TOWN OF POESTENKILL
RENSSELAER COUNTY, NEW YORK

PROPOSED WATER DISTRICT NO. 2
MAP, PLAN AND REPORT

August 2022
(Revised April 2023)

PREPARED FOR:
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I. EXECUTIVE SUMMARY

This Map, Plan and Report was commissioned by the Town of Poestenkill Town Board to evaluate the feasibility of, and to assist with, the creation of a water district in the Town.

The need for expansion of the water system stems from the joint investigation by the New York State Department of Environmental Conservation, New York State Department of Health, and Rensselaer County Department of Health. The State and County's investigation is a response to the Algonquin Middle School detecting perfluoroalkyl (PFAS) and polyfluoroalkyl (PFOA) substances in their water supply above New York States' public drinking water standards of 10 parts per trillion. The tests at the middle school and multiple wells at surrounding properties revealed regulatory violations of PFAS and PFOA. In addition to PFAS and PFOA the Town has encountered coliform in multiple wells. The presence of multiple contaminants shows the priority of providing municipal water to the Algonquin Middle School and surrounding area.

Currently, the Town of Poestenkill operates one (1) water district. The water district has approximately 400 service connections, servicing approximately 980 people. Water is purchased from the City of Troy, which is transported from Troy to Poestenkill through the intervening pipes owned and operated by the Town of Brunswick. The City of Troy's water source is the Tomhannock Reservoir. Water is treated by the City of Troy's Water Treatment Plant before distribution. The water is re-chlorinated before entering the Town of Poestenkill at the Town owned and operated pump station.

Formation of Water District No. 2 is proposed to provide the community with a safe and reliable source of drinking water. Due to community needs, the Town's financial capacity, and customer interest, the project is proposed in two phases. Phase 1 consists of installing water infrastructure from District No. 1 to the middle school, down Liberty Lane, and throughout Algonquin Estates. These areas can be serviced with sufficient pressure from the existing water tank and the improvements will solve the immediate need for clean water supply to areas that have seen contamination. There are two alternatives considered for the first phase of the water district, both of which include Liberty Lane and Algonquin Estates improvements.

- **Null Alternative:** No Action

  This alternative involves no proposed improvements to the contaminated water sources and surrounding areas identified within the Town.

- **Alternative No. 1:** Algonquin Middle School via Route 66

  This alternative involves connection to the existing water distribution system from Poestenkill's existing water district at the Route 66 and Snyders Corner Road intersection and continuing the new watermain down Route 66 to the Algonquin Middle School.

- **Alternative No. 2:** Algonquin Middle School via Weatherwax Road

  This alternative involves connection to the existing water distribution system from Poestenkill's existing water district at the Weatherwax Road and Snyders Corner Road intersection and continuing the new watermain down Weatherwax Road and Route 66 to the Algonquin Middle School.

Phase 2 improvements include continuing the water infrastructure down Route 66 to the Town of Sand Lake border and, due to increased elevations, will require a new water storage tank and booster pump station to provide all of the areas within this phase with the required water pressure. The storage tank proposed location is at the end of Vosburgh Road at a much higher elevation than the remainder of the district, requiring the installation of pressure reducing valves within the areas in order to limit the maximum pressure entering the low elevation zones. This phase adds a significant cost to the project without many additional users but provides a future connection point for the Town of Sand Lake to continue the water infrastructure into the town. Sand Lake is currently developing a design report for the feasibility of creating a water district by extending the water from Poestenkill due to contaminated water levels found in town. This allows an opportunity for an intermunicipal project to be developed using Phase 2 improvements in order to open up more grant funding opportunities.

It is noted that the new Poestenkill water district will increase the flow requirements from City of Troy supply and Town of Brunswick distribution system. Specifically, including Phase 2 into the improvements along with the remainder of the areas will cause the required flow to exceed the available water supply from the Brunswick water infrastructure. The Town of Brunswick has indicated that in order to transport additional water to the Town of Poestenkill multiple improvements are required. Improvements and their associated costs to the Brunswick water system have been described in order to provide the water users in all impacted Towns with an improved and more reliable system.

Based on the Town's available funds and the necessary improvements required to provide users with a clean water supply, the recommended alternative described in this report is:

- Performing the Phase 1 – Alternative 1 water improvements with a Preliminary Opinion of Cost of $5.55 million.

II. PROJECT BACKGROUND AND HISTORY

1) Site Information

a) Location

The improvements proposed herein are located in the Town of Poestenkill, Rensselaer County New York. They are generally located along the New York State Route 66 (Route 66) corridor between the intersections of Route 66 and Snyders Corner Road and Old Route 66 at the Town's southern boundary with the neighboring Town of Sand Lake. Improvements are also proposed for small portions of New York State Route 351 (Route 351), Algonquin Estates, Vosburgh Road, and multiple connecting streets. Figure 1 – General Plan, included in **Appendix A,** presents the general area of the proposed improvements.

b) Geology and Soils

The National Resources Conservation Service (NRCS) soils map and data identifies a variety of soil types throughout the project area. The Route 66 area primarily contains Bernardston gravelly silt loam and Pittstown gravelly silt loam. These soil types have a depth of approximately 15-30 inches to densic material and a depth of 18-36 inches to the water table.

The Algonquin Estates area primarily contains Bernardston-Nassau complex with undulating slopes and Hoosic gravelly sandy loam. These soil types have a depth of approximately 15-30 inches and more than 80 inches to a restrictive layer. The depth to the water table is 18-24 inches.

The Vosburgh Road/Heather Ridge Road area contains Pittstown gravelly silt loam and Albrights very stony silt loam. These soil types have a depth of approximately 15-30 inches to densic material, 18-30 inches to fragipan, and 18-36 inches to the water table.

The project area also contains a notable amount of Nassau-Manlius complex and Alden silt loam. Most of the project area soils are not well drained and many of the present soils have a high-water table. The NRCS soils maps and descriptions are included in **Appendix B** .

c) Protected Streams

The New York State Department of Environmental Conservation (DEC) Environmental Resource Mapper has identified multiple unnamed tributaries to the Wynants Kill and Newfoundland Creek crossing through the project area. All of the unnamed tributaries have a stream classification of C. All of the tributaries to Newfoundland Creek are classified as C (T) or C (TS), meaning they are protected streams. As such, a Protection of Waters Permit is required to physically disturb the bed or banks of the stream. Bed and bank disturbance for this project can be avoided with the use of directional drilling beneath the stream bed and banks. See **Appendix C** for the DEC Environmental Resource Mapper information.

d) Topography

The project area generally increases in elevation from north to south along Route 66. The low point of approximately 510 feet above sea level is at the intersection of Route 66 and Snyders Corner Road and the high elevation of approximately 660 feet above sea level is near the intersection of Route 66 and Vosburgh Road. Algonquin Estates and Vosburgh Road both slope

toward Route 66 with high points of 670 feet in Algonquin Estates and 730 feet on Vosburgh Road. Topography of the project area is depicted on Figure 1 – General Plan included in **Appendix A**.

e) Flood Zones

Based upon FEMA flood plain information, the majority of the project area is located outside of the 100-year flood plain. The 100-year floodplain of an unnamed tributary to Newfoundland Creek crosses the project area in two locations; Liberty Lane (formerly Linda Lane) near the intersection with Weatherwax Road and Reichard Lake Road approximately 2,300 feet south of the intersection with Route 66. The FEMA floodplain data is contained in **Appendix D.** Due to the subsurface nature of the project, the installation of watermains in these areas will have no impact upon the floodplain boundaries.

f) Cultural Resources

The New York State Historic Preservation Office (SHPO) has reviewed the project area and the proposed improvements and concluded that no historic properties, archaeological and/or historic resources, will be affected. SHPO's letter of No Effect is included in **Appendix E**.

g) Other Environmental Factors

i. Wetlands

i. New York State Regulated Wetlands

A review of the project area using the DEC Environmental Resource Mapper indicates that there are State regulated wetlands within the project area. A 175-acre freshwater wetland is located just east of Vosburgh Road. A large portion of Vosburgh Road is located in the wetlands surrounding "Check Zone". This simply means that the area will need to be checked for any extension of the existing wetland that may exist in that area. A map of the State wetlands and the surrounding check areas is included in **Appendix C**.

ii. Federally Regulated Wetlands

The United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) was consulted to determine if federally regulated wetlands are contained within the project area. The NWI recognized the DEC protected streams listed above as a Riverine wetland. The NWI also identified multiple freshwater emergent wetlands, fresh water forested/shrub wetlands, and freshwater ponds bordering the project area. Based upon the wetland location and the probable pipe routing, these wetlands will generally be avoided. There are some small areas along Route 66 where the wetlands are close to the highway. To avoid wetland impacts, pipe installation in these areas will likely be by directional drilling. The National Wetlands Inventory map is included in **Appendix C**.

ii. Rare, Threatened and Endangered Species

i. New York State Listed

The DEC Environmental Resource Mapper did not identify any rare or threatened animals in or adjacent to the project area. The DEC

Environmental Mapper information for the location is contained in **Appendix C**.

ii. Federally Listed

The USFWS Information for Planning and Consultation (IPaC) identified five migratory bird species as being on the Birds of Conservation Concern list. The migratory birds include:

- Blue-winged Warbler
- Bobolink
- Evening Grosbeak
- Prairie Warbler
- Wood Thrush

The Bald Eagle is considered vulnerable species.

The IPaC also lists the Monarch Butterfly as a candidate species to be listed in the Endangered/Threatened Species list.

The improvements contemplated herein are not expected to have an impact upon any of the species identified above.

The USFWS IPaC information for the project area is contained in **Appendix C**.

h) Environmental Justice

There are no environmental justice areas within or adjacent to the project area.

i) NYS Environmental Quality Review Act (SEQRA)

The Town, as required to submit for certain grant funds, has completed the required SEQRA review and has made a Determination of Significance under SEQRA (6 NYCRR Part 617). The Town Board issued a Negative Declaration on September 8th, 2022, a copy of which is included in Appendix F.

2) Ownership and Service Area

a) Ownership

All proposed facilities within Water District No. 2 will be owned and operated by the Town of Poestenkill.

b) Water System Operations and Management

The Town water system is managed by the Town of Poestenkill Water Department. The Water Manager is currently Robert Brunet, P.E.

c) Water District Boundary

The proposed Water District No. 2 boundary is presented on Figure 1 – General Plan in **Appendix A**.

d) Outside Users

No outside users are proposed in Water District No. 2.

e) Land Use and Zoning

Based upon the Town of Poestenkill Zoning Map, all property within the project area is zoned residential with the exception of a single parcel zoned PDD which is the Waste Management transfer station at the corner of Route 66 and Route 351.

The actual land use within the project area is mostly residential other than the aforementioned transfer facility, a lumber yard, middle school, legion hall, restaurant, fish and game club and church.

The project area contains lands in a NYS Agricultural District, along Weatherwax Road and along Route 66 at the eastern end of the project. The proposed work will be within the road right-of-way, therefore will not intrude into the agricultural district lands. The relevant Agricultural District map is included in **Appendix G**.

f) Population Trends and Growth

According to the 2020 U.S. Decennial Census, the population of the Town of Poestenkill is 4,322. This is down from the 2010 U.S. Decennial Census population of 4,530; a decrease of 4.6%.

The proposed service area of Water District No. 2 is only a small portion of the Town. Most of the parcels within the district are built-out with single-family residential homes. There are a number of vacant lots that leave the possibility of future development.

g) Historical and Projected Water Use Data

There is no historical water use data for the proposed water district. Projected water use has been established based upon an Equivalent Dwelling Unit (EDU) methodology. The proposed district contains approximately 269 EDUs in Alternative 1 and 267 EDUs in Alternative 2. Using the higher EDU total with Alternative 1, the first year water use is estimated at 250 gpd per EDU for a total of 67,250 gpd. As noted above, Town wide population has decreased almost 5 percent over the past 10 years. For design purposes, it is assumed that this trend will reverse and growth within the proposed district will be 2 percent per year.

Year	Average Water Use (gpd)
2022	67,250
2025	71,400
2030	78,800
2035	87,000
2040	96,000

h) Nearby Public Water Systems

Other than Poestenkill Water District No. 1, the Town of North Greenbush is the closest water supply system to the proposed water district and is approximately 1 mile away. The Town of North Greenbush also purchases water from the City of Troy.

i) Community Involvement

Due to the discovery of PFOA/S in the school's water supply wells and a few other wells, there has been a considerable amount of interest in obtaining water from another source to replace individual water wells. Regardless of whether PFOA/S has been identified in a well or not, the concern of future contamination is considerable for property owners.

Prior to any establishment of a water district, there are required public notices and hearings at which the public can comment upon any proposed public water system improvements.

III. EXISTING FACILITIES

1) Water District No. 1

a) Water Treatment, Supply, and Distribution

The Town operates and maintains one water district, known as Water District No. 1. The proposed project will connect to and be supplied water through Water District No. 1.

Water District No. 1 consists of predominantly 8- and 12-inch ductile iron pipe (DIP) and areas of high-density polyethylene pipe (HDPE). The district has approximately 400 service connections, serving approximately 980 people. Water is purchased from the City of Troy, which is transported from Troy to Poestenkill via the Town of Brunswick distribution system.

The City of Troy's water source is the Tomhannock Reservoir. Water is treated by the City's Water Treatment Plant (WTP). The water is treated seasonally at the intake with potassium permanganate and year-round at the Melrose Chlorination Station with chlorine dioxide. The water is then treated at the WTP, a conventional water treatment plant utilizing coagulation, flocculation, sedimentation, filtration, chlorination, and fluoridation processes.

The water is re-chlorinated before entering the Town of Poestenkill via a Town of Poestenkill owned and operated pump station located near the intersection of Spring Avenue and McKinley Way. The pump station is equipped with three variable speed pumps with a maximum pumping rate of 230 gpm at 115 psi.

The existing static pressures at the two potential connection points are:

- Snyders Corner Road at Route 66 = 98 psi; and
- Snyders Corner Road at Weatherwax Road = 83 psi.

b) Water Capacity and Quality

As a surface water source, the Tomhannock Reservoir is susceptible to a number of contaminants, however, the WTP has a history of good water quality. As of the 2020 Annual Drinking Water Report the WTP had no water quality violations. The City of Troy's 2020 Annual Drinking Water Report is included in **Appendix H**.

c) Storage

Storage in Water District No. 1 is provided by a 410,000-gallon welded steel storage tank located on Hinkle Road. The tank was constructed in 2010 and is 24 feet high with a base elevation of 719 feet and has a normal operating water level of 16 to 18 feet.

d) Permit and Agreement Conditions

i. NYS Water Withdrawal

As of 2020, the Troy WTP had a NYSDEC permitted withdrawal amount of 33 MGD. The 2020 Water Withdrawal Reporting Form stating the water withdrawal limits and sales to the Town of Poestenkill is included in **Appendix I.**

ii. Water Agreements

The Town of Poestenkill has two water supply agreements to have water supplied and delivered to Water District No. 1.

i. City of Troy

The Town of Poestenkill and the City of Troy entered into a water supply agreement dated October 21, 2008 wherein the City offered to sell, and the Town agreed to purchase, up to 500,000 gallons per day Average Daily Flow. The agreement is effective for 40 years from inception.

A total of 30.58 million gallons were sold to Poestenkill in 2020, or an average of 83,774 gpd. The Troy – Poestenkill Water Supply Agreement is included in **Appendix J**.

ii. Town of Brunswick

The Town of Brunswick and the Town of Poestenkill have a Water Transportation Agreement, dated September 29, 2009, for the Town of Brunswick to transport up to 165,000 gallons per day of water from the City of Troy to the Town of Poestenkill through its distribution system. Similar to the City of Troy agreement, this agreement is valid for up to 40 years. The cost to transport the water through the Brunswick system has been established to be 25 percent of the cost of water charged to Poestenkill by the City of Troy.

There are specific operational restrictions contained in the Brunswick agreement. The most relevant is the allowed pumping rate of the Poestenkill pump station. The rate is based upon time of day as follows:

- Between the hours of 6:00 AM and 11:00 PM, 102,000 gpd at the rate of 100 gpm; and,
- Between the hours of 11:00 PM and 6:00 AM, 63,000 gpd at the rate of 150 gpm.

The maximum daily supply volume is 165,000 gpd. The Brunswick – Poestenkill Water Transportation Agreement is also included in **Appendix J**.

e) Water Rates

Users in Water District No. 1 are charged on a benefit unit basis for debt service and a metered rate for water use. The charge per benefit unit and per 1,000 gallons is set at the Town's annual budget meeting. The rates established for 2022 are $403.36 per benefit unit. The 2022 water rate is $5.25 per 1,000 gallons.

Benefit units are assigned according to the following benefit unit schedule established by the Town:

Property Type	Benefit Units
Residential single-family homes, condominiums, or townhouses (per living unit)	1 unit
Multifamily homes	1 unit for the first residence plus 0.75 unit for each additional residence
Apartments	1 unit for the first residence plus 0.75 unit for each additional apartment
Vacant parcel	0 units for an undevelopable parcel of less than 0.5 acre
Vacant parcel	0.5 unit for a developable parcel of 0.5 acre to 10 acres
Vacant parcel	1 unit per parcel of 10 acres or more
Farm parcel	1 unit per parcel
Adult entertainment	2.5 units
School	30 units
Arc residential facility	4 units per facility
Industrial/commercial	1 unit ≤25 employees
Industrial/commercial	2.5 units > 25 employees
Community service (public assembly)	1 unit
Airport	1 unit
Highway garage	2.5 units
Library	2 units
Town hall	2.5 units
Recreation/entertainment	1 unit
Natural products	2.5
Restaurant	8 tables or less, 1.5 units
Restaurant	9 tables or more, 2.5 units

2) Proposed Water District No. 2

a) Water Treatment and Supply

Residential and commercial users located within the proposed water district utilize private wells for their drinking water source. Algonquin Middle School is served by two water supply wells located on the property. Upon confirmation of the presence of perfluorooctanoic acid (PFOA) the school began the process, with the assistance of the Rensselaer County Health Department (RCDOH), of installing a granular activated carbon system.

b) Water Quality

On January 7, 2021, as part of the State's new public water supply drinking water regulations, initial sampling and testing for per- and polyfluoroalkyl substances (PFAS) was conducted. Results indicated 13 parts per trillion (ppt) of PFOA in both wells located on the school property, exceeding the maximum contaminant level (MCL) of 10 ppt. Both wells were retested on February 1, 2021 and PFOA was again detected at 12 ppt. Perfluorooctane sulfonic acid, another PFA/S, was also detected but did not exceed 10 ppt.

As a result of the PFOA/S findings at the school, additional testing of private wells nearby was conducted in August 2021. As of December 2021, RCDOH has sampled 77 private wells in the vicinity of Algonquin Middle School. Of the 77 wells test, 13 detected PFAS exceeding the MCL. PFOA/S Test Locations included in **Appendix** K, presents the parcels tested and if the tests exceeded the MCL of 10 ppt.

DEC, DOH, and RCDOH are investigating potential sources of the PFAS contamination. Several properties within a mile of the school are being evaluated for potential use or disposal of materials containing PFOA/S.

In addition to PFOAs, testing has revealed that the listed wells in the project area tested positive for coliform. This is indicative of the need to disinfect the wells to avoid waterborne illness associated with coliform contamination.

- 13 Cathlie Drive
- 515 NY Route 255
- 564 Snyders Corner Road
- 9390 NY Route 66
- 924 NY Route 351
- 10 Seneca Drive
- 9 Seneca Drive
- 8 Seneca Drive
- 279 Blue Factory Road
- 332 Weatherwax Road
- 20 JD Way
- 71 Colehammer Road

IV. PROJECT NEED

1) Health, Sanitation, and/or Security
   The project is required to protect property owners, school children and staff and others from the potential effects of PFOAS. Installation of a public water supply completely eliminates the need to rely on individual wells and individual PFOA/S treatment systems that must be constantly maintained to ensure performance.

2) Design Standard Compliance
   The design standard being applied to this water system is the 2012 Recommended Standards for Water Works and New York State Sanitary Code.

V. ALTERNATIVES ANALYSIS

The proposed improvements consist of water main and appurtenances installation.

Due to uncertainties with funding availability and public acceptance the project has been structured into two phases that have individual cost estimates. This structure allows for the Town to select areas as desired. Phase 1 focuses on providing Algonquin Middle School with municipal water as it is the priority of the project, with two alternatives for where the supply connection is made. The following alternatives have been considered for Phase 1 of the water district:

Null Alternative:	No Action
Phase 1 - Alternative No. 1:	Supply Connection at Route 66 and Snyder Corner Road
Phase 1 - Alternative No. 2:	Supply Connection at Weatherwax Road and Snyder Corner Road
Phase 2:	Extension to Town of Sand Lake border and Vosburgh Road

1) Null Alternative

   For this alternative, no improvements will be made to provide an alternate drinking water supply to the PFOAS contaminated drinking water sources and surrounding areas. While there is no public capital cost for this option, the school and private water well users will have ongoing water treatment responsibilities if they continue to use their wells.

2) Phase 1 - Alternative No. 1 and Alternative No. 2

   Both Alternative No. 1 and 2 extend water from the existing watermain in Snyders Corner Road to the intersection of Route 66 and Route 351 by the Algonquin Middle School. Alternative 1 connects to the existing system at Route 66 and Alternative 2 connects at Weatherwax Road. These alternatives are the least required to extend water to the school. Phase 1 also includes additional areas such as Liberty Lane and Algonquin Estates.

   a. Distribution System

      i. Alternative No. 1 –Supply Connection at Route 66

         Alternate 1 extends along Route 66 from its point of connection to Water District 1 at Route 66 and Snyders Corner Road and extends to the intersection of Route 66 and Route 351. Phase 1 includes Algonquin Estates which is a residential neighborhood located east of Route 66 along Algonquin Beach Road and extends toward the Town's westerly boundary with the Town of Sand Lake. It also includes Liberty Lane, which is off of Weatherwax Road to the north. The distribution system improvements in Phase 1-Alternative 1 include approximately 19,900 feet of 8-inch watermain and associated gate valves, and hydrants. Hydrants will be spaced at no more than 600-foot intervals. Main line valves will be spaced no more than 1,500 feet, depending upon the number of users in the area. Appropriate tees, valves and stubs are proposed to be installed at points of potential future extension such as at Weatherwax Road and Route 351.

Figure 1 - General Plan, included in **Appendix A**, depicts the generalized alignment of the proposed water main and appurtenances for Alternative 1. It is anticipated the watermain will be installed within the bounds of Route 66 right of way subject to final field and boundary survey.

Per the 10 State Recommended Standards for Waterworks, the minimum permitted operating pressure in the system is 35 psi and preferable operating pressure in a distribution system is 60 to 80 psi. Static pressure along Route 66 will be a maximum of approximately 98 psi at the point of connection at Snyder's Corner Road (Elev. 510+/-) and a minimum of approximately 59 psi in front of the Algonquin Middle School (Elev. 600+/-). Liberty Lane ranges from a low of 46 psi near the White Church Road intersection (Elev. 630+/-) to a high of 68 psi near the intersection of Weatherwax Road (Elev. 580+/-). In Algonquin Estates, pressure ranges from a low of 46 psi near the Algonquin Beach Road and Cayuga Court intersection and along Cayuga Court (Elev. 585+/-), to a high of 63 psi at a few properties along Seneca Drive and the end of Cayuga Court (Elev. 630+/-).

The total number of parcels served by this alternative of Phase 1 is 109, six (6) of which are currently vacant. All remaining parcels are residential in nature with the exception of a drive-in theater, warehouse facilities and the Algonquin Middle School. Estimated water use for this alternative is 42,750 gpd.

ii. Alternative No. 2 - Supply Connection at Weatherwax Road

Alternate 2 extends along Weatherwax Road from its point of connection to Water District 1 at Weatherwax Road and Snyders Corner Road and extends along the length of Weatherwax Road and a portion of Route 66 to the intersection of Route 66 and Route 351. The distribution system improvements in Phase 1-Alternative 2 include approximately 20,600 feet of 8-inch watermain and associated gate valves, and hydrants. As with Alterative No.1, hydrant spacing will be no more than 600 feet and main line valve spacing no more than 1,500 feet. Appropriate tees, valves and stubs are proposed to be installed at points of potential future extension such as at Route 66 to extend northerly to Route 351 and easterly toward Snyders Corner Road.

Figure 1 – General Plan, included in **Appendix A**, depicts the generalized alignment of the proposed water main and appurtenances in Alternative 2. It is anticipated the watermain will be installed within the bounds of Town owned Weatherwax Road and a portion of the Route 66 right of way, subject to final field and boundary survey.

Static pressure in the system will be a maximum of approximately 83 psi at the interconnection with Water District No. 1 at Snyders Corner Road (Elev. 545+/-) and a minimum of approximately 59 psi in front of the Algonquin Middle School (Elev.=600+/-). The pressures in the Liberty Lane and Algonquin Estates areas are the same as described in Alternative 1.

The total number of parcels served by this area is 112, six (6) of which are currently vacant. All remaining parcels are residential in nature with the exception of a warehouse and the Algonquin Middle School. Estimated water use for this alternative is 42,250 gpd.

Both alternatives require stream crossings. In order to avoid impacts to the streams and their banks, the watermain will have to be installed using directional drilling techniques. It is recommended HDPE pipe used for the directional drilling. The HDPE main will not be subject to the corrosive nature of the location and will have electro welded joints essentially making the line a single piece of pipe with no joints to leak.

Both alternatives rely on the existing water storage tank in Poestenkill's Water District 1 to provide the fire flow to the new service area. Based on the existing tank elevation of 719 feet and roughly 10 feet of additional available pressure in the tank at around half of the normal operating levels and taking into account the friction losses through the pipe, the approximate fire flow available at the school is 650 to 675 gpm for these alternatives. The required fire protection reserve, or fire flow volume, is based upon the insurance Services Office (ISO) Guide for Determination of Needed Fire Flow in gallons per minute for a duration of two hours. The properties in Phase 1 are mostly residential in nature with the majority of homes separated by greater than 100 feet, excluding a handful of properties in Algonquin Estates. The ISO requirements for residential homes spaced over 100 feet is 500 gpm, showing that the existing tank will provide sufficient fire flows.

b. Design Considerations
In considering a water distribution system installation, the design would follow the standards established by the 2012 Recommended Standards for Water Works New York State Health Department requirements.

c. Impact on Existing Facilities
Either alternative will not have any significant effect upon Water District No. 1. Although water will be supplied through District 1, the existing pump station and storage tank is capable of providing the additional 43,000+/- gpd required by the addition of Water District No. 2.

d. Land Requirements
While it is anticipated that the water mains can be located in either Town or DOT right of way, depending on conditions observed after field survey, some easements may be required. Outright purchase of land should not be required for either alternative.

e. Constructability
There are no issues associated with either alternative that affect constructability or schedule of the improvements.

f. Environmental Impacts
There are no significant environmental impacts associated with either alternative. Although a number of migratory birds were identified as being in vicinity of the project, the improvements contemplated herein are not expected to have an impact to the species.

Both alternatives have to cross streams, however, the use of directional drilling will eliminate disturbance to the beds and banks.

Wetlands are located along the project boundaries, however, improvements contemplated herein are not expected to have an impact as the wetlands can either be avoided or impacts mitigated through directional drilling those areas where wetlands must be crossed.

g. Preliminary Opinion of Cost
The Preliminary Opinion of Cost for the Alternative No. 1 is approximately $5.55 million. The Preliminary Opinion of Cost for the Alternative No. 2 is approximately $5.73 million.

Detailed Preliminary Opinions of Cost for each alternative are presented in **Appendix N.**

h. Non-Monetary Factors
Most significantly, the improvements will provide safe and clean drinking water to users served by the improvements and eliminate the PFOA issues plaguing Algonquin Middle School.

i. Operation and Maintenance Considerations
Short-lived assets associated with the proposed improvements that will require maintenance and replacement after the service life of the equipment include:
- Residential Meters

3) Phase 2 Improvements
Phase 2 improvements include extending the watermain from the end of Phase 1 at the Route 66 and White Church Road intersection along Route 66 to the east where it will terminate at the Town of Sand Lake border. The improvements also extend watermain down Reichards Lake Road and Vosburgh Road. Due to elevation, pipe length, and number of users, Phase 2 will require a water storage tank and pump station to provide the necessary system pressure. Water storage tank and pump station sizing and locations are outlined in following sections of this report. The distribution system improvements in Phase 2 include approximately 9,700 feet of 8-inch watermain along Route 66 and Reichards Lake Road, 6,500 feet of 12-inch watermain along Vosburgh Road to the proposed water storage tank and associated gate valves, and hydrants. As with Phase 1, hydrant spacing will be no more than 600 feet and main line valve spacing no more than 1,500 feet. Appropriate tees, valves and stubs are proposed to be installed at points of potential future extension such as at Route 66 to extend easterly toward Sand Lake, Vosburgh Road toward Heather Ridge Road, and Reichards Lake Road to the south.

The northern end of Vosburgh Road has an elevation of approximately 730 feet while Heather Ridge Road also reaches elevations of approximately 730 feet. The properties along the interconnecting section of Route 66 from Route 351 have customers at elevations around 670 feet. Reichards Lake Road runs south from its intersection with Route 66 near the middle school, and ranges from elevations from 630 to 650 feet.

