UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

JAN 3 0 2009

To All Interested Government Agencies and Public Groups:

In accordance with the U.S. Environmental Protection Agency's (EPA) procedures for the preparation of environmental impact statements (EIS), an environmental review has been performed on the proposed agency action below:

Project Name: Village of Woodridge Wastewater Treatment Plant

Project Number: C-360592-02

Purpose of Project: The New York State Department of Environmental Conservation placed the Village under a consent order to replace the ineffective wastewater treatment system located at Panther Trail Road in Fallsburg, New York. The innovative/alternative (I/A) technology consisting of two aeration lagoons followed by overland flow application with a series of peripheral polishing marshes with discharge to the Neversink River never performed to expectation and the effluent quality violates its State Pollutant Discharge Elimination System permit.

Project Originator: Village of Woodridge, New York

Project Location: Greenfield Road
Village of Woodridge
Sullivan County, New York

Project Description: The project is to construct a new 0.8 million gallons per day (mgd) biological wastewater treatment plant (WWTP) off of Greenfield Road in the Village of Woodridge to replace the existing 0.79 mgd wastewater treatment system located at Panther Trail Road in Fallsburg. The WWTP will consist of two sequencing batch reactors (SBRs), an equalization tank, tertiary filtration system, ultraviolet disinfection, post aeration, aerobic digester, and sludge dewatering system. A new process building will be constructed to house the tertiary filtration system, sludge dewatering system, and the blowers for the SBRs, post aeration tanks and aerobic digesters.

The WWTP will be sized to accommodate the Village's current wastewater flows, including future flows from approved developments. A 16-inch pipe will run from the post aeration tank to a proposed outfall location at Sandburg Creek, which is tributary to Silver Lake.

Project Costs: $ 8,327,300

EPA Grant: $ 2,000,000

Our environmental review of this project indicates that no significant adverse environmental impacts will result from the proposed action. Consequently, we have made a decision not to prepare an EIS on the project. This decision is based on a careful review of the project's environmental information document, a site visit, and other supporting information. All of these documents, along with the Environmental Assessment (copy enclosed), are on file at the offices of the EPA Region 2 and the Village of Woodridge, where they are available for public scrutiny upon request. The EA is also available on EPA Region 2's website at http://www.epa.gov/region02/spmm/r2nepa.htm#r2docs.

Comments supporting or disagreeing with this decision may be submitted to EPA for consideration. All comments must be received within 30 calendar days of the date of this finding of no significant impact (FNSI). Please address your comments to: Grace Musumeci, Chief, Environmental Review Section, at the above address. No administrative action will be taken on the project for at least 30 calendar days after the date of this FNSI.

Sincerely,

George Pavlou
Acting Regional Administrator

Enclosure

USEPA Region 2
290 Broadway
New York, NY 10007-1866

Village of Woodridge Wastewater Treatment Plant

New York Construction Grant Reserve 100 Percent Modification Replacement

Village of Woodridge, Sullivan County, New York

Environmental Assessment

January 2009

Environmental Assessment

I. Project Identification:

Name of Project:	Village of Woodridge Wastewater Treatment Plant
Name and Address of Applicant:	Village of Woodridge P.O. Box 655 Woodridge, New York 12789
EPA Project Number:	C-360592-02
Project Location:	Greenfield Road Village of Woodridge Sullivan County, New York

II. Description of Facility Planning Area:

The Village of Woodridge is a 1.6 square mile municipality in Sullivan County, New York, located approximately eight miles northeast of Monticello on the west side of the Hudson River (Figure 1). The project area is located off of Greenfield Road in the Village of Woodridge. Directly east of the project area is Sandburg Creek, which flows into Silver Lake; both are part of the Hudson River drainage basin. Sandburg Creek has been designated by the New York State Department of Environmental Conservation (NYSDEC) as a Class B/Standard B(T) stream. The creek and lake are used for fisheries and as a non-contact recreational water resource in the area (Figure 2).

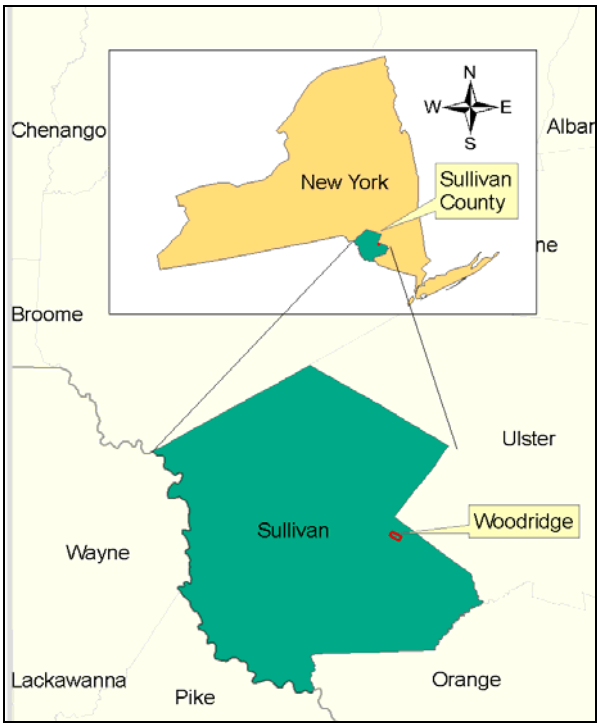


Figure 1 - County Location Map

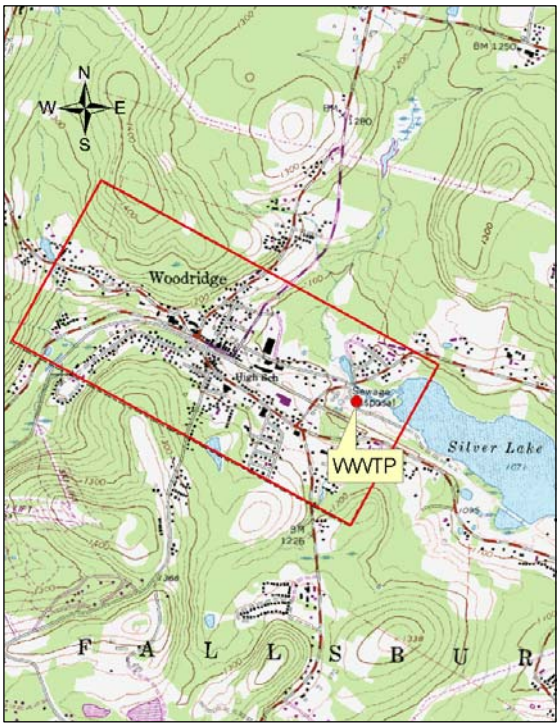


Figure 2 - Site Location Map

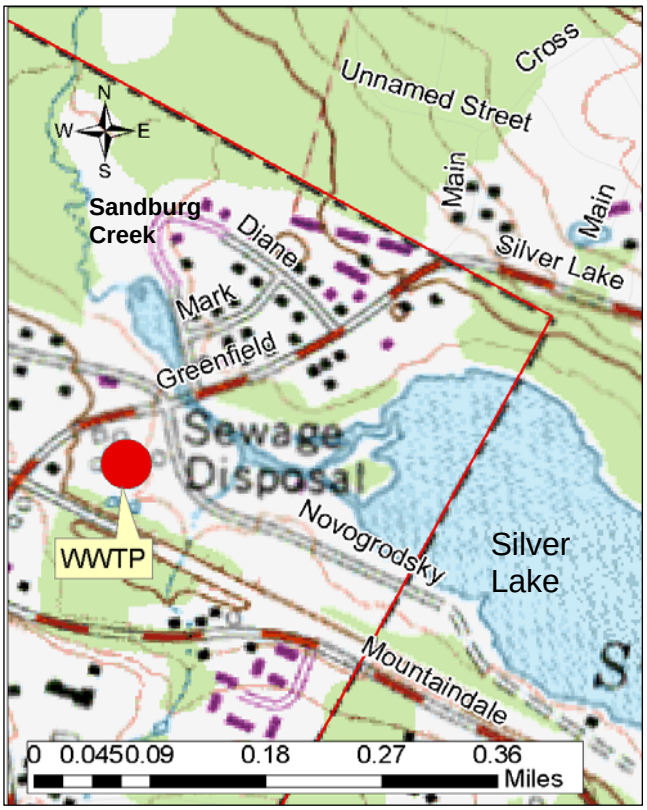


Figure 3 - Project Location Map

The project planning area primarily consists of 2.4 acres of previously disturbed, currently undeveloped, sparsely vegetated and lawn areas with a small portion consisting of a wet meadow. The site is adjacent to the existing pump station, a park, and the Department of Public Works (DPW) garage. The site was the original location of a wastewater treatment plant (WWTP) until it was abandoned in the 1980s. During that period, there were stone trickling filter, settling tanks, and other treatment plant components. Surrounding the site are residential commercial, and park/open space. The majority of residential properties around the site as well as the William Krieger Memorial Park (WKMP) were constructed in the 1950s and occupied when the former WWTP was operational. The majority of the site is zoned as Business and Light Industrial; whereas, a small area near Sandburg Creek directly east of the site is zoned as Residential Resort. Adjacent land use is residential of varying densities. Lot sizes vary from 10,000 to 40,000 square feet depending on the zone district and water and sewer availability (Figure 3).

