

STATE OF CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION



Revised Draft Environmental Impact Evaluation December 2008

A. Project Identification

Town of New Hartford
Water Pollution Control Facility Upgrade Project
New Hartford, Connecticut

B. Summary of Environmental Review

The Town of New Hartford conducted a wastewater facilities planning study for an upgrade of its wastewater treatment system. This study was conducted because the wastewater treatment plant's average flow has exceeded ninety percent of its design capacity, the facilities that were built in 1968 have exceeded their design life, and the current plant capacity could not support the Town's Plan of Conservation and Development. The Town's facility planning study was summarized in the engineering report entitled "Water Pollution Control Facility Upgrade Project" and was prepared by Maguire Group, Inc. The Connecticut Department of Environmental Protection (DEP) in accordance with the Connecticut Environmental Policy Act Regulations, Sections 22a-1a-1 through 22a-1a-12 has reviewed this report and all associated comments submitted in regard to this project. The Department completed a draft environmental impact evaluation document in February 2006 which summarized the Department's findings of the review of the report. Since that time, the proposed project has been revised for greater projected wastewater flow needs. This document summarizes the review of the revision to the proposed project since the previously noticed document in February 2006.

The subject area in the afore mentioned engineering report includes the treatment facility, areas of existing residential development that have marginal septic systems, the industrial park areas, and the proposed development corridor along Route 44. The study area is depicted in Figure 1. The engineering report recommended an upgrade and capacity expansion of the wastewater treatment facilities and identified areas of need for future sewer service. The following changes are recommended for the existing wastewater treatment plant processes: the head works including screenings, flow measurements, influent pump stations, biological system, equalization, effluent filtration, disinfection, effluent pump station, sludge thickening, septage disposal, control building and an emergency generator. The proposed expansion will not increase the pollutant loading to the Farmington River due to the increased level of treatment to which the facility will be upgraded. This proposal will also meet the anti-degradation policy requirements of the Department with regard to Wild and Scenic Rivers.

The contact for concerns with the information provided in this revised draft environmental impact evaluation is Stacy Pappano, Sanitary Engineer, DEP, Bureau of Water Protection and Land Reuse, 79 Elm Street, Hartford, CT 06106-5127 (stacy.pappano@ct.gov).

1. Existing Conditions

In the Town of New Hartford the majority of the area is served by onsite septic systems with a limited sewer system sewerage the downtown area and portions of the Route 44 corridor. The current sewage collection system follows the western branch of the Farmington River Valley from the northwest edge of its central village down to the treatment plant which is located off of Route 44 on a site adjacent to the Farmington River in an area known as Pine Plains/Meadows. Wastewaters in the sewered areas are conveyed via one of three pump stations. One of these is the main station that is adjacent to the village center at Routes 44 and 219. The treatment plant was built in 1968 and has been upgraded several times. The plant has secondary treatment, utilizing the activated sludge process for treatment and chlorination for disinfection. It currently has a permitted design capacity of 90,000 gallons per day. The treated wastewaters discharge into the west branch of the Farmington River just above its confluence with the east branch. The permitted effluent limits are based upon the anti-degradation policy for the Upper Farmington River.

In the Town of New Hartford more than ninety percent of the homes utilize onsite septic systems. A review of the Farmington Valley Health Districts records for septic system repairs, complaints, or problems indicates that there are no areas in town that exhibit chronic septic system failures. However, sections of the Town were considered as potential sewer areas for various reasons including age of systems, lot sizes, soil types, proximity to public water supply wells, etc. and were used to determine the needed capacity of the wastewater treatment system upgrade. These sections, identified in Figures 1 and 2, are the Route 44 Corridor; Cottage Street; Greenwoods Industrial Park; Greenwoods Road; Pine Meadows, and Johnny Cake Lane and Highland Street; and the existing sewer service area.

2. Purpose and Need

According to the July 2004 engineering report, the current estimated population of the Town is at 6,550. The Town's plan of development estimates a population growth to 6,620 for the year 2010 and the latest population projections from the State's Office of Policy and Management projects the population will increase to 7,950 in 2020. The projected increase in population in the areas where sewers could be constructed in the next 20-year period is likely to be minimal since the majority of these areas are fully developed residentially. The bulk of the population growth will be in areas where on-site sewage disposal systems are utilized. The upgrade of the treatment plant and the potential extensions of the sewers will not have a significant impact on the population growth of the Town.

The water supply for the Town of New Hartford is supplied by two wells, Pine Meadows and Black Bridge. The present average daily demand from these wells is about 225,000 gallons per day and a maximum daily demand of approximately 450,000 gallons per day. The wells collectively can supply approximately 567,000 gallons per day. The inclusion of the Pine Meadows section and the main downtown areas have been included as future sewer service areas due to the potential for septic system failures in these areas and the need to protect the water supply.

