites 2 towards bottom and Site 4 between the May and July events, but were lower at Sites 1, 2 surface, and 3 between the May and July events.

Dissolved phosphorous levels ranged from 0.005 to 0.035 mg/L in May and 0.005 to 0.15 in July. With the exception of Site 1, a majority of the phosphorus observed at each site was in the dissolved form (67 – 100%), and as such, may be more readily available to support algal growth. At Site 1, 17 – 31% of the phosphorus was dissolved.

3.2.2.3 Fecal Coliform

Water quality standards for fecal coliform generally state that the geometric mean, based on not less than five samples within a 30-day period, shall not exceed 200 fecal coliform colonies (fcc) per 100 ml of water. For the purpose of this study, 200 fcc/100ml in any sample was used as an indicator of elevated concentrations. Fecal coliform levels for the main lake-body ranged from <2 to 240 col/100ml (Table 3-4) during both sampling events. Highest levels in May were recorded at Site 1 (30 col/100ml) and Site 3 (52 col/100ml). Highest levels in July were 210 and 240 col/100ml at Site 5 (northern lagoon) and Site 3 (southern lagoon), respectively.

3.2.2.4 Total Suspended Solids (TSS)

TSS concentrations for Lake Kitchawan ranged from <3.9 to 6 mg/L (Table 3-4). Waters with a TSS concentration less than 20 mg/L are considered to have good clarity.

3.2.2.5 Chlorophyll *a*

Chlorophyll *a* concentrations are given in the following table (Table 3-5). Samples were collected at Site 2 (mid-lake) in May and at Site 2 and Site 5 (northern lagoon) during the July event (Figure 4). The Site 2 chlorophyll *a* concentration was low during the May event averaging 0.65 µg/L. There was little difference in the duplicate samples analyzed. July chlorophyll *a* concentrations were 5.75 µg/L mid-lake (Site 2 average of duplicate analyses) and 14.2 µg/L in the northern lagoon.

Table 3-5 Chlorophyll *a* Concentrations

May Event	Date	Chlorophyll *a*	July Event	Date	Chlorophyll *a*
		µg/L			µg/L
Site 2	5/30/2007	0.6	Site 2	7/26/2007	5.7
Site 2 (Duplicate)	5/30/2007	0.7	Site 2 (Duplicate)	7/26/2007	5.8
			Site 5	7/26/2007	14.2

3.2.3 Stormwater Sampling

Stormwater sampling was completed on November 15, 2007. Samples were collected at two locations: ST-1 (a storm drain located on the shore side of the intersection of Shore Road and Brookside Avenue) and ST-2, the inlet tributary adjacent to Ida Lane (Figure 7). Samples were collected and analyzed for total suspended solids (TSS), total phosphorus, dissolved phosphorus, and fecal coliform. Flow was estimated based on time of travel and air temperature ranged from 51 to 54 degrees F during the sampling. Rain was characterized as light and steady. The results are discussed below.

Station ST-1 exhibited elevated fecal coliform concentrations of 890 col/100ml. The measured total phosphorus concentration was 0.05 mg/L and dissolved phosphorus 0.03 mg/L. The reported total suspended solids concentration was <4 mg/L which is a relatively low concentration in the context of stormwater runoff. The Nationwide Urban Runoff Program (Athayede et al., 1983) documented an event mean concentration of 100 mg/L in stormwater runoff from urbanized areas. The estimated flow at the time of sampling at ST-1 was 0.4 cubic feet per second (cfs).

The fecal coliform concentration at ST-2 was 32 col/100 ml, well below water quality standards of 200 col/100 ml. The measured total and dissolved phosphorus concentrations were <0.01 mg/L. Stormwater phosphorus inputs at this location were significantly less than those at ST-1. The reported total suspended solids concentration was <4 mg/L which is a relatively low concentration in the context of stormwater runoff. The estimated flow at the time of sampling at ST-1 was 1.3 cubic feet per second (cfs).

3.3 Vegetative Mapping – Lake Kitchawan and Adjacent Lagoons

3.3.1 Methods

The macrophytic aquatic plant community of Lake Kitchawan was visually surveyed in late July during the second sampling event. Boat-based observations regarding plant cover, biomass, and species composition and spatial distribution were conducted concurrently with the bathymetric survey along several points on two (2) north-south transects as well as several points within the southern and northern lagoon. Submerged species were recorded in terms of depth from water surface. Composition of plant species was visually assessed where applicable and a rake was used to assess density and type vegetation located outside the range of visual assessment. Composition was expressed in terms of percentage. Vegetation density was observed in terms of surface coverage and/or submerged coverage and classified as the following:

- **very dense** (80-100% coverage) – plants occupying most of bottom; no obvious open water
- **dense** (60-79% coverage) – heavy plant cover with some limited gaps between plants or patches of plants; limited open water visibility
- **moderately dense** (40-59% coverage)
- **sparse** (20-39% coverage) – few plants; patchy distribution
- **very sparse** (<20% coverage) – very few plants
- **no vegetation** (0%)

An additional assessment along the shoreline of Lake Kitchawan and the lagoon system was conducted to assess the composition of emergent vegetation with focus on invasive species. Aquatic and emergent plant species were identified on-site or in the laboratory under scope with appropriate field guides and keys (Fassett, 1957 and Hellquist and Crow, 1980).

3.3.2 Vegetative Mapping Results

Percent coverage and aquatic plant species composition/distribution maps are given in Figures 8 and 9, respectively. The majority of Lake Kitchawan (approximately 90%) consists of either surface or submerged aquatic plants. The lagoons had 100% coverage (Figure 8). The majority of submerged vegetation in the lake was restricted to depths less than 10 feet and presence was non-existent in the lotic portion of the lake. Approximately 30% of the lake had visible surface coverage with an additional estimated 50% of aquatic vegetation being visible within 0.5 meters of the water surface.

A list of aquatic plant species observed in Lake Kitchawan is given in Table 3-6. Composition and spatial distribution is shown in Figure 9. Prominent aquatic plant species found within the Lake Kitchawan included spatterdock, white and yellow lily, Illinois pondweed, coontail, Eurasian milfoil, and curly pondweed. The southern lagoon consisted mostly of spatterdock, pickerelweed, white lily, and intermittent patches of coontail. The northern lagoon was covered entirely by duckweed, but small patches of spatterdock, white lily, and coontail were also evident. Purple loosestrife was also observed along the edges of both lagoons and the northwestern shore of the lake. Approximately 17 acres of the lake has aquatic plant beds dominated (>70%) by Eurasian watermilfoil.

Monospecific coverage of duckweed was observed within the northern lagoon. Dense growth of duckweed is usually attributed to high levels of nitrogen and phosphorous associated with septic leakage and organic sediment (Lemby, 2002).

Table 3-6 Aquatic Plants of Lake Kitchawan and Lagoon (July 2007)

Map Code	Common Name	Scientific Name
CP	Curly Pondweed	*Potamogeton crispus*
CT	Coontail	*Ceratophyllum demersum*
CW	Common Water Weed	*Elodea canadensis*
DW	Duckweed	*Lemna sp.*
EM	Eurasion Milfoil	*Myriophyllum spicatum.*
FP	Fern Pondweed	*Potamogeton robensii*
IP	Illinois Pondweed	*Potamogeton illinoensis*
PL	Purple Loosestrife	*Lythrum salicaria*
PW	Pickerel Weed	*Pontederia cordata*
SD	Spatterdock	*Nuphar polysepala*
WC	Wild Celery	*Vallisneria americana*
WL	White Water Lily	*Nympheae sp.*
WWC	White Water Crowfoot	*Ranunculus longirostris*
YL	Yellow Water Lily	*Nuphar sp.*

Dense aquatic vegetation over much of the lake and lagoon area may contribute to low dissolved oxygen conditions. In addition, while some vegetation is desirable as cover for fish, particularly early life stages, the dense vegetation growth over the lake and lagoons likely exceeds desirable levels for fisheries. Dense vegetation may allow populations of bluegill and other forage species to become stunted at small sizes because of inadequate predation. Dense vegetation may reduce predation efficiency, and the success of predatory species, many of which are desirable game species (e.g., largemouth bass).

3.4 Hydrologic, Nutrient and Sediment Load and Trophic State Modeling

Mathematical modeling is used to estimate water and pollutant loading, as well as the influence of such loading on the receiving waterbody. Modeling for Lake Kitchawan and its adjacent lagoon system was used to develop estimated hydrologic (water) and nutrient and sediment loads for the lake and lagoon system. The lake and lagoons were modeled separately, as they likely behave independently and differently to their respective hydrologic and nutrient loads. The following subsections provide a brief description of the modeling completed for the lake and lagoon areas.

3.4.1 Hydrologic Modeling

A hydrologic model was used to estimate the hydrologic budget for Lake Kitchawan. A hydrological budget is the quantity of water entering the lake from various sources (e.g., direct precipitation, tributaries, groundwater) and leaving the lake by various means (e.g., evaporation, surface water outlet, groundwater). The movement of water into and out of the lake is important as pollutants (e.g., nutrients, sediment) are carried by the water into the lake) and the rate of movement may have a significant influence on the affect of such pollutants on the lake/lagoons. For this project, a desk top hydrologic budget was developed for the lake and the lagoons. The input and output of the model is provided in Table 3-7.

Table 3-7 Desktop Hydrologic Budget for Lake Kitchawan and the Lake Kitchawan Lagoons

Parameter	Units	Total	Lake	Lagoon
Input Parameters				
Watershed Area (excl lake area)	hectare	326.4	184.6	141.9
Lake Surface Area	hectares	42.6	38.7	3.8
Lake Volume	m3	671,270	659,736	11,533
Annual Precipitation	m/yr	1.22	1.22	1.22
Evaporation Rate	%	0.66	0.66	0.66
Evapo-transpiration	%	0.5	0.5	0.5
Model Output				
Inflows				
Precipitation ->Lake	m3/yr	519,382	472,480	46,902
Precipitation ->Watershed	m3/yr	3,968,660	2,227,720	1,740,940
Runoff/Recharge after Evapo-Transpiration	m3/yr	1,984,330	1,113,860	870,470
% Surface water Inflow	%	42	44	38
Total Hydrologic Input	m3/yr	2,503,712	1,586,340	917,372
Outflows				
Evaporation	m3/yr	342,792	311,837	30,956
Net SW/GW Outflow	m3/yr	2,160,920	1,274,503	886,417
Total Outflow	m3/yr	2,503,712	1,586,340	917,372
Change in Storage	m3/yr	0	0	0
Total In or Out	**ac-ft/yr**	**2,035**	**1,296**	**740**

Flushing Rate	times/yr	3.7	2.4	79.1
Retention Time	years	0.27	0.41	0.01
Retention Time	days	98	151	5

Model inputs included the watershed area, lake or lagoon surface area, lake or lagoon volume, the rate of evaporation, the rate of evapo-transpiration, and the annual amount of precipitation that falls on the lake and watershed. The watershed and lake/lagoon areas were measured from maps developed specifically for this project. The volume was estimated based on the bathymetric mapping completed as part of this project. A regionally appropriate average annual evaporation rate was taken from data available from the National Oceanic and Atmospheric Administration (NOAA). A typical evapo-transpiration rate of 0.5 (or 50%) was used. Both evaporation and evapo-transpiration varies seasonally, with greatest rates observed during the summer, and lowest rates during the winter. Precipitation evaporating from the lake surface or evaporating from upland impervious surfaces or transpiring by plants is not available to runoff or enter the lake via groundwater inputs. In most instances the lake/lagoon water levels are expect to remain essentially constant year to year, though minor differences may occur based on climatic differences from year to year.

Using the model input data, the total estimated water inflow was estimated as the surface water runoff/groundwater recharge after evapo-transpiration plus direct precipitation to the lake. The estimated average annual inflow to the lake was 1,125,890 m^3/yr, approximately twice that entering the lagoon (865,319 m^3/yr). Total estimated inflows to and outflows from the lake are 1,598,370 m^3/yr (1,296 acre-feet) and are 912,221 m^3/yr (740 acre-feet) for the lagoon. The estimated outflow was assumed to equal the inflow, with no net increase or decrease in storage (or water elevation) over the course of the year. Evaporation from the lagoon surface represented approximately 3.3% of the total outflows, while evaporation represented approximately 17% of the outflow for the lake. The remaining water exited the lake via the surface water outlet or groundwater. It is not possible to estimate the fraction of water leaving the lake via groundwater versus surface flows without significant field studies and associated measurements. For the purposes of this project, the combined outflow provides sufficient information for this analysis. Separate modeling used to estimate sediment loading to the lake and lagoons (See Section 3.4.2.1 and 3.4.2.2) estimated average annual inflows[3] at 953 acre-ft and 728 acre-ft for the lake and lagoons respectively. This model also provides a breakdown on runoff entering the lake and lagoons as surface runoff versus that which would recharge to groundwater and potentially enter the lake via groundwater discharge. The precipitation that recharges to groundwater in the watershed may or may not enter the lake depending on groundwater flow directions. In addition, groundwater migration is far slower than surface water movement (i.e., measured in months and years versus days or hours). With an assumed lag time of 0.25 years, the model suggests that approximately 44 and 38 percent of the lake and lagoon inflows are surface water inflows.

It is useful to note that while the lake is approximately 10 times greater in surface area than the lagoon, and its volume approximately 57 times greater than that of the lagoons, the inflows are only 1.3 times greater. As such, it is expected that the flushing of water through the lake would be much slower than that for the lagoons. The flushing rate (or number of times per year that all of the water in the lake or lagoon is replaced) was calculated by dividing the volume of the lake (m^3) and lagoon by its respective total outflow (m^3/yr). The flushing rate of a waterbody influences the retention of pollutants (e.g., sediments and nutrients) within the waterbody, as well as the growth of algae in response to nutrients in the water column.

[3] Based average annual precipitation of 1.01 meters per year; average annual precipitation used in other hydrologic modeling was 1.22 m per year, which may account for some of the observed difference in total inflow/outflow estimates from the two modeling approaches.

The estimated flushing rate for the lake was 2.4 times per year while the flushing rate was 79 times per year for the lagoon. The inverse of the flushing rate is the retention time (expressed in years) which describes how long water remains in the waterbody. Natural lakes often have long retention times (e.g., several years); however the retention time for Lake Kitchawan is approximately 0.4 years (151 days); the retention time for the lagoon is only 5 days. Changes in lake volume associated with sediment accumulation can increase flushing rates (decrease retention time). As discussed in Section 3.1, the lake and lagoon have experienced significant sediment accumulation over time that may have increased the flushing rate (decreased the retention time) over the years.

3.4.2 Nutrient and Sediment Budgets

Another tool used to characterize waterbodies and their watersheds is the load (mass input) of nutrients and sediments to the waterbody. Some level of nutrient and sediment input is naturally occurring, and essential to ecosystem health. However, in developed watersheds, the load of nutrients and sediments exceed the levels that can be assimilated. Such excessive nutrient and sediment loading causes eutrophication of the waterbody, which in turn may cause decreasing depth, increased frequency and severity of algal blooms, and excess rooted vegetation, thus impairing desired water uses. Input and output data from the models used for this project are provided in Appendix A.

Nutrient and sediment budgets are estimates of the nutrient and sediment loading into and out of a waterbody. Nutrient and sediment budgets were developed for Lake Kitchawan and the Lake Kitchawan lagoons separately. Numerous models have been developed to estimate nutrient and sediment loading based on watershed characteristics such as land use, soils, and/or impervious area. For this project, the EPA (1980) model was used to estimate nutrient loads from the watershed to the lake and lagoon. This model uses unit loads per acre by land use to estimate phosphorus and nutrient loads. This model also provides for the estimation of septic system inputs based on per capita loads from septic systems as adjusted for nutrient retention and dilution. The EPA model also provides per hectare loads associated with direct atmospheric deposition (wet and dry). Estimates are also provided for inputs from waterfowl. There is minimal data available documenting loads associated with season and resident waterfowl. Best available estimates were used for this project.

Sediment loading may occur by wash-off of sediment particles accumulated on impervious surfaces (e.g., pavement, rooftops), erosion from pervious areas, as well as channel and bank erosion (Schueller, 1987). External sediment inputs were estimated based on the lake's watershed area, soil hydrologic group, and impervious area (derived from land use) using the P8 Urban Catchment Model version 3.4 (Walker, 2007) using historical hourly precipitation from a regional weather station (Bridgeport, CT). This modeling approach does not directly account for bank erosion. Visual inspection of the watershed did not reveal significant areas of bank erosion. As such, further quantification of this source was not deemed currently necessary. In addition to such external inputs, the death and incomplete decomposition of aquatic plants is also a source of sediments to the lake. Rates of accretion associated with aquatic plants are highly variable and poorly documented. As such, quantification of this internal source of accumulating sediments will not be provided.

3.4.2.1 Lake Kitchawan

Nutrient (phosphorus and nitrogen) budgets for Lake Kitchawan are provided in Table 3-8. Phosphorus is typically the primary nutrient of concern for most freshwater lakes. Phosphorus is said to be the limiting nutrient in most freshwater lakes, that is, phosphorus is the nutrient that controls the growth of algae. In some instances, nitrogen may be the limiting nutrient, though this is far less common.

The estimated phosphorus load to Lake Kitchawan ranged from 76 to 363 kg/yr. This range reflects the statistical uncertainty inherent to empirical models as well as the potential inter-annual variation in nutrient loading that may be expected based on differences in the frequency, intensity and total amounts of precipitation received on an annual basis. The most likely estimated phosphorus load to the lake is 175 kg/yr or 0.45 gm/m^2/yr on an aerial basis (dividing total load by the surface area of the lake). Septic systems represent the single largest source of phosphorus to the lake (60%), based on the model results. Atmospheric deposition, residential land use, and forested lands represent approximately 25% of the total load to the lake.

The estimated nitrogen load to Lake Kitchawan ranged from 1,133 to 2,463 kg/yr, with a most likely load of 1,892 kg/yr (Table 3-8).

Sediment inputs to the lake from external sources may accumulate in-lake, reducing water depth and increasing the availability of substrate for rooted aquatic plant growth. The predicted average annual sediment load to Lake Kitchawan was estimated at 32,657 kg/yr.

3.4.2.2 Lake Kitchawan Lagoons

Nutrient (phosphorus and nitrogen) budgets for the Lake Kitchawan Lagoons are provided in Table 3-9.

The estimated phosphorus load to the lagoons ranged from 39 to 167 kg/yr. The most likely estimated phosphorus load is 87 kg/yr or 2.25 gm/m^2/yr on an aerial basis (dividing total load by the surface area of the lagoon). Septic systems represent the single largest source of phosphorus to the lake (60%), based on the model results. Residential land use represents approximately 24% of the total phosphorus load to the lagoons.

The estimated nitrogen load to the Lake Kitchawan lagoons ranged from 560 to 1,107 kg/yr, with a most likely load of 846 kg/yr (Table 3-9).

The predicted average annual sediment load to the Lake Kitchawan lagoons was estimated at 19,000 kg/yr.

Table 3-8 Phosphorus and Nitrogen Budgets for Lake Kitchawan

		P load (kg/yr)			N load (kg/yr)		
Source	**Area (ha)**	**Low**	**Most-Likely**	**High**	**Low**	**Most-Likely**	**High**
Nonpoint Source/ Stormwater[1]							
Forest	50.5	4.9	10.4	15.9	94.3	124.3	154.4
Residential	99.3	9.6	20.5	31.3	185.3	244.4	303.5
Commercial/industrial	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open space/grassland	0.9	0.1	0.2	0.3	1.7	2.2	2.8
Agricultural-row	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural-pasture	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetland	31.8	3.1	6.6	10.0	59.3	78.2	97.1
Open water	38.7	3.8	8.0	12.2	72.2	95.2	118.2
Other Sources							
Septic systems		45.0	105.0	225.0	397.5	691.5	967.5
Waterfowl		3.8	5.0	6.3	187.5	250.0	312.5
Internal recycling		0.11	0.15	0.18	0.0	0.0	0.0
Atmospheric deposition		5.8	19.4	62.0	135.5	406.6	507.3
Total (kg/yr)		**76.1**	**175.1**	**363.1**	**1133.2**	**1892.5**	**2463.4**

1 = nonpoint load estimated based on watershed land use and pollutant export coefficients (adapted from EPA, 1980)

Table 3-9 Phosphorus and Nitrogen and Sediment Budgets for the Lake Kitchawan Lagoons

		P load (kg/yr)			N load (kg/yr)		
Source	**Area (ha)**	**Low**	**Most-Likely**	**High**	**Low**	**Most-Likely**	**High**
Nonpoint Source/ Stormwater[1]							
Forest	15.5	1.5	3.2	4.9	28.9	38.1	47.3
Residential	99.3	9.6	20.5	31.3	185.2	244.3	303.4
Commercial/industrial	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Open space/grassland	7.3	0.7	1.5	2.3	13.6	17.9	22.3
Agricultural-row	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural-pasture	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetland	20.7	2.0	4.3	6.5	38.6	50.9	63.2
Open water	3.8	0.4	0.8	1.2	7.2	9.5	11.7
Other Sources							
Septic systems		22.5	52.5	112.5	198.8	345.8	483.8
Waterfowl		1.5	2.0	2.5	75.0	100.0	125.0
Internal recycling		0.03	0.04	0.05	0.0	0.0	0.0
Atmospheric deposition		0.6	1.9	6.2	13.5	40.4	50.4
Total (kg/yr)		**38.8**	**86.7**	**167.4**	**560.6**	**846.8**	**1107.0**

1 = nonpoint load estimated based on watershed land use and pollutant export coefficients (adapted from EPA, 1980)

3.4.3 Trophic State Modeling

A wide array of empirical models exist for estimating in-lake (or lagoon) phosphorus concentrations based on phosphorus load, or conversely, estimating phosphorus load based on observed in-lake phosphorus concentrations. These models provide another mechanism for evaluating phosphorus loading and its impacts on water quality, particularly where field sampling data are limited. The model inputs and outputs are provided in Appendix A for reference.

