

# Whispering Oaks Sewer District Improvements

Town of Lysander, Onondaga County, New York

## Map and Plan

October 2010  
Revised January 2011



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## Table of Contents

<u>Section</u>	<u>Page</u>
1.0 Introduction	1
1.1 Authorization	1
1.2 Background	1
2.0 Current and Projected Wastewater Flows	4
2.1 Estimated Near-Term Flows, Whispering Oaks Sewer District Only	4
2.2 Estimated Future Flows Tributary to Whispering Oaks Sewers	4
3.0 Recommended Pump Station Improvements	8
3.1 Alternatives Considered	8
3.2 Recommended “Base” Facility Improvements, Alternative D	11
3.3 Recommended Improvements – “Excess Capacity” Provisions	14
4.0 Regulatory Approvals, Permitting Needs and Easements	15
5.0 Estimates of Probable Project Cost and Project Financing	16
5.1 Estimates of Probable Project Cost	16
5.2 Provisions for “Excess Capacity”	16
5.3 Basis for Proposed Financing	17
5.4 Reclamation of Existing Absorption Bed Lots	18
5.5 Estimated Annual Operation and Maintenance Costs	18
5.6 Estimated First Year Costs	19
5.7 Benefit to Outside Users	20
6.0 Recommended Steps to Proceed	22
 <u>Figures</u>	
Figure 1	Community Treatment System Site Plan
Figure 2	Tributary Parcels – Alternative D
Figure 3	Proposed Alternative D Force Main Route
Figure 4	Proposed Site Plan (Alternative D)

## Table of Contents

<u>Section</u>	<u>Page</u>
<u>Appendices</u>	
Appendix A – NYSDEC Correspondence	
Appendix B – Results of OCDWEP Home Inspections	
Appendix C – Baldwinsville West Pump Station Capacity Evaluation	
Appendix D – Estimated Project Costs	
Appendix E – Hydraulic Calculations – Alternative D	
Appendix F – User Costs and Financing Calculations	
Appendix G – Project Schedule	

## 1.0 Introduction

### 1.1 Authorization

By resolution of the Town Board of the Town of Lysander, dated June 14, 2010, Barton & Loguidice, P.C. (B&L) was authorized to prepare a Map and Plan for the Whispering Oaks Sewer District pump station and force main construction in accordance with Section 202-b of New York State Town Law.

### 1.2 Background

The Whispering Oaks residential subdivision is currently served by a community septic system that was constructed in 1991. The system is comprised of one (1) 16,000 gallon septic tank, a duplex gray water “dosing” pump station, and a total of eight (8) absorption beds (collectively referred to as a leach field). The Onondaga County Department of Water Environment Protection (OCDWEP) operates and maintains the pump station under contract agreement with the Town of Lysander; OCDWEP does not maintain the leach field.

The leach field has historically suffered from grey water outbreaks dating back as far as April 2001. These outbreaks continue to occur as a result of seasonal high water tables and possible hydraulic overloading and/or blinding of the beds. Efforts to mitigate the outbreaks, including resting of beds for a period of time and construction of perimeter cut-off trenches in an effort to lower the local water table, have shown only marginal results.

The County Health Department has advised the Town of Lysander that the current disposal system must be modified or expanded to rectify current outbreak problems and to accommodate remaining build-out. Further, the New

York State Department of Environmental Conservation (NYSDEC) has notified the Town that the facilities are in violation of Article 17, Section 0501 of the Environmental Conservation Law based on grey water outbreaks observed at the time of the annual NYSDEC inspection conducted on January 31, 2008. A copy of the NYSDEC's inspection letter, dated February 1, 2010, is included in appendix A. On May 28, 2010, the NYSDEC and Town of Lysander executed an Order on Consent that requires the Town to develop a plan for improvements to the system to eliminate the recurring breakouts. A copy of the signed Order on Consent is included as appendix A.

The Town of Lysander, on behalf of the Whispering Oaks Sewer District, is proposing to construct infrastructure and capacity improvements to address the ongoing problems with the failed subsurface disposal system. Infrastructure improvements considered generally included construction of a new community septic system, or the extension of public sewers to the Whispering Oaks development. A map of the existing Whispering Oaks development onsite wastewater treatment system is included as figure 1.

The Whispering Oaks Sewer District is located within Onondaga County's Sanitary District. The County has agreed to accept wastewater from the district as long as the planned public sewer extension is consistent with the County Comprehensive Plan, in addition to the NYS Smart Growth Public Infrastructure Policy Act recently adopted into law on September 29, 2010. Further, the County has conducted a detailed televising inspection program within the district's collection system pipes, and expanded that program to include the internal inspection of district residential dwellings in an effort to identify sources of infiltration and inflow (I/I), or clean water that does not need to be treated. The results of the County's inspection programs are summarized in appendix B. In summary, County inspections identified the backwash from residential water

softeners as the highest contributor of “clean water” to the community treatment system. A disconnection program is currently underway to remove the clean water with significant assistance provided by OCDWEP and the County Plumbing Office. County acceptance of the Whispering Oaks Sewer District wastewater is contingent on removal of the water softeners and any other documented sources of I/I.

## 2.0 Current and Projected Wastewater Flows

### 2.1 Estimated Near-Term Flows, Whispering Oaks Sewer District Only

Estimated current and projected wastewater flows were considered in the design of the proposed infrastructure improvements. Initially, the Whispering Oaks sewer facilities would serve the existing Whispering Oaks Sewer District only. Table A summarizes estimated average daily and peak hourly flows for existing and near-term future build-out for the Whispering Oaks Sewer District:

<b>Table A Estimated Near-Term Flows Whispering Oaks Sewer District Only</b>		
<b>Development</b>	<b>Average Daily Flow gpd (gpm)</b>	<b>Peak Hourly Flow gpd (gpm)</b>
<b>44 Homes @ 350 gpd</b>	15,4000 (11)	65,000 (45)
<b>4 Additional Homes @ 350 gpd</b>	1,400 (1)	6,000 (4)
<b>Total</b>	16,800 (12)	71,000 (50)

### 2.2 Estimated Future Flows Tributary to Whispering Oaks Sewers

In addition to the flows generated by the Whispering Oaks Sewer District, it is feasible to serve several adjacent areas in the future through new gravity sewers or low pressure force main connections. Existing and proposed development that may connect to Whispering Oaks pump station or force main include properties directly fronting NYS Route 370 (existing), Emerick Heights Phase I (existing), Emerick Heights Phase II (proposed), and approximately 140 acres of undeveloped land which generally slopes toward the existing Whispering Oaks gravity collection system from the east. It is also feasible to serve several areas of existing and potential development located south of NYS Route 370, generally fronting the Seneca River, including Blue Ridge Circle

(Rivermist) and properties along Good Fellow Lane. Areas to the west of Whispering Oaks have been ruled out as this area not only falls outside the County Sanitary District, but will also be preserved for agricultural use (i.e., “sending areas”) under the Town’s planned Transfer of Development Rights (TDR) legislation, consistent with Smart Growth principles.

Average daily flows for existing and future development were calculated based on house/lot counts, estimated populations to be served, and a theoretical flow rate of 350 gallons per day per household, with three (3) people per unit and a peaking factor in accordance with “10 State Standards for Wastewater Facilities”. For areas that fall within the proposed Transfer of Development Right (TDR) “receiving” areas, flow estimates were based on a density of 1.25 units per acre in accordance with AR-40 zoning.

The tributary area is generally bound by TDR “sending” areas to the west, the Seneca River to the south, New York State Route 690 to the east, and general topographic and environmental limitations to the north. A map of the potential service area that could be served by the improved Whispering Oaks wastewater facilities is included as figure 2. Table B summarizes estimated average daily and peak hourly flows for existing and future areas that can potentially be served by the Whispering Oaks facilities.