Soils on the site consist of Pompton gravelly fine sandy loam (PmA) and Philo silt loam (Pe) according to the Sullivan County Soil Survey map. From field and geotechnical investigations at the site, it was determined that there are no bedrock outcrops and its subsurface consists of topsoil, fill, silt and clay, glacial till, and boulders and/or cobbles. Groundwater is assumed to be at a depth of 1.5 feet below the existing ground surface.

III. <u>Purpose and Need for Project</u>:

Figure 4 – Existing Wastewater Treatment System Location Map

The Village of Woodridge is currently being served by the WWTP at Panther Trail Road in the Town of Fallsburg that was constructed in the 1980s using EPA construction grant funds (Figure 4). With the pumping station and head works at the Greenfield Road site, wastewater is currently pumped approximately three miles via 12-inch forcemain to the Panther Trail Road WWTP for treatment. NYSDEC placed the Village under a consent order on July 20, 2005 to replace the ineffective WWTP.

EPA funded the facility under the construction grant C-360592-02 and it was constructed utilizing an innovative/alternative (I/A) technology consisting of two aeration lagoons followed by overland flow application with a series of peripheral polishing marshes. The technology never performed to expectation and the effluent quality from this WWTP violates its State Pollutant Discharge Elimination System (SPDES) permit.

NYSDEC monitoring reports have documented poor treatment plant performance as follows:

- Suspended solids failed to achieve the anticipated 85 percent removal level 70 percent of the time in 1985 and 1986 (i.e., during the second and third year of operation).
- Violations of the 30 milligram per liter (mg/L) suspended solids limit occurred in 32 percent of the 1986 samples during the second year of operation.
- The fecal coliform analytical results obtained for the six month time frame of May through October during 1984 - 1986 exceed limits in 11 of the 18 months.

The failed objective of the original treatment plant project was that I/A technology with overland flow was to meet the equivalent of secondary treated effluent requirements.

IV. <u>Detailed Description of Selected Plan</u>:

The selected plan is to construct a new 0.8 million gallons per day (mgd) biological WWTP off of Greenfield Road in Woodridge to replace the existing 0.79 mgd WWTP located at Panther Trail Road in Fallsburg (Figure 5).

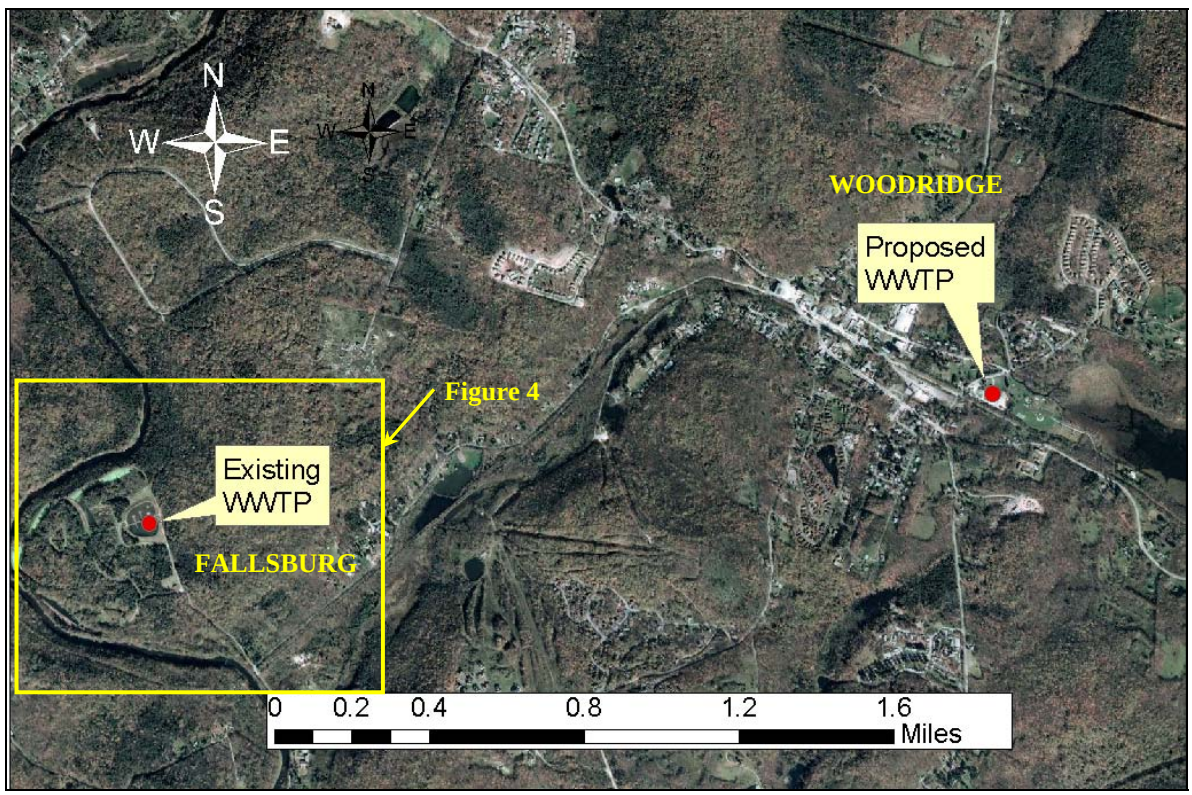


Figure 5 – Existing Treatment System in Fallsburg and Proposed WWTP in Woodridge

The new WWTP will consist of two sequencing batch reactors (SBRs), an equalization tank, tertiary filtration system, ultraviolet (UV) disinfection, post aeration, aerobic digester, and sludge dewatering system. A process building (42 feet by 92 feet) will house the tertiary filtration system, sludge dewatering system, and the blowers for the SBRs, post aeration

tanks and aerobic digesters. Dewatered sludge will be hauled to a permitted solid waste landfill. The UV disinfection system will be located outdoors adjacent to the process building under a 17 foot by 42 foot roof structure attached to the north side of the process building. Two parallel SBRs to be located outdoors are 116 feet long by 30 feet wide, additional space will be set aside for future SBRs (Figure 6).

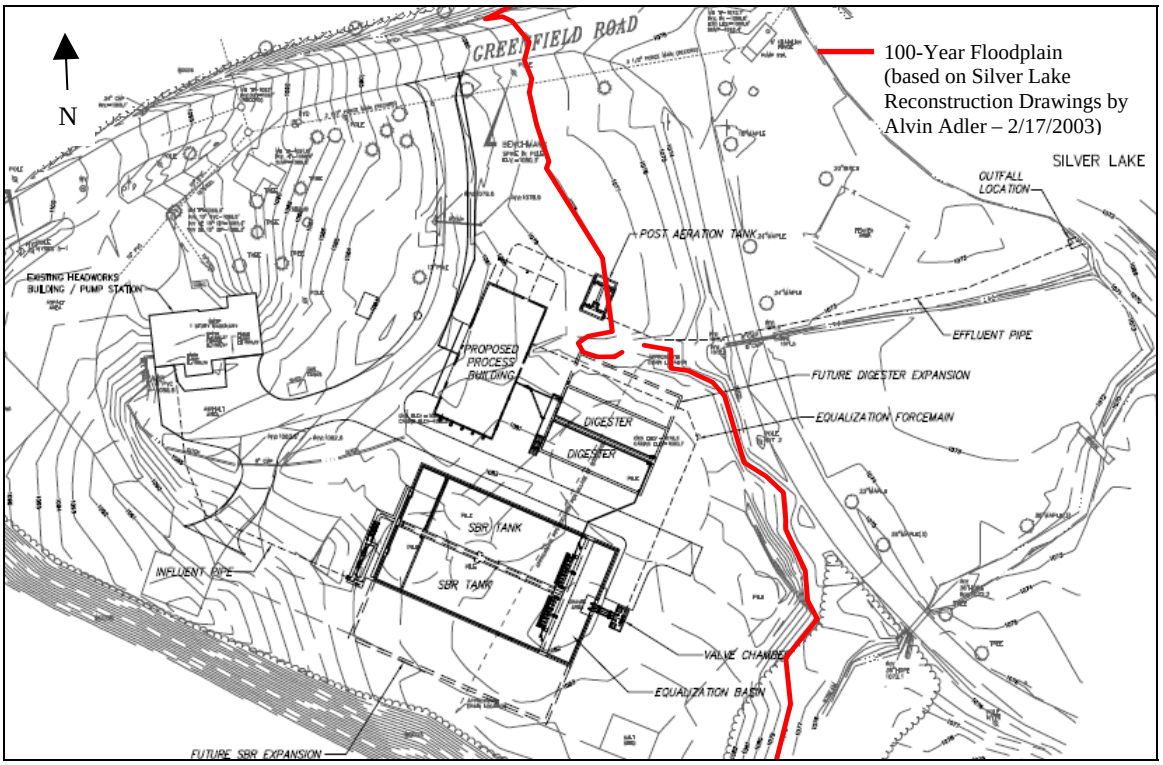


Figure 6 – Process Equipment Layout

Table 1 summarizes the projected wastewater flows for the current development plus approved new developments as well as some reserve capacity. The design period for the facility is 20 years.

