

CITY OF ITHACA WATER SUPPLY PROJECT CITY ENVIRONMENTAL QUALITY REVIEW ORDINANCE (CEQRO) STATE ENVIRONMENTAL QUALITY REVIEW ACT (SEQRA) DRAFT SCOPING DOCUMENT

Adopted with Revisions by the City of Ithaca Board of Public Works on May 25, 2007 Revised June 22, 2007 Distributed June 22, 2007

INTRODUCTION

Pursuant to Chapter 176 of the City of Ithaca Code, City Environmental Quality Review Ordinance (CEQRO); New York State Environmental Conservation Law Article 8, State Environmental Quality Review Act (SEQRA); and Part 617 of Chapter 6 of the New York Code of Rules and Regulations, and the adoption of a Positive Declaration by the City of Ithaca Board of Public Works, the City of Ithaca intends to prepare a Draft Environmental Impact Statement (DEIS) for the "Water Supply Project." In accordance with CEQRO and SEQRA, the DEIS is required to address specific adverse environmental impacts which can be reasonably anticipated. This document defines the potentially significant environmental impacts to be addressed in the DEIS, as well as the extent and quality of information necessary to address these issues.

DESCRIPTION OF THE PROPOSED ACTION

The current water system for the City of Ithaca consists of the Six-Mile Creek Watershed, the Filtration Plant at 202 Water Street, and a distribution system of pumping stations, holding tanks, and conveyance pipes. The age of the plant and impending changes in water quality regulations requires changes in the City's water system. Preliminary analysis of available options has narrowed the choice to two alternatives.

The first alternative is the "Rebuild Option." This option involves upgrading the existing system including: rebuild of the filtration plant; dredging the upper reservoir; modifications to the intake system, sludge settling lagoons, existing access route to the Sixty-Foot Dam; establishment of maintenance accesses to the raw water pipeline; and implementation of a maintenance plan for the dam and Sixty-Foot Reservoir.

The second alternative is the "Purchase Option." This option involves the purchase of finished (treated) water from the Southern Cayuga Lake Intermunicipal Water Commission (SCLIWC). The SCLIWC was formed by an agreement of municipal cooperation between the Towns of Dryden, Ithaca and Lansing, and the Villages of Cayuga Heights and Lansing. The SCLIWC operates a 9 million gallons per day (MGD) WTP on the southern shore of Cayuga Lake at Bolton Point. The source of water for the Bolton Point WTP is Cayuga Lake. This alternative includes: expansion of the current SCLWIC WTP located at 1492 East Shore Drive in the Town of Lansing (Bolton Point), construction of a new water transmission main (pipeline) between the SCLIWC facility and the existing City distribution system, and the selected



demolition/decommissioning of the existing City of Ithaca filtration plant with upgrades to its clearwells. This alternative also includes work in the Six-Mile Creek watershed to ensure dam safety as required (*i.e.*, implementation of a maintenance plan for the dam and Sixty-Foot Reservoir).

The action pending is the selection and implementation of one of these options to improve the City's municipal water supply by ensuring its compliance with more stringent regulations and its long-term reliability and integrity. In addition to the environmental assessment of both options, six other issues were identified in order to evaluate the alternatives. They include: Source Water Quality, Sustainability / System Reliability, System Governance / Control, Economics, and Plan Implementation. These evaluation criteria will be the topic of discussion at several joint meetings between the City of Ithaca Board of Public Works and the City of Ithaca Common Council and are not directly addressed in this scoping document.

Components (elements) of each option are outlined below:

Rebuild Option

Key proposed features (elements) of this alternative include:

- Proposed rebuild of the existing 7 MGD WTP with a 6 MGD plant on the current Water Street site. The source of water would continue to be the City's existing Six-Mile Creek supply impounded by the Sixty-Foot Dam. Raw (untreated) water would continue to flow by gravity from the reservoir to the new WTP through the City's existing 24-inch diameter cast iron pipeline.
- The "Rebuild Option" would involve a sequenced demolition of the existing WTP to minimize the transitory period during implementation from old to new filtration facilities.
- Purchase of a portion of the City's water requirement during construction to allow sequenced demolition of the existing facilities.
- Proposed rebuild of 37,400 square feet (sf) of uncovered drying beds on Giles Street in the City of Ithaca with approximately 40,000 sf of covered drying beds. The beds are proposed to be below grade with asphalt floors and concrete walls to 2 feet above grade and open walls above. The beds would be covered. The roof eaves would be approximately 8 to 10 feet above grade with the peak being approximately 14 to 16 feet above grade.
- Proposed construction of a facility adjacent to the intake of the Sixty-Foot Reservoir to house an air burst system to automatically clean the intake. This structure could be as large as a single car garage and have space to facilitate future installation of a raw water treatment chemical. Electrical power would be installed to facilitate installation of water quality and security monitoring equipment. Additionally, a radio communication system would be installed to transmit information from this building to the WTP on Water Street.
- An "L" shaped pre-sedimentation basin approximately 100-feet x 200-feet in size is proposed to be installed within the existing reservoir impoundment to improve water quality, to decrease chemical usage, and to reduce the amount of waste generated at the WTP.