<b>Table B</b>		
<b>Estimated Future Flows</b>		
<b>Tributary to Whispering Oaks Sewers</b>		
<b>Development</b>	<b>Average Daily Flow gpd (gpm)</b>	<b>Peak Hourly Flow gpd<sup>7</sup> (gpm)</b>
<b>To Whispering Oaks PS:</b>		
Emerick Heights Sec. I <sup>1</sup>	3,000 (2)	13,000 (9)
Emerick Heights Sec. II	14,000 (9)	53,000 (36)
Other Existing Development	4,000 (3)	16,000 (11)
Other Developable Area <sup>2</sup>	61,000 (43)	238,000 (166)
<b>Total</b>	82,000 (57)	320,000 (222)
<b>To Whispering Oaks FM:</b>		
Parcels Front NYS Rte 370 <sup>3</sup>	17,900 (12)	75,180 (53)
Developed River Area <sup>4</sup>	13,000 (9)	56,000 (39)
Other Developable Area <sup>5</sup>	2,000 (1)	7,000 (5)
Highland Meadows <sup>6</sup>	70,000 (49)	294,000 (204)
<b>Total</b>	94,400 (65)	395,180 (275)

Notes:

- <sup>1</sup> Section I (9 lots) currently served by private on-site disposal systems, with no dry sewers; new gravity collection system required to connect to proposed Section II (39 lots).
- <sup>2</sup> Developable areas that would be served by the Whispering Oaks Pump Station total 140 acres (assumed "Receiving" areas developed @ 1.25 units/acre = 175 single-family units, 3 people/unit).
- <sup>3</sup> Includes 51 existing units along the Seneca River between Route 690 and Blue Ridge Circle.
- <sup>4</sup> Includes 13 units on Blue Ridge Circle.
- <sup>5</sup> Includes 5 undeveloped lots along the Seneca River corridor.
- <sup>6</sup> Proposed "Highland Meadows" includes 160 acres of developable land with 1.25 units per acre allows for 200 units at 350 gpd; could also utilize existing Indian Springs gravity sewers.
- <sup>7</sup> Peaking factor of 3.9 for Area Tributary to Whispering Oaks Pump Station; peaking factor of 4.2 for Area Tributary to Whispering Oaks Force Main

It is proposed to allocate capacity, or include "excess capacity" provisions within the proposed wastewater infrastructure improvements for Whispering Oaks in accordance with applicable sections of Town Law, further outlined in Section 3.3. Based on the above estimates for consideration of the (alternative) extension of public sewers to the Whispering Oaks Sewer District and surrounding environs, the average daily and peak hourly design flows that would be tributary to the Whispering Oaks gravity sewer system and pump station are 77,700 gpd (57 gpm) and 319,000 gpd (222 gpm), respectively. Additional flows from existing waterfront parcels would be tributary to the force main, downstream

of the existing Whispering Oaks pump station. The force main would therefore be designed to handle average daily and peak hourly flows of 94,400 gpd (65 gpm) and 395,000 gpd (275 gpm), respectively.

### **3.0 Recommended Pump Station Improvements**

#### **3.1 Alternatives Considered**

Four (4) conceptual alternatives were evaluated for resolving the problems associated with the existing Whispering Oaks sewage disposal system.

##### **Alternative A – New Community Absorption Bed System**

This alternative involves construction of a new 16,000 gallon parallel septic tank, and a 22,000 SF absorption bed system on a lot adjacent to the existing system, which is currently reserved for this purpose. The existing septic tank, effluent pump station, valve manhole, and a portion of the existing force main would be utilized in the upgrade. This alternative was ruled out because the unfavorable conditions for convectional subsurface treatment system at the site. The conditions make the site susceptible to the same mode of premature failure that occurred with the existing subsurface disposal system. Perc and deep-hole tests conducted by the Town on this site were unfavorable for subsurface disposal design. If the system experienced failure in the future, the Sewer District would incur another cost to connect to an existing public system connected to a public treatment plant. It also lacks excess capacity for potential users outside the existing Whispering Oaks Sewer District. The use of onsite treatment for individual homes would be susceptible to the same form of premature failure that makes the community system not feasible and individual home owners would be responsible for the maintenance and replacement of an individual system.

### Alternative B – Force Main to Proposed Highland Meadows Subdivision

This alternative includes installation of a new 30 HP duplex submersible pump station and control system, valve manhole, and approximately 5,000 linear feet of 8-inch force main extending east under New York State Route 690 (directional bore) to a manhole within the proposed subdivision. Additional work on the existing sewers within the Indian Springs tract, downstream of the proposed development, would also be necessary to accommodate the projected Whispering Oaks pump station flows. The existing septic tank and beds would be demolished, and the two (2) lots reserved for existing and future leach fields would be reclaimed. This alternative was ruled out due to the higher capital and operating costs associated with the pump station/force main system, capacity restrictions within the existing downstream sanitary sewers, and delays encountered with moving the proposed development forward (current schedule is unknown).

### Alternative C – Force Main to Onondaga County Harbour Heights Station

This alternative involves installation of new duplex submersible pumps and County compliant control system, reuse of the existing valve manhole, installation of approximately 5,000 linear feet of 4-inch or 6-inch force main under the Seneca River via directional drilling, and installation of a standby emergency generator. A chlorine feed system and associated building would also be installed to mitigate potential odors at the discharge. The force main would discharge to the existing Harbour Heights pump station in the Town of Van Buren. The existing septic tank and beds would be demolished, and the two (2) lots reserved for existing and future leach fields would be reclaimed.

OCDWEP has indicated that the Harbour Heights pump station and associated conveyance system would not have sufficient remaining excess capacity to serve all potential development that may contribute flows to the Whispering Oaks system. Onondaga County Planning has also expressed concerns that this alternative would deviate from the County's comprehensive plan, and potentially use capacity that is reserved for future development within the Town of Van Buren. The alternative was discussed with the County Executive's Office, County Planning, and OCDWEP representatives at length during project development. Though it appears to represent the lowest capital cost alternative for the sewer district, it does not allow for long-term planning of public sewers along the Route 370 corridor in Lysander, and necessitates construction of capacity improvements at the County's Harbor Heights Pump Station.

#### Alternative D – Force Main to West Genesee Street Trunk Sewer

This alternative involves installation of a new 5 HP duplex submersible pump station and control system, two (2) air/vacuum release valve manholes and approximately 9,700 linear feet of 4-inch force main east along NYS Route 370, under NYS Route 690 (directional bore), to an existing manhole at Dexter Parkway. An emergency generator, chlorine feed system, and associated building would also be installed at the existing pump station site similar to Alternative C. The existing septic tank and beds would be demolished, and the two (2) lots reserved for existing and future leach fields would be reclaimed for residential development. The proposed force main alignment is shown as figure 4.

Based on a preliminary evaluation of the above four (4) alternatives, and more detailed evaluation of Alternative C and D with Town, County, DOH, DEC, and Environmental Facilities Corporation (EFC) representatives, it was

determined that Alternative D represents the most cost-effective, sustainable scenario for addressing the short- and long-term needs of the Whispering Oaks Sewer District and surrounding environs in the Town. OCDWEP has indicated that the County's existing sewage conveyance piping, the Baldwinsville West Pump Station, the Baldwinsville North Pump Station, and the Seneca Knolls wastewater treatment plant have sufficient capacity to accommodate this alternative. An evaluation of the remaining Baldwinsville West Pump Station capacity is included in appendix C. The Onondaga County Executive and Planning Offices have also expressed a preference for this force main route. Compliance with the County comprehensive plan and "smart growth" principals make this scenario a more "fundable" project under the Clean Water State Revolving Loan Fund (CWSRF). Alternative D will also have less permitting, easement and land acquisition needs than the river crossing proposed under Alternative C.