There are 91 parcels in this phase, 10 of which are vacant. 61 of the occupied parcels are single family homes, 4 are multi-family homes, and the remaining parcels consist of apartments, a bar, a lumber yard, a fuel store, a private hunting and fishing area, and a church. Estimated water use for this area is 24,500 gpd.

4) Water Storage Tank

a. Tank Volume

The effective volume for a water storage tank is the volume of water above an elevation that will provide sufficient system pressure under normal and fire flow conditions. The volume itself is determined based upon the average daily demand of the system and a two-hour fire protection reserve. In this case, the average daily demand for the system, assuming all properties in Phase 1 and 2 are included, is the projected 2040 demand of 96,000 gpd.

The required fire protection reserve, or fire flow volume, per ISO is in gallons per minute for a duration of two hours. ISO states residential properties with spacing over 100 feet would require 500 gpm of fire flow and residential properties at 31 to 100 feet spacing require 750 gpm. Although the properties in Phase 1 and 2 fall into the 500 gpm requirement, the residential fire flow requirement in this area will be 750 gpm for design purposes. The resulting required fire reserve is therefore 90,000 gallons (750 gpm x 2 hours x 60 min.)

The minimum effective volume in the tank must therefore be:

Average Day Use	96,000	gallons
Fire reserve	90,000	gallons
Storage Volume Reqd.	186,000	gallons
Say	**200,000**	**gallons**

b. Required Tank Elevation

The minimum water elevation required in the storage tank to provide a minimum operating pressure of 50 psi to the system is 846 feet. System pressures under fire flow conditions are permitted to drop to no more than 20 psi. Since the potential tank location has sufficient elevation in the Vosburgh Road area, the water storage tank will not have to be very high to reach the required water level. A tank of no more than 40 feet in height will be required to provide the necessary pressure, allowing the tank to be screened from view by the surrounding wooded areas.

The finished floor elevation of the tank should be around elevation 820. A 30-foot diameter, 40-foot-high tank will result in a high-water level of 860 feet.

c. Tank Location

The potential storage tank location is at the required elevation of 820 feet in Phase 2 which is shown on Figure 1 – General Plan in **Appendix A.** The location is in a wooded, non-developed areas and will require some tree removal necessary for installation of the tank.

The tank would be located beyond the northern end of Vosburgh Road. This location will require an additional 1,500 feet of 12-inch watermain and the necessary hydrants and valves to connect to the proposed system.

d. Tank Construction

There are several styles of water storage tanks available for use in this project. They include welded steel, bolted steel and bolted glass fused to steel tanks. All tanks sit on a ring wall. The welded steel and bolted steel tanks use a sand cushion beneath the bottom of the tanks inside the foundation wall while the glass fused to steel tanks often have a concrete floor depending upon soil conditions and seismic zones.

It is recommended that any tank be fitted with a mixer to maintain water quality and reduce the potential for ice damage. Water level in the tank is measured through the use of a pressure transducer that relays the signal to the water pumping system.

Other than the tank and foundation, other construction related to the water storage tank includes access, fencing and power supply.

5) Pressure Reduction

Installation of a water storage tank at the recommended elevation will increase pressures in some portions of the system beyond recommended ranges. The 10 State Recommended Standards for Waterworks state that when static pressures exceed 100 psi, pressure reducing devices shall be provided. To be conservative, main line pressure reducing valves are proposed at the following locations where static pressures from the tank exceed 95 psi. Static pressures are calculated using the proposed tank's high-water level of 860 feet and the approximate lowest elevation found in the area:

- Liberty Lane

  The low elevation on Liberty Lane near the intersection of Weatherwax Road is approximately 580 feet, making the elevation change from the high-water level in the tank equal to 280 feet. This indicates that the static pressures entering this low level will be 121 psi, exceeding the maximum pressure of 95 psi. A pressure reducing valve is proposed where the watermain enters Liberty Lane from Route 66, in order to reduce the elevated pressure from the tank.

- Algonquin Estates

  The low elevation in Algonquin Estates is approximately 585 feet near the Algonquin Beach Road and Cayuga Court intersection, making the elevation change from the high-water level in the tank equal to 275 feet. This indicates that the static pressures entering this low level will be 119 psi, exceeding the maximum pressure of 95 psi. A pressure reducing valve is proposed where the watermain enters Algonquin Estates from Route 66, in order to reduce the elevated pressure from the tank.

- Reichards Lake Road

  The low elevation in the Phase 2 area is approximately 630 feet in areas along Reichards Lake Road off of Route 66, making the elevation change from the high-water level in the tank equal to 230 feet. This indicates that the static pressures entering this low level will be 99 psi, exceeding the maximum pressure of 95 psi. There are only approximately 4 properties that would be within this low elevation

zone. Due to the minimal number of customers affected, these properties would get individual pressure reducing devices at their property line in order to reduce the elevated pressure from the tank, rather than a pressure reducing valve for the entire street.

The locations above are identified on Figure 1 - General Plan in **Appendix A.**

6) Pumping Station

A pumping station will be required to fill the proposed water storage tank. A simple duplex pump station will be sufficient for this application. The location of the pump station is recommended to be along Route 66 near the intersection of Algonquin Beach Road. This location allows the water storage tank to provide additional pressure to all areas of the system south of the pump station.

The pump station must be able to meet the peak daily flow requirements of the water system. Based upon the projected average water use of 96,000 gpd and a peak factor of 4 per the 10 State Standards, the minimum recommended pumping rate is 275 gpm.

7) Water Supply Limitations

The water supply for the district is Water District No. 1 and Water District No. 1's water supply is limited by its contractual relationship with the Town of Brunswick. As noted previously, the maximum pumping rate allowed during the day is 100 gpm and 150 gpm in the evening. The maximum daily supply is 165,000 gpd. Water District No. 1 currently is using approximately 97,000 gpd on average, leaving an average of 67,000 gpd available for District No. 2. This is insufficient for the total water system demand from Phase 1 and 2, which requires roughly 67,000 gpd. Excluding Phase 2 reduces the demand to roughly 43,000 gpd, which falls within the existing daily supply.

8) Impacts Associated with Phase 2

a. Impact on Existing Facilities

As noted, based upon the existing agreement with the Town of Brunswick there is not enough capacity remaining to provide service to both phases described herein. The Town of Brunswick has indicated that in order to transport additional water to the Town of Poestenkill the following improvements may be required.

- Town of Brunswick Improvements

The proposed project obtains its water supply from the City of Troy and through the Town of Brunswick distribution system. The point of connection between Brunswick and Poestenkill is in the Brunswick pressure zone. This zone is served by a duplex pump station location on North Lake Avenue (County Route 144) at the west end of the former Troy reservoir. The pump station has a reported capacity of 1,000 gpm. The Town of Brunswick has reported that the average day flow through the station is 550,000 to 650,000 gallons which translates to an average rate of 380 to 450 gpm. Peak daily flow is approximately 1,000,000 gpd or a flow rate of 700 gpm.

The Brunswick distribution system is essentially a long dead-end system comprises mainly of the original 16-inch Troy water transmission main and 12-

inch ductile iron pipe. The distance from the Brunswick pump station to the existing Poestenkill connect on Spring Avenue along the pipe line is approximately 52,000 feet or nearly 10 miles.

Discussion with the Brunswick Water System Operator revealed that fire flow in the Eagle Mills area and further west along the distribution system is relatively low. This makes sense due to the extreme length of the system and lack of storage or pumping ability on the southerly side of the system.

The Brunswick Water System Operator suggested the following improvements be made to the Brunswick System in the Brunswick pressure zone to improve flow to the area. These improvements eliminate some constructions in the system that work to reduce available flow and pressure.

1. Remove the existing pressure regulator located near Brunswick Park Drive.
2. Replace the existing 8-inch cross over connection at Brick Church Road and Hoosick Street with 12-inches or greater.
3. Remove the regulator on Pinewoods Avenue on the west side of the National Grid right of way.

In addition to the above, consideration must be given to either pumping or storage improvements in the Brunswick system. As the system is currently arranged, all water users in the Brunswick Pressure Zone and in the Town of Poestenkill are dependent upon a single pumping station. A catastrophic failure of the station will leave the areas without a water supply for an indeterminate period of time. To minimize the risk and to improve overall system hydraulics and increase supply capacity to the Town of Poestenkill a secondary pump station, located on Pinewoods Avenue will provide the pumping redundancy for the entire Brunswick and Poestenkill water systems, increase overall pumping capacity, increase fire flow on the southerly side of the system.

Land acquisition will be required for the proposed station. It is estimated a small parcel of approximately 0.2 acres will be required.

The costs associated with these improvements will have to be negotiated between the Towns. The installation of a second pump station is a significant improvement to the Brunswick water systems and not just required to provide water to Poestenkill. The concept opinion of cost associated with the Brunswick improvements identified herein is approximately $940,000 determined as follows:

•	Remove regulator at Brunswick Drive	$ 75,000
•	Remove regulator on Pinewoods Ave	$ 75,000
•	Improve crossover connection	$150,000
•	Pump Station	$450,000
	Sub-total	$750,000
•	Engineering, Legal, Land, etc. (25%)	$188,000
	Total	$938,000

b. Land Requirements

Land acquisition will be required for a booster pump station and storage tank. The pump station will require a small parcel of roughly 50 feet x 50 feet. Access and utility easements will be required depending upon the final location selected.

The tank site is estimated to be approximately 100 feet x 100 feet and will also require access easements and utility easements.

c. Constructability

There are no issues associated with any of the areas in Phase 2 that affect constructability or schedule of the improvements.

d. Environmental Impacts

Although there are a number of migratory birds were identified as being in vicinity of the project the improvements contemplated herein are not expected to have an impact upon the species.

A NYS Wetlands check zone is located along Vosburgh Road. Verification of any wetland extending to within 100 feet of proposed improvements is required. However, any wetland in this area can likely be avoided by appropriately locating the watermain.

e. Preliminary Opinion of Cost

The Preliminary Opinion of Cost for the Phase 2 improvements is approximately $6.465 million.

Detailed Preliminary Opinion of Costs are presented in **Appendix N.**

f. Non-Monetary Factors

Other than the aforementioned elimination of potential consumption of PFOA/S from drinking water wells there are no other non-monetary factors associated with any of the described improvements.

g. Operation and Maintenance Considerations

Short-lived assets associated with the proposed improvements that will require maintenance and replacement after the service life of the equipment include:

- Flow Meters
- Pressure Reducing Valves
- Residential Meters
- Pumps

VI. SUMMARY AND COMPARISON OF ALTERNATIVES

Table 3 - Summary and Comparison of Alternatives			
	Pros	Cons	Preliminary Opinion of Cost
Null Alternative	None	-Individuals and school must treat for PFOA/S -Does not alleviate public concern of future contamination of individual wells.	$0
Phase 1 Alternative No. 1: Algonquin Middle School via Route 66	-Eliminates the concern of PFOA/S contaminated wells or the possibility of future contamination for the school as well as residents and businesses along the pipe route. -Provides fire protection to the area	-Service area is limited and does not alleviate public concern of future contamination of individual wells.	$5.55 million
Phase Alternative No. 2: Algonquin Middle School via Weatherwax Road	-Eliminates the concern of PFOA/S contaminated wells or the possibility of future contamination for the school as well as residents and businesses along the pipe route. -Provides fire protection to the area	-Service area is limited and does not alleviate public concern of future contamination of individual wells.	$5.73 million
Phase 2	-Provides water to the greatest number of residents and businesses. -Eliminates the concern of contaminated wells or the possibility of future contamination for a broader area. -Provides fire protection. -Allows for the Town of Sand Lake to connect to the district in the future.	-The most expensive option. -Requires renegotiation of water transport agreement with the Town of Brunswick. -May require additional water improvements to Brunswick infrastructure if all additional areas are to be included.	$6.47 million

VII. RECOMMENDED ALTERNATIVE

The recommended alternative for the Water System Improvements is Phase 1 - Alternative No. 1: Supply Connection at Route 66. This recommendation is based upon limited financial ability of the Town and the cost and feasibility of the improvements when compared to the complete list of improvements suggested in the other alternatives.

Concept plans of the improvements are presented on Figure 1 – General Plan in **Appendix A**. The total Preliminary Opinion of Cost of the project is $5.55 million. A detailed breakdown of this figure is located in **Appendix N.**

The proposed district boundary is presented on Figure 2 - District Boundary located in **Appendix A,** as well as the corresponding district boundary description.

VIII. FINANCING

The recommended project is to be funded by several grant sources including:

1.	New York Water Infrastructure Improvement Act Grant	$3,327,333
2.	Bipartisan Infrastructure Law -Emerging Contaminate Grant	$ 670,367
3.	Rensselaer County Assistance	$ 600,000
	Grant Total	**$4,597,700**

The remainder of the funds must be provided through a loan or sale of bonds for the district in the amount of $ 952,300 ($5,550,000 - $4,597,700 = $952,300). For this analysis, the loan is assumed to be 30 years and have an interest rated of six (6) percent

The table below presents the financing scenario identified above for Phase 1 - Alternative No. 1 of the water improvements.

Town of Poestenkill Proposed Water District **Phase 1 – Alternative 1**	
Project Cost	$5,550,000
Grants	$4,597,700
Amount to Finance	$952,300
Term (Years)	30
Interest Rate	6%
Annual Debt Service	$69,184
Number of EDUs	171
Cost Per EDU	$405

IX. TYPICAL USER COSTS

The annual cost per user for the recommend project is the total of each user's portion of debt service and operation and maintenance.

The following assumptions are made for the purpose of this analysis:

- All operation and maintenance and debt service costs are spread across the 109 parcels on an EDU basis. 1 EDU is the equivalent of a single-family home.

Debt Service

The annual debt service for the district is projected to be $69,184, or $405 per EDU. This projection is based upon the grants identified in Section VIII -Financing.

Water Use

The existing Town water rate is $5.25 per 1,000 gallons of water use. Using the current average daily water use for District 1 customers which is approximately 80,000 gpd, this translates to $420 per year per user. Of the $5.25 water rate, $4.70 is used to pay the City of Troy and Town of Brunswick water supply agreement fees and the remaining $0.55 is used to pay water operation and maintenance costs.

Operation and Maintenance

The estimated average annual operation and maintenance budget for these improvements is approximately $31,500. This includes laboratory testing, meter reading/billing, personnel, and reserves. With 171 EDUs in Phase 1 of the project, the water rate allocation to O&M will cover $7,524, leaving $23,976 of O&M costs to be covered by the EDU payments. This adds an additional $140 per EDU annually to the typical user cost.

Typical User Cost

The typical first year annual user cost for a single-family residential home is the combination of the debt service, water use, and operation and maintenance cost.

Debt Service	$405
Water Use	$420
O&M	$140
Typical User Cost	$965

The typical user cost is within the New York State Comptroller Special District Average Estimated Cost Threshold of $1,040 for water districts. As a result, Comptroller review and approval is not required.

X. PERMIT/APPROVAL REQUIREMENTS

The proposed project may require the following regulatory approvals in order to be constructed:

- New York State Department of Health (NYSDOH)
  - Approval of Plans

- Rensselaer County Department of Health
  - Approval of Plans

- New York State Department of Environmental Conservation (NYSDEC)
  - Freshwater Wetlands Permit for work in the wetland
  - NY Waters Permit for stream crossings

- New York State Department of Transportation (NYSDOT)
  - Highway Work Permit for work in NYS Route 66

- New York State Department of Agriculture & Markets
  - Notice of Intent

- NYS Office of Historic Preservation
  - Letter of "No Impact" for work in archeological sensitive area

XI. PROJECT SCHEDULE

TASK	DURATION (WEEKS)
Prepare preliminary engineering report	COMPLETE
Prepare final construction documents, including construction drawings, specifications, and engineer's opinion of construction cost.	20
Apply for and obtain regulatory approvals and permits.	6
Release documents for public bidding. Review bids and select lowest responsible bidder.	5
Construction period.	32

XII. RECOMMENDED ACTIONS

Should the Town Board wish to progress the project recommended herein the following actions are recommended:

A. Water District Formation
Authorize formation of the water district in accordance with Town Law.

B. Plans and Specifications
Authorize the preparation of the required plans and specifications for the proposed improvements.

APPENDICES

APPENDIX A
FIGURES

PHASE 1:
ALTERNATIVE 2

PHASE 1:
ALTERNATIVE 1

WATER DISTRICT
NO. 1

PHASE 1:
ALTERNATIVE
1&2

PHASE 2

PHASE 2

SNYDERS CORNER ROAD

ROUTE 66

WEATHERWAX ROAD

PUMP STATION

SEE NOTE 1

LIBERTY LANE

CHURCH ROAD

WHITE ROAD

REICHARDS LAKE

SENECA DRIVE

CAYUGA COURT

BEACH ROAD

ALGONQUIN

ALGONQUIN MIDDLE SCHOOL

TANK LOCAITON

TANK PIPING

OPTIONAL TANK LOCATION & PIPING

VOSBURGH ROAD

TOWN OF POESTENKILL

TOWN OF SAND LAKE

HALF SCALE

LEGEND:

- PROPOSED HYDRANT
- PROPOSED VALVE
- PROPOSED BOOSTER STATION
- PRESSURE REDUCING VALVE
- PROPOSED WATER LINE
- PROPOSED WATER LINE (OPTIONAL)
- EXISTING WATER LINE
- 700 EXISTING CONTOURS

NOTE:
1. PRESSURE REDUCING VALVES WITHIN PHASE 1 ARE REQUIRED BY PHASE 2 IMPROVEMENTS. IF PHASE 2 IS NOT INCLUDED IN THE IMPROVEMENTS, THESE WILL BE REPLACED WITH GATE VALVES.

TOWN OF POESTENKILL
RENSSELAER COUNTY * NEW YORK

TOWN OF POESTENKILL
PROPOSED WATER DISTRICT NO. 2

FIGURE 1 – GENERAL PLAN

DESIGNED BY KBH
DRAWN BY JDF
REVIEWED BY

Laberge ENGINEERING ARCHITECTURE Group SURVEYING PLANNING
4 Computer Drive West • Albany, New York 12205
(518) 458-7112 • www.labergegroup.com

DATE 03/09/22
SCALE 1" = 500'
SHEET –

APPENDIX B
NRCS SOILS DATA

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United States Department of Agriculture

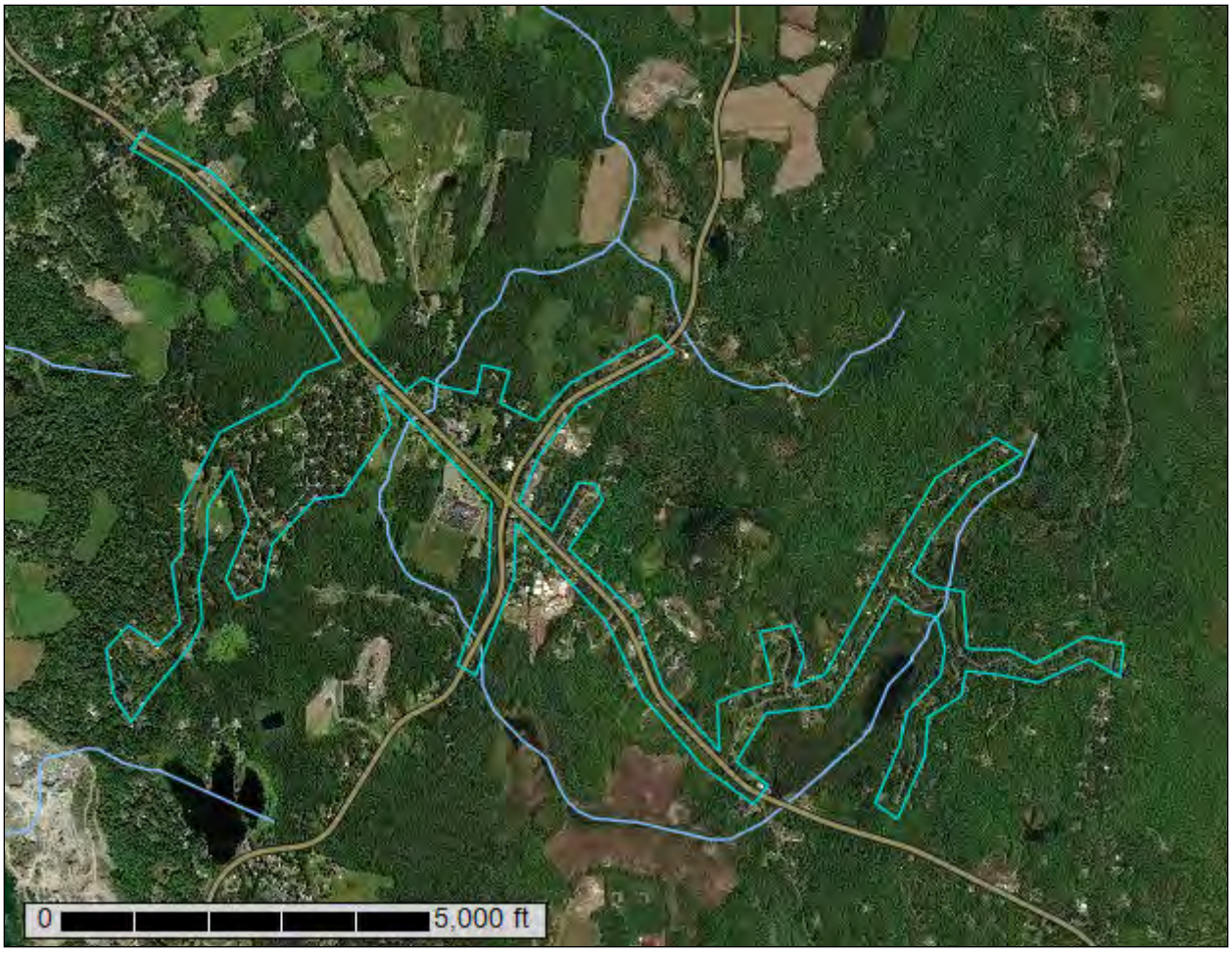
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Rensselaer County, New York

Proposed Water District #2



January 3, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

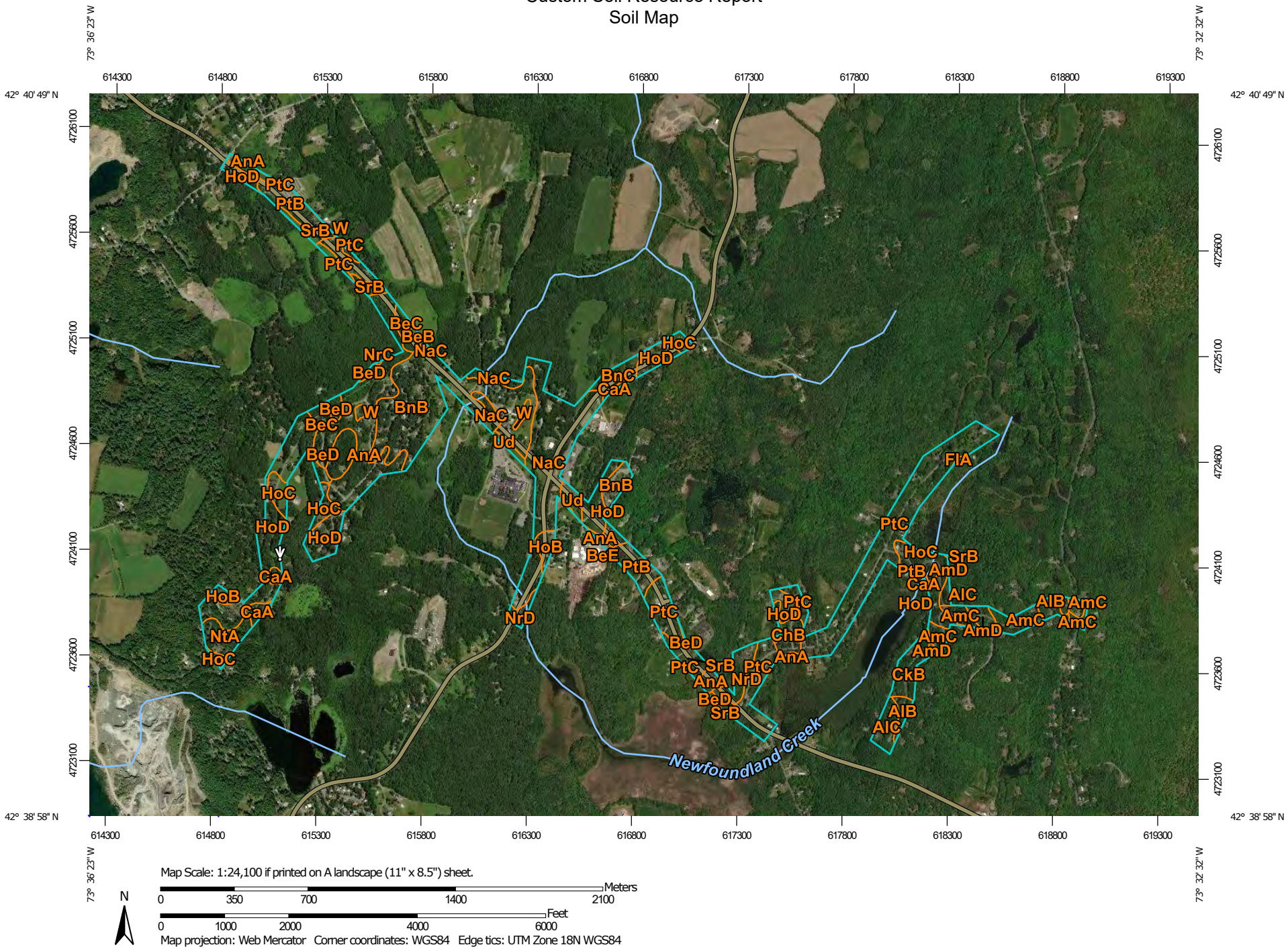
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



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 1:15,800.