3.4.3.1 Lake Kitchawan

Based on the estimated phosphorus load to the lake (see Section 3.4.2.1), the various trophic models predicted in-lake concentrations ranging from 0.041 to 0.11 mg/L. The observed average summer in-lake concentration was 0.015 mg/L. As this was based on a single summer sampling event, one might expect that concentrations could vary within the predicted range. In addition, it is possible that the lower observed in-lake concentration reflects enhanced nutrient settling associated with the dense aquatic plants in the lake.

Based on the observe chlorophyll concentration (5.7 µg/L), nuisance algal blooms (chlorophyll concentrations greater than 20 µg/L) would be expected to occur approximately 2% of the time. Using the average predicted in-lake chlorophyll concentration, the resultant nuisance algal bloom frequency could be as much as 79% of the time.

Another method for assessing the relative condition of a lake is through the use of trophic state indices. Perhaps the most widely known and used is the Carlson Trophic State Index or TSI (Carlson, 1977). The Carlson Trophic State Index ranges from 0 to 100, with the range between 40 and 50 most commonly associated with mesotrophic conditions. Each increase of 10 TSI units is equivalent to a doubling of phosphorus and a halving of Secchi depth. Numbers above 50 are associated with eutrophic (nutrient enriched) conditions, while numbers less than 40 are associated with oligotrophic conditions. It should be noted that use of the TSI may be misleading, and is generally discouraged in lakes with dense macrophyte beds because the TSI does not incorporate macrophyte biomass, which is often associated with eutrophic conditions. The TSIs are presented here, as one measure of the lake’s condition, excluding issues associated with macrophyte growth. The calculated TSIs may provide some insights as to potential lake condition should significant control of macrophytes be achieved.

The TSI was calculated based on phosphorus concentration, chlorophyll concentration or Secchi disk depth. The TSI-TP, TSI-CHL, and TSI-SD for the lake, based on observed phosphorus and chlorophyll concentrations and Secchi depth, were 43, 48, and 49 respectively. The TSI-TP, TSI-CHL and TSI-SD for the lake based on predicted concentrations/measurements were 65, 65, and 67, respectively. The TSIs based on predicted in-lake concentrations are greater than those calculated based on observe concentrations. This may suggest that aquatic macrophyte beds are effectively limiting algal growth in the lake, and that absent the rooted aquatic plant beds that algal blooms might become an issue for the lake.

As evidenced by the dense aquatic macrophyte beds, as well as the above trophic state modeling, Lake Kitchawan may be best characterized as eutrophic. To slow the process of eutrophication and reverse its effects on the lake, it is necessary to reduce the load of nutrients and sediment to the lake and lagoons. Vollenwieder (1968) developed an empirical model to predict permissible and critical loads for lakes based on their shape (i.e., volume) and hydrology. When loading is below the permissible level, few problems associated with nutrient enrichment should be observed. When loads exceed the critical load levels, significant problems associated with nutrient enrichment are to be expected.

The predicted range of phosphorus loads associated with the single observed phosphorus concentration of 0.015 mg/L is 24 to 65 kg/yr. As these loads are based on only a single summer phosphorus measurement, we believe it is appropriate to place greater reliance on the estimated loading values developed based on watershed land use. As additional data are collected in the future, it may be appropriate to revisit modeling results, to refine the current estimates.

Lake response modeling also indicates that as much as 63 percent of the phosphorus load to Lake Kitchawan is retained in the lake, providing a steady supply of nutrient rich sediments to support future aquatic plant growth.

At present the most likely phosphorus load for Lake Kitchawan (175 kg/yr) is above the critical load level (156 kg/yr) for the lake. To reduce loads to the permissible level (78 kg/yr) would potentially require a 55% reduction in nutrient loading. That level of reduction may not be fully achievable because of economic constraints. However, it is possible that modest reductions can be achieved. Such reductions would reduce the input of additional nutrients that may support future macrophyte growth as well as the potential magnitude and frequency of algal blooms, if substantial control of aquatic macrophytes were achieved.

3.4.3.2 Lake Kitchawan Lagoons

Based on the estimated phosphorus load to the lagoons (see Section 3.4.2.2), the various trophic models predict in-lake concentrations ranging from 0.026 to 0.094 mg/L. The observed average summer in-lake phosphorus concentration was 0.033 mg/L. As this was based on a single summer sampling event, one might expect that concentrations could vary within the predicted range.

Based on the observe chlorophyll concentration, nuisance algal blooms (chlorophyll concentrations greater than 20 µg/L) may be expected to occur approximately 28% of the time. Using the predicting range of potential in-lake chlorophyll concentrations, the resultant nuisance algal bloom frequency could be as much as 84% of the time.

The TSI was calculated based on phosphorus concentration, chlorophyll concentration or Secchi disk depth. As water clarity extended to the lagoon bottom during our field sampling events, no TSI was calculated for observed Secchi disk depth. The TSI-TP and TSI-CHL for the lagoons based on observed phosphorus and chlorophyll concentrations were 55 and 57, respectively. The TSI-TP, TSI-CHL and TSI-SD for the lagoons based on predicted concentrations/measurements were 66, 66, and 65, respectively. TSI values developed based on predicted concentrations were greater than those developed using observed concentrations, though to a lesser extent than was observed in the lake. The greater TSI values based on predicted in-lagoon concentrations may suggest that aquatic macrophyte beds are effectively limiting algal growth in the lagoons, and that absent the rooted aquatic weed beds, the frequency and severity of algal blooms may increase.

The predicted range of phosphorus loads associated with the single observed phosphorus concentration of 0.033 mg/L is 30 to 110 kg/yr. As these loads are based on only a single summer phosphorus measurement, we believe it is appropriate to place greater reliance on the estimated loading values developed based on watershed land use. As additional data are collected in the future, it may be appropriate to revisit modeling results, to refine the current estimates.

Lake response modeling also indicates that as much as 72 percent of the phosphorus load to Lake Kitchawan may be retained in the lagoons, providing a steady supply of nutrient rich sediments to support future aquatic plant growth.

At present the most likely phosphorus load for Lake Kitchawan (87 kg/yr) is above the critical load (Vollenwieder, 1968) level (38 kg/yr) for the lake. To reduce loads to the permissible level (19 kg/yr) would potentially require more than a 78% reduction in nutrient loading. As for the lake, that level of reduction may not be fully achievable because of economic constraints. However, it is possible that more modest reductions can be achieved that would improve lagoon water quality, and prevent further deterioration of the lagoons.

3.4.4 Modeling Limitations and Uncertainty

Models are a useful and commonly used tool for characterizing nutrient and sediment loading to lakes and the resultant impacts in terms of trophic condition. In many cases, models can be used in combination with field data collection programs, or as a first step to help prioritize future data collection programs. In this case, models were used as a first step to gain an understanding of nutrient loading to Lake Kitchawan and the lagoon system.

The most commonly used trophic models are empirical models. That is, the models have been developed using data from other lakes to establish relationships between external and internal nutrient loads and in-lake response (e.g., phosphorus, chlorophyll, and water clarity). Uncertainty or variability is inherent in scientific studies and models. Such uncertainty does not discount the validity of the study or model, as absolute certainty is not achievable. Uncertainty when studying or modeling dynamic and complex biological systems can often be as much as 30% or more. What is important is to understand that uncertainty exists, and that the magnitude of uncertainty is characterized. Recognizing that uncertainty exists, the study team must determine what levels of certainty are needed to address the project objectives, and what levels of certainty are achievable within the economic constraints of the project. Then decision making can proceed, with the understanding of the underlying uncertainty in data being used.

There are numerous sources of natural variability in nutrient loading as well as lake response. In addition to natural variability, other sources of uncertainty or variability expressed in these models include error in measurements (field or laboratory error) or estimates of parameters from the data sets used to develop the models or in the measurements and estimates developed for the lake being modeled (in this case, Lake Kitchawan and the lagoons).

For example, duplicate samples were collected at the in-lake location to quantify variability in concentrations. During the summer sampling event, one sample produced a phosphorus concentration of 0.012 mg/L, while the duplicate yielded a concentration of 0.018 mg/L. The standard deviation (a measure of uncertainty) for those measurements is plus or minus 0.004 mg/L. Standard operating procedures for sample collection help to minimize uncertainty associated with sample collection and handling, and laboratory quality assurance practices aim to control uncertainty in analytical measurements. However, such programs cannot eliminate all field or laboratory uncertainty. The difference in concentration between two samples in the above example may reflect natural variability in the distribution of phosphorus in the water column, or possible field sampling error or laboratory error, or some combination of the three.

Another method for addressing uncertainty is the use of low, most likely, and high estimates (which are in most cases based on the 25th, 50^{th,} or median and 75th percentile unit loads) for nutrient loading, as was done for this project. By using this low, most likely and high, we gain an understanding of the range of possible conditions incorporating sampling uncertainty, analytical uncertainty and natural variability.

In addition, the unique characteristics of the lakes making up the data set used to develop the models, also influences the relationships reflected in the models. Lakes that differ significantly in size, morphometry, geology, hydrology from those used in model development may not consistently behave as predicted by such models. Because of the shallow depth of Lake Kitchawan, and extensive macrophyte growth over much of the lake, Lake Kitchawan differs from the deeper, algal dominated systems used to develop many of the response models. As such, trophic modeling may not accurately reflect observed conditions in the lake, but may provide an indication of potential behavior in the absence of the dense macrophyte growth.

4.0 Diagnostic Summary

Overall, the findings of the 2007 Lake Kitchawan and Lagoon System Diagnostic Study determined that the waterbodies were eutrophic with primary nutrient inputs most likely anthropogenic and attributed to septic systems and/or the accretion of organic sediment. Since the area is mostly residential, failing and/or inadequate septic systems along the lakeshore and other runoff from residential development within the watershed were identified as likely primary sources of Lake Kitchawan's nutrient loading (WCDP, 2002). Other indicators supporting the sources of nutrient loading include the following:

- *Abundance of submerged aquatic plant coverage within the lake and lagoons.* Based on observation, coverage within the lake is estimated at 90% and 100% within the lagoons with distribution a function of depth (most plants were observed within depths less than 10 feet). Spatial distribution is not only a function of light attenuation limits, depth, sediment composition, but proximity to nutrient input.
- *Monospecific coverage of duckweed within the northern lagoon.* Dense duckweed coverage may be associated with elevated nitrogen that could be related to septic leachate.
- *The higher levels of nutrients and dissolved phosphorous observed near the more populated areas and lagoons.* Higher levels were commonly found in the lagoons and the northern portion of the lake where residential land use was either moderate or high,
- *The annual estimated amount of nitrogen and phosphorous (kg/yr) contributed by residential and septic system sources in comparison to the estimated or "most likely" overall value for the lake and lagoons.* Overall, modeling indicated that residential and septic system sources are estimated to contribute to 49% of the phosphorous load and 61% of the nitrogen load within the lake. Values were highest for residential and septic systems sources,
- *Values calculated from trophic modeling coupled with observed dense macrophyte beds indicate that the Lake and lagoons are eutrophic.* Trophic State Index (TSI) values for each were well over the mesotrophic limits of 50,
- *Conductivity values at each of the sample sites were close to 300 uS/cm.* Average values for the lake and lagoons was 271 uS/cm with lagoon readings being the highest (up to uS/cm 404) . Values over 300 uS/cm indicate the presence of pollutants from sources such as road salts, septic systems, and naturally occurring salts and minerals. The land use surrounding the lagoon was identified as moderate to high residential where septic systems are common.

Other observations that may influence management options include:

- Results from physical assessment indicated a predominant depth of organic sediment equal to or greater than 18 feet in both the lake and lagoons. Sediment accumulation/composition in the lake and lagoons was most likely originally associated with anthropogenic development and runoff, but with the increased abundance of submerged plants, may be more related to aquatic plant deposition and decomposition. Sediment samples collected were highly organic which tend to promote plant growth,
- Stormwater sampling showed fecal coliform levels well above 200 col/100ml at one location, but in-lake numbers were well within water quality standards. Fecal coliform concentrations of the main lake-body were found to be at levels not considered harmful (<2 to 46 col/100ml). Although, concentrations found in the lagoon were found at slightly higher levels (>200 col/100ml, the system is not considered to be harmful,
- Fisheries habitat is abundant in the lake. Numerous warm water species were observed within the lake. The increased amount of vegetation in conjunction with satisfactory dissolved oxygen (DO) levels provide habitat and a food supply that promotes fish populations. Low DO in the bottom waters of the lake, reduce available habitat during the summer. The lagoons, on the other hand, exhibit low DO and shallow depths not conducive to fish abundance,

- Aquatic vegetative composition included invasive species such as Eurasian milfoil. There is an evident overabundance of Eurasian milfoil in Lake Kitchawan (approximately 17% of vegetative composition consists of densities greater than 70%) as well as undesirable amounts of floating lilies. Recreational accessibility of Lake Kitchawan and its lagoons is limited by excessive aquatic vegetation. The removal methodology of Eurasian milfoil is limited due to the ability of the plant to propagate from stems and fragmented pieces left behind during the removal process,
- Removal of plants may cause an increase in algal growth. Current conditions within the lake and lagoon show moderate levels of chlorophyll but the removal of plants could initiate a large nuisance algal growth once plants are removed. Lake Kitchawan has slightly basic pH, moderate alkalinity, is well buffered, exhibits relatively high nutrient concentrations (nitrogen and phosphorus), and has low turbidity and TSS. These qualities can promote nuisance algal growth.

5.0 Evaluation of Management Options

To achieve the goals of the LKCC, a complete management program would need to incorporate watershed and in-lake/lagoon management strategies.

5.1 Plan Development Process

The development of a management plan is a dynamic and iterative process that can be described in four basic steps:

1) Identify key issues requiring management

2) Establish clear management objectives

3) Screen available in-lake and watershed management options.

    a. Eliminate options which do not address key management issues or which are infeasible due to physical, environmental or regulatory constraints.

    b. Evaluate potential benefits, limitations, implementation cost for feasible options that address key management issues

4) Develop an integrated management plan.

Step 1 was addressed in Sections 1 through 4 of this report. Steps 2 and 3 are described in the subsections that follow (see subsections 5.2 – 5.4). The fourth step, the integrated management plan, is presented in Section 6 of this report.

5.2 Plan Goals and Objectives

The following key problems were identified in the 2007 Diagnostic Study, and will be addressed in the Lake Kitchawan and Lagoon Management Plan:

- Nutrient loading (high levels of phosphorus and nitrogen),
- Accumulation of sediment from surrounding tributaries as well as internal sources,
- Sediment was soft and deep, and likely to be nutrient rich,
- The lake was relatively shallow and the lagoons extremely shallow,
- Rooted aquatic plants covered the majority of the lake and lagoons and included introduced invasive plant species. Coverage limits recreational use,
- A number of invasive species were present in the lake, with some emergent invasives present along the shoreline, and
- Shallow water depths in lagoons obstructed activities such as swimming and boating and prohibited access to the main waterbody during the summer growing season.

Based on communications with the Lake Kitchawan Conservation Committee (LKCC), it was understood that the overarching goal is to restore and protect Lake Kitchawan and its lagoons so they support desired uses (swimming, boating, and fishing) and are an aesthetic asset to watershed residents and the community at large. To achieve this goal, there are several objectives that must be accomplished including:

1) Reduce/manage the amount and types of submerged and emergent aquatic vegetation

    - Control of aquatic vegetation in individual home owner and Association swimming areas on an as needed basis

- Eradicate existing populations of Eurasian watermilfoil and other invasive species, to the extent possible
- Prevent/eradicate new infestations of invasive species.
- Reduce nuisance vegetation cover by 30%.
- Minimize sediment loads and associated sediment bound nutrients

2) Improve and protect the water quality of the lake and lagoons

   - Verify magnitude of septic system phosphorus inputs
   - Reduce phosphorus inputs from septic systems by 25%

3) Restore recreational accessibility within the lake and lagoon system

   - Selectively restore/increase water depth (sufficient for boat access)
   - Reduce overall aquatic vegetation density
   - Selectively control vegetation to create suitable boat access to at least 50% of the lake as well as the lagoons

The lake/lagoon management plan is intended to identify management options that will help to achieve the above objectives.

5.3 Initial Screening of Lake/Lagoon and Watershed Management Options

The objective of the initial screening of watershed and in-lake/lagoon management options for Lake Kitchawan and its lagoons is to identify options that address issues specific to that waterbody, correspond with existing management objectives, provide effective restoration measures for the sustainability of the lake and lagoon system, and eliminate options from further evaluation that do not satisfy management objectives. Initial screening criteria for Lake Kitchawan was based on the physical and morphometric characteristics of the waterbody, presence of contiguous wetlands, data collected from existing studies, regulatory constraints, and effectiveness in obtaining LKCC management objectives.

The initial screening process included both watershed and in-lake/lagoon level management options.

Watershed level management options were subdivided into either source reduction or transport mitigation strategies. Source controls are methods used to reduce the amount of pollutants generated in the watershed, or to prevent their release to the environment. Transport mitigation is aimed at stormwater management and non-point source control. Initial watershed options were compiled from existing watershed management reference materials (Schueler 1987, Dennis et al. 1989, Scheuler et al. 1992, Claytor and Scheuler 1996, USEPA 1999) and focus primarily on pollutant and sediment loading associated with stormwater runoff.

In-lake management options were compiled from myriad references (Cooke et al., 1993; NALMS, 2001) and focus primarily on algal or rooted plant control. Controls fall in several broad categories including chemical control (herbicides, algicides, nutrient inactivation), physical removal (harvesting, hydroraking, barriers), and biological controls (grass carp, pathogens, weevils, biomanipulation).

Table 5-1 lists the generally accepted watershed and in-lake/lagoon management options used in lake and watershed management. A further discussion of the feasibility and appropriateness of these management options are specifically addressed in Sections 5.1.1 and 5.1.2.

Table 5-1 Watershed Management Options

Watershed Level Restoration/Management Options	
Technique	**Descriptive Notes**
Source Reduction	
1. Agricultural Best Management Practices (BMP)	Land-use activities based on controlling runoff or water movement, erosion, and nutrient/contaminant loading.
2. Bank and Slope stabilization	Reduces erosion and in-stream sediment by maintaining the banks so they do not erode or fall into lake.
3. Behavioral Modifications	Changing the actions of watershed residents and lake users to improve water quality.
4. Land Use Conversion	Purchasing of deleterious properties and converting to less polluting land uses.
5. Wastewater Management	Community level collection and treatment of wastewater to remove pollutants, especially those associated with residential septic systems.
6. Zoning and Land Use Planning	Management of land to minimize deleterious impacts on water.
Transport Mitigation	
Stormwater Management/Non-point Source Control	
1. Buffer Strips and Swales	Areas of grass or other dense vegetation that trap particles and prevent contaminants from entering waterbody.
2. Chemical Treatment	Use of chemical additions for nutrient removal from stormwater discharges.
3. Catch Basins with Sumps and Hoods	Provide the capacity for sediment accumulation and prevent discharge of floatables.
4. Created Wetlands	Shallow pools that create conditions suitable for the growth of wetland plants that can act as filtration device.
5. Detention Ponds	Basins designed to hold a portion of stormwater runoff.
6. Infiltration Systems	Involves the passage of runoff into the soil or artificial medium.
7. Oil/Grit Chambers	Self-contained units that remove sediment, oil, and other floatables.
8. Rain Gardens	Man-made depression in the ground used to improve water quality by absorbing and filtering runoff.
9. Sediment Collection Plates	Inclining plates that trap sediment for collection.
10. Street Sweeping/Catch Basin Cleaning	Practice used to minimize sediment loading, particularly associated with winter ice control.
Wastewater Management	
11. Septic System Maintenance	Proper maintenance, repair and replacement of septic systems to minimize transport of nutrients and pathogens in wastewater.