- A proposed action would upgrade the access road from NYS Route 79/Slaterville Road in the Town of Ithaca, to the new intake facility to allow year-round access for routine inspections and maintenance. This would include lengthening the access road from the current 1,500 feet to 2,500 feet ± using switchbacks to reduce the grade to improve surface stabilization as a measure of erosion control. This would require clearing approximately 2 acres of vegetation. The new access road, as proposed, would be approximately 12 feet wide and paved.
- Reestablishment of an access road off Burns Road, also in the Town of Ithaca, to facilitate launching of a dredge into the Sixty-Foot Reservoir (to maintain water supply capacity and keep the Sixty-Foot Dam outlet open). This is anticipated to include installing a gate, removing trees and vegetation, installing culverts as necessary, and stabilizing soft areas with gravel. Access road improvements are proposed by installing approximately 800 feet ± of gravel roadway.
- Use of land within a restricted access area of the existing watershed within the Six-Mile Creek Natural Area to dewater dredged material prior to hauling off-site. The same land currently used for dewatering dredged materials from the impoundment behind the silt dam is proposed for this activity.
- As a key component of the WTP rebuild, improvements would be made to the Sixty-Foot Reservoir and approximately 2 miles of existing 24-inch diameter raw main along Six-Mile Creek. Multiple low impact access points would be created to rebuild 24-air release valves located throughout its length to ensure the continued use of the pipeline. The action would involve providing access to each of the structures with localized clearing as necessary to perform the required work.
- Maintenance dredging to retain water quality supply yield at the Sixty-Foot Reservoir.
- Together with improvement of access or development of access strategies for the Sixty-Foot Dam site, facilitate work as necessary to meet ongoing New York State Department of Environmental Conservation (NYSDEC) safety standards.
- All work excepting the WTP rebuild at 202 Water Street would impact the following Unique Natural Areas (UNAs): Six Mile Creek Natural Area (UNA-156).

Purchase Option

Key proposed features (elements) of this alternative include:

- Construction of a 4.35 MGD expansion to SCLIWC's existing 9 MGD Bolton Point WTP.
- Installation of a 17,000 linear feet (lf) large diameter transmission pipeline from the Bolton Point WTP to the City's existing distribution system. The work would impact the following UNAs: Esty's Glen (UNA-90) and Lake Cliff's McKinney's Point to Bolton Point (UNA-89), with potential impacts through stream crossings in Newman Tract (UNA-101), Renwick Slope (UNA-102), and McKinney's Twin Glens & Lake Cliff's (UNA-103).
- Decommissioning of the City's existing WTP and raw water transmission main. The 24-inch diameter raw water main would be abandoned-in-place. The decommissioning of the existing City plant facilities on Water Street and Giles Street would be accomplished through selective



demolition. The treatment facilities would be demolished while the high lift pumping station and clear well storage tanks would remain in service.

- A proposed action would upgrade the access road from NYS Route 79/Slaterville Road in the Town of Ithaca, to the Sixty-Foot Dam to allow year-round access for routine inspections and maintenance as necessary to meet ongoing NYSDEC safety standards. This would include lengthening the access road from the current 1,500 feet to 2,500 feet ±, using switchbacks to reduce the grade to improve surface stabilization as a measure of erosion control. This action would require clearing approximately 2 acres of vegetation. The new access road, as proposed, would be approximately 12 feet wide and paved.
- Reestablishment of an access road off Burns Road, also in the Town of Ithaca, to facilitate launching a dredge into the Sixty-Foot Reservoir (as necessary, to keep the Sixty-Foot Dam outlet open). This is anticipated to include installing a gate, removing trees and vegetation, installing culverts as necessary, and stabilizing soft areas with gravel. Access road improvements are proposed by installing approximately 800 feet of gravel roadway.
- Use of land within a restricted access area of the existing watershed within the Six-Mile Creek Natural Area to dewater dredged material prior to hauling off-site. The same land currently used for dewatering dredged materials from the impoundment behind the silt dam is proposed for this activity.

ALTERNATIVES

A discussion of project alternatives will be included in the DEIS. In addition to the "Rebuild Option", "Purchase Option", and "no action" alternative, the DEIS will discuss:

- alternative supplies (Cornell University Water System, CUWS)
- alternative magnitude (smaller [3 mgd] City WTP supplemented by capacity from existing regional supplies SCLIWC and CUWS)
- alternative site (new City-operated lake-source WTP located within the City limits along the Cayuga Lake shoreline)
- alternative designs and methodologies (design changes and alternative construction methodologies available to minimize environmental impacts of specified elements) including:
 - > alternative access strategies for performing work on air release and blow-off valves
 - > alternative methods of accomplishing desired goals (*i.e.*, settling lagoons)
 - > alternative methods of housing an air burst system at the Sixty-Foot Reservoir (e.e., without construction of a new building)
 - alternative methods of providing for dam safety (*i.e.*, which may not require hauling a dredge in from Burns Road)
 - > alternative pipeline installation methods (*i.e.*, directional drilling).

Under the "no action" alternative, the City would not implement the "Rebuild Option" or "Purchase Option". Potable water needs would continue to be provided from the City's existing system.

ISSUES RAISED DURING SCOPING AND DETERMINED NOT TO BE RELEVANT TO THE PROJECT



In accordance with CEQRO (§ 176-8(F)(7)) and SEQRA (6 NYCRR 617.8(f)(7)), the following issues were identified during the scoping process and determined not to be part of the project:

- Maintenance of Thirty-Foot Dam (both options)
- Replacement of the 24-inch diameter cast iron pipeline (Rebuild Option).