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: Rensselaer County, New York
Survey Area Data: Version 18, Sep 1, 2021

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

Date(s) aerial images were photographed: Jul 1, 2014—Sep 22, 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
AlB	Albrights silt loam, 3 to 8 percent slopes	4.4	1.1%
AlC	Albrights silt loam, 8 to 15 percent slopes	7.8	2.0%
AmC	Albrights very stony silt loam, 3 to 15 percent slopes	10.8	2.8%
AmD	Albrights very stony silt loam, 15 to 40 percent slopes	3.2	0.8%
AnA	Alden silt loam, 0 to 3 percent slopes	41.9	10.8%
BeB	Bernardston gravelly silt loam, 3 to 8 percent slopes	0.8	0.2%
BeC	Bernardston gravelly silt loam, 8 to 15 percent slopes	5.6	1.5%
BeD	Bernardston gravelly silt loam, 15 to 25 percent slopes	8.5	2.2%
BeE	Bernardston gravelly silt loam, 25 to 35 percent slopes	0.3	0.1%
BnB	Bernardston-Nassau complex, undulating	55.2	14.2%
BnC	Bernardston-Nassau complex, rolling	10.9	2.8%
CaA	Catden muck, 0 to 2 percent slopes	3.8	1.0%
ChB	Chenango very gravelly loam, 3 to 8 percent slopes	5.2	1.3%
CkB	Chenango gravelly loam, fan, 3 to 8 percent slopes	7.3	1.9%
FlA	Fluvaquents-Udifluvents complex, 0 to 3 percent slopes	0.2	0.0%
HoB	Hoosic gravelly sandy loam, 3 to 8 percent slopes	4.5	1.1%
HoC	Hoosic gravelly sandy loam, rolling	15.4	4.0%
HoD	Hoosic gravelly sandy loam, hilly	49.5	12.7%
NaC	Nassau-Manlius complex, rolling	42.6	10.9%
NrC	Nassau-Rock outcrop, complex, rolling	0.1	0.0%
NrD	Nassau-Rock outcrop complex, hilly	7.6	1.9%
NtA	Natchaug muck, 0 to 2 percent slopes	6.6	1.7%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PtB	Pittstown gravelly silt loam, 3 to 8 percent slopes	18.7	4.8%
PtC	Pittstown gravelly silt loam, 8 to 15 percent slopes	61.8	15.9%
SrB	Scriba silt loam, 3 to 8 percent slopes	10.8	2.8%
Ud	Udorthents, loamy	4.0	1.0%
W	Water	1.7	0.4%
Totals for Area of Interest		**389.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Rensselaer County, New York

AlB—Albrights silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9v0x
Elevation: 500 to 1,500 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Albrights and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Albrights

Setting

Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Loamy till or colluvium derived from reddish shale, siltstone, and fine-grained sandstone

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 19 inches: channery silty clay loam
H3 - 19 to 60 inches: channery silt loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 18 to 30 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F144AY008CT - Moist Till Uplands
Hydric soil rating: No

Minor Components

Scriba

Percent of map unit: 5 percent
Hydric soil rating: No

Bernardston
Percent of map unit: 5 percent
Hydric soil rating: No

Pittstown
Percent of map unit: 5 percent
Hydric soil rating: No

Albrights, gravelly surface
Percent of map unit: 3 percent
Hydric soil rating: No

Nassau
Percent of map unit: 2 percent
Hydric soil rating: No

AlC—Albrights silt loam, 8 to 15 percent slopes

Map Unit Setting
National map unit symbol: 9v0y
Elevation: 500 to 1,500 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Albrights and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Albrights

Setting
Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Loamy till or colluvium derived from reddish shale, siltstone, and fine-grained sandstone

Typical profile
H1 - 0 to 9 inches: silt loam
H2 - 9 to 19 inches: channery silty clay loam
H3 - 19 to 60 inches: channery silt loam

Properties and qualities
Slope: 8 to 15 percent
Depth to restrictive feature: 18 to 30 inches to fragipan
Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: F144AY008CT - Moist Till Uplands
Hydric soil rating: No

Minor Components

Bernardston

Percent of map unit: 5 percent
Hydric soil rating: No

Pittstown

Percent of map unit: 3 percent
Hydric soil rating: No

Scriba

Percent of map unit: 3 percent
Hydric soil rating: No

Nassau

Percent of map unit: 2 percent
Hydric soil rating: No

Albrights, gravelly surface

Percent of map unit: 2 percent
Hydric soil rating: No

AmC—Albrights very stony silt loam, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9v10
Elevation: 800 to 1,500 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition

Albrights, very stony, and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Albrights, Very Stony

Setting

Landform: Till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till or colluvium derived from reddish shale, siltstone, and fine-grained sandstone

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 19 inches: channery silty clay loam
H3 - 19 to 60 inches: channery silt loam

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 18 to 30 inches to fragipan
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144AY008CT - Moist Till Uplands
Hydric soil rating: No

Minor Components

Pittstown

Percent of map unit: 5 percent
Hydric soil rating: No

Manlius

Percent of map unit: 5 percent
Hydric soil rating: No

Bernardston

Percent of map unit: 5 percent
Hydric soil rating: No

Albrights, non-stony

Percent of map unit: 3 percent
Hydric soil rating: No

Nassau

Percent of map unit: 2 percent
Hydric soil rating: No

AmD—Albrights very stony silt loam, 15 to 40 percent slopes

Map Unit Setting

National map unit symbol: 9v11
Elevation: 800 to 1,500 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition

Albrights, very stony, and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Albrights, Very Stony

Setting

Landform: Till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till or colluvium derived from reddish shale, siltstone, and fine-grained sandstone

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 19 inches: channery silty clay loam
H3 - 19 to 60 inches: channery silt loam

Properties and qualities

Slope: 15 to 25 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 18 to 30 inches to fragipan
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144AY008CT - Moist Till Uplands
Hydric soil rating: No

Minor Components

Pittstown
Percent of map unit: 5 percent
Hydric soil rating: No

Bernardston
Percent of map unit: 5 percent
Hydric soil rating: No

Manlius
Percent of map unit: 5 percent
Hydric soil rating: No

Albrights, non-stony
Percent of map unit: 3 percent
Hydric soil rating: No

Nassau
Percent of map unit: 2 percent
Hydric soil rating: No

AnA—Alden silt loam, 0 to 3 percent slopes

Map Unit Setting
National map unit symbol: 9v12
Elevation: 300 to 1,500 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition
Alden and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Alden

Setting
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: A silty mantle of local deposition overlying loamy till

Typical profile
H1 - 0 to 7 inches: silt loam
H2 - 7 to 40 inches: silty clay loam
H3 - 40 to 60 inches: gravelly silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D
Ecological site: F144AY040NY - Semi-Rich Very Wet Till Depressions
Hydric soil rating: Yes

Minor Components

Scriba

Percent of map unit: 8 percent
Hydric soil rating: No

Alden, mucky surface

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Nassau

Percent of map unit: 5 percent
Hydric soil rating: No

Fluvaquents

Percent of map unit: 2 percent
Landform: Flood plains
Hydric soil rating: Yes

BeB—Bernardston gravelly silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9v14
Elevation: 0 to 1,000 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Bernardston and similar soils: 75 percent

Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bernardston

Setting

Landform: Till plains, hills, drumlinoid ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy, acid, dense till derived mainly from phyllite, shale, slate, and schist

Typical profile

H1 - 0 to 8 inches: gravelly silt loam
H2 - 8 to 30 inches: gravelly loam
H3 - 30 to 60 inches: gravelly loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 15 to 30 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Scriba

Percent of map unit: 5 percent
Hydric soil rating: No

Pittstown

Percent of map unit: 5 percent
Hydric soil rating: No

Manlius

Percent of map unit: 5 percent
Hydric soil rating: No

Albrights

Percent of map unit: 5 percent
Hydric soil rating: No

Nassau

Percent of map unit: 3 percent
Hydric soil rating: No

Bernardston, very stony
Percent of map unit: 2 percent
Hydric soil rating: No

BeC—Bernardston gravelly silt loam, 8 to 15 percent slopes

Map Unit Setting
National map unit symbol: 9v15
Elevation: 0 to 1,000 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Bernardston and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bernardston

Setting
Landform: Till plains, hills, drumlinoid ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy, acid, dense till derived mainly from phyllite, shale, slate, and schist

Typical profile
H1 - 0 to 8 inches: gravelly silt loam
H2 - 8 to 30 inches: gravelly loam
H3 - 30 to 60 inches: gravelly loam

Properties and qualities
Slope: 8 to 15 percent
Depth to restrictive feature: 15 to 30 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C/D

Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Pittstown
Percent of map unit: 5 percent
Hydric soil rating: No

Manlius
Percent of map unit: 3 percent
Hydric soil rating: No

Scriba
Percent of map unit: 3 percent
Hydric soil rating: No

Albrights
Percent of map unit: 3 percent
Hydric soil rating: No

Bernardston, very stony
Percent of map unit: 2 percent
Hydric soil rating: No

Nassau
Percent of map unit: 2 percent
Hydric soil rating: No

Bernardston, eroded
Percent of map unit: 2 percent
Hydric soil rating: No

BeD—Bernardston gravelly silt loam, 15 to 25 percent slopes

Map Unit Setting
National map unit symbol: 9v16
Elevation: 0 to 1,000 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition
Bernardston and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bernardston

Setting
Landform: Till plains, hills, drumlinoid ridges
Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy, acid, dense till derived mainly from phyllite, shale, slate, and schist

Typical profile

H1 - 0 to 8 inches: gravelly silt loam
H2 - 8 to 30 inches: gravelly loam
H3 - 30 to 60 inches: gravelly loam

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 15 to 30 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C/D
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Manlius

Percent of map unit: 5 percent
Hydric soil rating: No

Pittstown

Percent of map unit: 5 percent
Hydric soil rating: No

Nassau

Percent of map unit: 3 percent
Hydric soil rating: No

Albrights

Percent of map unit: 3 percent
Hydric soil rating: No

Bernardston, eroded

Percent of map unit: 2 percent
Hydric soil rating: No

Bernardston, very stony

Percent of map unit: 2 percent
Hydric soil rating: No

BeE—Bernardston gravelly silt loam, 25 to 35 percent slopes

Map Unit Setting

National map unit symbol: 9v17
Elevation: 0 to 1,000 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition

Bernardston and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bernardston

Setting

Landform: Drumlinoid ridges, till plains, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy, acid, dense till derived mainly from phyllite, shale, slate, and schist

Typical profile

H1 - 0 to 8 inches: gravelly silt loam
H2 - 8 to 30 inches: gravelly loam
H3 - 30 to 60 inches: gravelly loam

Properties and qualities

Slope: 25 to 35 percent
Depth to restrictive feature: 15 to 30 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C/D
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Manlius
Percent of map unit: 5 percent
Hydric soil rating: No

Nassau
Percent of map unit: 5 percent
Hydric soil rating: No

Albrights
Percent of map unit: 5 percent
Hydric soil rating: No

Bernardston, eroded
Percent of map unit: 3 percent
Hydric soil rating: No

Bernardston, very stony
Percent of map unit: 2 percent
Hydric soil rating: No

BnB—Bernardston-Nassau complex, undulating

Map Unit Setting
National map unit symbol: 9v1b
Elevation: 0 to 1,800 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Bernardston and similar soils: 45 percent
Nassau and similar soils: 30 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bernardston

Setting
Landform: Till plains, hills, drumlinoid ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy, acid, dense till derived mainly from phyllite, shale, slate, and schist

Typical profile
H1 - 0 to 8 inches: gravelly silt loam

H2 - 8 to 30 inches: gravelly loam
H3 - 30 to 60 inches: gravelly loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 15 to 30 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Description of Nassau

Setting

Landform: Till plains, ridges, benches
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Channery loamy till derived mainly from local slate or shale

Typical profile

H1 - 0 to 7 inches: very channery silt loam
H2 - 7 to 15 inches: very channery loam
H3 - 15 to 19 inches: unweathered bedrock

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 1.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Minor Components

Manlius

Percent of map unit: 10 percent

Hydric soil rating: No

Scriba

Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed soils

Percent of map unit: 5 percent
Hydric soil rating: No

Pittstown

Percent of map unit: 5 percent
Hydric soil rating: No

BnC—Bernardston-Nassau complex, rolling

Map Unit Setting

National map unit symbol: 9v1c
Elevation: 0 to 1,800 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Bernardston and similar soils: 45 percent
Nassau and similar soils: 35 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bernardston

Setting

Landform: Till plains, hills, drumlinoid ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy, acid, dense till derived mainly from phyllite, shale, slate, and schist

Typical profile

H1 - 0 to 8 inches: gravelly silt loam
H2 - 8 to 30 inches: gravelly loam
H3 - 30 to 60 inches: gravelly loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 15 to 30 inches to densic material
Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C/D
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Description of Nassau

Setting

Landform: Till plains, ridges, benches
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Channery loamy till derived mainly from local slate or shale

Typical profile

H1 - 0 to 7 inches: very channery silt loam
H2 - 7 to 15 inches: very channery loam
H3 - 15 to 19 inches: unweathered bedrock

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 1.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Minor Components

Manlius

Percent of map unit: 10 percent
Hydric soil rating: No

Unnamed soils

Percent of map unit: 5 percent
Hydric soil rating: No

Pittstown
Percent of map unit: 3 percent
Hydric soil rating: No

Scriba
Percent of map unit: 2 percent
Hydric soil rating: No

CaA—Catden muck, 0 to 2 percent slopes

Map Unit Setting
National map unit symbol: 2t2qk
Elevation: 0 to 1,430 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition
Catden and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Catden

Setting
Landform: Depressions, depressions, fens, depressions, kettles, marshes, bogs, swamps
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Highly decomposed herbaceous organic material and/or highly decomposed woody organic material

Typical profile
Oa1 - 0 to 2 inches: muck
Oa2 - 2 to 79 inches: muck

Properties and qualities
Slope: 0 to 1 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None

Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Very high (about 26.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F144AY042NY - Semi-Rich Organic Wetlands
Hydric soil rating: Yes

Minor Components

Canandaigua

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Natchaug

Percent of map unit: 5 percent
Landform: Depressions, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Alden

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Timakwa

Percent of map unit: 5 percent
Landform: Swamps
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

ChB—Chenango very gravelly loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9v1p
Elevation: 600 to 1,800 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Chenango and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chenango

Setting

Landform: Terraces, valley trains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, derived mainly from sandstone, shale, and siltstone

Typical profile

H1 - 0 to 7 inches: very gravelly loam
H2 - 7 to 43 inches: very gravelly loam
H3 - 43 to 78 inches: extremely gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F140XY021NY - Dry Outwash
Hydric soil rating: No

Minor Components

Unadilla
Percent of map unit: 3 percent
Hydric soil rating: No

Riverhead
Percent of map unit: 3 percent
Hydric soil rating: No

Hoosic
Percent of map unit: 3 percent
Hydric soil rating: No

Castile
Percent of map unit: 3 percent
Hydric soil rating: No

Carlisle
Percent of map unit: 1 percent
Landform: Swamps, marshes
Hydric soil rating: Yes

Palms
Percent of map unit: 1 percent
Landform: Marshes, swamps
Hydric soil rating: Yes

Fredon
Percent of map unit: 1 percent
Hydric soil rating: No

CkB—Chenango gravelly loam, fan, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 9v1q
Elevation: 100 to 1,330 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Chenango, fan, and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chenango, Fan

Setting
Landform: Alluvial fans
Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, derived mainly from sandstone, shale, and siltstone

Typical profile

H1 - 0 to 10 inches: gravelly loam
H2 - 10 to 24 inches: very gravelly loam
H3 - 24 to 60 inches: extremely gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 36 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F140XY021NY - Dry Outwash
Hydric soil rating: No

Minor Components

Chenango, strongly sloping

Percent of map unit: 5 percent
Hydric soil rating: No

Hoosic

Percent of map unit: 5 percent
Hydric soil rating: No

Fredon

Percent of map unit: 5 percent
Hydric soil rating: No

Castile

Percent of map unit: 5 percent
Hydric soil rating: No

FIA—Fluvaquents-Udifluvents complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9v1t

Elevation: 0 to 3,000 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition

Fluvaquents and similar soils: 45 percent
Udifluvents and similar soils: 35 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fluvaquents

Setting

Landform: Flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Alluvium with highly variable texture

Typical profile

H1 - 0 to 6 inches: silt loam
H2 - 6 to 60 inches: gravelly silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 5.95 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: FrequentNone
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 5 percent
Available water supply, 0 to 60 inches: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Description of Udifluvents

Setting

Landform: Flood plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium with a wide range of texture

Typical profile

H1 - 0 to 9 inches: gravelly fine sandy loam
H2 - 9 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very high (0.06 to 19.98 in/hr)
Depth to water table: About 36 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Limerick

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

Teel

Percent of map unit: 5 percent
Hydric soil rating: No

Saprists

Percent of map unit: 5 percent
Landform: Swamps, marshes
Hydric soil rating: Yes

Fredon

Percent of map unit: 3 percent
Hydric soil rating: No

Unnamed soils, moderately deep

Percent of map unit: 2 percent
Hydric soil rating: Unranked

HoB—Hoosic gravelly sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9v23
Elevation: 100 to 1,100 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Hoosic and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hoosic

Setting

Landform: Terraces, outwash plains, deltas
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and gravelly glaciofluvial deposits

Typical profile

H1 - 0 to 9 inches: gravelly sandy loam
H2 - 9 to 23 inches: very gravelly sandy loam
H3 - 23 to 60 inches: very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (1.98 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Chenango

Percent of map unit: 5 percent
Hydric soil rating: No

Castile

Percent of map unit: 5 percent
Hydric soil rating: No

Fredon

Percent of map unit: 3 percent
Hydric soil rating: No

Unnamed soils, sandy surface

Percent of map unit: 2 percent
Hydric soil rating: No

HoC—Hoosic gravelly sandy loam, rolling

Map Unit Setting

National map unit symbol: 9v24
Elevation: 100 to 1,100 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Hoosic and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hoosic

Setting

Landform: Terraces, outwash plains, deltas
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and gravelly glaciofluvial deposits

Typical profile

H1 - 0 to 9 inches: gravelly sandy loam
H2 - 9 to 23 inches: very gravelly sandy loam
H3 - 23 to 60 inches: very gravelly sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (1.98 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Riverhead
Percent of map unit: 5 percent
Hydric soil rating: No

Windsor
Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed soils, silty surface
Percent of map unit: 5 percent
Hydric soil rating: No

HoD—Hoosic gravelly sandy loam, hilly

Map Unit Setting
National map unit symbol: 9v25
Elevation: 100 to 1,100 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition
Hoosic and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hoosic

Setting
Landform: Terraces, outwash plains, deltas
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and gravelly glaciofluvial deposits

Typical profile
H1 - 0 to 9 inches: gravelly sandy loam
H2 - 9 to 23 inches: very gravelly sandy loam
H3 - 23 to 60 inches: very gravelly sand

Properties and qualities
Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (1.98 to 19.98 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Windsor

Percent of map unit: 5 percent
Hydric soil rating: No

Riverhead

Percent of map unit: 5 percent
Hydric soil rating: No

Hoosic, severely eroded

Percent of map unit: 3 percent
Hydric soil rating: No

Unnamed soils, sandy surface

Percent of map unit: 2 percent
Hydric soil rating: No

NaC—Nassau-Manlius complex, rolling

Map Unit Setting

National map unit symbol: 9v2l
Elevation: 200 to 1,800 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition

Nassau and similar soils: 45 percent
Manlius and similar soils: 25 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nassau

Setting

Landform: Till plains, ridges, benches
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex

Across-slope shape: Convex
Parent material: Channery loamy till derived mainly from local slate or shale

Typical profile
H1 - 0 to 7 inches: very channery silt loam
H2 - 7 to 15 inches: very channery loam
H3 - 15 to 19 inches: unweathered bedrock

Properties and qualities
Slope: 8 to 15 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 1.5 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Manlius

Setting
Landform: Till plains, ridges, benches
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till derived mainly from local acid shale bedrock

Typical profile
H1 - 0 to 8 inches: channery silt loam
H2 - 8 to 23 inches: very channery silt loam
H3 - 23 to 30 inches: very channery silt loam
H4 - 30 to 34 inches: unweathered bedrock

Properties and qualities
Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.0 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F144AY034CT - Well Drained Till Uplands

Hydric soil rating: No

Minor Components

Scriba
Percent of map unit: 10 percent
Hydric soil rating: No

Bernardston
Percent of map unit: 10 percent
Hydric soil rating: No

Rhinebeck
Percent of map unit: 4 percent
Hydric soil rating: No

Hudson
Percent of map unit: 4 percent
Hydric soil rating: No

Palms
Percent of map unit: 1 percent
Landform: Marshes, swamps
Hydric soil rating: Yes

Carlisle
Percent of map unit: 1 percent
Landform: Swamps, marshes
Hydric soil rating: Yes

NrC—Nassau-Rock outcrop, complex, rolling

Map Unit Setting
National map unit symbol: 9v2m
Elevation: 600 to 1,800 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition
Nassau and similar soils: 40 percent
Rock outcrop: 30 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nassau

Setting
Landform: Till plains, ridges, benches
Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Channery loamy till derived mainly from local slate or shale

Typical profile

H1 - 0 to 7 inches: very channery silt loam
H2 - 7 to 15 inches: very channery loam
H3 - 15 to 19 inches: unweathered bedrock

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 1.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Rock Outcrop

Properties and qualities

Depth to restrictive feature: 0 inches to lithic bedrock

Minor Components

Manlius

Percent of map unit: 10 percent
Hydric soil rating: No

Bernardston

Percent of map unit: 10 percent
Hydric soil rating: No

Unnamed soils, very shallow

Percent of map unit: 8 percent
Hydric soil rating: No

Alden

Percent of map unit: 1 percent
Landform: Depressions
Hydric soil rating: Yes

Palms

Percent of map unit: 1 percent
Landform: Marshes, swamps
Hydric soil rating: Yes

NrD—Nassau-Rock outcrop complex, hilly

Map Unit Setting

National map unit symbol: 9v2n
Elevation: 600 to 1,800 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition

Nassau and similar soils: 40 percent
Rock outcrop: 35 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nassau

Setting

Landform: Till plains, ridges, benches
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Channery loamy till derived mainly from local slate or shale

Typical profile

H1 - 0 to 7 inches: very channery silt loam
H2 - 7 to 15 inches: very channery loam
H3 - 15 to 19 inches: unweathered bedrock

Properties and qualities

Slope: 25 to 35 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 1.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Rock Outcrop

Properties and qualities

Depth to restrictive feature: 0 inches to lithic bedrock

Minor Components

Bernardston

Percent of map unit: 10 percent
Hydric soil rating: No

Manlius

Percent of map unit: 10 percent
Hydric soil rating: No

Unnamed soils, very shallow

Percent of map unit: 3 percent
Hydric soil rating: No

Alden

Percent of map unit: 1 percent
Landform: Depressions
Hydric soil rating: Yes

Palms

Percent of map unit: 1 percent
Landform: Marshes, swamps
Hydric soil rating: Yes

NtA—Natchaug muck, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2w68z
Elevation: 0 to 1,550 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Natchaug and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Natchaug

Setting

Landform: Depressions, depressions, depressions
Down-slope shape: Concave
Across-slope shape: Concave

Parent material: Highly decomposed organic material over loamy glaciofluvial deposits and/or loamy glaciolacustrine deposits and/or loamy till

Typical profile

Oa1 - 0 to 12 inches: muck
Oa2 - 12 to 31 inches: muck
2Cg1 - 31 to 39 inches: silt loam
2Cg2 - 39 to 79 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.01 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 17.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F144AY042NY - Semi-Rich Organic Wetlands
Hydric soil rating: Yes

Minor Components

Catden

Percent of map unit: 8 percent
Landform: Depressions, depressions, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Limerick

Percent of map unit: 5 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Sun

Percent of map unit: 4 percent
Landform: Depressions, hills
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Halsey

Percent of map unit: 3 percent

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

PtB—Pittstown gravelly silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9v2s
Elevation: 100 to 1,390 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Pittstown and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pittstown

Setting

Landform: Till plains, hills, drumlinoid ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Loamy till

Typical profile

H1 - 0 to 9 inches: gravelly silt loam
H2 - 9 to 24 inches: gravelly silt loam
H3 - 24 to 60 inches: gravelly silt loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 15 to 30 inches to densic material
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C

Ecological site: F144AY037MA - Moist Dense Till Uplands
Hydric soil rating: No

Minor Components

Bernardston
Percent of map unit: 5 percent
Hydric soil rating: No

Albrights
Percent of map unit: 5 percent
Hydric soil rating: No

Scriba
Percent of map unit: 4 percent
Hydric soil rating: No

Manlius
Percent of map unit: 4 percent
Hydric soil rating: No

Nassau
Percent of map unit: 1 percent
Hydric soil rating: No

Alden
Percent of map unit: 1 percent
Landform: Depressions
Hydric soil rating: Yes

PtC—Pittstown gravelly silt loam, 8 to 15 percent slopes

Map Unit Setting
National map unit symbol: 9v2t
Elevation: 20 to 1,890 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Pittstown and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pittstown

Setting
Landform: Till plains, hills, drumlinoid ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave

Across-slope shape: Convex
Parent material: Loamy till

Typical profile

H1 - 0 to 9 inches: gravelly silt loam
H2 - 9 to 24 inches: gravelly silt loam
H3 - 24 to 60 inches: gravelly silt loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 15 to 30 inches to densic material
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F144AY037MA - Moist Dense Till Uplands
Hydric soil rating: No

Minor Components

Albrights

Percent of map unit: 5 percent
Hydric soil rating: No

Bernardston

Percent of map unit: 5 percent
Hydric soil rating: No

Manlius

Percent of map unit: 4 percent
Hydric soil rating: No

Scriba

Percent of map unit: 4 percent
Hydric soil rating: No

Alden

Percent of map unit: 1 percent
Landform: Depressions
Hydric soil rating: Yes

Nassau

Percent of map unit: 1 percent
Hydric soil rating: No

SrB—Scriba silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9v36
Elevation: 30 to 1,440 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Scriba and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Scriba

Setting

Landform: Till plains, drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till dominated by sandstone, with lesser amounts of limestone and shale

Typical profile

H1 - 0 to 10 inches: silt loam
H2 - 10 to 21 inches: silt loam
H3 - 21 to 50 inches: gravelly silt loam
H4 - 50 to 60 inches: gravelly silt loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 12 to 21 inches to fragipan
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 3.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: No

Minor Components

Pittstown
Percent of map unit: 5 percent
Hydric soil rating: No

Alden
Percent of map unit: 3 percent
Landform: Depressions
Hydric soil rating: Yes

Scriba, very stony
Percent of map unit: 2 percent
Hydric soil rating: No

Unnamed soils
Percent of map unit: 2 percent
Hydric soil rating: No

Raynham
Percent of map unit: 2 percent
Hydric soil rating: No

Nassau
Percent of map unit: 2 percent
Hydric soil rating: No

Manlius
Percent of map unit: 2 percent
Hydric soil rating: No

Bernardston
Percent of map unit: 2 percent
Hydric soil rating: No

Ud—Udorthents, loamy

Map Unit Setting
National map unit symbol: 9v3c
Elevation: 0 to 1,070 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition
Udorthents, loamy, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Loamy

Typical profile

H1 - 0 to 60 inches: loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 36 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Unnamed soils, fragmental

Percent of map unit: 3 percent
Hydric soil rating: No

Udorthents, intermittently ponded

Percent of map unit: 2 percent
Hydric soil rating: No

Udorthents, clayey

Percent of map unit: 2 percent
Hydric soil rating: No

Udorthents, sandy

Percent of map unit: 2 percent
Hydric soil rating: No

Urban land

Percent of map unit: 1 percent
Hydric soil rating: Unranked

W—Water

Map Unit Setting

National map unit symbol: 9v3k
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 195 days
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

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APPENDIX C
NYSDEC ENVIRONMENTAL RESOURCE DATA AND IPaC INFORMATION

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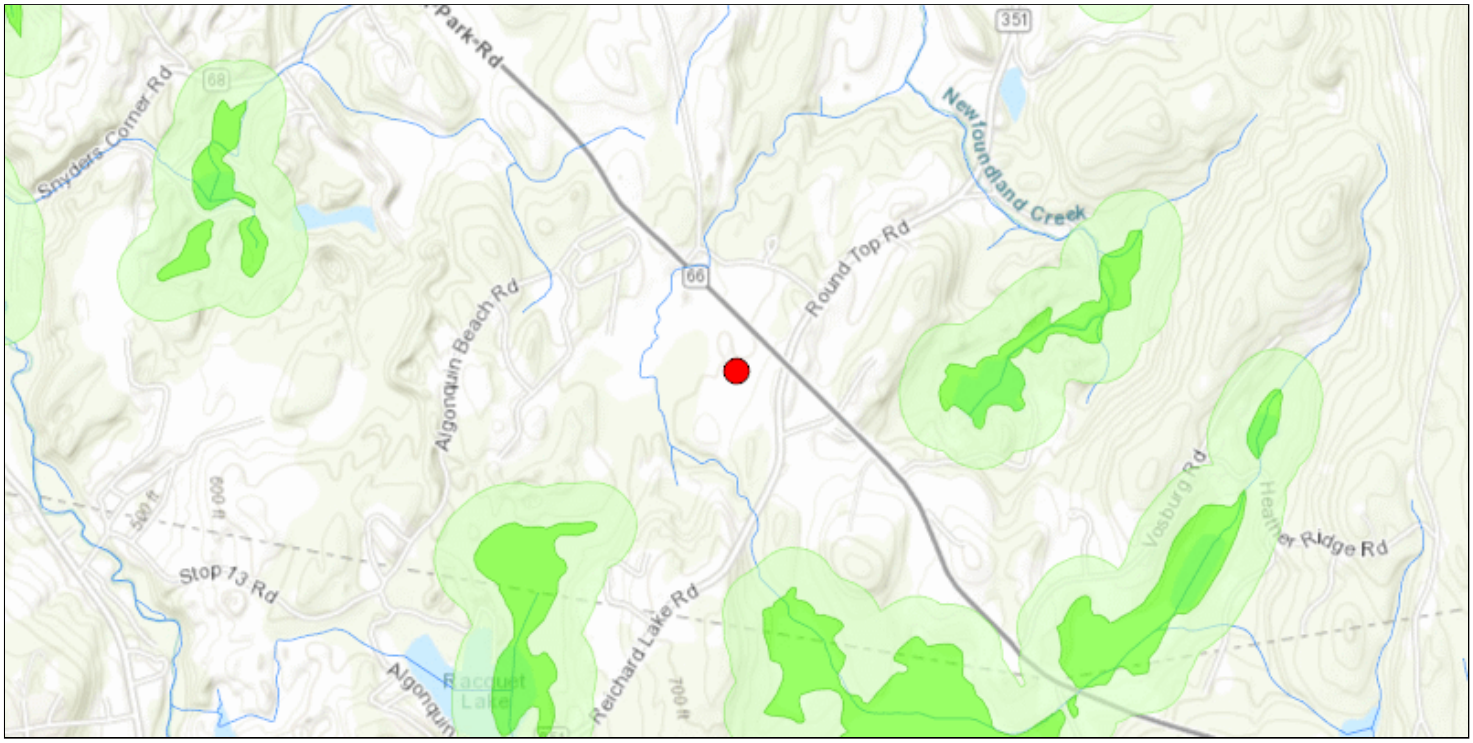
Environmental Resource Mapper



The coordinates of the point you clicked on are:

UTM 18	**Eas ng:**	616195.8881104598	**Northing:**	4724453.32364527
Longitude/La tude	**Longitude:**	-73.58214950561454	**La tude:**	42.66378556969762

The approximate address of the point you clicked on is:
333 State Route 351, Poestenkill, New York, 12140

County: Rensselaer
Town: Poestenkill
USGS Quad: AVERILL PARK

If your project or ac on is within or near an area with a rare animal, a permit may be required if the species is listed as endangered or threatened and the department determines the ac on may be harmful to the species or its habitat.