Table 5-2 In-Lake Management Options

In-Lake Level Restoration/Management Options	
Technique	**Descriptive Notes**
Algal Control	
1. Aeration and/or Destratification	Mechanical maintenance of oxygen levels and prevention of stagnation.
2. Biocidal Chemical Treatment	Addition of inhibitory substances intended to eliminate target species.
3. Biological Controls	Facilitation of biological interactions to alter ecosystem processes.
4. Chemical Sediment Treatment	Addition of compounds that alter sediment features to limit plant growths or control chemical exchange reactions.
5. Dilution and/or Flushing	Increased flow to minimize retention of undesirable materials.
6. Dredging	Removal of sediments under wet or dry conditions.
7. Dye Addition	Introduction of suspended pigments to create light inhibition of algal growth.
8. Hypolimnetic Withdrawal	Removal of oxygen-poor, nutrient-rich bottom waters.
9. Nutrient Inactivation	Chemical complexing and precipitation of nutrients in sediments or the water column
Rooted Aquatic Plant Control	
1. Biological Controls	Facilitation of biological interactions to alter ecosystem processes.
2. Benthic Barriers/Bottom Sealing	Physical obstruction of rooted plant growths and/or sediment-water interaction.
3. Biocidal Chemical Treatment	Addition of inhibitory substances intended to eliminate target species.
4. Dredging	Removal of sediments under wet or dry conditions.
5. Dye Addition	Introduction of suspended pigments to create light inhibition of plant growth.
6. Hand Pulling	Hand pulling/raking of vegetation; may also be implemented with support of hand held suction dredge or collection system
7. Hydroraking and Rotovation	Disturbance of sediments, often with removal of plants, to disrupt growth.
8. Macrophyte Mechanical Harvesting (with or without collection)	Removal of plants by cutting.
9. Water Level Control	Flooding or drying of target areas to aid or eliminate target species.

5.3.1 Impractical/ Non-applicable Management Options

Management options must be tailored to the specific needs and characteristics of a waterbody and should be evaluated on a case-by-case basis. Although the following watershed and in-lake/lagoon management options can be effective in some situations, they do not address significant problems in the Lake Kitchawan system, or are otherwise inadvisable, and thus have been eliminated from further evaluation.

Source Reduction Options

- Agricultural Best Management Practices – Because no significant agricultural land use within the watershed was identified, this option is not applicable.
- Land Use Conversion– No significant high intensity land use properties in watershed need to be addressed

Transport Mitigation Options

- Chemical Stormwater Treatment – Stormwater inputs are not considered a significant source of nutrients; Likely regulatory issues exist with use of alum or other stormwater chemical treatments as well as potentially high long-term maintenance and operation costs.

Algal Control

Although excessive algal growth can become a serious nuisance in aquatic habitats, the primary issue with Lake Kitchawan is rooted aquatic plant growth. As such, algal control options are not addressed further in this plan. It is possible that significant reductions in rooted aquatic plants may increase the frequency and severity of nuisance algae blooms, particularly if nutrient concentrations entering the lake and lagoons remain elevated. It may be necessary to revisit algal control options should significant control of rooted plants be achieved in the future. For reference purposes, Appendix B contains a detailed list of available algal control options.

Rooted Aquatic Plant Control

- Light-Limiting Dyes – Only effective in small ponds with limited flushing; not applicable at Lake Kitchawan or the lagoons
- Harvesting (without collection) – Not suitable due to the presence of Eurasian watermilfoil; risk associated with the spread of milfoil if plant fragments are not contained and removed.
- Drawdown – Not suitable at Lake Kitchawan because of contiguous wetlands and absence of water level control on the existing outlet structure.

5.3.2 Retained Potentially Feasible and Appropriate Management Options

The first step in the screening process eliminated those management options that were deemed site specifically ineffective or which did not address key management issues for the lake and lagoons (see Section 5.3.1). The following options were retained as potentially feasible and appropriate for Lake Kitchawan and the lagoons:

Watershed Management	**In-Lake Management**
Bank and Slope Stabilization	Biological Controls
Behavioral Modifications	Benthic Barriers/Bottom Sealing
Wastewater Management	Biocidal Chemical Treatment
Zoning and Land Use Planning	Dredging
Stormwater Management/Nonpoint Source Control	Hand Pulling/Raking
	Hydroraking and Rotovation
	Macrophyte Mechanical Harvesting (with collection)

Each of the above options has the potential for application within the Lake Kitchawan system but, in some cases, may not represent the best management practices. Therefore these options have been evaluated in greater detail and are discussed the remainder of this section. The final recommended options are summarized in Section 5.5.

5.4 Evaluation of Potentially Feasible and Appropriate Management Options

5.4.1 Watershed Management Options

Watershed management options are aimed at controlling sources of nutrients, sediments and other contaminants generated in and transported from the watershed to the lake or lagoons.

Source controls are methods used to reduce the amount of pollutants generated in the watershed, or to prevent their release to the environment. Eliminating some sources is impractical, but minimizing unnecessary pollutant use and keeping the pollutant from contacting stormwater or groundwater may be feasible. Helpful texts include Hansen et al. (1988), Humstone Squires (1990) and Maine COLA (1991). Source control strategies are discussed in Sections 5.4.1.1 through 5.4.1.5.

While control of sources is the first line of defense, it is often necessary to implement measures to address pollutant transport, where source controls cannot fully eliminate pollutant generation. The choice of transport mitigation methods is largely a function of the features of the land area in question, but multiple methods may apply in any instance. These options are aimed at stormwater management and nonpoint source control. A combination of site-specific factors and cost are the primary determinants of pollutant trapping strategies, which can include the methods described in Section 5.4.1.6. Entire texts have been devoted to the application and success of these best management practices (BMPs), and much has been learned over the last two decades (Schueler 1987, Galli 1990, Scheuler et al. 1992, Kadlec and Knight 1996, Claytor and Scheuler 1996).

5.4.1.1 Erosion Control

Soil erosion can represent a significant source of sediment accretion and associated sediment bound nutrients to the lake. Erosion control is an important component of an overall management plan designed to decrease pollutant loading to aquatic ecosystems. This is especially important in areas of new development, where soils are both exposed and susceptible to erosion. Erosion control is typically implemented via local or state regulations, as well as the Federal National Pollutant Discharge Elimination System (and state counterparts) for projects disturbing one or more acres of land.

During the course of several site visits completed as part of the lake assessment and characterization, no significant issues associated with erosion were observed within the watershed. Existing local, state and federal regulations provide adequate erosion control when properly implemented and enforced. Lake residents and municipal officials can ensure proper implementation and enforcement by notifying appropriate officials if erosion problems are observed.

Objective Addressed	1) Reduce/manage rooted aquatic vegetation 2) Improve and protect the water quality of the lake and lagoons
Primary Benefit	Minimize soil erosion associated with new or redevelopment/construction
Potential Limitations	None
Cost	No additional implementation cost
Recommended?	Yes

5.4.1.2 Bank and Slope Stabilization

All stream banks erode to some extent, but erosion process can be accelerated by human activities within the watershed. Excessive bank erosion and channel scouring can represent a significant portion of sediment loading from tributaries, particularly in urbanized watersheds, areas with steep slopes, and/or highly erodible soils. Bank erosion occurs when hydraulic forces remove erodible bank or bed materials (e.g., bank undercutting, channel scour) or because of geotechnical instability (i.e., bank slumping/collapse). Bank stabilization projects typically involve structural or vegetative measures to restore and stabilize banks and/or to manage/direct flow. Bank stabilization projects also may include restoration of fish habitat, or may involve measures to facilitate fish migration and movement.

No significant issues with bank erosion/channel scouring were observed during the study. Should problem areas be identified, actions should be taken to correct such issues.

Objective(s) Addressed	1) Reduce/manage rooted aquatic vegetation 2) Improve and protect the water quality of the lake and lagoons
Primary Benefit	Halt excessive bank erosion and reduce sediment transport

Potential Limitations	Involves construction near waterbody and potential adverse impacts associated with construction activities need to be appropriately addressed; Armoring of stream banks with hard structures may increase water velocity and increase bank erosion at downstream locations
Cost	Variable, but generally low to moderate cost
Recommended?	Yes, as needed in the future

5.4.1.3 Zoning and Land Use Planning

Zoning and land use planning is an important tool for the protection of water quality. A strong relationship exists between land use type and pollutant generation, with developed lands typically generating greater pollutant loads than undeveloped lands. Development, and associated increases in impervious surfaces, can also change the hydrology of the system increasing the potential for bank erosion and channel scouring. Relationships have been documented between watershed impervious area and declines in water quality, with watershed impervious area greater than 10% linked to marked declines in water quality.

A majority of the lake and lagoon watershed (82%) is already developed or undevelopable (e.g., waterbodies, wetlands, parks and other protected opens spaces). Existing development within the watershed is largely low density residential, and future development would likely be of a similar nature. As such, changes in land use under existing municipal zoning and land use regulations are not likely to significantly impact nutrient loading to the lake and lagoons. Hence additional efforts to strengthen or enhance existing regulatory controls are not deemed necessary at this time. Continued implementation of existing zoning and land use regulations, and consideration of potential impacts of new development on water quality is recommended on an ongoing basis.

Open space preservation, as well as the implementation of appropriate land use and zoning regulations is necessary to protect water quality.

Objective(s) Addressed	2) Improve and protect the water quality of the lake and lagoons
Primary Benefit	Minimize nutrient and sediment loads associated with future development in the watershed.
Potential Limitations	Potential benefits are limited by small amount of undeveloped yet developable land in the watershed; Changes to zoning and land use can be time consuming and in some cases difficult to gain approval of regulatory changes.
Cost	Variable, but generally low to moderate cost
Recommended?	Yes; limited to implementation of existing regulations

5.4.1.4 Wastewater Management

A properly functioning on-site waste disposal (septic) system can be an effective means of reducing pollutant loading to an aquatic ecosystem but does not trap all pollutants and requires inspection and maintenance as do larger public wastewater treatment systems.

The Croton Reservoir Watershed Plan suggested that failing and/or inadequate on-site septic systems serving homes along the lakeshore are likely sources of Lake Kitchawan's impairment as contributors to high phosphorus levels (WCDP, 2002). Nutrient modeling indicates that septic systems may be the single largest source of nutrients to the lake and lagoons. Options to address nutrient inputs from septic systems include:

- Construction of a municipal/regional sewer collection and treatment system
- Construction of a regional septic system
- Replacement of existing septic systems with innovative individual septic systems with enhanced phosphorus removal
- Proper maintenance and operation of existing systems and replacement of failing septic systems

Initial estimates of nutrient loading from septic systems were based on the estimated number of septic systems located within 300 feet of the lake or a tributary to the lake/lagoon, and per capita loading factors available from the literature. At this time, additional investigation is needed to more accurately quantify the magnitude of nutrient inputs associated with septic system operation, maintenance, and/or failure. Additional investigations would potentially include a review of local Board of Health records for evidence of system failures and replacement, an anonymous watershed resident survey to gather information regarding the system installation/replacement date, ongoing maintenance practices, equipment discharging to the system (e.g., shower, tubs, toilets, washing machines, dishwashers, garbage disposals), potential improper use (e.g., disposal of paint, solvents, greases), and routine maintenance practices, in-lake/lagoon monitoring of shoreline porewater (water filling the spaces between grains of sediment) nutrient concentrations in areas of concern, shallow groundwater sampling, dye testing, groundwater recharge and discharge measurements.

If such additional investigations confirm that septic systems represent an overwhelming source of nutrients to the watershed, options for addressing the causes of such nutrient inputs (e.g., failures, improper maintenance, improper use) should be reassessed.

Ongoing maintenance and inspection of on-site waste disposal systems is a recommended management technique for the Lake Kitchawan watershed for systems located within 300 feet of the lake or tributaries as well as other systems located in marginal soils or on steep slopes with shallow bedrock.

Objective(s) Addressed	1) Reduce/manage rooted aquatic vegetation 2) Improve and protect the water quality of the lake and lagoons
Primary Benefit	Minimize nutrient loads associated with onsite wastewater treatment systems (septic systems)
Potential Limitations	Additional investigation is needed to better quantify the magnitude of nutrient loading, and to identify the causes of high nutrient loads; construction and operation of a sewage collection and treatment system may be cost prohibitive, or at a minimum could take years to fund, design and implement. Behavioral modification (e.g., proper maintenance and operation) of systems may not be fully achieved through public education.
Cost	High cost for construction and operation of a wastewater treatment system and communal treatment systems
Recommended?	Yes; conduct additional investigations to confirm magnitude of nutrient loading from septic systems and its causes; implement public education programs to encourage proper maintenance and operation of septic systems; ongoing proper maintenance of systems should be implemented by watershed residents

5.4.1.5 Behavioral Modifications

Behavioral modifications involve changing the actions of watershed residents, lake users, and/or municipal staff to improve and protect water quality. Such changes may include, but are certainly not limited to, conversion to non-phosphate detergents, water conservation, elimination of garbage disposals/grinders for homes on septic systems, proper lawn care, and eliminating illegal dumping. Behavioral modifications can be achieved, through public education and/or the implementation of local by-laws and bans.

Public outreach and education is the preferred initial approach for behavioral modification, as it encourages voluntary conformance with best practices, rather than imposing rules and requirements that can be difficult to enforce. Suggested issues that could be addressed via initial public education programs include:

- Eutrophication/Lakes as living systems
- Proper maintenance/operation of septic systems
- Water conservation
- Waterfowl
- Rain gardens
- Proper lawn care practices

An important element of an effective public outreach and education program is tailoring the outreach and education programs to the target audience. Education can be accomplished via seminars/workshops, lake awareness days, brochures, factsheets, newsletters, one on one discussions, or the internet. It is particularly important that information be presented in an eye-catching, easily understood, easy to navigate format. It is also desirable to track the success of education efforts by establishing specific measurable outcomes. Periodic anonymous surveys completed before and after implementation can be an effective tool for tracking changes in behaviors associated with the education program implementation.

It is difficult to quantify the magnitude of nutrient and sediment load reductions that can be achieved through implementation. In the case of septic system maintenance and repair, loads from an improperly maintained/operated system may be reduced by as much as 50 percent with proper maintenance.

Public education is a recommended management technique for the Lake Kitchawan watershed, although public education and associated behavioral modification will not provide sufficient stand-alone water quality improvement to address the plan objectives.

Objective Addressed	1) Reduce/manage rooted aquatic vegetation 2) Improve and protect the water quality of the lake and lagoons
Primary Benefit	Reduce the generation and transport of pollutants (nutrients, sediments, other contaminants) to the lake and lagoon; Best used as a complement to other in-lake and watershed strategies.
Potential Limitations	Often requires ongoing long-term implementation; Actual reductions in nutrient or sediment loads may be limited
Cost	Variable, but generally low cost
Recommended?	Yes

5.4.1.6 Stormwater Management

Nutrients and sediments are carried in stormwater runoff. A range of stormwater management measures are available to address stormwater inputs to the lake and lagoons. On a lake-wide/lagoon-wide basis, nutrient inputs associated with stormwater runoff appear to be a far smaller source than septic systems. However, stormwater runoff from existing development (roadways, residential properties) is likely the largest external source of sediments to the lake and lagoons.

Implementation of stormwater control measures for new development consistent with state and federal regulations requiring 80% total suspended solids removal will minimize potential impacts associated with future development in the watershed. Individual home owners or groups may wish to implement rain gardens as a low cost way to help incrementally reduce their impact on the lake.

A description of commonly used stormwater treatment systems are provided below. Most are intended for individual sites or small collection areas, but several (e.g., created wetlands, detention systems) can, in some settings, be implement for regional stormwater treatment.

<u>Buffer Strips and Swales</u>

Buffer strips (or vegetated filter strips) are areas of dense vegetation that separate a waterway from a potentially adverse land use. These vegetated strips allow overland flow to pass through vegetation in a diffuse manner. Particulate settling and filtration and infiltration of water occur as the stormwater passes through the vegetation. Potential problems exist when flow is not properly distributed across the entire width of the buffer strip, causing channelization, short-circuiting and potential erosion problems. Treatment of large areas with buffer strips is not recommended, as this increases the likelihood of short-circuiting.

The use of buffer strips or swales can be a low cost, low impact means to minimize inputs to the aquatic environment. Swales are similar to buffer strips except that flow occurs in a confined channel over a longer distance. Lake shore and residents along tributaries to the lake and lagoons can create vegetated buffers along the shoreline to filter runoff from their property that directly drains to the lake, lagoons or tributaries. Residence can also create vegetated swales to treat runoff instead of direct piping to the lake.

Depending on sizing, properly designed and maintained buffers and swales may remove as much as 80 percent of the sediment from stormwater runoff.

<u>Catch Basins with Sumps and Hoods</u>

Deep sump catch basins equipped with hooded outlets can be installed as part of a storm water conveyance system (typically in roads and parking lots). Deep sumps provide capacity for sediment accumulation and hooded outlets prevent discharge of floatables (including oils and greases). Catch basins are usually installed as pre-treatment for other BMPs and are not generally considered adequate storm water treatment independently. Volume and outlet configuration are key features that maximize particle capture, but it is rare that more than the coarsest fraction of the sediment/pollutant load is removed by these devices.

Replacement of existing catch basins without sumps with deep sump catch basins is recommended in the course of normal replacement as part of roadway maintenance. The primary benefit of such replacements will be to minimize sediment loads related to fall leaf litter and winter sanding.

Deep sump catch basins, when properly maintained may reduce sediment loads in stormwater runoff by approximately 30 percent. Because only the coarsest sediments are removed, and a majority of nutrients and other pollutants are associated with smaller grain size particles, removal of sediment bound pollutants may be very low.

Detention

Detention ponds are essentially basins that are designed to hold a portion of stormwater runoff for at least 12-24 hours. Pollutant removal is accomplished mainly through settling and biological uptake. Wet detention ponds are more effective than dry detention ponds as the latter have a greater risk of sediment re-suspension and generally do not provide adequate soluble pollutant removal. Although effective, the land requirement is typically large and available land may not be available.

While effective, space limitations may preclude use of detention basins to address stormwater runoff from existing development. Detention basins may be used to control stormwater runoff from new development. If significant existing stormwater runoff sources are identified in the future, the use of detention basins for regional treatment could be reconsidered.

Detention basins can be sized to achieve sediment removal rates as high as 90 percent, though 70 to 80 percent is more common (Schueler, 1992). A typical phosphorus removal associated with such detention basins would likely remove approximately 50 to 60 percent of the total phosphorus in urban runoff.

Created Wetlands

Created wetlands are shallow detention systems that create conditions suitable for the growth of marsh or wetland plants. These systems maximize pollutant removal through vegetative filtration, nutrient uptake, soil binding, bacterial decomposition, and enhanced settling. Alternatively, a treatment system may combine created wetlands with detention ponds. Created wetlands are suitable for on-line or off-line treatment (assuming maintenance of adequate hydrology with off-line systems to support the wetland). Small scale pocket wetlands can be constructed using coir (coconut fiber) rolls at locations where tributaries or stormwater discharge to the lake or lagoon.

Although effective, this technique in not recommended at this time as additional land requirement is typically large and not necessarily available in the watershed of Lake Kitchawan. Small pocket wetlands could be considered in the future if a particularly problematic stormwater discharge were identified.

Created can be sized to achieve sediment removal rates as high as 90 percent (Schueler, 1992). A typical phosphorus removal associated with such detention basins would likely remove approximately 60 to 70 percent of the total phosphorus in urban runoff.

Infiltration Systems

Infiltration systems may include trenches, basins or dry wells, and involve the passage of water into the soil or an artificial medium. Particles are filtered by the soil matrix and many soluble compounds are adsorbed to soil particles. Overtime, soils may become clogged by accumulated particulates. As such, pretreatment with at least deep sump catch basins or oil/grit chambers is necessary. As subsurface systems, repair and replacement may be costly.