Table 1 – Wastewater Flow Projections

Flows	Average Daily (gpd)	Maximum Day (gpd)
Current	652,000 (1)	1,473,000 (2)
Approved Developments	61,800	123,600
Reserve Capacity	86,200	---
Total	**800,000**	**1,600,000**

(1) Used 2006 average flows.
(2) Used 99.5 % confidence interval excluding flows recorded during water main break.

The proposed WWTP will be sized to handle an annual design average flow of 800,000 gallons per day (gpd) to accommodate the Village's wastewater flows, including approved developments. The WWTP will handle a maximum day flow of 1.6 mgd and a peak hourly flow of 2.4 mgd. A 16-inch ductile iron pipe will run from the post aeration tank to a proposed outfall location at Sandburg Creek (Figure 7).

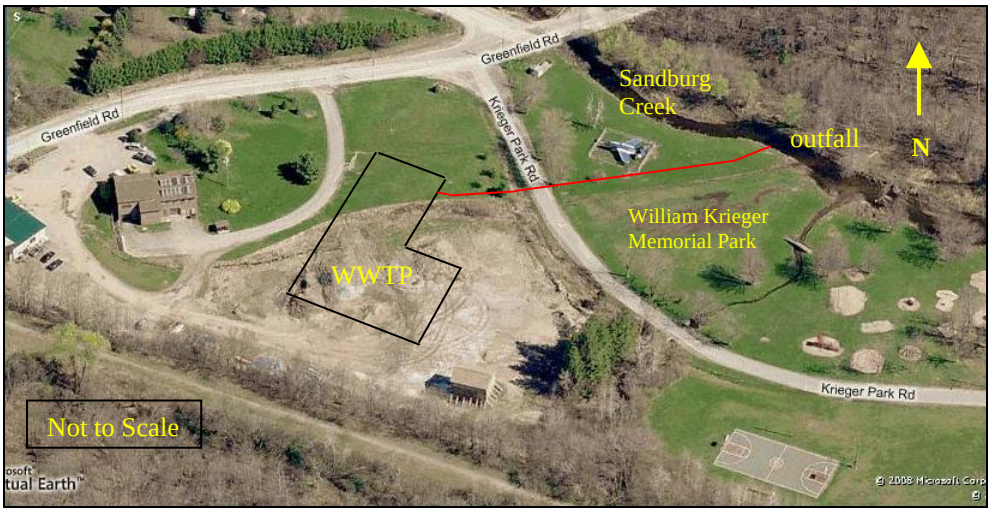


Figure 7 – Site Plan

The outfall was the location of the former WWTP discharge until 1982. A SPDES permit (NY 027 2817) was issued on February 15, 2008 for an average daily flow rate discharge to the creek of 0.8 mgd or 556 gallons per minute (gpm). The outfall termination concept may consist of a pipe within a concrete headwall, with a section of riprap between the headwall and the stream bank or a riprap alone with an outfall pipe extending to the creek. The ineffective I/A overland flow system will no longer be used once the new WWTP becomes operational. The property and any useful component of the Fallsburg WWTP may be sold.

V. <u>Estimated Project Costs</u>:

Table 2 provides detailed project costs information for the proposed WWTP, which contains a loan from the New York State Environmental Facilities Corporation (NYSEFC) for the duration of 30 years to finance the project.

Table 2 – Detailed Project Costs

Total Project Cost	$ 8,327,300	
Total Eligible Project Cost	$ 2,000,000	
Projected EPA Grant Amount	$ 2,000,000	
Other Grants / Loans Amount	$ 1,103,000 $5,224,300	USDA/Rural Development) (EFC Reserve Loan)
Local Share of Project Cost	$ 0	
Existing Annual Household Charge	$ 510	
Estimated Future Annual Household Charge	$ 646	(30 years for debt service and sewer use)
Projected Increase in Annual Household Charge	$ 136	

VI. <u>Evaluation of Alternatives</u>:

A. <u>No Action</u>: The "No Action" alternative was rejected because it would result in continuation of the existing condition. Continuing the existing I/A overland flow treatment process would result in poor quality effluent, which would continue to violate the SPDES permit and defy the NYSDEC consent order. Inadequately treated

wastewater will continue to degrade the surface water quality of Neversink River. Further operation of the WWTP will expose residents to potential health hazards from inadequately treated wastewater effluent released to the environment.

B. Conceptual and Treatment Process Alternatives:

1. Upgrade the Existing WWTP at Panther Trail Road in Fallsburg: This alternative would ensure adequate wastewater treatment operation for the next 20 years, upgrades are required to bring the existing WWTP to code with the 10-States Standards and to meet the SPDES permit requirements for nitrogen removal limits for wastewater discharge to the Neversink River. Under this alternative, SPDES permit requirements are 30 mg/L Biochemical Oxygen Demand (BOD) and 30 mg/L Total Suspended Solids (TSS). Upgrades are as follows: eliminate the existing overland flow system, upgrade the headworks and replace the existing grit removal and grinder system, install additional biological treatment units, rehabilitate the aerators, install new disinfection system, install new high head pumps at the Main Pump Station, and possibly replace the deteriorating forcemain that delivers wastewater to the WWTP, supply significant length of discharge piping, add a new sludge handling system, and provide two emergency generation systems. In addition, due to the outdated building, lighting, and electrical systems, modifications are required to comply with current building and utility codes.

   During peak flows, the existing pumps at the Main Pump Station that deliver wastewater to the WWTP are undersized and overflows have occurred to Silver Lake. The pumping capacity would have to be increased to handle peak hourly flow of 2,250 gpm. Additionally, the Main Pump Station would require a back-up generator to ensure that the main pumps are operational during a power outage. Pumps at the Silver Lake Pump Station would also be connected into the same generator to avoid wastewater overflows and discharges to Silver Lake.

   The existing lagoons would be used for primary treatment in conjunction with continuous flow type SBR technology for biological treatment of wastewater to remove the remainder of the BOD to achieve the required effluent quality. Downstream of the two cast-in-place SBRs would be an open channel ultraviolet (UV) irradiation technology placed outdoors beneath a pole barn. Light from the UV system will rupture the Deoxyribonucleic Acid (DNA), inactivate the disease-causing microorganisms, and to prevent cell reproduction. Seasonal disinfection would be required from May 15 through October 15. The biological treatment system would have a back-up emergency generator to keep the equipment in operation during a power outage.

   Cast-in-place concrete aerobic digester tanks would be constructed to process the sludge pumped from the SBRs and lagoons for volatile solids reduction. The aerobic digesters would have a diffused aeration system with blowers to provide the oxygen necessary for treatment and mixing. The digested sludge would be decanted to further concentrate the sludge prior to dewatering via centrifuge.

   This alternative was rejected because of the high capital cost for the wastewater treatment system and pumping station upgrades. The condition of the existing force main from the Village to the WWTP is unknown. There is no other WWTP

in the area with extra capacity to accept the wastewater from the Village for treatment while upgrades occur. Construction would have to be during periods of low wastewater flows, which requires planning for plant operational flexibility to continue to treat wastewater. With the high energy cost to operate the WWTP and the pump stations, there is no economic benefit of this alternative. As long as the existing pump stations remain operational, there is potential for wastewater overflows to Sandburg Creek, which flows to Silver Lake.