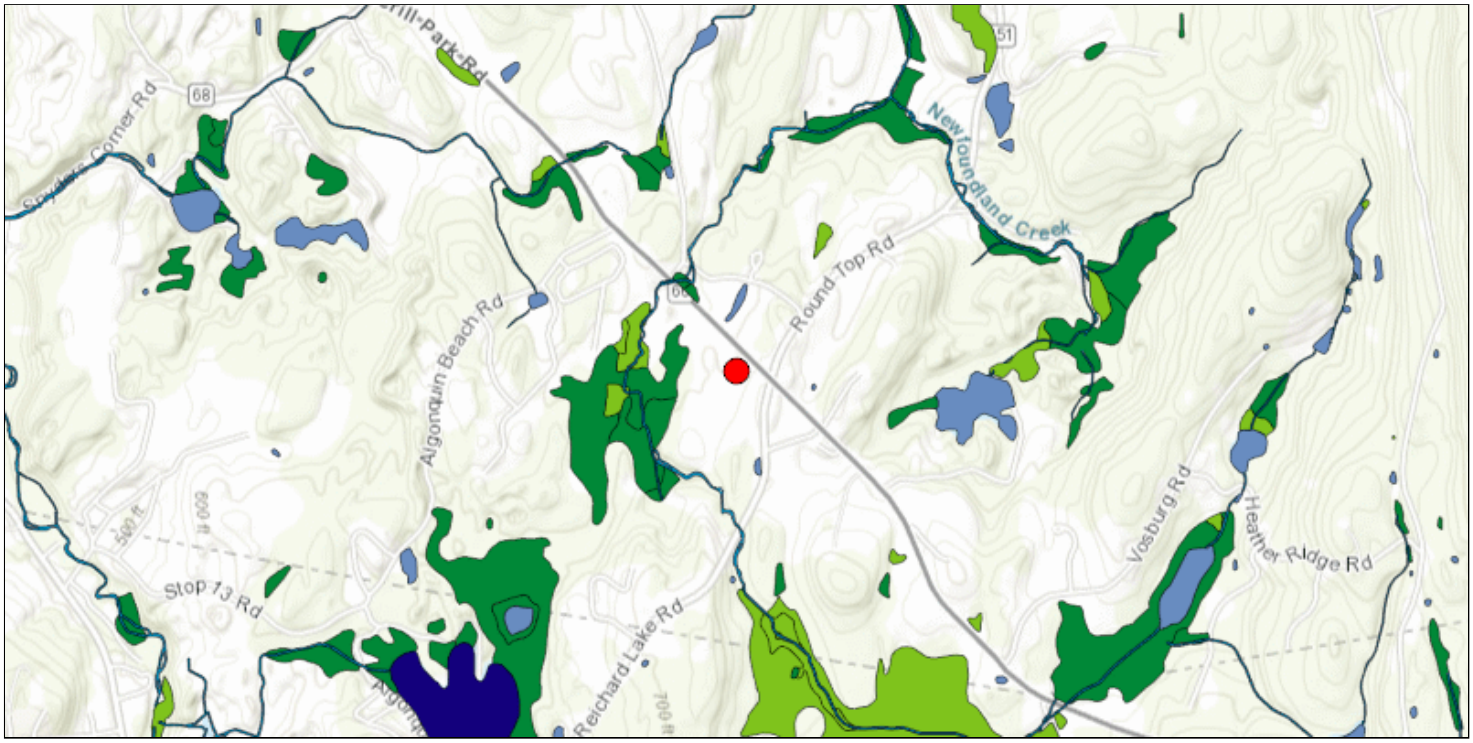
If your project or ac on is within or near an area with rare plants and/or significant natural communi es, the environmental impacts may need to be addressed.

The presence of a unique geological feature or landform near a project, unto itself, does not trigger a requirement for a NYS DEC permit. Readers are advised, however, that there is the chance that a unique feature may also show in another data layer (ie. a wetland) and thus be subject to permit jurisdic on.

Please refer to the "Need a Permit?" tab for permit informa on or other authoriza ons regarding these natural resources.

Disclaimer: If you are considering a project or ac on in, or near, a wetland or a stream, a NYS DEC permit may be required. The Environmental Resources Mapper does not show all natural resources which are regulated by NYS DEC, and for which permits from NYS DEC are required. For example, Regulated Tidal Wetlands, and Wild, Scenic, and Recrea onal Rivers, are currently not included on the maps.

National Wetlands Inventory



The coordinates of the point you clicked on are:

UTM 18	**Eas ng:**	616254.3445980966	**Northing:**	4724511.631937708
Longitude/La tude	**Longitude:**	-73.58142448028735	**La tude:**	42.66430168109

The approximate address of the point you clicked on is:
9023-9031 RT-66, Averill Park, New York, 12018

County: Rensselaer
Town: Poestenkill
USGS Quad: AVERILL PARK

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IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Rensselaer County, New York

Local office

New York Ecological Services Field Office

(607) 753-9334
(607) 753-9699

3817 Luker Road
Cortland, NY 13045-9385

http://www.fws.gov/northeast/nyfo/es/section7.htm

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird

species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Blue-winged Warbler *Vermivora pinus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 1 to Jun 30
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Evening Grosbeak *Coccothraustes vespertinus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Aug 10
Prairie Warbler *Dendroica discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31

Wood Thrush Hylocichla mustelina — Breeds May 10 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

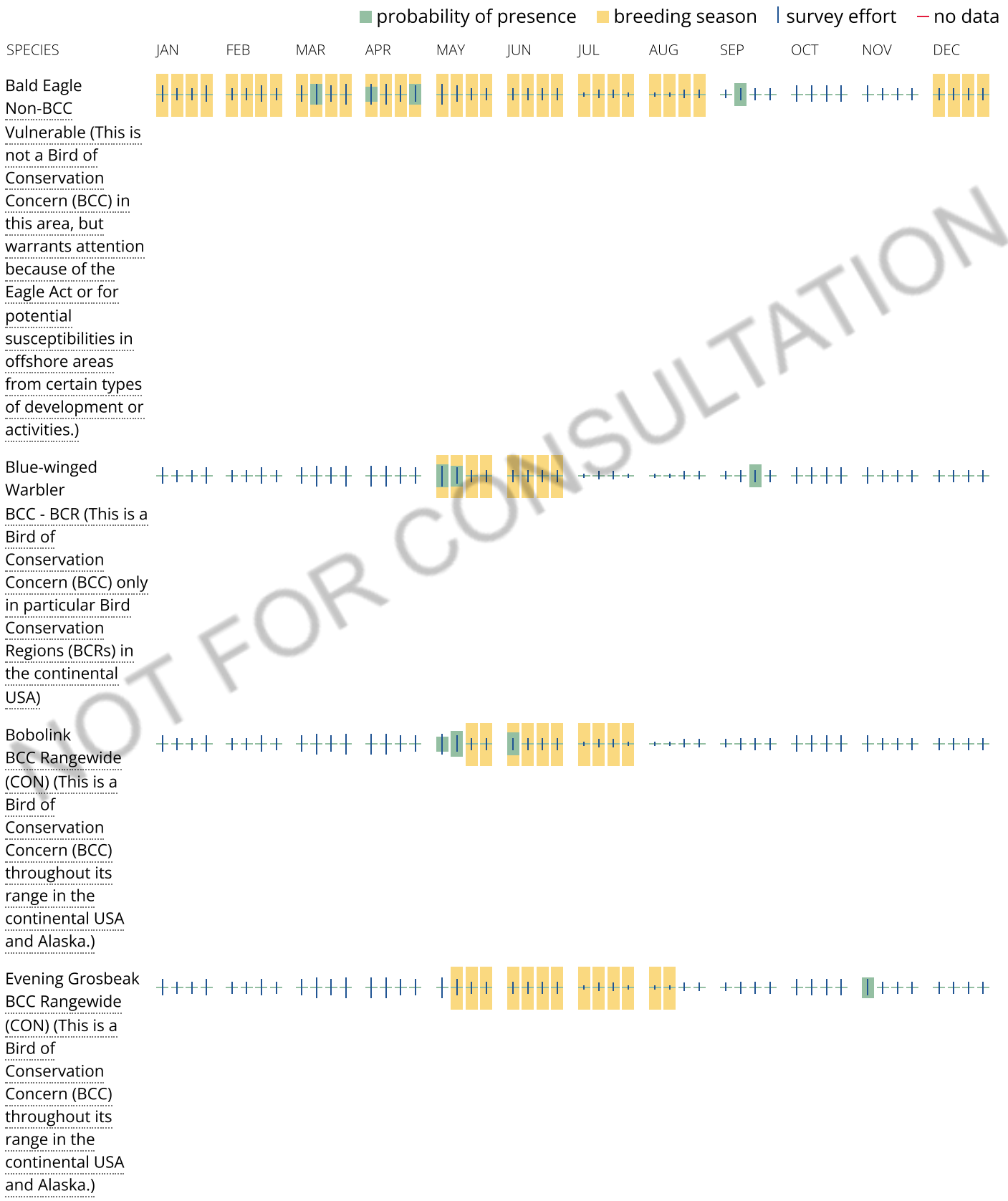
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)

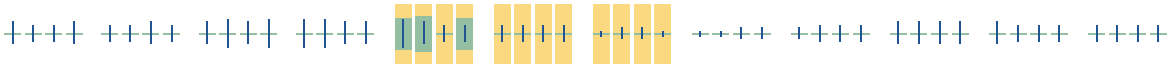
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

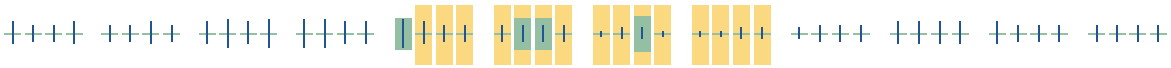
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Prairie Warbler BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Wood Thrush BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring

in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

APPENDIX D
FEMA FLOODPLAIN MAPS

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ELEVATION REFERENCE MARKS

REFERENCE MARK	ELEVATION (FT. NGVD)	DESCRIPTION OF LOCATION
RM10	455.62	Paint mark on north corner sidewalk to house no. 537 on the east side of State Route 150, 11 feet from pavement edge. Established by Tallamy, Van Kuren, Gertis and Thielman.
RM11	421.81	Square cut northeast corner wingwall north side of bridge leading to horse farm off State Route 150; 0.8 mile south of Earmier. Established by Tallamy, Van Kuren, Gertis and Thielman.

KEY TO MAP

500-Year Flood Boundary	ZONE B
100-Year Flood Boundary	
Zone Designations* With Date of Identification e.g., 12/2/74	ZONE A1 DATE / ZONE A5 DATE
100-Year Flood Boundary	
500-Year Flood Boundary	ZONE B
Base Flood Elevation Line With Elevation In Feet**	513
Base Flood Elevation in Feet Where Uniform Within Zone**	(EL 987)
Elevation Reference Mark	RM7 ×
River Mile	• M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:
AUGUST 30, 1974

FLOOD HAZARD BOUNDARY MAP REVISIONS:
JULY 22, 1976

FLOOD INSURANCE RATE MAP EFFECTIVE:
SEPTEMBER 2, 1981

FLOOD INSURANCE RATE MAP REVISIONS:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.

APPROXIMATE SCALE

400 0 400 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

TOWN OF
POESTENKILL,
NEW YORK
RENSSELAER COUNTY

PANEL 12 OF 12
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
360676 0012 B

EFFECTIVE DATE:
SEPTEMBER 2, 1981

federal emergency management agency
federal insurance administration

KEY TO MAP

100-Year Flood Boundary	ZONE B
500-Year Flood Boundary	ZONE A1 DATE
Zone Designations* With Date of Identification e.g., 12/1/74	ZONE A8 DATE
100-Year Flood Boundary	ZONE B
500-Year Flood Boundary	
Base Flood Elevation Line With Elevation in Feet**	513
Base Flood Elevation in Feet Where Uniform Within Zone**	(EL 987)
Elevation Reference Mark	RM7×.
River Mile	• M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard area (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:
AUGUST 30, 1974

FLOOD HAZARD BOUNDARY MAP REVISED:
JULY 23, 1976

FLOOD INSURANCE RATE MAP EFFECTIVE:
SEPTEMBER 2, 1981

FLOOD INSURANCE RATE MAP REVISED:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program, at (800) 638-6620.

APPROXIMATE SCALE
400 0 400 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

TOWN OF
POESTENKILL,
NEW YORK
RENSSELAER COUNTY

PANEL 10 OF 12
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
360676 0010 B

EFFECTIVE DATE:
SEPTEMBER 2, 1981

federal emergency management agency
federal insurance administration

APPENDIX E
SHPO REVIEW LETTER

NEW YORK STATE OF OPPORTUNITY. Parks, Recreation, and Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

January 18, 2022

Lauren Paulsen
Engineer
Laberge Group
4 Computer Drive West
Albany, NY 12205

Re: DEC
Town of Poestenkill Proposed Water District
22PR00337

Dear Lauren Paulsen:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the OPRHP and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

Based upon this review, it is the opinion of OPRHP that no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by this project.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

R. Daniel Mackay

Deputy Commissioner for Historic Preservation
Division for Historic Preservation

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APPENDIX F
SEQRA NEGATIVE DECLARATION

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Water District No. 2		
Project Location (describe, and attach a general location map): Project is located along NYS Route 66 between Snyders Corner Road and White Church Road.		
Brief Description of Proposed Action (include purpose or need): Installation of water distribution system to supply water to properties in an area affected by PFOA including the Algonquin middle School. The project is comprised of approximately 20,000 linear feet of water main and associates appurtenances such as hydrants, valves, and water services. The project will serve 109 parcels, six of which are currently vacant.		
Name of Applicant/Sponsor: Town of Poestenkill	Telephone: 518-283-5100 E-Mail: khammond@poestenkillny.com	
Address: Town Hall, 38 Davis Drive		
City/PO: Poestenkill	State: New York	Zip Code: 12140
Project Contact (if not same as sponsor; give name and title/role): Ronald J. Laberge, P.E., Laberge Group, Consulting Engineer	Telephone: 518-458-7112 E-Mail: rjlaberge@labergegroup.com	
Address: 4 Computer Drive West		
City/PO: Albany	State: New York	Zip Code: 12205
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☑Yes ☐No	Water District Formation, Bond Resolution	
b. City, Town or Village Planning Board or Commission ☐Yes ☑No		
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☐Yes ☑No		
e. County agencies ☐Yes ☑No		
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSDOH Approval of Plans, NYSDOT Highway Work Permit, NYS DEC Wetlands permit	
h. Federal agencies ☐Yes ☑No		

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☐Yes ☑No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes ☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

_____

_____

_____

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Averill Park Central School District

b. What police or other public protection forces serve the project site?
NYS Police, County Sherriff

c. Which fire protection and emergency medical services serve the project site?
Poestenkill Fire Department

d. What parks serve the project site?
none

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Water utility installation

b. a. Total acreage of the site of the proposed action? 4.6+/- acres
b. Total acreage to be physically disturbed? 4.6+/- acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 4.6+/- acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☐Yes ☑No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase	_____	_____	_____	_____
At completion of all phases	_____	_____	_____	_____

g. Does the proposed action include new non-residential construction (including expansions)? ☐Yes ☑No

If Yes,

i. Total number of structures _____

ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length

iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☑No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐Other specify:

_____

iii. If other than water, identify the type of impounded/contained liquids and their source.

_____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐Yes ☑No

If Yes:

i .What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.

_____

_____

iv. Will there be onsite dewatering or processing of excavated materials? ☐Yes ☐No

If yes, describe. _____

_____

v. What is the total area to be dredged or excavated? _____acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐Yes ☐No

ix. Summarize site reclamation goals and plan: _____

_____

_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐Yes ☑No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____

_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☐No
If Yes, describe:

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☐No
If Yes:

- acres of aquatic vegetation proposed to be removed:
- expected acreage of aquatic vegetation remaining after project completion:
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access):
- proposed method of plant removal:
- if chemical/herbicide treatment will be used, specify product(s):

v. Describe any proposed reclamation/mitigation following disturbance:

c. Will the proposed action use, or create a new demand for water? ☑Yes ☐No
If Yes:

i. Total anticipated water usage/demand per day: 42,700 gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☑Yes ☐No
If Yes:

- Name of district or service area: Poestenkill Water District No. 1
- Does the existing public water supply have capacity to serve the proposal? ☑Yes ☐No
- Is the project site in the existing district? ☐Yes ☑No
- Is expansion of the district needed? ☐Yes ☑No
- Do existing lines serve the project site? ☐Yes ☑No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☑No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project:
  20,000 LF of water main to serve 109 parcels
- Source(s) of supply for the district:

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☑Yes ☐No
If, Yes:

- Applicant/sponsor for new district: Town of Poestenkill
- Date application submitted or anticipated:
- Proposed source(s) of supply for new district: (C)Troy via (T)Brunswick and Poestenkill Water District No. 1

v. If a public water supply will not be used, describe plans to provide water supply for the project:

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐Yes ☑No
If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each):

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐Yes ☑No
If Yes:

- Name of wastewater treatment plant to be used:
- Name of district:
- Does the existing wastewater treatment plant have capacity to serve the project? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No

- Do existing sewer lines serve the project site? ☐Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

_____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☑No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

_____

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

_____

_____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐Yes ☑No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

_____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

_____

_____

- If to surface waters, identify receiving water bodies or wetlands: _____

_____

_____

- Will stormwater runoff flow to adjacent properties? ☐Yes ☐No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☑Yes ☐No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

Construction equipment such as excavators and dump trucks

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

none

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

none

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

_____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☑No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend

☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

_____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

_____

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

_____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

_____

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7AM - 5PM
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: 24 Hours/Day
- Saturday: 24 Hours
- Sunday: 24 Hours
- Holidays: 24 Hours

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

Heavy Construction Equipment, weekdays, 7AM to 5PM

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe: _____

n. Will the proposed action have outdoor lighting? ☐ Yes ☑ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☐ No

Describe: _____

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities:_____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: _____
- Operation: _____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: _____
- Operation: _____

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

_____

_____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

_____

_____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

_____

_____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

_____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

_____

_____

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☐ Industrial ☑ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☑ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

_____

_____

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	.2	.2	0
• Forested			
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	4.6	4.6	0
• Agricultural (includes active orchards, field, greenhouse etc.)			
• Surface water features (lakes, ponds, streams, rivers, etc.)	.1	.1	0
• Wetlands (freshwater or tidal)			
• Non-vegetated (bare rock, earth or fill)			
• Other Describe: _____ _____			

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☑ Yes ☐ No

If Yes,

i. Identify Facilities:

Algonquin Middle School

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☐ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☑ No

If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

_____

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >6FT feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site:

Gravelly Silt Loam	30 %
Gravelly Sandy Loam	70 %
	%

d. What is the average depth to the water table on the project site? Average: 2 feet

e. Drainage status of project site soils:

☑ Well Drained:	60 % of site
☑ Moderately Well Drained:	40 % of site
☐ Poorly Drained	% of site

f. Approximate proportion of proposed action site with slopes:

☐ 0-10%:	90 % of site
☐ 10-15%:	10 % of site
☐ 15% or greater:	% of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☑ Yes ☐ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑ Yes ☐ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name 863-808.1, 863-748 Classification C(TS)
- Lakes or Ponds: Name 863-813, 863-748 Classification C
- Wetlands: Name Federal Waters, Federal Waters, Federal Waters,... Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? Two Crossings of unnamed tributary to Newfoundland Creek ☑ Yes ☐ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☑ Yes ☐ No
If Yes:

i. Name of aquifer: Principal Aquifer

m. Identify the predominant wildlife species that occupy or use the project site: _____

_____ _____ _____

_____ _____ _____

n. Does the project site contain a designated significant natural community? ☐ Yes ☑ No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

_____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☑ No

If Yes:

i. Species and listing (endangered or threatened): _____

_____

_____

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐ Yes ☑ No

If Yes:

i. Species and listing: _____

_____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☑ No

If yes, give a brief description of how the proposed action may affect that use: _____

_____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☑ Yes ☐ No

If Yes, provide county plus district name/number: RENS002

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☑ No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

_____

_____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐ Yes ☑ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☐ Yes ☑ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☑ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

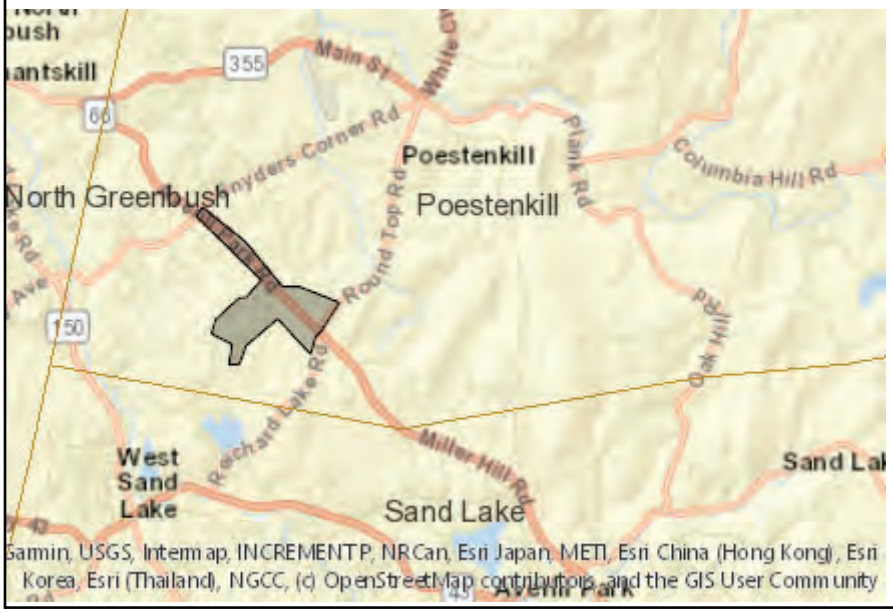
Applicant/Sponsor Name Town of Poestenkill Date 8-11-22

Signature _____ Title Supervisor

PRINT FORM

EAF Mapper Summary Report

Wednesday, July 13, 2022 9:03 AM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Stream Name]	863-808.1, 863-748
E.2.h.iv [Surface Water Features - Stream Classification]	C(TS)
E.2.h.iv [Surface Water Features - Lake/Pond Name]	863-813, 863-748
E.2.h.iv [Surface Water Features - Lake/Pond Classification]	C
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	No

E.2.i. [Floodway]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.j. [100 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.k. [500 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.l. [Aquifers]	Yes
E.2.l. [Aquifer Names]	Principal Aquifer
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	Yes
E.3.a. [Agricultural District]	RENS002
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No

Agency Use Only [If applicable]

Project : Poestenkill Water District No. 2

Date :

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "**Yes"** to a numbered question, please complete all the questions that follow in that section.
- If you answer "**No"** to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land

Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)

☐ NO ☑ YES

If "Yes", answer questions a - j. If "No", move on to Section 2.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☑	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☑	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☑	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☑	☐
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☑	☐
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☑	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☑	☐
h. Other impacts: _____ _____		☐	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g)

☑ NO ☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	□	□
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	□	□
c. Other impacts: _____ _____		□	□

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h)

☐ NO ☑ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☑	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☑	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☑	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☑	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☑	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☑	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☑	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☑	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☑	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☑	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☑	☐

l. Other impacts: _____ _____		☐	☐

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t)

☐ NO ☑ YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	☑	☐
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	☑	☐
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	☑	☐
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	☑	☐
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	☑	☐
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	☑	☐
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	☑	☐
h. Other impacts: _____ _____		☐	☐

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2)

☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	☐	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☐	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☐	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☐	☐
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☐	☐
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☐	☐

g. Other impacts: _____ _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D.2.h, D.2.g) ☑ NO ☐ YES

If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____ _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☑ NO ☐ YES

If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☐	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☐	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☐	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☐	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	☐	☐
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	☐	☐
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	☐	☐
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	☐	☐
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	☐	☐
j. Other impacts: _____ _____		☐	☐

8. Impact on Agricultural Resources

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	☐	☐
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, Elb	☐	☐
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	☐	☐
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	☐	☐
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	El a, E1b	☐	☐
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	☐	☐
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	☐	☐
h. Other impacts: _____		☐	☐

9. Impact on Aesthetic Resources

The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)

☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", go to Section 10.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	 ☐ ☐	 ☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	 ☐ ☐	 ☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____ _____		☐	☐

10. Impact on Historic and Archeological Resources

The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)

☑ NO ☐ YES

If "Yes", answer questions a - e. If "No", go to Section 11.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places.	E3e	☐	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☐	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☐	☐

d. Other impacts: _____ _____		☐	☐
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	☐	☐
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	☐	☐
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	☐	☐

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	☐	☐
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	☐	☐
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	☐	☐
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	☐	☐
e. Other impacts: _____ _____		☐	☐

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
c. Other impacts: _____ _____		☐	☐

13. Impact on Transportation

The proposed action may result in a change to existing transportation systems. ☑ NO ☐ YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____ _____		☐	☐

14. Impact on Energy

The proposed action may cause an increase in the use of any form of energy. ☑ NO ☐ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____ _____			

15. Impact on Noise, Odor, and Light

The proposed action may result in an increase in noise, odors, or outdoor lighting. ☑ NO ☐ YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☑ NO ☐ YES

If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☐	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☐	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☐	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☐	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☐	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☐	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☐	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☐	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☐	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☐	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☐	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☐	☐
m. Other impacts: _____ _____			

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. (See Part 1. C.1, C.2. and C.3.) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, Elb	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. (See Part 1. C.2, C.3, D.2, E.3) ☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

PRINT FULL FORM

Agency Use Only [IfApplicable]

Project :

Date :

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:

To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

The proposed project consists of linear underground utility installation throughout the Town directly adjacent to the roadways in the grassed areas. There are no significant environmental impacts associated with the installation of the pipe and associated appurtenances. Watermain installation will be performed via directional drilling to avoid any impacts to streams/wetlands encountered along the pipe alignment.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☐ Type 1 ☑ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information
within the attached Preliminary Engineering Report

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the
Town of Poestenkill as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Proposed Water District

Name of Lead Agency: Town of Poestenkill

Name of Responsible Officer in Lead Agency: Keith Hammond

Title of Responsible Officer: Supervisor

Signature of Responsible Officer in Lead Agency: Date:

Signature of Preparer (if different from Responsible Officer) Date:

For Further Information:

Contact Person: Keith Hammond, Supervisor

Address: 38 Davis Drive, Poestenkill, NY 12140

Telephone Number: 518-283-5100

E-mail: khammond@poestenkillny.com

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

PRINT FULL FORM

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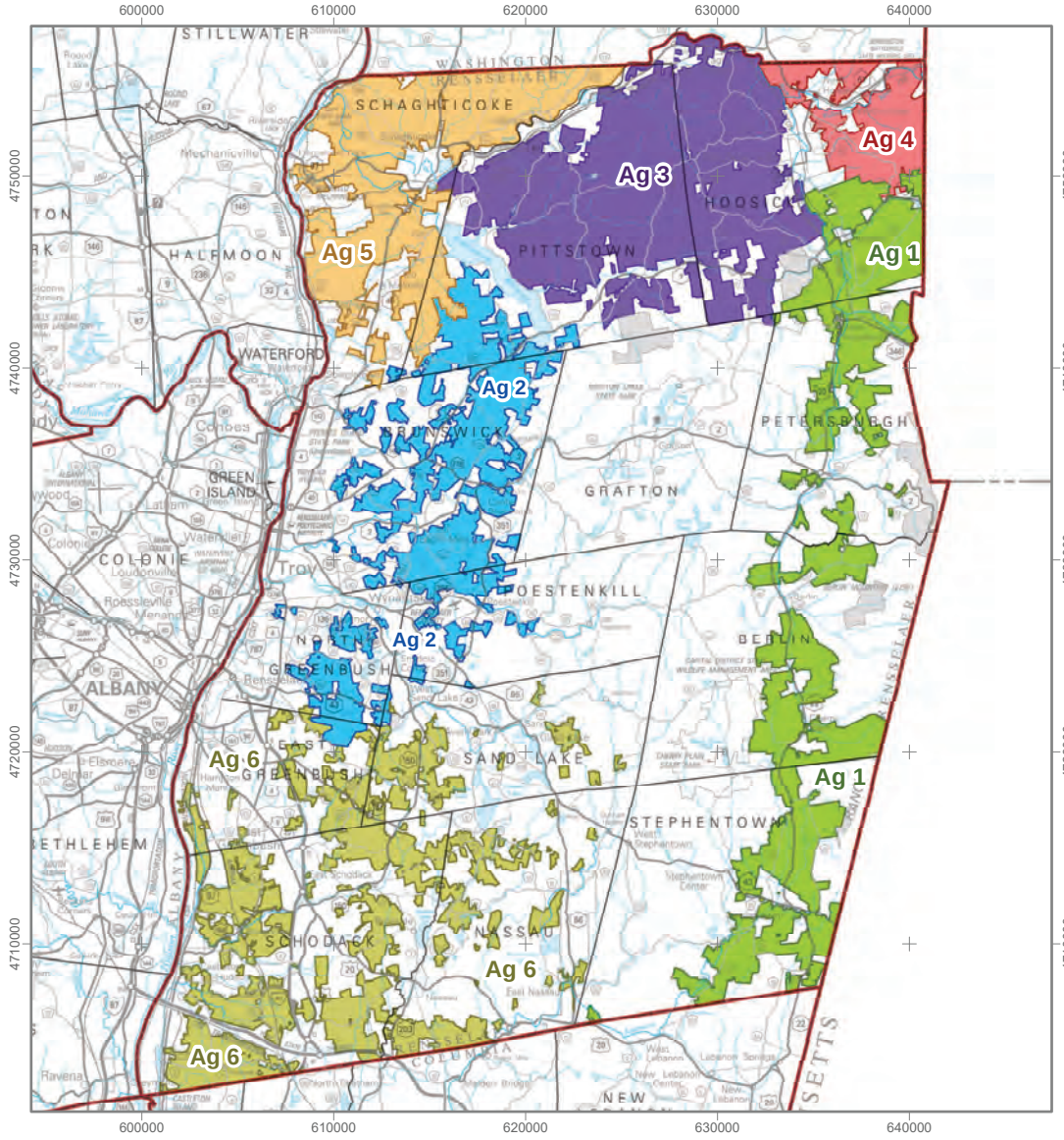
APPENDIX G
AGRICULTURAL DISTRICT MAP

New York State Dept of Agriculture and Markets

RENSSELAER COUNTY

Agricultural Districts 2021



Rensselaer County

Ag. District 1	**Ag. District 4**
Ag. District 2	**Ag. District 5**
Ag. District 3	**Ag. District 6**

DISTRICT CERTIFICATIONS and TOWNS

DISTRICT 1
CERTIFIED 1/12/2015
- Berlin
- Grafton
- Hoosick
- Petersburgh
- Stephentown

DISTRICT 2
CERTIFIED 1/11/2016
- Brunswick
- East Greenbush
- North Greenbush
- Pittstown
- Poestenkill
- Sand Lake
- Schaghticoke
- city of Troy

DISTRICT 3
CERTIFIED 8/23/2016
- Grafton
- Hoosick
- Pittstown
- Schaghticoke

DISTRICT 4
CERTIFIED 8/23/2016
- Hoosick

DISTRICT 5
CERTIFIED 9/6/2018
- Brunswick
- Pittstown
- Schaghticoke

DISTRICT 6
CERTIFIED 9/22/2020
- East Greenbush
- Nassau
- North Greenbush
- Schodack
- Sand Lake

MAP SOURCE INFORMATION

Map created at Cornell IRIS (Institute for Resource Information Sciences) <http://iris.cals.cornell.edu> for the NYS Department of Agriculture and Markets <https://www.agriculture.ny.gov>

Agricultural Districts boundary data is available at CUGIR (Cornell University Geospatial Information Repository) website: <http://cugir.library.cornell.edu>

Base Map: state250_bw.tif 1998 Scale: 1:250,000; County boundaries imported from the file nyshore.e00 from the NYSGIS Clearinghouse website: <http://gis.ny.gov>

DISCLAIMER
This is a general reference to Agricultural District boundaries; not a legal substitute for actual tax parcel information.

