Water for the Future: Upstate Water Supply Resiliency

New Paltz Temporary Transmission Water Main
Draft Supplemental EIS

Prepared for:

September 2017

Table of Contents

List of Figures

List of Tables

List of Attachments

List of Acronyms

ASTM	American Society for Testing and Materials
CEQR	City Environmental Quality Review
CRIS	Cultural Resource Information System
DEIS	Draft Environmental Impact Statement
DEP	Department of Environmental Protection
ESA	Environmental Site Assessments
FEIS	Final Environmental Impact Statement
HDPE	High-density polyethylene
NR	National Register of Historic Places
NRSA	Natural resources study area
NWI	National Wetlands Inventory
NYNHP	New York Natural Heritage Program
NYSDEC	New York State Department of Environmental Conservation
PCE	Passenger car equivalents
RA	Rural Agricultural
REC	Recognized Environmental Conditions
RWBT	Rondout-West Branch Tunnel
SEIS	Supplemental Environmental Impact Statement
SEQRA	State Environmental Quality Review Act
SERP	State Environmental Review Process
SHPO	State Historic Preservation Office
SR	State Register
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UWSR	Upstate Water Supply Resiliency
WFF	Water for the Future

1.0 NEW PALTZ TEMPORARY TRANSMISSION WATER MAIN

1.1 INTRODUCTION

This Supplemental Environmental Impact Statement (SEIS) addresses a new project element of New York City Department of Environmental Protection's (DEP) previously proposed Upstate Water Supply Resiliency (UWSR). UWSR was the subject of a Draft Environmental Impact Statement (DEIS), which was undertaken pursuant to the State Environmental Quality Review Act (SEQRA), its implementing regulations (6 NYCRR Part 617), and the New York City Environmental Quality Review procedure (CEQR). The DEIS was issued on September 19, 2016 by DEP, as Lead Agency under SEQRA and CEQR, and a series of public hearings were held on the DEIS in October 2016, and the public comment period closed on November 14, 2016.

Subsequent to the publication of the DEIS, DEP has identified an additional element of UWSR. This new project element would involve the development of a temporary transmission water main (temporary pipeline) to supply water to the Village and Town of New Paltz, referred to collectively here as New Paltz. As described in the UWSR DEIS, a number of temporary shutdowns of the Catskill Aqueduct would occur between 2018 and 2020. These shutdowns would occur for extended periods of time, typically up to 10 weeks each, in order to allow DEP to access the interior of the aqueduct to complete additional components of the proposed Catskill Aqueduct Repair and Rehabilitation (repair and rehabilitation). There are 15 Outside Community Connections along the Catskill Aqueduct which provide water to 20 communities. As discussed within the UWSR DEIS, DEP indicated that DEP would coordinate closely with the communities served by the Outside Community Connections to confirm they have access to adequate water supply independent of the upper Catskill Aqueduct prior to any temporary shutdown of the aqueduct required for the repair and rehabilitation. As the Catskill Aqueduct represents the primary water supply for New Paltz, during these proposed shutdowns this new temporary pipeline would supply water to New Paltz.

The purpose of this SEIS is to supplement information evaluated in the DEIS, describe the proposed new element of UWSR, and identify potential significant adverse impacts of this modification, if any. DEP issued a Draft Scope of Work for the SEIS on May 26, 2017 and held a public meeting to solicit comments on the Draft Scope for the SEIS during the comment period. This meeting was held on June 29, 2017 at the Town of New Paltz Community Center, 3 Veterans Drive, New Paltz, New York. Written comments were accepted throughout the public comment period, which closed on July 11, 2017. The Final Scope of Work is attached.

1.2 BACKGROUND

The New York City (City) water supply system (see **Figure 1-1**) was developed to deliver an abundant and reliable supply of clean drinking water to the City. DEP is currently responsible for supplying clean drinking water to over 8 million City residents and 1 million upstate customers in sufficient quantity to meet present water demands and to maintain the water supply system to meet future water demands. DEP developed the Water for the Future (WFF) to address significant leakage in one of its most critical pieces of water supply infrastructure: the Delaware Aqueduct. Repairing the Rondout-West Branch Tunnel (RWBT) portion of the Delaware Aqueduct is necessary for the City to continue to meet its water supply obligations.

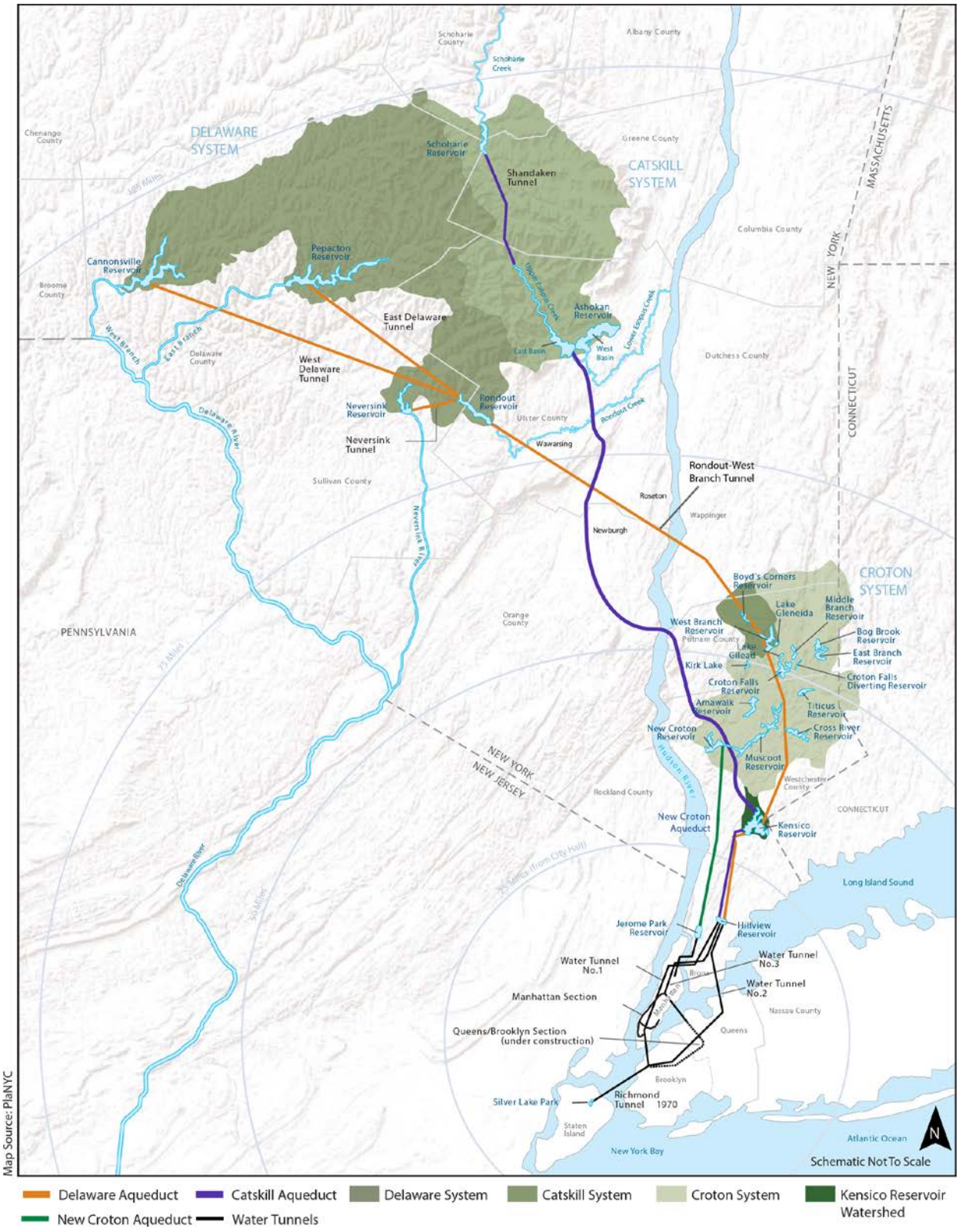


Figure 1-1: Water Supply System

DEP elected to construct a bypass tunnel and two associated shafts to permanently circumvent the leaking section of the Delaware Aqueduct at the Roseton crossing in the Town of Newburgh, Orange County, New York, and to conduct internal repairs to the leaking section in Wawarsing, Ulster County, New York. The work undertaken to circumvent the leaking section in the Roseton crossing area is referred to as the "RWBT Bypass." The RWBT Bypass work was previously evaluated in a Final Environmental Impact Statement (FEIS) issued on May 18, 2012 and construction of that project is ongoing.

1.2.1 UPSTATE WATER SUPPLY RESILIENCY

Once the bypass tunnel and shafts are completed in 2022, the RWBT would be temporarily shut down and drained to connect the bypass tunnel to the existing RWBT and to carry out internal repairs to the leaking section in Wawarsing. DEP estimates that the maximum shutdown duration would be approximately eight months. During this temporary shutdown of the RWBT, water from the Delaware System west of the Hudson River would be unavailable to the City and its customers. To ensure the continued supply of clean drinking water during this time, DEP has developed projects and plans comprised of three main components: (1) supply augmentation consisting of repair and rehabilitation of the Catskill Aqueduct; (2) WFF Shutdown System Operations[1], which would allow DEP to rely more heavily on the Catskill and Croton Systems during the temporary shutdown; and (3) RWBT Inspection and Repair during connection of the bypass tunnel, including decommissioning the bypassed section of the RWBT (see **Figure 1-2**).

The proposed repair and rehabilitation, WFF Shutdown System Operations, and RWBT Inspection and Repair work, collectively referred to as UWSR, were previously evaluated in a DEIS issued on September 19, 2016. Four public hearings were held in October 2016 and the public comment period closed on November 14, 2016.

[1] DEP frequently modifies its operation of the water supply system for many reasons, in response to a variety of conditions, as routine management that would not be subject to environmental review under SEQRA or CEQR. In contrast, "WFF Shutdown System Operations" as analyzed in the September 2016 DEIS refers to a specific and highly unusual protocol for operating the system designed solely for purposes of Upstate Water Supply Resiliency in connection with the Water for the Future.

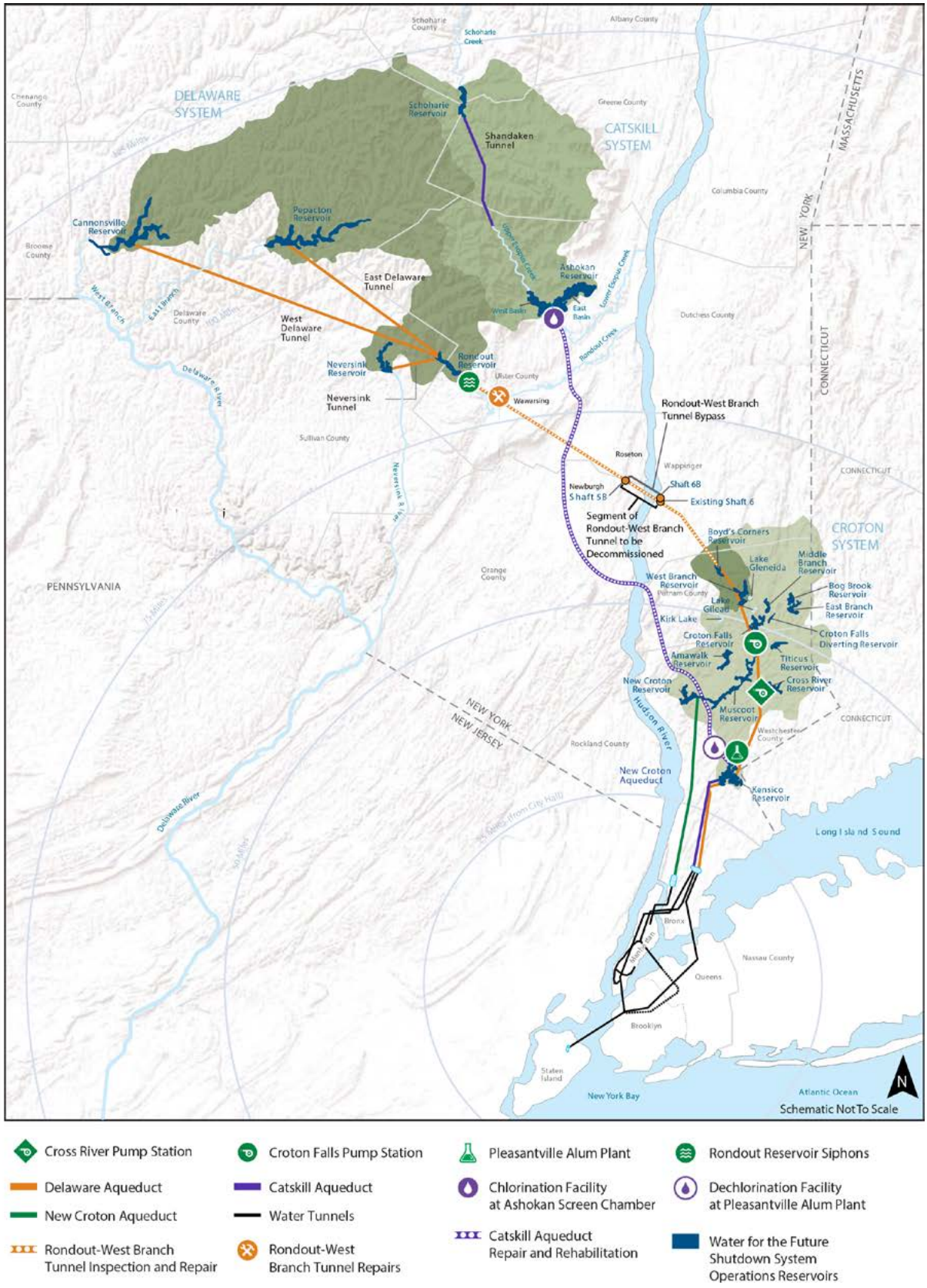


Figure 1-2: Water for the Future Overview

1.2.1.1 Catskill Aqueduct Repair and Rehabilitation

The original capacity of the upper portion of the Catskill Aqueduct between Ashokan and Kensico reservoirs has been reduced over time, partly because of the accumulation of biofilm, a naturally occurring layer of microorganisms within a self-produced polymer, along the aqueduct's interior surface. The proposed repair and rehabilitation (see **Figure 1-3**), as assessed in the UWSR DEIS, would restore historical capacity to the upper portion of the Catskill Aqueduct. This would provide water supply augmentation during the temporary shutdown of the RWBT and extend the Catskill Aqueduct's useful life.

As part of repair and rehabilitation, DEP would remove accumulated biofilm within the aqueduct, initially through the addition of one of two chlorine-based chemicals, sodium hypochlorite or chlorine dioxide. These would be added to the aqueduct via a proposed chlorination facility located at the Ashokan Screen Chamber. A dechlorination facility would be constructed at the Pleasantville Alum Plant in order to remove residual chlorine prior to release to Kensico Reservoir. Biofilm removal efforts would involve the physical removal of biofilm within the aqueduct. Repair and rehabilitation would also include additional repairs necessary as a result of age-related deterioration of the aqueduct, including repair or treatment of minor leaks and replacement of aging mechanical components. Temporary shutdowns of the aqueduct would be required to allow for the completion of these efforts, currently anticipated to encompass three separate 10-week periods over a 3-year period, from 2018 to 2020.

1.2.1.2 Outside Community Connections

DEP currently provides water supply to 15 Outside Community Connections from connections to the Catskill Aqueduct (municipal water supply systems that connect to the Catskill Aqueduct for a supply of water) (see **Figure 1-4**). As discussed within the UWSR DEIS, during temporary shutdown periods, water supply would be suspended to the Outside Community Connections. Several municipalities that currently do not have back-up supplies, including New Paltz, are pursuing separate back-up water supply projects, which are subject to independent environmental review.

As discussed in the UWSR DEIS, DEP would coordinate closely with communities served by Outside Community Connections to confirm they have access to adequate water supply, independent of the upper Catskill Aqueduct, prior to any temporary shutdown. In the event that the separate New Paltz projects are not in place prior to the temporary shutdowns, DEP is proposing a temporary alternative to supply water to New Paltz during the repair and rehabilitation temporary shutdowns. This new project element has been identified since the issuance for the UWSR DEIS and is the subject of this SEIS.

1.3 PURPOSE AND NEED

To complete repair and rehabilitation work activities prior to the planned shutdown of the RWBT in 2022, the Catskill Aqueduct would need to be out of service for up to 10 weeks at a time in fall of 2018, 2019, and 2020. As stated in the DEIS, DEP would coordinate closely with the communities served by the Outside Community Connections to confirm they have access to adequate water supply independent of the upper Catskill Aqueduct prior to any temporary shutdown of the aqueduct required for the repair and rehabilitation.

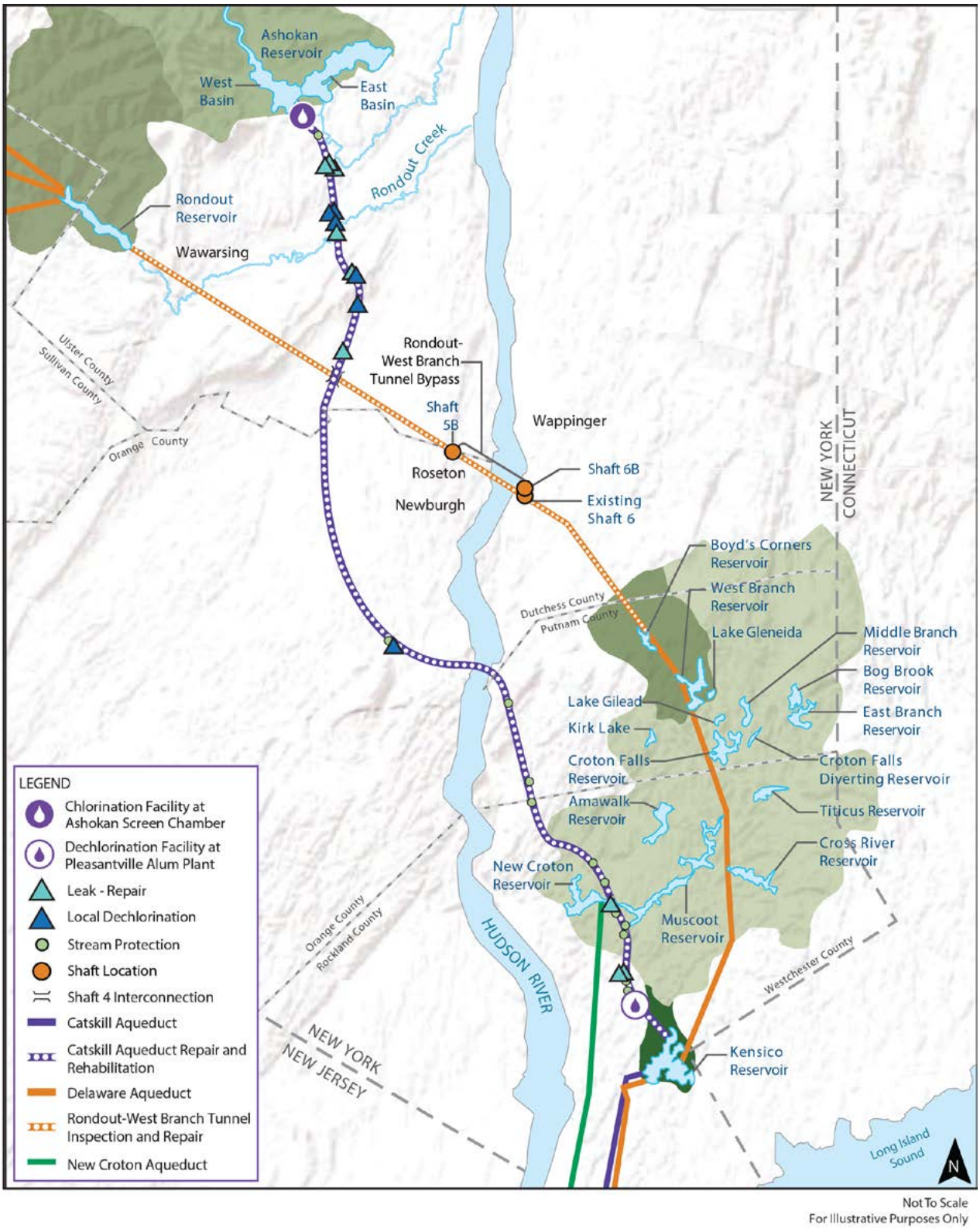


Figure 1-3: Catskill Aqueduct Repair and Rehabilitation

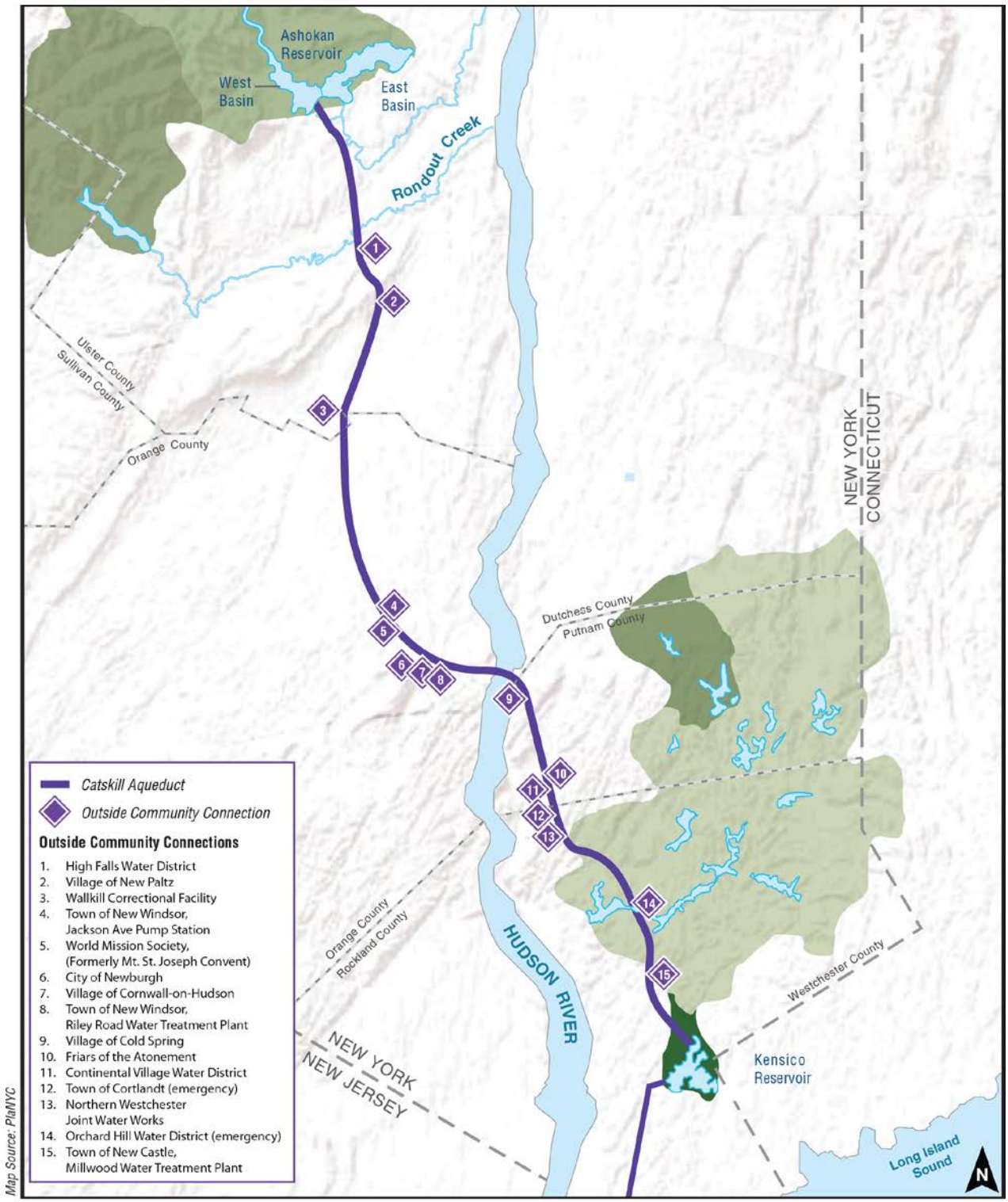


Figure 1-4: Outside Community Connections

New Paltz draws water from the Catskill Aqueduct and does not have a back-up supply in place that is capable of fully sustaining its supply needs during a continuous 10-week aqueduct shutdown. Water from the aqueduct is currently transferred to New Paltz Lower Reservoir where it is stored prior to treatment and distribution. This connection occurs at the New Paltz Connection Chamber, located north of Mountain Rest Road.

New Paltz is dependent on the Catskill Aqueduct as its primary water source and is considering independent projects to provide back-up water supply. Projects may include the development of a new well field capable of supplying 400 gallons per minute (gpm) and upgrading its existing reservoir system, including the installation of flashboards and dredging, to provide several additional days of storage capacity. The Village also plans to implement demand management initiatives in order to reduce demand during the repair and rehabilitation shutdown periods. In the event that New Paltz's independent back-up supply projects are not completed in time for the extended repair and rehabilitation shutdowns, DEP is proposing the temporary pipeline to convey water supply from the Catskill Aqueduct Wallkill Pressure Tunnel to New Paltz's existing raw water line.

The intent of this pipeline is to support completion of repair and rehabilitation work activities in a safe, dry environment, with the Catskill Aqueduct unwatered. In order to allow for the greatest length of the Catskill Aqueduct to be unwatered for the repair and rehabilitation work activities, DEP is proposing to provide Delaware Aqueduct water from the existing Catskill/Delaware Interconnection at Shaft 4 (Shaft 4 Interconnection). The Delaware Aqueduct water would be back fed to the Catskill Aqueduct's Wallkill Pressure Tunnel Downtake Chamber (Wallkill Downtake Chamber). The proposed temporary pipeline would provide a connection from the Wallkill Downtake Chamber to New Paltz Lower Reservoir.