POTENTIALLY SIGNIFICANT ADVERSE IMPACTS

Potentially significant adverse impacts to be addressed (for each of the two options) are associated with the following environmental issues:

- Impact on Land
- Impact on Water
- Impact on Drainage
- Impact on Air
- Impact on Plants and Animals
- Impact on Aesthetic Resources
- Impact on Historic and Archaeological Resources
- Impact on Open Space and Recreation
- Impact on Transportation
- Impact on Energy
- Noise and Odor Impacts
- Impact on Public Health and Safety
- Impact on Community Character and Land Use

The issues are further described below, along with the extent and quality of information necessary to address each issue.

1. IMPACT ON LAND

Rebuild option. The proposed facilities do not involve a change in land use. The project sites, including the existing watershed in the Six-Mile Creek Natural Area (UNA-156), the City's WTP site, and the Giles Street residual handling facility, are currently owned by the City and used for water supply system purposes, in addition to the UNA status of part of the site. The project would involve maintenance and alterations of existing facilities, and development of new facilities to improve the water supply reliability and efficiency of this existing system. Impacts on land associated with this option include:

- Demolition and construction activities on the City's existing WTP and residual handling sites.
- Rebuild of 37,400 sf of uncovered drying beds on Giles Street in the City of Ithaca with approximately 40,000 sf of covered drying beds. The beds are proposed to be below grade with asphalt floors and concrete walls to 2 feet above grade and open walls above.
- Reconstruction of a previously established access road off Burns Road to facilitate launching a dredge. This is anticipated to include installing a gate, removing trees and vegetation, and stabilizing soft areas with gravel.



- Use of land within a restricted access area of the existing watershed within the Six-Mile Creek Natural Area (UNA-156) to dewater dredged material prior to hauling off-site. The same land currently used for dewatering dredged materials from the impoundment behind the silt dam is proposed for this activity.
- Construction of a facility adjacent to the intake to house an air burst system to automatically clean the intake. This structure could be as arge as a single car garage and have space to facilitate future installation of a raw water treatment chemical.
- Upgrading the access road from NYS Route 79 to the new intake to facilitate year-round access to facilitate routine inspections and maintenance. This would include lengthening the access road to reduce the grade, to help stabilize the surface to improve erosion control, clearing approximately two-acres of land, and paving the access road.
- Rebuild twenty-four air release valves along the entire length of the existing 24-inch diameter cast iron raw water main. The action would involve providing access to each of the structures with localized clearing as necessary to perform the required work. Alternative methods to provide access to the valves will be evaluated in the DEIS (*i.e.*, existing access, combined access, width of access, amount of site clearing required, methodology/equipment, etc.).
- Together with improvement of access or development of access strategies for the Sixty-Foot Dam site, facilitate work as necessary to meet ongoing NYSDEC safety standards.

Purchase option. The project sites include approximately 2.8 miles along NYS Route 34/East Shore Drive within existing pavement, approximately 0.40 miles through six privately owned properties in the Village of Lansing that is predominantly forested land, connection to the City's existing distribution system near the Ithaca High School, and expansion of the Bolton Point WTP. Impacts on land associated with this option include:

- Expansion of the Bolton Point WTP, including a lagoon decant system upgrade (encompassing a footprint approximate to the existing area), and a new cast-in-place concrete clear well with a footprint of approximately 50 feet in diameter by 20 feet high.
- Installation of 17,000 lf of 30 to 36 inch diameter water pipe from the Bolton Point WTP to the City's distribution system; the majority of which would be installed along NYS Route 34/East Shore Drive within existing pavement, excepting stream crossings potentially off to the side of the road and possibly within the following UNAs: Newman's Tract (UNA-101), Renwick Slope (UNA-102), and McKinney's Twin Glens & Lake Cliffs (UNA-103).
- Installation of approximately 2,000 lf of pipe, which requires traversing a forested area, crossing a stream (gorge), and removal of approximately 2+ acres of trees and other vegetation within Esty's Glen (UNA-90) and Lake Cliff's McKinney's Point to Bolton Point (UNA-89).
- Pipeline construction that would cause disturbance and impacts to traffic patterns and flow.

Potential "Purchase Option" impacts within the Six-Mile Creek watershed include:



- Reestablishment of an access road off Burns Road in the Town of Ithaca to facilitate launching a dredge. This is anticipated to include installing a gate, removing trees and vegetation, installing culverts as necessary, and stabilizing soft areas with gravel. Access road improvements are proposed by installing approximately 800 feet ± of gravel roadway.
- Construction activities would result in land use impacts associated with the decommissioning of facilities including the City's WTP site, the Giles Street residual handling facility and the existing raw water transmission main.
- Use of land within a restricted access area of the existing watershed within the Six-Mile Creek Natural Area (UNA-156) would be required to dewater dredged material prior to hauling off-site. The same land currently used for dewatering dredged materials from the impoundment behind the silt dam is proposed for this activity. Activities would involve construction and disturbances for periods of one to three months in duration repeated every one to three years.
- Upgrading the access road from NYS Route 79 to the Sixty-Foot Dam for year-round access to facilitate routine inspections and maintenance. This would include lengthening the access road to reduce the grade, to help stabilize the surface to improve erosion control, clearing approximately two-acres of land, and paving the access road.
- Together with improvement of access or development of access strategies for the Sixty-Foot Dams site, facilitate work as necessary to meet on-going NYSDEC safety standards.