2.a. Constructing a New WWTP at Greensfield Road in Woodridge **(Selected)**: This alternative involves improvements to the existing headworks and grit removal and grinder system as identified in Alternative 1, construct a new wastewater treatment system at the Main Pump Station/DPW site, and eliminate the use of the aerated lagoons and I/A overland flow system and the Main Pump Station. The new WWTP will encompass an equalization basin, biological treatment system consisting of SBR technology, tertiary treatment system consisting of gravity sand filters, a clearwell to store filtered wastewater, a disinfection system consisting of UV irradiation technology, and an aeration system to raise the dissolved oxygen levels in the wastewater. The WWTP will also contain aerobic digester tanks to accept waste activated sludge (WAS) from the SBRs for sludge stabilization and volatile solids reduction. SPDES permit discharge requirements to Sandburg Creek under this alternative are 10 mg/L BOD, 5 mg/L TSS, 1.5 mg/L Nitrogen, and 1.0 mg/L Phosphorus. Stream discharge to a tributary of Silver Lake entails compliance with stringent stream standards.

Two cast-in-place concrete basins will be constructed outdoors for the SBR system to provide a total design flow of 0.8 mgd. An equalization basin, also cast in place, upstream of the SBR will be required to store the decant volume to minimize the size of the downstream tertiary treatment process. The proposed rapid rate gravity sand filtration system will consist of three cells, so that with one cell out of service; the other two cells will handle the design flow rate. Upstream of these filters will be a coagulant feed system to achieve the phosphorus removal from the wastewater stream. Directly under each filter cell, there will be a clearwell tank for storing filtered water for the backwash cycle and a mudwell tank for storing backwash wastewater. The sand filters, clearwells, and mudwells will be enclosed in a heated process building along with the sand filter blowers, air compressor, chemical feed systems, post-aeration blowers, and dewatering equipment.

An open channel UV system will be placed under a pole barn outdoors to disinfect the wastewater following filtration. Seasonal disinfection of the wastewater will occur from May 15 through October 15. A post aeration system consisting of two aeration tanks constructed in parallel will follow the UV disinfection to raise the dissolved oxygen levels in the effluent prior to discharge. A diffused air system consisting of air blowers, piping, and fine bubble diffusers will supply adequate quantities of air to the wastewater.

WAS from the SBR will be pumped to two aerobic digester tanks constructed of cast-in-place concrete situated on the side of the SBR tanks and will be equipped with fine bubble diffusers for sludge mixing and aeration. Two of the three blowers will supply air to the diffusers in the digesters with one blower as a back-

up unit. Digested sludge will flow from the aerobic digester into one of the two separate decant tanks. Sludge will settle and thicken in the decant tanks. Telescopic valves placed on top of the decant tanks will allow supernatant to be collected off the top of the decant tank to provide a thicker digested sludge feed to the sludge dewatering system. The collected supernatant will be conveyed to the SBR basins within the main treatment process. The thickened sludge in the process tank will be pumped to the dewatering system consisting of a centrifuge for processing. Dewatered sludge cake will be conveyed via screw conveyor to a dumpster. When the dumpster is full, the sludge cake will be transported to a solid waste landfill.

A back-up generator system will be required at the WWTP to ensure that all essential process equipment including the headworks, SBRs, equalization pumps, sand filtration, disinfection, and post aeration systems, as well as, the Greenfield Avenue Pump Station remain in operation during the event of a power outage.

This alternative was selected because of its lower capital costs, elimination of the Main Pump Station and associated electrical cost, elimination of the sewer overflows to Sandburg Creek, and high quality effluent discharge to protect Sandburg Creek and Silver Lake. This alternative has significantly lower operational and energy cost than the other alternatives. The proposed WWTP in Woodridge could be constructed while the existing WWTP in Fallsburg remains in operation to treat the wastewater from the Village. Lastly, this project will partially address the NYSDEC consent order that was issued in response to the poor performance of the existing WWTP and SPDES permit violations.

b. Constructing a New WWTP at Panther Trail Road in Fallsburg: This alternative would involve replacing the existing WWTP with a new WWTP similar to the selected alternative (Alternative 2a), except the new WWTP would be constructed at the Fallsburg location with the high quality effluent discharge to the Neversink River. This alternative was rejected because of its high capital costs associated with demolition of the existing WWTP, construction of the new WWTP, and upgrades to the pumping stations. There is no other WWTP in the area with extra capacity to accept the wastewater from the Village when constructing the new WWTP. The condition of the force main from the Village to the WWTP is unknown and it is possible that it may need replacing. There are high operational costs associated with the pump stations to transfer the wastewater from the Village to the WWTP.

3. Two Separate WWTPs: This alternative would involve operating two separate WWTPs having a combined design flow of 1.2 mgd. A new WWTP would be constructed at the Main Pump Station area in Woodridge and the existing WWTP in Fallsburg would be upgraded. The new WWTP at Woodridge would be sized to handle the existing “downtown” Village area flows while the upgraded WWTP at Fallsburg would handle flows from the 500-unit Davos housing development and any potential development.

The new treatment process at Woodridge would be similar to that presented in Alternative 2a with a wastewater treatment capacity of 0.8 mgd. The aerobic digester and dewatering process would be similar to that of Alternative 2a since these equipment would accept sludge from both WWTPs.

The Fallsburg WWTP would need to be upgraded similar to that presented in Alternative 1 to a capacity of 420,000 gpd. Additionally, a sludge holding tank, transfer station and tanker truck would be required to transport the sludge to the WWTP at Woodridge for processing. An emergency generator would be needed for this location as well.

This alternative was rejected because of the high capital cost for upgrades to the existing WWTP and pumping stations, construction of the new WWTP. There is the issue concerning the unknown condition of the existing force main. In addition, the operation of the two facilities would require greater energy use, which would bear unacceptably high cost for the Village in the long term.

VII. Environmental Consequences of the Selected Plan:

Environmental consequences of the proposed project are detailed throughout this section. Steps to minimize adverse effects on the environment are also included in this section.

A. Surface Water and Ground Water Quality:

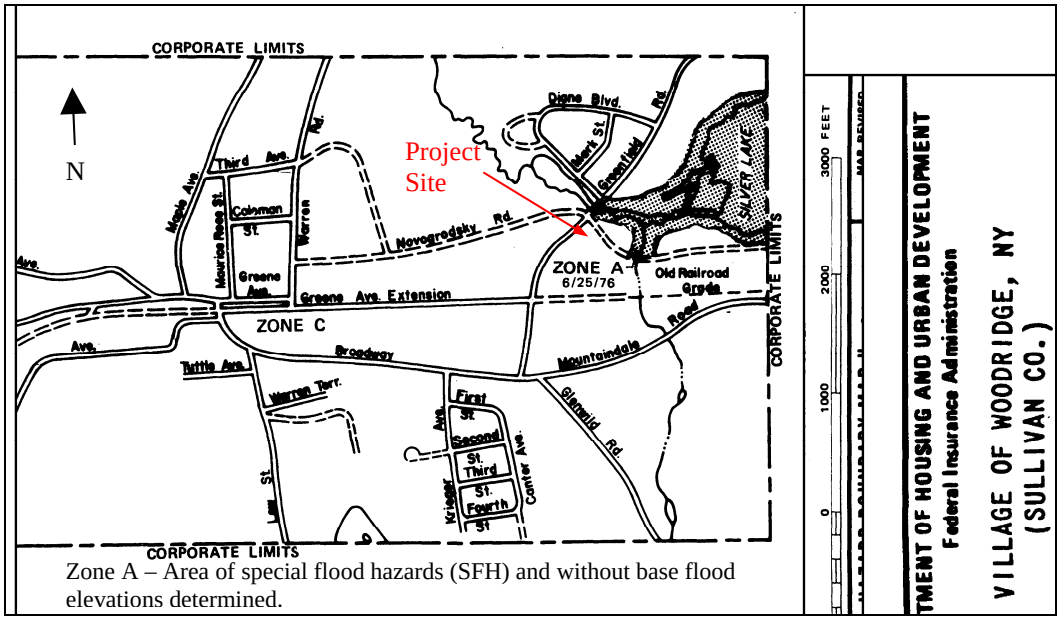
Implementation of this project is expected to result in substantial long-term positive impact to surface water quality by eliminating the poor quality wastewater discharge, which violates the SPDES permit, from the failed I/A technology to the Neversink River. Consequently, operation of the proposed WWTP under a new SPDES permit will benefit the surface water quality of Sandburg Creek by discharging wastewater that has been processed by tertiary treatment with UV disinfection.

During construction of the WWTP, groundwater will be maintained at a depth of two feet below excavation bottom at all times. The contractor will be responsible for dewatering to maintain dry ground conditions and increase stability when constructing the WWTP foundation. No sediment or silt laden water from dewatering operations will be discharged directly into any stream, wetland, surface or ground water source, or storm sewer. If necessary, a detailed dewatering operations plan will be developed and approved by the Village and/or NYSDEC.

Stormwater discharges from construction activities should not cause or contribute to a violation of water quality standards as regulated under SPDES permit (GP-02-01). Further, the contractor will adhere to the December 2006 Stormwater Management Report containing the Stormwater Pollution Prevention Plan (SWPPP) specifically developed for this project. During all phases of construction, contractors will maintain water quality standards by adhering to sediment and erosion control practices in the *New York State Standards and Specifications for Erosion Control*.