The proposed temporary pipeline would be implemented directly by DEP and would allow segments of the aqueduct to be unwatered to facilitate in-aqueduct repairs of the Catskill Aqueduct while maintaining a supply of water to New Paltz and thereby not impacting the later shutdown of the RWBT in 2022.

1.4 PROJECT DESCRIPTION

In the event that the construction of independent back-up supply projects in New Paltz are not completed in advance of the proposed Catskill Aqueduct shutdowns, DEP is proposing the temporary pipeline as an alternative way to supply water to New Paltz during the planned shutdowns. This project will ensure any delays to the construction of the repair and rehabilitation project are avoided.

1.4.1 TEMPORARY TRANSMISSION WATER MAIN

To address the maintenance of water supply to New Paltz during these shutdowns, DEP is proposing a temporary pipeline. The temporary pipeline would be constructed between the Wallkill Downtake Chamber and New Paltz's existing raw water line, located adjacent to Mountain Rest Road, a distance of approximately 2.3 miles. DEP would connect this temporary pipeline to New Paltz's existing raw water line, which would ultimately direct water to New Paltz Lower Reservoir (see **Figure 1-5**). The temporary pipeline would be placed at grade along the Catskill Aqueduct, primarily for use during the 2020 shutdown, although DEP may choose to

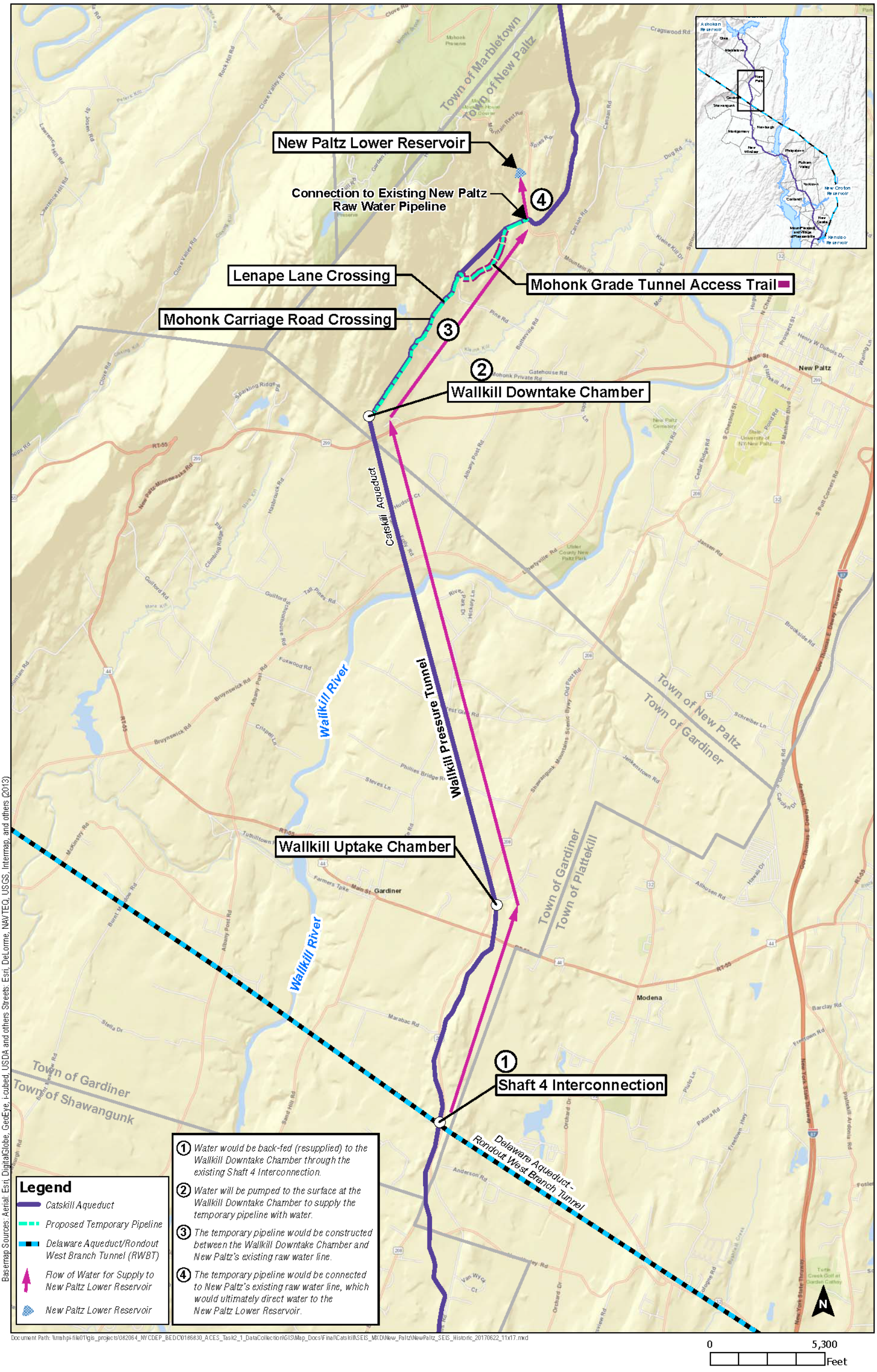


Figure 1-5: New Paltz Temporary Transmission Water Main and Connection to the Catskill/Delaware Interconnection at Shaft 4

(This page intentionally left blank)

install the pipeline earlier for use during either the 2018, 2019, and/or 2020 shutdowns. If repair and rehabilitation shutdowns are required beyond 2020, then the temporary pipeline may also be used during additional repair and rehabilitation project shutdowns. Once the repair and rehabilitation project is complete, the temporary pipeline would be removed, and the area would be restored to existing conditions.

The temporary pipeline would be supplied with water pumped from the Wallkill Downtake Chamber, which would be back fed (re-supplied) via the Catskill Aqueduct from the Delaware Aqueduct through the existing Shaft 4 Interconnection in Gardiner, New York (see **Figure 1-5**). The Shaft 4 Interconnection, an approximately 4,500 square foot partially buried facility, would allow water from the Delaware Aqueduct to be diverted to the Catskill Aqueduct. DEP would install valves and an internal 6-inch hose to provide the necessary water volume from the Delaware Aqueduct. Water would be fed to the Wallkill Uptake Chamber (the downstream section of the Wallkill Pressure Tunnel), which would convey the Delaware System water toward the Wallkill Downtake Chamber and the temporary pipeline for New Paltz. This would allow the portion of the Catskill Aqueduct north of the Wallkill Pressure Tunnel to remain unwatered for the duration of the extended shutdown.

Raw water would be transferred to New Paltz Lower Reservoir for storage prior to treatment and distribution by New Paltz, similar to current operations. The temporary pipeline has been designed to convey the flow to New Paltz Lower Reservoir raw water, as necessary, to meet demand to support a 10-week shutdown. This supply would be accomplished through an existing interconnection at DEP's Shaft 4, back feeding the Catskill Aqueduct to the Wallkill Downtake Chamber via the Wallkill Pressure Tunnel, and pumping from the Wallkill Downtake Chamber through the proposed temporary pipeline to New Paltz's existing raw water pipeline, located adjacent to the Mountain Rest Road, then to the New Paltz Lower Reservoir (see **Figure 1-5**).

The proposed temporary pipeline would consist of a 10-inch diameter high-density polyethylene (HDPE) pipe, running approximately 12,400 linear feet, primarily at grade, along the aqueduct from the Wallkill Downtake Chamber to Mountain Rest Road, where it would be connected to the existing New Paltz raw water pipeline. The temporary pipeline would be placed down slope from the top of the aqueduct cut-and-cover berm, to maintain vehicular access on the aqueduct, where possible (see **Figure 1-6**). The proposed temporary pipeline would be located adjacent to the top of the aqueduct cut-and-cover berm with the exception of one area where the aqueduct traverses through a steep and heavily wooded area. In this area, the temporary pipeline would not follow the aqueduct, but would follow an existing road ("Mohonk Grade Tunnel Access Trail") for a length of approximately 1,100 feet, before returning to the aqueduct alignment (see **Figure 1-5**). The use of the Mohonk Grade Tunnel Access Trail may require temporary property access permission from the property owner.

The temporary pipeline is anticipated to be delivered to the site in 40- and 50-foot lengths and staged at the Wallkill Downtake Chamber or a parking area adjacent to Mountain Rest Road directly from the delivery trucks, on City property. The sections of pipe would then be transported to the work site by driving along the aqueduct. The pipe sections would be butt-fused together as they are placed along the aqueduct. The temporary pipeline would be supported and restrained to keep the pipes in place during operation.

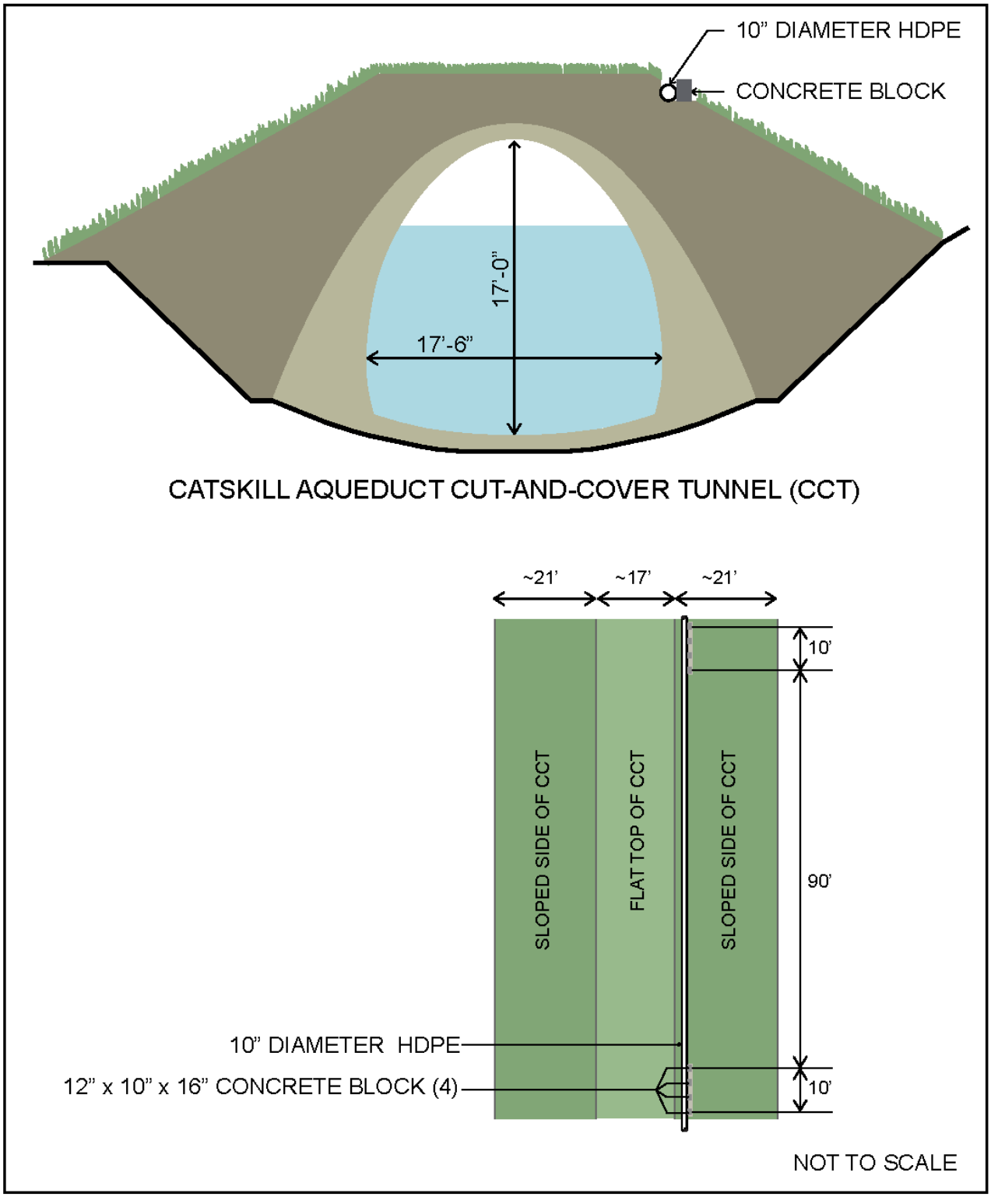


Figure 1-6: Proposed Pipeline Cross-Section and Plan View

There are existing vehicle and pedestrian crossings along the aqueduct, including the Mohonk Carriage Road (intersects with the Historic Duck Pond Trail), Lenape Lane, and the Mohonk Grade Tunnel Access Trail (see **Figure 1-5**). The temporary pipeline would be direct buried at Lenape Lane and the Mohonk Carriage Road crossings to maintain vehicle and pedestrian access, as required. Minor excavation would be required to install the temporary pipeline below grade in these locations. The vehicle crossings would be restored to existing conditions upon removal of the temporary pipeline.

The temporary pipeline would cross approximately 10 locations where the aqueduct has culverts crossing beneath it. The existing crossings are located approximately 10 to 70 feet down slope from the proposed temporary pipeline and allow existing watercourses or stormwater drainage to flow under the aqueduct. Blow-off valves would be placed at each of these crossings to allow drainage of the temporary pipeline to downstream of these culverts. The pipe would be drained by connecting a hose to the blow-off valve and releasing the raw water into the culvert or drainage ditch. Draining the pipe is especially necessary when not operational to prevent freezing.

The proposed temporary pipeline would be monitored and inspected before start up and frequently during operation. In addition, DEP would be prepared to address any repairs in a timely manner, if necessary.

1.4.2 CONNECTION AT WALLKILL DOWNTAKE CHAMBER

During planned shutdowns of the Catskill Aqueduct, raw water would be diverted from the Delaware Aqueduct via the Shaft 4 Interconnection to maintain a consistent water surface elevation within the Wallkill Pressure Tunnel to provide the necessary water level for supplying water to the New Paltz Lower Reservoir. As part of construction of the temporary pipeline, temporary pumps would be installed at the Wallkill Downtake Chamber. The pumps (one primary and one standby) have been designed to deliver water from the Wallkill Downtake Chamber through the temporary pipeline to New Paltz's existing raw water line adjacent to Mountain Rest Road, ultimately supplying the New Paltz Lower Reservoir. The pumps at the Wallkill Downtake Chamber are anticipated to operate for approximately 96 hours continuously and rest for approximately 32 hours before starting up again; however, operation of the pumps would occur as necessary to maintain sufficient water supply to New Paltz. Personnel would be on-site during the operation of the pumps.

The pumps would be mounted on a steel frame spanning the opening of a removed Wallkill Downtake Chamber panel. A new diesel-powered generator would be located at the Wallkill Downtake Chamber and would supply power to the pumping system while in use. A back-up generator would also be installed, but only one generator would be used at a time.

1.4.3 CONNECTION AT MOUNTAIN REST ROAD

The temporary pipeline would connect to New Paltz's existing raw water line located adjacent to Mountain Rest Road. This water line currently conveys water from the New Paltz Pumping Station to New Paltz Lower Reservoir. The existing raw water line is located approximately 4.5 feet below grade and while it does not operate on a continuous basis, it would be temporarily

shut down for approximately 5 days to allow for installation of a tee and connection with an isolation valve at grade, to facilitate the operation of the new connection. This gate valve would be removed and replaced with a blind flange after completion of the last 10-week shutdown. These activities would be of short-term duration and would not interrupt the water supply to New Paltz. The existing raw water line is located outside of the paved roadway, but within the roadway right-of-way, and therefore road closures and maintenance and protection of traffic is not anticipated.

1.5 PROJECT SCHEDULE

The proposed temporary pipeline would need to be operational in advance of the shutdown of the aqueduct that supplies New Paltz. For the purpose of the SEIS analyses, it was conservatively assumed that construction of the temporary pipeline would be completed in 2018 prior to the first planned shutdown for the repair and rehabilitation project, and the temporary pipeline would remain in place until after the final shutdown, anticipated in 2020. Installation of the temporary pipeline is anticipated to be completed in approximately 30 working days, with construction at the Wallkill Downtake Chamber anticipated to be completed in approximately 10 working days.

1.6 PROJECT APPROVALS AND COORDINATION

The temporary pipeline would require discretionary permits, approvals, and consultations from federal, State, and local agencies. DEP will work with involved agencies to acquire the necessary permits, approvals, and/or consultations needed for the construction and operation of the temporary pipeline. Potential discretionary permits, approvals, and consultations that may be obtained, as necessary, are listed in **Table 1-1**.

Table 1-1: Summary of Potential Discretionary Permits and Approvals for New Paltz Temporary Transmission Water Main

Agency/Entity	Permit and/or Approval
State	
NYS Department of Environmental Conservation	SPDES General Permit for Stormwater Discharges from Construction Activities (GP-0-15-002)
NYS Department of Health	Approval of Plans for Public Water Supply Improvement
Local	
New York City Department of Health and Mental Hygiene	Approval of Plans for Public Water Supply Improvement Review
Town of New Paltz	Wetlands and Watercourse*
	Clearing and Grading Permit*
	Steep Slope Permit*
	Municipal Separate Storm Sewer System (MS4) Acceptance Form for Stormwater Pollution Prevention Plan*
Village of New Paltz	Connection to Distribution System
Ulster County Department of Health	Approval of Plans for Public Water Supply Improvement Review
Ulster County Department of Public Works	Highway Work Permit
*The proposed temporary pipeline would not result in disturbance to regulated wetlands or watercourses or their associated buffer and minimal clearing or grading is proposed. In addition, the temporary pipeline route would be largely located on the Catskill Aqueduct earthen berm and would not be located on natural steep slopes or result in substantive ground disturbance.	

2.0 ANALYTICAL FRAMEWORK AND METHODOLOGY

2.1 INTRODUCTION AND BACKGROUND

As the Lead Agency, DEP is required to examine the potential environmental effects of a proposed action and, to the maximum extent practicable, avoid, or mitigate potentially significant adverse environmental impacts, consistent with social, economic, and other essential considerations. As detailed in the DEIS for UWSR, this environmental review is being prepared in accordance with New York's SEQRA and the City's CEQR process.

2.2 ANALYTICAL FRAMEWORK

As noted in the *CEQR Technical Manual* and SEQRA regulations (6 NYCRR §617.9(a)(7)), an SEIS may be required if there are changes in a proposed project which may result in one or more significant adverse environmental impacts not addressed in the original EIS. Since the issuance of the UWSR DEIS in September 2016, DEP has developed an alternative method to supply water to New Paltz during shutdowns of the aqueduct as part of the repair and rehabilitation project. DEP is proposing to install a temporary pipeline from the Wallkill Downtake Chamber to an existing New Paltz raw water line, located adjacent to Mountain Rest Road, and ultimately to New Paltz's Lower Reservoir ("proposed temporary pipeline") as discussed in Section 1.4, "Project Description." As this alternative was developed after the DEIS for the repair and rehabilitation project was issued, this SEIS analyzes this new project element.

The following is a description of the analytical framework used for this SEIS:

- **Existing Conditions.** Existing conditions were described in order to establish a baseline against which future conditions can be projected.

- **No Build Condition.** Using existing conditions as a baseline, conditions known to occur or expected to occur in the future, regardless of the Proposed Project, were then evaluated for the Proposed Project's analysis year(s). This is the "No Build" or "Future without the Proposed Project" and is the baseline condition against which the effects of the Proposed Project are measured.

- **Analysis Year.** The analysis year refers to the future year when a Proposed Project is likely to affect its environmental setting. The analysis year is representative of the anticipated construction and/or operational years.

- **Probable Impacts with the Proposed Project (With Action Condition).** Potential changes resulting from construction or operation of the New Paltz Temporary Transmission Water Main Project were then compared to the No Build condition to assess the potential for impacts associated with the incremental change. This comparison provides for an understanding of the potential impacts that could result with the Proposed Project. Future conditions would be evaluated and represent a "reasonable worst-case scenario" in order to determine the probable impacts with the Proposed Project.

For the purpose of the SEIS analyses, it was conservatively assumed that construction of the temporary pipeline would be completed in 2018 prior to the first shutdown associated with the repair and rehabilitation project, and would remain in place until after the final shutdown, anticipated in 2020.

The UWSR DEIS included an assessment of work locations in the Town of New Paltz. These work locations were included in two study areas, Mountain Rest Road and New Paltz-Minnewaska Road. Notable work sites within the DEIS study area for Mountain Rest Road include the New Paltz Connection Chamber and New Paltz Pump Station in the eastern portion of the DEIS study area and the culvert drain access manhole in the western portion of the DEIS study area. Notable sites within the DEIS study area for New Paltz-Minnewaska Road include the Poor Farm Arch Bridge and the Wallkill Downtake Chamber. The Kleine Kill, a tributary to the Wallkill River, traverses the northern portion of the New Paltz-Minnewaska Road Study Area and is bounded to the south by New Paltz-Minnewaska Road (also known as State Route 299 and County Route 8) and to the northeast by Lenape Lane, a local roadway. The study area for this SEIS, as defined in Section 2.4, "Study Area Location and Description," includes the southern portion of the Mountain Rest Road and the entire New Paltz-Minnewaska Road DEIS Study Areas. Additional analyses, as applicable and appropriate, are included herein to supplement the assessments previously completed for these two study areas as part of the UWSR DEIS.

2.3 SCREENING ASSESSMENT

For the purposes of this SEIS, screening assessments were conducted for each impact category to form an initial characterization of existing conditions, including an inventory of relevant data and environmental resources within the study area, to determine which impact categories warranted an impact analysis. The screening assessments primarily relied on desktop evaluations (e.g., review of ArcGIS data, maps, aerial imagery, applicable information from the DEIS, online databases, and local agency consultations). These desktop evaluations, and a supplementary field visit, are referenced or summarized in each screening assessment below. In addition, a review of potentially applicable State and local public policies informed many of the screening assessments to determine whether the temporary pipeline would be consistent with these. Those public policies that the temporary pipeline could be inconsistent with warranted an impact analysis and were identified relative to the applicable impact category.

Several impact categories did not warrant an assessment as per *CEQR Technical Manual* guidance, and were thus screened out of the impact analysis.

- A land use and zoning assessment are not applicable as the proposed temporary pipeline would not result in land use or zoning changes within existing public services or vacant land use areas and agricultural zoning designations. The temporary pipeline would be largely located along the alignment of the existing aqueduct or buried below grade where the temporary pipeline crosses Lenape Lane and the Mohonk Carriage Road (Historic Duck Pond Trail).

- A community facilities and services assessment is not applicable because the operation of the temporary pipeline would not involve substantive new populations and is not expected to

result in any changes to community services (e.g., schools, libraries, child care centers, healthcare facilities, police and fire protection). Any community service needs (e.g., police associated with traffic control or equipment deliveries) required during construction would be limited and very short-term, likely a few days or a few weeks. As a result, no impacts to existing or the need for new community facilities and services is expected and no detailed assessment is required.

- A shadows assessment is not applicable because the temporary pipeline would not result in new structures or additions to existing structures greater than 50 feet tall, or be located adjacent to, or across from a sunlight-sensitive resource.

- An urban design and visual resource assessment is not warranted because the temporary pipeline would not include the construction of any structures, and there would be minimal permanent physical changes to the project site. While visual resources may exist in the study area, upon completion of construction, no impacts to visual resources would occur. As a result, there would be no impacts related to urban design and visual resources and no detailed assessment is required.

- There would be no substantive disturbance to geology and soils, aquatic/benthic resources, wildlife, and unlisted rare and vulnerable species associated with the temporary pipeline. Therefore, an impact analysis related to these natural resources is not warranted.

- A solid waste and sanitation services assessment is not warranted because the temporary pipeline would not result in the generation of 50 tons per week or more of solid waste.

- An energy assessment is not warranted because the temporary pipeline would not result in any substantive increase in energy demands or new electrical or gas services and would likewise not result in new generation or transmission of energy.

- A greenhouse gas emissions and climate change assessment is not warranted because the temporary pipeline would not result in any substantive generation of greenhouse gases.

- An air quality impact analysis associated with the operation of the proposed temporary pipeline is not warranted as there would be no substantive and new mobile or stationary emission sources.

- A noise impact analysis related to mobile noise associated with the operation of the proposed temporary pipeline is not warranted.

- A traffic assessment for the operation of the temporary pipeline is not warranted as the proposed temporary pipeline would result in a nominal number of vehicle trips significantly below the *CEQR Technical Manual* screening threshold of 50 peak-hour passenger car equivalents (PCEs).

- A Critical Environmental Area assessment is not warranted because the temporary pipeline is not located in any Critical Environmental Areas.

For each impact category that did not screen out, an impact analysis was conducted that included an evaluation of existing conditions, future conditions without the temporary pipeline, and future conditions with the temporary pipeline, as described further below. This draft SEIS focuses on the following impact categories: public policy, socioeconomic conditions, open space and recreation, historic and cultural resources, natural resources, hazardous materials, water and sewer infrastructure, transportation, air quality and noise, neighborhood character and public health.

Unless otherwise noted in the impact categories below, the impact analysis methodologies for each of the impact categories presented within Section 9.3 of the UWSR DEIS were utilized.

2.4 STUDY AREA LOCATION AND DESCRIPTION

The temporary pipeline study area is located along the upper Catskill Aqueduct in the Town of New Paltz, Ulster County, New York. The study area is generally bounded by Mountain Rest Road to the north and the existing Wallkill Downtake Chamber to the south near New Paltz-Minnewaska Road (State Route 299). The study area boundary is located approximately 400 feet beyond the limits of the aqueduct and/ or within the areas of disturbance related to the proposed work to be performed. An aerial photograph of the study area, including the aqueduct corridor, proposed route of the temporary pipeline, staging and access areas, are shown on **Figure 2-1**.