Information needs. Information will be utilized to assess the following site-specific conditions:

- erosion potential (stability) of the soils during construction (earthwork) activities and long-term occupancy of the site
- use of on-site materials in construction (foundations, berms, landscaping, etc.)
- constructability issues
- extent of cuts and fills (soils to be imported or exported)
- permeability of soils and impact on storm water management
- presence of steep slopes and impact on erosion potential and storm water runoff
- means of access for inspection and maintenance of air release valves and Sixty-Foot Dam.

Information from the Soil Survey of Tompkins County, New York published by the United States Department of Agriculture (USDA) Natural Resources Conservation Services (NRCS, formerly Soil Conservation Service) and other readily available existing resources will be relied on to describe surface (soil) and subsurface (bedrock) conditions. Topographic data for the project areas will be acquired from existing surveys.

Mitigation. The DEIS will identify mitigation to address potential impacts associated with each option. Potential mitigation measures may include:

- Restricting the limits of construction to the minimum practicable area required to complete the work (including minimizing the location, number and width of required access routes).
- Use of alternative construction methods and materials, and means of site access.
- Preparation of Storm Water Pollution Prevention Plan (SWPPP) including an Erosion and Sedimentation Control (E&SC) Plan prepared in accordance with local and State standards to mitigate construction phase impacts.



- Timely and effective restoration of temporarily disturbed areas to pre-development conditions (to the extent practicable).
- Long-term storm water management controls to control the rate and quality of runoff prior to leaving the site.
- Use of landscaping to minimize erosion potential.

2. IMPACT ON WATER

Rebuild option. Construction activities would require work in and near the Sixty-Foot Dam, as well as in and near Six-Mile Creek. Water quality impacts may occur from the dredging of sediments from the Sixty-Foot Reservoir to maintain the water supply yield, as well as from runoff to adjacent waterbodies from cleared construction sites (WTP, access routes, drying beds).

Dredging activities would involve construction and disturbances associated with the operation of a floating dredge for periods of one to three months in duration repeated every one to three years.

An "L" shaped pre-sedimentation basin approximately 100-feet by 200-feet in size is proposed to be installed within the existing reservoir impoundment to improve water quality, to decrease chemical usage, and to reduce the amount of waste generated at the WTP. Activities could result in water quality impacts during the installation of the sheet piles and piping required for the structure.

Dredging activities would involve construction and disturbances associated with the operation of a floating dredge to perform work as necessary to meet NYSDEC dam safety requirements at the Sixty-Foot Dam. Operations occur from one to three months and would be repeated every few years as necessary to ensure the integrity of the dams and to maintain the water supply yield.

Purchase option. Water quality impacts may occur from sediment-laden runoff to adjacent waterbodies from cleared construction sites (Bolton Point WTP, pipeline alignment). No significant adverse impacts on water resources are anticipated as a result of purchasing water from the SCLIWC provided proper E&SC measures are installed and maintained during construction and kept in place post-construction until disturbed areas are stabilized.

Dredging activities would also involve construction and disturbances associated with the operation of a floating dredge as required to perform work as necessary to meet NYSDEC dam safety requirements at the Sixty-Foot Dam. Operations would occur from one to three months and would be repeated every few years as necessary to ensure the integrity of the dams and to maintain the water supply yield.

Information needs. Existing, readily available information will be relied upon to assess impacts on water. Sources of information include: City and County Planning Departments, NYSDEC (waterbody class and standard), Natural Areas Commission, and Cornell University.

Mitigation. The DEIS will identify mitigation to address potential impacts. Potential mitigation measures may include:



- Restricting the limits of construction to the minimum practicable area required to complete the work.
- Timely and effective restoration of temporarily disturbed areas to pre-development conditions (to the extent practicable).
- Installation of storm water management controls to manage storm water such that flows discharged off-site (under specific storm events) do not exceed pre-development rates. Existing discharge points would be utilized to the extent practicable.
- Implementation of E&SC measures during construction.

Regardless of the option selected, proper E&SC measures would be installed, maintained, and monitored during construction and kept in place post-construction until disturbed areas are stabilized.

3. IMPACT ON DRAINAGE

Rebuild option. Construction related activities at the existing City facilities including a proposed facility adjacent to the Sixty-Foot Dam intake, both access road upgrades, work at the WTP, and work on the existing raw water main may result in drainage impacts occurring over a period between one to three months.

Potential impacts may also result from runoff associated with increases in impervious areas including the paving of the access road from NYS Route 79 to the intake structure. Appropriate grading and drainage design would need to be implemented.

Purchase option. Demolition activities at City facilities to be decommissioned, as well as expansion activities at the SCLIWC sites (Bolton Point WTP and transmission main alignment) may result in drainage impacts throughout the construction period.

Measures would also be necessary to control runoff from the Sixty-Foot Dam maintenance dredging, and material dewatering sites for the Sixty-Foot Dam to meet NYSDEC dam safety requirements.

Information needs. Existing, readily available information will be relied upon to assess drainage impacts. Information sources include the NRCS, which publishes information relating to soils, permeability, and erosion potential. Existing information may be supplemented with conceptual storm water management plans to assess pre- and post-construction drainage issues (*i.e.*, storm water runoff quality and quantity).