Infiltration systems may be used for new or redevelopment on a selective basis with adequate pretreatment and long-term maintenance.

Oil/Grit Chambers

Oil/grit chambers include prefabricated proprietary treatment systems as well as other double tank chambers designed to include an initial settling chamber for sediment removal, and typically have hooded internal passages to remove oil and other floatables, as well as some form of outlet pool to control exit velocity. Some proprietary systems incorporate filtration or enhanced settling using vortex systems.

A Vortechnics system has been installed at the LKA beach with a second installation planned for late 2007 or early 2008. Installing these devices as off-line systems may enhance pollutant removal, but does not address dissolved fraction of nutrients, which may be important in stormwater runoff. However, incorporation of a created wetland or swale to receive discharge from these systems would potentially enhance nutrient removal.

At this time, no stormwater discharges warranting installation of oil and grit chamber have been identified. Such systems may be considered for new or redevelopment projects in the watershed.

Sediment Collection Plates

Sediment collection plates, ridged plates placed at tributary or storm drain inflows, are most effective as a pre-treatment but may be used for additional sediment removal. As a primary treatment, plates may only remove course sediments. Collection plates require regular maintenance to avoid washing accumulated sediments into the lake after each storm event.

Although this option could be used to address individual stormwater discharges to the lake or lagoons, there are other options that may be more effective and require less maintenance.

There is little documentation regarding sediment and pollutant removal rates for sediment collection plates. We anticipate that when regularly maintained, plates may remove 5 – 25% of sediments, depending on sizing, and whether the plates are used as pre-treatment, or as a final treatment step following other stormwater BMPs.

Rain Gardens

Rain gardens are an option for homeowners as well as businesses to participate in the reduction of polluted runoff and sedimentation, simply by planting a specialized garden. Rain Gardens are an infiltration technique: water is captured in a garden that features native plantings, and the water has a chance to slowly filter into the ground rather than run off into the storm sewer. It is a popular and inexpensive way to reduce non-point source pollution and protect lakes and streams.

When properly sized and maintained, rain gardens may achieve removals comparable to infiltration systems.

Implementation of rain gardens by individual property owners is recommended.

Street Sweeping/Catch Basin Cleaning

Removal of pollutants before they are introduced into Lake Kitchawan and the lagoons could be accomplished by regular street sweeping and catch basin cleaning. Vacuum street sweepers are generally more effective at sediment removal than traditional brush type systems. Both techniques provide only limited benefits by themselves, but could be effective tools in combination with other measures. Catch basin cleaning should be completed at least annually in most areas. Frequency can be adjusted based on inspection of basins to determine those basins that accumulate sediments and debris at the greatest rate. Minimally, street cleaning should occur once at the end of the winter ice season, and again in the fall. Weekly street sweeping has been demonstrated to provide a measureable reduction in sediment loading; however such high frequency sweeping is rarely economically achievable.

Use of broom sweepers provides very limited removal of the sediment particle sizes typically observed in urban runoff. Sweepers only remove very coarse particles, which would typically be trapped in catch basins or elsewhere in the storm drain system prior to discharge to the lake. As such, broom sweepers would be anticipated to reduce loads to the lake and lagoons by less than 2% in most instances. Vacuum sweepers can achieve better results and may reduce sediment loads by 5 – 15% of the median to largest size particles in stormwater runoff (Walker, 2007). Routine sweeping were catch basins without sumps may provide slightly greater benefits to the lake. Where deep sump catch basins are in place, sweeping will help reduce catch basin cleaning frequency, but may not measurably reduce sediment loads to the lake and lagoons.

Street sweeping and catch basin cleaning are recommended management techniques for the Lake Kitchawan watershed, as part of normal road maintenance and storm water drainage system management, but neither should be counted on as a primary pollutant control technique.

Objective(s) Addressed	1) Reduce/manage rooted aquatic vegetation 2) Improve and protect the water quality of the lake and lagoons
Primary Benefit	Minimize nutrient and sediment loads associated with existing and future development in the watershed.
Potential Limitations	Potential benefits (in terms of reduction in overall lake nutrient loading) related to potential new development are limited by small amount of undeveloped yet developable land in the watershed
Cost	Variable, moderate cost
Recommended?	Yes; limited to implementation of rain gardens for individual properties; and implementation of stormwater controls for new and redevelopment projects in the watershed

5.4.2 In-Lake Management Options

As noted previously, in-lake management options retained for further evaluation were limited to those potentially feasible and effective options that address rooted aquatic plant growth and shallow water depth. The following section discusses potentially viable options to control rooted aquatic plant growth in Lake Kitchawan and the adjacent lagoons. Appendix C contains further information regarding the advantages and disadvantages of possible options presented in a tabular format.

5.4.2.1 Mechanical/Physical Plant Control

There are many options for mechanical or physical removal and control of aquatic macrophytes. Options include benthic barriers, dredging, hand pulling with or without hand suction dredging, harvesting with collection, rototilling, and hydroraking. The mechanical control techniques are often cited as being analogous to mowing the lawn (cutting or harvesting), weeding the garden (hand pulling), or tilling the soil (rototilling or hydroraking), and these are reasonable comparisons.

Each mechanical and physical control option is addressed below.

<u>Benthic Barriers</u>

The use of benthic barriers, or bottom covers, is predicated upon the principles that rooted plants require light and can not grow through physical barriers. Artificial sediment covering materials, including polyethylene, polypropylene, fiberglass, and nylon, have been developed over the last three decades. A variety of solid and porous forms have been used. Manufactured benthic barriers are negatively buoyant materials, usually in sheet form, which can be applied on top of plants to limit light, physically disrupt growth, and allow unfavorable chemical reactions to interfere with further development of plants (Perkins et al. 1980).

Benthic barriers can be effectively used in small areas such as dock spaces and swimming beaches to completely terminate plant growth. The creation of access lanes and structural habitat diversity is also practical. Large areas are not often treated, however, because the cost of materials and application is high and maintenance can be problematic (Engel, 1984).

On a localized scale in Lake Kitchawan, bottom barriers could be an effective means to control rooted plant growths. Bottom barriers offer a smaller scale, localized approach to managing plant nuisances and would have minimal consequences on the overall lake ecosystem. This management option would largely benefit shoreline property owners on the lake, as it would not address the issue of shallow water depth in the lagoon. If sediments were first removed in the lagoon areas, benthic barriers would then be an effective means of rooted plant control in such areas.

Objective(s) Addressed	1) Reduce/manage rooted aquatic vegetation
Primary Benefit	Control of rooted aquatic plants in small areas; potentially useful for eradication of small invasive species infestations.
Potential Limitations	Cost prohibitive for large scale use; Requires periodic maintenance and replacement. If sedimentation occurs on barrier, barrier may become substrate for plant growth. Texture of barriers can be atypical of natural bottom. Anchoring of barriers, particularly in soft sediments can be problematic.
Cost	Variable, high cost; \$0.55-\$1.37/ft^2 (\$24,000 - \$59,700/acre)
Recommended?	Yes; by individual property owners

Hand Pulling/Manual Raking

This is a highly selective, labor intensive technique where unwanted plants are targeted and selectively removed by hand. Hand pulling or raking can be used to prevent individual invasives from forming established communities effectively remove non-dominant growths of undesirable species in mixed assemblages, and efficiently target and remove small patches of unwanted plants. Care should be taken when hand pulling or raking in areas infested with Eurasian watermilfoil since this plant reproduces and propagates from fragmentation. Fragments of Eurasian milfoil that are not removed from the waterbody will float to other areas in the waterbody, sink, regenerate, and rapidly establish new colonies. Complete removal is quintessential.

Hand pulling or raking may be used in combination with suction dredging or vacuum systems to collect and remove plant fragments. Suction dredging involves use of a small hand held dredge that removes plant materials and can cause disturbance of bottom sediments, whereas suction vacuum system are designed to remove the plant materials with little or no substrate disturbance.

A few Lake Kitchawan residents have successfully used contractors to remove plants from their swimming areas using the hand pulling method in conjunction with suction dredging/vacuuming. Based on visual inspection performed during the 2007 Diagnostic Study, this technique appeared to have good immediate results though limited to small areas. Information regarding the longevity of control is not known.

This technique is not suited to large scale efforts, especially when the target species or assemblage occurs in dense or expansive beds, but may be applied to Lake Kitchawan for control in small areas.

Objective(s) Addressed	1) Reduce/manage rooted aquatic vegetation
Primary Benefit	Control of rooted aquatic plants in small areas; potentially useful for eradication of small invasive species infestations.
Potential Limitations	Cost prohibitive for large-scale use. Requires periodic maintenance, monitoring, and removal.
Cost	Variable, low to high cost; \$ 0 (self implemented hand pulling)– \$450/acre, with vacuum supported removal;\$3,800 – \$11,800/acre with suction dredging
Recommended?	Yes; by individual property owners.

Harvesting

Mechanical harvesters include large barge mounted systems with conveyors, as well as smaller hand operated cutting systems. Offloading accessories are available for barge-mounted harvesters, allowing easy transfer of removed plants from the harvester in-lake to trucks on shore. Choice of equipment is based on project scale, with larger harvesting operations using machines manufactured commercially to specifications suited for the job.

Harvesting provides only short-term control of rooted aquatic plants and requires operations to be performed periodically. Harvesting has the advantage of removing plant biomass to minimize settling and decomposition of plants but operations do not remove all plant fragments. Due to the presence of Eurasian milfoil in Lake Kitchawan, a containment system would be needed to prevent transport of loose cut fragments to other portions of the lake.

Some lake associations choose to purchase and operate harvesters, while others prefer to contract harvesting services to a firm that specializes in aquatic plant removal. In some cases individual municipalities, counties or a group of municipalities will purchase a harvester to harvest vegetation in all lakes within their jurisdiction. Availability of skilled staff to run and maintain the machines can be problematic. In most cases, contract services are used.

Objective(s) Addressed	1) Reduce/manage rooted aquatic vegetation
Primary Benefit	Short-term control of rooted aquatic plants.
Potential Limitations	Does not provide long-term control; May increase spread of invasive species without proper collection and containment measures.
Cost	Low to moderate; \$450-\$900/acre for moderately dense areas. \$1,300-\$1,750/acre for very dense/difficult to cut/handle areas.
Recommended?	Yes; may not be feasible in lagoon areas because of shallow depth and deep sediment depth.

Rototilling

The uses of cultivation equipment for aquatic plant control involve procedures with a limited track record (Newroth and Soar, 1986). A rototiller is a barge-like machine with a hydraulically operated tillage device that can be lowered to depths of 10 to 12 feet for the purpose of tearing out roots. Work is typically performed when vegetative biomass is low (e.g., spring). Potential impacts to non-target organisms and water quality are substantial and may be undesirable at Lake Kitchawan. The inability to collect root crowns and plant fragments without containment increases the spatial distribution of Eurasian milfoil.

Objective(s) Addressed	1) Reduce/manage rooted aquatic vegetation
Primary Benefit	Control of rooted aquatic plants; 1 – 3 year control is possible (depending on species present)
Potential Limitations	Does not remove plant material, separate collection system required; may contribute to spread of invasive species without root crown and fragment collection and removal; May not be feasible or effective on plants with large root systems (e.g., lilies). This technique is not widely used, and equipment availability is potentially limited in this area.
Cost	Moderate cost; \$600 - \$1,800/acre (potentially more with collection of root crowns and fragments)
Recommended?	No

Hydroraking

Hydroraking uses the equivalent of a floating backhoe, usually outfitted with a York rake resembling tilling or moving silage equipment used on farms. The tines of the rake attachment are moved through the sediment, removing thick root masses and associated sediment and debris. Removed materials are either placed in a transport barge and taken to shore for offloading, or deposited directly into dump trucks for off-site disposal. The maximum depth reached is typically 10 to 12 feet. A hydrorake can be a very effective tool for removing submerged stumps, water lily root masses, or floating islands. Depending on the species present, hydroraking can achieve multi-year control, and may after several consecutive years of implementation begin to reduce regrowth of vegetation.

Use of a hydrorake is not a delicate operation, however, and will create localized turbidity and plant fragments. Hydroraking would be cost prohibitive to implement on a lake-wide basis, but may be effective for use in smaller areas, particularly where lilies are present.

Objective(s) Addressed	1) Reduce/manage rooted aquatic vegetation 3) Restore recreational accessibility within the lake and lagoon system
Primary Benefit	Control of rooted aquatic plants in small areas; may achieve 1-3 years of control, depending on the dominant species removed; may remove some accumulated sediment/debris.
Potential Limitations	Cost prohibitive for large-scale use; does not achieve long term control.
Cost	Variable, low cost (for small areas); \$0.05-\$0.11/ft^2 (\$2,200 – \$4,800/acre) for softer submerged vegetation; \$0.16-\$0.20/ft^2 (\$7,000 – \$8,700/acre) for emergent plants and large root masses (e.g., lilies).
Recommended?	Yes, particularly for lagoon areas as long-term or interim measure.

5.4.2.2 Dredging

A primary benefit of dredging is the restoration of water depth by the removal of sediments that have accumulated over many decades. Dredging works as a plant control technique when either a light limitation on growth is imposed through increased water depth or when enough "soft" sediment (muck, clay, silt and fine sand) is removed to reveal a less favorable substrate (typically rock, gravel or coarse sand).

Dredging techniques can be conveniently grouped into four categories: dry excavation, wet excavation, hydraulic dredging, and pneumatic dredging (Appendix C). Proper planning is needed to avoid and minimize negative environmental consequences that may be associated with dredging. In addition, dredging changes the existing morphology of a lake, and should be engineered with clear recognition of its full impact, positive and negative.

The 2007 Diagnostic Study showed that unconsolidated sediments are extremely deep in the lake and lagoons. Given that significant contiguous wetland areas exist along the lake and lagoon, it is highly unlikely that depth of sediment removal would reach a substrate that would be less conducive for plant growth. It may be however, cost-prohibitive to dredge large areas of the lake to depths that would effectively limit plant growth based on light attenuation limitations (e.g., to depths >15 feet). Wide-scale dredging is not likely to be an effective approach for future plant management in Lake Kitchawan, but may be a suitable option to restore water depths and accessibility. Removal of plants associated with dredging operations may provide temporary plant control but a plant management and monitoring plan would need to be implemented.

Dredging may be applicable to select areas of the lake and within the lagoons.

Objective(s) Addressed	1) Reduce/manage rooted aquatic vegetation 3) Restore recreational accessibility within the lake and lagoon system
Primary Benefit	Restoration of water depth with control of vegetation (until areas recolonize).
Potential Limitations	Cost prohibitive for large scale implementation; disturbs bottom sediments; disposal of removed material may be difficult.
Cost	High; \$10 - \$15/ cubic yard of sediment.
Recommended?	Yes; lagoon and possibly other selected areas.

5.4.2.3 Chemical Control

Killing nuisance aquatic weeds with chemicals (herbicides) is perhaps the oldest method in aquatic plant control. Other than lowering water levels (drawdown), few alternatives to herbicides have been widely used or implemented until the last 20 years. Modern pesticides/herbicides have short half lives (e.g., are not persistent in the environment), and have undergone more extensive testing than their historical counterparts.

There are six active ingredients currently approved for use in aquatic herbicides nationwide, with a seventh ingredient still in experimental phases: copper products, endothall, diquat, glyphosate, 2,4-D, fluridone, and triclopyr. Fluridone, 2,4-D, and glyphosate are “systemic” herbicides that eradicate plants completely. Fluridone can be particularly effective for the control of Eurasian watermilfoil. Diquat and endothall are “knock down” herbicides, which eliminate above ground growth, but not the whole plant. In New York, diquat is allowed for use where there is little or no outflow, and where outflows can be controlled. 2,4-D is only approved for use on emergent aquatic plants. Herbicide control of macrophytes does not remove plant biomass, and hence may contribute to continued sediment accumulation.

State and Federal regulatory restrictions on herbicide are more stringent for water supply reservoirs and waters upstream of water supply reservoirs. Use of herbicides may be appropriate for selective use to control milfoil or other invasive species in Lake Kitchawan, but regulatory approval would be required due to its inclusion with New York City reservoir system. In many instances, use of mechanical or other means of vegetation control are preferred by residents as herbicide/pesticide use is not considered desirable for wide-scale plant control.

Objective(s) Addressed	1) Reduce/manage rooted aquatic vegetation
Primary Benefit	Short-term control of vegetation
Potential Limitations	Requires the addition of chemicals to the lake; does not remove plant material; may provide only short-term control; repeat treatments (potentially every 1-2 yrs) could be required.
Cost	Low; \$0.01-\$0.04 ft^2 (\$450 – \$1,750/ acre) depending on which herbicide is used.
Recommended?	Potentially, as part of comprehensive invasive species control program

5.4.2.4 Biological Control

Biological control has the objective of achieving control of plants without introducing toxic chemicals or using machinery. It suffers from one ecological drawback; in predator-prey (or parasite-host) relationships, it is rare for the predator to completely eliminate the prey. Consequently, population cycles or oscillations are typically induced for both predator and prey. It is unclear if the magnitude of the upside oscillations in plant populations will be acceptable to human users, and it seems likely that a combination of other techniques with biocontrols may be necessary to achieve more long-term, predictable results.

Herbivorous Insects and Fish

Biological control may be achieved with herbivorous insects and fish include fish such as *Ctenopharyngidon idella* (the grass carp) and insects such as the aquatic weevil (*Euhrychiopsis lecontei*). Lake Kitchawan residents had at one time considered the use of grass carp for Lake Kitchawan. Concerns about implementation of this strategy without a full evaluation of other options available was one factor prompting this study and plan development.

Use of grass carp may be approved by NYSDEC for small ponds without contiguous wetlands. Use for larger waterbodies is evaluated on a case by case basis. It is unlikely that use would be approved in lakes that have contiguous wetlands, such as Lake Kitchawan.

Some success in plant control has been observed with aquatic insects such as the aquatic weevil. This option remains experimental, and is not recommended at this time.

Objective(s) Addressed	1) Reduce/manage rooted aquatic vegetation.
Primary Benefit	Control of vegetation (potentially long term).
Potential Limitations	Most techniques are experimental, with highly variable results; Some regulatory restrictions on use of grass carp.
Cost	Variable; $770/acre/yr[4] for grass carp; no specific cost information available for weevils.
Recommended?	No.

Plant Pathogens

Fungi are the most common plant pathogens investigated, but results are still limited. Results have not been consistent or predictable in most cases, and problems with isolating effective pathogens, overcoming evolutionary advantages of host plants, and delivering sufficient inoculum have limited the utility of this approach to date. This is not a recommended option at this time.

Objective(s) Addressed	1) Reduce/manage rooted aquatic vegetation
Primary Benefit	Control of vegetation (potentially long term).
Potential Limitations	Most techniques are experimental, with highly variable results.
Cost	Cost information for lake-wide applications is not available.
Recommended?	No.

Selective Planting

Although focus is on controlling or eradicating aquatic plants (invasives), evidence suggests that the selective planting, establishment, and presence of a healthy, desirable aquatic plant community can minimize or slow invasive distribution rates. Invasive growth and distribution has been linked to natural and anthropogenic disturbance. The majority of plant control techniques involve some level of disturbance. In order to prevent reestablishment of invasives post management implementation, it is important to ensure

[4] Annual cost; cost s are amortized over the expected life of the fish. Cost presented represents a long-term annual maintenance cost.

native, desirable species establish dominance. Establishment and maintenance of a stable plant community is achieved through supplemental seeding, planting, and monitoring.

This management option used in conjunction with hydroraking, hand pulling, and suction dredging could be an effective technique to prevent reestablishment of invasives in newly cleared areas, in both lake and lagoon..

Objective(s) Addressed	1) Reduce/manage rooted aquatic vegetation.
Primary Benefit	Control of vegetation (potentially long term).
Potential Limitations	Most techniques are experimental.
Cost	Variable; project specific.
Recommended?	Yes as part of a comprehensive invasive species control program.

5.5 Final Recommended Management Options for Lake Kitchawan

Table 5-3 gives the list of final recommended management options for Lake Kitchawan and the lagoon system as determined through our screening and evaluation process. The table gives the benefits, level of implementation, estimated costs for each option, and general regulatory requirements. Estimated costs were based on prices in 2001 U.S dollars adjusted to 2007 dollars using a 3% per annum inflation rate. In addition, the table identifies Action Now items. Certain management options may require further study and design (i.e. septic Investigations, Invasive Plant Management Plan, Dredge Management Plan, etc.) prior to implementation. Section 6 presents these recommended measures in the form of a comprehensive management plan which includes specific actions required for implementation.