The Catskill Aqueduct crosses Mountain Rest Road within the UWSR DEIS Mountain Rest Study Area, see DEIS Chapter 9.6.3. The Wallkill Downtake Chamber is located within the UWSR DEIS New Paltz-Minnewaska Road Study Area, see DEIS Chapter 9.6.4. As detailed in the UWSR DEIS, access to the Wallkill Downtake Chamber is provided from New Paltz-Minnewaska Road (State Route 299). Staging for the proposed temporary pipeline would be available at Mountain Rest Road and the Wallkill Downtake Chamber.

The study area consists of public service, open space, vacant, and agricultural land uses. The proposed temporary pipeline is mainly located in a public service corridor (i.e., the Catskill Aqueduct) which is owned and maintained by DEP. The proposed temporary pipeline would be located entirely within an Agricultural (A-3) zoning district and is identified as a permitted use as a public utility within the Town of New Paltz.

A small portion of the Lake Mohonk Mountain House Complex, listed on the National Register of Historic Places (NR), is located in the study area. There are no other federal, State, or local designated historic districts, landmarks, or known archeological resources within the study area.

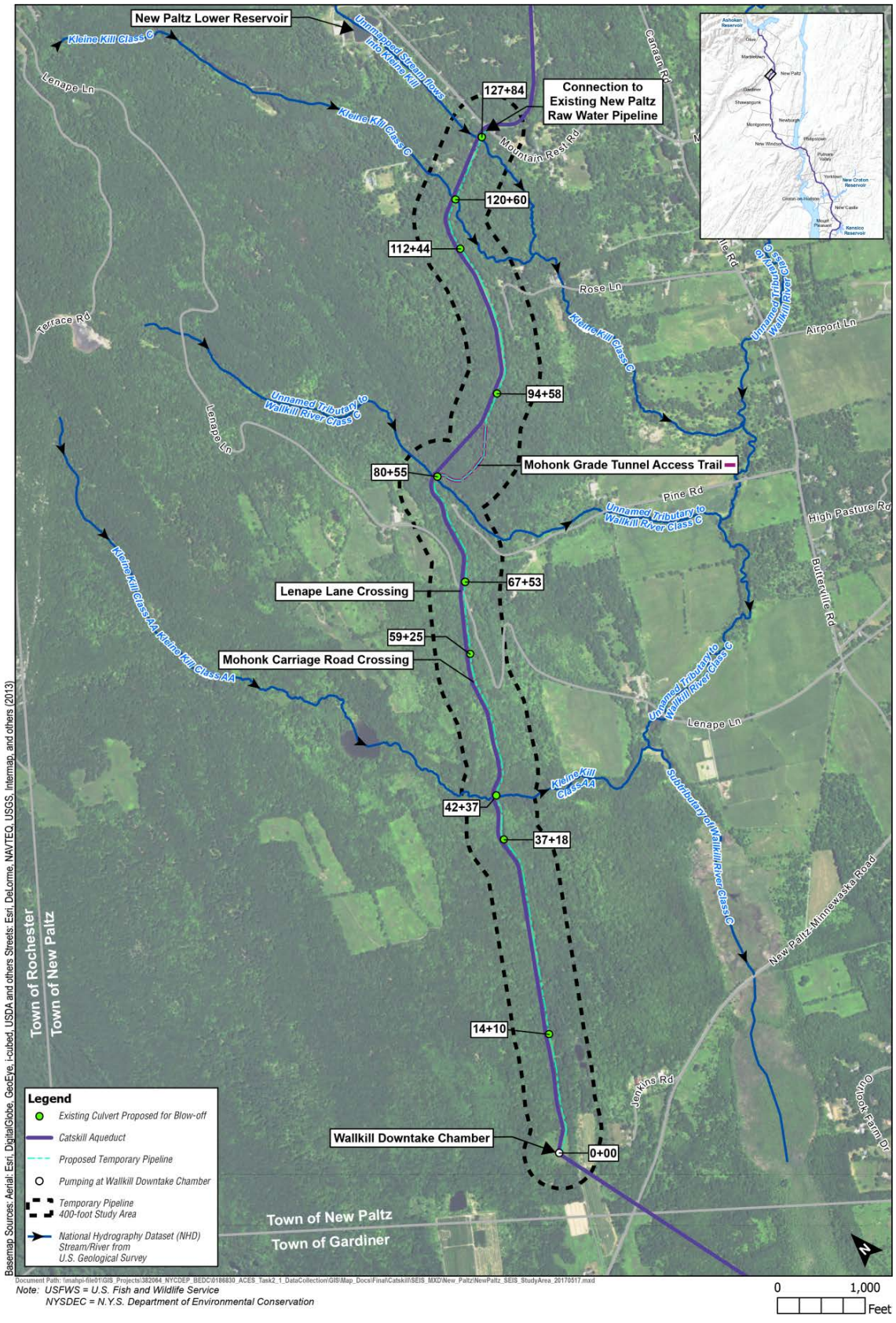


Figure 2-1: Study Area

3.0 PROBABLE IMPACTS

3.1 LAND USE, ZONING, AND PUBLIC POLICY

As discussed in the screening assessment, the proposed temporary pipeline would not result in significant changes to land use or zoning. Therefore, an impact analysis related to these categories is not warranted. In accordance with the *CEQR Technical Manual*, this section considers the proposed temporary pipeline's consistency with applicable public policies.

Public Policy

Applicable public policies for Ulster County and the Town of New Paltz were reviewed in relationship to the proposed temporary pipeline. The *2007 Ulster County Open Space Plan* establishes a framework for the management and protection of open space resources identified by Ulster County. These include water resources, working landscapes, landforms and natural features, ecological communities, cultural and historic resources, and recreational resources. To provide guidance on these open space resources, Ulster County has established "*Principles of the Open Space Plan*" that seek to safeguard the county's open space values. Based upon a review of these principles, there are two principles (Open Space Principles 2 and 7) applicable to the proposed temporary pipeline:

> *(2) Preserve and protect open space, unique natural areas and heritage areas and sites, wetlands, water and woodland resources, scenic views, areas of natural beauty and the rural character of Ulster County.*
>
> *(7) Protect and enhance the county's most valuable open space landforms and natural features with coordinated planning and safeguard policies.*

Historic and cultural resources within the study area are discussed in Section 3.4, "Historic and Cultural Resources," and water and terrestrial resources within the study area are discussed in Section 3.5, "Natural Resources and Water Resources." Open space and recreation resources are also identified within the study area and are discussed in Section 3.3, "Open Space and Recreation."

Future Without the Proposed Project

In the future without the proposed temporary pipeline, continued operation of the Catskill Aqueduct would be consistent with existing conditions and no new developments or structures are anticipated. Operation of the aqueduct in the future without the proposed temporary pipeline would remain consistent with public policies within the Town of New Paltz, Town of Gardiner, and/or Ulster County.

Probable Impacts with the Proposed Project

The proposed temporary pipeline would also be consistent with the two applicable "*Principles of the Open Space Plan"* within the *2007 Ulster County Open Space Plan* as discussed below.

> *(2) Preserve and protect open space, unique natural areas and heritage areas and sites, wetlands, water and woodland resources, scenic views, areas of natural beauty and the rural character of Ulster County.*

Under this principle, valuable landforms and natural features are protected in order to benefit residents and preserve the rural character of Ulster County.

A portion of Mohonk Preserve property is located in the central and southwestern portion of the study area, west of the Catskill Aqueduct, see Section 3.3, "Open Space and Recreation." A portion of the temporary pipeline would be installed within Mohonk Preserve, however, the pipeline would be buried and the ground surface would be restored to existing conditions after initial construction and placement of the pipeline and also after the temporary pipeline is removed. As described above, the proposed temporary pipeline would be installed under existing roadways and trails used for public access through the Mohonk Preserve. Construction in the study area may temporarily affect views from the trails and roadways, however, the construction of the temporary pipeline would be for a limited amount of time (approximately 30 days) and vehicle and pedestrian access to these trails would be maintained at all times. The operation of the temporary pipeline would not impact land use, roadways or trail usage and following removal of the proposed temporary pipeline, the crossings would be restored to existing conditions.

Portions of the Lake Mohonk Mountain House Complex, a site listed on the NR, are located in the central and southern portions of the study area (see Section 3.4, "Historic and Cultural Resources"). The Lake Mohonk Mountain House Complex is located within the larger Mohonk Preserve, an approximately 8,000-acre, non-profit nature preserve used for outdoor recreation such as hiking, picnicking, snowshoeing, and biking. As described in the Historic and Cultural Resources section, the installation and removal of the temporary pipeline would not be visible from the Lake Mohonk Mountain House and no impacts to historic resources would occur.

As described in Section 3.5, "Natural Resources and Water Resources," the proposed temporary pipeline would not create adverse impacts to wetlands, water, and woodland resources. The temporary pipeline would be largely located within DEP-owned property along the alignment or adjacent to the Catskill Aqueduct. Construction and operation of the temporary pipeline would not be located within or adversely impact wetlands, water resources or woodlands.

As such, the temporary pipeline would not affect open space resources, unique natural areas and heritage areas and sites, wetlands, water and woodland resources, scenic views, areas of natural beauty, or the rural character of Ulster County and would be consistent with this principle.

> *(7) Protect and enhance the county's most valuable open space landforms and natural features with coordinated planning and safeguard policies.*

The potential for impacts to open space resources associated with the temporary pipeline are analyzed in detail in Section 3.3, "Open Space and Recreation." Under this principle, the Open Space Plan recommends preserving the visual or ecological values of significant landforms and natural features in order to protect against inappropriate development.

The installation, operation, and removal of the temporary pipeline would not permanently affect landforms and natural features such as valleys, ridgelines, slopes, coastal areas, or scenic areas. Proposed work activities would take place largely within DEP-owned property adjacent to the Catskill Aqueduct on previously disturbed lands and within or adjacent to existing roadways. During construction, views of the equipment and vehicles from the Mohonk Preserve would be temporary and partially screened by a dense stand of trees along the Catskill Aqueduct. Construction of the temporary pipeline would take approximately one month and any visual effects would be temporary. During operation of the pipeline, no adverse impacts associated with visual resources would be anticipated. The proposed temporary pipeline would therefore be consistent with this policy, and would not result in significant impacts to the county's most valuable open space landforms and natural features.

Therefore, the temporary pipeline would not result in significant adverse impacts to public policy within the study area.

3.2 SOCIOECONOMIC CONDITIONS

In accordance with the *CEQR Technical Manual*, this section considers the proposed temporary pipeline's potential to affect socioeconomic conditions in the study area.

Existing Conditions

The study area is predominately open space, public services (i.e., Catskill Aqueduct), vacant land, and residential land uses with limited agricultural areas. It is primarily forested, with low-density residential areas and agricultural fields in the south. The Wallkill Downtake Chamber site is accessed by crossing a private property for which DEP has existing access rights. The Mountain Rest Road staging area is accessed from Mountain Rest Road. The length of the aqueduct is accessed by driving on top of the Catskill Aqueduct from the Wallkill Downtake or Mountain Rest Road, with the exception of one section. At this location, the transmission water main would leave the aqueduct and follow an existing path around an inaccessible portion of the aqueduct for a length of approximately 1,150 feet, following the existing Mohonk Grade Tunnel Access Trail, before returning to the aqueduct.

Future Without the Proposed Project

DEP has consulted with the Towns of New Paltz and Gardiner and Ulster County, and it is DEP's understanding that no major developments or programs are planned within the study area within the timeframe of the impact analysis. Therefore, in the future without the temporary pipeline, it is assumed that land use, population, housing, and economic activity within the study area would be similar to existing conditions.

Probable Impacts with the Proposed Project

The proposed temporary pipeline would not result in (1) direct residential displacement; (2) direct business displacement; (3) indirect residential displacement; (4) indirect business displacement; or (5) adverse effects on a specific industry. However, the proposed temporary pipeline may require the acquisition of land/easements (or other agreements); therefore, a socioeconomic assessment was done. The temporary pipeline would require access to private property along the approximately 1,150 foot length following the existing Mohonk Grade Tunnel Access Trail that is owned by the Mohonk Preserve. DEP would require necessary property access permission from the owner.

Construction would occur along the length of this Trail to install the proposed pipeline at grade. Following construction, all equipment would be removed. Following operation of the temporary pipeline, the temporary pipeline would be removed and the area would be restored to existing conditions. The property access permission acquired by DEP would not create any significant impacts to the existing landowner. As a result, the temporary pipeline would not directly displace businesses (or employees) or residences.

Therefore, the temporary pipeline would not result in significant adverse impacts to socioeconomic conditions.

3.3 OPEN SPACE AND RECREATION

The *CEQR Technical Manual* requires an open space assessment if a project "potentially has a direct or indirect effect on open space." Open space resources are located within the study area and this section considers the potential effects of the temporary pipeline to open space and recreational resources.

Existing Conditions

The open space and recreation study area encompassed those areas within 400 feet of the proposed temporary pipeline as shown on **Figure 3-1.** Two open space and recreation resources exist within the study area: the Mohonk Preserve and the Mohonk Carriage Road (Historic Duck Pond Trail) (see **Figure 3-1**). In addition, the temporary pipeline would also follow the Mohonk Grade Tunnel Access Trail, an informal road that is not formally mapped or maintained by the Mohonk Preserve, where the temporary pipeline would diverge from the Catskill Aqueduct. The Mohonk Preserve is an approximately 8,000-acre, non-profit nature preserve used for outdoor recreation such as hiking, picnicking, snowshoeing, and biking. Approximately 41 acres of the Mohonk Preserve are located within the central and southwestern portion of the study area. A short segment of a Lake Mohonk Mountain House Complex mapped hiking trail, Historic Duck Pond Trail, is also located within the central portion of the study area, and crosses the proposed temporary pipeline route. Other informal trails exist in the study area; however, these trails are not mapped or formally maintained and would have limited views of the proposed temporary pipeline through the densely forested areas along the trails.

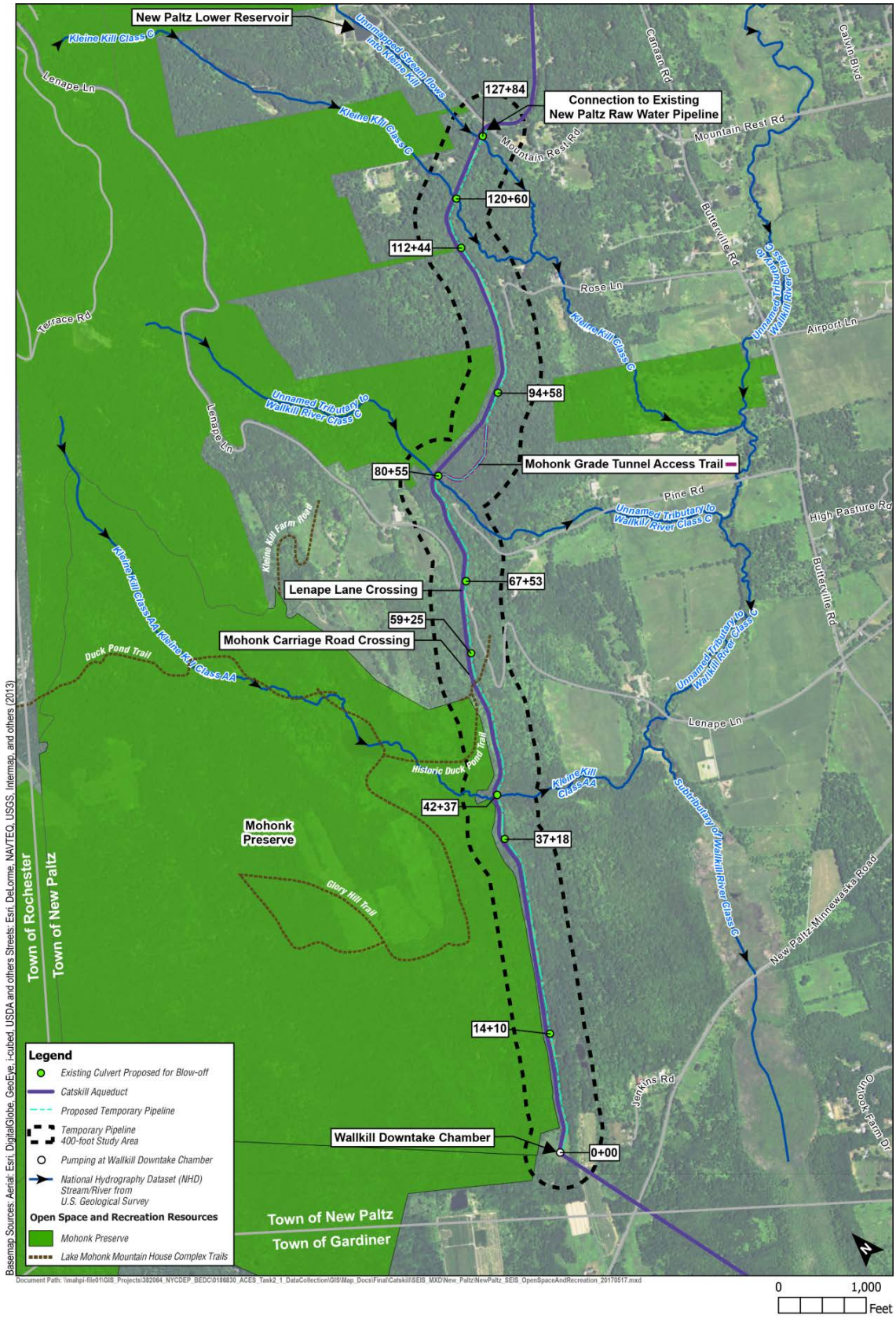


Figure 3-1: Open Space and Recreational Resources

Future Without the Proposed Project

DEP has previously consulted with the Towns of New Paltz and Gardiner, and Ulster County, and it is DEP's understanding that no plans to expand or create new open spaces or recreational resources are anticipated within the area of the proposed temporary pipeline within the timeframe of the impact analysis. In the future without the proposed temporary pipeline, natural processes, such as changes in habitat due to natural vegetative succession, are anticipated to continue and use of the identified open spaces is anticipated to continue. Therefore, in the future without the proposed temporary pipeline, it is assumed that open space and recreation would remain the same as under existing conditions.

Probable Impacts with the Proposed Project

No changes to open space and recreation resources would occur from the proposed temporary pipeline. Work activities for the proposed temporary pipeline would be located outside the limits of the Mohonk Preserve and would not cause impacts to the preserve. The temporary pipeline route would be largely located on the Catskill Aqueduct earthen berm. The temporary pipeline route would cross over existing trails, including the Historic Duck Pond Trail (Mohonk Carriage Road), where the temporary pipeline would be buried below grade, and the informal Mohonk Grade Tunnel Access Trail, where the temporary pipeline would be located at grade. To accommodate hikers during construction, access to the existing trails across the project site would be maintained. Construction vehicles would proceed with caution while driving in the vicinity of hiking trails and would yield to trail users. The installation and removal of the temporary pipeline may temporarily affect views from mapped and informal trails adjacent to and/or within a limited portion of the study area, however, these work activities would be short-term. Following construction activities, all equipment would be removed from the work areas and the site would be revegetated to restore to existing conditions. Trail crossings would be maintained or restored to existing conditions once the new pipeline is installed to avoid impacts to these contributing features of the Lake Mohonk Mountain House Complex.

During operation of the temporary pipeline, no significant impacts to open space and recreation resources are anticipated. Diesel-powered generators (one primary and one standby) would be located at the Wallkill Downtake Chamber to supply power to the pumps during operation of the temporary pipeline. While there may be temporary increases in noise levels in close proximity these, potential impacts to hiking or other recreational uses within Mohonk Preserve are not anticipated at the Lake Mohonk Mountain House Preserve and the aforementioned trails as these are located a significant distance from the Wallkill Downtake Chamber site. The proposed temporary pipeline would not encroach upon, cause a loss of open space, impact the use or physical character of, or disrupt views from the Mohonk Preserve or the Historic Duck Pond Trail.

Therefore, the proposed temporary pipeline would not result in significant adverse impacts to open space and recreation within the study area.

3.4 HISTORIC AND CULTURAL RESOURCES

In accordance with the *CEQR Technical Manual*, an historic and cultural resources assessment, which include both archeological and architectural resources is warranted for projects that would have any ground disturbance or if the project would result in a new or alteration to a historically important building, structure or object. The proposed temporary water pipeline would not affect historically important buildings, structures, or objects, but would involve ground disturbance. This section analyzes the potential for the proposed temporary pipeline to affect historic and cultural resources.

Existing Conditions

Historic resources identified in the New York State Historic Preservation Office (SHPO) Cultural Resource Information System (CRIS) were reviewed within the historic resources study area, as shown on **Figure 3-2**. One site listed on the NR, the Lake Mohonk Mountain House Complex (NR Number 90NR02849) is located within the study area. The Complex comprises a majority of the central and southern portions of the study area and extends further east and west of the study area. The Lake Mohonk Mountain House Complex includes the large resort hotel (Lake Mohonk Mountain House) located on the Shawangunk Ridge of the Catskill Mountains on 1,325 acres of forest, landscaped meadows, and gardens. It adjoins the Mohonk Preserve and is crisscrossed by hiking trails and carriage roads connected to the Mohonk Preserve. The Lake Mohonk Mountain House is a National Historic Landmark located within the Complex, but is located outside of the study area. The temporary pipeline would cross Mohonk Carriage Road (Historic Duck Pond Trail) and Lenape Lane within the Lake Mohonk Mountain House Complex. In addition, the temporary pipeline would cross, the Mohonk Grade Tunnel Access Trail, an informal road within the Complex. According to the CRIS database, and previous correspondence with SHPO conducted as part of the UWSR DEIS, there are no NR/State Register (SR) listed archeological resources, no additional NR/SR historic districts, no State landmarks, and no other known structures eligible for listing on the NR/SR within the study area.

Future Without the Proposed Project

DEP has previously consulted with the Towns of New Paltz and Gardiner and Ulster County as part of the UWSR DEIS, and it is DEP's understanding that no impacts to historic and cultural resources are anticipated in the study area within the timeframe of the impact analysis. Therefore, in the future without the proposed temporary pipeline, it is assumed that historic and cultural resources within the study area would remain the same as under existing conditions.

Probable Impacts with the Proposed Project

Within the NR-listed Lake Mohonk Mountain House Complex, no impacts to NR-listed structures would occur. Potential impacts from the proposed temporary pipeline would be limited to where the temporary pipeline crosses the Mohonk Carriage Road (Historic Duck Pond Trail), Lenape Lane, and the Mohonk Grade Tunnel Access Trail. To avoid impacts to Lenape Lane and Mohonk Carriage Road, the temporary pipeline would be buried below ground to maintain vehicle and pedestrian access during operations of the proposed temporary pipeline.

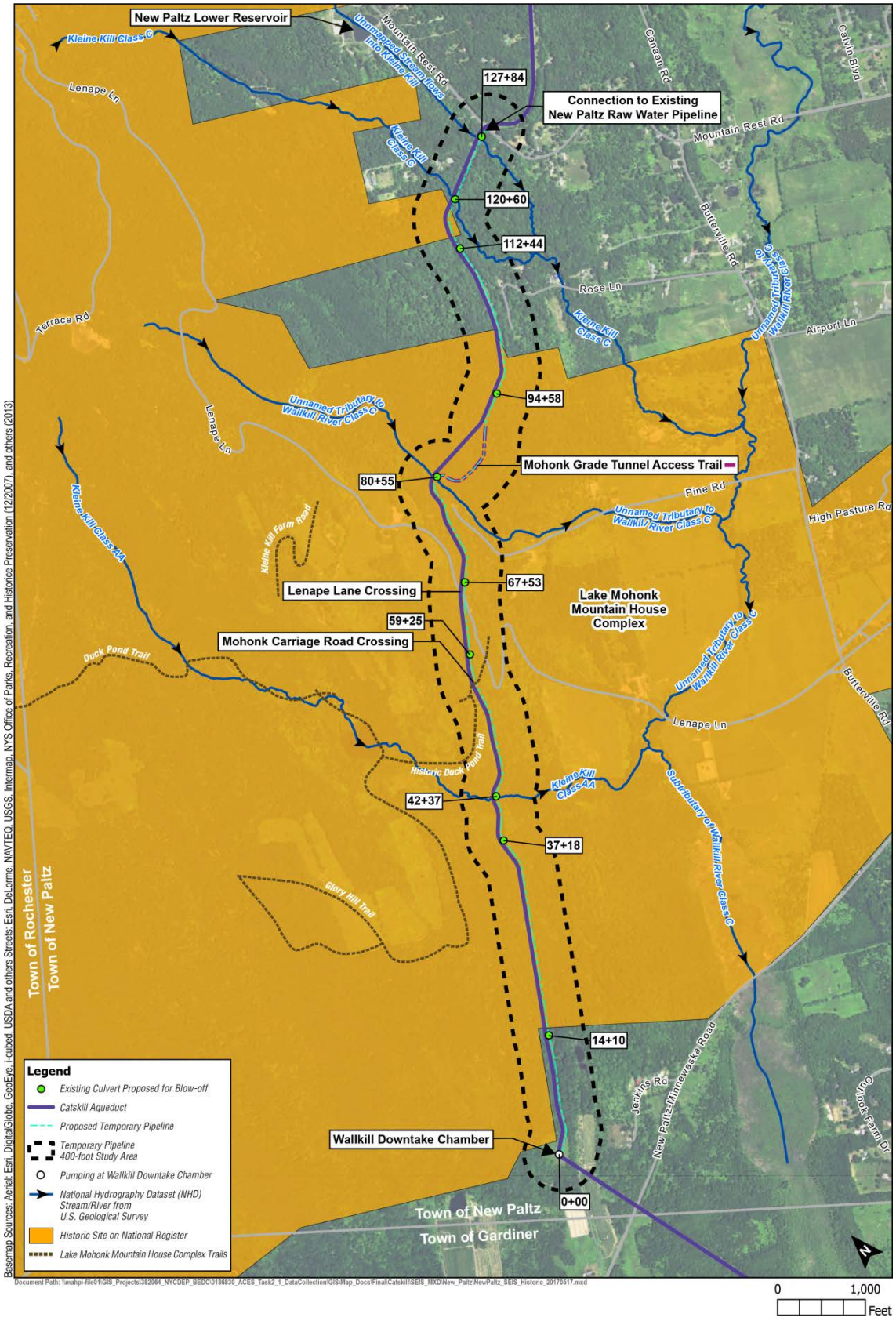


Figure 3-2: Historic Resources

Pursuant to prior consultation with SHPO on potential impacts to cultural or archeological resources, no impacts associated with the limited soil disturbance within these areas within the Preserve would be anticipated.