Mitigation. Potential mitigation measures may include:

- Restricting the limits of construction to the minimum practicable area required to complete the work (including the location, number and width of access routes) would be considered.
- Applicable E&SC practices would be implemented during construction to minimize potential environmental consequences. In addition, a SWPPP would be prepared and implemented for construction phase activities disturbing one-acre or greater including measures to control the rate and quality of the runoff. Measures would also be necessary to control runoff from dredged material dewatering sites, cleared pipeline alignments, and new or modified access routes.
- Proper erosion and sediment control measures would be installed, maintained, and monitored during construction and kept in place post-construction until disturbed areas are stabilized.



• "Green" alternatives such as the use of pervious surfaces for access routes will also be evaluated.

4. IMPACT ON AIR

Rebuild option. Construction activities may result in fugitive dust and equipment exhaust emissions in the Six-Mile Creek Natural Area (UNA-156), at the City's WTP site, and at the Giles Street residual handling facility throughout the construction period.

Purchase option. Construction and demolition activities may result in fugitive dust and equipment exhaust emissions at the Bolton Point WTP site, along the water transmission main alignment, at the City's WTP site, and at the City's Giles Street residual handling facility throughout the construction period. Construction phase impacts on traffic flow along NYS Route 34 (during pipeline installation) may result in increases in emissions from queued or delayed vehicles.

Information needs. Existing, readily available information will be relied upon to assess impacts on air. Existing sources include the NYSDEC and United States Environmental Protection Agency.

Mitigation. The DEIS will identify mitigation measures to reduce or eliminate dust and vehicle emission impacts. Potential mitigation measures may include:

- dust control (*i.e.*, vehicle washing, track-out control, watering)
- vehicle emission controls
- maintenance and protection of traffic plan.

The contractor will be required to implement mitigation measures to minimize impacts including proper maintenance of vehicles and equipment and dust suppression procedures.

5. IMPACT ON PLANTS AND ANIMALS

Rebuild option. Construction activities at the City's existing WTP site and Giles Street residual handling facility would result in site clearing activities over a one to three month period. The sites are currently characterized by water system facilities, parking and mowed lawn/landscaped areas, which will also characterize the site upon the completion of facility improvements. Improvements are to be constructed within the existing site footprint. No critical habitats or endangered/threatened species are known to exist on these sites.

Construction within the existing watershed of the Six-Mile Creek Natural Area (see 1. Impact on Land) could result in the displacement and/or elimination of plants and/or animals. The existing watershed in the Six-Mile Creek Natural Area is in the Tompkins County Unique Natural Area (UNA-156, Six Mile Creek Valley). According to the Unique Natural Areas Inventory of Tompkins County, UNA-156 includes wooded slopes and open areas on both sides of Six-Mile Creek and the three City-owned reservoirs. This area is large and diverse containing streams, gorges, waterfalls, marshland, forest, and abandoned farm fields in various successional stages. Diverse flora and fauna make this area a "quality example of plant community." Little to no disturbance in this area over the last 100-years has allowed many plant and animal communities to emerge. The New York Heritage Program has determined that this site may contain rare plants, animals, and/or significant ecological communities.



Purchase option. Construction activities at the SCLIWC's Bolton Point WTP site, as well as demolition activities at the City's WTP and Giles Street residual handling facility sites (see 1. Impact on Land), would result in site clearing activities over a one to three month period. The sites are currently characterized by water system facilities, parking and mowed lawn/landscaped areas, which may also characterize the site upon the completion of facility improvements. The sludge settling lagoons site could be allowed to revert to a more natural state. Activities would be accomplished within the existing site footprints. No critical habitats or endangered/threatened species are known to exist on these sites.

Construction phase disturbances along the water transmission main alignment in the roadbed of NYS Route 34/East Shore Drive could have an impact on plants or animals. The 2,000 feet of pipe that would disturb approximately two-acres of forested area adjacent to the Bolton Point WTP could result in the displacement and/or elimination of plants and/or animals known to be important to the community. This area is characterized by the Esty's Glen (UNA-90) and Lake Cliffs McKinney's Point to Bolton Point (UNA-89). According to the Unique Natural Areas Inventory of Tompkins County, UNA-90 is a steep-sided rock gorge with a number of rare and scarce plants. Disturbance in or near this gorge should be avoided if possible. According to Unique Natural Areas Inventory of Tompkins County, UNA-89 has limestone cliffs with long exposures of fossiliferous (containing fossils) limestone and shale. A narrow band of forest exists above the cliffs with mixed conifers and hardwoods behind. The pipeline would also traverse several streams potentially impacting Newman Tract (UNA-101), Renwick Slope (UNA-102), and McKinney's Twin Glens & Lake Cliffs (UNA-103).

Maintenance dredging of the Sixty-Foot Reservoir, as well as the work necessary to meet NYSDEC dam safety requirements at the Sixty-Foot Dam may also result in the displacement of plants and animals. Impacts on plants and animals associated with maintenance dredging should be assessed for this option as well.

The DEIS will assess the potential for project-related activities to significantly impact terrestrial and aquatic ecology including direct impacts created by habitat loss and wildlife displacement from site clearing and facility construction activities, and indirect impacts from sedimentation in storm water run-off to aquatic resources (Six-Mile Creek, Cayuga Lake). Topics to be evaluated in the DEIS consist of:

- vegetative cover
- habitat types and rankings
- wildlife
- wetlands
- endangered and threatened species
- critical habitats
- unique natural areas.