Table 5-3 Recommended Management Options for Lake Kitchawan/Lagoons

Recommended Options	Benefits	Level of Implementation	Action Now	Cost	Potential Permit Needs	Notes
Watershed Options						
Erosion control	Control erosion from new and redevelopment projects	Watershed-wide by municipalities	Y	No additional cost	None	Implemented through existing local, state and federal requirements by municipalities
Bank and Slope Stabilization	Reduce sediment and nutrient loading	Watershed-wide by municipalities and/or LKCC and/or other groups	N	TBD; project specific basis	NYSDEC Wetlands permit, potential USACE Section 404	May be implemented on an as-needed basis at various watershed locations, if problem areas are identified.
Behavioral Modifications	Reduction of nutrient loading	Watershed-wide by LKCC and/or by municipalities	Y	$3,000 - $5,000 per year (possibly higher for initial startup)	None	Public education program may include combination of meetings, workshops, newsletters, brochures, etc. Cost of program is dependent on vehicles chosen, and whether outside services are used for material development.
Wastewater Management (ongoing maintenance and inspections)	Reduction of nutrient loading	Watershed-wide by Individual homeowners (system maintenance) and municipal Health Department staff (inspections/enforcement); LKCC may wish to negotiate discounts with one or more septic haulers for Association members or watershed residents.	Y	No additional cost	None	Ongoing septic system maintenance and repair will help minimize nutrient inputs. Pump outs at least every 2 years for properly sized systems are recommended, more frequently for undersized systems. It may be possible to obtain group discount rates from septage haulers for the Association to help encourage proper maintenance by residents.
Wastewater Management (septic system inventory/wastewater study)	Reduction of nutrient loading	Watershed-wide (systems within 300 feet of the lake, lagoons or tributaries) by LKCC or municipality	N	$20,000 - $40,000	None	Complete septic system survey/wastewater study to quantify septic system loads; Outcome of study would help determine whether additional measures to address septic system nutrient inputs are required.
Zoning and Land Use Planning	Reduce nutrient and sediment loading	Watershed -wide by municipalities	Y	Implementation of existing regulations by municipalities = no additional cost.	None	Implementation on existing regulations (SPDES stormwater for construction activities, sediment erosion control, flood control, planning/zoning review of new or expanded development projects/subdivisions); continue to implement sound land use/open space master planning practices.
Stormwater Management - Buffer Strips and Swales or created pocket wetlands	Reduce nutrient and sediment loading	Selective basis by LKCC or individual property owners in conjunction with LKCC.	N	TBD, as needed	May require NYSDEC Wetlands permit	Requiring buffer strips for all new construction is not unreasonable and is possible in most cases.
Stormwater Management - Rain Garden	Reduce nutrient and sediment loading	Individual properties by individual homeowners.	Y	Minimal; $2500 to provide guidelines for creation	None	Rain gardens may be implemented by individual home owners.
Stormwater Management - Street Sweeping/Catch Basin Cleaning	Reduce sediment loading	Town level implementation.	Y	Likely included in current municipal road/highway maintenance budgets; (potentially $10,000/yr for two sweepings; $50/basin if not currently implemented).	None	Minimally should sweep once at end of ice season and again in the fall.
In-Lake/Lagoon Options						
Benthic Barriers	Rooted aquatic plant control	Selected near-shore areas by individual property owners; also as part of a comprehensive plan to address invasive species by LKCC	N	$900 - $2200 per 1500 sf of area covered	NYSDEC wetland permit	Implementation by individual homeowners in localized areas. May achieve some reduction in cost if a group of homeowners were to pursue installation together.
Hand pulling (with manual removal)	Unwanted plants can directly be targeted.	Selected near-shore areas by individual property owners;	Y	Minimal	None	No cost assuming work is complete by property owners; or manual labor may be contracted by individual home owners

Recommended Options	Benefits	Level of Implementation	Action Now	Cost	Potential Permit Needs	Notes
Harvesting with Collection	Control of aquatic plants (short-term)	In-lake in designated areas (total of 60 acres) by LKCC	N	$55,000 - $80,000/yr	NYSDEC Wetland permit	Assumed that water depths are too shallow for effective harvester use in the lagoons; Multiple cuttings may be required to maintain control throughout the summer use period; May be considered as an interim measure to restore water uses near term, while awaiting implementation of longer term solutions
Herbicides	Invasive aquatic plant control	In-lake/lagoon in designated areas as part of a comprehensive invasive species management plan	N	$9,000 - $33,000/yr for treatment of 20 acres	NYSDEC wetland permit, chemical application permit	Would only use in specific areas under strict conditions to supplement other physical removal strategies. Would likely focus on large infestations to provide initial control..
Hydroraking	Control of aquatic plant	Lagoon/lake to create access channels (concentrated in shallow areas where access is significantly impeded) by LKCC and other selected near-shore areas by individual property owners	N	$70,000 - $87,000 for 10 acres of removal; plus $350/ 1500 sf for work at additional properties	NYSDEC	LKCC or small groups of residents may be able to negotiate more favorable rates if contractor mobilization costs are shared among a group versus independent individual implementation by each land owner. Consider LKCC implementation to open up main access channels to lake and lagoons
Hand pulling with Diver Suction Dredging	Control of invasive aquatic plant	May be used in combination with suction dredge or vacuum areas or areas of milfoil infestation as part of comprehensive invasive species management plan	N	$38,000 - $110,000 for 10 acres of vegetation removal	NYSDEC wetland permit	Effective for selected areas but not lake-wide.
Invasive Species Control Plan	Eradicate or minimize invasive aquatic plants	Lake and lagoon by LKCC and/or municipalities	N	$15,000-$20,000 for plan development	None for plan development; NYSDEC Wetlands permit and chemical application permit potentially required	A comprehensive invasive species management plan should be developed for the control of invasive species in the lake and lagoons. This plan would likely be required to secure funding support, as well as to obtain permits for some control options.
Dredging	Increased depth, rooted aquatic plant control	Selected lagoon areas; possibly selected other areas in the lake by LKCC and/or municipalities as a stand alone strategy or as part of a comprehensive plan to address invasive species	N	$390,000 to $580,000 (removal of 3 ft of sediment over 8 acres; 38,720 cubic yards of sediment) Plus dredging feasibility study ($20,000), engineering design and permitting ($100,000)	NYSDEC Wetlands Permit, Sec. 401, Sec. 404,	A detailed feasibility assessment and engineering design would be required prior to implementation; sediment disposal is likely to be a significant issue
Selective Planting	Control of invasive aquatic plant used in combination with other strategies	Selected areas as part of a comprehensive invasive species control plan	N	TBD, pending development of invasive species control plan	NYSDEC wetland permit	Largely experimental with few well-documented cases.

Additional local, state or federal permits may be required. Check with regulatory agencies prior to implementation to be sure appropriate permits are secured.

6.0 Lake and Watershed Management Plan

This section will outline the comprehensive lake and watershed management plan for Lake Kitchawan and the lagoons, aimed at achieving the goals identified by the LKCC. Section 5 described a process by which management goals and objectives were identified, and a wide range of watershed and lake management options were evaluated. The culmination of that evaluation was the selection of a suite of measures that when implemented, would help the LKCC achieve their stated goals and objectives. Briefly, the selected measures included:

Watershed Management Measures

- Erosion control*
- Bank and Slope Stabilization
- Behavioral Modifications*
- Wastewater Management (ongoing maintenance and inspections)*
- Wastewater Management (septic system inventory/wastewater study)
- Zoning and Land Use Planning*
- Stormwater Management - Buffer Strips and Swales or created pocket wetlands
- Stormwater Management - Rain Garden*
- Stormwater Management - Street Sweeping/Catch Basin Cleaning

In-Lake/Lagoon Management Measures

- Benthic Barriers
- Hand pulling (with manual/vacuum removal)*
- Harvesting with Collection
- Hydroraking
- Invasive Species Control
    - Benthic Barriers
    - Hand pulling (with suction dredge/vacuum removal)
    - Selective Planting
    - Herbicides
- Selective Dredging

*Include “Action Now” activities

Each recommended option has been divided into one or more discrete activities. Each activity then includes a description, specific implementation lead (the organization or entity responsible for completion of the item), schedule for implementation, measureable achievements, and monitoring/tracking requirements.

Costs described herein are planning level costs, developed based on typical costs for similar projects around the country. Actual costs may be greater than or less than the planning level costs provided here. In most instances, it will be necessary to obtain estimates from contractors or consultants for specific work. Depending on funding availability in may be necessary to phase implementation, prioritize selected areas for implementation, or re-assess other options if a particular measure is ultimately deemed economically infeasible.

Some actions may be able to be implemented quickly with little additional effort and at a low cost (“Action Now” activities), while others may require significant additional effort including additional study, design, permitting, and securing of outside funding support prior to implementation. For discussion purposes, recommended measures for implementation have been divided into two categories 1) Action Now Measures and 2) Near and Long-term Measures, and are described below.

A number of different measures have been recommended for vegetation control, some of which may be implemented by individuals, and others by the LKCC. Figure 10 illustrates target areas for various rooted aquatic plant control measures.

The balance of this management plan is organized as follows:

- Section 6.1 presents the "Action Now" measures
- Section 6.2 describes near and long-term measures
- Section 6.3 identifies several measures that may be appropriate for use, should specific problems be identified in the watershed in the future.
- Section 6.4 provides a description of recommended monitoring and tracking to identify long term trends in water quality and lake condition as well as to measure the success of plan implementation.
- Section 6.5 provides a recommended program for periodic plan review and update such that this plan becomes a living document that changes as the lake and lagoons change, or our knowledge grows about the lake, lagoons and watershed.

6.1 Action Now Measures

"Action Now" items are practices that can be implemented with minimal additional effort and achieved by the individual homeowner or community member. Although these practices appear small in scale, with full participation, they will be effective measures in improving and maintaining the health of Lake Kitchawan.

6.1.1 Behavioral Modifications – Public Education/Outreach

6.1.1.1 Description

Education and outreach is a critical first step and should precede any attempt at regulation. Public education relies heavily upon cooperation from residents and other lake users, and is not likely to result in major improvements in water quality by itself. However, some level of improvement (e.g., nutrient load reduction) has been noted in other studies and the education process sets the stage for community involvement and cooperation.

Public education and outreach can be accomplished by mailing an informative brochure on watershed management to all residents in the watershed, through the use of video programs on local access television, providing internet website updates, by placing informative billboards in high access areas, or by holding public meetings for watershed residents. The focus of education and behavioral modifications in this watershed should be on fertilizer use and general yard maintenance to minimize polluted runoff. Appendix D contains suggested topics and example content as well as other resources that may be useful in the development and implementation of an education program for the lake and watershed residents. This item should rank high on the priority list as it is an effective low cost option for minimizing nutrient inputs.

It is anticipated that over the long-term, a sound education program may reduce phosphorus loading by 5%, excluding reductions associated with septic system maintenance addressed in Section 6.1.5.

6.1.1.2 Activities, Implementation Lead, and Measurable Achievements

#1 Establish a LKCC Education Subcommittee or Task force (LKCC)

- Form a standing committee and/or task force responsible for development and implementation of future education and outreach efforts.

#2 Incorporate at Least One Educational Element into LKCC Upcoming Mailing or Newsletter (or facilitate similar educational element distribution by municipalities targeting all residents) (LKCC)

- There is an abundance of readily available educational information that may address key issues where watershed and lake residents, and which could be easily incorporated into another planned mailing.

#3 Develop an education and outreach program (LKCC)

- Develop an education and outreach program for watershed and lake residents. Plan should identify methods/vehicles for communication (e.g., newsletter, factsheet, internet, workshop, lecture series, etc.), responsible parties, topics/content, schedule, and cost. The program should also include surveys or other tools to measure effectiveness of the outreach program. The LKCC may opt to have an outside contractor assist with development of the program, or may undertake development internally. LKCC may also work with the municipalities and other lake associations to develop a broader based education program.

#4 Implement education and outreach program (LKCC)

- Implement the education and outreach program for watershed and lake residents, Communications of information should occur at least semi-annually, but preferably would occur quarterly; perhaps more frequently during the summer. The LKCC may opt to have an outside contractor assist with implementation of the program, and may also consider cooperative implementation with the municipalities and/or other lake associations.

6.1.1.3 Cost

Implementation costs can be very low if existing information/materials are used, and implementation is undertaken by the LKCC without outside assistances. For budget planning purposes, we have assumed a cost of $3,000 - $5,000 per year on an ongoing basis. The estimated cost to initially develop the education and outreach plan is $5,000, if developed by an outside contractor.

6.1.1.4 Schedule

Implementation of Activities #1 and #2 can begin immediately, and should be accomplished within the first 6 to 12 months of plan implementation. Activity #3 should begin after the education committee/task force has been created, and should be completed within the first 12 months of plan implementation. Activity #4 will be implemented over the long-term.

6.1.1.5 Monitoring/Tracking

LKCC should report accomplishments of the education program implementation to LKCC members and residents at least annually. An initial watershed resident survey (or similar activity) should be completed that would gain information on current watershed resident practices and knowledge about issues affecting the lake. Repeating similar surveys periodically can be used to track changes in resident practices and understanding, as well as help identify which vehicles of communication have been most effective. This information should then be used to refine the education program as needed to increase its effectiveness.

6.1.2 Erosion Control

6.1.2.1 Description

Implementation of erosion control requirements via existing local, state, and federal regulations should be continued to minimize sediment inputs to the lake and lagoons. This may include the installation and maintenance of sediment pollution control and erosion control for all construction activities.

LKCC and watershed residents can help with enforcement by reporting observed erosion problems to the Westchester County Soil & Water Conservation District and/or appropriate municipal officials.

Continued use of proper erosion control is expected to prevent increased sediment loads to the lake during construction projects, but will not otherwise reduce existing loads to the lake and lagoons.

6.1.2.2 Activities, Implementation Lead, and Measurable Achievements

#1 Implement existing regulations governing erosion control (Municipalities, County, LKCC)

- Require proper erosion control for new and redevelopment projects in the watershed.

#2 Enforce existing regulations governing erosion control (Municipalities, County, LKCC)

- Enforce existing regulatory requirements
- Encourage watershed residents to notify public officials if evidence of erosion at construction sites is observed.
- Enlist volunteers to attend regular planning board meetings to maintain an awareness of construction projects being undertaken in the watershed.

6.1.2.3 Cost

Implementation of existing regulations governing erosion control can be accomplished at no added cost.

6.1.2.4 Schedule

Implementation is ongoing, and should continue in the future.

6.1.2.5 Monitoring/Tracking

LKCC should obtain information regarding enforcement activities and actions undertaken by municipal or county officials, and maintain an awareness of construction projects being proposed or undertaken in the watershed. LKCC should report information regarding ongoing and construction projects having received municipal approvals, as well as information regarding enforcement activities to the LKCC membership. Information regarding proposed/ongoing projects as well as enforcement activities should be used to determine if strengthening of existing regulations or enforcement activities is necessary to protect the lake and lagoons.

6.1.3 Street Sweeping/Catch Basin Cleaning

6.1.3.1 Description

It is recommended that street sweeping occur at least twice a year: once at the end of the winter ice season and once again in the fall in areas of high sediment accumulation. For the purposes of this plan it is assumed that the municipalities currently sweep streets on an annual basis with a broom type sweeper, and that catch basins are cleaned once every one to three years. The municipalities may wish to consider increased frequency of sweeping to reduce the frequency of catch basin cleaning.

We have assumed that continued implementation of existing sweeping/cleaning programs produce no decrease in sediment loading from existing conditions, but will prevent increases in loads from roadway runoff. Increasing the frequency of sweeping and cleaning is estimated to decrease loads from roadways by 2 to 5 percent from existing conditions. Because roadways represent a fairly small percentage of the total impervious area in the watershed, net reductions in loading to the lake will be less than 1 percent.

6.1.3.2 Activities, Implementation Lead, and Measurable Achievements

#1 Continue to implement existing street sweeping and catch basin cleaning practices (Municipalities, LKCC)

- Communicate the importance of regular sweeping/cleaning to municipal road/highway or public works departments (LKCC)
- Obtain information on existing street sweeping and catch basin cleaning frequency (LKCC)
- Sweep streets and clean catch basins in the Lake Kitchawan watershed per existing municipal practices (municipalities)

#2 Increase the frequency of street sweeping and/or catch basin cleaning in areas where heavy accumulation is repeatedly observed. (Municipalities, LKCC)

- Identify areas where street sweeping and/or catch basin cleaning frequency appears inadequate to manage localized sediment loads.
- Increase sweeping/cleaning frequency to address problem areas.

6.1.3.3 Cost

Continuation of the street sweeping and catch basin cleaning at levels currently undertaken by the municipalities can be accomplished at no additional cost. The added cost to increase the sweeping frequency in selected high accumulation areas is $10,000/year. Increased catch basin cleaning would cost approximately $50 per basin per cleaning. The exact number of basins in the watershed is not known. Cost for increased cleaning of 100 basins would be $5,000 per year.

6.1.3.4 Schedule

Activity #1 should be implemented during the first year of plan implementation. Activity #2 should be initiated in Year 1 of plan implementation with a goal of full implementation by the end of Year 2, or as soon as practical given local budgetary planning process and timelines.

6.1.3.5 Monitoring/Tracking

LKCC should obtain information regarding the miles of streets swept, and number of basins cleaned within the watershed on an annual basis. This information should be reported to the watershed residents at least annually. LKCC volunteers/watershed residents should report observations of excess sediment build up on roads or in catch basins near their property or elsewhere to the appropriate municipal officials, as well as the LKCC leadership. These reports should be used to identify areas of high accumulation and to evaluate whether adjustments to sweeping/cleaning frequency are required in certain areas.

6.1.4 Zoning and Land Use Planning

6.1.4.1 Description

It is recommended that existing state and local regulations continue to be followed for zoning and land use practices. Regulations for Pound Ridge and Lewisboro are available at http://www.townofpoundridge.com/ and www.Lewisborogov.com and zoning maps are available at local offices upon request. Permits would be required for zoning and land use planning are obtained through the local zoning board of appeals (ZBA). This item is of lower priority as improvements are minimal if current regulations are already being followed.

Continued implementation of environmental regulatory requirements under the existing zoning and landuse regulations will minimize future increases in sediment and nutrient loading associated with new development or redevelopment within the watershed. No decrease in existing loading is anticipated from the continued implementation of these regulations.

6.1.4.2 Activities, Implementation Lead, and Measurable Achievements

#1 Continue to implement existing zoning and land use regulations (Municipalities)

- Implement existing zoning and land use regulations that protect water quality in the lake and lagoons)

#2 Encourage proper implementation of existing zoning and land use regulations (Municipalities)

- Enlist volunteers to attend regular planning board meetings to maintain an awareness of construction projects being undertaken in the watershed.

6.1.4.3 Cost

Continued implementation of existing zoning and landuse regulations by the municipalities can be accomplished at no additional cost.

6.1.4.4 Schedule

Activity #1 is ongoing and should be continued. Activity #2 should be initiated in Year 1 of plan implementation.

6.1.4.5 Monitoring/Tracking

LKCC should obtain information regarding actions undertaken by municipal or county officials, and maintain an awareness of new projects being proposed or undertaken in the watershed. LKCC should report information regarding ongoing and proposed projects having received municipal/county approvals to the LKCC membership.

6.1.5 Septic System Maintenance

6.1.5.1 Description

Maintenance and repair of on-site waste disposal systems is a recommended management technique for the Lake Kitchawan watershed. Education is the first step in alerting residents to this need. Effort should be made to educate septic system users of the limitations of those systems, and how users can minimize strain on system capabilities. This is a high-priority item that can be implemented with minimal effort.

Consideration of a bylaw that requires proof of septic system inspection and maintenance may be appropriate if evidence suggests that voluntary participation is not yielding adequate results.