Development in the next twenty years is likely to occur along the Route 44 corridor south of the River Run Condominiums to the junction of Satan's Kingdom and small areas close

to the existing sewer service area. The Route 44 corridor has been rezoned by the Town's Planning and Zoning Department for commercial and industrial development.

Since the last evaluation of the Town's plan of development the projected flow needs of the plant have increased from a previous proposal of 250,000 to 400,000 gallons per day. However the sewer service area as proposed in 2004 has not changed since the previous EIE evaluation at 250,000 gallons per day. Additional applications for sewer connections were submitted to the Town's WPCA during the development of the project which attributed the increase in the flow projections in the industrial and commercial areas and the existing sewer area.

A reassessment of future flow allocation for the existing sewer service area was also conducted since the current plant is consistently seeing wastewater flows greater than the current design flow. The reevaluation of the twenty year flow projection needs for the Town was completed in July 2008. The evaluation utilized an estimated 200 gallons per day (gpd) per unit for residential parcels for the existing or proposed future areas (Figure 2). The following table summarizes the current projected flows and the basis for the proposed design capacity increase of the upgraded treatment plant.

AREAS	Wastewater Flow (gpd)
Existing Sewer Service Area	135,000
Route 44 corridor	93,100
Cottage Street	10,600
Greenwoods Industrial Park/Hillside	58,400
Greenwoods Road	62,400
Pine Meadows Section	27,000
Johnny Cake/Highland	13,500
TOTAL (Estimated 2008 Design Flow)	400,000

3. Discussion of Alternatives

a. No Action

The purpose of the planning study is to determine what remedial actions are necessary to mitigate a potential for pollution from the treatment plant because the plant has reached its useful life and is reaching its treatable capacity. If capacity and treatment upgrades of the plant are not implemented then the hydraulic capacity of the treatment facilities will be overtaxed during substantial rainfall events, creating solids carryover in the secondary clarifiers and increasing the solids to the Farmington River. Since this area of the river has been designated as a scenic river and is affected by the anti-degradation policy, which dictates that no net increase of pollutants can be discharged, this option is not viable.

Additional impact of no action is that the Town may suffer economically by restricting development. The lack of availability of adequate wastewater treatment limits the potential for planned commercial development and economic growth.

b. Upgrade Existing Facilities

In order to meet the DEP's goals for anti-degradation of the Farmington River, the existing treatment plant needs to be upgraded to accomplish the required BOD, suspended solids, and total nitrogen reduction, effluent filtering and reduction of chlorine residuals in the effluent prior to discharge to the Farmington River.

In evaluating alternatives available to expand the existing facility, comparisons were made regarding their compatibility with existing processes, use of existing facilities, and achievement of required effluent quality. The technologies considered for use in meeting current and future flows and loads at the plant include activated sludge, sequencing batch reactors, trickling filters, rotating biological contactors and combinations of these technologies. As a result of these comparisons, it was decided that New Hartford would incorporate sequencing batch reactors for advanced wastewater treatment. This process will work well with the existing facilities and is incrementally expandable to handle increased flows and future permit requirements. The site layout and treatment processes proposed for this recommendation can be referenced in Figure 3.

4. Impact of Proposed Project on the Environment

a. Direct Impacts

i. Air Quality

It is expected that short-term effects on the air quality in the immediate vicinity of a sewer extension would occur from dust and exhaust emissions. The contractor will be required to mitigate levels of excessive dust to minimize air quality issues. Construction activities will generate additional truck and heavy equipment traffic. Exhaust emissions should also be minimal compared to normal traffic emissions. Dust particles should only be noticeable in the immediate construction area. These factors are all short-term and will not conflict with Connecticut's State Air Quality Management Plan.

Although septage will soon be taken at the plant, any increase in odor is not expected because odor controls will be implemented in the design of the upgraded facilities.

ii. Noise

A temporary increase in noise may occur during the construction of the sewers in the roadways of the project area. Since the typical source of noise in this area is from vehicle traffic, any noise pollution will be minimized by limiting construction to normal working hours.

iii. Water Quality

The expansion of the treatment facilities has included capacity for the Pine Meadows section of the Town for protection of water quality due to the potential for septic system failures in this area and the proximity of this area to the public water supply wells.

The proposed project will have no negative impacts on the region's water quality. In 1990, as a direct result of the Wild and Scenic Study of the Farmington River, the lowering of water quality is prohibited. Therefore, an expansion of the treatment plant is only allowed if the pollutant loading to the River remains the same through higher degrees of treatment.