B. Floodplains:

The Ten-States Standards require that wastewater treatment facilities and equipment be protected against physical damage by a 100-year flood. According to the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Map (FIRM), the project area is located in a designated 100-year special flood hazard area and no base flood elevations have been determined (Figure 10).



Zone A – Area of special flood hazards (SFH) and without base flood elevations determined.

Figure 10 – FEMA Flood Insurance Rate Map for Woodridge.

However, based on the Silver Lake Reconstruction project design drawings completed by Alvin Adler, P.E. dated February 17, 2003, 1,074 feet and 1,078 feet flood elevations were determined for 25-year and 100-year flood recurrence periods, respectively, for the Silver Lake area. The 500-year flood elevation for the project area is not available. As shown in Figure 6, no buildings, electrical or mechanical equipment are proposed for construction or installation in the 100-year floodplain.

Given a 100-year flood event, there will be no overtopping of floodwaters into the wastewater treatment tanks because the tops of all of the tanks and equipment as well as the floor elevations for the buildings are at elevation 1,080 feet and above. As shown in Figure 6, the footprint of the post aeration tank is partially in the 100-year floodplain with the top of the tank at elevation 1080.5 feet, which provides 2.5 feet of freeboard should a 100-year flood event occur.

To ensure that the wastewater treatment plant equipment will not be damaged during a 100-year storm event, the backwater effect was used to determine the plant hydraulics as required by the Ten-States Standards. The invert of the gravity effluent outfall is at 1,070 feet and it will be submerged as it extends into Sandburg Creek as the stream elevation is at 1,072 feet. The weir at the post aeration tank is at 1,078.25 feet and the flow over the weir will range from 1,078.2 to 1,078.51 feet. The effluent pipe may flow full depending on the stream elevation during flooding, but will continue to discharge during a 100-year flood condition.

The outfall from the WWTP to Sandburg Creek will be constructed within the floodplain. The installation of the outfall in the floodplain is not expected to impact the character of the floodplain or result in loss of flood storage capacity.

A storm event during construction could cause silt and sediment deposition into Sandburg Creek, which will be mitigated via erosion and sediment control measures outlined in the SWPPP described in detail in Section VII.A. Work in the floodplain will be completed in accordance with the SPDES permit requirements.

C. Wetlands:

As shown in Figure 8, the NYSDEC Freshwater Wetland Map indicates that regulated freshwater wetlands are located to the north of the project site. The project will not impact this wetland or its 100-foot buffer area. Based on the September 27, 2006 wetland delineation conducted by Clough Harbor and Associates, wetlands associated with Sandburg Creek are within the limits of the project site. Sandburg Creek is a NYSDEC regulated stream and effluent from the WWTP will be discharged to this creek through an outfall constructed in jurisdictional wetlands.

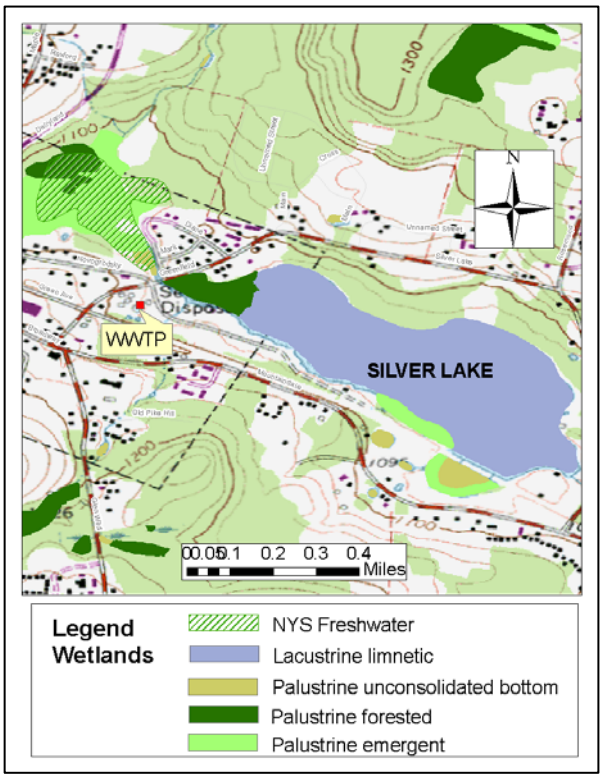


Figure 8 – NYSDEC and Federal Wetlands

As shown in Figure 9, the differentiation of Wetland A from Wetland B is primarily one of manmade versus natural. Wetland A consists of 0.27 acres of non-jurisdictional wetlands and 0.0008 of an acre (35 square feet) of jurisdictional wetlands. Wetland A is characterized as a low quality, manmade wet meadow/ditch containing invasive species such as purple loosestrife (*Lythrum salicaria*), which contributes 25 to 35 percent of the total wetland species.

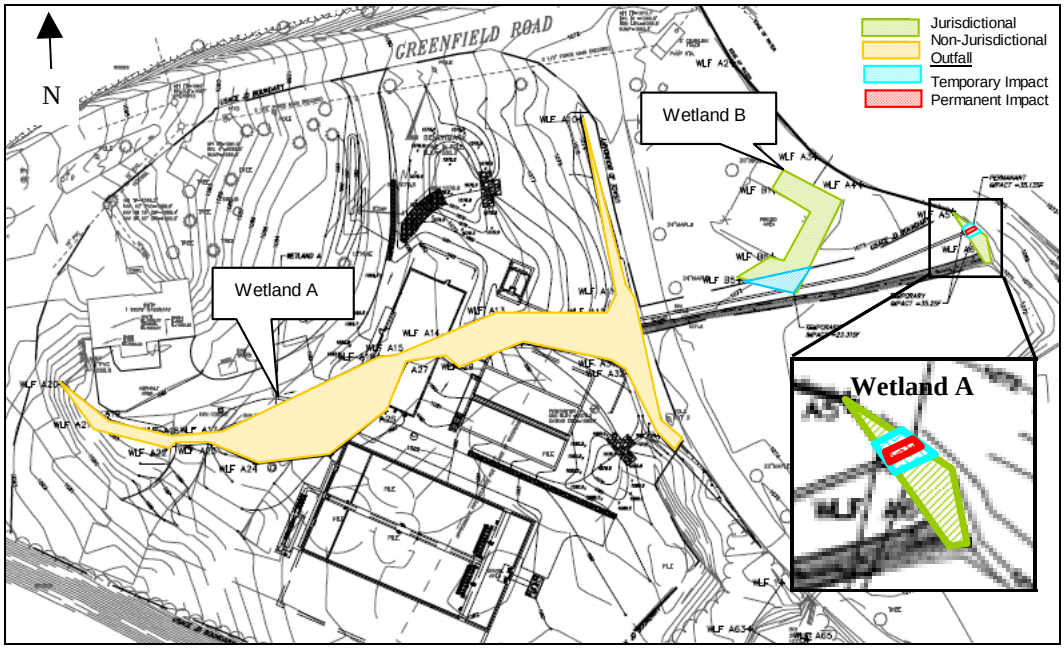


Figure 9 – Delineated Wetlands Map

Wetland A originates from a 4-inch PVC pipe connected to a floor drain in the adjacent DPW garage. Additionally, a portion of the ditch between the existing pump station and Sandburg Creek was constructed to accommodate flow from a sewerage overflow pipe connected to an existing wet well to prevent flooding of the building. Wetland A also serves as a roadside drainage ditch along the access road to the adjacent public park. The only area of Wetland A that is not considered to be manmade is the small area along the bank of Sandburg Creek and its associated fringe wetland (Inset of Figure 9). Wetland B consists of 0.04 acres (1,742 square feet) of jurisdictional wetlands characterized as a disturbed/mowed wet meadow.

Construction of the WWTP will permanently impact approximately 0.221 acres of non-jurisdictional wetlands in Wetland A; approximately 0.049 acres of Wetland A will not be impacted. The manmade ditch/meadow wetland is situated in the middle of the site and there are no practical alternatives to reduce or avoid impacts. The layout of the site was dictated by the location of the existing headworks facility. Alternative on-site configurations were evaluated during the design process. As the treatment system flows by gravity from west to east toward Sandburg Creek, structures need to be configured in such way to avoid head loss. In addition to not being able to split up the structures, the location of the proposed process building in the northern portion of the site would not work because of the existing head works facility. The eastern portion of the area across Krieger Park Road adjacent to Sandburg Creek is not suitable for constructing the WWTP because it would have required placement of structures in the floodplain.