Operation of the temporary pipeline would not involve significant disturbances to these crossings or other portions of the Lake Mohonk Mountain House Complex, and would not affect historic and cultural resources. After the temporary pipeline is decommissioned and removed, the crossings would be restored to existing conditions.

The balance of the proposed temporary pipeline route would be largely located on the Catskill Aqueduct earthen berm, which was previously disturbed during the initial construction of the Catskill Aqueduct in the early 1900s. Work activities for the installation and operation of the temporary pipeline would be located within these areas of previous soil disturbance. As described in the UWSR DEIS, SHPO issued a determination of No Effect for work activities along the aqueduct corridor, including the area of the proposed temporary pipeline. As there are no known archeological resources within the study area, the activities of the proposed temporary pipeline would not impact archeological resources.

Therefore, the proposed temporary pipeline would not result in significant adverse impacts to historic and cultural resources.

3.5 NATURAL RESOURCES AND WATER RESOURCES

The *CEQR Technical Manual* indicates that a natural resource assessment should be conducted when a natural resource is present on or near a project site, and when that project has the potential to cause direct or indirect disturbances to a natural resource. The following may be considered, as appropriate, in a natural resources analysis: "groundwater, soils, and geologic features; numerous types of natural and human-created aquatic and terrestrial habitats (including wetlands, dunes, beaches, grasslands, woodlands, landscaped areas, gardens, parks and built structures) and any areas used by wildlife." The proposed temporary pipeline would not result in significant disturbance to geology and soils, aquatic/benthic resources, wetlands, wildlife, and unlisted rare and vulnerable species associated with the temporary pipeline. Therefore, an impact analysis related to these natural resources is not warranted. The natural resources study area does have the potential to support protected water resources, terrestrial resources, and federal/State Threatened and Endangered Species and State Species of Special Concern. An analysis of the potential effects to these resources as a result of the temporary pipeline was therefore prepared.

The natural resources study area (NRSA), as shown on **Figure 3-3**, was assessed to identify potential resources occurring within the study area. The analysis included a desktop evaluation of New York State Department of Environmental Conservation (NYSDEC) water classification data, NYSDEC freshwater wetlands maps, United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) maps, national hydrography data, published soil survey maps, and United States Geological Survey (USGS) topographic maps. The NRSA includes a portion of the Catskill Aqueduct containing a mowed corridor ranging from approximately 16 to 36 feet wide surrounded by deciduous forest and multiple culverts associated with the aqueduct. The existing culverts are located approximately 10 to 70 feet down slope from the location of the proposed temporary pipeline.

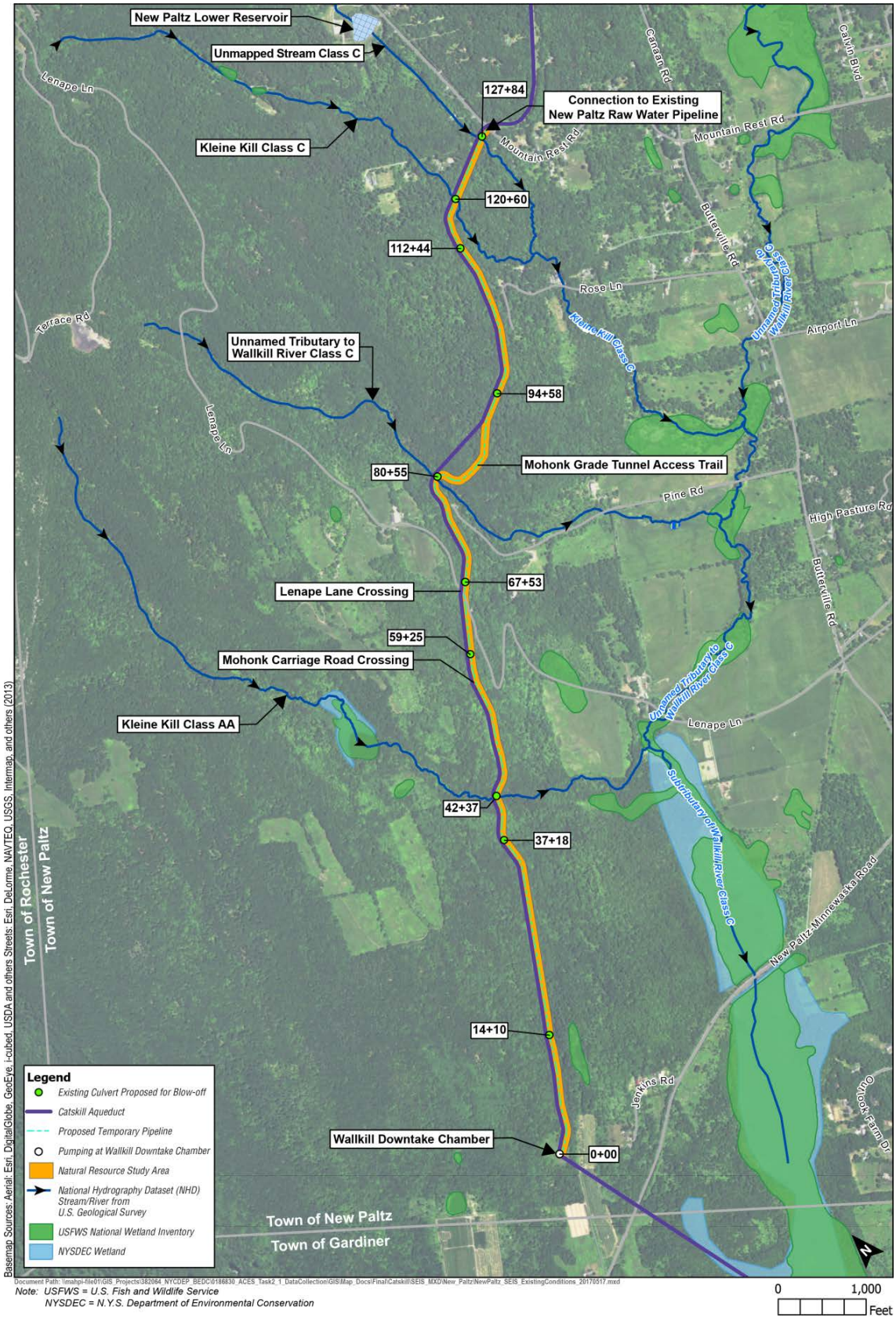


Figure 3-3: Natural Resources

3.5.1 WATER RESOURCES

Existing Conditions

The NRSA is located within the Lower Hudson River drainage basin, more specifically within the Rondout watershed (hydrologic unit code [HUC] 02020007) and the Kleine Kill-Wallkill River subwatershed (HUC 020200070406).

The alignment of the proposed temporary pipeline would largely be adjacent to the top of the existing Catskill Aqueduct. Existing culverts pass beneath the existing aqueduct and the proposed temporary pipeline would likewise cross these due to its location along the aqueduct. Ten (10) of these crossings would be used during the operation of the proposed temporary pipeline as discussed below. The locations of these ten culverts are shown on **Figure 3-3**. Based on a desktop analyses and a field visit conducted on April 13, 2017, four of the 10 culverts allow streams to flow under the aqueduct that are mapped and classified by NYSDEC (see **Table 3-1**). The remaining six culverts allow water to flow to drainage swales, channels, or ditches that are not formally mapped or regulated by NYSDEC.

Table 3-1: Surface Waters within the Natural Resource Study Area

Water Resource	NYSDEC Classification	Cowardin Classification
Kleine Kill	AA[1]	Riverine, Upper Perennial, Unconsolidated Bottom, Permanently Flooded (R3UBH)
Kleine Kill	C[2]	Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded (R5UBH)
Unmapped Stream flows into Kleine Kill	NA	Riverine, Intermittent Streambed, Seasonally Flooded (R4SBC)
Unnamed Tributary to Wallkill River	C[2]	Riverine, Intermittent, Streambed, Seasonally Flooded (R4SBC)

Notes:

1 Class AA waters: water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation; and fishing. The waters shall be suitable for fish, shellfish, and wildlife propagation and survival.

2 Class C waters: fishing. These waters shall be suitable for fish, shellfish, and wildlife propagation and survival. The waters shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.

A desktop evaluation of NYSDEC freshwater wetlands maps, USFWS NWI maps, published soil survey maps, and USGS topographic maps was conducted. No mapped wetlands exist within the NRSA. In addition, no wetlands were observed during the April 13, 2017 site visit.

Future Without the Proposed Project

It is DEP's understanding that no developments or structures are anticipated within the area of the temporary pipeline, within the timeframe of the impact analysis based upon consultation with the Town of New Paltz and Ulster County. Therefore, it is assumed that water resources within the NRSA would remain the same as existing conditions under the future without the proposed temporary pipeline.

Probable Impacts with the Proposed Project

This section analyzes the potential for temporary disturbances to water resources associated with the installation and operation of the temporary pipeline in the NRSA.

Construction

The temporary pipeline would be located near the top of the existing aqueduct. While the proposed temporary pipeline would traverse the aqueduct and cross the 10 existing culvert crossings, no work is proposed within the streams or their banks. The temporary pipeline would be located at an elevation well above the location of the actual streams or drainage features. Concrete blocks would be placed at a regular spacing distance along the route to support the temporary pipeline against the existing aqueduct slope. The exception would be the Kleine Kill crossing. The temporary pipeline would cross over the Kleine Kill via the existing Poor Farm Arch Bridge. No disturbances to the regulated buffer at this culvert crossing would occur. DEP would also implement appropriate erosion and sediment control measures to limit potential impacts during construction.

Following construction, temporarily disturbed areas would be restored to pre-existing conditions and seeded with native vegetation. Therefore, the temporary pipeline would not result in significant adverse impacts to water resources.

Operation

No significant impacts to surface waters associated with the operation of the proposed temporary pipeline is in operation are expected. When not in use, the temporary pipeline would be drained at the Wallkill Downtake Chamber and the 10 existing culvert crossings. Blow-off valves would be placed at each of these crossings to allow drainage of the temporary pipeline to the culvert crossings. The temporary pipeline would be drained by connecting a hose to the blow-off valve and releasing the raw, uncontaminated water into the culvert or drainage ditch. The flow rate would be controlled with the blow-off valves to prevent the potential for erosion or scouring at the discharge point. Freeze protection during pipeline operation would be addressed by maintaining flow or draining the temporary pipeline at the Wallkill Downtake Chamber or blow-off locations, if necessary.

3.5.2 TERRESTRIAL RESOURCES

Existing Conditions

Based on a field visit conducted on April 13, 2017 and field visits completed in support of the UWSR DEIS, ecological communities in the vicinity of the proposed temporary pipeline include a hemlock-northern hardwood forest and chestnut oak forest in the northern portion of the study

area and a successional old field in the southern portion of the study area. The study area contains portions of a mowed corridor associated with the Catskill Aqueduct surrounded by deciduous forest. Tree species within the hemlock-northern hardwood forest include eastern hemlock (*Tsuga canadensis*), black cherry (*Prunus serotina*), red oak (*Quercus rubra*), black oak (*Q. velutina*), sugar maple (*Acer saccharum*), red maple (*A. rubrum*), and bigtooth aspen (*Populus grandidentata*). The understory is dominated by New York fern (*Thelypteris noveboracensis*). Trees within the chestnut oak forest include scarlet oak (*Q. coccinea*), chestnut oak (*Q. prinus*), black oak, red oak, red maple, sugar maple, and black cherry. American beech (*Fagus grandifolia*) saplings and New York fern were also observed in the understory. These areas of hemlock-northern hardwood forest and chestnut oak forest observed during field visits are not mapped as a significant natural community by the New York Natural Heritage Program (NYNHP).

The study area also contains a successional old field. Trees at the forest edge, which is nearly 200 feet from the Wallkill Downtake Chamber, include eastern red-cedar (*Juniperus virginiana*), black walnut (*Juglans nigra*), white ash (*Fraxinus americana*), white pine (*Pinus strobus*), and black cherry. Shrubs include northern spicebush (*Lindera benzoin*) and tatarian honeysuckle (*Lonicera tatarica*), and herbs observed include timothy-grass (*Phleum pratense*), dandelion (*Taraxacum* spp.), strawberry (*Fragaria x ananassa*), Russian knapweed (*Rhaponticum repens*), wild bergamot (*Monarda fistulosa*), and garlic mustard (*Alliaria petiolata*).

Future Without the Proposed Project

DEP has previously consulted with the Towns of New Paltz and Gardiner and Ulster County, and it is DEP's understanding that no new projects or developments that would affect terrestrial resources are anticipated within the area of the temporary pipeline within the timeframe of the impact analysis. Under the future without the proposed temporary pipeline condition, natural processes, such as changes in habitat due to natural vegetative succession, are anticipated to continue. Terrestrial resources within the study area would therefore be anticipated to remain similar to existing conditions.

Probable Impacts with the Proposed Project

No tree removal is anticipated as part of the temporary pipeline; however, minor underbrush clearing and trimming may be required. Following construction of the temporary pipeline, all equipment would be removed and operation of the temporary pipeline would not adversely affect terrestrial resources. Upon removal of the temporary pipeline, DEP would revegetate areas, as applicable and appropriate, with native species and/or allow areas to naturally recolonize with existing species. The temporary pipeline would therefore not result in significant adverse impacts to terrestrial resources.

3.5.3 FEDERAL/STATE THREATENED AND ENDANGERED AND STATE SPECIES OF SPECIAL CONCERN

Existing Conditions

As assessed in the UWSR DEIS, nine federal/State Threatened and Endangered Species and State Species of Special Concern were identified as potentially utilizing the habitat within the

NRSA. None of these species were observed during the field visit on April 13, 2017, however the potential for impacts to these species were assessed.

Future Without the Proposed Project

In the future without the proposed temporary pipeline, it is assumed that federal/State Threatened and Endangered Species and State Species of Special Concern within the study area would largely be the same as existing conditions, other than other than possible changes in habitat due to natural vegetative succession and general anthropogenic influences.

Probable Impacts with the Proposed Project

Based on the analysis presented in **Table 3-2**, no impacts are anticipated. There would be no effects to eastern box turtles (*Terrapene carolina*), eastern hognose snakes (*Heterodon platyrhinos*), timber rattlesnakes (*Crotalus horridus*), wood turtles (*Glyptemys insculpta*), cerulean warblers (*Setophaga cerulean*), sharp-shinned hawks (*Accipiter striatusor*), Indiana bats (*Myotis sodalist*), northern long-eared bats (*Myotis septentrionalis*), or scarlet indian-paintbrush (*Castilleja coccinea*) associated with the proposed temporary pipeline.

Therefore, the proposed temporary pipeline would not result in significant adverse impacts to federal/State Threatened and Endangered Species or State Species of Special Concern within the NRSA.

Table 3-2: Analysis of Potential Disturbance to Federal/State Threatened and Endangered Species and State Species of Special Concern and Habitats within the Natural Resources Study Area

Common Name	Scientific Name	Federal Listing	State Listing	Analysis of Potential Disturbance	Warrants Further Analysis
Amphibians and Reptiles					
Eastern Box Turtle	*Terrapene carolina*	Unlisted	Special Concern	Potential habitat exists within the adjacent hemlock-northern hardwood and chestnut oak forests, as well as within the successional old field. Work activities would be confined to previously disturbed areas. If any isolated areas of potential habitat exist within the NRSA, as a mobile species, any eastern box turtles that might otherwise use these areas are expected to instead utilize similar, adjacent habitats during construction. As part of the proposed temporary pipeline, wildlife crossings would be placed every 500 feet along the proposed route to maintain an access corridor for smaller species, such as turtles. Therefore, there are no effects anticipated and no further analysis for eastern box turtles is warranted.	No
Eastern Hognose Snake	*Heterodon platyrhinos*	Unlisted	Special Concern	Work activities would be limited to areas previously disturbed. Should any potential habitat exist within the study area, a variety of habitats would be available for the species' use in the vicinity during construction. Therefore, there are no effects anticipated and no further analysis for eastern hognose snakes is warranted.	No
Timber Rattlesnake	*Crotalus horridus*	Unlisted	Threatened	The old field and open land at the Wallkill Downtake Chamber would provide potential foraging and basking habitat. According to NYNHP, however, no records of timber rattlesnakes were identified within 1.5 miles of the NRSA. Therefore, there are no effects anticipated and no further analysis for timber rattlesnakes is warranted.	No
Wood Turtle	*Glyptemys insculpta*	Unlisted	Special Concern	Potential habitat exists within the adjacent hardwood forest and successional old field areas. However, work activities would be confined to previously disturbed areas. Should any potential habitat exist within the NRSA, a variety of habitats would be available for the species' use in the vicinity during construction. Therefore, there are no effects anticipated and no further analysis for wood turtles is warranted.	No

Table 3-2: Analysis of Potential Disturbance to Federal/State Threatened and Endangered Species and State Species of Special Concern and Habitats within the Natural Resources Study Area

Common Name	Scientific Name	Federal Listing	State Listing	Analysis of Potential Disturbance	Warrants Further Analysis
Cerulean Warbler	*Setophaga cerulea*	MBTA	Special Concern	Preferred habitat for Cerulean Warblers is high in the canopy of mature forests. No impacts to or tree removals would occur as part of the proposed temporary pipeline Therefore, there are no effects anticipated and no further analysis for Cerulean Warblers is warranted.	No
Sharp-shinned Hawk	*Accipiter striatus*	MBTA	Special Concern	Potential habitat exists within the adjacent hardwood forest and forest edge. However, work activities would be confined to previously disturbed areas. Due to the abundant forested habitat near the work site and the lack of anticipated impacts to these forested habitats as a result of the proposed temporary pipeline no effects are anticipated and no further analysis for Sharp-shinned Hawks is warranted.	No
Mammals					
Indiana Bat	*Myotis sodalis*	Endangered	Endangered	Potential bat roosting habitat was observed surrounding the Poor Farm Arch Bridge in the central portion of the study area during a previous field visit, conducted on August 3, 2015 as part of the UWSR DEIS. However, no tree removal is anticipated as part of the installation, operation, or removal of the temporary pipeline. Therefore, there are no effects anticipated and no further analysis for Indiana bats is warranted.	No
Northern Long-eared Bat	*Myotis septentrionalis*	Threatened	Threatened	Potential bat roosting habitat was observed surrounding the Poor Farm Arch Bridge during a previous field visit, conducted on August 3, 2015 as part of the UWSR DEIS. However, no tree removal is anticipated as part of the installation, operation, or removal of the temporary pipeline. Therefore, there are no effects anticipated and no further analysis for northern long-eared bats is warranted.	No
Plants					
Scarlet Indian-Paintbrush	*Castilleja coccinea*	Unlisted	Endangered	No suitable habitat or evidence of specimens was found in the NRSA during presence/absence surveys. Therefore, there are no effects anticipated and no further analysis for Scarlet Indian-paintbrush is warranted.	No

Note:
MBTA: Migratory Bird Treaty Act

3.6 HAZARDOUS MATERIALS

A hazardous material is define in the *CEQR Technical Manual* as "any substance that poses a threat to human health or the environment." An evaluation was conducted to determine whether the proposed temporary pipeline would increase the exposure of people or the environment to hazardous materials.

Existing Conditions

As part of the hazardous materials assessments, existing documentation was reviewed. To evaluate the potential presence of hazardous materials within the study area, the Phase 1 Environmental Site Assessments (ESA) completed in 2014 and 2015 as part of the UWSR DEIS were used to identify Recognized Environmental Conditions (RECs) in general conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Practice E 1527-13 and CEQR requirements. The Phase I ESAs completed for the Catskill Aqueduct corridor, Mountain Rest Road and New Paltz-Minnewaska Road Study Areas were used and encompassed the interconnection to the temporary pipeline and the Wallkill Downtake Chamber, respectively. The Phase I ESAs included site reconnaissance, research on current/historical use, and review of federal and State regulatory listings for both the site and neighboring properties within the appropriate search distance defined in the ASTM standard.

Based on the Phase I ESA investigations, there was no indication of an environmental impact that would constitute a REC as defined by the ASTM standard that would affect the proposed activities. Additionally, there is no history of contamination at or in the vicinity of the study area where the proposed work activities would occur. Furthermore, proposed excavation areas would be located on a previously disturbed section of the Catskill Aqueduct and would be very limited. Similarly, excavation within or adjacent to existing roadways, such as Lenape Lane are not anticipated to result in adverse impacts as these would also be limited in areal extent and would be located in areas of prior disturbance. Given the findings of previous subsurface investigation along similar portions of the aqueduct corridor, no subsurface ground contamination is anticipated.

Future Without the Proposed Project

No change in hazardous materials would be expected under the future without proposed temporary pipeline condition and a result conditions related to these materials would be expected to remain the same.

Probable Impacts with the Proposed Project

There would be a limited amount of ground disturbance associated with the installation, operation, or removal of the temporary pipeline. Ground disturbance would be associated with the establishment of foundations to support the temporary pipeline, two subsurface crossings, and the interconnection of the temporary pipeline to the existing New Paltz raw water supply line. In the future with the proposed temporary pipeline, work activities would require temporary storage and use of diesel fuel to support portable power supply. The fuel supply would be

enclosed in a secondary containment system, located downgrade of the Wallkill Downtake Chamber. The use and storage of diesel fuel would be in accordance with applicable regulatory requirements and guidelines including those relating to: federal Spill Prevention, Control, and Countermeasures requirements, as applicable; and State petroleum bulk storage, and spill reporting requirements. DEP and its contractors would handle all materials in accordance with applicable federal, State, and local regulations and guidelines.

Therefore, the temporary pipeline would not result in significant adverse impacts from the presence or disturbance of hazardous materials or the use of these during construction and operation.

3.7 WATER AND SEWER INFRASTRUCTURE

This section analyzes the potential for the temporary pipeline to affect water and sewer infrastructure. The temporary pipeline would be constructed and operated to provide water supply to New Paltz when DEP requires shutdown of the Catskill Aqueduct to conduct biofilm removal and repair and rehabilitation work.

Existing Conditions

The existing water supply source for the Town and Village of New Paltz is the Catskill Aqueduct and four reservoirs, located near the New Paltz water filtration facility on Mountain Rest Road. DEP provides raw aqueduct water to New Paltz and this water is then filtered and chlorinated by New Paltz prior to distribution to the community. New Paltz uses an average of approximately 0.88 mgd.

No existing sewer infrastructure is located in proximity to the proposed temporary pipeline.

Future Without the Proposed Project

In the future without the proposed temporary water pipeline, New Paltz might not have sufficient water supply available during the temporary shutdowns of the Catskill Aqueduct anticipated by DEP as part of its UWSR project, specifically repair and rehabilitation. While New Paltz has been pursuing separate and independent projects to supplement its existing water supply system, in the future without the proposed temporary pipeline, it is assumed that existing water and sewer infrastructure would remain the same as existing conditions without the addition of the new sources of water supply from other sources that are currently being advanced by New Paltz.

Probable Impacts with the Proposed Project

The proposed temporary pipeline would be constructed to supply the New Paltz Lower Reservoir with water from the Delaware Aqueduct. The temporary pipeline would be designed to convey raw water to the New Paltz Lower Reservoir to meet required demand. This supply would be accomplished through an existing interconnection at DEP's Shaft 4, backfeeding the Catskill Aqueduct to the Wallkill Downtake Chamber via the Wallkill Pressure Tunnel, and pumping from the Wallkill Downtake Chamber through the proposed temporary pipeline to New Paltz's existing raw water line adjacent to the Mountain Rest Road to the New Paltz Lower Reservoir.

The pumps at the Wallkill Downtake Chamber are anticipated to operate for approximately 4 days and rest for approximately 1.3 days. The optimal operating level range of the New Paltz Lower Reservoir will be coordinated with New Paltz filter plant operation.

When not in operation, draining of the temporary pipeline may be warranted to prevent freeze damage during extreme cold air temperatures. A total of approximately 70,000 gallons of water would be drained to nearby surface waters or drainage channels at 10 existing culverts located along the alignment of the proposed temporary pipeline and the Catskill Aqueduct. Raw water from the temporary pipeline would be discharged to existing drainage channels or directly to surface water via blow-off valves installed at the branches of the temporary pipeline. During a blow-off event, hoses may be used to direct the water to the discharge location. If necessary, flow rates would be controlled with the blow-off valves to prevent the potential for erosion or scouring at the discharge point.

The proposed temporary pipeline would not result in any significant new water infrastructure needs as the temporary pipeline would connect to an existing New Paltz raw water supply line that would direct water to the existing New Paltz Lower Reservoir. The purpose of the proposed temporary pipeline is to maintain access to a reliable source of water for New Paltz. No increase in existing water supply is anticipated and therefore no significant new sources of wastewater or impacts to wastewater treatment would occur as a result of the temporary pipeline. As a result, a detailed assessment of impacts to sewer and wastewater infrastructure is not warranted. The operation of the temporary pipeline would also not result in any significant change in existing impervious surfaces or stormwater conveyances. Construction staging areas would be limited to two existing developed areas that would not require significant ground disturbance. No significant impacts due to stormwater are therefore anticipated and a detailed analysis is not warranted.

The proposed temporary pipeline would involve maintaining access to existing water supply from the Catskill Aqueduct to New Paltz and would not result in significant impacts to water and sewer infrastructure.