Boundaries as certified prior to January 2021

Open Enrollment Annual Inclusions added after the certification date are not included in this data. Check with county agencies to confirm the status of individual parcels

Agricultural Districts, Rensselaer County NY, 2021

Author: Cornell Institute for Resource Information Sciences (Cornell IRIS) and NYS Department of Agriculture and Markets

Description: These GIS files represent geographic boundaries for lands that are under the protection of NYS Agricultural District Law, administered by the New York State Department of Agriculture and Markets. The boundaries are derived from New York State Agricultural District, 1:24,000-scale, maps produced at county agencies. The district boundaries correspond to tax parcel data. District boundaries are joined into a file representing all of the Agricultural Districts within an entire county. Note that 2003 legislation allows lands to be added to districts on an annual basis. Electronic data provided here may predate those additions. Tax parcel detail is not included in this dataset. Rights-of-way for state and federal highways, and secondary roads, railroads and utilities are only included when they are delineated on the original 1:24,000 scale maps. The data files are in ArcGIS shapefile format. A Geographic Information System (ArcGIS) file intended to represent the lands within agricultural district. Please note that boundaries may be generalizations; precise information can be obtained from the county or town tax parcel information.

Collection: Agricultural Districts (NYS Ag and Markets)

Place: Rensselaer County NY

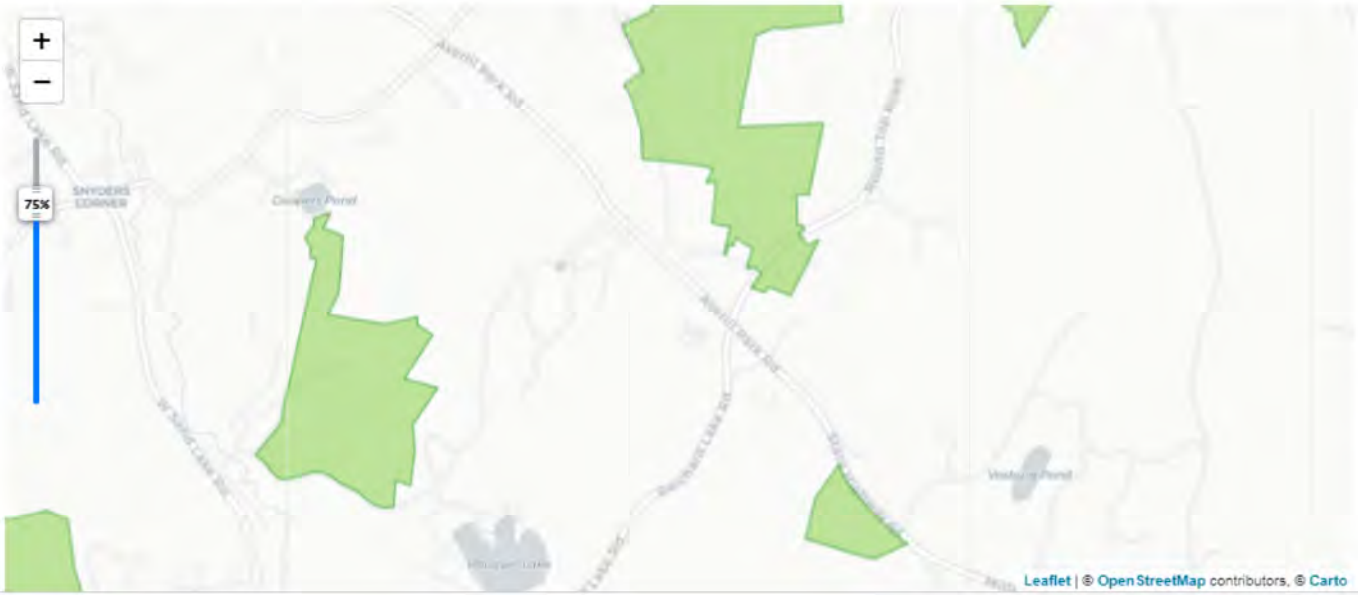
Category: agriculture and property

Subject: New York State Agricultural District boundaries and Agriculture and Markets

Year: 2021

File Size: 2.47 MB

More Details: Metadata



Attribute	Value
county	Rensselaer
district	2
creation	Jun 8, 1975
certified	Jan 11, 2016
towns	Brunswick, East Greenbush, North Greenbush, Pittstown, Poestenkill, Sand Lake, Schaghticoke, city of Troy
distcode	RENS002

APPENDIX H
TROY 2020 ANNUAL DRINKING WATER QUALITY REPORT

City of Troy

Annual Drinking Water Quality Report for 2020

Public Water Supply ID# 4100050

Patrick Madden
Mayor

City of Troy
Department of Public Utilities
25 Water Plant Road
Troy, New York 12182
Phone: (518) 237-0319
Fax: (518) 233-7038
www.troyny.gov

Water Billing Inquires
(518) 279-7100

Introduction

To comply with State and Federal regulations, 10 NYCRR, Subpart 5-1.72 and 40CFR Part 141, Subpart O, respectively, the City of Troy, Department of Public Utilities is issuing this annual report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and increase your awareness of the need to protect our drinking water sources. Last year your tap water met all State drinking water health standards. This report provides an overview of last year's water quality. Included in the report are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact the City of Troy, Department of Public Utilities at 518-237-0319. If you want to learn more, please attend any of the regularly scheduled City Council meetings. The meetings are held the first Thursday of each month at the Troy City Hall, 433 River Street, 5th Floor.

Where Does Our Water Come From?

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State Health Department and the EPA prescribe regulations, which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The water source for the City of Troy is the Tomhannock Reservoir, a man made reservoir 6 ½ miles northeast of the city. The reservoir is 5 ½ miles long and holds 12.3 billion gallons when full. The quality of the water from the Tomhannock Reservoir is good to excellent. During 2020, the city did not experience any restriction of our water source. Water flows from the reservoir by gravity where seasonally potassium permanganate is added at the intake and at the Melrose Chlorination Station the water is pre-disinfected with chlorine dioxide all year long. The water then flows to the John P. Buckley Water Treatment Plant (WTP) a conventional water treatment plant utilizing coagulation, flocculation, sedimentation, filtration, chlorination and fluoridation processes.

The New York State Health Department completed a Source Water Assessment for the Tomhannock Reservoir. It includes a susceptibility rating based on the risk posed by each potential source of contamination and how likely contaminants could enter the reservoir and is only an estimate of the potential for contamination. It does not mean that the water delivered to your home is or will become unsafe to drink. The assessment found an elevated susceptibility to contamination for this source of drinking water. The amount of agricultural land in the assessment area results in an elevated potential for protozoa and pesticides contamination, however, there is reason to believe that the land cover data may over estimate the percentage of row crops in the assessment area. While there are some facilities present, permitted discharges do not likely represent an important threat to source water quality, based on their density in the assessment area. In addition, it appears that the total amount of wastewater discharged to surface water in this assessment area is not high enough to further raise the potential for contamination (particularly for protozoa). There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, and these facility types include mines and closed landfills. Finally, it should be noted that hydrologic characteristics (e.g. basin shape and flushing rates) generally make reservoirs highly sensitive to existing and new sources of phosphorus and microbial contamination.

Facts and Figures

The City of Troy, Department of Public Utilities serves water to over 50,000 residents of Troy, as well as the industrial and commercial customers within the city, through over 13,000 service connections. In addition, the city wholesales water to the City of Rensselaer, Towns of East Greenbush, North Greenbush, Brunswick, Schaghticoke, Poestenkill, and Halfmoon, and Villages of Menands and Waterford. The total finished water produced at the water treatment plant in 2020 was 6,045.8 million gallons or an average of 16.52 million gallons a day. Of this, 1,185.1 million gallons were accounted for through metered sales within the city, with the remainder being used for the wholesale customers and the unaccounted for water. The unaccounted for water is estimated to be about 27%. In 2020, water customers within the city of Troy were charged $ 3.432 per 1,000 gallons of water.

Are There Contaminants In Our Drinking Water?

Water quality testing is required of all public water systems by Part 5 of the New York State Sanitary Code. According to these requirements, the Department routinely tests your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, and synthetic organic compounds. The tables below indicate which contaminants were detected and which were not.

We are required to present the following information on lead in drinking water:
If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. The City of Troy is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at http://www.epa.gov/safewater/lead.
It should be noted that all drinking water, including bottled drinking water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426- 4791) or the Rensselaer County Health Department at 518-270-2626.

What Does This Information Mean?
As you can see by the tables, our system had no MCL violations. We have also learned through our testing that some other contaminants have been detected; however, these contaminants were detected below New York State requirements. They are also indicated in the table below as non-detected contaminants.

Is Our Water System Meeting Other Rules That Govern Operations?
During 2020, our system was in compliance with all applicable State drinking water operating and reporting requirements.

Do I Need to Take Special Precautions?
Although our drinking water met state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

Information on Fluoride Addition
Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water. To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires that we monitor fluoride levels on a daily basis. During 2020 monitoring showed fluoride levels in your water were in the optimal range (0.7ppm – 1.2ppm) 100 % of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride.

Why Save Water and How to Avoid Wasting It?
Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:
- Saving water saves energy and some of the costs associated with both of these necessities of life;
- Saving water reduces the cost of energy required to pump water and the need to construct costly new sources, pumping systems and water storage tanks; and
- Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:
- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. Run it only when you have loaded it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances, then check the meter after 15 minutes, if it moved, you have a leak.

System Improvements
The Water Treatment Plant has been undergoing an upgrade to the computer automation equipment. This upgrade should be completed within the next few months. In Spring of 2020 Public Utilities installed the 16 inch water main for South Troy industrial road project. In 2020 the bid was awarded for the Transmission line project which will replace the pipes that feed the Water Treatment Plant from the Tomhannock Reservoir, this work has since started in March of 2021. New valves are being built to replace outdated valves at the Eddy's Lane Pump Station which feed our water storage tanks.

Combined Sewer Overflows (CSO's)
The City of Troy in cooperation with the City of Albany Water Board, the cities of Cohoes, Rensselaer, Watervliet and the Village of Green Island joined in a venture to develop a CSO's Long Term Control Plan (LTCP), with the Capital District Regional Planning Commission coordinating the project. This is being done as mandated by the NYSDEC and USEPA to comply with the National CSO Control Policy. The communities mentioned conducted the monitoring, sampling and analysis in the summer of 2008 to identify the issues associated with CSO's during wet weather events. The results are being used to determine CSO impacts to the receiving water bodies, i.e. Hudson River, and to develop the required LTCP. NYSDEC implemented a final plan for the communities to reduce the amount of CSO's. For more information please visit www.cdrpc.org/CSO.html

Municipal Separate Storm Sewer Systems (MS4)
The City of Troy in cooperation with other Rensselaer County communities, the NYSDEC and the EPA have been working with the county and local governments to help control storm water run-off and try to educate and inform the public about stormwater. Stormwater should naturally seep into the ground, but impervious areas restrict this process causing flooding and pollution. For questions and brochures please visit:
www.troyny.gov/departments/public-utilities/stormwater-management/, www.epa.gov/npdes/stormwater

Closing
Thank you for allowing us to provide your family with quality drinking water in 2020. We will continue to strive to improve and deliver you safe drinking water for years to come. We ask that all our customers help us protect our local water sources, which are the heart of our community and our way of life. The Rensselaer Land Trust is interested in helping us protect the Tomhannock Watershed. For more information visit their website at www.renstrust.org or write to RTLC, 415 River St., Troy, NY 12180.

Definitions:
* Lead and Copper are reported at 90th percentile, where 90% of samples collected are less than the average value. Two of the thirty lead samples collected were above the Action Level (AL) of 0.015 mg/l.
** Water containing more than 20 mg/L of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/L of sodium should not be used for drinking by people on moderately restricted sodium diets.
*** A violation occurs when a total coliform positive sample is positive for E. coli or when a total coliform positive sample is negative for E. coli but a repeat total coliform sample is positive and the sample is also positive for E. coli.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.
Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.
Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or requirements which a water system must follow.
Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.
Non-Detects (ND): Laboratory analysis indicates that the constituent is not present.
Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).
Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).
Picocuries per liter (pCi/l): Corresponds to 0.037 disintegrations per second per liter. The average activity within the human body from Potassium-40 is 0.1 micro curies.

TABLE OF DETECTED CONTAMINANTS

Contaminant	Violation Yes/No	Date or Frequency of Sample	Level Detected			Unit Measurement	MCLG / MRDLG	Regulatory Limit (MCL, TT, MRDL, AL)	Likely Source of Contamination
			Value or Average	Range Low	Range High				
Physical and Chemical Analytes									
pH	No	Daily	**8.53**	6.24	9.00	-	-	NDL	Adjusted at WTP
Temperature	No	Daily	**13.0**	3.6	24.9	° C	n/a	NDL	-
Color	No	Daily	**0**	0	7	color units	n/a	15	Naturally occurring
Turbidity	No	Daily	**0.43**	0.06	2.00	NTU	n/a	5	Soil runoff
Chlorine	No	Daily	**0.79**	0.12	1.12	mg/L	4	4.0	Added disinfectant
Chlorine Dioxide	No	Daily	**0.014**	0.00	0.15	mg/L	0.8	0.8	Added disinfectant
Fluoride	No	Daily	**0.79**	0.37	0.99	mg/L	n/a	2.2	Adjusted at WTP
Alkalinity, as $CaCO_3$	No	Daily	**41.2**	23.4	47.2	mg/L	n/a	NDL	Naturally occurring
Hardness, as $CaCO_3$	No	Weekly	**52.3**	47.0	58.0	mg/L	n/a	NDL	Naturally occurring
Iron	No	Weekdays	**0.02**	0.00	0.05	mg/L	n/a	0.3	Naturally occurring
Manganese	No	Weekdays	**0.017**	0.00	0.04	mg/L	n/a	0.3	Naturally occurring
Disinfection By-Products									
Trihalomethanes (THM)									THM & HAA formed by reaction of Chlorine with naturally occurring organic material. Chlorite & Chlorate formed by the raction of Chlorine Dioxide with naturally occuring organic material
Campbell Ave FS	No	Quarterly	**57.8**	41.1	94.7	ug/L	n/a	80.0	
Griswold Heights	No	Quarterly	**77.3**	66.4	92.7	ug/L	n/a	80.0	
Cookie Factory	No	Quarterly	**65.6**	37.2	98.9	ug/L	n/a	80.0	
Deli & Brew	No	Quarterly	**61.5**	49.9	81.9	ug/L	n/a	80.0	
Haloacetic acids (HAA)									
Campbell Ave FS	No	Quarterly	**34.3**	23.6	42.2	ug/L	n/a	60.0	
Griswold Heights	No	Quarterly	**36.4**	22.4	47.3	ug/L	n/a	60.0	
Cookie Factory	No	Quarterly	**40.2**	23.3	48.8	ug/L	n/a	60.0	
Deli & Brew	No	Quarterly	**33.4**	22.7	41.0	ug/L	n/a	60.0	
Chlorite	No	Monthly	**0.83**	0.59	1.09	mg/L	n/a	1.00	
Chlorate	No	Monthly	**0.17**	0.08	0.27	mg/L	n/a	n/a	
Lead and Copper									
Lead *	No	Annually	**0.0032**	<0.0010	0.010	mg/L	0.00	(AL) 0.015	Household plumbing corrosion, erosion of natural deposits.
Copper *	No	Annually	**0.0309**	0.006	0.185	mg/L	1.30	(AL) 1.30	
Inorganic Chemicals									
Barium	No	7/1/2020	**0.0301**	-	-	mg/L	2.0	2.0	Naturally occurring
Chloride	No	7/1/2020	**17.9**	-	-	mg/L	n/a	250.0	Naturally occurring or road salt
Nitrate-as N	No	7/1/2020	**0.2**	-	-	mg/L	10.0	10.0	Runoff from fertilizer
Sodium **	No	9/15/2020	**12.3**	-	-	mg/L	n/a	**	Naturally occurring
Sulfate	No	7/1/2020	**12.0**	-	-	mg/L	n/a	250.0	Naturally occurring
Radiological									
Gross Alpha Particles	No	3/11/2016	**-0.840**	1 sample every 6 years		pCi/l	0	15.0	Naturally occurring
Gross Beta Particles	No	3/11/2016	**0.681**			pCi/l	0	4.0	Naturally occurring
Radium 226	No	3/11/2016	**0.456**			pCi/l	0	5.0	Naturally occurring
Radium 228	No	3/11/2016	**-0.144**			pCi/l	0	5.0	Naturally occurring
Total Uranium	No	3/11/2016	**0.167**			ug/L	0	30.0	Naturally occurring

TABLE OF NON-DETECTED CONTAMINANTS

Inorganic Chemicals			Organic Chemicals			
Antimony	Chromium		2,4,5-TP (Silvex)	Aldicarb Sulfoxide	Heptachlor	Pentachlorophenol
Arsenic	Cyanide	Selenium	2,4-D	Atrazine	Heptachlor Epoxide	Toxaphene
Asbestos	Mercury	Silver	Alachlor	Carbofuran	Lindane	Vinyl Chloride
Beryllium	Nickel	Thallium	Aldicarb	Chlordane	Methoxychlor	PFC's
Cadmium	Nitrite-as N	Zinc	Aldicarb Sulfone	Endrin	PCB's	1,4-Dioxane

MICROBIOLOGICAL TABLE

Coliform	No	Weekdays	**0.38%**	-	-	%	0	5%	Naturally occurring
E.Coli ***	No	Weekdays	**0**	-	-	-	0	***	Human/animal fecal waste

APPENDIX I
TROY WATER WITHDRAWAL REPORTING FORM

March 2020

New York State Department of Environmental Conservation
Division of Water, Bureau of Water Resources Management
625 Broadway, Albany, NY 12233-3508

Water Withdrawal Reporting Form

Due by **March 31st** of each year

Prior to filling out this form, please read the instructions on the last page

Section **1** of **6** – Basic Information

Facility Name: John P. Buckley Water Treatment Plant | Facility Street Address: 25 Water Plant Rd | Reporting Year: 2020

City: Troy | Zip: 12182 | Town: NA | County: Rensselaer

Contact Name: Chris Wheland | Email: chris.wheland@troyny.gov | Telephone: 518-237-0193

Source Name	Tomhannock Reservoir	Source Type	R	Well Depth		Max Rate		Units	
Source Name		Source Type		Well Depth		Max Rate		Units	
Source Name		Source Type		Well Depth		Max Rate		Units	
Source Name		Source Type		Well Depth		Max Rate		Units	
Source Name		Source Type		Well Depth		Max Rate		Units	
Source Name		Source Type		Well Depth		Max Rate		Units	
Source Name		Source Type		Well Depth		Max Rate		Units	

17.6	mgd	27.4	mgd	33	mgd
Average Day Withdrawal	Units	Maximum Day Withdrawal	Units	NYSDEC Permitted Withdrawal	Units

Submitted By: Andrew Golden | Title: Assistant Operations Manager | Date: 2/8/2021

Water Withdrawal Category (Check One)

- ☐ Agricultural
- ☐ Bottled / Bulk Water
- ☐ Commercial
- ☐ Environmental
- ☐ Industrial
- ☐ Institutional
- ☐ Mine Dewatering
- ☐ Oil / Gas Production
- Power Production:
  - ☐ Fossil Fuel
  - ☐ Nuclear
  - ☐ Other Pwr
- ◉ Public Water Supply
- Recreational:
  - ☐ Golf Course
  - ☐ Snow Making
  - ☐ Other Rec
- ☐ Other Category

Water Withdrawal Reporting Form

Section **5** of **6** – Outside Sales to Other Water Systems or Facilities

Permittees must record any sales occurring outside of their water service area or facility and include the information requested below.
If this does not apply to your facility, please proceed to the next section.

Purchaser Name	Facility Type	Type of Sale	Contracted Amount (gallons per day)	Water Sold in Year (gallons per year)	Average Amount (gallons per day)	Maximum Amount (gallons per day)
Brunswick	pws	c	4,000,000	229,853,541	629,735	
Halfmoon	pws	c	4,000,000	571,733,800	1,566,394	
Menands	pws	c	4,500,000	358,100,000	981,095	
North Greenbush	pws	c	4,000,000	182,288,960	499,422	
Poestenkill	pws	c	500,000	30,577,512	83,774	
Rensselaer/ East Greenbush	pws	c	7,000,000	1,194,043,619	3,271,352	
Scaghticoke	pws	c	450,000	69,776,559	191,169	
Waterford	pws	c	3,000,000	224,110,000	614,000	

Facility Type:
PWS = Public Water Supply; **IND** = Industrial; **COM** = Commercial; **INS** = Institutional; **O/G** = Oil or Gas; **REC** = Recreational; **BOT** = Bottled or Bulk

Type of Sale:
C = Continuous; **I** = Intermittent; **E** = Emergency

Average Amount:
To calculate Average Amount, divide total water (gallons) used in a year by number of days of purchase. Total is in gallons per day.

Maximum Amount:
Maximum Amount is the one day greatest use in the year of record, shown in gallons per day.

APPENDIX J
WATER SUPPLY AND TRANSPORTATION AGREEMENTS

See Item 1+2

WATER TRANSPORTATION AGREEMENT
TOWN OF BRUNSWICK
AND
TOWN OF POESTENKILL

AGREEMENT made this 24th day of September, 2009, by and between the **TOWN OF BRUNSWICK**, a municipal corporation and political and geographic subdivision of the County of Rensselaer and State of New York, having offices at the Brunswick Town Hall located at 336 Town Office Road, Troy, New York 12180, in the Town of Brunswick, New York (hereinafter referred to as "**BRUNSWICK**"), and the **TOWN OF POESTENKILL**, also a municipal corporation and political and geographic subdivision of the County of Rensselaer and State of New York, having offices at the Poestenkill Town Hall located at 38 Davis Drive, Poestenkill, New York 12140 (hereinafter referred to as "**POESTENKILL**").

WHEREAS, **POESTENKILL** has heretofore taken steps to establish Water District No.1 of the Town of Poestenkill (hereinafter referred to as "the **DISTRICT**"), with the intention of purchasing the water to be supplied to the **DISTRICT** from the City of Troy (hereinafter also referred to as "**TROY**") pursuant to a separate agreement dated October 21, 2008, which has heretofore been executed and entered into between **TROY** and **POESTENKILL** (said agreement hereinafter also referred to simply as "the supply agreement", a copy of which is annexed hereto and made a part hereof as *EXHIBIT A*), with transportation of said water from **TROY** to **POESTENKILL** intended to be effected through the intervening pipelines and other infrastructure of **BRUNSWICK**, as set forth in an amendment to the supply agreement dated August 3, 2009, a copy of which is annexed hereto as *EXHIBIT B*; and

WHEREAS, as a condition precedent to necessary State Comptroller approval of the **DISTRICT** and to the securing of financing for the **DISTRICT** and the undertaking of final design and physical construction of the piping and other infrastructure of the **DISTRICT**, it is necessary and desirable that **POESTENKILL** have in effect a not only a binding agreement for the sale and supply of water to the **DISTRICT** but also a similar binding agreement for the transportation of said water to the **DISTRICT**; and

WHEREAS, **BRUNSWICK** is willing and able to transport water from **TROY** to **POESTENKILL** to the extent hereinafter provided, and subject to the conditions and limitations set forth in said supply agreement and elsewhere in this Agreement, and the parties hereto mutually desire to have **BRUNSWICK** transport said water to **POESTENKILL** for the consideration and upon the terms and conditions hereinafter set forth; now therefore

WITNESSETH:

IT IS HEREBY AGREED by and between the parties hereto, pursuant to the authority of the Constitution of the State of New York and Article 5-C of the General Municipal Law of the State of New York, and in consideration of the services to be performed and the water to be transported by **BRUNSWICK** and the compensation to be paid by **POESTENKILL**, as follows:

1. In accordance with the terms of this Agreement, **BRUNSWICK** shall deliver water to **POESTENKILL** to the extent that **TROY** supplies water to **BRUNSWICK,** and subject to the limitations set forth in this paragraph, for the use of **POESTENKILL** pursuant to the supply agreement between **TROY** and **POESTENKILL** and also subject to any limitations of **BRUNSWICK**'s infrastructure to deliver same. Said water shall be delivered at the existing pressure in the 12" water main to be constructed hereunder in the Town of Brunswick at the point of connection between said water main and a continuation thereof to be constructed within the Town of Poestenkill for service to the **DISTRICT**, with said point or points of connection intended to be at or adjacent to the boundary line between the Town of Brunswick and the Town of Poestenkill, which point of connection is presently intended to be at the intersection of Menemsha Lane and Pleasantview Avenue in the Town of Brunswick. It is agreed that the supply static pressure at said point of connection has heretofore been determined by **BRUNSWICK** to be approximately 100 psi (pounds per square inch) and it is hereby agreed that a back pressure sustaining valve pit shall be installed by **POESTENKILL** to ensure that the static pressure at said location will not fall below 80 psi during operation of the **POESTENKILL** water pump station hereinafter discussed. It is agreed that **BRUNSWICK** shall deliver to **POESTENKILL** up to 165,000 gpd (gallons per day) of water as follows: between the hours of 6:00 AM and 11:00 PM, 102,000 gpd at the rate of 100 gallons per minute (17 hours x 100 gal/min x 60 min/hour = 102,0000 gallons) and between the hours of 11:00 PM and 6:00 AM, 63,000 gpd at the rate of 150 gallons per minute (7 hours x 150 gal/min x 60 min/hour = 63,000 gallons), as measured by a master meter on the Brunswick side of the Brunswick-North Greenbush boundary line to be furnished, owned and maintained by **POESTENKILL** as hereinafter provided. Nothing herein shall preclude the parties from entering into a subsequent Agreement whereby **BRUNSWICK** agrees to transport an additional volume of water to **POESTENKILL** on such terms and conditions as the parties shall therein specify. **POESTENKILL** shall accept such water as it is chlorinated, treated and purified by **TROY** and **BRUNSWICK.** In this regard, it is specifically acknowledged by **POESTENKILL** that it may have to chlorinate and/or otherwise treat the water received from **BRUNSWICK** in order to meet the requirements of the drinking water standards of the New York State Health Department (including especially those set forth in 10 NYCRR Part 5, Subpart 5-1 Public Water Systems) and the Rensselaer County Health Department.