Results of actions such as education and behavioral modification are extremely difficult to accurately measure. Better residential management is likely to reduce loads of phosphorus, nitrogen, and bacteria from existing conditions. Approximately 30 to 50 % of the phosphorus in domestic wastewater may be associated with the use of phosphate containing detergents. There is little information available regarding specific breakdown of septic system inputs between normal leaching through soils versus system failures. We have assumed that 50% of remaining inputs are associated with gradual release from septic leach fields, and 50% is associated with system failures. For the purposes of this plan, it is assumed that pumping septic systems every two years will eliminate one third of the phosphorus discharged as gradual release from the system. Educational efforts alone are expected to only achieve 10% replacement or repair of failing systems. With 50% voluntary compliance with use of no-phosphate detergents and regular system maintenance, and 10% replacement or repair of failing systems, watershed phosphorus loads may be reduced by 20%

6.1.5.2 Activities, Implementation Lead, and Measurable Achievements

#1 Complete an educational/outreach program for watershed residents regarding proper septic system maintenance and operation (LKCC)

- Develop an education/outreach program to educate watershed residents regarding proper septic system maintenance and operation.

#2 Undertake a wastewater management study to evaluate benefits of additional measures to ensure proper siting, operation, maintenance, repair and replacement of septic systems in the watershed (LKCC)

- Complete a wastewater management study (see Section 6.2.1)

6.1.5.3 Cost

We anticipate that this educational effort would be undertaken as part of the behavioral modification measures (See Section 6.1.1). We recommend allotting an additional one-time budget of $1500 for development and dissemination of materials specifically related to septic system maintenance as part of the public education program implementation. Costs associated with Activity #2 are addressed under Near-term and Long-term Measures Wastewater Management (See Section 6.2.1)

6.1.5.4 Schedule

Activity #1 should be implemented within the first year of plan implementation, in conjunction with the public education and outreach program developed under the recommended behavioral modification measure (See Section 6.1.1). Activity #2 should be implemented as described in Section 6.2.1.

6.1.5.5 Monitoring/Tracking

LKCC should document implementation of an education effort that provides information to watershed residents regarding proper septic system maintenance and operation. Accomplishments should be reported to the LKCC membership.

6.1.6 Rain Gardens

Rain gardens may be implemented by individual homeowners to treat runoff from rooftops, driveways, or other impervious areas on their property. Installation of a rain garden would typically be limited in scale, and no more significant than other landscaping undertaken by homeowners. Rain gardens should be installed in upland areas, at least 25 feet from the edge of the lake, lagoons or tributaries.

Prior to construction, homeowners should check with local officials regarding the potential need for any permits for construction.

Rain gardens may reduce sediment loading from individual properties by 90 to 100 percent if all runoff from impervious surfaces is treated. Nutrient load reductions would be on the order of 60 to 80 percent. Treatment of ½ of the runoff from 25% of the residential properties with rain gardens would potentially reduce watershed sediment and phosphorus loads by 2 to 3%.

6.1.6.1 Activities, Implementation Lead, and Measurable Achievements

#1 Provide educational materials regarding the design and implementation of rain gardens (LKCC)

- Develop and distribute materials regarding rain gardens to watershed residents, and local landscape contractors.

#2 Construct one or more rain gardens on their property (LKCC, individuals)

- Identify 5 watershed residents per year willing to construct rain gardens on their property
- Construct 3 to 5 rain gardens per year

6.1.6.2 Cost

We anticipate that this educational effort would be undertaken as part of the behavioral modification measures (See Section 6.1.1). We recommend allotting an additional one-time budget of $2500 for development and dissemination of materials specifically related to rain gardens as part of the public education program implementation. Costs associated with Activity #2 would be minimal and born by individual property owners.

LKCC may wish to seek pilot funding to defray cost for the education program as well as several pilot installations in the watershed.

Where existing runoff leaves the property as a confined flow (e.g., in a ditch, swale or pipe), it may be possible to sample runoff and analyze samples for total phosphorus and total suspended solids to document reductions. Analytical cost per sample would be less than $100 each, and samples could be collected by the property owner, LKCC volunteers, or an outside contractor. Assume a total cost of $2,500 dollars for monitoring if implemented by property owners or volunteers, $7,500 if implemented by a contractor (5 rain events, 5 locations).

6.1.6.3 Schedule

Activity #1 should be implemented within the first year of plan implementation. Activity #2 should be initiated in Year 2 of plan implementation (or sooner if possible), with a goal of completing 25 installations by the end of Year 6 of implementation.

6.1.6.4 Monitoring/Tracking

LKCC should document implementation of an education effort that provides information to watershed residents regarding rain gardens. Accomplishments including commitments by individual property owners to construct rain gardens, constructions completed, should be reported to the LKCC membership. It may be difficult to compete quantitative monitoring to document the effectiveness of rain gardens. Visual observations and documentation of runoff from the property during rain events under existing conditions could be used as a baseline for comparison to post-installation conditions. Long-term in-lake monitoring will also reflect any measurable benefits of rain garden installations.

6.1.7 Aquatic Plant Control - Hand pulling (with manual/vacuum removal)

6.1.7.1 Description

Although this option can be labor intensive, this form of mechanical removal can be employed by individuals at a very low cost. Hand pulling or raking, with removal, could be implemented by property owners along the shoreline as well as an effective means of keeping the beach swimming area clear. This measure may be implemented in conjunction with benthic barriers (see discussion of benthic barriers in Section 6.2.4). For larger areas or more inaccessible areas, manual pulling with vacuum removal of pulled materials may be appropriate.

Manual removal will likely achieve 75 – 95% control of aquatic vegetation initially, repeated efforts may be required over the course of the growing season to maintain vegetation at acceptable levels.

6.1.7.2 Activities, Implementation Lead, and Measurable Achievements

#1 Remove rooted vegetation with rakes or hand pulling from individual property owner swimming areas (with or without vacuum assisted removal) (Individuals)

- Remove rooted vegetation from individual property owner shoreline areas.

6.1.7.3 Cost

Cost for implementation would be the responsibility of the individual homeowners, and may range from $0 to $450/acre per year.

6.1.7.4 Schedule

Activity #1 may be implemented by shoreline property owners beginning immediately, and on an as-needed basis in the future.

6.1.7.5 Monitoring/Tracking

LKCC should, as part of follow up surveys, determine the number of shoreline residents employing this measure, and their perceived effectiveness and duration of control associated with implementation.

6.2 Near and Long-Term Management Measures

Near and long-term management measures include those measures that are sufficiently complex or costly as to require additional time for implementation. Some "Action Now" measures described in the previous section, while initiated immediately, may require long-term implementation. Refer to Section 6.1 for a description of "Action Now" measures that may continue over the near to long term.

6.2.1 Wastewater Management

6.2.1.1 Description

A comprehensive wastewater management study is needed to confirm septic system phosphorus contributions to lake/lagoon nutrient loading, and to identify opportunities to control septic system nutrient inputs that may not be fully addressed through public education and outreach efforts.

The wastewater management study should verify the number of systems located within 300 feet of the lake, lagoons or tributaries, document current watershed resident maintenance and operation practices, document existing failure and replacement rates, and document the adequacy of existing inspection and enforcement programs. Field studies should be conducted to quantify groundwater movement and refine estimates of septic system nutrient loading in various areas of the lake and watershed.

If such additional investigations confirm that septic systems represent an overwhelming source of nutrients to the watershed, a wastewater management plan should be developed that explores in detail, options for reducing nutrient loading from septic systems. Such a plan would consider regulatory, education, and incentive programs as well as engineering solutions.

6.2.1.2 Activities, Implementation Lead, and Measurable Achievements

#1 Complete a comprehensive wastewater management study (LKCC)

- Develop a scope of work and select contractor to conduct the study
- Complete the wastewater management study
- Present results of study to LKCC membership.

#2 Develop a comprehensive wastewater management plan for the watershed (LKCC)

- Prepare wastewater management plan

#3 Implement the wastewater management plan (LKCC)

- Update the contents of this lake management plan to incorporate recommendations of the wastewater management plan
- Implement the wastewater management plan recommendations

6.2.1.3 Cost

Wastewater management studies and wastewater management plans can be completed at varying levels of detail and complexity. We suggest a budget of $20,000 for the initial wastewater management study. If required, development of the wastewater management plan may cost $20,000 to $100,000, depending on the level of detail provided and the number and complexity of options considered. Depending on the nature of the wastewater management plan recommendations, implementation costs could range from <$100,000 to >$1,000,000.

6.2.1.4 Schedule

Activity #1 should be implemented within the first year of plan implementation, or as soon as funding can be secured. Activity #2 would proceed, if required, after completion of Activity #1 (probably in Year 2 or 3 of implementation). Activity #3 would occur after completion of Activity #2, and would likely require many years to achieve full implementation.

Implementation of the activities will be dependent on securing the necessary funding support for the required study, management plan development, and long-term plan implementation. This schedule should be updated as necessary based on available funding and priorities.

6.2.1.5 Monitoring/Tracking

LKCC should track and report completion of the major activities associated with this measure. Other monitoring and tracking may be recommended as part of the wastewater management plan developed in Activity #2.

6.2.2 Aquatic Plant Control – Harvesting with Collection

The next step up in mechanical removal of aquatic plants is harvesting. This may involve collection in nets or small boats, or can employ smaller boat-mounted cutting tools that haul the cut biomass into the boat for eventual disposal on land. This is particularly effective against milfoil and results are immediate and still relatively inexpensive. However, results are short-term as milfoil will grow back and this technique may not be practical for areas where there is excessive lily growth based on boat access issues. These difficult areas would include the lagoon. However, this technique may still be used to control milfoil and with the use of benthic mats after clearing, it would be an effective option.

6.2.2.1 Activities, Implementation Lead, and Measurable Achievements

#1 Harvest rooted vegetation (with collection and containment) from Lake Kitchawan and accessible lagoon areas (LKCC)

- Harvest vegetation from 60 acres of the lake and lagoons.

#2 Evaluate harvester effectiveness with a single cutting per season; adjust frequency as needed/economically viable (LKCC)

- Document pre- and post-harvest vegetation densities. Document changes in post-harvest density immediately after harvest and at 2 months after harvesting.
- Adjust frequency or target areas for harvesting as needed

#3 Identify and establish a long-term funding mechanism and/or pursue a cooperative program with municipalities or other nearby lake associations (LKCC)

- Identify and implement long-term funding mechanism including sustainable funding levels
- Adjust total area harvested to meet sustainable funding levels.

6.2.2.2 Cost

Cost for implementation is estimated at $55,000 – $80,000/year. Harvesting represents a significant long-term ongoing cost that may be difficult to sustain. It may be necessary to reduce the total area of harvesting to priority areas likely to benefit all or most lake users to remain within available budgets.

6.2.2.3 Schedule

Activity #1 may be implemented in conjunction with an invasive species control program (See Section 6.2.5 and in conjunction with other individual shoreline and lake/lagoon hydroraking (Section 6.2.3 or benthic barriers-Section 6.2.4), and may begin as soon as funding can be secured, and a contractor is selected for the work. The contractor should obtain any required permits for implementation. Long-term implementation will be dependant on identification of a long-term funding mechanism. Activity #2 should be implemented during the first two years of harvesting. Activity #3 should be completed during the first year of plan implementation.

6.2.2.4 Monitoring/Tracking

LKCC should conduct vegetation monitoring to track changes plant species composition and density associated with harvesting. This information should be used to evaluate the overall benefits achieved, and to refine the harvesting program as needed.

6.2.3 Aquatic Plant Control - Hydroraking

6.2.3.1 Description

Hydroraking can provide effective aquatic plant control with up to two to three years of control depending on the plant species. Hydroraking also may remove some sediment, thus providing some limited increase in water depth. The highest priority for hydroraking is the lagoon areas, and channels connecting the lake and lagoons. This option would particularly be an effective control for water lilies and would provide extended control when lily tubers are removed.

6.2.3.2 Activities, Implementation Lead, and Measurable Achievements

#1 Hydrorake and remove rooted vegetation from the selected areas in the Lake Kitchawan lagoons and Lake Kitchawan (LKCC)

- Hydrorake vegetation from 10 acres of the lake and lagoons (common areas).

#2 Hydrorake and remove rooted vegetation from the individual property shoreline areas (Individuals)

- Hydrorake vegetation from individual shoreline areas.

#3 Evaluate hydrorake effectiveness and the achieved duration of control (LKCC)

- Document pre- and post-harvest vegetation densities. Document changes in post-hydroraking density immediately after removal, at 1 year after removal, and 2 years after removal.
- Adjust frequency or target areas for harvesting as needed

#4 Identify and establish a long-term funding mechanism and/or pursue a cooperative program with municipalities or other nearby lake associations (LKCC)

- Identify and implement long-term funding mechanism including sustainable funding levels
- Adjust total area hydroraked or frequency to meet sustainable funding levels.

6.2.3.3 Cost

Estimated annual cost for hydroraking is $70,000 - $87,000 for 10 acres of removal; plus $350/ 1500 sf for work at additional properties. Hydroraking at individual shoreline areas would be borne by the property owner. Anticipate an initial hydrorake frequency of once every three years. Hydroraking represents a significant long-term ongoing cost that may be difficult to sustain. It may be necessary to reduce the total area of hydroraking to priority areas likely to benefit all or most lake users to remain within available budgets, or to complete smaller areas annually on a three year rotating cycle.

6.2.3.4 Schedule

Activities #1 and #2 may be implemented in conjunction with an invasive species control program (See Section 6.2.5) and in conjunction with other individual shoreline and lake/lagoon harvesting (Section 6.2.2 or benthic barriers-Section 6.2.4), and may begin as soon as funding can be secured, and a contractor is selected for the work. The contractor should obtain any required permits for implementation. Long-term implementation will be dependant on identification of a long-term funding mechanism. Activity #3 should be implemented during the first two to three years of hydroraking. Activity #4 should be completed during the first year of plan implementation.

6.2.3.5 Monitoring/Tracking

LKCC should conduct vegetation monitoring to track changes in plant species composition and density associated with hydroraking. This information should be used to evaluate the overall benefits achieved, and to refine the hydroraking program as needed.

6.2.4 Aquatic Plant Control - Benthic Barriers

6.2.4.1 Description

Benthic barriers can control plant growth in small areas such as dock spaces and swimming beaches. They can also be used for creating access lanes, but may be more costly than other alternatives (e.g., harvesting or hydroraking on a per acre basis). Installation contractors should obtain any required permits for installation. Proper maintenance and repair of barriers is necessary. Property owners should be required to maintain barriers (including periodic removal and cleaning). Barriers that become detached and a hazard to public safety and/or navigation should be removed or repaired promptly at the property owner’s expense.

6.2.4.2 Activities, Implementation Lead, and Measurable Achievements

#1 Install benthic barriers to control vegetation in individual shoreline areas (Individuals)

- Install benthic barriers at selected shoreline areas.

6.2.4.3 Cost

The installed cost for benthic barriers may range from $900 - $2200 per 1500 sf of area covered. Cost would be borne by individual property owners. It is possible that implementation cost may be reduced if groups were to pursue an installation together.

6.2.4.4 Schedule

Activity #1 may be implemented by shoreline property owners beginning immediately, or on an ongoing basis in the future.

6.2.4.5 Monitoring/Tracking

LKCC should, as part of follow up surveys, determine the number of shoreline residents employing this measure, and their perceived effectiveness and duration of control associated with implementation.

6.2.5 Aquatic Plant Control - Invasive Species Control

6.2.5.1 Description

A number of invasive emergent and submerged vegetation species have been identified in the lake, lagoons, and adjacent shoreline areas. Purple loosestrife (*L. salicaria*) invasion of a wetland can result in the suppression of the resident plant community and the eventual alteration of the wetland's structure and function. Eurasian watermilfoil was documented throughout much of the lake, with dense beds dominated by Eurasion milfoil covering approximately 17% of the lake. Illinois pondweed, another invasive species, was also documented over large areas of the lake. Purple loosestrife and Eurasion watermilfoil represent two invasive species of greatest concern for the lake and lagoons.

A comprehensive invasive species management plan should be developed to address the control and eradication of these species in the lake and lagoons. The invasive species control plan would more closely document the location of infestations, evaluate and recommend specific control options as part of an integrated control program, and would recommend a long-term monitoring program to track control success as well as potential locations of new infestations requiring control. Control options likely to be considered would include diver removal with suction dredging, selective planting of desirable species, herbicides, benthic barriers, and other vegetation removal techniques.

Implementation of the program should aim to eradicate invasive species infestations and prevent reinfestation in the future. Complete eradication may not be possible, in which case, efforts should be aimed at preventing further spread of existing infestations.

6.2.5.2 Activities, Implementation Lead, and Measurable Achievements

#1 Develop an integrated invasive species control plan (LKCC)

- Develop work scope and select contractor for plan development
- Prepare the control plan.

#2 Implement the integrated invasive species control plan (LKCC)

- Implement control activities as outlined in the invasive species control plan
- Update this management plan to reflect the recommended activities identified in the plan

6.2.5.3 Cost

The estimated cost to develop the integrated invasive species control plan is $15,000 to $20,000. Implementation costs will depend on the recommended control activities, and the area where controls would be implemented.

6.2.5.4 Schedule

Activity #1 should be implemented within the first year of plan implementation, or as soon as funding can be secured. Implementation under Activity #2 would begin after plan development has been completed, funding secured, one or more contractors selected, and the appropriate permits and approvals for implementation received. Implementation is likely to occur over the long-term with a high level of activity during the initial years of implementation followed by more modest levels of maintenance control. Implementation would likely be integrated with other ongoing vegetation management programs in the lake and lagoons.

6.2.5.5 Monitoring/Tracking

LKCC should track and report progress on the development and implementation of the plan to LKCC membership. The plan, once developed, will include a range of specific monitoring and tracking requirements for implementation.

6.2.6 Selective Dredging

6.2.6.1 Description

Although excessive sedimentation exists throughout the entire Lake Kitchawan system, severe restrictions to recreational uses, based on sedimentation, are confined only to the lagoon. Plant removal from the main lake-body is believed to be sufficient enough to allow the desired recreational uses in this area. However, water levels are so shallow in the lagoon, that plant removal alone, would still not allow recreational access or use. Dredging appears to be the only option if this goal is to be achieved. Dredging is a major operation, but can provide major benefits if done correctly. Removing sediment is the only practical way to consistently increase water depth, and dredging has become one of the most frequently prescribed management techniques (Holdren, et. al., 2001). Guidelines include:

- A proper feasibility study of the lake and disposal sites must be performed. The potential negative impacts must be considered and how they can be avoided
- Sediment attributes must be assessed (quality and quantity)
- Design of the dredging project – will involve extensive engineering and should be done by professionals.
- Permits must be secured (usually an extensive task).
- Costs are expensive but can improve conditions over the long term.

The first step in the process is to complete the dredging feasibility and conceptual design process. This feasibility assessment would build on the information gathered to date, evaluate options for dredge material disposal, identify methods of dredging, target locations for dredging, target depths of dredging, potential adverse environmental impacts, permit requirements, etc. This study would also result in a refined planning level cost estimate for dredging including engineering study and permitting costs.

6.2.6.2 Activities, Implementation Lead, and Measurable Achievements

#1 Complete a dredging feasibility and conceptual design study (LKCC)

- Develop work scope and select contractor to complete the feasibility study
- Complete the dredging feasibility study and conceptual design plan

#2 Complete engineering design and permitting

- Complete preliminary and final engineering design for in-lake dredging, and temporary and/or permanent offsite dredge material placement/disposal
- Secure required permits for dredging

#3 Implement selective dredging program

- Develop bid specification package and obtain quotes for dredging
- Select dredging contractor
- Complete dredging project

6.2.6.3 Cost

The estimated cost for the dredging feasibility study is approximately $20,000 and engineering, design, and permitting costs are estimated at $100,000. The estimated cost to remove three feet of sediment over 8 acres (selected sites and lagoons) is $390,000 to $580,000.

6.2.6.4 Schedule

Activity #1 should be initiated in Year 1 or 2 of plan implementation, depending on funding availability. Implementation of Activities #2 and #3 would proceed sequentially as funding is available. Because dredging is an extremely costly and complex undertaking, it may take many years to fully implement this measure.

6.2.6.5 Monitoring/Tracking

LKCC should track and report progress on activity completion to LKCC membership. Once designed, the dredging project will likely incorporate additional monitoring and tracking activities.

6.3 "As Needed" Measures

Bank and slope stabilization and the use of buffers, swales and or pocket created wetlands may be considered on an as-needed basis to address bank erosion or stormwater runoff problems that may be identified in the future. These measures are described in Sections 5.4.1.2 and 5.4.1.6. If deemed necessary, the plan should be updated to incorporate specific recommended actions, cost, schedule, monitoring, and incorporate tracking elements.