The following demonstrates the current and future treatment requirements to meet the permitted loadings for discharge into the Farmington River. As flow increases the allowed concentrations of a potential pollutant is decreased to maintain the anti-degradation policy's set loading limitations for the discharge into the Farmington River. The allocated load to the Upper Farmington River from the New Hartford treatment plant facility is 22.5 pounds per day for a 5-day Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS) and 15 pounds per day for Ammonia. At the current permitted flow rate of 90,000 gallons per day this loading allocation translates to a permit concentration limit of 30 mg/l for 5-day BOD and TSS and 20 mg/l for Ammonia. The anti-degradation policy, which states no net loading, means that the pounds per day allowed to be discharged from the facility will remain the same regardless of flow. Therefore, at the proposed increase in design flow to 400,000 gallons per day, the discharge concentration limits will be 7 mg/l for 5-day BOD and TSS and 4 mg/l for Ammonia. The proposed advanced treatment for the upgrade, Sequencing Batch Reactors and effluent filtration, are adequate to treat to these limitations.

	BOD	TSS	Ammonia
Current Permitted Design Flow of 90,000 gallons per day	30 mg/l	30 mg/l	20 mg/l
Proposed Permitted Design Flow of 400,000 gallons per day	7 mg/l	7 mg/l	4 mg/l
Loading Limitation to Farmington River	22.5 lbs/day	22.5 lbs/day	15 lbs/day

With the proposed expansion of the treatment facility the current NPDES discharge permit will be modified to include these lower concentration limits and will also include additional monitoring for Nitrogen components along with a rolling twelve month average for Total Nitrogen at 13.3 pounds per day.

Implementation of the anti-degradation policy adopted in 1987 also results in the need for effluent filtration and the use of dechlorination or preferably ultraviolet (UV) disinfection. The treatment plant after the upgrade will be an advanced wastewater treatment facility capable of treating wastewaters to the concentrations depicted in the table above and include a conversion to ultraviolet disinfection.

iv. Environmentally Sensitive Areas**a. Wetlands**

The treatment plant site does not contain wetland areas. If future sewers are constructed then during construction any areas close to wetlands, storm drains, or watercourses, will require the contractor to install and maintain erosion control measures to protect environment.

b. Floodplains

The treatment plant located next to the bank of the Farmington River is in the zone of the 100-year flood. The entire treatment plant site is encompassed by a berm initially built in 1968, however the berm is not adequate for protection of a 100-year flood and therefore, all building structures; existing and future, will be elevated to above the 100-year flood elevation (Figure 3). A flood management certification will be required prior to construction of the new facilities. However, no impacts to flood elevation or storage capacity are anticipated because of this construction.

c. Aquifers and Water Supply

The proposed project area for the upgrade of the treatment plant is not in an identified aquifer protection zone.

There are two water supply wells, Black Bridge and Pine Meadow, located southeast of the main town area known as the Pine Meadows area. These are operated for the Town of New Hartford by Connecticut Water Company. The area of influence for these two wells is in the Pine Meadows section of the Town. Although the water supply does not show an indication of deterioration from the septic systems in the area despite poor quality soils for septic system use, it may be necessary to extend sewers to the Pine Meadows area of the Town in the future if the water supply shows deterioration. For this reason, this section of the Town is included as a potential area for sewer service within the twenty-year planning period of the upgraded treatment facilities.

v. Socio-Economic Impacts

The recommended alternative for meeting the community's wastewater treatment needs is the best choice economically and environmentally. This project is considered eligible for funding under DEP's Clean Water Fund (CWF). The project is listed in the Clean Water Fund priority list for Fiscal Years 2008-2009 as an eligible project with funding set at \$5,000,000 as the first phase of funding. Additional Clean Water Funding will be available in upcoming fiscal years for the remaining eligible costs of the project. The project was also identified by the State Legislature as the recipient of a Small Town Economic Assistance Program (STEAP) grant in the amount of \$500,000. This grant was administered by the DEP towards the engineering and administrative expenditures for planning and design of the selected alternative.

The updated 2008 project costs are shown below:

Project Costs		CWF Funding	
		25% Grant	2% Loan
Design – Engineering	\$126,000	\$31,500	\$94,500
Construction - Engineering	\$631,200	\$157,800	\$473,400
Resident Inspection	\$379,200	\$94,800	\$284,400
Construction	\$6,797,737	\$1,699,434	\$5,098,303
Contingency	\$704,907	\$176,227	\$528,680
Legal/Fiscal Administration	\$100,000	\$0	\$100,000
Loan Interest	\$210,956	\$0	\$210,956
TOTALS	\$8,950,000	\$2,159,761	\$6,790,239

The project was bid in September 2008 with a construction cost of \$6,797,737. Whereas the original local funding authorization approved in 2004 was for \$3,118,000, the Town of New Hartford must authorize additional funding before the contract can be awarded. A supplemental authorization was defeated on November 4, 2008. Another referendum is scheduled for mid to late January 2009.