Information needs. Qualified professionals will investigate flora and fauna, including aquatic species in areas where there would be significant disturbance within the UNA boundaries. The evaluation will be based on a combination of site reconnaissance and a review of existing published data including:

• *Ecological Communities of New York State* published by the NYSDEC (1990)



- *Tompkins County Unique Natural Area Inventory* (2000) prepared by the Tompkins County Environmental Management Council
- *Tompkins County Natural Resources Inventory* (2001) prepared by the Tompkins County Planning Department
- Cornell University Lake Source Cooling DEIS prepared for Cornell University
- *Site Invasive Species Management Plan for Six-Mile Creek Natural Area* (2005) prepared by the Six-Mile Creek Invasive Plant Advisory Committee

The following information resources will be consulted:

- Ithaca Planning Department
- Tompkins County Planning Department
- Cornell University
- NYSDEC Natural Heritage Program
- United States Fish & Wildlife Service
- Natural Areas Commission
- EcoLogic.

Existing wetland mapping (NYSDEC Freshwater, National Wetland Inventory) will also be reviewed to evaluate potential impacts on State and federal wetlands. Additional site reconnaissance may be necessary to further evaluate potential impacts on wetlands.

Mitigation. The DEIS will identify mitigation measures to reduce or eliminate significant adverse impacts to aquatic and terrestrial habitats. Potential mitigation measures may include:

- Limiting construction disturbance areas to the minimum area required.
- Implementation of an E&SC plan to eliminate off-site impacts.
- Implementation of a SWPPP to manage storm water runoff on and off the site.
- Consideration and evaluation of alternative designs and methodologies for project elements which would be less impacting on plants and/or animals.

6. IMPACT ON AESTHETIC RESOURCES

Rebuild option. Replacing the existing 37,400 sf of uncovered drying beds on Giles Street in the City of Ithaca with approximately 40,000 sf of covered drying beds may have an impact on views from publicly accessible areas. The roof eaves would be approximately 8 to 10 feet above grade with the peak being approximately 14 to 16 feet above grade.

The proposed utility building at the reservoir, anticipated to be as large as a single car garage, with associated security lighting and monitoring equipment, signage, and radio communication antenna(e), would contrast with existing conditions.

Visual impacts may also result from:

- Lengthening the access road from 1,500 feet to 2,500 feet from NYS Route 79/Slaterville Road to the new intake facility, paving the road to a width of 12 feet, and clearing approximately 2 acres of vegetation, which may have an impact from within the watershed area.
- Reestablishment of an access road off Burns Road to facilitate launching a dredge. This is anticipated to include installing a gate, removing trees and vegetation, installing culverts as



necessary, and stabilizing soft areas with gravel. Access road improvements are proposed by installing approximately 800 feet \pm of gravel roadway.

• Construction of a pre-sedimentation basin in the Sixty-Foot Reservoir.

The greatest impact could be during and after construction until vegetation has been reestablished. Short and long-term visual impacts should be studied for the access roads.

Purchase option. Visual impacts may result from:

• The removal of approximately 2+ acres of forested land along the shore of Cayuga Lake and the expansion of the Bolton Point WTP. These activities may have an impact on views from NYS Route 34, north and south of the site along the east shore, from the lake itself (boaters), and from the western shore.

Construction activities could also result in visual impacts throughout the construction period within the existing watershed of the Six-Mile Creek Natural Area (UNA-156), at the City's WTP and Giles Street residual handling facility sites, at the SCLIWC's Bolton Point WTP site, and along the proposed water transmission main alignment.

Similar to the Purchase Option, visual impacts related to maintenance activities within the Six-Mile Creek watershed could include:

- Lengthening the access road from 1,500 feet to 2,500 feet from NYS Route 79/Slaterville Road to the new intake facility, paving the road to a width of 12 feet, and clearing approximately 2 acres of vegetation, which may have an impact from within the watershed area.
- Reestablishment of an access road off Burns Road to facilitate launching a dredge. This is anticipated to include installing a gate, removing trees and vegetation, installing culverts as necessary, and stabilizing soft areas with gravel. Access road improvements are proposed by installing approximately 800 feet ± of gravel roadway.

Information needs. In addition to identifying visual impacts resulting from changes on existing sites, the DEIS should also identify new land to be affected *(i.e., clearing for access roads, dewatering, etc.)*. Visual assessments would be necessary to assess aesthetic impacts on publicly accessible areas. For the "Rebuild Option", the visual assessment should include an assessment of the covered drying beds; as well as of the rebuilt water plant from Giles Street, Water Street, and State Street; and access roads. For the "Purchase Option", an assessment from NYS Route 34, north and south of the site along the east shore of Cayuga Lake, from the lake, and from the western shore should be provided to determine impact. The assessment would be conducted in accordance with NYSDEC guidelines (Assessing and Mitigating Visual Impacts, DEP-00-2).

Mitigation. Construction phase impacts can be mitigated by limiting site-clearing activities to the minimal area required to meet construction objectives (including the location, number and width of access routes; and alternative means of maintaining dam safety [*e.g.*, which may not require hauling a dredge to the Sixty-Foot Reservoir from Burns Road]). Placement, design, color, architectural features (*i.e.*, facades, materials, colors, landscaping), and strategic screening of the building, (without compromising security), may help to mitigate long-term impacts. "Green" alternatives such as the use of pervious surfaces for access routes will also be evaluated.