6.4 Monitoring Programs Needs

Ideally, each element of the management plan should have an accompanying monitoring module that facilitates tracking of progress and adjustment of the program as necessary to achieve goals. Tracking and/or monitoring specific for recommended measures have been presented with each measure. The monitoring program described here, is focused on measuring long-term changes in water quality and lake condition. For budgetary reasons, this diagnostic study incorporated only limited monitoring. A long-term monitoring program will help to refine estimates of nutrient loading and trophic condition of the lake.

The following major elements are proposed as part of a long-term monitoring program for Lake Kitchawan:

- Annual in-lake monitoring of phosphorus, chlorophyll a, and Secchi depth (Spring and Mid-Summer)
- Vegetation mapping (species distribution and density) – every two years during the initial five years of plan implementation; every three to four years thereafter.
- Stormwater monitoring (total phosphorus, total suspended solids, fecal coliform) – two storm drains, two storm events per year, for three years.

As vegetation is controlled with implementation of the management program, it may be appropriate to add phytoplankton and zooplankton counts to the in-lake monitoring program. Similarly, as vegetation control is implemented, it may be useful to consider a fisheries survey to document the condition of the fishery and management activities that might enhance the quality of the fishery.

6.5 Management Plan Review and Updating

Management plans need to be "living documents" which are adapted to meet every changing conditions, priorities, and information. As such, it is important that this management plan is periodically reviewed and updated.

We recommend a biannual (every two year) review of the plan updating as required. It may also be useful to create simple tracking mechanisms or a log to track that status of activity implementation between regular plan updates.

Significant changes in condition or development/acquisition of new information may require additional updates as such conditions change or information becomes available.

7.0 Funding

Although the LKCC may be able to fund implementation of certain items with membership funding, outside funding sources will be required to implement the Lake Kitchawan Lake and Lagoon Management Plan. Federal and state programs have been established specifically to assist in lake management and watershed management programs, more so on a watershed level. Funding programs run on annual cycles with deadlines 6 to 12 months in advance of grant awards. Most grants are competitive and require careful preparation to communicate eligibility and conform to grant requirements and priorities. Many of the grant programs focus on implementation versus the earlier planning, design and permitting stages. In some cases, grant programs will credit Town or Association/Committee expenditures with matching amounts. Contacting the agency representatives for each program to gather information regarding deadlines, eligibility, priorities, and other requirements is important. Private foundations are another source of funding. The following identifies some of the potential funding opportunities available.

7.1 Federal Opportunities

Key funding sources include:

Section 319 Non-Point Source Control Program -. Clean Water Act Section 319(h) funds are provided to the state and include a variety of components, including technical assistance, financial assistance, education, training, technology transfer, demonstration projects, and regulatory programs. Each year, EPA awards Section 319(h) funds to states in accordance with a state-by-state allocation formula that EPA has developed in consultation with the states. In accordance with guidance issued by EPA under Section 319 of the Clean Water Act, Section 319(h) funding decisions are made by the states.

Environmental Protection Agency (EPA) -To support committed watershed organizations and state and local governments in improving the nation's water quality, the U.S. Environmental Protection Agency (EPA) has numerous programs that serve to protect watersheds. The EPA has also created a website to provide tools, databases, and information about sources of funding to practitioners and funders that serve to protect watersheds. The site can be accessed at: http://www.epa.gov/owow/funding.html.

EPA Targeted Watersheds Implementation Grants - The Targeted Watersheds Grant (TWG) program encourages the protection and restoration of the country's water resources through cooperative conservation. The program supports collaborative watershed partnerships that are ready to implement on-the-ground restoration and protection activities designed to achieve quick, measurable environmental results. In 2007, EPA awarded $13.3 million in implementation grants for 2006/2007. http://www.epa.gov/twg/implementation.html

Other sources include:

US Department of Agriculture Programs such as the Wildlife Habitat Incentives Program - (administered by the NRCS) - The Wildlife Habitat Incentives Program (WHIP) is a voluntary program for people who want to develop and improve wildlife habitat primarily on private land. Through WHIP USDA's Natural Resources Conservation Service provides both technical assistance and up to 75 percent cost-share assistance to establish and improve fish and wildlife habitat. WHIP agreements between NRCS and the participant generally last from 5 to 10 years from the date the agreement is signed. http://www.nrcs.usda.gov/programs/whip/

Bring Back the Natives Grant Program - The Bring Back the Natives initiative (BBN) funds on-the-ground efforts to restore native aquatic species to their historic range. Projects involve partnerships between communities, agencies, private landowners, and organizations that seek to rehabilitate streamside and watershed habitats. Projects focus on habitat needs of species such as fish, invertebrates, and amphibians that originally inhabited the waterways across the country. Funding for the BBN program is administered through NFWF from federal agencies cooperating to support this program. Cooperating agencies and organizations include the US Fish and Wildlife Service (FWS), Bureau of Land Management (BLM), USDA Forest Service (FS), and Trout Unlimited (TU). A 2:1 non-Federal match is required and grant awards vary between $10,000 and $100,000. The BBN program awards between 12-15 matching grants annually Since 1991, BBN has supported 244 projects and benefited over 120 species, 29 of which are federally listed as threatened or endangered. May be applicable if planting swales and wetlands.

National Fish and Wildlife Foundation General Matching Grants - The National Fish and Wildlife Foundation operates a conservation grants program that awards grants, on a competitive basis, to eligible grant recipients. Grants are awarded to projects that: (1) address priority actions promoting fish and wildlife conservation and the habitats on which they depend; (2) work proactively to involve other conservation and community interests; (3) leverage available funding; and (4) evaluate project outcomes. A 1:1 match is required and grants generally range between $10,000 and $150,000. May be applicable to lagoons and plant removal by providing fish habitat.

7.2 New York Department of Environmental Conservation

Grants for environmental protection and improvement are available from the state for municipalities, community organizations, not-for-profit organizations, and individuals.

2008 Aquatic Invasive Species Eradication Grant (ISEG) Program -The New York State Department of Environmental Conservation (DEC) provides State assistance funding through reimbursement for projects to eradicate aquatic species identified as being invasive within water bodies and wetlands of New York State. Acceptable projects are proposals to kill and/or permanently remove plants or animals that meet the definition of aquatic invasive species or aquatic nuisance species from waterbodies or wetlands in New York State. The most important aquatic invasive species are listed below. Grants can only be awarded to municipalities and Not-For-Profit Corporations (NFPs). http://www.dec.ny.gov/animals/32861.html

Water Quality Improvement Projects Program - The Department periodically issues a call for projects, evaluates applications, and ranks projects for funding under the WQIP process. Funds are used for projects that demonstrate direct environmental benefits that will help reduce polluted runoff, improve water quality, and restore habitat in New York State waters. http://www.dec.ny.gov/pubs/4774.html

Environmental Protection Fund - Governor Eliot Spitzer recently signed legislation that will increase revenue to the state's Environmental Protection Fund (EPF) from $225 million to $250 million in the 2008-09 fiscal year, and to $300 million in fiscal year 2009-10 and thereafter. These funds would largely be available for acquisition of watershed lands for preservation of open space.

7.3 Non-profit Sources

New York Corporate Wetland Restoration Partnership (NYCWRP) - The New York Corporate Wetlands Restoration Partnership (NYCWRP) is an innovative private-public initiative aimed at preserving, restoring, enhancing and protecting aquatic habitats throughout New York. Small grants may be available for projects. http://www.cwrp.org/newyork.html

Other private foundations and/or local corporations may also provide grants for environmental projects. These include but are not limited to the New York Audubon Society and Ducks Unlimited. The following link provides a links to a range of foundations supporting environmental initiatives.

http://efc.boisestate.edu/federal_state_sponsors.asp?mode=private_foundations.

7.4 Corporate Grants

Some corporations provide funding for environmental projects in either their employees' communities or the communities where they are located as part of "green" initiatives. Such corporations are often industrial, but may also include service businesses and retailers.

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8.0 References

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APPENDIX G: ENERGY EFFICIENCY BEST PRACTICES

Due to the nature of the recommended alternative, there are no energy efficiency best practices applicable to this project.

APPENDIX H: EXAMPLES OF SHORT-LIVED ASSETS

Short-lived assets associated with the proposed advanced treatment systems are as follows:

- Aeration Blowers
- Control Panel

APPENDIX I: ENGINEERING REPORT CERTIFICATION

Engineering Report Certification

To Be Provided by the Professional Engineer Preparing the Report

During the preparation of this Engineering Report, I have studied and evaluated the cost and effectiveness of the processes, materials, techniques, and technologies for carrying out the proposed project or activity for which assistance is being sought from the New York State Clean Water State Revolving Fund. In my professional opinion, I have recommended for selection, to the maximum extent practicable, a project or activity that maximizes the potential for efficient water use, reuse, recapture, and conservation, and energy conservation, taking into account the cost of constructing the project or activity, the cost of operating and maintaining the project or activity over the life of the project or activity, and the cost of replacing the project and activity.

Title of Engineering Report: Lake Kitchawan Wastewater Study

Date of Report: December 1, 2021

Professional Engineer's Name: Anthony C. Catalano, P.E.

Signature:

Date: December 1, 2021

APPENDIX J: SMART GROWTH ASSESSMENT FORM

Smart Growth Assessment Form

This form should be completed by an authorized representative of the applicant, preferably the project engineer or other design professional.[1]

Section 1 – General Applicant and Project Information

Applicant: Woodard & Curran Eng. & Geo. Services P.A.P.C. Project No.: 0214731.00

Project Name: Town of Lewisboro - Lake Kitchawan - EOH Community Wastewater Plan

Is project construction complete? ☐ Yes, date: ☑ No

Please provide a brief project summary in plain language including the location of the area the project serves:

Install advanced treatment units at 187 homes within the Town of Lewisboro around Lake Kitchawan.

Section 2 – Screening Questions

A. Prior Approvals

1. Has the project been previously approved for Environmental Facilities Corporation (EFC) financial assistance? ☐ Yes ☑ No
2. If yes to A(1), what is the project number(s) for the prior approval(s)? Project No.:
3. If yes to A(1), is the scope of the previously-approved project substantially the same as the current project? ☐ Yes ☐ No

If your responses to A(1) and A(3) are both yes, please proceed to Section 5, Signature.

B. New or Expanded Infrastructure

1. Does the project involve the construction or reconstruction of new or expanded infrastructure? ☐ Yes ☑ No

Examples of new or expanded infrastructure include, but are not limited to:

(i) The addition of new wastewater collection/new water mains or a new wastewater treatment system/water treatment plant where none existed previously;

(ii) An increase of the State Pollutant Discharge Elimination System (SPDES) permitted flow capacity for an existing wastewater treatment system; and OR

[1] If project construction is complete and the project was not previously financed through EFC, an authorized municipal representative may complete and sign this assessment.

(iii) An increase of the permitted water withdrawal or the permitted flow capacity for the water treatment system such that a Department of Environmental Conservation (DEC) water withdrawal permit will need to be obtained or modified, or result in the Department of Health (DOH) approving an increase in the capacity of the water treatment plant.

If your response to B(1) is no, please proceed to Section 5, Signature.

Section 3 –Smart Growth Criteria

Your project must be consistent will all relevant Smart Growth criteria. For each question below please provide a response and explanation.

1. Does the project use, maintain, or improve existing infrastructure?
   ☐ Yes ☐ No

   Explain your response:

2. Is the project located in a (1) municipal center, (2) area adjacent to a municipal center, or (3) area designated as a future municipal center, as such terms are defined herein (please select one response)?

   ☐ Yes, my project is located in a municipal center, which is an area of concentrated and mixed land uses that serves as a center for various activities, including but not limited to: central business districts, main streets, downtown areas, brownfield opportunity areas (see *www.dos.ny.gov* for more information), downtown areas of local waterfront revitalization program areas (see *www.dos.ny.gov* for more information), areas of transit-oriented development, environmental justice areas (see *www.dec.ny.gov/public/899.html* for more information), and hardship areas (projects that primarily serve census tracts or block numbering areas with a poverty rate of at least twenty percent according to the latest census data).

   ☐ Yes, my project is located in an area adjacent to a municipal center which has clearly defined borders, is designated for concentrated development in the future in a municipal or regional comprehensive plan, and exhibits strong land use, transportation, infrastructure, and economic connections to an existing municipal center.

   ☐ Yes, my project is located in an area designated as a future municipal center in a municipal or comprehensive plan and is appropriately zoned in a municipal zoning ordinance

   ☐ No, my project is not located in a (1) municipal center, (2) area adjacent to a municipal center, or (3) area designated as a future municipal center.

   Explain your response and reference any applicable plans:

3. Is the project located in a developed area or an area designated for concentrated infill development in a municipally-approved comprehensive land use plan, local waterfront revitalization plan, and/or brownfield opportunity area plan?

   ☐Yes ☐No

   Explain your response and reference any applicable plans:

4. Does the project protect, preserve, and enhance the State's resources, including surface and groundwater, agricultural land, forests, air quality, recreation and open space, scenic areas, and significant historic and archaeological resources?

   ☐Yes ☐No

   Explain your response:

5. Does the project foster mixed land uses and compact development, downtown revitalization, brownfield redevelopment, the enhancement of beauty in public spaces, the diversity and affordability of housing in proximity to places of employment, recreation and commercial development, and the integration of all income and age groups?

   ☐Yes ☐No

   Explain your response:

6. Does the project provide mobility through transportation choices including improved public transportation and reduced automobile dependency?

   ☐Yes ☐No ☐N/A

   Explain your response:

7. Does the project involve coordination between State and local government, intermunicipal planning, or regional planning?

   ☐Yes ☐No

   Explain your response and reference any applicable plans:

8. Does the project involve community-based planning and collaboration?

☐Yes ☐No

Explain your response and reference any applicable plans:

9. Does the project support predictability in building and land use codes?

☐Yes ☐No ☐N/A

Explain your response:

10. Does the project promote sustainability by adopting measures such as green infrastructure techniques, decentralized infrastructure techniques, or energy efficiency measures?

☐Yes ☐No

Explain your response and reference any applicable plans:

11. Does the project mitigate future physical climate risk due to sea-level rise, storm surges, and/or flooding, based on available data predicting the likelihood of future extreme weather events, including hazard risk analysis data, if applicable?

☐Yes ☐No

Explain your response and reference any applicable plans:

Section 4 – Miscellaneous

1. Is the project expressly required by a court or administrative consent order? ☐ Yes ☐ No

If yes, and you have not previously provided the applicable order to EFC/DOH, please submit it with this form.

Section 5 – Signature

By signing below, you agree that you are authorized to act on behalf of the applicant and that the information contained in this Smart Growth Assessment is true, correct and complete to the best of your knowledge and belief.

Applicant: Woodard & Curran Eng. & Geo. Services P.A.P.C.	Phone Number: 914 294 2602
Name and Title of Signatory: Ken Kohlbrenner, Project Manager	
Signature:	Date: 12/1/2021

APPENDIX K: ADDITIONAL CONSIDERATIONS FOR SPECIFIC TECHNOLOGIES AND PROJECT TYPES

The appropriate considerations for new collection systems and decentralized wastewater systems were included as outlined within the report.

APPENDIX L: DESIGN FLOWS BY PARCEL

Lake Kitchawan Detailed Flow Calculations

Parcel ID	Street	Address	Lake	Land Use Code	Flow Unit Basis	Avg. Per Capita Pop.	Flow, gpd
65.8-3-11	4	BEECH RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-3-12	10	BEECH RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.3-1-1	0	BIRCH SPRING RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
55.3-1-2	0	BIRCH SPRING RD	Kitchawan	Residential land including a small improvement (not used for living accommodations)	No flow	2.67	0
55.3-1-27	0	BIRCH SPRING RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
55.3-1-28	0	BIRCH SPRING RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
55.3-1-26	11	BIRCH SPRING RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.3-1-3	14	BIRCH SPRING RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.3-1-4	16	BIRCH SPRING RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.3-1-5	18	BIRCH SPRING RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-27	0	BISHOP PARK RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-1-41	0	BISHOP PARK RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.2-1-2	9	BISHOP PARK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-40	25	BISHOP PARK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-42	27	BISHOP PARK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-39	29	BISHOP PARK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-43	31	BISHOP PARK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-44	36	BISHOP PARK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-45	38	BISHOP PARK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-46	40	BISHOP PARK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-47	42	BISHOP PARK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-48	48	BISHOP PARK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-26	54	BISHOP PARK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.1-2-17	0	BOUTONVILLE RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.2-1-24	0	BOUTONVILLE RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.2-2-35	0	BOUTONVILLE RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.4-1-1	0	BOUTONVILLE RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.2-2-34	91	BOUTONVILLE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-1-21	107	BOUTONVILLE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-1-25	114	BOUTONVILLE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-1-23	115	BOUTONVILLE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-22	0	BROOKSIDE TRAIL	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-1-15	4	BROOKSIDE TRAIL	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-21	6	BROOKSIDE TRAIL	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-23	10	BROOKSIDE TRAIL	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-24	11	BROOKSIDE TRAIL	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-1-2	0	CROSS POND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-2-1	0	CROSS POND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-2-3	0	CROSS POND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.2-4-13	0	CROSS POND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.4-2-29	0	CROSS POND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.4-2-31	0	CROSS POND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200

Lake Kitchawan Detailed Flow Calculations

Parcel ID	Street	Address	Lake	Land Use Code	Flow Unit Basis	Avg. Per Capita Pop.	Flow, gpd
54.4-2-33	0	CROSS POND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.4-2-35	0	CROSS POND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.4-3-1	0	CROSS POND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.4-3-4	0	CROSS POND RD	Kitchawan	Recreational Facilities	Individually inspect	2.67	0
54.2-3-1	2	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-4-2	3	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-4-8	5	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-4-9	7	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-3-2	8	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-4-10	9	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-3-3	10	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-4-11	11	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-3-4	12	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-4-12	15	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-3-5	16	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-15	18	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-3-3	19	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-16	20	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-3-2	21	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-3-6	23	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-3-7	25	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-19	28	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-3-8	29	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-20	30	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-3-9	31	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-21	32	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-3-10	33	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-22	34	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-3-11	35	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-3-12	37	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-23	38	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-3-13	39	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-1-8	40	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-1-9	41	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-1-7	42	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-1-6	44	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-1-5	46	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200

Lake Kitchawan Detailed Flow Calculations

Parcel ID	Street	Address	Lake	Land Use Code	Flow Unit Basis	Avg. Per Capita Pop.	Flow, gpd
54.20-2-9	47	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-1-4	48	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-2-8	49	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-1-3	50	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-2-7	51	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-2-6	53	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-1-1	54	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-2-5	55	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-2-4	57	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-25	60	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-2-2	61	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-26	62	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-27	64	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-30	66	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-32	67	CROSS POND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.3-2-12	0	CURTIS RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
55.3-2-14	0	CURTIS RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
55.3-2-8	0	CURTIS RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
55.3-2-11	3	CURTIS RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.3-2-13	7	CURTIS RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-6	0	DINGEE RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.2-2-32	1	DINGEE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-1-22	6	DINGEE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-31	7	DINGEE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-30	11	DINGEE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-2	12	DINGEE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-7	15	DINGEE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-3	16	DINGEE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-8	17	DINGEE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-9	19	DINGEE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-4	20	DINGEE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-10	21	DINGEE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-5	26	DINGEE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-11	31	DINGEE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-12	37	DINGEE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-17	1	DOGWOOD LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200

Lake Kitchawan Detailed Flow Calculations							
Parcel ID	Street	Address	Lake	Land Use Code	Flow Unit Basis	Avg. Per Capita Pop.	Flow, gpd
54.4-2-18	4	DOGWOOD LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-24	6	DOGWOOD LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-12	8	DOGWOOD LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-10	1	FAY LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-9	3	FAY LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-4	4	FAY LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-8	5	FAY LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-5	6	FAY LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-7	7	FAY LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-6	8	FAY LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-5-11	0	GRANDVIEW RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-5-13	0	GRANDVIEW RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-1-18	6	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-2-12	7	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-19	8	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-20	12	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-2-14	17	GRANDVIEW RD	Kitchawan	Seasonal residences	Per Capita	2.67	200
65.8-1-25	18	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-28	22	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-29	24	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-3-8	25	GRANDVIEW RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-1-30	26	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-3-9	27	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-3-10	29	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-31	30	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-32	32	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-33	34	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-5-9	37	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-5-10	41	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-5-22	42	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-5-12	45	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-5-21	46	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-5-14	47	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-5-20	48	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-5-19	50	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-5-15	51	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200