### 3.2 Recommended "Base" Facility Improvements, Alternative D

It is proposed to utilize the existing grey water pumping station and community septic system infrastructure to the greatest extent practical to reduce capital project costs to district residents. The proposed improvements will effectively increase the system reliability, and will be designed in accordance with State design standards (i.e., "10 State Standards") and OCDWEP Instrumentation/Electrical standards for SCADA Monitoring and Control. The Whispering Oaks pump station will be designed in accordance with OCDWEP's "small" pump station requirements. Site work will be limited to topsoil and seeding and minor landscaping/plantings around the wet well and valve pit to minimize visual impacts for future development on the adjoining lot. The following major items are proposed under the "base" improvement plan for serving the Whispering Oaks Sewer District only:

Proposed “Base” Improvements:

- Demolish the existing “grey” water pumps, rails, pump bases, and controls; demolish and remove the existing absorption bed system, and remove the distribution boxes, absorption field piping network and stone fill in accordance with NYSDEC Part 750 regulations;
- Install two (2) new 5 HP submersible pumps, designed to pump approximately 80 gpm with one (1) pump operating; install associated pump rails, supports, stainless steel lifting chains and upper brackets;
- Utilize/modify the existing 16,000 gallon septic tank to increase pump station storage capacity and provide additional response time for OCDWEP maintenance personnel in the event of power failure (storage volume is further back-up to emergency generator), including grinder pump dewatering;
- Install new pressure transducer level sensor and high/low level redundant alarm float switches;
- Grout seal and epoxy coat the existing wet well to preserve concrete structure life/eliminate infiltration at wall joints;
- Install PLC-based instrumentation and control panel (compliant with OCDWEP “small” pump station requirements), main disconnect switch, and automatic transfer switch;
- Install a 50 KW diesel emergency generator with integrated fuel storage tank;
- Install a chlorine feed system (for odor and corrosion control within the wet well and at the discharge manhole on Dexter Parkway), and associated 1-inch water service, backflow prevention assembly, and eyewash/shower safety equipment;
- Install a 12’x16’ “stick-built” structure to house the chlorine feed system, with open-air screened room to protect the generator and control/electrical panels;

- Complete site work for the new pump station, including landscaping trees/shrubs around the wet well to screen it from any future residence constructed on the “reclaimed” lot, and placement of fill to raise the site for improved access and drainage;
- Install approximately 9,700 linear feet of 4-inch HDPE force main between the existing Whispering Oaks pump station, along NYS Route 370 to the existing 8-inch force main stub under the intersection of Dexter Parkway and NYS Route 370 (West Genesee Street Sewer District). At the request of Whispering Oaks residents at public informational meetings, the portion of force main from the leach field to the Rubicon Road dead end/drainage easement will be installed within the street right-of-way; directional drilling will be used where feasible to avoid landscaping disturbance, yard/drive restoration, and existing utilities. Per an initial meeting with the NYSDOT, the Route 690 crossing will be directionally drilled on the south side of Route 370 with no casing pipe.

The existing leach field on parcel No. 49.1-02-18 will be decommissioned and reclaimed in accordance with the provisions of Part 750 New York State Department of Conservation (DEC) regulations. It is anticipated Whispering Oaks Developing, Inc., will sell the unneeded parcels reserved for onsite wastewater treatment (49.1-2-18 and 49.1-2-16) on behalf of the Town to help offset project capital costs, further detailed in Section 5. Abandonment and reclamation of the absorption bed lot could potentially be completed using “self-help” initiatives such as the Town Highway for excavation and hauling of material to an acceptable disposal site, and placement of suitable fill within the excavated absorption bed area.

### 3.3 Recommended Improvements – “Excess Capacity” Provisions

In order to accommodate projected flows from the surrounding areas tributary to the Whispering Oaks collection system, pump station, and force main as outlined in Section 2.0, it is recommended that the Town implement several improvements beyond the “base” improvements described above to effectively provide public sewer access to the areas surrounding the Whispering Oaks Sewer District. Pump station and force main system hydraulic calculations for the proposed “base” and “excess capacity” improvements are included in appendix E. The following modifications to the “base” improvements are proposed under the recommended “excess capacity” provisions:

- Install approximately 9,700 linear feet of 6-inch HDPE force in lieu of a 4-inch force main to provide adequate capacity for higher pumping rate. The 6-inch force main allows use of the same 5 HP submersible pumps, which would operate at a better efficiency point at the higher flow rate than the “base” scenario, effectively reducing electrical power costs.
- Low-pressure lateral kits comprised of a 1.25-inch tap and pipe stub to highway right-of-way, buried ball valve and check valve will be provided for future connection of all existing developed parcels fronting the proposed force main along the Route 370 corridor. This would be done under the Whispering Oaks project to avoid “live tapping” the force main in the future, the need for DOT permitting for work within the highway right-of-way, and to capitalize on funding that will be available under the Round 10 Water Quality Improvement Grant further detailed in Section 5.3.

#### 4.0 Regulatory Approvals, Permitting Needs and Easements

The following permits will be required for construction of the proposed Whispering Oaks pump station and force main:

- USACOE – Nationwide 12 – “Utility Lines & Substations” for temporary and permanent wetlands disturbance and 0.1 ac / 0.5 ac disturbance thresholds
- NYSDEC – SPDES GP-0-10-001, Phase 2 Stormwater, Erosion and Sediment Control
- NYSDEC – 401 Water Quality Certification
- NYS DOT – Highway Work Permit for the proposed directionally drilled force main crossing of NYS Route 370 and work along NYS Route 370, including beneath Route 690
- OCDWEP/OCDOH – local approval of contract drawings and specifications
- NYSDEC/NYSEFC – NYS approval of contract drawings and specifications

Figure 4 illustrates the proposed force main route, lands currently owned by Whispering Oaks Development, Inc., and existing drainage and sanitary easements. The pump station improvements will be constructed entirely within the existing 70' x 30' sanitary easement as shown in figure 5. The force main will be installed within existing public rights-of-way and existing drainage easements, where feasible. However, several permanent easements (approximately 20-foot wide) may be required along the force main alignment. Several temporary construction easements may also be required to grant the contractor access to the site, or provide room to work within the existing right-of-way or easement.

## 5.0 Estimates of Probable Project Cost and Project Financing

### 5.1 Estimates of Probable Project Cost

Estimates of probable project cost were prepared for the recommended “base” improvements needed to serve the existing Whispering Oaks subdivision only (i.e., estimated design flows in table A), and for the “excess capacity” improvements needed to serve projected growth within tributary areas to the Whispering Oaks collection and pump station/force main systems (i.e., estimated design flows in table B). Itemized cost estimates for each improvement scenario are included as appendix D, respectively.

The estimated probable project costs (2011 dollars), inclusive of construction contingency, engineering, legal, bonding, administrative and miscellaneous costs are as follows:

“Base” Improvements: \$1,134,000

“Excess Capacity” Improvements: \$1,324,000

### 5.2 Provisions for “Excess Capacity”

The proposed Alternative D with excess capacity will provide provisions for future connection by residential development outside the existing Whispering Oaks Sewer District. In accordance with the excess capacity provisions of New York State Town Law (Article 12 subsection 192-a), the additional cost related to constructing a 6-inch force main in lieu of a 4-inch force main would be reimbursed to the petitioning owners by the Town of Lysander. The difference in project cost (portion related to excess capacity) in the amount of approximately

\$190,000 would be reimbursed to the petitioning owners by the Town of Lysander. The maximum amount to be expended for the Whispering Oaks Sewer District portion of the project is therefore \$1,134,000.

### 5.3 Basis for Proposed Financing

The Town of Lysander will finance the capital project cost on behalf of the Whispering Oaks Sewer District. The portion of debt service attributed to the excess capacity provisions will be financed through the Town's general fund. The remainder of the debt service will be collected through an annual special benefit assessment on all parcels within the Whispering Oaks Sewer District. As additional connections outside the Whispering Oaks Sewer District are made, either by existing West Genesee Street Sewer District users (refer to figure 4) or new sewer district users within the proposed West Genesee Street Sewer District Extension No. 1, the excess capacity portion of the project cost will be assessed to each parcel served, consistent with the current methods of assessment for the Whispering Oaks Sewer District or as otherwise established by the Town Board.