3.8 TRANSPORTATION

This section assesses the potential for the temporary pipeline to affect transportation. The operation of the proposed temporary pipeline would require, for each shutdown, a DEP employee to travel to the site and turn on the temporary pumping system that would be located at the Wallkill Downtake Chamber. The employee would return to the site to turn off the system after the conclusion of each shutdown. In addition, occasional trips for any required maintenance would be made. As a result, a nominal number of vehicle trips significantly below the *CEQR Technical Manual* screening threshold of 50 peak-hour PCEs. Traffic patterns would therefore remain largely the same as existing conditions. Following the removal of the temporary pipeline, any minor change in the traffic patterns within the study area would return to existing conditions.

Therefore, the operation of the proposed temporary pipeline would not result in significant adverse impacts to transportation within the study area and no further analysis is required.

3.9 AIR QUALITY

The operation of the temporary pipeline would be short-term in nature. Air quality emissions from stationary sources associated with the temporary pipeline operation would be limited to primarily the use of generators to operate the temporary pumping system that would be located at the Wallkill Downtake Chamber. These generators would only be anticipated to operate during the short-term (approximately 10 week) shutdowns of the aqueduct during repair and rehabilitation. Mobile sources would include vehicles traveling to/from the temporary pipeline study area. As discussed in Section 3.8, "Transportation," the operation of the proposed temporary pipeline would result in a nominal number of new vehicle trips, significantly below the *CEQR Technical Manual* screening thresholds, which would result in little or no change in air quality due to mobile sources. Following the removal of the temporary pipeline, short-term air quality emissions from stationary and mobile sources within the proposed temporary pipeline study area would return to existing conditions.

Therefore, an air quality impact analysis associated with the operation of the proposed temporary pipeline is not warranted.

3.10 NOISE

Activities that could generate noise emissions from stationary and/or mobile sources were assessed in this section.

3.10.1 STATIONARY NOISE

The study area for the noise analysis is the area within 1,500 feet of the stationary noise-generating equipment that would be used during operation of the temporary pipeline. The study area, as shown on **Figure 3-4**, encompasses areas within the Towns of New Paltz and Gardiner and includes residential parcels. Two sensitive noise receptors are located in the study area and include residences. The operation of the temporary pipeline was evaluated to determine compliance with local noise codes.

The operation of the temporary pipeline, specifically the operation of the temporary pumping system at the Wallkill Downtake Chamber, is subject to the Towns of New Paltz and Gardiner Noise Control Laws for operational noise sources. The Town of Gardiner Noise Control Law (§220-40.C) limits daytime and nighttime noise levels at the property line of the lot from which noise is emitted. Noise between the hours of 7 AM and 8 PM cannot exceed 70 A-weighted decibels (dBA), and noise between the hours of 8 PM and 7 AM cannot exceed 60 dBA. The Town of New Paltz does not contain quantitative noise limits applicable to the proposed temporary pipeline. The Town of New Paltz Noise Control Law (§100-3.A) generally prohibits any person to make, continue, aid, countenance, cause to be made, or assist in making any unreasonably loud, disturbing, and unnecessary noise on Sunday commencing at 8 PM and continuing through and including Monday at 7 AM and during the same hours upon each successive evening and morning of each successive day of the week thereafter through and including Saturday at 7 AM and on Saturday commencing at 8 PM and continuing through and including Sunday at 9 AM; provided, however, that the foregoing hours shall be extended until the hour of 9 AM on any day upon which there is celebrated a legal holiday. Any noise which

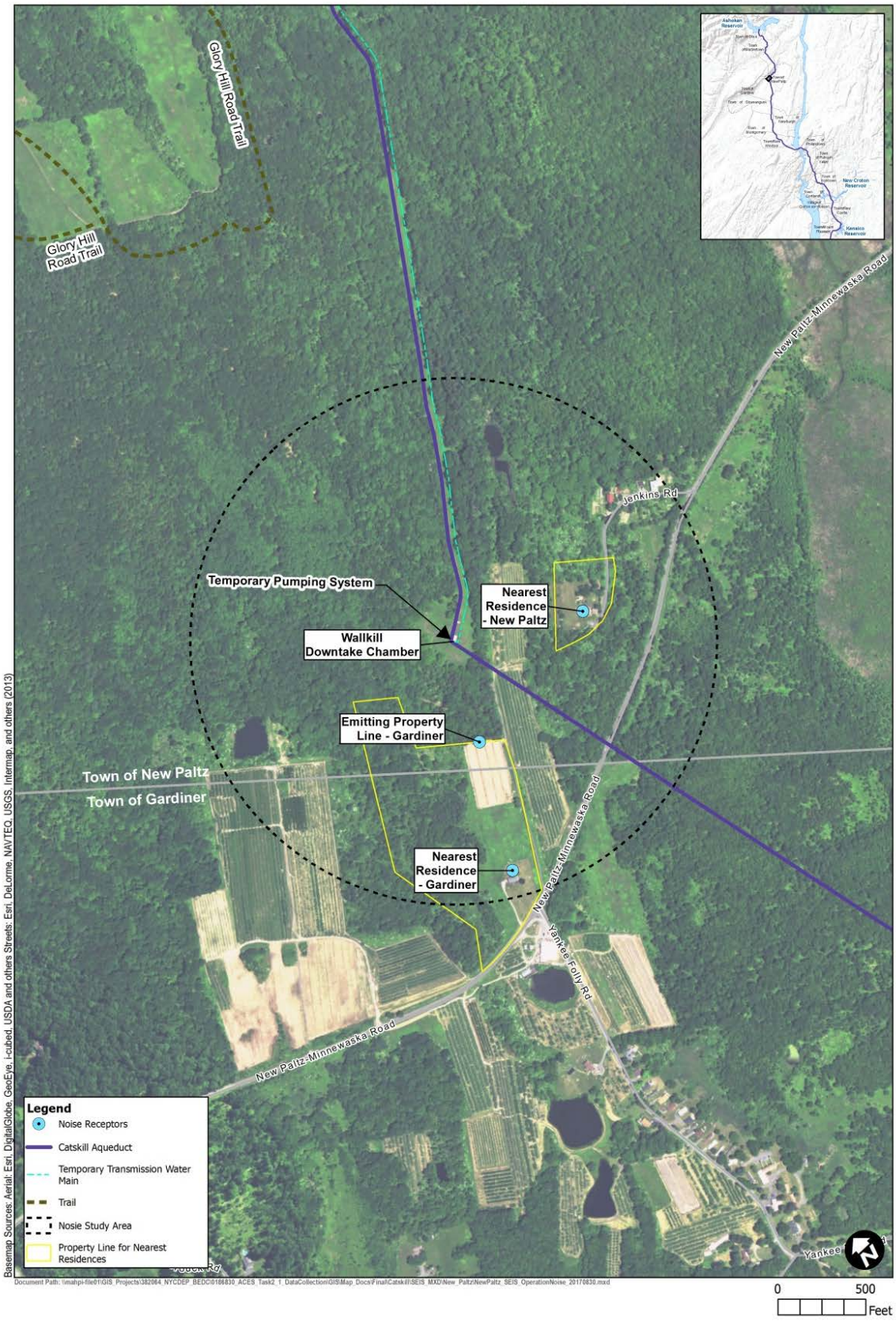


Figure 3-4: Operation - Noise

unreasonably interferes with the sleep, comfort, repose, health, or safety of others is prohibited during the hours mentioned above.

Future Without the Proposed Project

DEP has consulted with the Towns of New Paltz and Gardiner and Ulster County, and it is DEP's understanding that no major projects that would result in a change in land use, or new noise-generating sources that would contribute to an increase in ambient noise levels are anticipated within the temporary pipeline study area within the timeframe of the impact analysis. Therefore, in the future without the proposed temporary pipeline, it is assumed that ambient noise levels within the study area would be similar to existing conditions.

Probable Impacts with the Proposed Project

In the future with the operation of the temporary pipeline, noise-producing activities at the Wallkill Downtake Chamber would include 24-hour operations during the 2018, 2019, and/or 2020 10-week shutdown periods for the repair and rehabilitation project. The primary noise-generating equipment that would be used during operation of the temporary pipeline are two generators with a reference noise level (L_{eq}) of 75 dBA at 50 feet[2]. Each generator will be equipped with sound attenuating enclosures to reduce the noise level (L_{eq}) to 75 dBA or lower. Additional noise sources, such as pumps, would also be utilized during the operation of the temporary pipeline at the Wallkill Downtake Chamber. These noise sources, however, would be located inside of the structure and would be lesser noise contributors at nearby residences and noise-sensitive land uses.

The operation of the temporary pipeline has the potential to occur during daytime and nighttime hours and would result in a noise level of up to 57 dBA at the nearest emitting property line in the Town of Gardiner. Therefore, stationary operational noise levels are anticipated to comply with the Town of Gardiner noise level limits.

There would be an increase in stationary noise levels during 24-hour operation of the temporary transmission pipeline during the 2018, 2019, and/or 2020 10-week shutdown periods for the repair and rehabilitation project. However, the duration of the increase in noise levels would be over relatively short durations, approximately 10 weeks, once per year. Following the removal of the temporary pipeline, noise levels from stationary noise sources within the study area would return to existing conditions. Therefore, although there would be a temporary increase in noise during operation of the temporary pipeline, noise from the temporary operation would not result in significant adverse impacts to sensitive receptors within the study area.

3.10.2 MOBILE NOISE

Mobile noise sources would include vehicles traveling to/from the temporary pipeline study area. The operation of the proposed temporary pipeline would result in a nominal number of vehicle trips significantly below the *CEQR Technical Manual* screening thresholds. Following the

[2] Caterpillar Weather Protective and Sound Attenuated Enclosures (2014).

removal of the temporary pipeline, noise levels from mobile noise sources within the study area would return to existing conditions.

Therefore, a noise impact analysis related to mobile noise associated with the operation of the proposed temporary pipeline is not warranted.

3.11 NEIGHBORHOOD CHARACTER

A neighborhood character assessment, as defined by the *CEQR Technical Manual*, "considers how elements of the environment combine to create the context and feeling of a neighborhood and how a project may affect that context and feeling." An assessment of neighborhood character is needed when a Proposed Project has the potential to result in significant impacts to technical areas, such as land use, zoning and public policy, open space, historical and cultural resources, transportation and noise, among others. An assessment of neighborhood character was completed as the proposed temporary pipeline has the potential to impact noise during construction as discussed in Section 3.13, "Construction."

Existing Conditions

The character of the study area is largely defined by a mix of residential, public service, open space, vacant and portions of agricultural land uses. The temporary pipeline's physical setting is within a rural location. The temporary pipeline would traverse the study area in a general north to south direction and would be largely located within a right-of-way associated with the existing Catskill Aqueduct. Mountain Rest Road traverses the northern portion of the study area, paralleling an unnamed tributary to Kleine Kill which flows to the south. The study area is bounded to the south by New Paltz-Minnewaska Road (also known as State Route 299 and County Route 8), a heavily traveled two-lane arterial, and to the east by Lenape Lane, a local roadway.

Future Without the Proposed Project

DEP has previously consulted with the Towns of New Paltz and Gardiner and Ulster County, and it is DEP's understanding that no changes in land use and no new projects or structures are anticipated within the study area within the timeframe of the impact analysis. Therefore, in the future without the temporary pipeline, it is assumed that neighborhood character within the study area would remain the same as existing conditions.

Probable Impacts with the Proposed Project

The temporary pipeline would be located within a public services corridor which is owned and maintained by DEP and vacant land where the temporary pipeline diverges from the Catskill Aqueduct. Primary staging would occur at the Wallkill Downtake Chamber. Access to the Wallkill Downtake Chamber would occur via New Paltz-Minnewaska Road to an existing gravel access road. An existing parking area off Mountain Rest Road would serve as a secondary staging area, and provide additional parking. As detailed in the UWSR DEIS, staging and access improvements would be completed to facilitate access to the Wallkill Downtake Chamber as part of the larger repair and rehabilitation project. These improvements were assessed in the UWSR

DEIS and are currently scheduled to be completed during spring or summer 2018, prior to commencement of the proposed temporary pipeline project.

As described previously, no analysis of potential impacts to land use and zoning due to the proposed temporary pipeline was required. In addition as discussed in Section 3.3, "Open Space and Recreation" and Section 3.4, "Historic and Cultural Resources," the work activities would not adversely affect, open space and recreation, or historic and cultural resources in the study area. Furthermore, the public policy impact analysis provided in Section 3.1, "Land Use, Zoning, and Public Policy," concluded the work activities were consistent with applicable plans.

As described in Sections 3.8.1, "Transportation," and 3.10, "Noise," during construction, the work activities in the study area would be short-term and would result in a temporary increase in traffic and noise. Following completion of installation of the temporary pipeline, construction equipment and vehicles would be removed from the study area and traffic patterns would return to existing conditions. These temporary increases in traffic and noise levels would not result in a density of activity or service conditions that would affect the overall character of the study area.

The temporary pipeline would not generate significant adverse effects on public policy, open space and recreation, historic and cultural resources, transportation, or noise. Therefore, the proposed temporary pipeline would not result in significant adverse impacts to neighborhood character.

3.12 PUBLIC HEALTH

The *CEQR Technical Manual* identifies that a public health assessment is not warranted where "no significant unmitigated adverse impact is found in other CEQR analysis areas, such as air quality, water quality, hazardous materials or noise." As discussed above, operation of the proposed temporary pipeline would not result in significant adverse effects related to air quality, hazardous materials, transportation, or noise Therefore no significant adverse effects to public health associated with exposure to contaminated materials, traffic, air quality, or noise would occur; nor would any federal, State, or local standards be exceeded. The project would also not involve solid waste management practices that would attract pest or vermin to the area. Therefore, the temporary pipeline would not result in significant adverse impacts to public health within the study area.

3.13 CONSTRUCTION

The sections below provide a description of the construction activities and equipment associated with the proposed temporary pipeline and the potential effects on transportation, air quality, and noise in the study area for the 2018 build year. Construction activities and equipment would include mobilization, site preparation, construction, and demobilization, as appropriate, as well as equipment that would be present on-site to carry out these activities.

3.13.1 TRANSPORTATION

The study area for the transportation analysis consists of the major convergent roadways that would potentially be used by the employees and construction vehicles associated with the proposed temporary pipeline.

To support activities within the temporary pipeline study area, the primary staging area, from which workers would be transported to the site daily, would be located at the Wallkill Downtake Chamber. Access to the Wallkill Downtake Chamber would occur via New Paltz-Minnewaska Road (State Route 299) to an existing gravel access road. An existing parking area off Mountain Rest Road (County Route 6) would serve as a secondary staging area, and provide additional parking. To the extent available, construction vehicles would travel on truck-permitted roadways directly to and from the work sites within the temporary pipeline study area.

DEP had previously consulted with the Towns of New Paltz and Gardiner and Ulster County, and it is DEP's understanding that no changes in land use or an increase in traffic due to outside developments are anticipated within the temporary pipeline study area within the timeframe of the impact analysis. Therefore, in the future without the temporary pipeline, it is assumed that traffic, public transportation, and pedestrian activities within the study area would be similar to existing conditions.

Work activities would mainly consist of the installation of the temporary pipeline and construction of the temporary pumping system. Temporary pipeline installation would generate the most vehicle trips and was therefore the basis of the construction transportation analysis.

The temporary pipeline installation would result in approximately 28 peak-hour PCEs along New Paltz-Minnewaska Road, which is below the *CEQR Technical Manual* screening threshold of 50 peak-hour PCEs. In addition, the construction work activities within the temporary pipeline study area would be short-term, significantly less than two years in duration (approximately 30 days) and would not generate public parking, transportation demands or pedestrian activity within the study area. Following completion of the temporary pipeline construction, traffic patterns would return to existing conditions.

Therefore, although there would be a minor temporary increase in traffic, the construction of proposed temporary pipeline would not result in significant adverse impacts to transportation within the study area.

3.13.2 AIR QUALITY

The temporary pipeline construction work activities would be short-term in nature, approximately 30 work days. Air quality emissions from mobile and stationary sources associated with the temporary pipeline construction would primarily consist of construction equipment, including worker and delivery vehicles, and fugitive dust emissions associated with excavation and grading activities and diesel exhaust from heavy equipment (e.g., generator, trencher, excavator, material delivery trucks). The number of heavy equipment units that would be needed at a given location within the temporary pipeline study area at a single time would be limited. Once construction is completed, the construction equipment and vehicles would be removed from the work sites. Therefore, an air quality impact analysis related to construction of the temporary pipeline is not warranted.

3.13.3 NOISE

3.13.3.1 Stationary Noise

The study area for the noise analysis is the area within 1,500 feet of the temporary pipeline construction work activities as shown on **Figure 3-5**, which encompasses areas within the Towns of New Paltz and Gardiner. The study area is split into three distinct areas (polygons), which together are considered the noise study area. One worst-case receptor was analyzed for each type of receptor (i.e., residence, emitting property line) within the three noise study area polygons.

The temporary pipeline noise study area included residential parcels located in the northern and southern portions of the study area. It also included the Mohonk Preserve and a recreational trail in the center portion of the study area. These were considered noise-sensitive receptors for this analysis. The construction work activities were evaluated to determine compliance with local noise codes.

The construction activities within the study area are subject to the Towns of New Paltz and Gardiner Noise Control Laws. The Town of New Paltz Noise Control Law (§100-3.B) prohibits construction work between the hours of 8 PM and 7 AM, specifically the operation of pile drivers, steam shovels, pneumatic hammers, derricks, hoists, or other equipment that creates loud or unusual noise. The Town of Gardiner Noise Control Law (§220-40.C) limits daytime and nighttime noise levels at the property line of the lot from which noise is emitted. However, construction and maintenance activities between 8 AM and sunset are exempt. Noise between the hours of 7 AM and 8 PM cannot exceed 70 dBA, and noise between the hours of 8 PM and 7 AM cannot exceed 60 dBA.

It is DEP's understanding that no major projects that would result in a change in land use, or new noise-generating sources that would contribute to an increase in ambient noise levels are anticipated within the temporary pipeline study area within the timeframe of the impact analysis. Therefore, in the future without the proposed temporary pipeline, it is assumed that ambient noise levels within the study area would be similar to existing conditions.

In the future with the proposed temporary pipeline, stationary noise-producing activities associated with construction of the temporary pipeline would occur at five primary sites: near Mountain Rest Road at the northern end of the study area, Wallkill Downtake Chamber at the southern end of the study area, and two road crossings between Mountain Rest Road and the Wallkill Downtake Chamber in the center portion of the study area. The northern and southern noise-producing work sites are more than 1,500 feet apart and include unique receptors. Work associated with road and trail crossings were also located more than 1,500 feet from the Mountain Rest Road and Wallkill Downtake Chamber work areas and included unique receptors. Therefore, three areas were included in the stationary noise analysis.

In the northern portion of the study area, the stationary noise-generating equipment associated with the connection of the temporary pipeline at Mountain Rest Road would emit the most noise. In the southern portion of the study area, the stationary noise-generating equipment associated with the construction of the temporary pumping system at the Wallkill Downtake Chamber would emit the most noise. In the center portion of the study area, installation of the temporary pipeline near the Mohonk Preserve and recreational trails would be the loudest noise-producing activity near these recreational land uses.

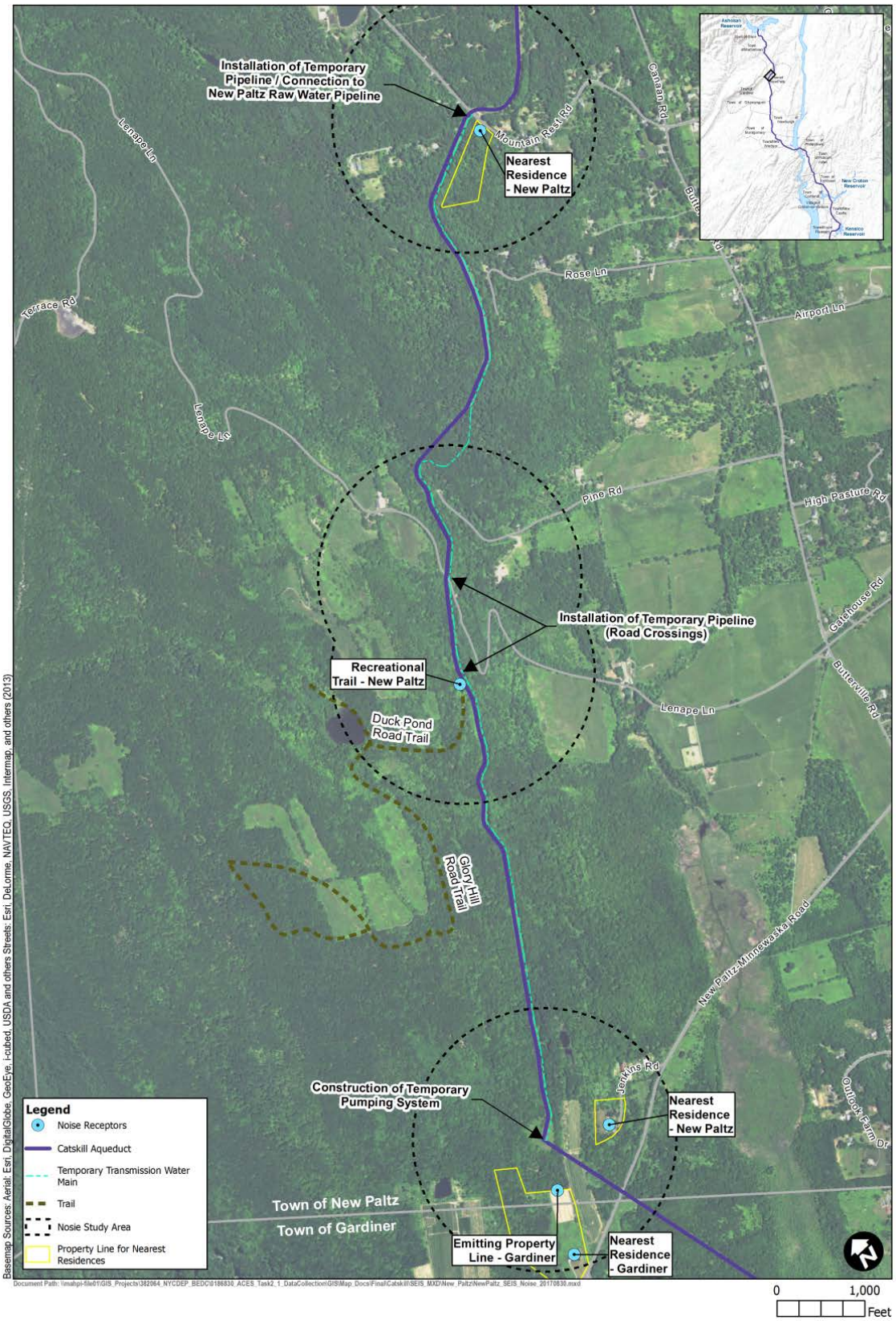


Figure 3-5: Construction - Noise

The noise analysis focused on the three loudest stationary noise-generating equipment types necessary for each of the temporary pipeline construction work activities. **Table 3-3** lists the noise-generating equipment that would be used during each of the temporary pipeline construction work activities and the associated reference noise levels. The types of noise-generating equipment analyzed were conservatively based on peak construction operating conditions.

Table 3-3: Stationary Source Construction Equipment Modeled at the Temporary Pipeline Study Area - Noise Analysis and Reference Noise Levels (L_{eq})

Equipment Type	Reference Noise Level (L_{eq}) at 50 feet (dBA)[1]
Installation of Temporary Pipeline (Mountain Rest Road and Road/Trail Crossings – 8 AM to 6 PM or Sunset, whichever is earlier, Monday through Friday)	
Trencher	82
Excavator	81
Welder	69
Construction of Temporary Pumping System (Wallkill Downtake Chamber – 8 AM to 6 PM or Sunset, whichever is earlier, Monday through Friday)	
Hand Tools	82
Excavator	81
Loader	76

Note:
[1] *CEQR Technical Manual,* Chapter 22.

The construction of the temporary pumping system would result in a noise level of up to 64 dBA at the nearest emitting property line in the Town of Gardiner (see **Table 3-4**). Therefore, the construction work activities would not exceed the Town of Gardiner noise level limits.

Following the removal of the temporary pipeline, noise levels from stationary construction noise sources within the study area would return to existing conditions. Therefore, although there would be a temporary increase in noise during the construction of the temporary pipeline, noise from the construction work activities would be for a short period of time (ranging from 10 to 30 work days dependent upon location) would not result in significant adverse impacts to sensitive receptors within the temporary pipeline study area.

3.13.3.2 Mobile Noise

Mobile noise sources associated with the temporary pipeline work would include vehicles traveling to and from the work sites and staging areas within the study area. A mobile noise screening assessment was conducted to determine if a mobile noise analysis was warranted. The mobile noise screening assessment accounts for such factors as location of the work activities in relation to noise-sensitive receptors and the magnitude and intensity of work activities. Mobile noise sources would range from 8 to 18 peak-day vehicle trips (192 to 662 noise PCEs). All vehicle trips were assumed to occur during the peak hour. However, the temporary pipeline construction activities would be short-term (between 10 and 30 work days) and intermittent in

nature with the peak number of vehicle trips to and from the work sites occurring during a limited period during the overall duration of construction activities. Therefore, a noise impact analysis related to mobile noise associated with the construction of the temporary pipeline is not warranted.