7. IMPACT ON HISTORIC AND ARCHAEOLOGICAL RESOURCES



Rebuild and Purchase options. To assess potential impacts associated with both options, a Phase 1 Cultural Resource Investigation may need to be completed for areas within the project limits of construction that have no record of prior disturbance. The City will work with the New York State Office of Parks, Recreation and Historic Preservation – Field Services Bureau (also referred to as the State Historic Preservation Office, SHPO) to identify potential impacts associated with proposed activities, and to identify the level of consultation and investigations that may be necessary.

Information needs. Existing, readily available information will be relied upon including information compiled by SHPO (*i.e.*, SPHINX System, the Geographic Information System [GIS] for Archeology and National Register). In accordance with State and federal preservation laws, the City will consult with SHPO to identify investigations that may be necessary. Cultural resource investigations would be completed in accordance with "Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State."

Mitigation. Mitigation may include avoidance of historic and archaeological resources. If a listed or eligible resource cannot be avoided, some form of mitigation would be necessary. Mitigation may include the reduction of the direct impact on the resource as well as data recovery for the portion of the site to be impacted. A data retrieval plan would be developed that balances resource-preservation, engineering, environmental and economic concerns, while addressing research questions. The plan would be reviewed by the SHPO prior to implementation. The full implementation of the data retrieval plan would provide adequate mitigation of the resource.

8. IMPACT ON OPEN SPACE AND RECREATION

Rebuild option. No changes in the use of the Six Mile Creek Natural Area (UNA-156) are proposed. There would be visual impacts from permanent changes to the restricted access area within the existing watershed of the Natural Area (*i.e.*, proposed utility building, communication antenna(e), clearing for access roads, vegetation removal, and security monitoring equipment).

Under this option, site access to restricted areas would continue to be controlled by security gates. Maintenance of the raw water transmission main between the Sixty-Foot Dam and the City's existing WTP would involve the identification and/or construction of access routes for the installation of pipeline markers, air release valves and blow-off valves along an alignment within an area of the City's Six Mile Creek Natural Area that is authorized for public access.

Purchase option. Installation of the water transmission main between the Bolton Point WTP and an interconnection with the City's existing transmission/distribution system is proposed to occur along an alignment adjacent to the City's Stewart Park. Impacts would be throughout the duration of the construction period and mitigated by restoration of the pipeline alignment to preconstruction conditions.

Implementation of this option does require changes to the use, control, and funding of the Six-Mile Creek Natural Area (UNA-156). Implementation of this option would require coordination with the City School District for access to property at the City of Ithaca Middle and High Schools where the planned interconnection of the proposed transmission main will be made.

Information needs. Existing, readily available information will be relied upon to assess impacts on open space and recreation. The Board of Public Works, City Department of Planning, Natural



Areas Commission, and specialized legal resources will be consulted to ascertain the type and magnitude of impacts.

Mitigation. Potential mitigation measures may include:

- Limiting site-clearing activities to the minimal area required to meet project objectives (including the location, number and width of access routes).
- Use of architectural features (*i.e.*, facades, materials, colors, landscaping) in proposed facilities located in the Six-Mile Creek Natural Area (UNA-156) to mitigate long-term impacts. "Green" alternatives such as the use of pervious surfaces for access routes will also be evaluated.
- Development of control and funding mechanisms that protects the Six Mile Creek Natural Area while still allowing access for City and public needs.

9. IMPACT ON TRANSPORTATION

Rebuild option. Construction activities would result in an increase in traffic accessing and egressing the City's WTP site, as well as the Six-Mile Creek watershed during the construction period. Construction worker vehicles and equipment would utilize local roads during the length of the construction phase. Operations and maintenance staff, as well as material delivery trucks would continue to utilize local roads to access and egress the City's WTP site during the operation phase. Operation-phase traffic is not anticipated to be significantly different from traffic levels currently accessing and egressing the WTP site.

Purchase option. Construction activities would result in an increase in traffic accessing and egressing the Bolton Point WTP site, and the water transmission main alignment during the construction period. Construction worker vehicle and equipment would utilize local roads during the length of the construction phase. Operations and maintenance staff, as well as material delivery trucks would continue to utilize local roads to access and egress the Bolton Point WTP site during the operation phase. Operation-phase traffic is not anticipated to be significantly different from traffic levels currently accessing and egressing the WTP site. However, there would be an increase in use of the Bolton Road access through the "Lake Cliffs, South of Portland" natural area (UNA-64).

Information needs. Existing, readily available information will be relied upon to assess impacts on traffic. Highway jurisdictions will be consulted to identify and compile available highway data relating to road conditions, highway capacity, levels of service, and accident levels. Fieldwork may be necessary to supplement existing information.

Mitigation. The contractor would be responsible for maintaining safe and adequate traffic flow during the construction phase (*i.e.*, pipeline installation along NYS Route 34). Components of a "Maintenance and Protection of Traffic Plan" will be identified in the DEIS. Plan components will be based on the New York State Manual of Uniform Traffic Control Devices (MUTCD). Highway work permits would be obtained from applicable agencies.