It is proposed that the pump station improvements be constructed and financed in accordance with Town Law, Section 202-b, which outlines the process for increasing, or improving facilities within an existing special improvement district. The NYSDEC has notified the Town that this project is eligible to receive Water Quality Improvement Project (WQIP) grant funding for eighty-five percent (85%) of construction costs, with a maximum grant amount of \$1,240,150 awarded. The remaining 15% of construction costs and all "soft" costs (i.e., engineering, legal, administrative, etc.) will be paid for by the Whispering Oaks Sewer District/Town. In order to fund the remaining portion of the project costs, the Town is completing steps required to secure a low-interest

loan through the NYSEFC's Clean Water State Revolving Fund (CWSRF) program. Final funding terms (i.e., interest rate and number of years financed) will be determined following submission of a full application for funding to the NYSEFC. The Town will be submitting a "Hardship" application in an effort to secure zero percent interest loan financing.

#### 5.4 Reclamation of Existing Absorption Bed Lots

Implementation of the proposed extension of public sewers will allow the sewer district to abandon the existing absorption bed system located on the south side of Penfold Way on tax parcel No. 049.1-02-18.0. Further, it will allow for the future sale of tax parcel No. 049.1-04-16.0 which was reserved for construction of a new absorption bed system. The two (2) lots are currently owned by "Whispering Oaks Development, Inc.", or Pathfinder Bank. Preliminary negotiations between the Town and Pathfinder have included sale of these two (2) lots for use as building lots. The estimated value of similarly sized lots in this area is approximately \$40,000 per lot, for a total of \$80,000. Based on the condition of the two (2) reserve lots, (i.e., reclamation needs, presence of pump station and easement) it is anticipated that these lots could be sold for a value of \$25,000 each, for a total of \$50,000. It is anticipated that the money recovered from the reclaimed lots would be used to reduce the net capital cost of the project.

#### 5.5 Estimated Annual Operation and Maintenance Costs

Once connected to the county's public sewer system, each user would begin paying Onondaga County's Sanitary District charge to cover transportation and treatment of their wastewater. This charge would be assessed annually on the individual's County tax bill. The estimated first year (2011) charge is \$338.33.

In addition to the County charge, district users would pay an annual Town operation and maintenance charge to cover electrical costs for the pump station, telephone service (for the alarm dialer), diesel costs for the emergency generator, and the cost of operating the chemical feed system. The estimated first year Town O&M charge is \$3,680, equivalent to \$80/unit.

#### 5.6 Estimated First Year Costs

The estimated first year user costs were calculated for several possible funding scenarios. These scenarios are detailed in appendix F. Several financing plans utilize the “50 percent rule”, which states that the amount of any annual capital payment shall not exceed the amount of any other payment by 50 percent. Thus, the unit charge for the first year would be the lowest for the term of the loan. During the following years, the unit charge would increase according to the amortization schedule for repayment of the loan. This may be offset by growth of the user base as additional properties connect to the pump station and force main along NYS Route 370.

Based on this assessment, the lowest and highest potential costs are summarized below:

WQIP Grant and CWSRF Hardship Financing (0% for 30 years with 50% rule):	\$649.00/unit
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WQIP Grant and CWSRF Subsidized Interest Rate Financing (2.1% for 20 years with 50% rule):	\$845.63/unit
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It is noted that at this time it is anticipated that the Town will receive some form of reduced interest rate CSWRF financing to help relieve the burden of the capital costs of this project. The Town will not know exact finance terms until the NYSEFC has reviewed the Town's full application for funding. The Town will submit a separate application for hardship funding (0%, 30-year loan) on behalf of the Whispering Oaks Sewer District; however, the NYSEFC has advised that the project may not be eligible for this program. However, due to the nature of the consent order, it is important for the Town to continue to progress this project in order to avoid further fines or penalties from the NYSDEC.

Sewer district residents currently pay an annual Town O&M charge of \$400 for 2011. The estimated net increase in the district's annual charge therefore ranges between \$445.63 and \$249.00 for the financing terms listed above.

#### 5.7 Benefit to Outside Users

As previously discussed, the proposed project includes installation of a new force main along NYS Route 370. This force main could provide municipal sewer service to frontage properties where public sewers are not currently available. As part of the "excess capacity" provisions for this project, a low-pressure service lateral kit is proposed to be installed for each developed property along the NYS Route 370 force main alignment to allow for future connection of fronting residences and buildings. At such time, each property owner would be responsible for connecting to the lateral kit, and providing installation and maintenance of additional small-diameter 1-1/4 inch force main and a residential grinder pump station on private property.

A portion of this potential service area is already included in the West Genesee Sewer District as shown on figure 4. All remaining properties must be incorporated into a formal Town sewer district prior to connecting to the Whispering Oaks force main. The Town has initiated an interest survey in the potential service area. Based on the results of this survey, the Town may move forward with the preparation of Map, Plan and Report and public hearing for formation of a new sewer district in accordance with Article 12 of NY Town Law. The district formation process may also be initiated by an informal petition by interested property owners.

A meeting was held with the Region 7 NYSDEC Office on January 11, 2011 to discuss the potential for applying any remaining funds under the WQIP grant toward constructing public sewer infrastructure to connect users to the new force main along the Route 370 corridor, adjacent to the Seneca River. Since this new public infrastructure (i.e., grinder pumps and service laterals) would effectively abandon on-site systems, the DEC was agreeable to applying WQIP grant funds toward eligible construction costs.

Should these properties connect to the Whispering Oaks force main in the future, they will be assessed in manner consistent with the existing Whispering Oaks Sewer District rate structure.

## 6.0 Recommended Steps to Proceed

It is recommended that the Town Board, following review and approval of this Map and Plan, hold a Public Hearing in accordance with Section 202-b of Town Law to present the project to sewer district residents and to move forward with project implementation. Under Town Law, the Board's decision does not require approval of the State Comptroller. Charges for excess capacity are subject to permissive referendum. The following schedule is proposed for project implementation and a complete schedule is included as appendix G:

- Complete Design Winter 2010-11
- Town Board Accepts Map & Plan January 2010
- Public Hearing February 2010
- Complete Amended SEQR February 2010
- Establish Financing Terms (Bond Resolution) February 2010
- Excess Capacity Terms (Resolution) February 2011
- Regulatory Review/Approval Spring 2011
- Permitting Applications/Permits Issued Spring 2011
- Solicit Bids June 2011
- Award Contracts July 2011
- Notice to Proceed July 2011
- Final Surface Restoration May 2012
- Substantial Completion & Start-up May 2012