2. The measurement of water delivered to **POESTENKILL** shall be undertaken by **POESTENKILL** with the approval of **BRUNSWICK** and **TROY**. Such flow measurements shall be made by an approved metering device or devices owned by **POESTENKILL** at a location or locations determined by **POESTENKILL** and approved by **BRUNSWICK** and

TROY. Any and all such metering devices shall be capable of being read remotely by Brunswick and shall be inspected and calibrated at least quarterly by **POESTENKILL**. A copy of the inspection and calibration reports shall be filed with the **BRUNSWICK** Water Department. The cost of such quarterly inspections and calibrations shall be paid by **POESTENKILL**. **BRUNSWICK** may request **POESTENKILL** to test and certify to the accuracy of any metering device at more frequent intervals. The costs of such additional tests shall also be paid by **POESTENKILL**. In the meter chamber or house provided for such meter, there shall be maintained a bypass to be used only in the event of meter failure. The bypass valve shall be chained and sealed and operated only with the express consent of **BRUNSWICK** and **TROY**. If the seal is broken at any time by **POESTENKILL** or its representatives or by third parties acting with **POESTENKILL**'s permission, other than as authorized by **BRUNSWICK**, the bill will reflect same in estimated charges and a 10% additional penalty will be assessed. In the case of missing or inaccurate flow records due to faulty metering device operation or other circumstances, an estimate of flow shall be made by **BRUNSWICK** based on past records of a comparable period. The estimates shall be used by **BRUNSWICK** to establish **POESTENKILL**'s payments to **BRUNSWICK** for the period of missing or inaccurate data. It is understood and agreed that, unless the parties hereto shall subsequently specifically agree otherwise in writing, any required master meter(s) shall be installed and operational before **BRUNSWICK** begins transporting water to **POESTENKILL**.

3. **BRUNSWICK** assumes no responsibility for the operation of water works constructed and owned by **POESTENKILL**. Conversely, the waterworks of **BRUNSWICK** have been or shall be operated and maintained solely by **BRUNSWICK**, and **POESTENKILL** assumes no responsibility for the construction, operation and maintenance of same except as otherwise expressly provided in this Agreement. **BRUNSWICK** shall not be responsible or liable in any way for the acts of God, or any other acts beyond its control which may, in any way, cause an interruption or discontinuance of the service provided for in this Agreement or in any deficiency in the quality of the water transported to **POESTENKILL**. However, neither the foregoing nor anything set forth elsewhere in this Agreement shall operate to excuse **BRUNSWICK** from responsibility or liability for any such interruption or discontinuance or diminished water quality which results in whole or in part from lack or insufficiency of maintenance or inspection or from any willful conduct or negligence or other culpable acts or omissions by **BRUNSWICK** or its employees, agents and representatives.

Except as otherwise expressly provided herein, neither party assumes any responsibility for any facility not included in its own waterworks and in the event that a facility of a third party shall be involved in the furnishing of service to, or the receipt of service from either party hereto, such party agrees to look solely to such third party for any such services. **POESTENKILL** assumes sole responsibility for compliance with this Agreement by those users of its waterworks whose water is delivered from the **BRUNSWICK** waterworks. Similarly, as between the parties hereto, **BRUNSWICK** assumes sole responsibility for compliance with this Agreement by those users of its waterworks other than **POESTENKILL** whose water is delivered directly from the **BRUNSWICK** waterworks and not through the waterworks of **POESTENKILL**. With respect to users and customers served by or through **POESTENKILL**, **BRUNSWICK** shall deal directly with **POESTENKILL** which shall, in turn, make certain that all of **POESTENKILL**'s users and

customers comply with terms of this Agreement and with any rules and regulations of the **BRUNSWICK** Town Board or the **POESTENKILL** Town Board, as applicable.

4. Impairment of Supply; Force Majeure; Mutual Indemnification.

A. Responsibility. Subject to the qualifications and conditions set forth elsewhere herein, the transporting of water by **BRUNSWICK** to **POESTENKILL** under this Agreement shall not impair the transporting or furnishing of water by **BRUNSWICK** to its own customers. **BRUNSWICK** may not be compelled to transport water to **POESTENKILL** continuously in the case of accident, or in the event that the water mains or their appurtenances or the source upon which this supply is dependent are impaired. For the purposes of this subsection, the word "accident" shall mean any occurrence occasioned by the consequences of any act of God as hereinafter defined, act of public enemy, wars, blockades, riots, natural disasters, civil disturbances, labor strikes, power failures, explosions, or any cause which is not within the control of **BRUNSWICK**, or which **BRUNSWICK** is unable to prevent or overcome by the exercise of due diligence. It is further understood and agreed that water transportation to **POESTENKILL** may be temporarily disrupted during water main flushing by **BRUNSWICK**. **BRUNSWICK** shall, in the first instance, be the sole judge in all these matters, and its decisions shall, if and to the extent they are reasonable, be final and binding upon **POESTENKILL**. However, the reasonableness of such decisions or of any other exercise of discretion on the part of **BRUNSWICK** in connection with this paragraph shall be subject to binding arbitration as hereinafter provided.

B. Acts of God. Neither **BRUNSWICK** nor **POESTENKILL** shall be liable in damages or otherwise for failure to perform any obligation under this agreement, which failure is occasioned by or in consequence of any act of God, act of public enemy, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of rulers and peoples, civil disturbances, labor strikes, power failures, explosions, breakage or accident to machinery or lines of pipe, failure or want of water supply, the binding order of any court or governmental authority which has been resisted in good faith by all reasonable legal means, and any other cause, whether of the kind herein enumerated or otherwise, not within the control of such party and which act, omission or circumstances such party is unable to prevent or overcome by the exercise of due diligence. Such causes or contingencies affecting the performance by either **BRUNSWICK** or **POESTENKILL**, however, shall not relieve such party of liability in the event of its negligence or intentional actions, or in the event of such party's failure to use due diligence to remedy the situation and remove the cause in an adequate manner and with all reasonable dispatch, nor shall such causes or contingencies affecting performance relieve **POESTENKILL** from its obligations to make payments of amounts then due in respect to water theretofore delivered, or from its obligation to make other payments to **BRUNSWICK** as provided elsewhere in this Agreement.

C. Indemnification. **POESTENKILL** shall exonerate, indemnify and save harmless **BRUNSWICK** from all claims and demands which **BRUNSWICK** is legally bound to pay

whether for injuries to persons or loss of life or damage to property occurring within or about any of the connections exclusively supplying water to **POESTENKILL**; excepting, however, such claims and demands, whether for injuries to persons or loss of life or damages to property, as and to the extent same shall be caused in whole or in part by any act or omission of **BRUNSWICK** or its agent. **BRUNSWICK** shall exonerate, indemnify and save harmless **POESTENKILL** from all claims and demands which **POESTENKILL** is legally bound to pay whether for injuries to persons or loss of life or damage to property occurring within or about any of the connections exclusively supplying water to **POESTENKILL**; excepting, however, such claims and demands, whether for injuries to persons or loss of life or damages to property, as and to the extent same shall be caused in whole or in part by any act or omission of **POESTENKILL** or its agent. The phrase "claims and demands" includes court costs and expenses, legal fees and judgments.

5. It is contemplated by the parties that **TROY** shall undertake to deliver to **BRUNSWICK** such quantities of water as are sufficient to satisfy the demand requirements of **BRUNSWICK** and the maximum volume of water **BRUNSWICK** agrees to supply to **POESTENKILL** pursuant to this Agreement, under the existing or any future water supply agreement between **TROY** and **BRUNSWICK** as well as under the existing or any future water supply agreement between **TROY** and **POESTENKILL**. For this purpose, **BRUNSWICK** hereby agrees that it shall undertake reasonable efforts in its negotiations with **TROY** to have such supply obligation included in any new agreement between **TROY** and **BRUNSWICK** which may supersede the water supply agreement dated November 27, 1967 between those entities; provided, however, that nothing herein shall require **BRUNSWICK** to make any concessions to **TROY** in its contractual negotiations in order to make such provisions part of the new Agreement between **TROY** and **BRUNSWICK**. The foregoing notwithstanding, it is understood by the parties hereto that **TROY** does not bind itself during periods of water shortage resulting from an emergency or any unforeseeable occurrence beyond the control of **TROY** to deliver water except in such quantities as are available. Under such circumstances, any reduction in the total quantity of water supplied by **TROY** to **BRUNSWICK** for use by the customers of both **BRUNSWICK** and **POESTENKILL** will reduce the quantity of such water passed on and supplied by **BRUNSWICK** to **POESTENKILL** proportionally.

6. **BRUNSWICK** agrees that it shall undertake reasonable efforts to include in its aforedescribed new agreement with **TROY** an express acknowledgment by **TROY** of **BRUNSWICK**'s transportation to **POESTENKILL** of a portion of the water supplied to **BRUNSWICK** by **TROY**, as well as **TROY**'s express consent to such transportation and to the assessment of a water transportation charge by **BRUNSWICK** to **POESTENKILL** as hereinafter set forth. Nothing herein shall require **BRUNSWICK** to make any concessions to **TROY** in its contractual negotiations in order to make such provisions part of the new Agreement between **TROY** and **BRUNSWICK**.

7. No assignment by **POESTENKILL** of its rights or duties under this Agreement shall be binding on **BRUNSWICK**, unless **BRUNSWICK** consents to such an assignment in

writing with the same formality as employed in the execution of this Agreement. **POESTENKILL** may only use or distribute water purchased from **BRUNSWICK** within **POESTENKILL**'s corporate limits and may not resell nor supply the water outside of these limits, without the express due consent of **BRUNSWICK**.

8. Correspondence.

Correspondence by **POESTENKILL** to **BRUNSWICK** concerning any item in this Agreement shall be sent to:

Water Department
Town of Brunswick
Brunswick Town Hall
Troy, New York 12180

Correspondence by the **BRUNSWICK** to **POESTENKILL** concerning any item in this Agreement shall be sent to:

Utilities Department
Town of Poestenkill
38 Davis Drive – P.O. Box 210
Poestenkill, New York 12140

9. THIS PARAGRAPH NOT USED.

10. **POESTENKILL** will install and maintain the meter or meters described in paragraphs 1 and 2 of this Agreement of a size and type to be mutually approved by **TROY**, **BRUNSWICK** and **POESTENKILL** to register the flow of water transported by **BRUNSWICK** to **POESTENKILL** in units of 1,000 gallons. In the meter chambers or houses provided for such meters or in the vicinity thereof, there shall be installed and maintained a bypass to be used only in the event of meter failure. In the event such water is transported to **POESTENKILL** through such bypass, and during the period when such meter is not registering, then **POESTENKILL** agrees to pay **BRUNSWICK** a transportation assessment fee at the rate hereinafter provided during the period when such meter is not registering, which fee shall be a proportionate charge based upon the meter reading for the total of the six-month period preceding the time when the meter disability occurred, as well as any additional penalty provided for in paragraph 2 of this Agreement which arises from unauthorized breach of the bypass valve seal as described therein. Until such time as said replacement meters are installed and operational, **POESTENKILL** shall notify both **BRUNSWICK** and **TROY** of any new water customers, changes in water districts and installation of fire hydrants. Anything hereinabove to the contrary notwithstanding, in no case shall the volume of water upon which such

transportation bypass fee is predicated be greater than the volume of water used to compensate **TROY** for the quantity of water supplied under such circumstances.

11. Except as otherwise provided in paragraph 19 of this Agreement,, **POESTENKILL** will pay **BRUNSWICK** for water transported to **POESTENKILL** as registered by the meters hereinbefore described at the rate of 25% of the amount **TROY** shall charge **POESTENKILL** for supply of water from **TROY** to **POESTENKILL**. It is understood that such transportation charge to be paid by **POESTENKILL** to **BRUNSWICK** shall be over and above the amount paid by **POESTENKILL** to **TROY** for water supply (said supply rate to initially be $3.432 per thousand gallons of water as set forth in the water supply agreement between **POESTENKILL** and **TROY** with said $3.432 rate being the present meter rate being paid by the inhabitants of **TROY**, i.e., the "City Rate" as defined in Section 301 of the aforementioned supply agreement), for a total initial amount of $4.290 per thousand gallons, with $3.432 to be paid by **POESTENKILL** to **TROY** for water supply and $0.858 (i.e., 25% of $3.432) to be paid by **POESTENKILL** to **BRUNSWICK** for water transportation. The meter(s) shall be read by representatives of **POESTENKILL** and **BRUNSWICK** and payment shall be made in accordance with the schedule set forth for payments from **POESTENKILL** to **TROY** pursuant to Section 302 of the annexed supply agreement between those entities. Whereas said Section 302 provides that **TROY** shall bill **POESTENKILL** two times per year, to wit: on May 1 and November 1, with payment due to **TROY** within 30 days thereafter, **BRUNSWICK** agrees to notify both **TROY** and **POESTENKILL** not less than 10 days prior to each such payment date of the amount of water transported to **POESTENKILL** and the total charge to **POESTENKILL** therefor. Payment from **POESTENKILL** to **BRUNSWICK** shall be due two (2) times per year payable at the Treasurer's Office of **BRUNSWICK** on the same dates as the payments shall be due from **POESTENKILL** to **TROY**. It is agreed that if any questions arise as to the accuracy of the computation of the sums due from **POESTENKILL** to **BRUNSWICK**, such questions shall be submitted to binding arbitration as provided in paragraph 16 hereof. If, following the execution of this Agreement, it is subsequently agreed in writing by and between the parties hereto that water shall be transported by **BRUNSWICK** to **POESTENKILL** before the installation of the master meter or meters, then **POESTENKILL** shall pay **BRUNSWICK** for any water so delivered on an estimated use basis, or on such other basis as may be specified by the parties in the subsequent agreement, until such time as the master meters referenced herein are installed. In any event, **BRUNSWICK** shall transport to **POESTENKILL** water supplied by **TROY** pursuant to its Water Supply Agreement with **TROY**, upon the signing and delivery of this Agreement and as soon as the necessary facilities, including all metering devices, and all capital improvements to the **BRUNSWICK** waterworks as described in paragraph 18(E) of this Agreement, will permit, consistent with the terms and conditions of the annexed water supply agreement between **TROY** and **POESTENKILL**.

If water bills or outstanding balances remain unpaid thirty (30) days after the same shall be due, **BRUNSWICK** shall add thereto a penalty of the prime rate plus three (3) per cent. The prime rate shall further be described as the Wall Street Journal Prime Rate in effect at the date of the billings and as it is established or changed from time to time by the Wall Street Journal. In no event, however, shall the penalty charged be less than 5.0%. If the bills continue to remain unpaid sixty (60) days after they are due, **BRUNSWICK** shall add interest charged on the original bill from its

due date at the rate of one and one half (1 1/2) percent per month. If the final date for payment before the imposition of a penalty or the charging of interest should fall on a Saturday, Sunday or legal holiday, any such payment may be made to **BRUNSWICK** on the next business day following such Saturday, Sunday or legal holiday or may be made by mail provided the postmark on the envelope indicates that the letter was so mailed on such next business day, and **BRUNSWICK** shall receive such payment without imposing the prime plus three (3) percent penalty or the interest charges.

If **POESTENKILL** fails to pay to **BRUNSWICK** the total amount of its bill for water within ninety (90) days from the billing of same, **BRUNSWICK** may consider this Agreement void and terminate water transportation to **POESTENKILL** or restrict water flow to the minimum required to maintain an adequate water supply for the purpose of potable use for human consumption, sanitation and fire flow. All other uses of water will be suspended and water restrictions will be put into place by **POESTENKILL**. In such event, **BRUNSWICK** will have the unrestricted right to access and operate the water supply control devices or valves of **POESTENKILL** for the purpose of imposing water restrictions. The consideration of this Agreement as void by **BRUNSWICK** for non-payment, as provided in this paragraph, shall not eliminate, diminish or affect **POESTENKILL's** obligation to pay **BRUNSWICK** for all water theretofore delivered and to make all payments to **BRUNSWICK** for reimbursement of certain capital costs incurred by **BRUNSWICK** as provided for in paragraphs 18(E) and 18(F) of this Agreement.

Should **POESTENKILL** require water to be transported from **BRUNSWICK** for emergency purposes in flow rates in excess of 165,000 gallons per day and such water is available from **TROY** for delivery to **POESTENKILL**, and **BRUNSWICK** is able to supply the same without adversely affecting its own customers, **BRUNSWICK** may, in its sole discretion, supply such water. In such case, **BRUNSWICK** shall bill **POESTENKILL** for all such emergency use, to the extent same exceeds 24 hours in duration, at the rate of one and one-half (1.5) times the normal rate provided for in this paragraph. Emergency use for 24 hours or less shall be billed at the normal rate provided for in this paragraph. Nothing in this Section shall be construed as giving **POESTENKILL** a right to use water at a flow rate or flow rates exceeding 165,000 gallons per day, nor shall it preclude **BRUNSWICK** from imposing additional charges if the emergency use is prolonged in the opinion of **BRUNSWICK**. In this regard, **BRUNSWICK** shall have sole and exclusive discretion as to the determination of **BRUNSWICK**'s capacity to deliver water in excess of 165,000 gallons per day, and the determination of the length of any prolonged emergency use.

12. Should **BRUNSWICK** expand the capacity of any of its waterworks solely to accommodate a municipality or user other than **POESTENKILL**, **POESTENKILL** shall not be liable for the costs incurred by the **BRUNSWICK**'s waterworks for said expansion. If, at the express written request of **POESTENKILL**, **BRUNSWICK** should provide additional capacity solely for use by **POESTENKILL** in any of **BRUNSWICK**'s waterworks (i.e., capacity in excess of the referenced amounts), **POESTENKILL** shall make payments to **BRUNSWICK** to offset the costs incurred by **BRUNSWICK** to upgrade or otherwise modify its waterworks to provide such increased capacity. Should **BRUNSWICK** upgrade or otherwise modify its waterworks to provide improvements not relating to capacity, either in response to federal, state,

or local authorities, or other justifiable cause, **POESTENKILL** shall make payments to **BRUNSWICK** to offset the costs incurred by **BRUNSWICK** in proportion to **POESTENKILL'S** planned utilization in said waterworks In all cases, **BRUNSWICK** shall be the sole and final judge as to all improvements, additions or expansions to the waterworks, as well as to the proposed apportionment of any costs therefor to **POESTENKILL**, and **BRUNSWICK'S** decisions shall, to the extent they are reasonable, be final and binding upon **POESTENKILL**. The reasonableness of such decisions shall be subject to binding arbitration as hereinafter provided.

13. This Agreement shall be effective as of the date first above written and except as hereinafter provided shall continue in full force and effect and shall be binding upon the parties hereto and their respective successors and assigns for an initial period of twenty (20) years from said effective date, subject to automatic renewal for two (2) additional terms of ten (10) years each, for a total of forty (40) years, unless either party shall give written notice to the other, no fewer than one hundred eighty (180) days prior to the end of the then existing term, of said party's intent to not renew. This Agreement and any renewal thereof shall remain in full force and effect as long as neither party shall be in substantial breach of this Agreement or in substantial default of its obligations hereunder. In the event of such a substantial breach or default of this Agreement by either party hereto, the non-breaching party may, at its sole option, terminate this Agreement by providing ninety (90) days' written notice of such intended termination, together with a specification of the basis of any alleged breach, to the other party. It is specifically acknowledged that non-payment by **POESTENKILL** for water transported to it by **BRUNSWICK** for more than ninety (90) days after any due date hereinabove provided, and failure to make any other payment required to be made by **POESTENKILL** to **BRUNSWICK** under the terms of this Agreement for more than 90 days after the due date for such payment as provided for in this Agreement, shall constitute a substantial breach of this Agreement as shall the failure by **BRUNSWICK** to transport water to **POESTENKILL** in accordance with and subject to the limitations of this Agreement, for a period of twenty (20) days or more. It is further acknowledged and agreed that if and in the event **POESTENKILL** should at some time in the future develop its own source of water supply, thereby no longer requiring water to be supplied by **TROY** and transported by **BRUNSWICK**, then this Agreement may be terminated by **POESTENKILL** without penalty by **POESTENKILL** giving notice of its intent to do so to **BRUNSWICK** not less than 180 days prior to such termination date; provided, however, that should **POESTENKILL** so terminate this Agreement, said action shall not eliminate, diminish or affect in any way **POESTENKILL'S** obligation to reimburse **BRUNSWICK** for certain capital costs incurred by **BRUNSWICK** as described in paragraphs 18(E) and 18(F) of this Agreement.

14. It is understood and agreed that it is expressly required in the existing water supply agreement between **BRUNSWICK** and **TROY** - and that **BRUNSWICK** shall make reasonable efforts to provide in any amendment thereto or in any future water supply agreement between **BRUNSWICK** and **TROY** - that **TROY** agrees to constantly inspect its water supply system and to monitor and assure the quality of its water supply and shall promptly effect all repairs and replacements necessary to insure an uninterrupted flow of water to adequately supply

water to **BRUNSWICK** and to thereby enable **BRUNSWICK** to adequately transport water to **POESTENKILL** as provided in this Agreement and in the annexed supply agreement. Nothing herein shall require **BRUNSWICK** to make any concessions to **TROY** in its contractual negotiations in order to make such provisions part of the new Agreement between **TROY** and **BRUNSWICK**.

15. **POESTENKILL** shall furnish its own pumping facilities to serve areas of high elevation. **POESTENKILL** shall also be solely responsible for the design, siting, furnishing and installation of any water tower or holding tank and appurtenant pumping, piping and controls necessary to provide the **DISTRICT** with sufficient water pressure and/or reserve capacity. **BRUNSWICK** shall have no responsibility for the design, construction, maintenance or operation of any such water tower, holding tank, pumping station, piping or other appurtenances within the Town of Poestenkill. The parties expressly acknowledge that **BRUNSWICK** shall in no way be held liable or accountable for the delivery of the supply of water once it leaves the jurisdictional limits of the Town of Brunswick.

16. In case any disagreement or difference shall arise in respect of items herein designated to be submitted for arbitration, such disagreement or difference shall be submitted to the arbitrating of three persons who shall not be residents, taxpayers or employees of either of the parties hereto: one of such persons shall be appointed by each party and a third shall be appointed by the two so appointed. If either party shall refuse or neglect to appoint an arbitrator within twenty (20) days after the other party shall have appointed an arbitrator and served written notice thereof upon the other party requiring appointment of an arbitrator, then the arbitrator so first appointed shall have the power to arbitrate the matters of this agreement or difference as if he were the arbitrator appointed by both parties hereto for that purpose, and his award or determination in writing shall be final, provided, however, that such award be made within thirty (30) days after such refusal or neglect of the other party to appoint an arbitrator. In case there are three arbitrators selected as above, an award in writing signed by any two of them shall be final, providing such award shall be made within thirty (30) days after the reference to said arbitrators unless such time shall be extended by agreement of the parties hereto. The provisions of Article 75 of the Civil Practice Laws and Rules of the State of New York or any law thereafter enacted relating to the arbitration of differences shall be controlling with respect to any procedure or any submission to the Courts of the State of New York for determination.

17. Where **BRUNSWICK** is directly or implicitly authorized to exercise its judgment under the provisions of this Agreement, its judgment shall not be questioned unless clearly unreasonable.

18. Specific issues, terms and provisions.

A. Water Supply Agreements with the City of Troy. As previously referenced, attached hereto and made a part hereof as ***EXHIBIT A*** is a copy of a separate water supply

agreement between **POESTENKILL** and **TROY** dated October 21, 2008, and attached hereto and made a part hereof as *EXHIBIT B* is a copy of an amendment to said water supply agreement between **POESTENKILL** and **TROY** dated August 3, 2009. Additionally, attached hereto and made a part hereof as *EXHIBIT C* is a copy of the existing separate water supply agreement between **BRUNSWICK** and **TROY** dated November 27, 1967. It is understood and acknowledged by the parties hereto that each of them is bound by the terms and conditions of their separate agreements with **TROY** and accordingly the terms and conditions of this Agreement shall, to the fullest extent possible and except as otherwise clearly set forth herein, be construed to be consistent with the terms and conditions of those agreements. In addition, it is understood that **BRUNSWICK** is in the process of renegotiating its water supply agreement with **TROY** and it is believed that execution of a new agreement between those parties is imminent. If and when such new agreement between **BRUNSWICK** and **TROY** is executed, said new agreement shall be substituted for the old agreement and made a part hereof as *EXHIBIT C*.

B. Master Water Meter Chamber. **POESTENKILL** shall install at its own expense a master water meter chamber on the Brunswick side of the boundary line between Brunswick and North Greenbush, with the location of same currently contemplated to be on the north side of Spring Avenue, approximately 600 feet east of Creek Road. This master water meter, which shall be owned and maintained by **POESTENKILL**, shall be used to determine the volume of water being transported from **BRUNSWICK** to **POESTENKILL** at this location and hence determine the water supply payments due from **POESTENKILL** to **TROY** and the water transportation payments due from **POESTENKILL** to **BRUNSWICK**, as set forth in paragraph 11 hereof. The specifications for this master water supply chamber shall be approved in writing by **TROY** and by **BRUNSWICK** prior to purchase and installation by **POESTENKILL**. The master water meter chamber shall be equipped for a radio read device as used by **BRUNSWICK** (see also paragraph 2 hereof). This connection shall be the only metered connection to the **BRUNSWICK** water system unless **BRUNSWICK** approves, in writing, an additional connection.

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C. Design, Installation, Ownership and Maintenance of 12" Water Main and Appurtenances. The 12" water supply line to be located in the Town of Brunswick and to serve as the connection between the water distribution system of **BRUNSWICK** and that of **POESTENKILL**, together with the appurtenances thereto shall be designed and installed by **POESTENKILL**. Said design is subject to review and approval by **BRUNSWICK**'s engineering consultant. Construction of the 12" main shall be effected by **POESTENKILL** under the general supervision and direction of **BRUNSWICK'S** Highway Department and Water Department, with the understanding that any instructions or directives to contractors and trades working pursuant to contract with **POESTENKILL** shall be communicated to them only by the Project Engineer or other duly designated representative of **POESTENKILL**. Following completion of physical construction work in the **DISTRICT** and prior to the commencement of water delivery

from **BRUNSWICK** to **POESTENKILL**, and upon written approval and acceptance of the 12" line by **BRUNSWICK**, ownership of said 12" water supply line and the appurtenances thereto within the Town of Brunswick shall be transferred from **POESTENKILL** to **BRUNSWICK**, whereupon **BRUNSWICK** shall be fully and solely responsible for the ownership and maintenance thereof and any needed repairs thereto. It is specifically acknowledged and agreed that the connection items to be included with the water main in the Town of Brunswick and to be installed and paid for by **POESTENKILL** include the water main tap, corporation stop, copper line to highway right of way (R.O.W.) and curb stop. It is also specifically acknowledged and agreed that the house lateral from the R.O.W. line, the individual water service meter and the internal water system connection shall be paid for by the individual Brunswick property owner.

D. Additional Appurtenances Required for Use of 12" Water Line as a Distribution Main to Brunswick Residents. The **BRUNSWICK** engineering consultant has estimated that there are 52 properties within the Town of Brunswick which may be served by the 12" water line connecting the **BRUNSWICK** water distribution system to that of **POESTENKILL** and has requested that additional hydrants, valves and tees at road intersections be installed to effect such service. It has also been requested by **BRUNSWICK** that the pipe material be ductile iron rather than HDPE so as to be compatible with **BRUNSWICK**'s existing infrastructure and maintenance equipment and tooling. It is agreed that proposed requisite changes to the plans initially prepared by **POESTENKILL**'s engineer will be prepared and furnished by the **BRUNSWICK** engineering consultant and will be incorporated in bidding documents for the **DISTRICT** construction work.

E. Capital Improvements to the Water Distribution System of the Town of Brunswick. It is acknowledged by the parties hereto that certain capital improvements to the water distribution system of the Town of Brunswick are necessary for the furnishing of water transportation services to **POESTENKILL** as provided for in this Agreement. Said improvements involve the furnishing of three (3) pre-cast pressure regulating valve pits and include installation of the pits, tapping valves and sleeves, and tees required to make the pits fully operational, together with the cost of all associated professional engineering services, including particularly but not necessarily exclusively, engineering services required for or related to site location, site work and easements; preparation of plans and specifications; construction phase services; and system start-up. In addition, an emergency generator shall be required at the Brunswick Vanderheyden Reservoir water pump station. The total estimated cost of such capital improvements to be furnished and paid for by **BRUNSWICK** – and the maximum principal amount to be reimbursed by **POESTENKILL** to **BRUNSWICK** as hereinafter set forth – is $392,500.00, broken down as follows:

Pre-cast valve pit	$50,000 each x 3 pits =	$150,000
Pit installation	$35,000 each x 3 pits =	105,000
Engineering services	$12,500 each x 3 pits =	37,500
Emergency generator	$100,000 (1 required) =	100,000
Total Capital Improvements Costs		$392,500

F. Reimbursement of Capital Improvements Costs. While the furnishing of the aforedescribed capital improvements to the water distribution system of the Town of Brunswick and the payment and/or financing of the costs associated therewith shall be the sole responsibility of **BRUNSWICK**, it is agreed that all such costs will be reimbursed to **BRUNSWICK** by **POESTENKILL** in the following manner: the principal amount of said costs (not to exceed $392,500 as set forth above) together with the financing interest and other financing costs, shall be reimbursed by the making of installment payments from **POESTENKILL** to **BRUNSWICK** in accordance with a ten (10) year bond retirement schedule. Anything hereinabove to the contrary notwithstanding, it is understood and agreed that principal payments by **POESTENKILL** to **BRUNSWICK** shall be required no more frequently than once every 12 months and interest payments shall be required no more frequently than once every 6 months, in accordance with the 10-year bond retirement schedule which shall be provided to **POESTENKILL** by **BRUNSWICK**, with the due dates of **POESTENKILL's** payments to **BRUNSWICK** to be 30 days prior to the indicated due dates of **BRUNSWICK's** bond retirement payments. Any failure on the part of **POESTENKILL** to make any such payment shall subject **POESTENKILL** to the same interest and penalties as provided for the non-payment of the water transportation charge as set forth in paragraph 11 of this Agreement. **POESTENKILL** specifically acknowledges that the provisions of this paragraph shall survive any termination of this Agreement by **POESTENKILL** pursuant to paragraph 13 of this Agreement based on its development of its own water supply, as well as any termination of this Agreement by **BRUNSWICK** as a consequence of the non-payment by **POESTENKILL** of any fee or charge required to be paid by **POESTENKILL** TO **BRUNSWICK** under the terms of this Agreement. Once incurred, **BRUNSWICK** will provide **POESTENKILL** with written documentation of the reimbursable costs incurred which are to be reimbursed pursuant to this paragraph.