Table 3-4: Stationary Construction Noise Analysis Results (L_{eq}) at the Nearest Noise-Sensitive Receptors

Nearest Noise-Sensitive Receptor	Distance from Site (Feet)	Predicted Stationary Noise Level (L_{eq}) at Noise-Sensitive Receptor (dBA)	Town of New Paltz Noise Limit	Town of Gardiner Noise Limit	Potential for Exceedance (Yes, No or NA)[1]
Installation of Temporary Pipeline (Mountain Rest Road and Road and Trail Crossings – 8 AM to 6 PM or Sunset, whichever is earlier, Monday through Friday)					
Recreational Trail (Mohonk Preserve)	150	75	NA	NA[2]	NA
Nearest Residence – New Paltz	177	74	NA	NA[2]	NA
Construction of Temporary Pumping System (Wallkill Downtake Chamber – 8 AM to 6 PM or Sunset, whichever is earlier, Monday through Friday)					
Nearest Residence - New Paltz	754	62	NA	NA	NA
Nearest Residence - Gardiner	1,347	57	NA	NA	NA
Emitting Property Line - Gardiner	592	64	NA	70[3]/60[4]	No

Notes:
NA = Not Applicable

[1] Potential for Exceedance outcomes are:
- "Yes" if there is an applicable quantitative town noise limit and the predicted stationary noise level at the noise-sensitive receptor would exceed that limit.
- "No" if there is an applicable quantitative town noise limit and the predicted stationary noise level at the noise-sensitive receptor would not exceed that limit.
- "NA" if there is no applicable quantitative town noise limit.

[2] The Town of Gardiner is located outside of the 1,500-foot noise study buffer.

[3] Noise limit is applicable between the hours of 7 AM and 8 PM.

[4] Noise limit is applicable between the hours of 8 PM and 7 AM.

4.0 CUMULATIVE EFFECTS

The *CEQR Technical Manual* defines cumulative effects as "two or more individual effects on the environment that, when taken together, compound or increase each other." Based on the assessment of the construction and operation of the temporary pipeline, no two or more individual effects on the environment would occur that, when taken together, compound or increase each other. As discussed above, construction of the temporary pipeline would be short-term, temporary and proper protective measures would be employed to protect the resources that are most likely to have the potential for a significant impact. Following the proposed temporary pipeline, any areas disturbed from construction of the temporary pipeline would be restored to existing conditions. In addition, operation of the temporary pipeline would not involve significant disturbances to resources within the study area and would be consistent with existing conditions. Therefore, no cumulative effects would occur from the proposed temporary pipeline.

5.0 GROWTH INDUCEMENT

Growth-inducing aspects of the proposed temporary pipeline were assessed. As specified in the *CEQR Technical Manual*, these aspects of the project "generally refer to secondary impacts that trigger further development in the area." The temporary pipeline would provide a replacement and maintenance of current levels of water supply to New Paltz during the temporary shutdown of the Catskill Aqueduct. The proposed temporary pipeline would not result in an increase in water supply capacity that would trigger additional development in the area. Therefore, no growth inducement impacts would occur.

6.0 UNAVOIDABLE ADVERSE IMPACTS

The *CEQR Technical Manual* requires that significant adverse impacts be summarized or presented when they are "unavoidable if the project is implemented regardless of the mitigation employed (or if mitigation is impossible)." Unavoidable significant adverse impacts are defined as those that meet the following two criteria:

- There are no reasonably practicable mitigation measures to eliminate the impacts; and
- There are no reasonable alternatives that would meet the purpose and need of the action, eliminate the impact, and not cause other or similar significant adverse impacts.

The temporary pipeline would not result in significant adverse impacts that would require mitigation, therefore, the proposed pipeline would not introduce new unavoidable adverse impacts to the project.

7.0 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Per the *CEQR Technical Manual*, this section summarizes the proposed temporary pipeline and its impacts to environmental resources, both man-made and natural resources. The proposed temporary pipeline would involve the use of various nonrenewable construction materials, materials for operation and maintenance, and minor use of fuels to support equipment used during the construction and operation of the temporary pipeline. The materials that would be used for the proposed temporary pipeline are nonrenewable resources and are considered irretrievably and irreversibly committed, because reuse is not possible or highly unlikely. However, the use of these materials would not be significant in volume or duration that would result in a significant commitment of the resources.

In addition, the proposed temporary pipeline would not result in the loss of environmental resources, both in the immediate future and in the long term. The construction of the temporary pipeline would result in a minor disturbance to the ground in the immediate vicinity of the pipeline supports and at the road and trail crossings. These areas are expected to return to existing conditions after the temporary pipeline is removed at the end of the proposed temporary pipeline.

ATTACHMENT A

FINAL SCOPE OF WORK AND RESPONSE TO COMMENTS

Water for the Future: Upstate Water Supply Resiliency

New Paltz Temporary Transmission Water Main Supplemental EIS

~~Draft~~ Final Scope of Work

Prepared for:

~~May~~ September 2017

Water for the Future: Upstate Water Supply Resiliency

New Paltz Temporary Transmission Water Main Supplemental Environmental Impact Statement

~~Draft~~ Final Scope of Work

~~May~~ September 2017

CEQR No: 15DEP006U

Lead Agency: New York City Department of Environmental Protection

Acting Commissioner: Vincent Sapienza, P.E.

Lead Agency Contact: Angela Licata
Deputy Commissioner of Sustainability
Attn: Sangamithra Iyer, P.E.
New York City Department of Environmental Protection
59-17 Junction Boulevard
Flushing, NY 11373

Preparer: New York City Department of Environmental Protection
Bureau of Environmental Planning and Analysis
59-17 Junction Boulevard
Flushing, NY 11373

Table of Contents

List of Figures

List of Tables

Appendix

List of Acronyms

CEQR	City Environmental Quality Review
DEIS	Draft Environmental Impact Statement
DEP	Department of Environmental Protection
EIS	Environmental Impact Statement
ESA	Environmental Site Assessment
FEIS	Final Environmental Impact Statement
GHG	Greenhouse Gas
mgd	million gallons per day
NYC	New York City
NYCRR	New York Codes, Rules and Regulations
NYS	New York State
PCE	Passenger car equivalents
RCNY	Rules of the City of New York
RWBT	Rondout-West Branch Tunnel
SEIS	Supplemental Environmental Impact Statement
SEQRA	State Environmental Quality Review Act
SERP	State Environmental Review Process
SHPO	State Historic Preservation Office
TNM	Traffic Noise Model
SPDES	State Pollutant Discharge Elimination System
UWSR	Upstate Water Supply Resiliency
WFF	Water for the Future

1.0 INTRODUCTION

This ~~Draft~~ Final Scope of Work for a Supplemental Environmental Impact Statement (SEIS) addresses a new element of the New York City Department of Environmental Protection's (DEP) previously proposed Upstate Water Supply Resiliency (UWSR) Project. The UWSR Project was the subject of a Draft Environmental Impact Statement (DEIS) that was prepared consistent with the State Environmental Quality Review Act (SEQRA), its implementing regulations (6 NYCRR Part 617), and New York City Environmental Quality Review (CEQR). The DEIS was issued on September 19, 2016 by DEP, as Lead Agency under SEQRA and CEQR, and a series of public hearings were held on the DEIS in October 2016.

Subsequent to the publication of the DEIS, DEP has identified an additional element of the UWSR Project. This new project element would involve the development of a new temporary water transmission main to supply the Village and Town of New Paltz, referred to collectively here as New Paltz. This water transmission main would supply water to New Paltz during those periods when DEP would need to temporarily shut down the Catskill Aqueduct for extended periods, as described in the DEIS for the UWSR Project. The purpose of this ~~Draft~~ Final Scope of Work is to describe the proposed new element of the UWSR Project, provide the environmental framework for the assessment of this, and identify potential significant adverse impacts, if any.

DEP issued a Draft Scope of Work for the this Supplemental Environmental Impact Statement (SEIS) on May 26, 2017. To solicit public comments on the New Paltz Temporary Transmission Water Main Project and, specifically, on the scope of the environmental analysis, a public meeting on the Draft Scope of Work was held on June 29, 2017, at the Town of New Paltz Community Center, 3 Veterans Drive, New Paltz, NY. Written comments were accepted throughout the public comment period, which closed on July 11, 2017.

Subsequent to the public scoping meeting, DEP reviewed and considered the comments received during the public scoping process. Appendix A to this Final Scope of Work identifies the comments made during the public scoping process and provides responses to those comments. This Final Scope of Work was prepared after consideration of the relevant public comments.

Based on the Final Scope of Work, a Supplemental EIS will be prepared and circulated for public review. A public hearing will be scheduled with a period for submitting written comments on the SEIS.

Where relevant and appropriate, new text and editorial changes have been made to the Draft Scope and incorporated into this Final Scope. These new text changes are indicated with double underlines and text deletions are displayed as striked out text.

2.0 BACKGROUND

2.1 WATER FOR THE FUTURE

The New York City (City) water supply system was developed to deliver an abundant and reliable supply of clean drinking water to the City. DEP is currently responsible for supplying clean drinking water to over eight million City residents and one million upstate customers in sufficient quantity to meet present water demands and to maintain the water supply system to meet future water demands. This is achieved through careful and coordinated management of the City's three surface water supply systems: the Catskill, Delaware, and Croton systems (see **Figure 1**). Recognizing the need to protect the long-term viability and overall resilience of the water supply system, the City continues to make systematic and sustained investments in the critical infrastructure that provides water to approximately nine million people each day.

DEP developed the Water for the Future program (WFF) to address significant leakage in one of its most critical pieces of water supply infrastructure: the Delaware Aqueduct. The Delaware Aqueduct has been in operation since the 1940s and transports water a distance of approximately 85 miles from the Delaware water supply system. The Delaware water supply system is the source of approximately 50 percent of the City's water supply. The Delaware Aqueduct is comprised of several segments, the longest of which is the Rondout-West Branch Tunnel (RWBT) that connects the Delaware water supply system's Rondout Reservoir, located in Ulster and Sullivan counties, New York, to the West Branch Reservoir in Putnam County, New York (see **Figure 1**). Repairing the RWBT is necessary for the City to continue to meet its water supply obligations, as it is the City's only direct conduit to the source waters of the Delaware water supply system west of the Hudson River.[1]

The RWBT segment of the Delaware Aqueduct is leaking up to 35 million gallons per day (mgd), primarily in the area known as the Roseton crossing under the Town of Newburgh, Orange County, New York; a second leaking section is located near the Town of Wawarsing, Ulster County, New York.

To address these leaks, an iterative planning process involving complex modeling and considerations for both repair time and cost was undertaken to determine the optimal method of repair. As a result of this planning process, DEP elected to construct a bypass tunnel and two associated shafts to permanently circumvent the leaking section at the Roseton crossing, and to conduct internal repairs to the section in Wawarsing. The work undertaken to circumvent the leaking section in the Roseton crossing area is referred to as the "RWBT Bypass." The RWBT Bypass work was previously evaluated in a Final Environmental Impact Statement (FEIS) issued on May 18, 2012, and work on that project is ongoing.

[1] In addition to the RWBT, critical segments of the Delaware Aqueduct include those between West Branch and Kensico Reservoirs and between Kensico Reservoir and the City's distribution system.

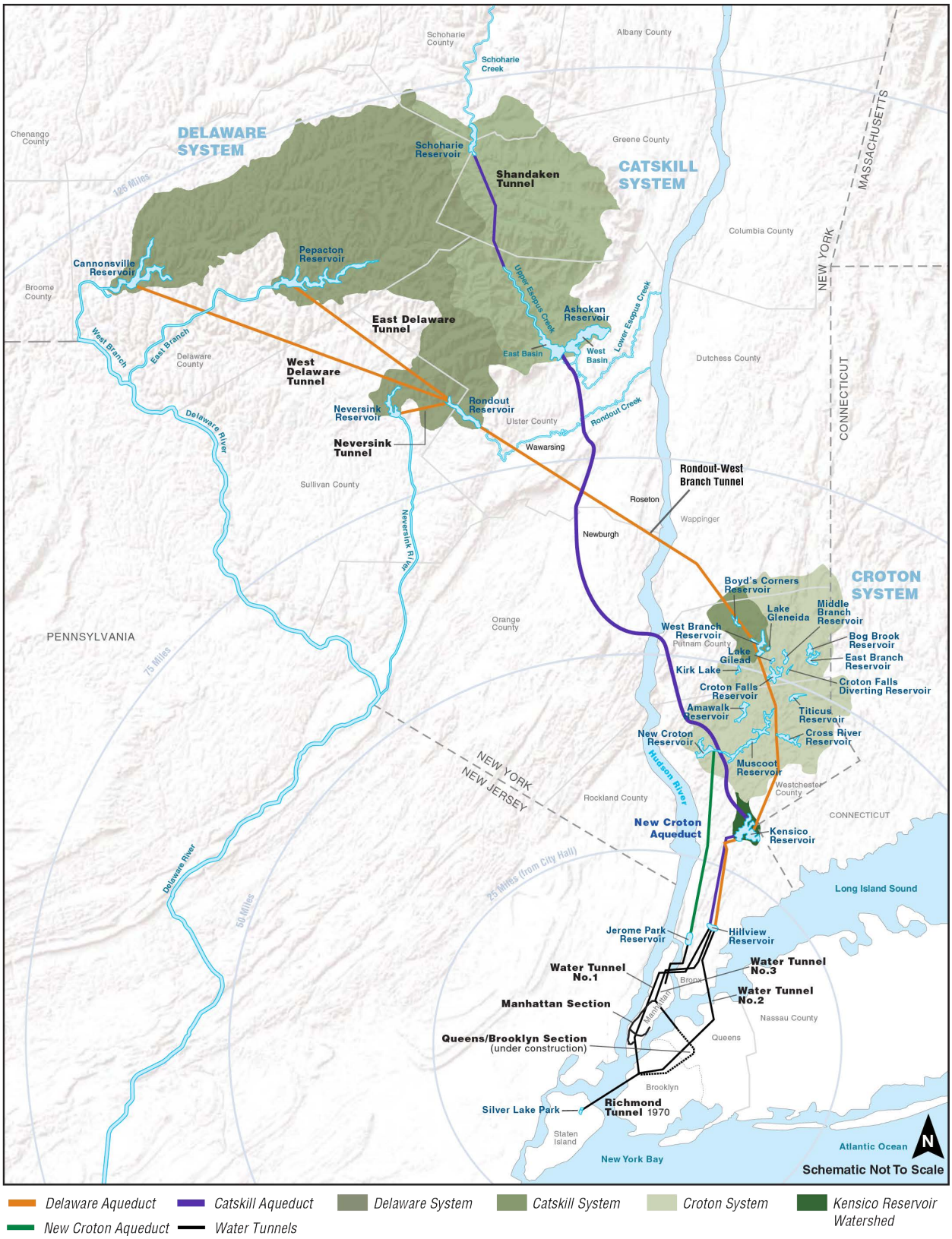


Figure 1: Water Supply System

2.2 UPSTATE WATER SUPPLY RESILIENCY PROJECT

Once the bypass tunnel and shafts are completed in 2022, the RWBT would be temporarily shut down and drained to connect the bypass tunnel to the existing RWBT and to carry out internal repairs to the leaking section of the existing RWBT in Wawarsing. DEP estimates that the maximum shutdown duration would be approximately eight months. During this temporary shutdown of the RWBT, water from the Delaware System west of the Hudson River would be unavailable. To ensure the continued supply of clean drinking water during this time, DEP has developed projects and plans comprised of three main components: (1) supply augmentation consisting of rehabilitation of the Catskill Aqueduct; (2) WFF Shutdown System Operations,[2] which would allow DEP to rely more heavily on the Catskill and Croton Systems during the temporary shutdown; and (3) RWBT Inspection and Repair during connection of the bypass tunnel, including decommissioning the bypassed section of the RWBT.

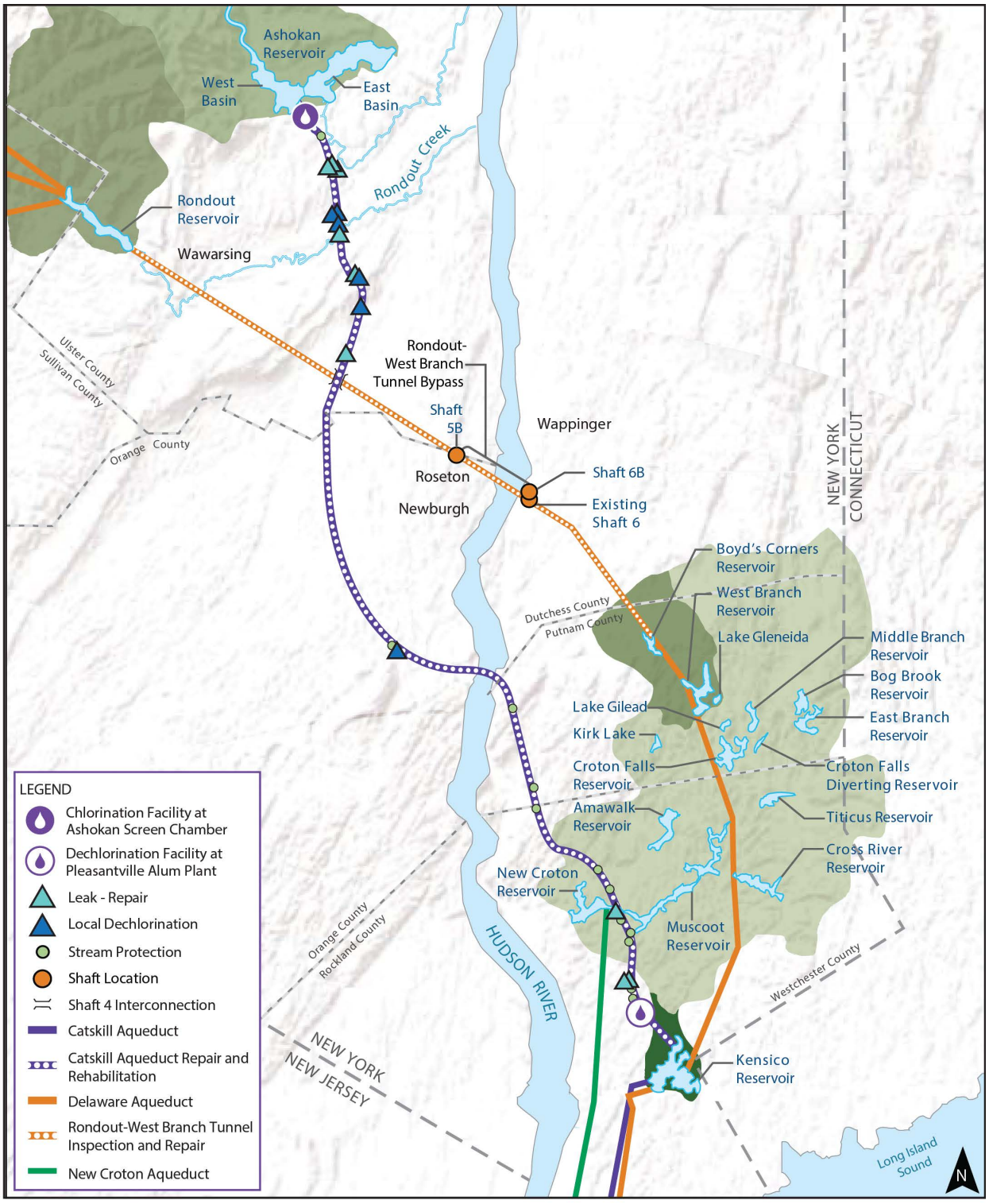
The repair and rehabilitation of the Catskill Aqueduct, WFF Shutdown System Operations, and RWBT Inspection and Repair work, collectively referred to as UWSR, were previously evaluated in a DEIS issued on September 19, 2016. Public hearings were held on October 20, 24, 25, and 28, 2016 in Ellenville, New York; Yorktown Heights, New York; Newburgh, New York; and Loch Sheldrake, New York respectively, to collect public comments. The public comment period closed on November 14, 2016.

2.3 CATSKILL AQUEDUCT REPAIR AND REHABILITATION PROJECT

The original capacity of the upper portion of the Catskill Aqueduct between Ashokan and Kensico reservoirs has been reduced over time, partly because of the accumulation of biofilm (a naturally occurring layer of microorganisms within a self-produced polymer) along the aqueduct's interior surface. As part of the UWSR Project, DEP plans to repair and rehabilitate the Catskill Aqueduct to restore its historical capacity. This would provide water supply augmentation during the temporary shutdown of the RWBT. In addition, the repair and rehabilitation of the Catskill Aqueduct would extend the aqueduct's useful life for many years to come.

The proposed Catskill Aqueduct Repair and Rehabilitation (repair and rehabilitation) would restore capacity to the upper portion of the Catskill Aqueduct between the Ashokan and Kensico reservoirs (see **Figure 2**) closer to its historical capacity. As part of the repair and rehabilitation project, DEP would remove accumulated biofilm within the aqueduct initially through the addition of one of two chlorine-based chemicals, sodium hypochlorite or chlorine dioxide. These would be added to the aqueduct via a proposed chlorination facility located at the Ashokan Screen Chamber. A dechlorination facility would be constructed at the Pleasantville Alum Plant to remove residual chlorine prior to release to Kensico Reservoir. Biofilm removal efforts would involve the physical removal of biofilm within the aqueduct. The repair and rehabilitation project

[2] DEP frequently modifies its operation of the water supply system for many reasons, in response to a variety of conditions, as routine management that would not be subject to environmental review under SEQRA or CEQR. In contrast, "WFF Shutdown System Operations" as analyzed in the September 2016 DEIS refers to a specific and highly unusual protocol for operating the system designed solely for purposes of Upstate Water Supply Resiliency in connection with the Water for the Future program.



Not To Scale
For Illustrative Purposes Only

Figure 2: Catskill Aqueduct Repair and Rehabilitation

would also include additional repairs necessary as a result of age-related deterioration of the aqueduct, including repair or treatment of minor leaks and replacement of aging mechanical components. Biofilm removal and repair and rehabilitation of the Catskill Aqueduct would require temporary shutdowns of the aqueduct to allow for the completion of these efforts, currently anticipated to encompass three separate 10-week periods over a 3-year period.

2.4 OUTSIDE COMMUNITY CONNECTIONS

DEP currently provides water supply to 15 Outside Community Connections from the Catskill Aqueduct. These connections serve approximately 20 communities (see **Figure 3** and **Table 1**).

To complete the proposed repair and rehabilitation work activities, temporary shutdowns of the Catskill Aqueduct lasting up to 10 weeks each, would occur over a 3-year period from 2018 to 2020. During these Catskill Aqueduct shutdowns, water supply from the Catskill Aqueduct would be suspended to communities served by these Outside Community Connections. As discussed in the DEIS, DEP would coordinate closely with the communities served by these Outside Community Connections to confirm they have adequate water supply independent of the upper Catskill Aqueduct prior to any temporary shutdown of the aqueduct required for the repair and rehabilitation.

As discussed in Section 5.3 of the DEIS, several municipalities that currently do not have back-up supplies are pursuing back-up water supply projects, which are subject to independent environmental review. These include the Town/Village of New Paltz.

New Paltz is dependent on the Catskill Aqueduct as its primary water source. Water from the aqueduct is transferred to New Paltz's open reservoir where it is stored prior to treatment and distribution. The Town and Village of New Paltz are considering projects consisting of development of a new well field capable of supplying 400 gallons per minute (gpm), upgrading their existing reservoir system including the installation of flashboards, and dredging to provide several additional days of storage capacity. The Village also plans to implement demand management initiatives in order to reduce demand during the Catskill Aqueduct shutdown periods.

In the event that the new well field project is not completed in time for the extended Catskill Aqueduct shutdowns, DEP is proposing an alternative temporary overland pipeline connection to the Catskill Aqueduct Wallkill Pressure Tunnel at the Wallkill Downtake Chamber to convey water to New Paltz's existing raw water transmission main on Mountain Rest Road. This Proposed Project is further described in Section 3.0, and is the subject of this SEIS.