Lake Kitchawan Detailed Flow Calculations							
Parcel ID	Street	Address	Lake	Land Use Code	Flow Unit Basis	Avg. Per Capita Pop.	Flow, gpd
65.8-5-18	52	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-5-16	53	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-5-17	55	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.2-1-9	57	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.2-1-1	58	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.2-1-8	59	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.2-1-7	65	GRANDVIEW RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-10-12	0	HEMLOCK RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-10-13	0	HEMLOCK RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-10-14	0	HEMLOCK RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-10-15	0	HEMLOCK RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-10-16	0	HEMLOCK RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-4-4	0	HEMLOCK RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-4-6	0	HEMLOCK RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-6-11	0	HEMLOCK RD	Kitchawan	Residential land including a small improvement (not used for living accommodations)	No flow	2.67	0
54.20-6-15	0	HEMLOCK RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-6-6	0	HEMLOCK RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-2-17	0	HEMLOCK RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-3-1	0	HEMLOCK RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-3-3	0	HEMLOCK RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-3-5	0	HEMLOCK RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-3-6	0	HEMLOCK RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-4-2	2	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-6-16	5	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-3	6	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-5	8	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-7	12	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-8	14	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-9	18	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-9-1	26	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-6-12	27	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-9-2	46	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-9-4	62	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-2-21	68	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-2-22	70	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-3-2	73	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-2-18	74	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-3-4	81	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-2-16	82	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-2-13	84	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-3-13	89	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200

Lake Kitchawan Detailed Flow Calculations

Parcel ID	Street	Address	Lake	Land Use Code	Flow Unit Basis	Avg. Per Capita Pop.	Flow, gpd
65.8-3-7	93	HEMLOCK RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-7-7	0	HICKORY RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-7-8	0	HICKORY RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-8-15	0	HICKORY RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-2-12	0	IDA LANE	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-2-13	0	IDA LANE	Kitchawan	Recreational Facilities	Individually inspect	2.67	0
54.20-1-10	1	IDA LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-2-10	2	IDA LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-1-11	3	IDA LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-2-11	4	IDA LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-32	0	KITCHAWAN RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-7-1	0	KITCHAWAN RD	Kitchawan	Residential land including a small improvement (not used for living accommodations)	No flow	2.67	0
65.2-1-3	150	KITCHAWAN RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.2-1-11	160	KITCHAWAN RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.2-1-10	162	KITCHAWAN RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.2-1-12	166	KITCHAWAN RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-5-7	170	KITCHAWAN RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.3-2-2	0	LAKE AVE	Kitchawan	Residential vacant land	Per Capita	2.67	200
55.3-2-3	0	LAKE AVE	Kitchawan	Recreational Facilities	Individually inspect	2.67	0
55.3-2-4	0	LAKE AVE	Kitchawan	Residential vacant land	Per Capita	2.67	200
55.3-2-6	0	LAKE AVE	Kitchawan	Residential vacant land	Per Capita	2.67	200
55.3-2-7	3	LAKE AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.3-2-5	7	LAKE AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-3-11	0	LAKE KITCHAWAN DR	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-3-17	0	LAKE KITCHAWAN DR	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-3-19	0	LAKE KITCHAWAN DR	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-3-20	0	LAKE KITCHAWAN DR	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-4-19	0	LAKE KITCHAWAN DR	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-4-26	0	LAKE KITCHAWAN DR	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-4-27	0	LAKE KITCHAWAN DR	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-4-31	0	LAKE KITCHAWAN DR	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-4-33	0	LAKE KITCHAWAN DR	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-5-1	0	LAKE KITCHAWAN DR	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-5-2	0	LAKE KITCHAWAN DR	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-5-4	0	LAKE KITCHAWAN DR	Kitchawan	Residential land including a small improvement (not used for living accommodations)	No flow	2.67	0
54.20-7-3	0	LAKE KITCHAWAN DR	Kitchawan	Residential vacant land	Per Capita	2.67	200
55.3-1-29	0	LAKE KITCHAWAN DR	Kitchawan	Residential vacant land	Per Capita	2.67	200
55.3-2-1	0	LAKE KITCHAWAN DR	Kitchawan	Residential land including a small improvement (not used for living accommodations)	No flow	2.67	0
55.3-2-10	0	LAKE KITCHAWAN DR	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-1-3	0	LAKE KITCHAWAN DR	Kitchawan	Residential land including a small improvement (not used for living accommodations)	No flow	2.67	0
65.8-2-2	0	LAKE KITCHAWAN DR	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-2-3	0	LAKE KITCHAWAN DR	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-2-8	0	LAKE KITCHAWAN DR	Kitchawan	Residential land including a small improvement (not used for living accommodations)	No flow	2.67	0
55.3-1-30	46	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.3-2-9	47	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200

Lake Kitchawan Detailed Flow Calculations

Parcel ID	Street	Address	Lake	Land Use Code	Flow Unit Basis	Avg. Per Capita Pop.	Flow, gpd
55.3-1-31	48	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.3-1-32	50	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-5-10	52	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-5-8	54	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-5-6	58	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-5-5	62	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-8-13	63	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-7-5	65	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-7-2	69	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-5-3	70	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-6-1	79	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-1	85	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-34	93	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-3-2	96	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-3-3	98	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-3-4	100	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-3-5	102	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-3-6	104	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-3-7	106	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-30	107	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-3-8	110	LAKE KITCHAWAN DR	Kitchawan	Seasonal residences	Per Capita	2.67	200
54.20-3-9	114	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-3-10	118	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-29	119	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-28	121	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-3-12	122	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-3-13	124	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-3-14	126	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-3-15	128	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-3-16	130	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-14	135	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-25	139	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-24	143	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-23	149	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-21	153	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200

Lake Kitchawan Detailed Flow Calculations

Parcel ID	Street	Address	Lake	Land Use Code	Flow Unit Basis	Avg. Per Capita Pop.	Flow, gpd
54.20-4-18	161	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-2-7	165	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-3-18	166	LAKE KITCHAWAN DR	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-2-1	167	LAKE KITCHAWAN DR	Kitchawan	Cultural and Recreational	Individually inspect	2.67	202
65.8-1-1	168	LAKE KITCHAWAN DR	Kitchawan	Seasonal residences	Per Capita	2.67	200
65.8-1-2	170	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-4	174	LAKE KITCHAWAN DR	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-13	0	LAKE PATH	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-4-15	0	LAKE PATH	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-4-16	0	LAKE PATH	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-2-4	0	LAKE PATH	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-2-11	1	LAKE PATH	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-2-10	3	LAKE PATH	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-2-5	6	LAKE PATH	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-2-9	7	LAKE PATH	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-2-6	8	LAKE PATH	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-9-8	19	LAKE PATH	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-17	22	LAKE PATH	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-9-9	23	LAKE PATH	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-11	26	LAKE PATH	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-9-11	39	LAKE PATH	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-4-12	0	LAUREL RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-9-3	0	LAUREL RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-9-7	0	LAUREL RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-2-19	0	LAUREL RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-9-5	43	LAUREL RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-9-6	45	LAUREL RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-2-20	50	LAUREL RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-37	0	LAURIE LANE	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.2-2-46	1	LAURIE LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-45	3	LAURIE LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-36	4	LAURIE LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-44	5	LAURIE LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-43	7	LAURIE LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-38	8	LAURIE LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-42	9	LAURIE LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-39	10	LAURIE LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-24	11	LAURIE LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-40	12	LAURIE LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-23	13	LAURIE LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200

Lake Kitchawan Detailed Flow Calculations

Parcel ID	Street	Address	Lake	Land Use Code	Flow Unit Basis	Avg. Per Capita Pop.	Flow, gpd
54.2-2-41	14	LAURIE LANE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-8-14	0	MAIN ST	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.2-1-26	0	PINE HILL DR	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.2-2-13	0	RIDGEFIELD AVE	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.4-2-13	0	RIDGEFIELD AVE	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.4-2-28	0	RIDGEFIELD AVE	Kitchawan	Residential vacant land	Per Capita	2.67	200
55.1-3-1	0	RIDGEFIELD AVE	Kitchawan	Residential vacant land	Per Capita	2.67	200
55.1-3-10	0	RIDGEFIELD AVE	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.4-2-1	43	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-13	46	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-2	49	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-3	53	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-14	56	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-15	68	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-16	74	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-18	80	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-19	84	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-17	88	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-29	92	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-28	96	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-2-14	99	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-27	100	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-26	104	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-3-6	109	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.4-1-20	110	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-3-7	115	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-3-8	119	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-25	122	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-3-9	123	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-3-10	129	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-22	136	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-4-1	141	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-21	144	RIDGEFIELD AVE	Kitchawan	Rural residence with acreage	Per Capita	2.67	200
54.2-4-3	149	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-20	150	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-4-4	155	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-19	156	RIDGEFIELD AVE	Kitchawan	Rural residence with acreage	Per Capita	2.67	200
54.2-4-7	159	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-4-6	161	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200

Lake Kitchawan Detailed Flow Calculations

Parcel ID	Street	Address	Lake	Land Use Code	Flow Unit Basis	Avg. Per Capita Pop.	Flow, gpd
55.1-3-3	163	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.1-3-2	165	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-4-5	169	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-18	170	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-17	174	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-16	180	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.1-3-5	183	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-15	184	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.2-2-14	188	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.1-1-9	196	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.1-3-7	197	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.1-3-8	201	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.1-1-8	202	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.1-3-9	205	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.1-1-7	206	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.1-1-6	210	RIDGEFIELD AVE	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-10-2	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-10-5	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-10-6	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-10-7	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-10-8	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-11-1	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-11-2	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-11-4	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-11-6	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-6-2	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-6-4	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-6-5	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-6-9	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-3-16	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-3-17	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-3-20	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-4-1	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-4-14	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-4-15	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-4-20	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-4-21	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-4-22	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-4-4	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-4-6	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-4-8	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-4-9	0	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-5-2	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-5-4	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-5-5	0	RIDGELAND RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
54.20-7-4	3	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-6-3	6	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-7-6	9	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200

Lake Kitchawan Detailed Flow Calculations

Parcel ID	Street	Address	Lake	Land Use Code	Flow Unit Basis	Avg. Per Capita Pop.	Flow, gpd
54.20-7-9	15	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-7-10	17	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-7-11	19	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-6-13	22	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-7-12	23	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-8-16	27	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-6-10	30	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-11-9	33	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-11-3	37	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-11-8	39	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-10-4	40	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-11-7	45	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-10-10	57	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-10-9	64	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-10-11	68	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-3-19	69	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-4-25	73	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-4-24	77	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-4-23	81	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-4-5	84	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-4-19	89	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-4-7	92	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-4-18	93	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
66.1-1-1	97	RIDGELAND RD	Kitchawan	Vacant. Rural	No flow	2.67	0
65.8-4-10	98	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-5-1	99	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-4-12	102	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-5-3	105	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-4-13	106	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-5-8	117	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-4-16	122	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-4-17	130	RIDGELAND RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.1-3-15	1401	ROUTE 35	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.1-3-16	1411	ROUTE 35	Kitchawan	Recreational Facilities	Individually inspect	2.67	202
55.1-3-78	1415	ROUTE 35	Kitchawan	One family year-round residence	Per Capita	2.67	200

Lake Kitchawan Detailed Flow Calculations

Parcel ID	Street	Address	Lake	Land Use Code	Flow Unit Basis	Avg. Per Capita Pop.	Flow, gpd
55.1-3-79	1419	ROUTE 35	Kitchawan	One family year-round residence	Per Capita	2.67	200
55.1-3-77	1423	ROUTE 35	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-13	0	SHORE TRAIL	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-1-17	0	SHORE TRAIL	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-1-6	0	SHORE TRAIL	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-1-7	0	SHORE TRAIL	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-1-8	0	SHORE TRAIL	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-1-5	4	SHORE TRAIL	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-16	5	SHORE TRAIL	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-14	11	SHORE TRAIL	Kitchawan	Seasonal residences	Per Capita	2.67	200
65.8-1-12	15	SHORE TRAIL	Kitchawan	Seasonal residences	Per Capita	2.67	200
65.8-1-9	16	SHORE TRAIL	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-10	20	SHORE TRAIL	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-34	2	SPRUCE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-35	8	SPRUCE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
65.8-1-36	12	SPRUCE RD	Kitchawan	One family year-round residence	Per Capita	2.67	200
54.20-11-5	0	WHITE BIRCH RD	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-3-14	0	WOODLAND TRAIL	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-3-15	0	WOODLAND TRAIL	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-3-18	0	WOODLAND TRAIL	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-4-2	0	WOODLAND TRAIL	Kitchawan	Residential vacant land	Per Capita	2.67	200
65.8-4-3	0	WOODLAND TRAIL	Kitchawan	Residential vacant land	Per Capita	2.67	200
10269-3	9	BISHOP PARK RD	Kitchawan	Residential vacant land	Per Capita	2.74	206
10269-4	11	Bishop Park Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10265-2.9	12	Bishop Park Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10269-5	15	Bishop Park Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10265-4	20	Bishop Park Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10269-6	21	Bishop Park Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10265-1	6	Bishop Park Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10280-1	22	Bishop Park Rd (& 24)	Kitchawan	1 Family Res	Per Capita	2.74	206
10301-19.9	127	Boutonville Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10542-2	142	Boutonville Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10542-5	134	Boutonville Rd (& 138)	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-50	67	CROSS POND RD	Kitchawan	Residential vacant land	Per Capita	2.74	206
10263-38	100	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-37	102	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-36	104	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-22	105	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-21	107	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-35.9	108	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-92.1	110	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-20	115	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-33	116	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-19	119	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-32	124	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-49	74	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-43	76	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-44	77	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-39	84	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-29	85	Cross Pond Rd	Kitchawan	Res vac land	No flow	2.74	0
10263-30	87	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-31	89	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-27	91	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-26	93	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-28	95	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-23	99	Cross Pond Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10301-16.1	26	DINGEE RD	Kitchawan	Residential vacant land	Per Capita	2.74	206
10301-15	44	Dingee Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10301-12	50	Dingee Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10301-11	56	Dingee Rd	Kitchawan	1 Family Res	Per Capita	2.74	206

Lake Kitchawan Detailed Flow Calculations

Parcel ID	Street	Address	Lake	Land Use Code	Flow Unit Basis	Avg. Per Capita Pop.	Flow, gpd
10301-9	64	Dingee Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10301-7	68	Dingee Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-69	10	Ebenezer Ln	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-70	17	Ebenezer Ln	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-73	18	Ebenezer Ln	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-78	24	Ebenezer Ln	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-74	25	Ebenezer Ln	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-79	34	Ebenezer Ln	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-84	44	Ebenezer Ln	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-85	46	Ebenezer Ln	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-86	56	Ebenezer Ln	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-65	6	Ebenezer Ln	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-41	11	Highview Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-64	15	Highview Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-47.9	17	Highview Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-42.1	19	Highview Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10301-2.3	24	Highview Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-51	25	Highview Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10301-6	26	Highview Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-52	27	Highview Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-54	33	Highview Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10301-1	4	Highview Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-45	5	Highview Rd	Kitchawan	School	Individually inspect	2.74	1,500
10263-46	7	Highview Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10301-2.2-9	8	Highview Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-91	9	Highview Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10264-3.1	100	Kitchawan Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10264-3.2	120	Kitchawan Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10264-1.1	124	Kitchawan Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10264-1.2	128	Kitchawan Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10269-1	144	Kitchawan Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10053-13	38	Kitchawan Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10053-8.2	44	Kitchawan Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10053-8.3	56	Kitchawan Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10053-8.1	58	Kitchawan Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-12	62	Kitchawan Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-11.20	78	Kitchawan Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10264-1.3	126	Kitchawan Rd (& 126A)	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-11.14	9	KNAPP RD	Kitchawan	One family year-round residence	Per Capita	2.74	206
10263-11.9	37	KNAPP RD	Kitchawan	One family year-round residence	Per Capita	2.74	206
10263-11.7	43	KNAPP RD	Kitchawan	One family year-round residence	Per Capita	2.74	206
10263-11.16	10	Knapp Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-11.13	15	Knapp Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-11.12	19	Knapp Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-11.17	22	Knapp Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-11.11	23	Knapp Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-11.1	24	Knapp Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-11.18	26	Knapp Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-11.19	28	Knapp Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-11.10	33	Knapp Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-11.3	34	Knapp Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-11.4	40	Knapp Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-11.8	41	Knapp Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-11.5	42	Knapp Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-11.6	44	Knapp Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-11.15	8	Knapp Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-11.2	30	Knapp Rd (& 30A)	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-80	Ebenezer	Ln	Kitchawan	Res vac land	No flow	2.74	0
10263-81	Ebenezer	Ln	Kitchawan	Res vac land	No flow	2.74	0
10264-2	Bishop	Park Rd	Kitchawan	Res vac land	No flow	2.74	0
10280-2	Bishop	Park Rd	Kitchawan	Res vac land	No flow	2.74	0
10047-101	167	Park View Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-108	170	Park View Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-24	Cross	Pond Rd	Kitchawan	Public park	Individually inspect	2.74	202
10263-25	Cross	Pond Rd	Kitchawan	Wild lands	No flow	2.74	0
10263-53	Cross	Pond Rd	Kitchawan	Res vac land	No flow	2.74	0

Lake Kitchawan Detailed Flow Calculations							
Parcel ID	Street	Address	Lake	Land Use Code	Flow Unit Basis	Avg. Per Capita Pop.	Flow, gpd
10301-20	outonville	Rd	Kitchawan	Res vac land	No flow	2.74	0
10540-2	outonville	Rd	Kitchawan	Res vac land	No flow	2.74	0
10301-16.2	Dingee	Rd	Kitchawan	Res vac land	No flow	2.74	0
10301-16.3	Dingee	Rd	Kitchawan	Res vac land	No flow	2.74	0
10543-1	Dingee	Rd	Kitchawan	Res vac land	No flow	2.74	0
10263-48	Highview	Rd	Kitchawan	Res vac land	No flow	2.74	0
10263-55	Highview	Rd	Kitchawan	Res vac land	No flow	2.74	0
10263-11.21	itchawan	Rd	Kitchawan	Wild lands	No flow	2.74	0
10263-11.22	itchawan	Rd	Kitchawan	Wild lands	No flow	2.74	0
10263-63.9	itchawan	Rd	Kitchawan	Cemetery	No flow	2.74	0
10263-11.23	Knapp	Rd	Kitchawan	Res vac land	No flow	2.74	0
10047-110	Salem	Rd	Kitchawan	Cemetery	No flow	2.74	0
10301-14	Salem	Rd	Kitchawan	Public park	Individually inspect	2.74	202
10301-22	Salem	Rd	Kitchawan	Res vac land	No flow	2.74	0
10301-8	Salem	Rd	Kitchawan	Res vac land	No flow	2.74	0
10540-3	Salem	Rd	Kitchawan	Res vac land	No flow	2.74	0
10263-60	Scofield	Rd	Kitchawan	Res vac land	No flow	2.74	0
10263-68	Scofield	Rd	Kitchawan	Res vac land	No flow	2.74	0
10263-77	Scofield	Rd	Kitchawan	Res vac land	No flow	2.74	0
10263-82	Scofield	Rd	Kitchawan	Res vac land	No flow	2.74	0
10263-83	Scofield	Rd	Kitchawan	Res vac land	No flow	2.74	0
10263-89	Scofield	Rd	Kitchawan	Res vac land	No flow	2.74	0
10263-1	169	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10053-11	171	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10053-12	173	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-17	233	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-18	245	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-58	250	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-63.9	254	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-67.1	264	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-67.2	266	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-34	267	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-70.2	268	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-70.1	270	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-40	273	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-75	276	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-76	280	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-80	290	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10301-4.9	295	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-85	296	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-90	306	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-93	308	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10301-10	309	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-96	312	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-95	314	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10301-13.1	315	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10301-13.2	317	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-100	318	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10301-21	331	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10301-17	333	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-103	338	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-102	340	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10540-1	343	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-104	346	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-105	352	Salem Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10047-99	324	Salem Rd (& 324A)	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-61	15	Scofield Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-66	20	Scofield Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-62	21	Scofield Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-90	27	Scofield Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-67	28	Scofield Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-71	36	Scofield Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-72	39	Scofield Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-75	42	Scofield Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-76	44	Scofield Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-2	5	Scofield Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-87	59	Scofield Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-88	61	Scofield Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-59	66	Scofield Rd	Kitchawan	1 Family Res	Per Capita	2.74	206

Lake Kitchawan Detailed Flow Calculations

Parcel ID	Street	Address	Lake	Land Use Code	Flow Unit Basis	Avg. Per Capita Pop.	Flow, gpd
10263-58	74	Scofield Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-56	77	Scofield Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-57	81	Scofield Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
10263-3	82	Scofield Rd	Kitchawan	1 Family Res	Per Capita	2.74	206
						Total:	**121,021**

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