G. Additional Reimbursement for Engineering Costs. As and for consideration for any and all other professional engineering services heretofore provided and hereafter contemplated to be provided by BRUNSWICK's engineer in connection with this Agreement, including particularly but without limiting the generality of the foregoing, engineering services related to fire flow tests, hydraulic analysis, contract issues, attendance at funding agency and engineering meetings, and review of plans and specifications for pipe line facilities and appurtenant structures to be installed in the Town of Brunswick, it is agreed that **POESTENKILL** will pay to **BRUNSWICK** the lump sum amount of $20,000. Regardless of whether or not the conditions set forth in paragraph 20 of this Agreement are satisfied and regardless of whether or not this Agreement should become null and void as a result of any failure to meet any such conditions, such payment shall be made in full within thirty (30) days of the execution of this Agreement by **BRUNSWICK. BRUNSWICK** agrees to hold the payment in escrow pending audit and approval by **BRUNSWICK** of detailed bills for said services which shall be submitted by **BRUNSWICK's** engineering consultant to **BRUNSWICK** and forwarded to **POESTENKILL.** No payment shall be made from the escrowed funds for a period of fourteen (14) days following the forwarding of the bill or bills to

POESTENKILL to afford **POESTENKILL** an opportunity to comment. Notwithstanding the foregoing, the parties acknowledge that **BRUNSWICK** shall be the sole and exclusive judge of the adequacy, accuracy and validity of the bills, and its determinations in that regard shall be final and binding in all respects.

Notwithstanding anything in this Agreement to the contrary, it is expressly understood and agreed that in the event that **POESTENKILL** shall fail to make the lump sum payment of $20,000.00 to **BRUNSWICK** within the time limited therefor in this paragraph, **BRUNSWICK** may, in its sole and exclusive discretion, declare this Agreement null and void and terminate the same. It is further expressly acknowledged by the parties that **POESTENKILL's** obligation to make said payment shall survive termination of this Agreement pursuant to this paragraph.

19. Adjustment of the Transportation Charge Between Changes in the City Rate. The amount of the water transportation charge provided for in paragraph 11 of this Agreement, an amount equal to 25% of the rate per thousand gallons of water paid by **POESTENKILL** to **TROY** under its Water Supply Agreement with **TROY** (the "City Rate"), may be adjusted at the sole and exclusive discretion of **BRUNSWICK** on an annual basis commencing January 1, 2011, in accordance with, and subject to the limitations of, this paragraph.

On January 1 of each calendar year of this Agreement, commencing on January 1, 2011, for which there has been no change in the City Rate from the previous year, **BRUNSWICK** shall be entitled to an adjustment in the amount of the transportation charge per thousand gallons of water in effect for the previous year based upon the percentage change in the Consumer Price Index – All Urban Consumers, Northeast Region , All Items, 1982 - 1984 = 100; Series CUUR0100SA0, not seasonally adjusted, as published by the U.S. Department of Labor, Bureau of Labor Statistics. The new water transportation charge shall be an amount equal to the transportation charge for the prior year plus a percentage of such amount equal to the percent change in the Consumer Price Index. The amount of the percent change in the transportation charge per thousand gallons of water shall be calculated as follows:

Take the CPI value for the month of October immediately prior to the January 1 on which the adjustment is to take place and subtract therefrom the CPI value for the month of October of the previous year (15 months prior to the January 1 upon which the adjustment is to take effect). That result is then divided by the CPI value for the month of October of the previous year. That result is then multiplied by 100 to equal the percent change. The following example illustrates the computation of the percent change for a hypothetical January 1, 2011, water transportation charge increase:

CPI for Current Period (October 2010)	185.2
Less CPI for Previous Period (October 2009)	181.7
Equals Index Point Change	3.5

Divided by Previous Period CPI (October 2009)	181.7
Equals	0.019
Multiplied by 100	0.019 x 100
Equal Percent Change	1.9%

Notice of any such adjustment in the amount of the water transportation charge shall be provided in writing by **BRUNSWICK** to **POESTENKILL** not later than December 20 of any calendar year of this Agreement, and the adjustment shall become effective on the January 1 immediately thereafter.

For any calendar year of this Agreement for which **TROY** has changed the City Rate, the water transportation charge per thousand gallons paid by **POESTENKILL** to **BRUNSWICK** shall be an amount equal to 25% of the new City Rate. During any such calendar year, there shall be no CPI adjustment in the water transportation charge.

In no event during the term of this Agreement shall the water transportation charge paid by **POESTENKILL** to **BRUNSWICK** be less than an amount equal to 25% of the City Rate then in effect.

20. Except as otherwise provided in paragraph 18(G) hereof, this Agreement is expressly conditioned upon (a) receipt by the Town of Poestenkill of requisite State and Federal financial assistance, including especially certain Federal economic recovery stimulus moneys through the American Recovery and Reinvestment Act (ARRA), which moneys are necessary for **POESTENKILL** to fund construction of the Water District and the payments to be made to **BRUNSWICK** pursuant to this Agreement, and (b) the execution of contracts for the physical construction of the infrastructure of Water District No.1 of the Town of Poestenkill. If either of these conditions is not met, this Agreement shall be null and void and the parties shall be mutually released from any and all obligations hereunder. The parties expressly acknowledge and agree that **BRUNSWICK** will not be expected or required to take any further action, or incur any further expense, which may be contemplated under the terms of this Agreement, unless and until **POESTENKILL** notifies **BRUNSWICK**, in writing, that all of the conditions and contingencies set forth in this paragraph have been satisfied in all respects. Similarly, the parties expressly acknowledge and agree that **POESTENKILL** shall have no financial obligation to **BRUNSWICK** for any such action claimed to have been taken or expense claimed to have been incurred by **BRUNSWICK** in the absence of any such prior written notification from **POESTENKILL**, except as provided in paragraph 18(G).

21. This Agreement may be executed in multiple copies, each bearing original signatures, each of which executed copies may be deemed an original Agreement for any and all lawful purposes.

22. Merger; Non-Waiver; Severability. This Agreement contains all the understandings between the parties hereto and incorporates and supersedes any prior agreements between the parties, both oral and written. The provisions, terms and conditions of this Agreement may only be modified by written amendment, making specific reference to this Agreement, and executed by the parties with the same formality as this Agreement. Failure of either party hereto to exercise any right hereunder shall not be deemed a waiver of such party to exercise at some future time said right or rights or any other right said party might have hereunder. If any clause or provision of this Agreement or application thereof shall be held unlawful or invalid, no other clause or provision of this Agreement or its application shall be affected, and this Agreement shall be construed and enforced as if such unlawful or invalid clause or provision had not been contained herein.

IN WITNESS WHEREOF, **BRUNSWICK** has caused this Instrument to be executed in its name in multiple copies by its Town Supervisor and its seal affixed hereto and attested by its Town Clerk and **POESTENKILL** has caused this Instrument to be executed in its name in multiple copies by its Town Supervisor and its seal affixed hereto and attested by its Town Clerk as of the day and year first above written.

TOWN OF BRUNSWICK

By:

Phillip H. Herrington, Town Supervisor

Attest:

Susan Quest-Sherman, Brunswick Town Clerk

Approved as to form:

Thomas R. Cioffi, Esq.
Brunswick Town Attorney

TOWN OF POESTENKILL

By:

Margaret Y. Schmidt, Town Supervisor

Attest:

Vivian Kelly, Town Clerk

Approved as to form:

Patrick J. Tomaselli, Esq.
Poestenkill Town Attorney

AGREEMENT BETWEEN THE CITY OF TROY, NEW YORK AND THE TOWN OF POESTENKILL FOR WATER SUPPLY

THIS AGREEMENT, made and entered into this 21st day of Sept, 2008 (hereinafter called the "Agreement", the "Contract", or the "Agreement and Contract"), by and between the Town of Poestenkill (hereinafter called the "Buyer"), and the City of Troy, a municipal corporation within the County of Rensselaer, State of New York, acting by and through its Mayor, with the approval of its City Council (hereinafter called the "City").

WITNESSETH:

WHEREAS, the City Council of Troy has at a regular meeting, by resolution duly passed, voted to sell and supply water under a contract which shall provide the terms and conditions of sale, furnishing of water and payment for same.

WHEREAS, the Town of Poestenkill, at a regular meeting, by resolution duly passed, voted to purchase water from the City under a contract which shall provide the terms and conditions of sale, furnishing of water and payment for same.

WHEREAS, the Buyer and the City have determined to enter into this Agreement,

NOW, THEREFORE, in consideration of the mutual promises and covenants herein set forth, and in order to secure the services described below, the parties hereto, each binding itself, its respective representatives, successors, and assigns, do mutually agree as follows:

ARTICLE I
SHORT TITLE; DEFINITIONS AND INTERPRETATIONS

Section 101. Short Title. This Agreement may be referred to as the "Troy - Poestenkill Water Supply Agreement".

Section 102. Meanings and Construction.

A. Definitions. For all purposes of this Agreement, and any amendments or other changes thereto, the terms shall have the meanings set forth below:

1. "Average Daily Flow" means the total volume of water measured in gallons over a 365 day period at a metering station divided by 365 days.

2. "Department" means the Department of Public Utilities of the City of Troy.

3. "City Rate" means the water rate charged to the residents of the City of Troy.

4. "Mayor" means the Mayor of the City of Troy or his designee.

5. "Maximum Daily Flow" means the highest total volume of water measured in gallons at a metering station over any consecutive twenty-four (24) hour period during a calendar year.

6. "Peak Hourly Flow" means the highest total volume of water measured in gallons at metering station over any consecutive sixty (60) minute period.

7. "Person" means any individual, firm, company, association, society, corporation, political subdivision, fire district, or group.

8. "Planning Utilization" means the capacity in City waterworks that the Buyer desires to use.

9. "Waterworks" means facilities for collection, storage, supply, distribution, treatment, pumping, metering, and transmission of water.

B. Construction. This Agreement, except where the context clearly indicates otherwise, shall be construed as follows:

1. Definitions include both singular and plural;

2. Pronouns include both singular and plural and include both genders.

ARTICLE II
GENERAL PROVISIONS

Section 201. Obligations of the Buyer. The Buyer understands and agrees to the following obligations, limitations, and commitments, in return for the City's agreement to permit connection by the Buyer to the City's waterworks.

A. Limitation of Rights. Nothing in this Agreement shall be construed as a grant by the City of any exclusive right or privilege. The provision of water by City to Buyer does not grant any rights of ownership in Troy's waterworks. The Buyer shall comply in all respects with the City's Rules and Regulations of water use unless otherwise specified herein.

B. Charges and Fees. The Buyer shall make payment of all charges described in this Agreement to the City by the final day of the month of receipt of same, unless expressly provided for otherwise.

C. Terms of Delivery. The Buyer may only use or distribute water purchased from the City within the Buyer's corporate limits and may not resell nor supply the water outside of these limits, without the express due consent of the City.

D. Control of System Leaks and Wasteful Use. The Buyer shall operate and maintain its waterworks connecting to that of the City in accordance with customary practices and within the guidelines set forth below. The Buyer shall do all in its power to minimize the wasteful use of water within its service area. Should the City impose restrictions on water use on its customers (e.g., sprinkling bans) the Buyer shall conform to such restrictions within all areas covered by this contract. The imposition of said restrictions shall be within the sole and exclusive discretion of the City. Nothing in this agreement shall prevent the Buyer from imposing its own restrictions above and beyond those imposed by the City. The Buyer shall ensure that if it installs devices to raise the water pressure it shall also install suitable back flow prevention devices as required by state or federal law and the City. The Buyer shall ensure that pumping of water supplied to the Buyer be on a schedule approved by the City and in conformance with all existing cross connection regulations.

E. Conformance to Law. The Buyer shall abide by all applicable laws of the United States and the State of New York, together with such Rules and Regulations as the City may promulgate from time to time with regard to its waterworks.

F. The Buyer shall agree to compensate the City for a minimum of 100,000 gallons per day during the life of this agreement. The foregoing notwithstanding, it is hereby acknowledged and agreed that, whereas the Buyer's water distribution infrastructure is not yet in place and construction thereof has not even commenced, the Buyer's obligation to compensate the City for the aforesaid minimum usage shall not commence until such time as the Buyer's water distribution system is operational to the extent that water is actually being supplied to no fewer than six hundred (600) of the Buyer's consumers (i.e., connected parcels within the Water District).

Section 202. Obligations of the City. The City agrees to the following obligations, limitations and commitments, in return for the timely payment by the Buyer of the charges specified in this agreement.

A. Contract Service Area. The City shall deliver water to the Town of Poestenkill at various mutually agreed upon delivery points, at the existing pressure and quality in those distribution mains, subject to the limitations in Section 201 (C) of this Agreement. The Buyer shall have a separate agreement with the Town of North Greenbush for the transport of the water from the City Line to the Buyer.

B. Measurement of Flows, The measurement of water delivered to the Buyer shall be undertaken by the Buyer with the approval of the City. Such flow measurements shall be made by approved metering devices owned by the Buyer at locations determined by the City, subject to the agreement and consent of the Town of North Greenbush. All

such metering devices shall be inspected at least quarterly. The Buyer will maintain all master meter devices in good condition and provide a certified report of any maintenance, repair and accuracy of such devices once per year to the City. All master metering devices will be tested every two years and reports of such testing, including accuracy, will be provided to the City. A copy of the inspection and calibration reports shall be filed with the City's Department of Public Utilities. The City may request the Buyer to test and certify as to the accuracy of the master metering devices at more frequent intervals. The cost of such tests shall be paid by the Buyer. In the master meter chamber or house provided for such meter, or in the vicinity thereof, there shall be maintained a bypass to be used only in the event of meter failure. The bypass valve shall be chained and sealed and operated only with the express consent of the City. If the seal is broken at any time by the Buyer or Buyer's representatives or by third parties acting with Buyer's permission, other than as authorized by the City, the bill will reflect same in estimated charges and a 10% additional penalty will be assessed. In the case of missing or inaccurate flow records, due to faulty metering device operation or other circumstances, an estimate of flow shall be made by the City based on past records of a comparable period. The estimates shall be used by the City to establish the Buyer's payments to the City for the period of missing or inaccurate data.

C. Records, Accounts and Audits. The City shall keep records and accounts, with complete and correct entries of all its transactions with the Buyer, which, shall at reasonable times, be subject to the inspection of any officer or agent of the Buyer.

D. The City shall supply Poestenkill up to a total of 500,000 gallons per day Average Daily Flow for the life of this agreement

Section 203. Obligations of Both Parties. The City and the Buyer both agree to the following obligations, limitations, and commitments.

A. Assignment of Users. The Buyer's users of its waterworks shall be served by water facilities owned, operated and maintained by the Buyer, unless there is written amendment to this Agreement.

B, Responsibility for System Operation and Maintenance. The City assumes no responsibility for the operation and maintenance of water works constructed and owned by the Buyer. The City's waterworks shall be operated and maintained by the City, and the Buyer assumes no responsibility for the operation and maintenance of the same, with the exception of costs set forth in Article III. The City shall not be responsible or liable in any way for the acts of God, or any other act or acts beyond its control which may, in any way, cause an interruption or discontinuance of the service provided for in this Agreement.

Section 204. Impairment of Supply.

A. Responsibility. The furnishing of water by the City under this Agreement shall not impair the furnishing of water by the City to its customers. The City may not be compelled to furnish water to the Buyer continuously in the case of accident, or in the event that the water mains or their appurtenance or the source upon which this supply is dependent are impaired. For the purposes of this subsection, the word "accident" shall mean any occurrence occasioned by the consequences of any act of God as hereinafter defined, act of public enemy, wars, blockades, riots, natural disasters, civil disturbances, labor strikes, power failures, explosions, or any cause which is not within the control of the City, or which the City is unable to overcome by the exercise of due diligence. The City shall in the first instance be the sole judge in all these matters, and its decisions shall, if and to the extent they are reasonable, be final and binding upon the Buyer. The reasonableness of such decisions shall be subject to binding arbitration as hereinafter provided.

B. Acts of God. Neither the City nor the Buyer shall be liable in damages or otherwise for failure to perform any obligation under this agreement, which failure is occasioned by or in consequence of any act of God, act of public enemy, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of rulers and peoples, civil disturbances, labor strikes, power failures, explosions, breakage or accident to machinery or lines of pipe, failure or want of water supply, the binding order of any court or governmental authority which has been resisted in good faith by all reasonable legal means, and any other cause, whether of the kind herein enumerated or otherwise, not within the control of such party and which act, omission or circumstances such party is unable to prevent or overcome by the exercise of due diligence. Such causes or contingencies affecting the performance by either the City or the Buyer, however, shall not relieve such party of liability in the event of its negligence, intentional actions, or in the event of such party's failure to use due diligence to remedy the situation and remove the cause in an adequate manner and with all reasonable dispatch, nor shall causes or contingencies affecting performance relieve the Buyer from its obligations to make payments of amounts then due in respect to water theretofore delivered.

C. Indemnification. The Buyer shall exonerate, indemnify and save harmless the City from all claims and demands which the City is legally bound to pay whether for injuries to persons or loss of life or damage to property occurring within or about any of the connections exclusively supplying water to the Buyer; excepting, however, such claims and demands, whether for injuries to persons or loss of life or damages to property, as shall be caused by any act or omission of the City or its agent. The City shall exonerate, indemnify and save harmless the Buyer from all claims and demands which the Buyer is legally bound to pay whether for injuries to persons or loss of life or damage to property occurring within or about any of the connections exclusively supplying water to the Buyer; excepting, however, such claims and demands, whether for injuries to persons or loss of life or damages to property, as shall be caused by any act or omission of the Buyer or its agent. The phrase "claims and demands" includes court costs and expenses, legal fees and judgments.

Section 205. Correspondence. Correspondence by the Buyer to the City concerning any item in this agreement shall be sent to:

City of Troy
Department of Public Utilities
25 Water Plant Road
Troy, New York 12182

Correspondence by the City to the Buyer concerning any item in this agreement shall be sent to:

Town of Poestenkill
38 Davis Drive - P.O. Box 210
Poestenkill, NY 12140

ARTICLE III
PAYMENTS FOR SERVICES

Section 301. Payment. Buyer shall pay for all water delivered by City based on the metered water use of Buyer as determined pursuant to Section 202(b) multiplied times the metered water rate charged to residential customers in the City of Troy (the "City Rate"). The current rate is $3.432 per 1000 gallons. The Buyer shall compensate the City at a minimum rate of 100,000 gallons per day per billing cycle, subject to the provisions of paragraph F of Section 201. The Buyer will maintain all master meter devices in good condition and provide a certified report of any maintenance, repair and accuracy of such devices once per year to the City. All master metering devices will be tested every two years and reports of such testing, including accuracy, will be provided to the City. The master meters will be read by the Buyer once per month and the readings will be provided to the City by the 3rd business day following. The City will be allowed to confirm all readings given by the Buyer, and with a three day notice, the Buyer will accompany and allow the City to confirm the readings at the master meter locations.

Section 302. Billing Cycle. The City shall bill the Buyer two times per year, on May 1 and November 1. Billings shall be rendered to Buyer and become due and payable at the Treasurer's Office of the City within thirty (30) days.

Section 303. Emergency Use. Should the Buyer require water from the City in flow rates in excess of 500,000 gallons per day Average Daily Flow and such water is available for delivery to the Buyer, the City may, at its sole discretion, supply such

water. In such case, the City shall bill the Buyer for all such emergency use, excluding agreed upon fire or other natural disaster of 24 hours or less, at a rate of one and one-half (1.5) times the rate in Section 301 of this Article. Nothing in this Section shall be construed as giving the Buyer a right to use water at an Average Daily Flow exceeding 500,000 gallons per day, nor shall it prohibit the City from assessing additional charges if such emergency use is prolonged in the opinion of the City. The City shall have sole and exclusive discretion as to the determination of the availability of water in excess of an Average Daily Flow of 500,000 gallons per day, and the determination of the length of any prolonged emergency use.

Section 304. Water Rate Change. The City agrees to notify the Buyer of proposed changes to the water rates and charges herein, within thirty (30) days after City Council approval of such changes. The Buyer agrees to be bound by any rate changes and the effective date thereof as established by the Department. The foregoing notwithstanding, it is understood and agreed that in no event shall the rate charged by the City to the Buyer exceed the rate charged by the City to the residents of the City of Troy (the "City Rate").

Section 305. Delinquent Bills. If water bills or outstanding balances remain unpaid thirty (30) days after the same shall be due, the City shall add thereto a penalty of the prime rate plus three (3) percent. The prime rate shall further be described as the Wall Street Journal Prime Rate in effect at the date of the billings and as it is established or changed from time to time by the Wall Street Journal. In no event, however, shall the penalty charged be less than 5.0%. If the bills or outstanding balances continue to remain unpaid (60) days after they were due, the City shall add interest charged on the original bill from its due date at the rate of one and one half (1 1/2) percent per month. If the final date for payment before the imposition of a penalty or the charging of interest should fall on a Saturday, Sunday or holiday, any such payment may be made to the City on the next business day following such Saturday, Sunday or legal holiday or may be made by mail provided the postmark on the envelope indicates that the letter was so mailed on such next business day, and the City shall receive such payment without imposing the prime plus three (3) percent penalty or the interest charges.

Section 306. Bills Over Ninety (90) Days Due. If the Buyer fails to pay to the City the total amount of its bill for water within ninety (90) days from the billing of same, the City may consider this Agreement void and terminate water service to the Buyer or restrict water flow to the minimum required to maintain an adequate water supply for the purpose of potable use for human consumption and sanitation. All other uses of water will be suspended and water restrictions will be put into place by the Buyer. The City will have the unrestricted right to access and operate the water supply control devices or valves of the Buyer for the purpose of imposing water restrictions. This would not void the Buyer of its responsibility to pay the City for its proportionate share of expenses incurred by the City for expansion and/or upgrading of the City's waterworks facilities as specified in Section 307. The Buyer will supply all necessary labor and materials

required to impose any required water restrictions, without prejudice.

Section 307. Expansion and/or Upgrading of City's Waterworks. Should the City expand the capacity of any of its waterworks solely to accommodate a municipality or user other than the Buyer, the Buyer shall not be liable for the costs incurred by the City's waterworks for said expansion. Should the City provide additional capacity for use by the Buyer in any of the City's waterworks (i.e., capacity in excess of the referenced amounts), the Buyer shall make payments to the City to offset the costs incurred by the City. Should the City upgrade or otherwise modify its waterworks to provide improvements not related to capacity, either in response to federal, state, or local authorities, or other justifiable cause, the Buyer shall make payments to the City to offset the costs incurred by the City in the proportion of the Buyer's planned utilization in such said waterworks. This may include, but not be limited to, water treatment plant upgrades, reservoir and transmission main improvements, and mains 16 inches and larger that are used for the purpose of inter-municipal supply. In all cases, the City shall, in the first instance, be the sole and final judge as to all improvements, additions or expansions to the waterworks, and the City's decisions shall, to the extent they are reasonable, be final and binding upon the Buyer. The reasonableness of such decisions shall be subject to binding arbitration as hereinafter provided.

ARTICLE IV
MISCELLANEOUS PROVISIONS

Section 401. Status of Former Agreements. This Agreement supersedes all conflicting provisions of former or currently existing contracts for water services between the City and the Buyer, and constitutes the entire contract between the City and The Buyer.

Section 402. Incurring of Debt. Nothing in this Agreement shall be construed as to prevent either party thereto from incurring any debt deemed necessary to ensure the sufficiency of funds required to construct, maintain and operate their respective waterworks.

Section 403. Arbitration. In case any disagreement or difference shall arise in respect of items herein designated to be submitted for arbitration, such disagreement or difference shall be submitted to the arbitrating of three persons who shall not be residents, taxpayers or employees of either of the parties hereto: one of such persons shall be appointed by each party and a third shall be appointed by the two so appointed. If either party shall refuse or neglect to appoint an arbitrator within twenty (20) days after the other party shall have appointed an arbitrator and served written notice thereof upon the other party requiring appointment of an arbitrator, then the arbitrator so first

appointed shall have the power to arbitrate the matters of this agreement or difference as if he were the sole arbitrator appointed by both parties hereto for that purpose, and his award or determination in writing shall be final, provided, however, that such award be made within thirty (30) days after such refusal or neglect of the other party to appoint an arbitrator. In case there are three arbitrators selected as above, an award in writing signed by any two of them shall be final, providing such award shall be made within thirty (30) days after the reference to said arbitrators unless such time shall be extended by agreement of the parties hereto. The provisions of Article 75 of the Civil Practice Laws and Rules of the State of New York or any law thereafter enacted relating to the arbitration of differences shall be controlling with respect to any procedure or any submission to the Courts of the State of New York for determination.

Section 404. Exercise of Judgment. Where the City is directly or implicitly authorized to exercise its judgment under the provisions of this Agreement, its judgment shall not be questioned unless clearly unreasonable,

Section 405. Status of Legal Representatives. Successors and Assigns. Each one of the benefits and burdens of this Agreement shall inure to and be binding upon the respective legal representatives, successors, and assigns of the parties hereto.

Section 406. Amendment. The provisions, terms and conditions of this Agreement shall be modified only by written amendments to this Agreement, executed with the same formality as this Agreement,

Section 407. Third Parties. The City assumes no responsibility for any facility not included in its waterworks and in the event that a facility of a third party shall be involved in the furnishing of service to, or the receipt of service from the Buyer, the Buyer agrees to look solely to such third party for any such services. The Buyer assumes sole responsibility for compliance with this Agreement by those users of its waterworks whose water is delivered from the City waterworks. The City shall deal directly with the Buyer which shall, in turn, make certain that all users and customers comply with terms of this Agreement and with any rules and regulations of the Board of the City, as applicable.

Section 408. Assignment. No assignment by the Buyer of its rights or duties under this Agreement shall be binding on the City, unless the City consents to such an assignment in writing with the same formality as employed in the execution of this Agreement.

Section 409. Waiver. Failure of either party hereto to exercise any right hereunder shall not be deemed a waiver of such party to exercise at some future time said right or rights or another right it may have hereunder.

Section 410. Effective Date; Duration; Breach. This Agreement shall be effective as of the date first above written. This Agreement shall be in full force and effect and shall be binding on the Buyer and the City for forty (40) years from the effective date, as long as neither the City nor the Buyer shall be in substantial breach of this Agreement or in substantial default of its obligations hereunder. In the event of such a substantial breach or default of this Agreement by either party hereto, the non-breaching party may, at its sole option, terminate this Agreement. Neither the City nor the Buyer shall have any claim against the other for any previous payment or capital outlays. Non-payment for water supplied, pursuant to section 306 herein, shall constitute a substantial breach under the provisions herein, and shall provide for the termination of this contract, with the notice provided herein. It is further acknowledged and agreed that if and in the event the Town of Poestenkill should at some time in the future develop its own source of water supply, then this agreement may be terminated by the Town of Poestenkill without penalty by giving notice of intent to do so not less than 180 days prior to such termination date.

Section 411. Obstruction of Supply. In the event or occasion, at anytime throughout the duration of this contract, the Town of North Greenbush shall, through no fault or complicity of either party hereto, refuse, deny or in any way obstruct the delivery of water supply from the City of Troy to the Town of Poestenkill, effectively preventing such delivery of water supply from the City of Troy pursuant to the terms of this agreement, then either the City of Troy or the Town of Poestenkill may elect to terminate this contract with a thirty (30) day written termination notice delivered to the other party by regular mail or personal service. In the event such obstruction of delivery is attributable in whole or in part to the fault or complicity of either party to this agreement, then the other party hereto may elect to terminate this contract by written notice as aforesaid. In the event delivery of water to the Town of Poestenkill shall be permanently restored during such 30-day notice period, the notice of termination shall be deemed rescinded and this agreement shall remain in full force and effect except that the Town of Poestenkill will not be liable for payment to the City of Troy of the minimum daily charge set forth in section 201(F) of this agreement for any day in which water delivery was obstructed. In the event of a termination as defined herein, without fault or complicity on the part of either party hereto, each party to this contract hereby waives and releases the other party of and from liability for any and all causes of action, in contract and/or in tort, which might in any way be attributable to the cessation of supply of water as provided herein. It is the understanding of the parties hereto that the City of Troy shall in no way be held liable or accountable for the delivery of the supply of water once it leaves the jurisdictional limits of the City of Troy and enters the transmission delivery line which is owned by the Town of North Greenbush, it being the understanding and agreement of the parties hereto that the City of Troy may establish and maintain a contract for supply of water to the Town of North Greenbush and that the Town of Poestenkill shall establish and maintain a water transportation contract with the Town of North Greenbush for the delivery of water supply from the City of Troy to the Town of Poestenkill. To this end, the City of Troy shall include no provision in any new

agreement with the Town of North Greenbush and shall waive enforcement of any provision in any existing agreement with the Town of North Greenbush which in any way prohibits North Greenbush from transporting water to the Town of Poestenkill or mandates the assessment of any surcharge on water thus transported. It is however understood and agreed that nothing herein shall in any way prevent the Town of North Greenbush from assessing to the Town of Poestenkill a reasonable transportation charge for such water delivery. In the event the Town of Poestenkill is unable to enter into a contract with the Town of North Greenbush, for the utilization of their transportation system, to transport water from the City of Troy Cross-Street pump station to the Town of Poestenkill, either party may elect to terminate this contract with a thirty day notice.