The New Hartford WPCA is developing a plan for general taxation and assessment in order to finance the treatment system upgrade as well as a sewer user charge system for the operation and maintenance costs of the system. The proposal at the time of the referendum in November 2008 was for twenty percent of the project costs to be paid by the existing sewer users. The remainder of the project cost will be compensated by connection charges of \$8,000 per unit for new users and by general taxation. The more users that connect to the sewer system, the less the town will pay annually to cover the debt service. However, the Town is currently revising this proposal due to the failed referendum to one in which the ratio of the costs to be financed would be more on the sewer users than on the general tax base. As of the date of this document, the revised financial plan has not been finalized by the Town of New Hartford.

vi. Historical/Archeological and Nation Landmarks

Many portions of the Town of New Hartford are designated as an historical or archeological area; however, none of the construction activities at the treatment plant are in these zones or will impact historical or archeological resources.

vii. Endangered Species

The DEP Natural Resource Center's Natural Diversity Data Base was reviewed to depict extant populations of Federal or State Endangered, Threatened, or Special Concern species. Endangered species were not identified at the plant site or at the future sewer service areas.

The proposed work will not be taking place in an area of natural diversity database areas. No impact to vegetation or wildlife as a result of the proposed upgrade to the plant is anticipated.

viii. Coastal Zone Management

This project area is not within the coastal zone.

ix. Wild and Scenic Rivers

The Upper Farmington River in the area of the proposed upgrade has been designated a Wild and Scenic River. The upgrade of the plant is designed to have no increase in loading even though capacity will increase at the plant. This policy works in harmony with the Wild and Scenic classification to protect and ensure water quality of the river.

Vegetation screening and coloring of above berm building structures to blend in with the surroundings are proposed for the project.

x. Prime Farmland

Although many portions of New Hartford are defined as prime farmland soils, the proposed treatment plant construction will not take place in any designated prime farmland soils. Some prime farmland does exist in the areas of future sewer service areas but these areas have already been fully developed either residentially or commercially and are no longer available as farmland. Such areas include the northern section of Johnny Cake Lane and an area along Route 44 (Main Street).

b. Indirect Impacts

There will be no long-term adverse environmental impacts on air due to this project. There will be no change in flood elevations.

The project will promote economic opportunities for the Town that are not available due to the limitations of the existing treatment facilities. This will allow for the business and commercial growth along the west side of the Route 44 corridor south of the existing treatment facilities. This area has been identified by the Town as an area of economic growth and development and is consistent with the State's C&D plan. If these areas are developed further stormwater runoff and traffic may increase.

c. Irreversible and Irretrievable Commitment of Resources

Resources committed to the implementation of the project include all fuel, labor, and materials required for the construction of the upgrade and expansion of the facility. A long-term commitment for labor and maintenance resources will be needed to properly operate and maintain the system. Long-term truck traffic at the treatment plant due to acceptance of septage deliveries is anticipated at a rate of 3 or 4 additional septage trucks per day. The land on the existing site within the berm area will be utilized for the upgraded treatment facility equipment; therefore, no land will remain available for future use at the site. Power costs will increase due to the increased power demand for proposed SBR system and the UV disinfection system.

d. Relationship of Project to Approved Land Use Plans

The upgrade of the treatment plant is consistent with the development strategies of the Conservation and Development Policies Plan for Connecticut (2005-10), (C&D Plan), which states that State policy should “. . . promote the maintenance and improvement of existing infrastructure systems and development in the areas where such infrastructure already exists” (p.20).

The areas identified in the planning report as potential sewer extensions have lands that are designated as Growth Areas, Rural Community Centers, Neighborhood Conservation Areas, and Preservation Areas on the C&D Plan’s Locational Guide Map. The areas are consistent with the development strategies of the Conservation and Development Policies Plan for Connecticut with the exception of a portion of the Pine Meadows section and an area south of Route 219. All the areas for potential sewer extensions are areas that are either fully developed, in an aquifer protection area which is fully developed without sewers or in urban areas as designated on the C & D mapping. Given the circumstances as discussed further, the Office of Policy and Management has verbally indicated on May 18, 2005 that future sewers in all of the identified potential sewer areas are considered consistent with the C & D plan. Figures 1 and 2 show these identified areas as described below.