10. IMPACT ON ENERGY

Rebuild option. Rebuild of the existing City WTP would utilize energy during construction activities including electricity, as well as gasoline and diesel fuels for construction worker vehicles and equipment. Gasoline and diesel fuels would also be expended by City operations and maintenance staff vehicles and material delivery trucks during facility operations. Existing



on-site energy utilities (electricity and natural gas) would be utilized to support facility operations. Potential increases in net energy equivalents and chemical usage are expected.

Purchase option. Construction of the Bolton Point WTP expansion and water transmission main would utilize electricity, as well as gasoline and diesel fuels for construction worker vehicles and equipment. Gasoline and diesel fuels would also be expended by SCLIWC operations and maintenance staff vehicles and material delivery trucks during facility operations. Existing onsite energy utilities (electricity and natural gas) would be utilized to support facility operations. Additional electrical energy would be used to power proposed pumps to convey water from Cayuga Lake to the Bolton Point WTP.

Information needs. Existing, readily available information will be relied upon to assess impacts on energy. Estimated energy usage information will be obtained from the City, SCLIWC and the utility purveyor.

Mitigation. Energy saving alternatives will be identified in the DEIS including consistency with the NYS Energy Code.

11. NOISE AND ODOR IMPACTS

• **Rebuild option.** Long-term noise and odor impacts are not anticipated. Noise would be generated during the construction phase and dredging activities. Activities would involve construction and disturbances for periods of one to three months in duration repeated every one to three years. Operation phase noise to areas with authorized public access is not anticipated to be different from existing WTP operations at Water Street. The rebuilding and covering of the drying beds can be accomplished without the need for additional mechanical equipment.

Purchase Option. Significant noise and odor impacts are not anticipated. Noise would be generated during construction phase and dredging activities, but impacts are considered short-term. Operation phase noise impacts on surrounding properties is not anticipated to be different from existing WTP operations at Bolton Point.

Information needs. Existing, readily available information will be relied upon to assess noise and odor impacts (including construction equipment noise data published on the internet).

Mitigation. Potential mitigation measures may include:

• The proper muffling and upkeep of vehicles and equipment, and limiting construction activities.

12. IMPACT ON PUBLIC HEALTH AND SAFETY

Rebuild option. It is not anticipated that the rebuild of the City's WTP would result in an increased impact or need for local police and emergency services. Construction activities would result in minor increases in traffic on local roads, which could be mitigated by the implementation of a "Maintenance and Protection of Traffic Plan." This project alternative is being proposed to achieve the City's objective of providing for a long-term quality and reliable water supply maintaining Six-Mile Creek as the water supply source. Issues concerning water quality vulnerability would be addressed through a monitoring study to identify background contaminants. Six-Mile Creek water would be treated at the City's rebuilt WTP to meet New York State public water supply requirements.



Purchase option. It is not anticipated that the purchase of water from the SCLIWC and associated Bolton Point WTP modifications would result in an increased impact or need for local police and emergency services. Construction activities would likely result in impacts on traffic flow on local roads, which could be mitigated by the implementation of a "Maintenance and Protection of Traffic Plan." This project alternative is being proposed to achieve the City's objective of providing for a long-term quality and reliable water supply though the purchase of water from the SCLIWC, which utilizes Cayuga Lake as its regional water supply source. Concerns regarding water quality vulnerability would be addressed through a monitoring study to identify background contaminants. Cayuga Lake water would be treated at the expanded Bolton Point WTP to meet New York State public water supply requirements.

The DEIS would address public safety concerns regarding the loss of a reliable and redundant water supply in which the majority of its distribution system is gravity fed.

Information needs. Existing, readily available information (including source water quality data) will be relied upon to assess impacts on public health and safety. Additional analysis of source water may be necessary. Information regarding alternative water supplies in the area would be necessary to evaluate impacts relating to the loss of a redundant supply (under Purchase Option). Relevant information would include the location and source of the supply, available capacity, and the ability of the water purveyor to serve as a redundant supply for the City. Information regarding the transportation and storage of water treatment chemicals will be identified for each option.

Mitigation. Water treatment methodologies will be summarized in the DEIS. Treatment of the water supply would conform to state and federal requirements.

13. IMPACT ON COMMUNITY CHARACTER AND LAND USE

Rebuild option. Rebuild of the City's WTP would provide for a reliable water supply for existing and future City customers. Construction activities would be accomplished on existing City properties utilized for the existing water supply system. No significant impacts on the character of the community or neighborhood are anticipated. Growth within the community would continue to be evaluated as part of the City's right-to-build review (zoning) processes.

Purchase option. Purchase of SCLIWC water would provide for a reliable water supply for existing and future City customers. Expansion of WTP facilities would occur on the existing Bolton Point WTP site. No changes in land use are proposed. In addition, no significant impacts on the character of the community or neighborhood are anticipated. Growth within the community would continue to be evaluated as part of the City's right-to-build review (zoning) processes.

Implementation of this option does require changes to the use, control, and funding of the Six-Mile Creek Natural Area (UNA-156).

Information needs. Existing, readily available information will be relied upon to assess impacts on community character and land use. The Board of Public Works, City Department of Planning, Natural Areas Commission, and specialized legal resources will be consulted to ascertain the type and magnitude of impacts.

Mitigation. Potential mitigation measures may include: .



• Development of control and funding mechanisms that protects the Six Mile Creek Natural Area while still allowing access for City and public needs.



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