Outfall construction activities will have minor impacts to wetlands in two areas. Approximately 0.0008 acre (35 square feet) of jurisdictional stream bank wetland (Wetland A) associated with Sandburg Creek will be permanently impacted by the installation of a proposed headwall and/or rip rap for the 16-inch outfall structure. Shifting the location of the outfall structure in either direction along Sandburg Creek would only impact the wetland in a different location; therefore, the proposed location of the outfall was selected for optimal plant operation. Approximately 0.0013 acre (58.5 square feet) of jurisdictional wetland (Wetland B) will be temporarily impacted from the trenching activities for the 16-inch outfall pipe. There will be no filling of Sandburg Creek as part of the outfall construction.

Work within the bed and banks of Sandburg Creek require a permit under Article 15 of the New York State Environmental Conservation Law. Any work within the jurisdictional wetlands will be undertaken in accordance with local and/or state permit requirements. Temporary impacted wetlands will be fully restored to original state via grading and seeding with native, non-invasive wetland species. If practicable, the wetland permanently impacted by construction activities of the outfall will be recreated at another location along the stream bank or within Wetland B.

D. Agricultural Lands:

The State of New York Agriculture and Markets indicated in a letter dated March 8, 2007 that the project will not impact any land within an agricultural district.

E. Air Quality:

Based on the review of the EPA's List of Counties that are in Nonattainment or Maintenance for One or More National Ambient Air Quality Standards (NAAQS), Sullivan County is not located in a nonattainment area or maintenance area for any criteria pollutant. Given the capacity of the new WWTP, the proposed project will not foster significant population growth in the Village that could then result in traffic congestion and vehicle idling that could deteriorate localized air quality.

However, there will be minor short-term air quality impacts from this project. These include vehicular emissions from operating construction equipment and fugitive dust generated from construction activity. A mitigation plan will be developed and implemented prior to construction. Mitigation techniques include, but are not limited to:

- Conserve energy (reduce idle times when equipment is not in use, operate equipment efficiently to decrease fuel consumption, use newer or more energy efficient equipment, etc.);
- Perform routine operation and maintenance services on construction equipment;
- Use clean fuel(s) in combustion-type engines;
- Wet down or chemically treat exposed earth during construction;
- Limit construction activities during extremely windy and/or dry conditions;
- Cover dust producing materials being transported to and from the area; and
- Implement a traffic management plan to minimize any delays.

F. Energy Usage and Greenhouse Gas Emissions:

Greenhouse gas (GHG) emissions to the atmosphere from human activities around the world are responsible for climate change. Operation of construction equipment and material delivery vehicles will produce GHG emissions. GHGs include carbon dioxide, methane, nitrous oxide, and fluoridated gases. Start-up and operation of the WWTP process equipment and providing heat and electricity for the WWTP buildings will indirectly contribute to GHG emissions. Table 3 illustrates the approximate quantity of GHGs to be generated during construction activities over 12-months to complete the WWTP from the date of Notice to Proceed. It is likely that additional GHG could be generated from the operation of other vehicles or smaller equipment unaccounted for during the construction of the WWTP; thus, the primary focus of this assessment is to quantify the larger sources of GHGs. The construction of the WWTP will produce approximately 231.5 tons (210 tonnes) of carbon dioxide (CO_2).

The proposed WWTP site has an existing power source to operate the entire facility. The CO_2 production was calculated from electricity consumption. The amount of electricity to be consumed by the WWTP was estimated based on operational comparison between the existing wastewater treatment system and the proposed WWTP. Calculations indicate that the new WWTP will require 18 percent additional energy to meet its operational needs.

The existing I/A treatment system used 507,000 kWh per year of electricity from July 2007 to June 2008. This equates to be approximately 100 tons (90.7 tonnes) of CO_2 emitted into the atmosphere. Therefore, the proposed WWTP is estimated to consume 599,700 kWh per year or approximately 118.3 tons (107.3 tonnes) of CO_2 will be emitted to the atmosphere annually.

Table 3 – Approximate GHG Generated During Construction of WWTP[1].

Construction Activity	Diesel Used (gallons)	CO_2 from Diesel (tonne[2])	Gasoline Used (gallons)	CO_2 from Gasoline (tonne)	Electricity Used (KWh[3])	CO_2 from Electricity (tonne)	Total GHG (tonne)
Excavation/ Backfilling & Concrete Construction	15,167	154.1	1,419	12.5	14,000	2.6	169.2
Masonry/ Equipment Installation & Paving	101	1.03	1,517	13.4	19,600	3.5	17.9
Construction Inspector/ Site Staff	0	0	3,139	23.1	0	0	23.1
Totals	15,167	155.1	6,075	49.0	33,600	6.1	210.2

1. The GHG Indicator: United Nations Environment Programme Guidelines for Calculating Greenhouse Gas Emissions for Businesses and Non-Commercial Organizations, June 7, 2000.
2. A tonne or metric ton equals 1,000 kilograms, 2,204.6226 pounds, or 1.1023 short tons (U.S.).
3. Kilowatt hour (kWh).

There will be a net increase of 18.3 tons (16.6 tonnes) of CO_2 per year when the new WWTP becomes fully operational and the I/A treatment system operation ceases. As the life expectancy of this new WWTP is twenty years, the total GHG to be emitted to the atmosphere from this action is approximately 2,597 tons (2,356 tonnes) of CO_2 from both construction and operation of the WWTP.

Mitigation strategies listed in Section VII.E during planned construction activities should assist in reducing GHG emissions from construction equipment. The goal is to reduce GHG production from the WWTP operations over the next twenty years. A mitigation strategy could include purchasing energy from renewable sources. Integry, the Village's energy supplier, has a Renewable Energy Credit Program and the Village intends to investigate energy use reduction opportunities for the WWTP operations to offset the estimated 2,366 tons (2,146 tonnes) of CO_2 over twenty years.

EPA's websites, *Energy Star for Wastewater Plants and Drinking Water Systems* (http://www.energystar.gov/index.cfm?c=government.wastewater_drinking_water), *Energy Star Performance Ratings: Technical Methodology for Wastewater Treatment Plant* (http://www.energystar.gov/ia/business/evaluate_performance/wastewater_tech_desc.pdf), *Sustainable Infrastructure for Water and Wastewater* (http://www.epa.gov/waterinfrastructure/bettermanagement_energy.html), *Wastes – Resource Conservation – Reduce, Reuse, Recycle – Industrial Materials Recycling* (http://www.epa.gov/osw/conserve/rrr/imr/indust.htm#cd-materials), and *Clean Energy* (http://www.epa.gov/cleanenergy), contain guidance and technical information on improving performance, construction, and energy conservation for wastewater treatment systems that could provide additional energy saving strategies for the new WWTP to reduce GHG emissions.

G. Natural Resources and Wildlife:

Impacts to vegetation and wildlife will be minimal since a majority of the project area consists of cleared and previously disturbed land and lawn area. A small portion of the site is a wet meadow. Various wildlife may be present surrounding the project area due to its forested setting. Given their mobility patterns, these creatures will likely relocate themselves during construction activities and may return once the natural setting is restored. The project area is situated near many mature trees, but no trees are proposed to be removed as a result of this activity. The project area is not a park land or open space. No recreation opportunities are currently provided at the WKMP adjacent to the proposed site. Access to Sandburg Creek and Silver Lake will not be impacted by this project.

Mitigation consists of construction contractors complying with the *New York State Standards and Specifications for Erosion Control.* During construction, the contractor will be required to implement erosion control measures so as to minimize the impact of the excavation and backfill activities. Disturbed areas will be graded and vegetated with non-invasive native species as quickly as possible following construction to restore the natural setting.

H. Endangered/Threatened Species:

To comply with Section 7 of the Endangered Species Act, a complete review of the federal threatened and endangered species list for Sullivan County on the Fish and Wildlife Service's website, http://www.fws.gov/northeast/nyfo/es/section 7.htm was conducted. The list indicates that the federally threatened bog turtle (*Clemmys muhlenbergii*), endangered Indiana bat (*Mytotis sodalis*), endangered dwarf wedge mussel (*Alasmidonta heterodon*), and the threatened northern wild monkshood (*Aconitum noveboracense*) are known or likely to occur in Sullivan County.

The preferred habitat for the bog turtle is wetlands consisting of wet meadow or pen calcareous bogs and wet prairie, respectively. Further, bog turtles prefer areas with tussock forming vegetation, water that is cool and slow moving and deep mucky soils. The project site soils are not organic or mucky. No tussock forming vegetation was identified at the site. Wetlands at the site do not contain the proper substrate for a bog turtle habitat; therefore, no bog turtles are anticipated in the project area.

Indiana bats are known to hibernate in caves/abandoned mines within six counties in New York State (NYS) in the winter. Sullivan County is not on the list and there are no hibernacula within the vicinity of the site. Additionally, there are no upland/wetland forested summer habitats present at the project site. Based on this information, the project site is primarily open and it is not anticipated that Indiana bats will be impacted by this project.