## Figures

**Figure 1**  
**Community Treatment Site Plan**

WHISPERING OAKS DVLPMT IN  
049.1-04-15.0

WHISPERING OAKS DVLPMT IN  
049.1-04-16.0

TRYNISKI MARK E  
049.1-04-05.0

PENFOLD WAY

SEEBER GERALD  
049.1-03-03.0

PATRICK CHRISTOPHER  
049.1-02-17.0

KAYHAD-MAHD M  
049.1-03-02.0

ASHINGTON DR

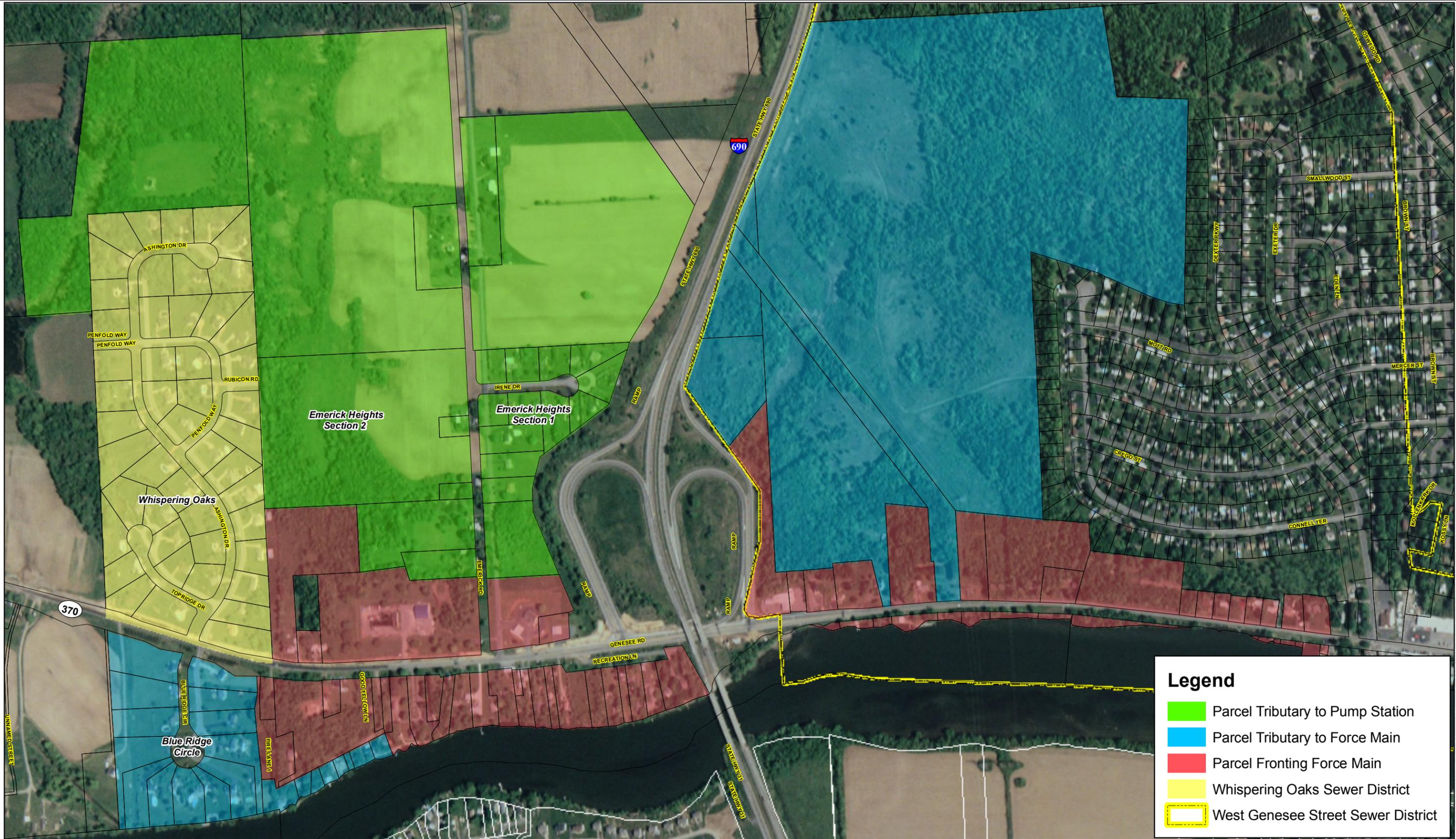
- Legend**
- Existing
-  Catch Basin
  -  Drainage Culvert
  -  Gravity Sewer Manhole
  -  4" Force Main/ Distribution Piping
  -  Gravity Sewer
  -  Whispering Oaks Absorption Beds
  -  Septic Tank
  -  Pump Station Wet Well
  -  Pump Station Valve Vault
  -  Town Sanitary Easement



1 inch = 40 feet

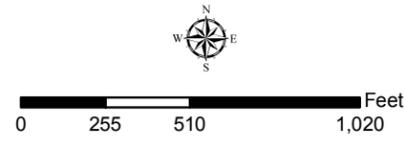
K:\Projects\2010\236228\236228\fig1.dwg 1 - community treatment.swg 11/17/10

**Figure 2**  
**Tributary Parcels – Alternative D**



**Legend**

- Parcel Tributary to Pump Station
- Parcel Tributary to Force Main
- Parcel Fronting Force Main
- Whispering Oaks Sewer District
- West Genesee Street Sewer District



K:\Projects\2010\236228\Projects\Map and Plan revised 9/17/2010\Whispering oaks-Tributary Parcels.mxd

**Figure 3**  
**Proposed Alternative D Force Main Route**



**Legend**

- Proposed Force Main Alignment
- Existing Sewer Districts**
- W. Genesee Street
- Whispering Oaks



1 inch = 500 feet

Town of Lysander  
**Proposed Alternative D-  
 Force Main Route**  
 Onondaga County      9/23/10      New York

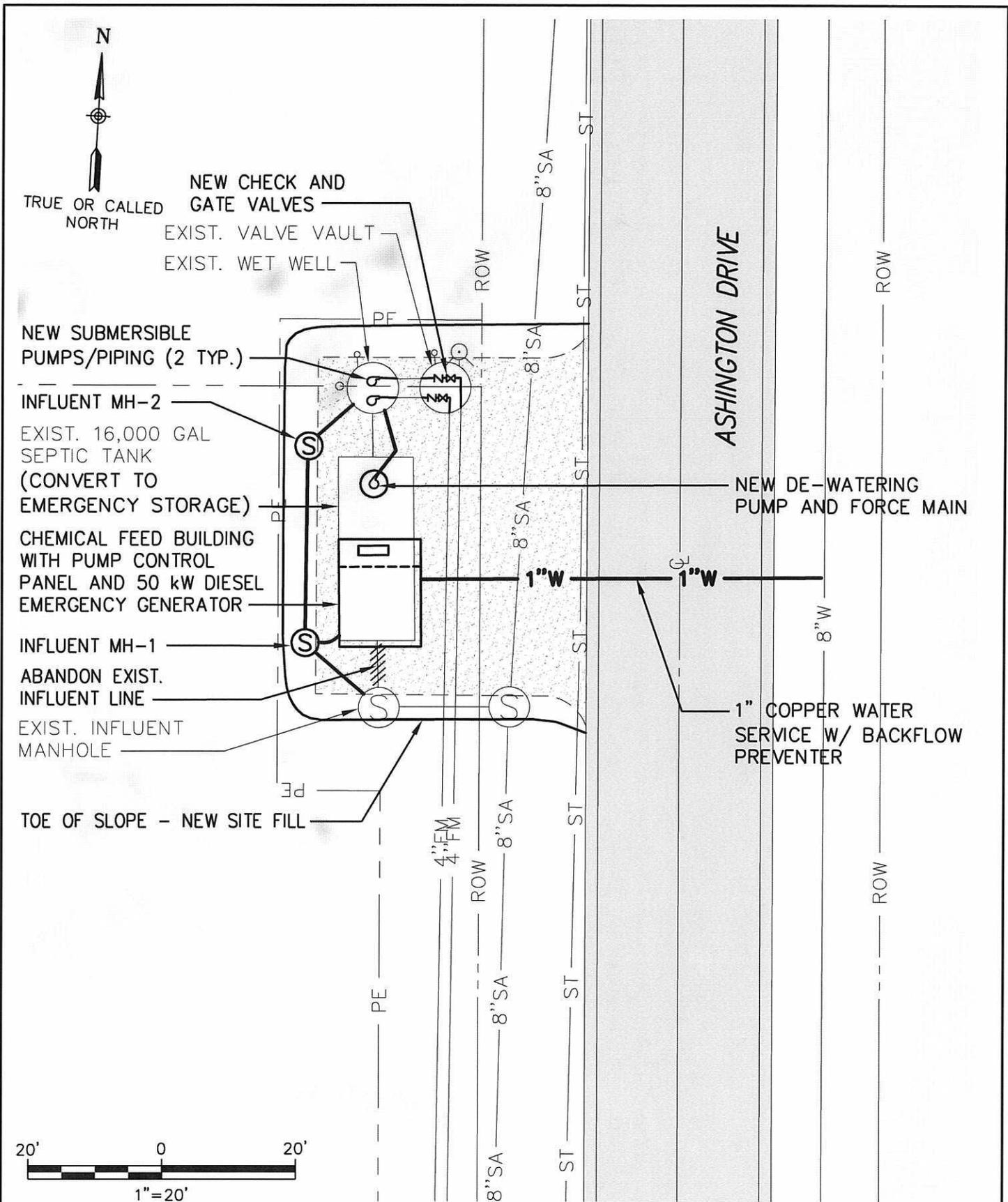
Figure  
 3  
 Project  
 No.  
 236.228