Route 44 Corridor

The Route 44 corridor south of the River Run Condominiums has been identified by the Town of New Hartford as an area for development. Some vacant parcels on the west side of Route 44 have potential for future development. Some existing parcels in this corridor will have the potential to be more fully utilized once constraints of flows to the treatment plant are no longer in place. The area to the west of Route 44 has been designated as an Urban Area on the Conservation and Development (C&D) map and is consistent with the C&D plan.

Pine Meadows

This area known as the Pine Meadows section of the Town includes Main Street (Route 44) between Wickett Street and Church Street, Wickett Street, Black Bridge Road up to 10 Street, 10 Street, and Church Street. This area has been fully developed with approximately 100 residences and an elementary school. The lots in this Pine Meadows area are in a designated aquifer protection zone. This area does have the potential need for sewer extensions due to the proximity of the Town’s two public water supply wells. The sections along Main Street (Route 44) and Church Street are designated as a “Neighborhood Conservation Area”. The area to the northeast of Route 44 extending to the Farmington River that includes portions of 10 Street and Black Bridge Road where the elementary school is located is designated as a “Preservation Area”. This is due to the 100-year flood plain. Sewers would be allowed in this area to protect the public water supply wells if chronic problems were documented with septic systems and public health was threatened.

Industrial Parks

This area includes the Town’s industrial parks, and is comprised of Industrial Park Road, Meadow Street, Cottage Street, and Greenwoods Avenue. The Greenwoods Industrial Park, north of Route 219 (Reservoir Road), is partially developed. Development and growth in this area is consistent with the “Growth Area”

designation and mapping of the C&D plan. An area along the roadway on Greenwoods Avenue leading to the New Hartford Industrial Park has been designated as “Neighborhood Conservation”. This developed industrial park is located in a “Growth Area” as designated on the C & D map. The area between Reservoir Road and Cottage Street (south of Route 219) is designated as a preservation area; however, this area is fully developed residentially and has small lot sizes. Potential for expansion of sewers to Cottage Street will be allowed due to the limitations for expansion and the small lot sizes.

Johnny Cake and Highland

This is a residential area that is also fully developed. Sewers could be extended to these homes in the future should there be failures in the on-site systems. According to the Conservation and Development Plan mapping, this area is designated as an Urban Growth Area.

e. Unavoidable Adverse Impacts

Unavoidable adverse impacts are limited to short-term impacts directly related to construction operations. All adverse impacts can be minimized by best management practices during construction activities.

f. Mitigation of Adverse Environmental Impacts

Adverse impacts associated with the project are construction related and short term in nature. There will be an increase in noise and some local traffic congestion at the construction area. Traffic control measures will be undertaken as part of the construction specifications. Air and dust impacts will be controlled and measures will be undertaken as part of the contract specifications. Additionally, the contractor will be required through contract specifications not to violate any applicable ordinances, regulations, or laws pertaining to air, water, noise, and traffic issues.

g. Energy Considerations

Energy expenditures for the project fall into two categories: construction and operation. In terms of construction, energy consumption will be primarily that needed to power construction vehicles and produce construction materials. This expenditure will not be significant. In terms of operation, the energy expenditures will be those needed to operate pumps at the pumping stations, the SBR system, and the UV system. An increase in energy consumption may occur at the pump station with the installation of larger capacity pumps for the proposed service area; however, this may be off-set by the more energy-efficient pumps currently on the market. The SBR and UV systems will consume more energy than the current traditional operations.

5. Licenses, Permits, & Certifications Needed

DEP’s approval will be needed for the proposed treatment facilities and the design of such facilities. A modification of the current NPDES discharge permit and a public notice of such a modification will need to be completed before the discharge from the new facilities can commence. This will be accomplished by renewing the facility’s NPDES permit for a design flow of 400,000 gallon per day before the construction of the new facilities is

completed. Additional permits and applications for the treatment plant construction are not expected.

The upgraded treatment facilities will require additional staffing and reclassification of the facility from a class II to a class III. The Town of New Hartford may negotiate a contract with its current contract operator, Connecticut Water Company, for the operations of the plant prior to substantial completion of the final construction.

A flood management certification will be required prior to the start of construction of the project and approval for the Town's Inland Wetland Commission will also be required.

6. Summary of Agency and Public Consultations

Two public hearings were held at the Town Hall on May 25, 2004 and at the Antolini School on May 26, 2004 to discuss and ensure public awareness of the proposed treatment system and septage receiving station. Another public hearing was held on June 14, 2004 on the wastewater treatment processes, needs, costs to the user, and town financing. A referendum vote was successful on June 24, 2004 to appropriate funds towards the project.