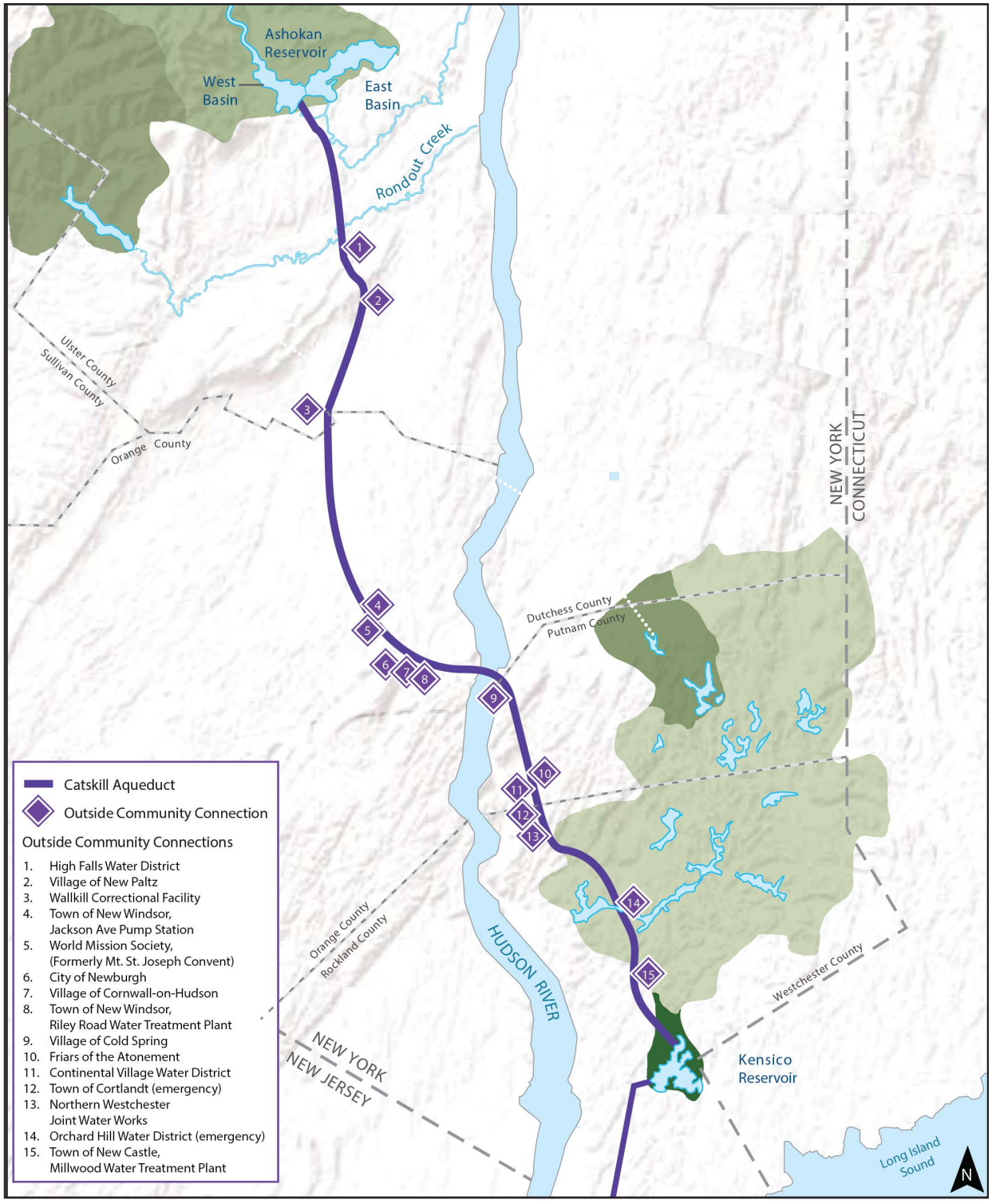
Table 1: Outside Community Connections to the Catskill Aqueduct

Location	Water Supply Connections[1]
West-of-Hudson	High Falls Water District[2]
	Village and Town of New Paltz[2]
	Wallkill Correctional Facility
	Town of New Windsor, Jackson Avenue Pump Station[2]
	World Mission Society (formerly Mount Saint Joseph Convent)
	City of Newburgh[2]
	Village of Cornwall-on-Hudson[2]
	Town of New Windsor, Riley Road Water Treatment Plant[2]
East-of-Hudson	Village of Cold Spring
	Friars of the Atonement
	Continental Village Water District[2]
	Town of Cortlandt (emergency)
	Northern Westchester Joint Water Works[2]
	Orchard Hill Water District (emergency)
	Town of New Castle, Millwood Water Treatment Plant[2]

Notes:

1 This table represents the 15 Outside Community Connections from the Catskill Aqueduct that serves approximately 20 communities.

2 These Outside Community Connections rely on the Catskill Aqueduct as their primary supply of drinking water (primary users). All other communities use the Catskill Aqueduct as a back-up supply (secondary users). Note that the City of Newburgh, which typically uses the Catskill Aqueduct as a back-up water supply source, will use Catskill Aqueduct as a primary source until completion of its treatment systems scheduled to be available in 2017.



Not To Scale
For Illustrative Purposes Only

Figure 3: Outside Community Connections

3.0 PROPOSED NEW PALTZ TEMPORARY TRANSMISSION WATER MAIN

3.1 PURPOSE AND NEED

The Catskill Aqueduct Repair and Rehabilitation (repair and rehabilitation) project must be completed prior to the planned shutdown of the RWBT in 2022. The repair and rehabilitation will require the Catskill Aqueduct to be out of service for up to 10 weeks at a time in 2018, 2019, and 2020.

New Paltz draws water from the Catskill Aqueduct as its primary source of drinking water and does not currently have a back-up supply capable of fully sustaining its supply needs during the proposed aqueduct shutdown. New Paltz is undertaking independent projects consisting of development of a new well field, upgrading its existing reservoir system, and implementing demand management initiatives in order to meet demand during the Catskill Aqueduct shutdown periods to provide a long-term back-up supply independent of the City's water supply system. However, in order to limit impact to the repair and rehabilitation construction if these projects are not fully implemented, DEP is proposing an alternate supply of water to New Paltz. This would be implemented directly by DEP and allow segments of the aqueduct to be unwatered to allow in-aqueduct repairs thereby maintaining a supply of water to New Paltz and not impacting the shutdown of the RWBT and the interconnection of the new bypass tunnel in 2022.

3.2 PROJECT DESCRIPTION

DEP is proposing an approach that would consist of several shorter duration shutdowns (up to 10 days each) in 2018 and/or 2019 that would coincide with the complete 10-week aqueduct shutdowns for locations south of the Catskill Aqueduct's Wallkill Pressure Tunnel. This would allow New Paltz to meet demand by refilling its Lower Reservoir between each short shutdown. For the 10-week shutdown in 2020 to allow completion of biofilm removal, DEP is designing an approximately 2.3 mile temporary transmission water main (temporary pipeline or pipeline) that will extend overland from the Wallkill Pressure Tunnel Downtake to a Village of New Paltz existing raw water pipeline at Mountain Rest Road that directs water to New Paltz's Lower Reservoir (see **Figure 4**). The temporary pipeline will be placed at grade along the Catskill Aqueduct, primarily for use during the 2020 shutdown, although DEP may choose to install the temporary pipeline earlier for use during either the 2018, 2019, and/or 2020 shutdowns. If Catskill Aqueduct shutdowns are required beyond 2020, then the temporary pipeline may be used during additional shutdowns. Once the project is complete, the temporary pipeline will be removed.

The temporary pipeline will be supplied with water pumped from the Wallkill Downtake which will be back fed (re-supplied) via the Delaware Aqueduct through an existing interconnection at Delaware Aqueduct Shaft 4 in Gardiner, New York. This will allow the portion of the Catskill Aqueduct north of the Wallkill Pressure Tunnel to remain unwatered for a prolonged period of time so that biofilm removal and other in-aqueduct construction activities can occur. During use of this temporary pipeline, a bulkhead may be constructed inside the aqueduct to allow southern sections of the aqueduct to remain unwatered to facilitate repair and rehabilitation work.

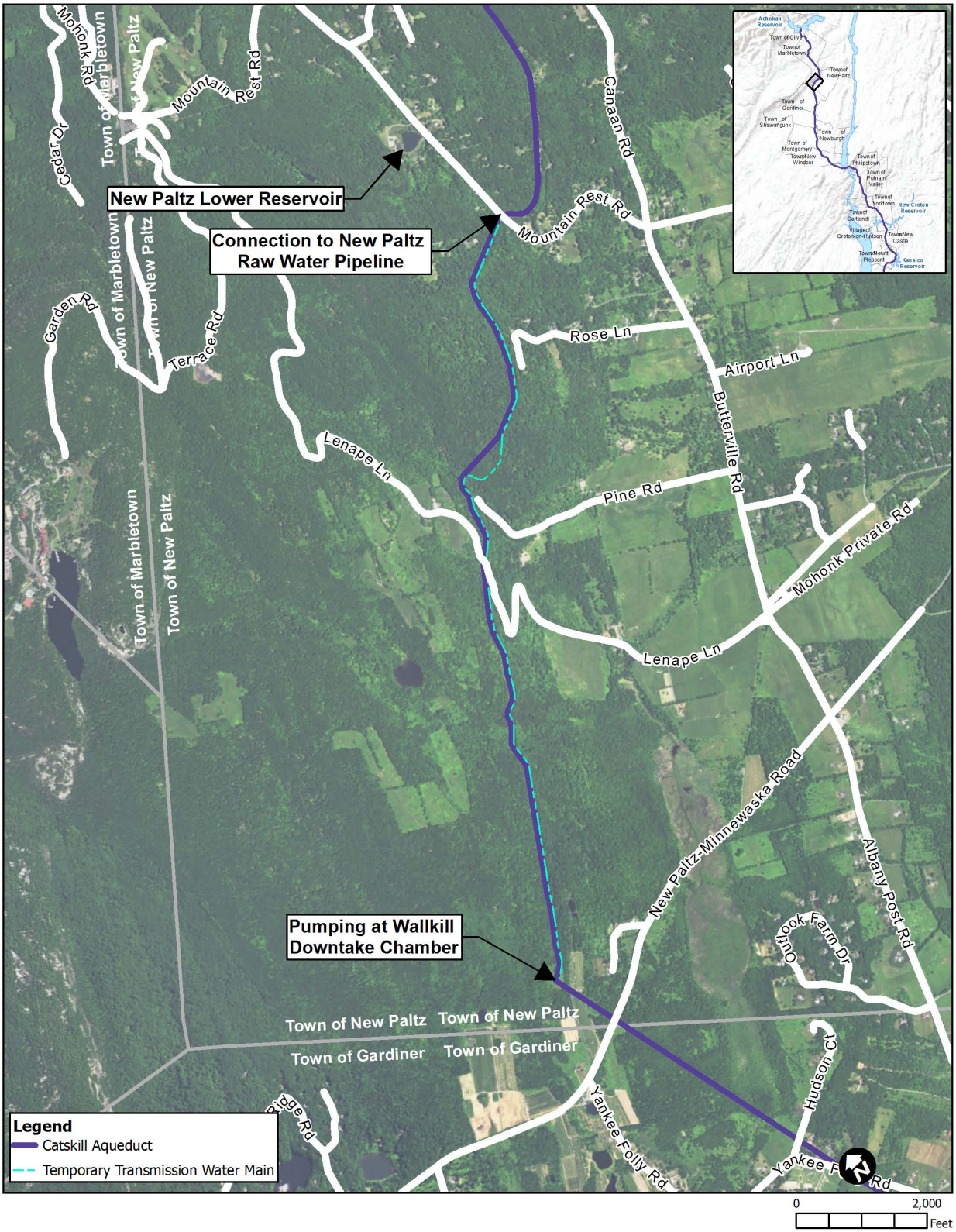


Figure 4: Site Location Map

3.3 PROJECT SCHEDULE

For the purpose of the SEIS analyses, it will be conservatively assumed that construction of the New Paltz Temporary Transmission Water Main would be completed in 2018 prior to the first shutdown associated with the repair and rehabilitation project, and would remain in place until after the final shutdown, anticipated in 2020.

3.4 PROJECT APPROVALS AND COORDINATION

The Proposed Project would require permits and approvals from State and local agencies. ~~Anticipated~~ Potential discretionary permits and approvals are listed in **Table 2**. DEP would coordinate with applicable agencies, as necessary.

Table 2: Summary of Potential Discretionary Permits and Approvals for New Paltz Temporary Transmission Water Main

Agency/Entity	Permit and/or Approval
State	
NYS Department of Environmental Conservation	SPDES General Permit for Stormwater Discharges from Construction Activities (GP-0-15-002)
NYS Department of Health	Approval of Plans for Public Water Supply Improvement
Local	
New York City Department of Health and Mental Hygiene	Approval of Plans for Public Water Supply Improvement Review
Village of New Paltz	Connection to Distribution System
Ulster County Department of Health	Approval of Plans for Public Water Supply Improvement Review
Ulster County Department of Public Works	Highway Work Permit
Town of New Paltz	Wetlands and Watercourse
	Clearing and Grading Permit
	Steep Slope Permit
	Municipal Separate Storm Sewer System (MS4) Acceptance Form for Stormwater Pollution Prevention Plan

3.5 ANALYTICAL FRAMEWORK FOR SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

As the Lead Agency, DEP is required to examine the environmental effects of a proposed action and, to the maximum extent practicable, avoid, or mitigate potentially significant adverse environmental impacts, consistent with social, economic, and other essential considerations.

This environmental review is being prepared in accordance with New York's SEQRA and the City's CEQR process. Any proposed action funded, approved, or directly undertaken by a New York State or local agency must comply with the provisions of SEQRA and its implementing regulations (6 NYCRR Part 617). As a consequence, the New Paltz Temporary Transmission Water Main Project is subject to review under SEQRA. In addition, since the proposed action is being undertaken by a City agency, it is also subject to review under CEQR requirements, as set forth in 62 RCNY Chapter 5 and Executive Order 91 of 1977, CEQR regulations, and CEQR amendments, as well as the State Environmental Review Process (SERP), as required by the State Revolving Loan Fund Program. The City's *CEQR Technical Manual* provides guidelines for conducting environmental reviews performed under CEQR.

As noted in the SEQRA regulations (6 NYCRR § 617(a)(7)), a SEIS may be required if there are changes in a proposed project, newly discovered information, or changes in circumstances related to the project. Since the issuance of the DEIS in September 2016, DEP has identified the need to develop an alternative method to supply water to New Paltz during shutdowns of the aqueduct as part of the repair and rehabilitation project if New Paltz is unable to implement the independent water supply projects that are currently being advanced. DEP is proposing to install an overland temporary pipeline from the Wallkill Downtake Chamber to New Paltz's raw water pipeline, located adjacent to Mountain Rest Road, and ultimately to New Paltz's Lower Reservoir. As this alternative was developed after the UWSR DEIS was issued, DEP will be analyzing this alternative in a SEIS.

The SEIS will describe the analytical framework that will be used to assess the potential for impacts associated with the Proposed Project. It will define the assessment conditions; build year (construction and operation); impact assessment categories; and impact thresholds as follows:

- **Existing Conditions.** In the SEIS, existing conditions will be described in order to establish a baseline against which future conditions can be projected.

- **No Build Conditions.** Using existing conditions as a baseline, conditions known to occur or expected to occur in the future, regardless of the proposed project, are then evaluated for the proposed project's analysis year(s). This is the "No Build" or "Future without the Proposed Project" and is the baseline condition against which the effects of the proposed project are measured.

- **Analysis Year.** The analysis year refers to the future year when a proposed project is likely to affect its environmental setting. The analysis year is representative of the anticipated construction and/or operational years.

- **Probable Impacts with the Proposed Project (With-Action Condition).** Potential changes resulting from temporary construction or operation of the New Paltz Temporary Transmission Water Main Project will be compared to the No Build condition to assess the potential for significant adverse impacts. This comparison provides for an understanding of the potential impacts that could result with the proposed project. Future conditions would be evaluated and represent a "reasonable worst-case scenario" in order to determine the probable impacts with the proposed project.

3.6 ORGANIZATION AND SCOPE OF THE SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

As discussed above, since the sponsor of the Proposed Project is DEP, a New York City agency, it is subject to CEQR in addition to SEQRA. The City of New York's *CEQR Technical Manual* provides suggested methodologies for conducting environmental assessments performed under CEQR.

The methodologies in the *CEQR Technical Manual* provide a structured approach to addressing the potential for significant adverse impacts, and this ~~Draft~~ Final Scope of Work follows its suggested analytical approaches for a targeted environmental review. These methodologies are considered to be appropriate technical analysis methods and guidelines for environmental impact assessment of discretionary actions in New York City. However, since the Proposed Project has the potential to affect locations outside the City, locally and/or State-accepted EIS methodologies will be applied, as applicable.

The remainder of this ~~Draft~~ Final Scope of Work describes the analysis methodologies that will be used in the SEIS to assess the potential environmental effects of the Proposed Project.

- **Sections 3.6.1** and **3.6.2** outline the Executive Summary and Project Description to be included in the SEIS.

- **Section 3.6.3** describes the methodologies that will be used to analyze the potential impacts of the Proposed Project.

- **Section 3.6.4** describes how the Proposed Project's cumulative effects will be assessed.

- **Sections 3.6.5**, **3.6.6**, **3.6.7,** and **3.6.8** describe how the SEIS will identify any required mitigation measures, as well as disclose any growth inducing effects, unavoidable adverse impacts, and irreversible and irretrievable commitment of resources.

- **Section 3.6.9** states that a glossary of acronyms will be included as part of the SEIS.

3.6.1 Executive Summary

The SEIS will include an Executive Summary providing the reader with a clear understanding of the information found in the main body of the SEIS. A synopsis of all potential significant adverse impacts from the construction and temporary operation of the Proposed Project, along with proposed mitigation measures for such impacts, if applicable, will be summarized in this chapter. Specifically, the Executive Summary will include:

- A brief description of the Proposed Project, including a summary of the overall UWSR Project and its interrelationship to the Proposed Project, background leading to its development and anticipated analysis year(s).

- A list of involved and interested agencies, and required approvals/permits.

- A concise list of any anticipated significant adverse impacts and proposed mitigation measures.

3.6.2 Project Description

This chapter of the SEIS will describe the Proposed Project and provide the public and decision-makers with the context within which to evaluate the Proposed Project.

The Project Description chapter will contain an overview of the UWSR and the repair and rehabilitation project, a detailed description of the proposed New Paltz Temporary Transmission Water Main Project, a list of all actions and approvals associated with the Proposed Project, identification of the applicant, and a discussion of the regional setting for the Proposed Project. It will also incorporate a statement of purpose and need for the Proposed Project and a discussion of the interrelationship of the Proposed Project to the larger UWSR program. An overview of the Proposed Project's construction and operations schedule will also be provided, and locations where construction may occur (including construction staging areas) will be identified.

3.6.3 Probable Impacts of the Proposed Project

3.6.3.1 Overview

As described above, the Proposed Project involves the construction and temporary operation of an overland temporary pipeline to supply raw water to New Paltz during the planned Catskill Aqueduct shutdowns. This portion of the SEIS will provide a detailed assessment of potential impacts related to the Proposed Project.

A targeted or focused environmental review is anticipated based upon the nature of the Proposed Project. Those resource areas that are most likely to have the potential for a significant impact would be addressed in more detail, while a review of remaining resource areas may be limited or eliminated, where appropriate. Based on the nature of the Proposed Project, the limited amount of construction, and limited operational requirements, no detailed analyses related to land use and zoning, socioeconomics, community facilities, shadows, urban design and visual resources, and energy would be required. As applicable, the rationale for limiting or excluding further review of a specific issue or technical analysis is discussed within the following sections.

At a minimum, an initial screening will be completed in the SEIS for those environmental impact assessment categories for which more detailed assessments are not required. Using the methodology described below, applicable environmental impact assessment categories (e.g., natural resources, water and sewer infrastructure, etc.) will be evaluated for the Proposed Project. In some cases, specific assessment categories may be evaluated cumulatively with respect to both construction and operation.

For the Proposed Project, a 400-foot radius was circumscribed surrounding the limits of construction. Per the *CEQR Technical Manual,* a 400-foot radius study area allows for a proposed project's immediate effects on an area to be determined.

In addition to the general criteria for establishing study areas, the *CEQR Technical Manual* allows study areas to vary for specific impact categories, as appropriate. It was appropriate to

establish impact category-specific study areas for natural resources and stationary noise assessments for the following reasons:

- Natural resources study area boundary would typically be smaller than the study area boundary. The natural resources study area would be focused on the immediate areas surrounding the work that could be directly or indirectly affected by the Proposed Project.

- The boundary of the study area for stationary noise would be based on a 1,500-foot radius surrounding the work site. Per the *CEQR Technical Manual*, receptors within a 1,500-foot radius from the Proposed Project that would have a direct line of sight of the Proposed Project should be considered for a stationary noise analysis.

3.6.3.2 Land Use, Zoning, and Public Policy

Activities associated with construction and temporary operation of the Proposed Project would occur in the Town of New Paltz, Ulster County, New York. The Proposed Project would involve the temporary placement of an overland pipeline along the Catskill Aqueduct that would extend approximately 2.3 miles from the Wallkill Downtake to Mountain Rest Road where the pipeline would be interconnected to an existing raw water pipeline that extends to New Paltz's Lower Reservoir. No change in or impacts to existing land uses or zoning would occur as part of the Proposed Project. The majority of the Proposed Project would occur within an existing utility corridor associated with the aqueduct. No detailed assessment of land use and zoning would therefore be completed. A review and analysis of public policy will be completed and this will outline and evaluate potential compliance with public policies that may apply to the study area, including any adopted or proposed neighborhood or community plans.

3.6.3.3 Socioeconomic Conditions

The Proposed Project would not result in (1) direct residential displacement; (2) direct business displacement; (3) indirect residential displacement; (4) indirect business displacement; and (5) adverse effects on a specific industry. In addition, the Proposed Project would not include any acquisition of land/easements; therefore, a socioeconomic assessment is not required.

3.6.3.4 Community Facilities and Services

Operation of the Proposed Project would not involve significant new populations and is therefore not anticipated to result in any changes to community services (e.g., schools, libraries, child care centers, healthcare facilities, police and fire protection). Upon completion of construction, no permanent workers would be associated with the operation of the temporary pipeline. Any community service needs (e.g., police associated with traffic control or equipment deliveries) required during construction would be limited and very short-term, likely a few days or a few weeks. As a result, no impacts to existing or the need for new community facilities and services is expected and no detailed assessment is required.

3.6.3.5 Open Space and Recreation

There are open space and recreational resources adjacent to the Catskill Aqueduct and the Proposed Project. An inventory of existing open space and recreational resources within the

study area will be conducted utilizing existing information and data sources to determine if any resources would potentially be displaced or are located in close enough proximity to the Proposed Project to warrant an analysis of potential impacts. Results of the open space and recreation assessment and an assessment of conditions in the future with and without the Proposed Project will be presented in the SEIS.

3.6.3.6 Shadows

The Proposed Project would not result in any new structures that would have the potential to result in new shadow impacts to light-sensitive or other resources. No detailed analysis would therefore be required.

3.6.3.7 Historic and Cultural Resources

A portion of the Catskill Aqueduct within the study area is located within a historic resource. In addition, the Proposed Project would involve limited excavation associated with the placement of foundations for pipeline supports along the aqueduct and for the interconnection of the temporary pipeline to an existing New Paltz raw water pipeline within the Mountain Rest Road right-of-way. This section of the SEIS will include an assessment of the potential for impacts that could occur as a direct or indirect result of construction and temporary operation of the Proposed Project. This analysis will include identification of archeological and architectural resources that could be affected by the Proposed Project. The analysis will also utilize existing Phase 1A literature reviews already prepared and previous consultations with the State Historic Preservation Office (SHPO), where readily available.

3.6.3.8 Urban Design and Visual Resources

The Proposed Project would involve the construction and temporary operation of an overland pipeline and would not include the construction of any structures or significant and permanent physical changes to the project site. Upon completion of construction, no impacts to visual resources would occur. As a result, there would be no impacts related urban design and visual resources and no detailed assessment is required.

3.6.3.9 Natural Resources and Water Resources

According to the *CEQR Technical Manual*, a natural resource analysis is required if: (1) a natural resource is present on or near the site of a proposed project; and (2) the proposed project has the potential to disturb, impact, or affect that resource. If there is a potential for direct or indirect project-related adverse impacts to natural resources, then further analysis is required. Direct impacts are those that immediately interfere with or alter the resource by causing death, injury, harm, harassment, and/or displacement; impact baseline site conditions, such as filling or draining areas; construction of structures in the water; or the removal of vegetation (clearing and grading). Indirect impacts are those that affect a natural system or another resource that uses or relies upon habitat provided by the resource under study (habitat loss/loss of "critical" habitat).

A detailed natural resources analysis for a proposed project is not generally warranted if:

- The site and surrounding area is mostly devoid of natural resources;

- Habitat for natural resources or sensitive species does not exist on the proposed project site;

- Disturbance of the subsurface would not impact areas on which other natural systems are dependent; and/or

- The potential for disturbance from the project has been previously deemed insignificant by a government agency with jurisdiction over that resource, and conditions have not changed significantly since prior permits were issued for other projects with the same level of disturbance.

The Proposed Project has the potential to require some clearing of vegetation during construction activities; however, limited or no tree clearing is anticipated. In addition, there are numerous surface water streams in the study area that currently cross the Catskill Aqueduct in a series of culverts and a bridge which would be crossed by the temporary pipeline. Pipeline blow-off locations would also be located at several locations along the length of the temporary pipeline to allow for the periodic release of untreated, raw water from the pipeline to surface water.

An initial analysis will be conducted to determine whether a more detailed natural resources analysis is warranted for a specific species or habitat associated with the Proposed Project. The initial analysis will include a combination of desktop analyses, previous agency consultations, and information acquired from previous site surveys, where available. The desktop analyses will be used to identify existing natural resources within the study area that could be affected by construction and temporary operation of the Proposed Project. A natural resources analysis considers species in the context of the surrounding environment, habitat, or ecosystem and, if these are present, an analysis of the Proposed Project's potential to impact those resources is required. Such resources include groundwater, soils and geologic features, numerous types of natural and human-created aquatic and terrestrial habitats, and any areas used by wildlife.

The SEIS will include a description of the proposed construction and operation of the pipeline and the potential impacts of these to natural resources as applicable. No impacts to groundwater are anticipated. Existing conditions will be described and an estimate of potential impacts to natural resources due to the Proposed Project would be provided. Protective measures that would be incorporated into the Proposed Project (e.g., silt fence, hay bales, etc.), as well as proposed restoration of existing vegetation (e.g., reseeding), if applicable, to address or limit potential impacts would also be discussed.

3.6.3.10 Hazardous Materials

There would be a limited amount of ground disturbance associated with the Proposed Project primarily associated with the establishment of foundations to support the temporary pipeline and the interconnection of this main to an existing raw water pipeline. The evaluation of current environmental conditions will use the results of the Phase 1 Environmental Site Assessment (ESA) completed as part of the UWSR DEIS. Applicable information from the Phase I will be summarized in the SEIS. The SEIS will include a description of measures that would be incorporated into the Proposed Project, such as compliance with existing regulatory requirements, implementation of subsurface testing (if warranted) prior to construction to

determine the need for special handling of excavated materials, and a summary of protocols to be implemented during construction of the Proposed Project to limit public and construction workers' exposure to potential contaminants.

The temporary operation of the Proposed Project would also include the on-site storage of diesel fuel enclosed in a secondary containment system. The SEIS will include a discussion of the potential impacts from the storage of diesel fuel on-site.

3.6.3.11 Water and Sewer Infrastructure

The Proposed Project would not create any significant changes in the number and intensity of users in the study area that would adversely impact wastewater collection and treatment capacity. No significant new sources of wastewater would be generated as a result of the Proposed Project; as a result, a detailed assessment of impacts to sewer infrastructure is not warranted.