K:\Projects\200\236228\Project Map and Plan revised 9/17/2010\Alternative D.mxd

**Figure 4**  
**Proposed Site Plan (Alternative D)**

Plotted: Jan 24, 2011 - 2:08PM  
 i:\Shared\200\236228\PS Site V.2. 012111.dwg

SYR By: jmt



TOWN OF LYSANDER  
 WHISPERING OAKS SEWER DISTRICT IMPROVEMENTS

PROPOSED SITE PLAN

Figure Number  
 4

Project Number  
 236.228

Date  
 JANUARY, 2011

Scale  
 1" = 20'

TOWN OF LYSANDER

ONONDAGA COUNTY, NEW YORK

## **Appendices**

**Appendix A**  
**NYSDEC Correspondence**

FEB 07 2008

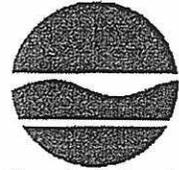
**New York State Department of Environmental Conservation**

**Division of Water, Region 7**

615 Erie Boulevard West, Syracuse, New York 13204-2400

Phone: (315) 426-7500 • FAX: (315) 426-7459

Website: [www.dec.state.ny.us](http://www.dec.state.ny.us)



Alexander B. Grannis  
Commissioner

February 1, 2008

Supervisor Bullis and Town Board  
8220 Loop Road  
Baldwinsville, NY 13027

**RE: Whispering Oaks Sewer District**

Dear Supervisor Bullis and Town Board members:

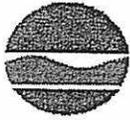
On January 31, 2008, Department staff inspected the Whispering Oaks Sewer District. The leach field had failed, and water was observed flowing up from the ground surface. Further, an area of water had frozen on the field. This is a violation of Article 17, Section 0501 of the Environmental Conservation Law.

Please provide us the Town's schedule for returning to compliance by February 15, 2008. Feel free to contact this office should there be any questions.

Sincerely,

Sandra Lizlovs, PE  
Environmental Engineer II

cc: Onondaga Co. Health Dept.



## MUNICIPAL/PCI WASTEWATER FACILITY INSPECTION REPORT

**Inspection Type: Comprehensive**

SPDES Number: NY0231321  
 County: ONONDAGA DEC Region: 7  
 Fac. Insp. Rep.: none  
 Inspector: LIZLOVS, SANDRA M

Facility Name: WHISPERING OAKS SUBDIVISION STP  
 Date: 01/31/2008 Time: 01:15 PM  
 DEC ID: 7 3136 00028

Joint w/EPA:  Sample Taken:

Facility Contact:  
 Summary Rating: UNSATISFACTORY

Inspection Purpose: annual inspection  
 Weather Conditions: cold, partly sunny

Completed Inspection:  Add. Info. Attchd:

Items	Rating	Comments (Note units out of operation / outstanding operation, etc.)
<b>GENERAL</b>		
Buildings/Grounds/Housekeeping	MARGINAL	leach fields mowed, however leach field has failed
Flow Metering	NOT APPLICABLE	
Stand-by Power	NOT APPLICABLE	
Alarm Systems	NOT APPLICABLE	
Odors/Odor Control	SATISFACTORY	none noticed
Influent Impact On Operations	NOT RATED	
Preventative Maintenance	UNSATISFACTORY	Failed septic system
Other :		
<b>PRELIMINARY/PRIMARY</b>		
Influent Pumps	NOT RATED	
Bar Screen/Comminutor	NOT APPLICABLE	
Disposal Of Grit/Screenings	NOT APPLICABLE	
Grit Removal	NOT APPLICABLE	
Settling Tanks	NOT APPLICABLE	
Scum/Sludge Removal	NOT APPLICABLE	
Effluent	NOT APPLICABLE	
Other : Septic Tanks	UNSATISFACTORY	System has failed. observed surfacing sewage.
<b>SECONDARY/TERTIARY</b>		
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
<b>EFFLUENT</b>		
Disinfection	NOT APPLICABLE	
Effluent Condition	NOT APPLICABLE	

Part 1 (Continued)

Items	Rating	Comments (Note units out of operation / outstanding operation, etc.)
Receiving Water Condition	NOT APPLICABLE	
Other :		
<b>SLUDGE HANDLING/DISPOSAL</b>		
Digesters	NOT APPLICABLE	
Sludge Pumps	NOT APPLICABLE	
Sludge Dewatering	NOT APPLICABLE	
Sludge Handling/Disposal	NOT APPLICABLE	
Other :		
Signature of Inspector: <i>Lamar JB</i>	Date: <i>2/1/08</i>	

**New York State Department of Environmental Conservation**  
**Office of General Counsel, Region 7**  
615 Erie Boulevard West, Syracuse, New York 13204-2400  
Phone: (315) 426-7405 • FAX: (315) 426-7408  
Website: www.dec.ny.gov



**RECEIVED**

JUL 27 2010

SUPERVISOR'S OFFICE  
TOWN OF LYSANDER

July 26, 2010

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Barry W. Bullis  
Supervisor  
Town of Lysander  
Office of the Supervisor  
8220 Loop Road  
Baldwinsville, New York 13027

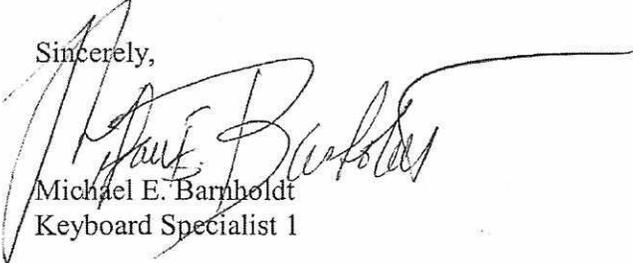
**Re: DEC Case No. R7-20100519-36**

Dear Mr. Bullis:

Enclosed is a copy of the signed Consent Order, issued by this Department's Regional Director on July 26, 2010, together with a receipt for payment of the civil penalty provided in paragraph I of the Order.

Thank you for your cooperation in this matter.

Sincerely,

  
Michael E. Barnholdt  
Keyboard Specialist 1

Enclosures

cc/w/enclosure: Thomas Vigneault, Regional Enforcement Coordinator  
Joe Zalewski, Regional Water Engineer

STATE OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

-----X

In the Matter of Violations of  
Article 17 of the New York State  
Environmental Conservation Law and of  
Title 6 of the Official Compilation of  
Codes, Rules and Regulations of the  
State of New York, Part 750, by

CONSENT ORDER  
CASE NO.  
R7-20100519-36

Town of Lysander  
Onondaga County, New York,

Respondent.

-----X

1. The New York State Department of Environmental Conservation ("the Department") is responsible for the administration and enforcement of New York State Environmental Conservation Law ("ECL") 17 and ("Title 6 NYCRR") Part 750, promulgated pursuant thereto.

2. The Town of Lysander ("Respondent") is a municipal corporation located in Onondaga County, New York, with offices located at 8220 Loop Road, Baldwinsville, New York. Respondent owns and operates a sewage disposal system for the Whispering Oaks Sewer District ("the Facility") located on Ashington Drive at Penfold, Way in the Town of Lysander, Onondaga County, New York.

3. On December 14, 1989, Respondent was issued ("SPDES") State Pollutant Discharge Elimination System Permit No. NY 023-1321 ("the

Permit"), regulating sewage discharges from the Facility effective January 1, 1990. The Permit was subsequently renewed effective November 1, 1994, November 1, 1999, November 1, 2004, and November 1, 2009, with a current expiration date of October 31, 2014.

4. ECL 17-0511 states that the use of existing or new outlets or point sources, which discharge sewage into waters of this state is prohibited unless such use is in compliance with all standards, criteria, limitations, rules and regulations promulgated or applied by the department pursuant to this article.

5. ECL 17-0803 and 6 NYCRR 750-1.4 prohibit the discharge of pollutants to the waters of the state from any outlet or point source without a SPDES permit issued pursuant hereto or in a manner other than as prescribed by such permit.