The typical habitat for dwarf wedge mussels includes running waters of all sizes. Bottom substrates can include gravel, sand, and silt, which can be distributed in relatively small patches behind larger boulders and cobbles with water velocity being usually slow to moderate. Sandburg Creek will be receiving the wastewater effluent and is within project limits. The NYSDEC National Heritage Program (NHP) did not indicate the presence of dwarf wedge mussel within the vicinity of the project.

The preferred habitat for the northern monkshood includes talus slopes, partially shaded cliffs and stream sides on sandstone or limestone. This species needs high humidity and cool soil conditions. The project area does not contain talus slopes or cliffs; therefore, the northern monkshood is not thought to be present in the vicinity of the project.

Review of the December 20, 2006 NYSDEC NHP report further indicates that there are no records of known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of the site. Consequently, there are no anticipated impacts to state and federally listed threatened or endangered species or critical habitats from implementation of this project.

I. Designated Wellhead Protection Areas:

East Pond is the main drinking water supply located 1.5 miles north of the Village. A stand-by Caisson Well (Well 1) located north of the project site is used during summer peak water demands. Well 2, located north of the project site at Diane Lane, and Well 3, located southeast of the project site, also provide supplemental water supply during summer periods when water demand is high. Some residents receive drinking water from individual wells in the vicinity of the project area. None of the aforementioned wells are located within the project area; therefore, the WWTP will not cause significant impact.

J. Cultural Resources:

The NYS Historic Preservation Office (SHPO) of the NYS Department of Parks and Recreation and Historic Preservation determined that the proposed project will have no effect on cultural resources in or eligible for inclusion in the National Register of Historic Places in a letter dated July 14, 2006.

The Village of Woodridge consulted the St. Regis Mohawk Tribe regarding this proposed project in a letter dated May 19, 2008. Information was requested on the presence of cultural resources of significance to the Tribe within the project site.

K. Other Environmentally Sensitive Resources:

The project will not result in any significant impacts to essential fish habitat, wild and scenic rivers, designated coastal zone, or sole source aquifer because these environmentally sensitive resources do not exist in the vicinity of the project area.

L. Population Growth/Secondary Impacts of Induced Growth:

Based on the U.S. Census Bureau records, annual population growth rate from 1990 to 2000 was 1.43 percent with the Village population increasing from 783 to 902 people. The annual population growth rate from 2000 to 2007 was 2.5 percent with the population increasing from 902 to 1073 people. It is expected that population growth will occur over a long period of time, which can create additional development in the Village. However, growth can be managed by enforcing local planning and zoning regulations.

The proposed 0.8 mgd WWTP has been designed to serve the existing residences and local businesses, including approved development. The new WWTP will have an extra 10,000 gpd capacity over the existing 0.79 mgd WWTP in Fallsburg. More importantly, under the order of consent by NYSDEC, this proposed WWTP is to replace the existing WWTP in Fallsburg. As such, the proposed project is designed to accommodate the Village's current needs by providing wastewater treatment services and to allow limited capacity for planned and approved development in Woodridge.

` Typically, air and water quality, transportation, environmental resources, demand on public services, and housing are secondary impacts related to growth. Since this project will have no potential to significantly increase population, significant adverse secondary impacts are not anticipated.

M. Noise:

Increases in noise associated with construction activities will temporarily impact local residents in the project area. There are no hospitals, schools or other public facilities within the project area that would be adversely affected by construction noise. WKMP is directly east of the project area on the east side of Krieger Park Road adjacent to Sandburg Creek. It is anticipated that park visitors will either relocate themselves further away from the noise source or will visit the park during times when construction is not occurring.

To control noise generated by construction equipment, construction activities will be limited to normal work hours. Additionally, construction machinery will be equipped with attenuation devices (i.e., mufflers) to minimize noise.

N. Traffic:

Activities related to construction of the proposed WWTP will most likely create short-term traffic impacts consisting of temporary and minor delays. No road closures are anticipated for Greenfield Road, adjacent to the project area, during construction. No long-term significant or permanent increases in traffic are anticipated in the project area after the construction is complete.

Alternative traffic routing, detouring, and flagging will be used to improve traffic flow on Greenfield Road during the construction of the WWTP.

O. Odors:

The nearest receptors are several homeowners located on Greenfield Road approximately 300 feet north of the WWTP. The existing headworks system currently operates an odor control system. The SBR activated sludge process is most associated with a musty/damp smell, which is generally not offensive to olfactory receptors. No significant odors will occur during proper operation of the aerobic biological treatment system and the aerobic digester. The sludge dewatering system will be contained in a closed pipe/vessel and dewatered sludge will be hauled away.

P. Aesthetics:

The project area is adjacent to the DPW garage. The height of the WWTP will be 20-feet 8-inches high, which is considered a low profile building. The proposed site is

bordered on the residential side by mature trees, which will not be disturbed by construction activies.

It is anticipated that the WWTP will be visible to travelers on Greenfield Road, to visitors of the adjacent park, and from nearby residences. The mature trees that are present provide a natural buffer. Where possible, additional trees will be planted at the outskirts of the site to provide additional buffer between the WWTP and WKMP, such as along Krieger Park Road and/or Greenfield Road. Newly planted trees will serve as a carbon sink. There will be no post-construction impacts on the surrounding community since disturbed areas will be restored to their original condition.

Q. Socioeconomics and Demographics:

The average household currently pays $510 annually for combined wastewater services. The total projected annual service cost for a typical residential user in the project area is approximately $646 for debt repayment and sewer use for thirty years from date of loan inception. This equates to be a 27 percent rate increase for residents. This rate increase is two percent of the Village's median annual household income (MAHI) of $32,503 (adjusted to 2008 dollars) derived from $23,750 based on U.S. Census Bureau's 2000 census records. The typical affordability standard is that ratepayers may be expected to pay one to two percent of the MAHI for wastewater collection, treatment, and disposal services based on the *Combined Sewer Overflows: Guidance for Financial Capability Assessment and Schedule Development (February 1997)*. The NYSEFC has prequalified the loan for the project, which will be financed at zero percent interest over 30 years based on 1,563 equivalent dwelling units. Consequently, there are no significant socio-economic impacts from this project on a homeowner in the Village. In the future, the Village plans to sell the equipment and property from the WWTP at the Fallsburg location to be decommissioned and apply the monies towards the loan or debt repayment.

Table 4 provides the demographic information from the U.S. Census Bureau's 2000 census for Woodridge.

Table 4 – Village of Woodridge Population by Race and Ethnicity

	Woodridge		**Sullivan County Percentage**	**U.S. Percentage**
Origin	**Population**	**Percentage**		
White	657	72.8	85.3	75.1
Black	112	12.4	8.5	12.3
American Indian	2	0.2	0.3	0.9
Asian	9	1.0	1.1	3.6
Hawaiian/Pacific	2	0.2	0	0.1
Other	81	9.0	2.9	5.5
Two or More Races	39	4.3	1.9	2.4
Hispanic (may be of any race)	213	23.6	9.2	12.5

All residents of the project area connected to the sewer system that conveys wastewater to the WWTP will benefit from this project regardless of income. The new WWTP will not be located in an area that contains low income residents.

Although, there are families that live in poverty in the Village, it is also the setting of many vacation or second homes and these areas are not segregated in any way.

R. Environmental Justice:

The methodology used in this assessment supports *EPA Region 2's Interim Policy for Environmental Justice*. This environmental justice (EJ) assessment was performed on the Village of Woodridge, which is identified as the Community of Concern (COC). This will determine whether this project would create any disproportionate impacts relative to a community's environmental and/or human health. Throughout the process, the environmental burden and minority and low-income indicators for the COC were compared to that of a statistically-derived reference community.

To analyze the environmental burden, the environmental load profile (ELP) in Table 5, captures the existing environmental load (i.e., environmental burden) within the COC and relatively compares it to the overall NYS threshold for toxics release inventory, facility density, and air toxics (cancer and non-cancer). The ELP indicators shown in Table 5 are under the NYS threshold; therefore, there will be no increase in environmental burden in the COC from the construction and operation of the new WWTP.

Table 5 - Environmental Load Profile

Indicators	**NYS Threshold**	**Village of Woodridge**	
		Indicator	**Ranking**
Toxics Release Inventory	5.67	0.52	0
Facility Density	56	55.89	0
Air Toxics – Cancer	63.55	15.82	0
Air Toxics – Non-cancer	11.3	2.41	0

Table 6 shows the results of the demographic analysis, which indicates the percent minority and percent poverty, which is then compared to a statistically derived threshold reference for an urban area in NYS.