Since construction costs have increased since 2004, additional informational public meetings were held on August 28, 2008 and October 21, 2008 to discuss the project flow needs, design of the facilities, and funding necessary to perform the treatment system upgrades.

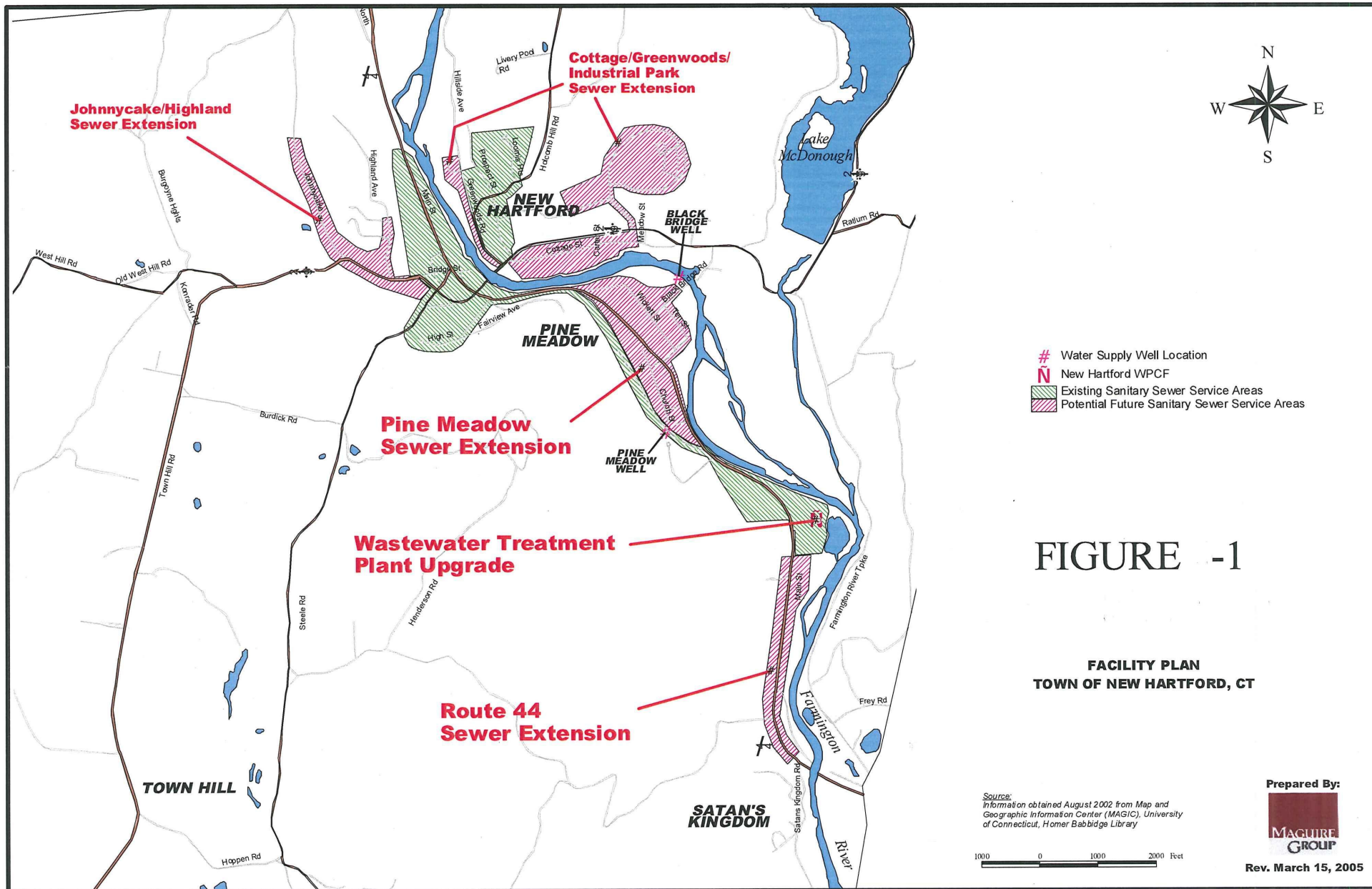
Comments received during the previous public review period for the environmental impact evaluation noticed in February 2006 were adopted into this revised document.

7. Reference Maps

Figure 1 – Existing and Future Sewer Service Area map prepared by Maguire Group, Inc.