6. 6 NYCRR 750-2.8(a)(6) states that the permittee and operator shall operate the wastewater treatment facility in such a manner as to minimize odors and other nuisance conditions to a degree that is achievable when compared to standard practices for operation of such wastewater treatment facilities.

7. On January 31, 2008, October 16, 2008, and April 8, 2010, the Department documented that the Respondent's sewage disposal system was failing with sewage surfacing on top of the ground.

8. Such conduct was in violation of the provisions of ECL Sections 17-0511, 17-0803, 6 NYCRR 750-1.4, and 6 NYCRR-2.8.

9. Pursuant to ECL Article 17, a person who commits the violation described above shall be liable to a penalty of \$37,500 per day for each such violation.

10. Respondent, with respect to the violations described herein, has affirmatively waived the right to a hearing on this matter as provided by law, consents to the issuing and entering of this Order, and agrees to be bound by the provisions, terms, and conditions contained herein.

NOW, having considered this matter and being duly advised, IT IS ORDERED THAT:

I. Upon the Respondent's execution and return of this Order, Respondent shall pay a civil penalty in the amount of Four Hundred Fifty Dollars (\$450.00), payment of which shall be made to the New York State Department of Environmental Conservation at its Region 7 Headquarters, 615 Erie Boulevard West, Syracuse, New York 13204-2400, to the attention of the Office of General Counsel.

II. Respondent is further assessed a civil penalty in the amount of Two Thousand Two Hundred Fifty Dollars (\$2,250.00), payment of which is suspended as a penalty to guaranty compliance and shall

become payable in the event that Respondent fails to comply with the provisions, terms, and conditions of this Order.

The penalty to guaranty compliance under this paragraph shall become due and payable within 15 calendar days after Respondent receives written notice from the Department that Respondent was or is in violation of this Order.

A. If Respondent fails to comply with any milestone date established by this Order, the Department shall be entitled to payment by Respondent of stipulated penalties, to be calculated in accordance with the following schedule for each such milestone date:

<u>Period of Non-Compliance</u>	<u>Penalty Per Day</u>
1-15 days	\$ 100
16-30 days	\$ 200
31 days and thereafter	\$ 300

Stipulated penalties under this section begin to accrue on the day on which Respondent's failure to comply with any provision of this Order first occurs and shall continue to accrue until Respondent performs the required activity.

III. Respondent shall comply with the terms, provisions, and conditions of the Schedule for Compliance, annexed to and made a part of this Order at Appendix A.

IV. No change in this Order shall be made or become effective except as specifically set forth by a further written order of the Department, being made either upon written application to the

Department by the Respondent setting forth the grounds for the relief sought, or upon the Department's own findings after an opportunity for the Respondent to be heard, or pursuant to the summary abatement powers of the Department.

V. Nothing contained in this Order shall be construed as barring, diminishing, adjudicating, or in any way affecting any of the civil, administrative, or criminal rights of the Department or of the Commissioner or the Commissioner's designee (including, but not limited to, nor exemplified by, the rights to recover natural resources damages and to exercise any summary abatement powers) or authorities with respect to any party, including Respondent.

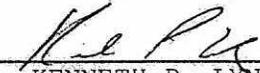
VI. The provisions, terms, and conditions of this Order shall bind the Respondent, the agents, servants, employees, successors, and assigns of Respondent, and all persons, firms, and corporations acting under or for Respondent.

VII. Respondent shall indemnify and hold harmless the Department, the State of New York, and their representatives and employees for all claims, suits, actions, damages, and costs of every name and description arising out of or resulting from the fulfillment or attempted fulfillment of this Order by Respondent and its successors (including successors in title) and assigns.

VIII. The effective date of this Order is the date that the Commissioner or the Commissioner's designee signs it.

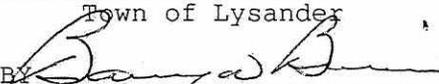
Dated: SYRACUSE, NEW YORK  
July 26, 2010

NEW YORK STATE DEPARTMENT  
OF ENVIRONMENTAL CONSERVATION  
ALEXANDER B. GRANNIS, Commissioner

BY   
KENNETH P. LYNCH  
Regional Director, Region 7

CONSENT BY RESPONDENT

Respondent hereby consents to the issuing and entering of this Order without further notice, waives the right to notice and hearing herein, and agrees to be bound by the provisions, terms, and conditions contained herein.

Town of Lysander  
BY   
PRINTED NAME Barry W. Bullis  
TITLE Supervisor  
DATE July 15, 2010

MUNICIPAL ACKNOWLEDGEMENT

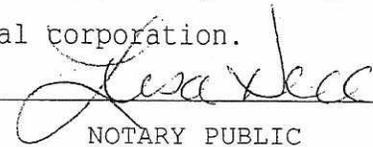
STATE OF NEW YORK )

: ss.:

COUNTY OF ONONDAGA )

On the 15 day of July in the year 2010, before me personally came Barry W. Bullis, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument, and acknowledged to me that he/she is the Supervisor of the Town of Lysander, the municipal corporation described in and which executed the above instrument; and that he/she signed his/her name thereto as authorized by said municipal corporation.

LISA DELL  
NOTARY PUBLIC, State of New York  
No. 4952626  
Qualified in Onondaga County  
Commission Expires June 19, 20\_\_

  
NOTARY PUBLIC

**Appendix B**  
**Results of OCDWEP Home Inspections**



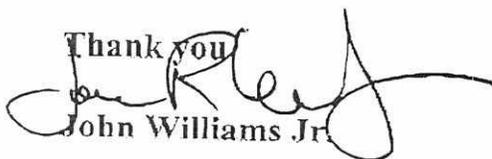
Joanne M. Mahoney, County Executive  
 Patricia M. Pastella, P.E., BCEE, Commissioner  
 Plumbing Control Section  
 7120 Henry Clay Boulevard  
 Liverpool, NY 13088-5344  
 Phone (315) 435-6614  
 Fax (315) 435-5425  
<http://www.ongov.net>

## ONONDAGA COUNTY PLUMBING CONTROL

### REPORT OF OPEN SURVEYS

WHISPERING OAKS 11-18-2010

8246 ASHINGTON	JOHNSON
8210 ASHINGTON	PETROWSKI
8271 ASHINGTON	BEBNARCZYK
8223 ASHINGTON	DUTEAU
8219 ASHINGTON	CORDARO
1968 PENFOLD WAY	ABHOL
1983 PENFOLD WAY	KENNEWEG
1964 PENFOLD WAY	TRYNISKI
1980 PENFOLD WAY	STRAIN
1951 TOPRIDGE	SPRAUGE
1939 TOPRIDGE	SUNDERHAFT

Thank you  
  
 John Williams Jr.

Plumbing Control Supervisor

# TOWN OF LYSANDER

## OFFICE OF THE SUPERVISOR

Barry W. Bullis  
Supervisor  
Tel: (315) 638-4264

8220 LOOP ROAD  
BALDWINSVILLE, NEW YORK 13027  
Fax: (315) 635-1515

David J. Rahrle  
Comptroller  
Tel: (315) 635-1443

October 28, 2010

## Whispering Oaks Sewer District Update

Dear Resident:

This letter provides a brief update on the status of the district's planned sewer improvement project as presented at the September 9, 2010 Public Informational Meeting.

### Map & Plan Report

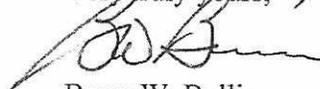
The Town's engineers, Barton & Loguidice, submitted a revised Map and Plan report to the Town Board at its October 25 meeting. This revised plan encompasses a public sewer extension from the foot of Dexter Parkway westerly along Route 370 connecting to the Whispering Oaks system. A copy of the report is available for viewing at the Town Clerk's office, as well as electronically on the Town's website (<http://townoflysander.org/>). The Town Board intends to schedule a Public Hearing at its next regular meeting after which a notice will be sent indicating the date and time. You will be given the opportunity to speak at the hearing and your attendance is encouraged. After the hearing, the final report will be submitted to the New York State Department of Environmental Conservation (NYSDEC), Onondaga County Department of Water and Environmental Protection (OCDWEP), and New York State Environmental Facilities Corporation (NYSEFC) for review/approval. Once approved by the three agencies, final design of the recommended alternative will begin.