The temporary operation of the Proposed Project would also not result in any significant change in existing impervious surfaces or stormwater conveyances. DEP would implement appropriate erosion and sediment control measures to limit potential impacts during construction. Potential access and/or staging areas would be limited or within existing developed areas and are not anticipated to include any or significant ground disturbance. No impacts to stormwater infrastructure are anticipated and a detailed analysis would not be required.

The Proposed Project would involve the construction and operation of a temporary water transmission main to provide water supply to New Paltz when DEP requires shutdown of the Catskill Aqueduct to facilitate biofilm removal and repair and rehabilitation work. This chapter of the SEIS would provide a general overview of the existing New Paltz water supply system and a discussion of current and future (Build Year) water supply needs. The operation of the Proposed Project and its impacts upon existing water infrastructure and supply needs in New Paltz would be discussed.

3.6.3.12 Solid Waste and Sanitation Services

The construction and temporary operation of the temporary pipeline is not expected to result in a significant increase in solid waste generation or change the way solid waste is currently handled. Little or no solid waste would be generated as a result of the operation of the temporary pipeline. Construction of the Proposed Project may necessitate the disposal of construction debris, but this would be limited. Therefore, a detailed assessment is not required.

3.6.3.13 Energy

The construction and operation of the Proposed Project is not anticipated to result in a significant increase in energy use. Operation of the Proposed Project would include the installation and use of two pumps and powered by diesel generators (one primary and one backup); however, this is not anticipated to result in any significant increased need for energy. No new electrical or gas service is anticipated as part of the Proposed Project. No detail assessment of energy usage is anticipated and a brief qualitative discussion will be provided.

3.6.3.14 Transportation

Upon initiation of operation it is anticipated that a minimal number of employee vehicles would be generated on a daily basis and on many days there would be no employees traveling to or from the site. Therefore, in accordance with the *CEQR Technical Manual*, a detailed traffic study would not be warranted for operations because the trip generation would be well below the 50 peak-hour passenger car equivalent (PCE) threshold for analysis. Analysis of potential construction-related transportation impacts is discussed in Section 3.6.3.20 below.

3.6.3.15 Air Quality

Temporary operation of the Proposed Project would not result in a significant increase in vehicular traffic, with a minimal number of employee vehicles expected daily. As a result, the maximum hourly incremental traffic generated by the project would not exceed the *CEQR Technical Manual* carbon monoxide (CO) screening threshold of 170 peak-hour trips at nearby intersections in the study area, or the particulate matter (PM2.5) emission screening threshold discussed in Chapter 17, Sections 210 and 311 of the *CEQR Technical Manual*. As such, an assessment of operational mobile source air quality emissions is not warranted.

No significant new air emissions sources are proposed with the exception of a diesel generator located at the Wallkill Downtake Chamber site which would be used during each 10-week aqueduct shutdown when the temporary transmission main would be in service. An operational stationary air discussion will be included within the SEIS specific to the generator that is proposed and the potential for air emissions from this. As a result, a detailed stationary air quality analysis for operations is not anticipated.

A discussion of the assessment of potential impacts to air quality as a result of construction of the Proposed Project is outlined in Section 3.6.3.20 below.

3.6.3.16 Greenhouse Gas Emissions and Climate Change

Typically, projects with larger-scale activities include a greenhouse gas (GHG) analysis focused mainly on CO_2, NO_2, and methane, pollutants associated with fossil fuel combustion. However, since no significant stationary or mobile fossil fuel combustion sources are proposed as part of the Proposed Project, there would be no significant direct or indirect sources of these compounds. Furthermore, upstream emissions related to the production of construction materials would be negligible and electricity use would also be temporary and minimal, and would not require any additional power supply from the local grid. There would be negligible construction and temporary operational GHG emissions associated with the Proposed Project, and, therefore no further assessment is required.

3.6.3.17 Noise

Operation of the Proposed Project would not result in a significant increase in mobile noise, as the very limited vehicular traffic anticipated would consist of passenger vehicles. The maximum hourly incremental traffic generated by the project is not expected to exceed the *CEQR Technical Manual* screening threshold of an increase in noise PCEs by 100 percent or more in the future

with the Proposed Project. As such, an assessment of operational mobile source noise emissions is not warranted.

Operation of the Proposed Project would result in additional sources of stationary noise emissions from a diesel-powered generator that would power a new submersible pump during the 10-week shutdowns when the temporary transmission main would be used. For the stationary noise sources, an initial assessment will be performed to assess the potential for noise impacts. This will include an identification of sensitive receptors located within a 1,500-foot radius of the emissions source and those with a direct line of site to the project site. The maximum emissions will be considered at the nearest noise-sensitive receptor(s) which will be utilized to determine if a more detailed noise analysis is required. If there is the potential for impacts, a detailed stationary source analysis will be performed. The detailed stationary operational noise analysis would be performed using a spreadsheet model or CadnaA, an acoustical three-dimensional noise model, to determine the total noise level that would be emitted at the nearest noise-sensitive receptor(s) due to the proposed on-site operation activities. If predicted noise levels are not in compliance with the *CEQR Technical Manual* impact thresholds and/or applicable local noise codes:

- Maximum allowable cumulative noise levels for new equipment would be established for incorporation into the project design and specifications; and
- Measures that could be implemented as part of the Proposed Project to reduce noise levels and achieve compliance with requirements will be evaluated.

A discussion of the assessment of potential noise impacts associated with construction of the Proposed Project is described in Section 3.6.3.20 below.

3.6.3.18 Neighborhood Character

An initial analysis of the potential for construction and operation of the Proposed Project to affect neighborhood character will be included in the SEIS. The neighborhood character assessment will be conducted as follows:

- Based on planned development projects in the vicinity of the proposed site, public policy initiatives, and planned public improvements, anticipated changes in the character of the area in the future without the Proposed Project will be summarized.

- The predominant factors that contribute to defining the character of the neighborhood surrounding the project site will be described. The Proposed Project's effect on neighborhood character will be assessed using the analyses of potential impacts for various technical areas—i.e., urban design and visual resources, historic resources, socioeconomic conditions, traffic, and noise.

3.6.3.19 Public Health

According to the *CEQR Technical Manual*, a public health assessment may be warranted if an unmitigated significant adverse impact is identified in other CEQR analysis areas, such as air quality, drinking water quantity and quality, hazardous materials, or noise. Although such an

impact is not expected for the Proposed Project, if one is identified a public health assessment will be prepared and presented in the SEIS.

3.6.3.20 Construction

This chapter of the SEIS will include a description of the construction activities and equipment associated with the Proposed Project. For the purposes of this SEIS, the build year for the Proposed Project would be 2018. The description of construction activities and equipment will include mobilization, site preparation, construction, and demobilization, as appropriate, as well the types of equipment that will be present on-site to carry out these activities.

Traffic and Transportation

The construction transportation assessment presented in the SEIS will consider the increase in vehicle trips from construction workers, construction vehicles, and equipment to and from the site. While not anticipated, the potential for temporary lane closures that could temporarily affect traffic movement near the site would be discussed. It is assumed that construction vehicles would proceed to the site from the closest truck route, approaching the aqueduct from both ends of the study area.

The SEIS will include an initial assessment to identify the project-related construction worker and truck trips. Construction worker parking and truck delivery staging will also be addressed. The construction transportation analysis will take into account several factors, including: trip distribution; departure/arrival patterns; and anticipated vehicular trips during construction for the proposed actions. Construction duration for initial installation and eventual removal is anticipated to be less than one year.

Level 1 (Trip Generation) and Level 2 (Trip Assignment) assessments will be conducted as described above to determine if the analysis thresholds in the *CEQR Technical Manual* would be exceeded. While not anticipated, if this initial analysis identifies an exceedance of the *CEQR Technical Manual* quantified transportation analyses thresholds (e.g., 50 or more vehicle trips during a given peak hour at an intersection), a detailed transportation analysis will be conducted. While not anticipated, if substantive road closures/traffic detours are required during construction, a detailed construction transportation analysis would also be conducted. In the detailed construction transportation analysis, existing traffic data will be utilized, where available, to establish existing traffic service levels at key intersections where the routes to/from the project site may overlap or cross (i.e., inbound divergence points and outbound convergence points). The estimated peak-hour trips associated with construction of the Proposed Project during peak construction will then be overlaid onto the future baseline traffic network and compared to the impact criteria outlined in the *CEQR Technical Manual*, in order to determine the potential for significant adverse traffic impacts. If any significant adverse impacts are predicted, mitigation measures will be developed.

Air Quality

Construction stationary and mobile air assessments will be performed and discussed within the SEIS. Construction activities would be short-term in nature. An assessment of emissions from construction equipment, worker and delivery vehicles, as well as fugitive dust emissions will be

performed. For on-site construction sources, the assessment will review the projected activity at the site in the context of construction intensity, duration, and location of emissions relative to nearby sensitive locations; and will identify any project-specific control measures that could be implemented to reduce the effects of construction on air emissions. The number of heavy equipment units that would be needed at a single time would be limited (e.g., generator, grader, excavator, fans, material delivery trucks). For mobile construction sources, an initial site-wide mobile assessment will be performed to confirm that the *CEQR Technical Manual* mobile source screening thresholds would not be exceeded. As such, detailed analyses of construction stationary and mobile air quality emissions are not warranted.

Noise

An initial assessment of noise emissions that would be generated by the Proposed Project's construction activity will be performed. The assessment will review the projected activity and equipment at the site in the context of construction intensity, duration, and location of emissions relative to nearby sensitive receptors; and will identify any project-specific control measures that could be implemented to reduce construction-related noise. Measures for compliance with DEP Rules for Citywide Construction Noise Mitigation and the New York City Noise Control Code will be qualitatively discussed.

For mobile construction sources, a mobile source assessment will be performed to confirm that the construction of the Proposed Project would not result in a doubling of existing noise PCEs, and therefore the *CEQR Technical Manual* mobile source screening threshold would not be exceeded. If any locations are predicted to experience more than a doubling of noise PCEs, which would translate to a 3 dB(A) increase in noise levels, an evaluation of the construction duration and location of emissions relative to nearby sensitive receptors will be performed to determine if a detailed mobile noise analysis is warranted.

For the stationary construction noise sources, an initial assessment will be performed to assess the potential for noise impacts. This will include an identification of noise-sensitive receptors located within a 1,500-foot radius of the emissions source and those with a direct line of site to the construction work area. If noise-sensitive receptors would be located within 1,500 feet, an evaluation of the stationary noise sources to be used during construction will be performed to determine if a stationary noise impact analysis is warranted. If warranted, a stationary noise impact analysis will be performed to determine whether construction would comply with local noise code scheduling requirements. The maximum emissions will be considered at the nearest noise-sensitive receptor(s).

If this assessment identifies the potential for significant adverse impacts from on-site construction activities and an exceedance of the screening thresholds, a detailed analysis of noise during construction will be performed. Potential noise impacts due to construction-related stationary and mobile sources will be examined. One representative reasonable worst-case time period (i.e., day) during the construction peak period will be selected for analysis. During the representative reasonable worst-case time period, noise levels due to construction activities at the selected site will be predicted for representative nearby sensitive receptors. For on-site construction sources, where the assessment identifies the potential for significant adverse impacts, an analysis of on-site construction activities will be conducted using a spreadsheet

model or CadnaA, an acoustical three-dimensional noise model to determine the potential for significant adverse noise impacts. In addition, if required, a mobile source analysis at representative major convergence roadways adjacent to noise-sensitive receptors would be conducted using the Federal Highway Administration Traffic Noise Model (TNM). Based on the results of the construction noise analysis, if necessary, the feasibility, practicability, and effectiveness of implementing measures to mitigate significant construction noise impacts will be examined.

3.6.4 Cumulative Effects

Cumulative impacts are two or more individual effects on the environment that, when taken together, compound or increase each other. The SEIS will evaluate the potential cumulative impacts from construction and operation of the Proposed Project, as applicable.

3.6.5 Mitigation

If any potential for significant adverse impacts resulting from the construction and temporary operation of the Proposed Project are identified in the analysis areas discussed above, practicable measures that could avoid or mitigate those impacts will be identified in this chapter of the SEIS.

3.6.6 Growth Inducing Effects of Proposed Project

This chapter will discuss whether there is the potential for growth inducing impacts to occur as a result of the Proposed Project. While not anticipated, the discussion will focus on whether the Proposed Project would trigger additional development.

3.6.7 Unavoidable Adverse Impacts

If any unavoidable adverse impacts are expected to result from the Proposed Project, they will be disclosed and discussed in this section of the SEIS.

3.6.8 Irreversible and Irretrievable Commitment of Resources

While not anticipated, this section of the SEIS will disclose any irretrievable commitment of resources that the Proposed Project may require.

3.6.9 Glossary of Acronyms

The SEIS will include a glossary of acronyms.

APPENDIX A

RESPONSE TO COMMENTS

A. INTRODUCTION

This document summarizes and responds to all substantive oral and written comments received during the public review period on the Water for the Future: Upstate Water Supply Resiliency New Paltz Temporary Transmission Water Main Supplemental Environmental Impact Statement (SEIS) Draft Scope of Work. The public review period for the SEIS Draft Scope of Work (Draft Scope) began on May 26, 2017 with issuance of the Notice of Intent to Prepare a SEIS by the New York City Department of Environmental Protection (DEP), in accordance with New York State Environmental Quality Review Act (SEQRA) and New York City Environmental Quality Review (CEQR) procedures. The SEIS Draft Scope was distributed on May 26, 2017 for public review and comment. Copies of the Draft Scope were made available for public review at the Town of New Paltz Town Hall, the Village of New Paltz Village Hall, and DEP offices in Queens and Kingston, NY. The document was also made available for public review on DEP's website.

DEP held a public meeting to solicit public comments on the Draft Scope during the comment period. The public meeting was held on June 29, 2017 at the Town of New Paltz Community Center, 3 Veterans Drive, New Paltz, NY. Written comments were accepted throughout the public comment period, which closed on July 11, 2017.

The Final Scope of Work (Final Scope) was issued on September 6, 2017. The Final Scope addresses comments received during the public review and finalizes changes, if any, to assessment methodologies that were made after the Draft Scope was published.

Section B below identifies the organizations and individuals that commented on the Draft Scope.

Section C summarizes and responds to each substantive comment. The comments are organized by subject area. Where multiple comments were made on the same subject matter, comments have been grouped together. Following each comment is the name of the organization or individual that made the comment, as listed in Section B. Responses to each comment follow.

B. ORGANIZATIONS AND INDIVIDUALS THAT COMMENTED ON THE SEIS DRAFT SCOPE OF WORK

The following organizations and individuals commented on the New Paltz Temporary Transmission Water Main SEIS Draft Scope during the comment period:

1. David Clouser, P.E., L.S, Barton & Loguidice, D.P.C., written comments received July 6, 2017. (Clouser)
2. Carol Cryer, oral comments dated June 29, 2017. (C.Cryer)
3. Ted Cryer, oral comments dated June 29, 2017. (T. Cryer)
4. Donna Liebman, oral comments dated June 29, 2017. (Liebman)
5. Tim Rogers, Mayor, Village of New Paltz, oral comments dated June 29, 2017. (Rogers)
6. Roy Speedling, oral comments dated June 29, 2017. (Speedling)

C. COMMENTS AND RESPONSES

GENERAL COMMENTS

Comment 1 Please include the Town of New Paltz as an Involved Agency in the environmental review with the following potential discretionary permits and approvals listed, in accordance with the provisions of the Code of the Town of New Paltz: (Clouser)

- Watercourse and Wetland Permit -The temporary transmission water main potentially traverses four (4) regulated streams and one (1) nearby wetland.
- Clearing and Grading Permit - Permit required for areas of land disturbance greater than 10,000 square feet or involving addition or removal of more than 40 cubic yards of fill.
- Steep Slope Permit - Permit required for land disturbance on slopes greater than 15% and covering a minimum horizontal area of 3/10 acre, or slopes greater than 25% and covering a minimum horizontal area of 2/10 acre.
- MS4 Acceptance of SWPPP(s) NOI.
- A Highway Work Permit may be required from Ulster County Department of Public Works (DPW).

Response 1 The Town of New Paltz was listed as an Involved and Interested Agency/Party within DEP's Notice of Intent to Prepare a SEIS issued with the Draft Scope of Work on May 26, 2017. The noted permits have been added to the list of potential discretionary permits in the Final Scope. Any potential permits that may be required will be assessed and disclosed in the draft SEIS. DEP has also met with, and will continue an ongoing dialogue with the Town of New Paltz.

Comment 2 Circulate Draft Project Plans that can be reviewed by the Town and to be used to confirm permit requirements. As a minimum, the following elements should be shown on the Plans: horizontal alignment, areas of land disturbance (trees, brush, grass or any other type of vegetation), areas of filling, excavation, clearing and grading, steep slopes (greater than 15%), excessive slopes (greater than 25%), location of watercourses, designated Town/State/Federal wetlands and associated buffers and construction method where pipe transverses waterways. (Clouser)

Response 2 DEP has met with, and will continue an ongoing dialogue with the Town of New Paltz. Project plans will be circulated as necessary and required in order to determine specific permit needs or meet project requirements.

Comment 3 We respectfully request that a SEQRA Full Environmental Assessment Form (EAF) be prepared to facilitate the project's review. This Full EAF would provide a description of the project and its setting to further identify the project, the nearby resources and the project's potential impacts. (Clouser)

Response 3 Based on SEQRA requirements, the lead agency may waive the requirement for an EAF if an application is accompanied by a Draft EIS in lieu of an EAF. As Lead Agency, DEP is preparing the New Paltz Temporary Transmission Water Main SEIS to the Upstate Water Supply Resiliency DEIS in lieu of an EAF for issuance with the Final Scope of Work (FSOW). The SEIS will provide a description of the project, its setting, nearby resources, and the potential for any impacts. If an EAF is required in support of any discretionary permits, one will be provided.

Comment 4 Provide additional information regarding the potential frequency and permitting with regards to the discharge of pipeline blow offs that would allow for the periodic release of untreated water to surface water resources. (Clouser)

Response 4 Discharge of raw uncontaminated water from the pipeline blow-offs are expected to be infrequent and will be described as part of the SEIS. Discharges from the pipeline at the blow-off locations along its alignment may require NYSDEC SPDES review. Should it be determined that a permit from the NYSDEC is required, DEP will incorporate supplemental information into DEP’s overall Catskill Aqueduct Repair and Rehabilitation NYSDEC SPDES application.

Comment 5 Provide more information on the area of disturbance being proposed, including pipe supports, staging areas, etc. (Clouser)

Response 5 Additional information on the area of disturbance proposed, pipe supports, staging areas, and other project details will be included in the SEIS.

Comment 6 Provide a copy of the Amended Stormwater Pollution Prevention Plan (SWPPP) and Notice of lntent for this additional project work for the Town's review when it is available. (Clouser)

Response 6 DEP will provide the Amended SWPPP when it is available.

Comment 7

For the past three years, myself ,and 20 other members of the Plains Road Water Watch have repeatedly asked the Village, and later the Town, what contingencies were in place should difficulties arise with the proposed plan to develop wells at Plains Road and Plesser Turk properties. We had offered suggestions regarding a viable 'Plan B,' such as connecting to the Town of Lloyd's water supply, connecting to Gardiner's water or utilizing the Wallkill River. We also expressed concerns as to whether or not the proposed configuration of these wells and the improvements to the reservoir system would adequately meet the 10 State Standard. In my opinion, based on the urgency and magnitude of this water project, that a viable 'Plan B' should have been included in the initial report, "Village of New Paltz Phase II Backup Water Supply Project - Final Project Report" by Clouser Associates, Chazen Companies, and Brinnier & Larios, dated September 2014. As a consequence of the unexpected failure of the Plesser, Slash, and Turk wells, and having no 'Plan B' in place, the Village and Town are now unprepared to meet the water needs of the community as the Catskill Aqueduct shutdown approaches. Luckily for us, the DEP has had the foresight to develop a 'Plan B.'

My main objection to the use of 101 Plains Road is based upon my lack of confidence in the ability of the Village and the Town to responsibly manage the aquifer at Plains Road. For three years, it has been verbally expressed that the wells located at 101 Plains Road would be used solely on a temporary basis, but there has always been this unspoken undertone that the true intent was usage as a permanent source with the ultimate objective of eliminating our dependency on the Catskill Aqueduct. Due to the fact that an accurate safe yield at the 101 well was never confirmed beyond the initial problematic pump test, I fear that the Village and Town will abuse the aquifer to its point of depletion. Then what? (C. Cryer)

Response 7

Noted. No changes are proposed to the Draft Scope.

Comment 8

There has been significant frustration over the DEP's potential decision to suspend the development of the wells at 101 Plains Road, and as a result, the creation of therefore Water District #5. And this is an unfortunate disappointment for many neighbors along Plains Road who have struggled with water quality and supply issues for quite some time. The lawsuit by some of the neighbors along Plains Road has caused the DEP to have these decisions, however, we need to keep in perspective the primary reason for this project all along has been for New Paltz to establish a reliable alternative water supply for the periods the Catskill Aqueduct is shut down.

In view of the Village and the Town, it also has been seen as a potential emergency back-up water supply for the Village, the Town, and also for SUNY in the event of any sort of crisis. It was estimated at the beginning that 600 gallons per minute would be required to meet the standards of the New Paltz -- demands of the New Paltz community. When the Plesser Turk property up on Paradies Lane failed water quality testing, the overall required water supply was diminished by 100 gallons per minute, which is about 17 percent of the required demand. The remaining 83 percent was projected to come from the reservoir supply system up on Mountain Rest Road – 17 percent, and then another 66 percent from 101 Plains Road. Again, that is a 17 percent shortfall under those conditions.

The report by Paul Rubin -- HydroQuest report, does state that a draw of 400 gallons per minute from the wells at 101 Plains Road should be able to support the 10-week shutdown of the Catskill Aqueduct. But later in the report, I need to remind people that he also cautions the use beyond 400 gallons per minute because no real safe yields have been established. And he also addresses the slow recharge of the wells as indicated on charts of some of his reports.

At this time, there really is no viable replacement for the loss of the Plesser Turk property that I heard of, and it is important to note that the terms of the "10 States Standard – Recommendation for Public Water Works" has never really been met. The requirement was brought to the attention at a Village Board meeting in the fall of 2014 by a representative of Brinnier & Larios. This standard explains that there should be sufficient reserve capacity in a water system that if one element -- one of those three elements should fail, then the other two can make up the difference. This has never been met. It actually suggests another 100 gallons should be part of the plan, not 600, but 700 gallons per minute to have a reserve supply should something fail, which is what has happened.

At the joint Village Board meeting in March, David Clouser did make – did layout some potential things that could be done to help make them -- this deficiency up from the 600 gallons with improvements in Mountain Rest Road and also some community actions to reserve -- to use less water. However, to me, this didn't get a very -- really a high level of confidence because it isn't a defined thing that gets you towards 600 gallons per minute. It seemed to me to be kind of risky. So to me, in the end, it states that New Paltz, for this project, still does not have the adequate supply. It's falling short by 100 gallons per minute at the least,

and therefore, the alternative plan that the DEP is discussing tonight, I think, is the best solution for the numbers. We need the big commitment and time schedules that they have. (T. Cryer)

Response 8 Noted. No changes are proposed to the Draft Scope.

Comment 9 I just want to offer my support to Carol and Ted. Their statements that they made are supported by a number of Plains Road residents, and I would also like to thank and support the -- this current plan -- the temporary pipelines, because I think in all, it's the wisest way to go. (Leibman)

Response 9 Noted. No changes are proposed to the Draft Scope.

Comment 10 I just want to be on the record that I have concerns about temporary plans. New Paltz has been a rate payer, purchasing water from the DEP, for about 100 years. So, this project will be funded using rate payer funds. This is not just a New York City project. This is a project that it's important that we are mindful of New Paltz as well. We source 60 percent of all New Paltz municipal water by purchasing it from the DEP, and DEP water is far and away the most expensive component in our water fund. And we've been told by DEP staff that the cost of raw water that we purchase is below their costs. We've been told by DEP staff that we should anticipate more rate increases like we've seen during the last decade. It's currently $1.73 per 1,000 gallons, and it has gone up on average 11 percent every year for the last decade. This is incredibly unsustainable at this rate, and the governor's office, the comptroller's office has articulated how important it is that we spend money wisely across the State because we have an infrastructure problem regarding drinking water. And if we are spending money on a temporary plan using rate payer money including New Paltz rate payer money that we could be investing in a permanent solution to help communities like New Paltz offset the cost of this expensive water, that is far and away the most prudent thing for rate payers. And I'm not suggesting that we put all of our eggs in the Plains Road basket.

We have discussed other alternatives with the DEP, and I've discussed them with DEP staff as recently as Tuesday. And I would like to continue those discussions, because I think that is the most prudent thing that we could be doing for New Paltz rate payers. We are essentially a pimple on the back of New York City water rate users, but, we are using close to a million gallons of water per day, and I know that the City is using a billion gallons of water a day. But when I send a water bill to municipal water

users, it's a material bill. They are not, you know, just easily -- you know, we have expensive water in this community, and DEP water is, as I said, 60 percent of it, and I think the most prudent thing to do is take a harder look and to make sure that we have dotted every 'I' and crossed every 'T' as far as permanent solutions regarding water infrastructure. (Rogers)

Response 10 Noted. No changes are proposed to the Draft Scope.

Comment 11 I would like to support the mayor. As he just said, I think that it's ironic that there's a level of trust in this plan by a lot of supporters of this plan who are not in favor of Water District #5, and a lot of the supporters who were not -- a lot of the people who were not supporters of Water District #5. One of the reasons was that they didn't trust the DEP and NYC. I'm supporting Water District #5. There's a lot of back and forth with the facts and figures. I just wanted to stand up and say that I'm in support of Water District #5. (Speedling)

Response 11 Noted. No changes are proposed to the Draft Scope.