Section 412. Severability. If any clause or provision of this Agreement or application thereof shall be held unlawful or invalid, no other clause or provision of this Agreement or its application shall be affected, and this Agreement shall be construed and enforced as if such unlawful or invalid clause or provision had not been contained herein.

IN WITNESS WHEREOF, the City of Troy, acting through the Mayor, with the approval of the City Council, and the Town of Poestenkill, acting through the Supervisor, with the approval of the Town Board, have executed this agreement on the day and year first above written.

Buyer (Town of Poestenkill)
Approved:

Margaret Y. Schmidt, Town Supervisor

City of Troy
Approved:

Harry J. Tutunjian, Mayor

Approved as to Form:

Patrick J. Tomaselli, Esq.
Town of Poestenkill Town Attorney

Approved as to Form:

David B. Mitchell, Esq.
City of Troy Corporation Counsel

EXHIBIT A

October 21, 2008 Water Supply Agreement between TROY and POESTENKILL

EXHIBIT B

August 3, 2009 Amendment to
Water Supply Agreement between TROY and POESTENKILL

AMENDMENT TO AGREEMENT BETWEEN THE CITY OF TROY, NEW YORK AND THE TOWN OF POESTENKILL FOR WATER SUPPLY

THIS AMENDMENT TO AGREEMENT, made and entered into this 3 day of August, 2009 (hereinafter called the "Amendment"), by and between the Town of Poestenkill, a municipal corporation within the County of Rensselaer, State of New York, acting by and through its Town Supervisor, with the approval of its Town Board (hereinafter called the "Buyer" or "Poestenkill"), and the City of Troy, a municipal corporation within the County of Rensselaer, State of New York, acting by and through its Mayor, with the approval of its City Council (hereinafter called "Troy" or "the City").

WITNESSETH:

WHEREAS, by Agreement between the parties hereto made and entered into the 21st day of October, 2008, and in accordance with the terms and conditions set forth therein, Troy agreed to sell and supply water to Poestenkill and Poestenkill agreed to purchase and take delivery of water from Troy; and

WHEREAS, at the time said Agreement between the parties hereto was made and entered into, it was contemplated by said parties that the water supplied by Troy would be transported to Poestenkill through the distribution mains and infrastructure of the Town of North Greenbush (hereinafter "North Greenbush") pursuant to a separate transportation agreement to be negotiated and entered into by and between Poestenkill and North Greenbush, and accordingly the Agreement makes reference to a contemplated transportation agreement with North Greenbush and transportation services to be provided by that municipality; and

WHEREAS, it has since been determined by the Poestenkill that its water transportation needs might be better served by having the water supplied by Troy transported to Poestenkill through the distribution mains and infrastructure of the Town of Brunswick (rather than those of North Greenbush) pursuant to a separate transportation agreement to be negotiated and entered into by and between Poestenkill and the Town of Brunswick;

NOW, THEREFORE, it is hereby agreed by and between the parties hereto, each binding itself, its respective representatives, successors, and assigns, that the Agreement between them made and entered into the 21st day of October, 2008, be and hereby is amended as follows:

1. Any and all references to water transportation services to be provided by the Town of North Greenbush and/or to a proposed water transportation agreement with the Town of North Greenbush are hereby amended to refer to such services to be provided by and such agreement to be entered into with either the Town of North Greenbush or the Town of Brunswick.

2. Witnout in any way limiting the generality of the foregoing, it is specifically agreed that the phrase "Town of Brunswick or Town of North Greenbush" be and hereby is substituted for the phrase "Town of North Greenbush" or "North Greenbush" in the following locations in the Agreement:

   Section 202(A) – line 4

   Section 202(B) – line 4

   Section 411 – lines 2, 23, 25, 27, 29, 30, 31, 33-34 and 36

IN WITNESS WHEREOF, the City of Troy, acting through the Mayor, with the approval of the City Council, and the Town of Poestenkill, acting through the Supervisor, with the approval of the Town Board, have executed this Amendment to Agreement on the day and year first above written.

Buyer (Town of Poestenkill)
Approved:

Margaret Y. Schmidt, Town Supervisor

City of Troy
Approved:

Harry J. Tutunjian, Mayor

Approved as to Form:

Patrick J. Tomaselli, Esq.
Town of Poestenkill Town Attorney

Approved as to Form:

Charles Sarris, Esq.
City of Troy Corporation Counsel

EXHIBIT C

November 27, 1967 Water Supply Agreement between TROY and BRUNSWICK

AGREEMENT

AGREEMENT made this 27 day of November, 1967, by and between the CITY OF TROY, a municipal corporation in the County of Rensselaer, Post Office Address, City Hall, Troy, New York, (hereinafter designated "TROY") and the TOWN OF BRUNSWICK, a municipal corporation in the County of Rensselaer, Post Office Address, Town Office, Center Brunswick, R. D. 3, Troy, New York, (hereinafter designated "BRUNSWICK").

WITNESSETH:

WHEREAS, the parties hereto duly entered into and executed a contract dated July 26, 1954, a copy of which is annexed hereto and made a part hereof as Exhibit "A".

WHEREAS, the sums due to TROY by BRUNSWICK pursuant to the terms of said agreement are in dispute and have been disputed since the time payment thereunder first became due; and

WHEREAS, BRUNSWICK has failed and refused to pay any sums thereunder until the sums due were either agreed upon or established; and

WHEREAS, negotiations have been entered into between TROY and BRUNSWICK and such sums, due but disputed, have been compromised and settled:

NOW, THEREFORE, it is mutually agreed as follows:

1. BRUNSWICK agrees to pay as hereinafter specified to TROY the amount of TWENTY-SIX THOUSAND NINE HUNDRED FORTY-FIVE AND44/100 DOLLARS ($26,945.44) principal and interest thereon at the rate of 2.9 per annum and TROY agrees to accept said sum in full discharge of the obligation of BRUNSWICK for said payment.

2. The above payments will be made by BRUNSWICK to TROY in fifteen (15) annual instalments of principal and interest commencing on the 1st day of March 1968 by payment of the sum of ONE THOUSAND FIVE HUNDRED TWENTY-NINE AND 70/100 DOLLARS ($1,529.70) on principal and further by payment on said date of the sum of SIX HUNDRED SIXTY-FIVE AND 42/100 DOLLARS ($665.42) interest and said payments of principal and interest shall be made on the same date annually

thereafter until the full amount of the aforesaid principal and interest is paid.

3. This agreement is made subject to the referendum requirement, if applicable, of the Town Law and shall become void and of no effect in the event of voter disapproval following a referendum.

4. Except as herein modified it is expressly agreed by the parties hereto that all other terms of the contract dated July 26, 1954 attached hereto as Exhibit "A", are to remain in full force and binding upon both parties hereto.

5. This Agreement and the following Agreements, namely:

(a) The settlement of disputed claims for installation, maintenance and repair by the City of Troy dated November 1967.

(b) The contract of purchase and sale of Vandenheyden Reservoir dated November 1967,

(c) The contract for water supply dated November 1967.

(d) The contract of sale of pipe lines in the Town of Brunswick dated November 1967.

shall constitute a single, comprehensive settlement of all problems presently in litigation or intended to be in litigation as herein described between BRUNSWICK and TROY and are intended to constitute the settlement and compromise of such litigation upon the terms and conditions therein set forth upon the signing and entry of an Order approving said settlement thereof. Such Agreements, however, shall not merge in and become part of such Order or Judgment, but shall remain separate, apart and remain in all respects, duly enforceable contracts.

6. An Order may be entered by either party hereto based on these Agreements which constitute as above set forth a stipulation discontinuing said action, approving said agreement and all the terms thereof and thereby discontinuing said actions without costs to either party.

IN WITNESS WHEREOF, TROY has caused this Instrument to be executed in its name in quadruplicate by its City Manager and its seal affixed and attested by its City Clerk and BRUNSWICK has caused

this Instrument to be executed in its name in quadruplicate by its Supervisor and its seal affixed and attested by its Town Clerk as of the day and year first above written.

CITY OF TROY

BY /s/ Sidney Smith
City Manager

TOWN OF BRUNSWICK

BY /s/ Richard W. Kessler
Supervisor

(Seal)
ATTEST:

/s/ Thomas H. Brown
City Clerk

(Seal)
ATTEST:

/s/ Marguerite I. Wilcox
Town Clerk

STATE OF NEW YORK)
COUNTY OF RENSSELAER) SS.:
CITY OF TROY)

On this 29th day of November, 1967, before me personally came Sidney O. Smith, to me personally known, who, being be me duly sworn, did depose and say that he resides in the City of Troy; that he is the City Manager of said City, the municipal corporation described in and which executed the within instrument; that he knows the seal of said corporation; that it was affixed by Resolution of the City Council of the City of Troy and that he signed his name thereto by like order.

/s/ Lawrence J. Connors
Notary Public

STATE OF NEW YORK)
COUNTY OF RENSSELAER) SS.:
CITY OF TROY)

On this 27th day of November, 1967 before me personally came RICHARD V. KEELER, to me personally known, who, being by me duly sworn, did depose and say that he resides in the Town of Brunswick, that he is the Supervisor of the Town of Brunswick, the municipal corporation described in and which executed the within instrument; that he knows the seal of said corporation; that it was so affixed by order of the Town Board of said Town of Brunswick; and that he signed his name thereto by like order.

/s/ R. Richard Decatur
Notary Public

THIS AGREEMENT, made this 25th day of July, 1954, by and between the CITY OF TROY, NEW YORK, a municipal corporation duly organized and existing under and by virtue of the Laws of the State of New York and located in the County of Rensselaer and State of New York, hereinafter called the "City", and the TOWN BOARD OF THE TOWN OF BRUNSWICK, a municipal corporation duly organized and existing under and by virtue of the Laws of the State of New York and located in the County of Rensselaer and State of New York, hereinafter called the "Town Board."

W I T N E S S E T H

WHEREAS, there has been duly established in the said Town of Brunswick a sewer district known and designated as "Sycaway Sewer District #2" embracing territory in said Town of Brunswick adjacent to the said City, such territory is more fully described in the order establishing said District and duly adopted by the Town Board on the 11th day of November, 1953, and

WHEREAS, a resolution was duly adopted by the Town Board on the 14th day of July, 1954, authorizing the making of a contract with the City for the disposal of sewage of said district upon the terms and provisions herein set forth, and

WHEREAS, a resolution was duly adopted by the Common Council of the City on the 18th day of February, 1954 authorizing the making of a contract with the Town Board for the disposal of sewage of said district upon the terms and conditions herein set forth, and

WHEREAS, a resolution was duly adopted, by the Board of Estimate and Apportionment of the City on the 19th day of February, 1954, approving said contract and authorizing the signing of this contract by the Mayor on behalf of the City, and

WHEREAS, in order for the sewage and storm waters of said sewer district to be deposited in the sewer system of the City, it is necessary for the City to construct a thirty inch trunk sewer approximately 1000 feet in length from the manhole now in existence

in Putnam Street adjacent to the easterly boundary line of the City, westerly in Putnam Street to the west side of North Lake Avenue directly opposite said Putnam Street, thence southerly along the west side of North Lake Avenue to a new manhole to be constructed over the existing sewer in Hoosick Street,

NOW, THEREFORE, the City does hereby agree to construct the trunk sewer and to allow the disposal of sewage and storm waters from said district into its sewer system for the duration of this agreement and the Town Board does hereby agree to pay to the City for such service in accordance with the provisions of this agreement, in the manner following, to wit:

1. The City shall at all times during the period of this agreement allow the deposit of sewage and storm waters from said district into its sewer system.

2. The City will undertake to keep its sewer system in good working order for such deposit.

3. That in consideration of the use of the sewer system of the City, it shall receive from the Town of Brunswick annually an amount equal to that assessed against property owners within the City as a sewer tax, for each user of the sewer system in said districts, but in no event shall such amount be less than 40% of the water rents paid by such property owners. The first payment under this paragraph shall be made on the 1st day of March, 1955, and all subsequent annual payments shall be made on the 1st day of March of each and every year during the term of this agreement.

4. That in consideration of the construction of said thirty inch trunk sewer and appurtenant structures by the City as provided for in Contract No. 54-4 and the specifications forming a part thereof and the use of said sewer line, commencing on the 1st day of March, 1956, and on the 1st day of March of each and every year thereafter for a period of fifteen (15) years, the City shall receive from the Town of Brunswick one-fifteenth (1/15) of one-half (1/2) of the actual cost of the construction of said sewer line

under said contract, plus one-half (1/2) of the interests be paid by the City on the serial bonds the proceeds of which are to be used for the costs of such construction. It is understood and agreed between the parties hereto that the words "actual cost" shall include the costs of preliminary surveys, engineering and inspection fees connected with such construction but the total amount thereof shall not exceed 9% of the contract price.

5. The amount provided for in paragraph "3" hereof shall apply to all further extensions of the sewer facilities in said district and to all sewer facilities which may be constructed in any extensions of said district and utilizing the aforesaid thirty inch trunk sewer.

6. It is understood that in the event the sewer rents charged to property owners in the City are to be increased, the City shall notify the Town Board prior to September 1 of any year that the amounts set forth in paragraph "3" are to be increased in the payment due on the 1st day of March, next succeeding.

7. Upon the request of the City, the Town Board shall furnish to the City a true and accurate account of the users of the sewer system in said district and the City shall have the right to make all reasonable inspections of the various dwellings and buildings within said district to determine whether or not there has been any changes in sewer users.

8. The City will not maintain any part of the sewer system that is located within the Town of Brunswick, New York.

9. The plans and specifications including the type, size, etc. of trunk sewers and laterals for any extensions of existing trunk sewers or laterals in said district shall be submitted to the City Engineer who shall approve or disapprove of the proposed extensions within thirty (30) days.

10. The terms of this agreement shall be for thirty (30) years commencing January 1, 1955 and ending December 31, 1984.

IN WITNESS WHEREOF, the parties hereto have signed and sealed

this agreement the day and year first above written.

THE CITY OF TROY, NEW YORK

By /s/ Edward A. Fitzgerald
Mayor

TOWN BOARD OF THE TOWN OF BRUNSWICK

By /s/ Francis H. McKnight
Supervisor

STATE OF NEW YORK :
COUNTY OF RENSSELAER : SS.:
CITY OF TROY :

On this 25th day of July, 1954, before me, the subscriber, personally appeared EDWARD A. FITZGERALD, to me personally known, who, being by me duly sworn, did depose and say that he resides in the City of Troy, New York; that he is the Mayor of the City of Troy, New York, the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by and pursuant to a Resolution of the Common Council of the City of Troy, New York, adopted on the 18th day of February, 1954, and duly approved by the Board of Estimate and Apportionment on the 19th day of February, 1954, and that he signed his name thereto by like order.

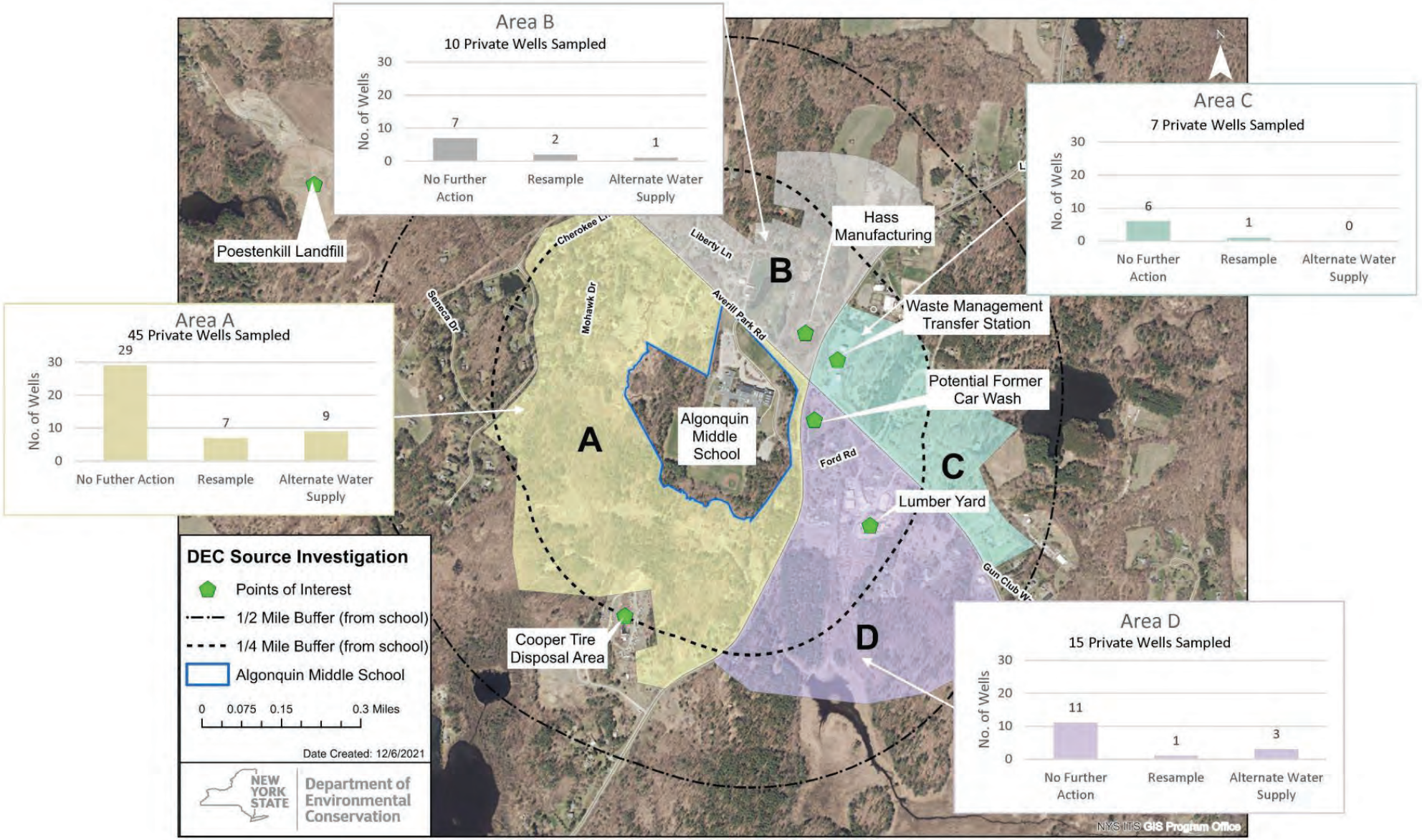
/s/ Daniel J. Michel
DANIEL J. MICHEL
Notary Public, State of New York
Residing in Rensselaer County
Commission expires Mar. 30, 1956

STATE OF NEW YORK :
COUNTY OF RENSSELAER : SS.:
TOWN OF BRUNSWICK :

On this 26th day of July, 1954, before me, the subscriber, personally appeared FRANCIS H. McKNIGHT, to me personally known, who, being by me duly sworn, did depose and say that he resides in the Town of Brunswick, New York; that he is the Supervisor of the Town of Brunswick, New York, the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by and pursuant to a Resolution of the Town Board of the Town of Brunswick, New York, adopted on the 14th day of July, 1954 and that he signed his name thereto by like order.

/s/ Allen Dixon
Allen Dixon
Notary Public, State of New York
Residing in Rensselaer County
Commission expires Mar. 30, 1957

APPENDIX K
NYSDEC PFOA SOURCE INVESTIGATION MAP


Area B
10 Private Wells Sampled
No. of Wells
30
20
10
0
7
2
1
No Further Action
Resample
Alternate Water Supply
Area C
7 Private Wells Sampled
No. of Wells
6
1
0
No Further Action
Resample
Alternate Water Supply
Area A
45 Private Wells Sampled
No. of Wells
29
7
9
No Futher Action
Resample
Alternate Water Supply
Area D
15 Private Wells Sampled
No. of Wells
11
1
3
No Further Action
Resample
Alternate Water Supply
Poestenkill Landfill
Hass Manufacturing
Waste Management Transfer Station
Potential Former Car Wash
Algonquin Middle School
Lumber Yard
Cooper Tire Disposal Area
A
B
C
D
Cherokee Ln
Liberty Ln
Seneca Dr
Mohawk Dr
Averill Park Rd
Ford Rd
Gun Club W
DEC Source Investigation
Points of Interest
1/2 Mile Buffer (from school)
1/4 Mile Buffer (from school)
Algonquin Middle School
0 0.075 0.15 0.3 Miles
Date Created: 12/6/2021
NEW YORK STATE
Department of Environmental Conservation
NYS ITS GIS Program Office

APPENDIX L
SMART GROWTH ASSESSMENT FORM

NEW YORK STATE OF OPPORTUNITY. | Department of Health | Environmental Facilities Corporation

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: Town of Poestenkill Project No.:

Project Name: Proposed Water District No. 2

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:

Installation of the necessary water infrastructure required to form Water District No. 2 for the Town of Poestenkill. This includes approximately 19,900 LF of 8-inch watermain and the associated hydrants and valves.

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: The project will utilize the Town of Brunswick's and Poesntenkill Water District No. 1 water infrastructure to transport water supply to the project area.

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:

   Per the Town of Poestenkill Zoning Map, the entire project area is zoned as residential excluding one planned development property. There are no adjacent municipal centers, current or future.

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:

Per the Town of Poestenkill Comprehensive Plan, the project area is not located in any of the specified areas.

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:

The project is required to move customers off of the existing contaminated water supply.

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:

Per the Town's zoning plan, the project area is all residential use excepting one planned development property. The majority of the parcels are built-out, with the vacant parcels being for future residential use.

6. Does the project provide mobility through transportation choices including improved public transportation and reduced automobile dependency?

☐Yes ☐No ☑N/A

Explain your response:

The project is a municipal water system.

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:

The project will require coordination between the Town of Poestenkill and the Town of Brunswick's Water Transportation agreement and the City of Troy's Water Supply agreement.

8. Does the project involve community-based planning and collaboration?

   ☑Yes ☐No

   Explain your response and reference any applicable plans:

   The Town will collaborate with the community to determine which customers want to be included in the new water district and the feasibility of inclusion.

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:

    The project provides customers with a safe drinking water supply.

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:

    Per the FEMA Floodplain maps, the project area is not at risk for flooding. The nature of the job being a underground utility project does not impact climate risk mitigation.

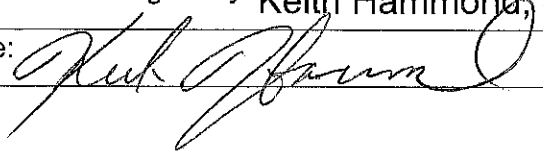
Section 4 – Miscellaneous

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: Town of Poestenkill	Phone Number: 518-283-5119
Name and Title of Signatory: Keith Hammond, Supervisor	
Signature: 	Date: 8/30/22

APPENDIX M
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: Poestenkill Proposed Water District No. 2

Date of Report: August 2022

Professional Engineer's Name: Laberge Group

Signature:

Date: 8-29-2022

APPENDIX N
PRELIMINARY OPINION OF COST

Laberge ENGINEERING ARCHITECTURE Group SURVEYING PLANNING

PHASE 1 - ALTERNATIVE 1

PRELIMINARY OPINION OF COST

DISTRIBUTION SYSTEM IMPROVEMENTS

Item	Quantity	Unit cost	Total
8" Ductile Iron Pipe (CL 52)	19,900	100 /LF	$1,990,000
16" HDPE	500	550 /LF	$275,000
8" Gate Valves	19	2,250 /EA	$42,750
Hydrants	30	7,200 /EA	$216,000
Select Bedding/Backfill Material	3,100	30 /CY	$93,000
12" Subbase	600	60 /CY	$36,000
3" Base Course Asphalt	200	75 /SY	$15,000
3" Binder Course Asphalt	1,800	60 /SY	$108,000
1.5" Top Course Asphalt	1,600	50 /SY	$80,000
House Services	110	2,000 /EA	$220,000
Curb Stops	110	300 /EA	$33,000
Water Service Meters	110	1,800 /EA	$198,000
Rock Excavation(1)	1,000	175 /CY	$175,000
Maintenance & Protection of Traffic	1	100,000 LS	$100,000
SUB-TOTAL CONSTRUCTION			$3,581,750
Contingency - 15%			$537,263
Legal (Local & Bond)			$50,000
District Formation			$10,000
Survey & Mapping			$65,000
Geotechnical Investigations			$60,000
Permitting			$5,000
Engineering			$300,000
Construction Administration			$95,000
Construction Observation			$140,000
Grant Administration			$35,000
Environmental Review			$7,500
Inflation Adjustment (2 Years @8%/yr)			$659,042
TOTAL			$5,545,555
		SAY	**$5,550,000**

(1) No data is available at this time to estimate the volume of rock removal required. The estimate provided is strictly a place holder.

Laberge ENGINEERING ARCHITECTURE Group SURVEYING PLANNING

PHASE 1 - ALTERNATIVE 2

PRELIMINARY OPINION OF COST

DISTRIBUTION SYSTEM IMPROVEMENTS

Item	Quantity	Unit cost	Total
8" Ductile Iron Pipe (CL 52)	20,600	100 /LF	$2,060,000
16" HDPE	500	550 /LF	$275,000
8" Gate Valves	19	2,250 /EA	$42,750
Hydrants	31	7,200 /EA	$223,200
Select Bedding/Backfill Material	3,200	30 /CY	$96,000
12" Subbase	700	60 /CY	$42,000
3" Base Course Asphalt	200	75 /SY	$15,000
3" Binder Course Asphalt	1,900	60 /SY	$114,000
1.5" Top Course Asphalt	1,900	50 /SY	$95,000
House Services	113	2,000 /EA	$226,000
Curb Stops	113	300 /EA	$33,900
Water Service Meters	113	1,800 /EA	$203,400
Rock Excavation(1)	1,000	175 /CY	$175,000
Maintenance & Protection of Traffic	1	100,000 LS	$100,000
SUB-TOTAL CONSTRUCTION			$3,717,000
Contingency - 15%			$557,550
Legal (Local & Bond)			$50,000
District Formation			$10,000
Survey & Mapping			$65,000
Geotechnical Investigations			$60,000
Permitting			$5,000
Engineering			$300,000
Construction Administration			$95,000
Construction Observation			$140,000
Grant Administration			$35,000
Environmental Review			$7,500
Inflation Adjustment (2 Years @8%/yr)			$683,928
TOTAL			$5,725,978
		SAY	**$5,730,000**

(1) No data is available at this time to estimate the volume of rock removal required. The estimate provided is strictly a place holder.

Laberge ENGINEERING ARCHITECTURE Group SURVEYING PLANNING

PHASE 2

PRELIMINARY OPINION OF COST

DISTRIBUTION SYSTEM IMPROVEMENTS

Item	Quantity	Unit cost	Total
8" Ductile Iron Pipe (CL 52)	9,700	100 /LF	$970,000
12" Ductile Iron Pipe (CL 52)	6,500	155 /LF	$1,007,500
16" HDPE	100	550 /LF	$55,000
8" Gate Valves	10	2,250 /EA	$22,500
12" Gate Valves	11	4,000 /EA	$44,000
8'' Pressure Reducing Valve	3	21,000 /EA	$63,000
Hydrants	29	7,200 /EA	$208,800
Select Bedding/Backfill Material	2,530	30 /CY	$75,900
12" Subbase	488	60 /CY	$29,275
3" Base Course Asphalt	123	75 /SY	$9,240
3" Binder Course Asphalt	1,464	60 /SY	$87,824
1.5" Top Course Asphalt	1,464	50 /SY	$73,187
House Services	96	2,000 /EA	$192,000
Curb Stops	96	300 /EA	$28,800
Water Service Meters	96	1,800 /EA	$172,800
Water Pumping Station/Site	1	250,000 /LS	$250,000
200,000 gal. Water Storage Tank/Site	1	800,000 /LS	$800,000
Generator	1	75,000 /EA	$75,000
Rock Excavation(1)	500	175 /CY	$87,500
Maintenance & Protection of Traffic	1	150,000 /LS	$150,000
SUB-TOTAL CONSTRUCTION			$4,402,325
Contingency - 15%			$660,349
Legal (Local & Bond)			N/A
District Formation			N/A
Survey & Mapping			$45,000
Geotechnical Investigations			$45,000
Permitting			$5,000
Engineering			$320,000
Construction Administration			$100,000
Construction Observation			$75,000
Grant Administration			N/A
Environmental Review			N/A
Inflation Adjustment (2 Years @8%/yr)			$810,028
TOTAL			$6,462,702
		SAY	**$6,465,000**

(1) No data is available at this time to estimate the volume of rock removal required. The estimate provided is strictly a place holder.