Table 6. Demographic Analysis

Indicators	**NYS Threshold**	**Village of Woodridge**	
		Indicator	**Setting**
Percent Minority	51.51 %	21.05 %	Urban
Percent Poverty	23.59 %	18.91 %	Urban

The demographic analysis indicates that the percent minority and poverty indicators in the COC are below the NYS values. Accordingly, the COC does not meet the EPA criteria to be classified as an EJ area and no additional EJ analysis is necessary. EPA's website, http://www.epa.gov/region02/ej/, contains EJ information and explains how the indicators are used in the assessment.

S. Climate Change:

As a consequence of climate change, there is potential for Sandburg Creek and Silver Lake water quality to be compromised from warming air and water body temperatures, extreme droughts that diminish stream flows, as well as wet weather events that increase risk of flooding and expand floodplains. Typically, effluent from a WWTP averages between 55 - 70 degrees Fahrenheit (F). In times of drought, if the water level in the creek is so low that the creek is not flowing, the creek temperature would be greatly influenced by the temperature of the effluent. Current federal and state regulations restrict discharges from significantly affecting the water temperature, dissolved oxygen content, and quality of Sandburg Creek. As climate changes occur, the SPDES permit may need to be revisited to ensure appropriate discharge allowances to protect these water resources.

An intense storm event could exacerbate flooding conditions of Sandburg Creek increasing its flood elevation past the 100-year floodplain elevation mark of 1,078 feet. Based on the Silver Lake Dam Construction project drawings, 1,079 feet flood elevation was given as 150 percent of the 100-year storm elevation for the area. If the flood elevation of Sandburg Creek were to increase by 1-foot above the 100-year flood elevation, there will be no overtopping of floodwaters into the wastewater treatment tanks because the tops of all of the tanks and equipment as well as the floor elevations for the buildings are at elevation 1,080 feet and above. If 100-year storm events or worse occur more frequently in the near future due to accelerating climate change effects, there are mitigation measures such as planting native non-invasive vegetation and trees in the area between the stream bank and WWTP to reduce impacts from floodwaters on the riparian zone and WWTP structures.

Since the estimated life expectancy of this WWTP is approximately 20-years, facility upgrades or replacement will be required, allowing any needed modifications over time to accommodate impacts due to climate change.

T. Cumulative Impacts:

An additional requirement of the NYSDEC consent order is to correct the deficiencies within the existing sewer collection system infrastructure that is deteriorating and experiencing significant infiltration/inflow (I/I). Due to peak wastewater flows exceeding the hydraulic capacity of the influent pumps, wastewater overflows from the Main Pump Station wet well to a culvert that leads to Silver Lake. This problem worsens when I/I flows increase, especially during intense storm events with higher precipitation amounts. This I/I problem compromises the water quality of Sandburg Creek and Silver Lake, which is a public health concern due to the discharge being close in proximity to the WKMP.

Two critical areas have been identified to reduce I/I based on the evaluation of the collection system. The proposed sewer rehabilitation project will repair sewers on Maple and Highland Avenues in the Village of Woodridge. The identified sewers will be repaired during the summer of 2009 when wastewater flows are off-peak and before the WWTP goes into operation. There will be minor effects associated with the construction to repair these sewers, but these short-term effects will not result in long-term significant cumulative environmental impacts. Traffic will be minimal since these side roads are not highly traveled and sewer construction is usually

limited to road rights-of-way and easements. Construction work to repair these sewers is anticipated to last one week at each location and will not cause any significant air quality impacts from vehicular traffic and construction equipment emissions. There will be no traffic impacts since alternative routing to all points within the Village is available. The SWPPP will be used the contractors to reduce the potential for sediment and silt laden stormwater runoff to Sandburg Creek and Silver Lake during all phases of sewer system construction.

The Village has also identified sewers on Novogrodsky Road that also need improvements to reduce I/I. Additional sewer collection system improvements will only occur if the Village secures funds in the future. Unaccounted I/I flows from deteriorating sewers not repaired will be combined with the raw wastewater flows to the new WWTP. As long as the WWTP operates within capacity to handle combined wastewater flows, there should be no significant water quality impacts to Sandburg Creek and Silver Lake.

The WWTP is not being constructed in response to future growth, but to replace a failed wastewater treatment system to mitigate water quality impacts. This project will not induce growth as it will add minimal additional capacity to the system to meet current demand. The new WWTP will operate at capacity to accommodate the wastewater demands for the Village, including approved developments. Construction and operation of the 0.8 mgd WWTP will not result in any significant cumulative impacts. However, the WWTP site is designed to add a third process train if the need arises to provide an additional capacity of 0.4 mgd. If there is a demand for additional development in the future, the planning board will need to devise a land use plan to evaluate growth within the Village. It is anticipated that any new growth will be from outside development and it will be the responsibility of users to provide the costs required to upgrade the WWTP. At this time there are no plans to expand the WWTP, since there are no plans for additional development.

VIII. Coordination of Environmental Review:

A. Public Participation: Public participation was an integral part of project planning. Public notices, meetings and hearings open to the public are listed below:

- July 19, 2005 - Public Notice letter sent to all interested parties regarding the Special Meeting on July 26, 2005 to discuss the sewage treatment plant upgrade.
- August 16, 2005 - Public Notice letter sent to all interested parties regarding the Special Meeting on August 23, 2005 to discuss the sewage treatment plant upgrade.
- October 3, 2005 - Public Notice letter sent to all interested parties regarding the Special Meeting on October 11, 2005 to discuss the wastewater treatment system upgrade.
- November 22, 2005 - Public Notice letter sent to all interested parties regarding the Special Meeting on November 29, 2005 to discuss the wastewater treatment system upgrade.
- February 28, 2006 - Affidavit of Publication on the Bond Resolution in the County Democrat newspaper which authorizes construction of the wastewater system improvements project, Fred Stabbert, Publisher.
- June 20, 2006 - Public Notice letter sent to all interested parties regarding the Special Meeting on June 26, 2006 to discuss the wastewater treatment system upgrade.

- September 1, 2006 – Affidavit of Publication on the Legal Notice of Public Hearing in the County Democrat newspaper which lists the details of the September 12, 2006 hearing presenting the sewer use ordinance rules and regulations, Fred Stabbert, Publisher.
- November 21, 2006 – Public Notice letter sent to all interested parties regarding the Public Hearing on November 28, 2006 to discuss the proposed sewer use ordinance.
- December 28, 2006 – Public Notice letter sent to all interested parties regarding the Public Information Session on January 6, 2007 for the construction of a new wastewater treatment plant.
- April 16, 2007 – Letter from Diane Garritt of the Village of Woodridge to Vern Ingraham of Clough, Harbors & Associates re: Public Notice letters sent to all interested parties regarding the Special Meeting on February 21, 2006; August 21, 2006; and January 6, 2007 to discuss the wastewater treatment system upgrade.

B. Federal, State, and Local Agencies and Tribal Nations Notified/Consulted:

- New York State Department of Agriculture and Markets
- New York State Department of Environmental Conservation, Natural Heritage Program
- New York State Environmental Facilities Corporation
- New York State Office of Parks, Recreation, and Historic Preservation
- New York State Department of Environmental Conservation, Region 3
- St. Regis Mohawk Tribe
- U.S. Department of Agriculture – Rural Development
- U.S. Environmental Protection Agency, Region 2
- U.S. Department of Interior, Fish and Wildlife Service
- U.S. Army Corps of Engineers

IX. **Reference Documents**:

- *Letter from Karen Clark, P.E. of Clough Harbor & Associates to Nikolaus Wirth of EPA re: Response to EID questions, Village of Woodridge, New York,* December 11, 2008.
- *Letter from Karen Clark, P.E. of Clough Harbor & Associates to Michael Hajducek of EPA re: Response to EID questions, Village of Woodridge, New York,* October 24, 2008.
- *Environmental Information Document, Village of Woodridge Wastewater Treatment Plant Improvements, Village of Woodridge, New York,* Clough Harbors & Associates, Albany, New York, May 30, 2008.
- *Letter from Karen Clark, P.E. of Clough Harbor & Associates to Harry Nelson, P.E. of NYS Environmental Facilities Corporation re: Response to Comments, Village of Woodridge, New York,* May 9, 2008.
- *Preliminary Engineering Report - Wastewater Facilities, Village of Woodridge, New York,* Clough Harbors & Associates, Albany, New York, January 2007.
- *Basis of Design Report for Wastewater Treatment Plant, Village of Woodridge, New York,* Clough Harbors & Associates, Albany, New York, December 2006.
- *Stormwater Management Report for the Village of Woodridge Wastewater Treatment Plant Upgrade, Village of Woodridge, New York,* Clough Harbors & Associates, Albany, New York, December 15, 2006.