Figure 2 – Sanitary Sewer Service Areas map prepared by Maguire Group, Inc. for project area and flow projections

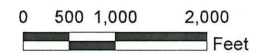
Figure 3 – Site Layout, Grading and Landscape Plan prepared by Maguire Group, Inc. for wastewater treatment facility expansion and upgrade



TOWN OF NEW HARTFORD



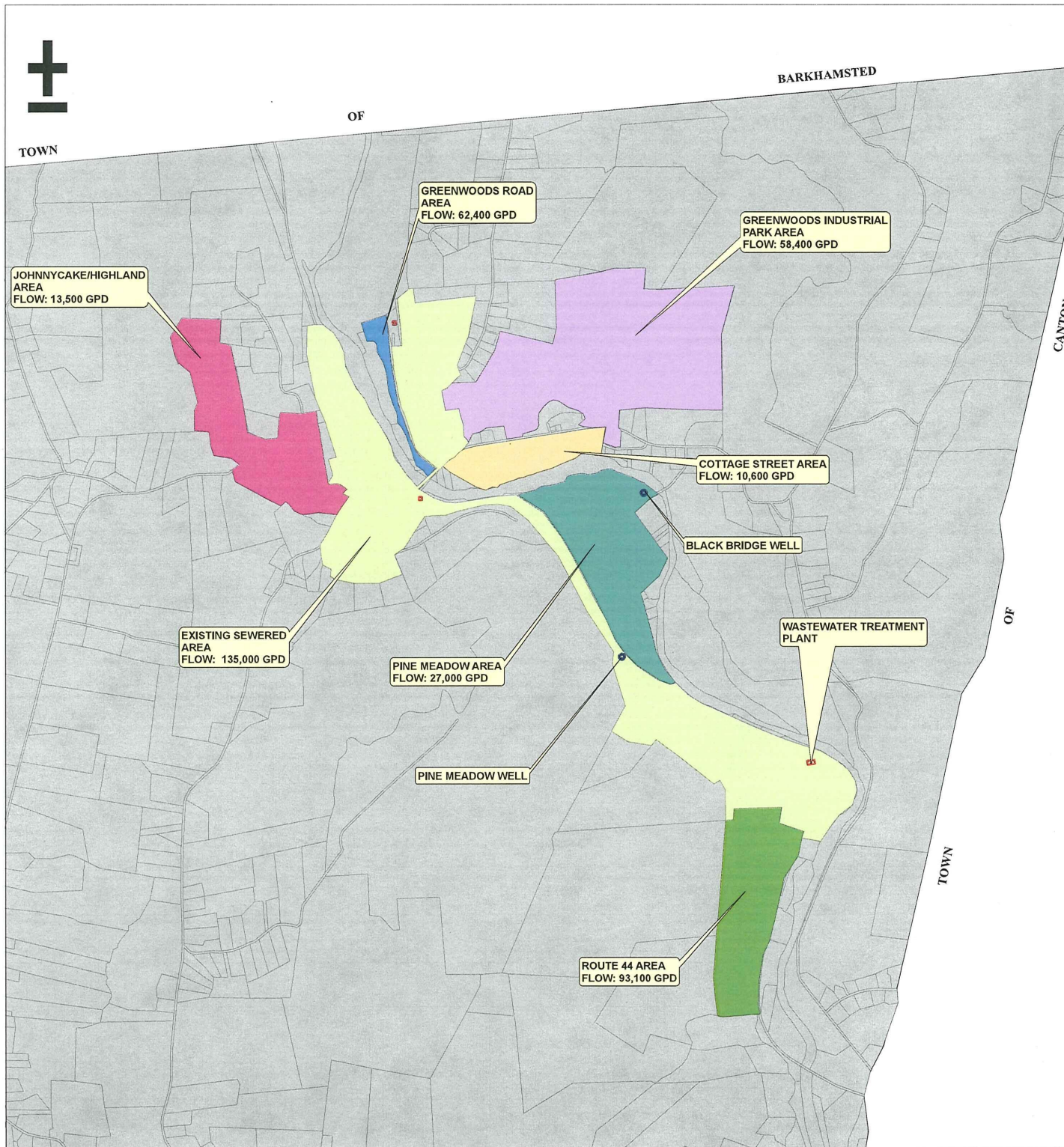
SANITARY SEWER SERVICE AREAS



LEGEND

 SEWER AVOIDANCE AREA

FIGURE 2

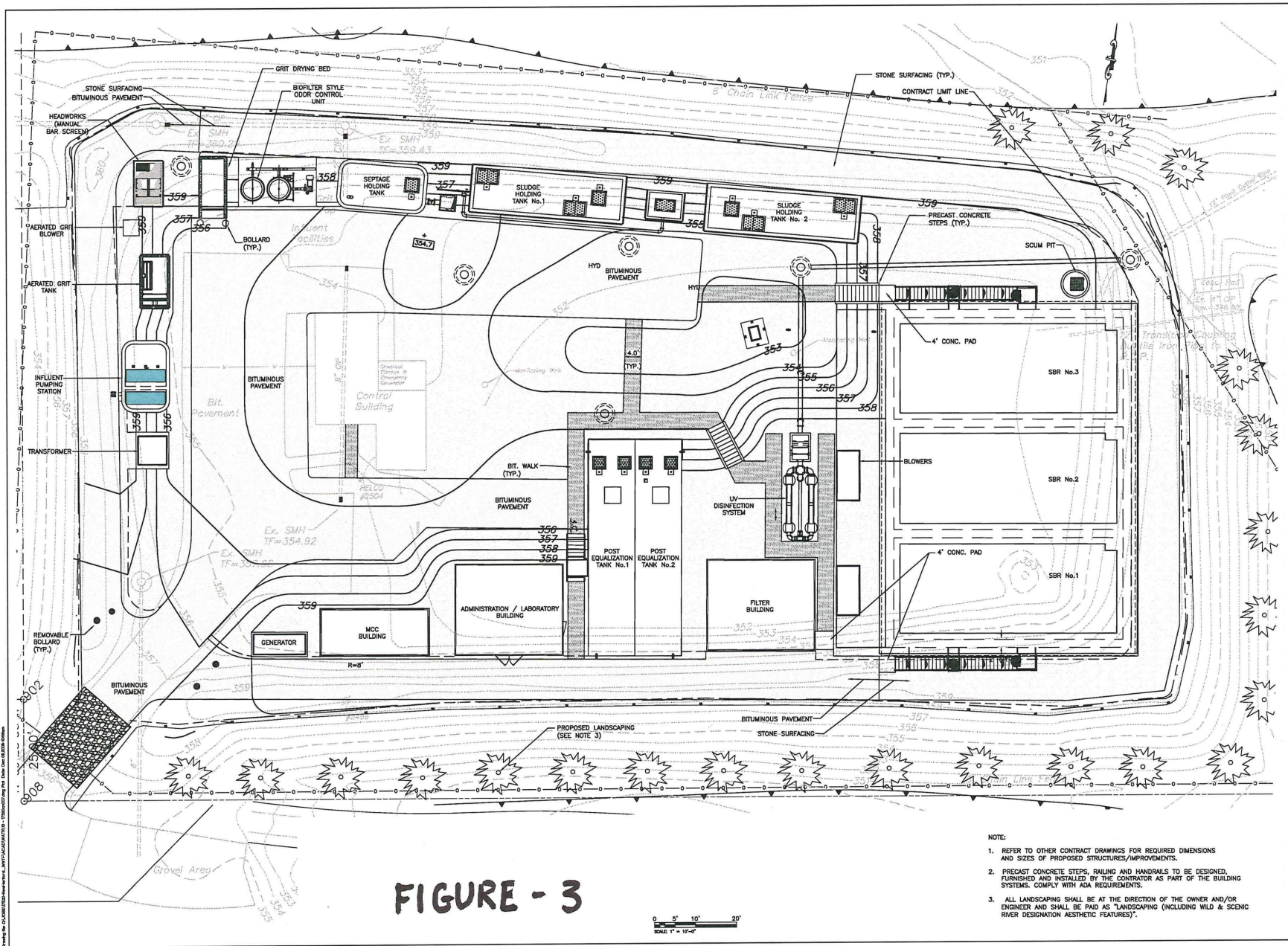


Source:
- C&D Information obtained from OPM Website
http://www.opm.state.ct.us/igp/cd_access/index.htm#TOWNS
- Parcel Information Provided by New England Geosystem
- Sewer and Potential Sewer Service areas information developed by Maguire Group Inc.

PREPARED BY:



DATE: 12-4-06
(Flows Rev. 07-15-08)



PROJECT NO.: 17520	
DESIGNED BY: JF	
DRAWN BY: JP	
CHK'D BY: APA	
DATE: 8/08/08	
SCALE: 1" = 10'	
SHEET NO.:	
C-006	
SHEET OF	

TOWN OF NEW HARTFORD, CT	
WWTF EXPANSION AND UPGRADE	
SITE LAYOUT, GRADING AND LANDSCAPING PLAN	

Maguire Group Inc.	
Architects/Engineers/Planners	
New Britain, Connecticut 06051	

1	8/9/08	ADDENDUM #1	MARK DATE DESCRIPTION
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