### Home Inspection Program

As a reminder, we ask again for your cooperation with the disconnection of water softeners which discharge backwash water into the sanitary sewer. As you know Onondaga County will require that all sources of "clean" water be removed from the sanitary sewer before connection to the County's system will be allowed. In addition, the removal of this clean water will reduce flows to the existing septic system potentially improving performance and reducing operating costs. Attached is a copy of the August inspection report conducted by Onondaga County Plumbing Control marked up to show those residences that have not yet disconnected. If your home is listed, please make arrangements to complete the necessary work as soon as possible and call John Williams at 435-6614 to arrange for a follow up inspection.

If you have any questions, I can be reached at 638-4264, or email at [supervisor@townoflysander.org](mailto:supervisor@townoflysander.org), or you may contact Jim Thayer, Michelle Borton or Ken Knutsen at Barton & Loguidice Engineers, 457-5200. Thank you again for your cooperation and continued patience throughout this phase of the sewer project.

Very truly yours,



Barry W. Bullis  
Supervisor



Joanne M. Mahoney, County Executive  
Patricia M. Pastella, P.E., BCEE, Commissioner  
Plumbing Control Section  
7120 Henry Clay Boulevard  
Liverpool, NY 13088-5344  
Phone (315) 435-6614  
Fax (315) 435-5425  
<http://www.ongov.net>

August 11, 2010

Mr. Barry W. Bullis  
Town of Lysander Supervisor

*States as of  
10/28/10*

Re: Whispering Oaks I and I surveys

Dear Supervisor Barry Bullis

Enclosed please find results of the surveys conducted at the above housing tract. I have attached for your information the addresses which were found to have water softener discharge to the sanitary drainage of the home.

~~8267 ASHINGTON~~ - *Completed*

8262 ASHINGTON

8246 ASHINGTON

8210 ASHINGTON

8222 ASHINGTON

8271 ASHINGTON

8223 ASHINGTON

8219 ASHINGTON

8243 ASHINGTON

8219 ASHINGTON

---

~~1989 PENFOLD~~ — *Completed*

1968 PENFOLD

1983 PENFOLD

~~1976 PENFOLD~~ — *Completed*

1964 PENFOLD

1980 PENFOLD

~~1992 PENFOLD~~ — *Completed*

~~1953 TOPRIDGE~~ — *Completed*

1956 TOPRIDGE

1951 TOPRIDGE

1943 TOPRIDGE

1948 TOPRIDGE

1939 TOPRIDGE

The following homes are to be investigated for floor drain connections

~~1972 PENFOLD~~ *Completed*

The following home has a drainage issue in wet weather conditions that allows storm water run-off to flow into the manhole located on the corner of the property.

~~8275 ASHINGTON~~ — *Completed*

The remaining homes have no code issues as of the above date.

# TOWN OF LYSANDER

## OFFICE OF THE SUPERVISOR

Barry W. Bullis  
Supervisor  
Tel: (315) 638-4264

8220 LOOP ROAD  
BALDWINSVILLE, NEW YORK 13027  
Fax: (315) 635-1515

David J. Rahrle  
Comptroller  
Tel: (315) 635-1443

July 12, 2010

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

*See Attached*

Re: Whispering Oaks Sewer District  
Sewer Inspection Program

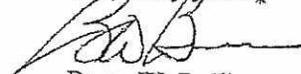
Dear

In February of last year you were sent a letter (copy attached) requesting your assistance with an inspection program being undertaken by the Town of Lysander with the assistance of the Onondaga County Department of Water Environment Protection to identify sources of "clean water", including ground water and rain water, entering the sanitary sewer system. This is being done in an effort to identify and eliminate the sources of clean water in order to reduce flows, and attempt to mitigate the "grey water" outbreaks that have been occurring at the Whispering Oaks Community Septic System site. To date you have not responded to our request. Please be advised that the New York State Department of Environmental Conservation (NYSDEC) has now formally stepped in and has issued a "Consent Order" to enforce compliance with environmental laws and to cause the elimination of this failed system within a manageable time line. Failure to comply with this Order could result in substantial fines and penalty's being levied all directly chargeable to the sewer district. It is imperative that every effort be made to mitigate any clean water infiltration into this system as soon as possible.

The Town continues to work with the County Executive's Office and the NYSDEC to advance the pending Water Quality Improvement grant and to facilitate the most cost effective final solution to this issue by connecting Whispering Oaks to the county system. As clean water discharge into a public sewer from sources such as sump pumps, footing drains and roof leaders is a violation of the Onondaga County Sanitary Code, we need to verify that this condition is not present before the county will allow any connection. If we are not able to obtain voluntary compliance we will have no choice but to initiate legal action to enable access for inspection purposes. We sincerely hope that this does not become necessary.

I will make myself available at any reasonable hour of the day or night to discuss this with you or to answer any questions you may have. Also, the Town Board will be scheduling another Public Informational Meeting in the near future following completion of the building inspection program. Please call John Williams, Onondaga County Plumbing Control Supervisor, at 435-6614 as soon as possible to schedule an appointment for an inspection. Thank you.

Very truly yours,



Barry W. Bullis  
Supervisor.  
Office 638-4264  
Cell 345-6733

As of 7/12/10

Mr. & Mrs. John Petrowski  
8210 Ashington Dr.  
Baldwinsville, NY 1327

Mr. & Mrs. Leo E. Kirk  
8214 Ashington Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. Joseph W. Ventura  
8218 Ashington Dr.  
Baldwinsville, NY 13027

Mr. Daniel A Fiaschetti  
8222 Ashington Dr.  
Baldwinsville, NY 13027

M. Walsh & K. Wharton  
8226 Ashington Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. William Bendo  
8230 Ashington Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. Kenneth Bartelli  
8234 Ashington Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. John Levanti  
1992 Penfold Way  
Baldwinsville, NY 13027

Mr. Vincent R. Polito  
1988 Penfold Way  
Baldwinsville, NY 13027

Thomas Cramer & Catherine Collins  
1984 Penfold Way  
Baldwinsville, NY 13027

Mr. & Mrs. Mark A. Giacini  
1953 Topridge Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. David L. Sprague  
1951 Topridge Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. Robert Carlson  
1947 Topridge Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. Steven D. Einbinder  
1943 Topridge Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. Eugene R. Sunderhaft  
1939 Topridge Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. Peter J. Thomas  
1948 Topridge Dr.  
Baldwinsville, NY 13027

Margaret A. Sennett  
1952 Topridge Dr.  
Baldwinsville, NY 13027

William W. Habelt  
1956 Topridge Dr.  
Baldwinsville, NY 13027

Mr. Steven Jenks &  
Ms. Sandra McFarland  
8215 Ashington Dr.  
Baldwinsville, NY 13027

Anthony Cordaro & Carmelo Cicala  
8219 Ashington Dr.  
Baldwinsville, NY 13027.

Michael Duteau & Molly Herdic  
8223 Ashington Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. David B. Skinner  
8227 Ashington Dr.  
Baldwinsville, NY 13027

Michael R. Falteisek  
8231 Ashington Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. Mai H. Makhlof  
8235 Ashington Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. Stephen R. Cook  
8239 Ashington Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. Christopher Patrick  
8243 Ashington Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. Richard Wynkoop  
1989 Penfold Way  
Baldwinsville, NY 13027

Mr. & Mrs. Russ W. Johnson  
8246 Ashington Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. Gerald Seeber  
1965 Penfold Way  
Baldwinsville, NY 13027

Raymond R. Holt  
1973 Penfold Way  
Baldwinsville, NY 13027

Mr. & Mrs. David C. Kenneweg  
1983 Penfold Way  
Baldwinsville, NY 13027

Jerry W. Strain  
1980 Penfold Way  
Baldwinsville, NY 13027

North CNY Annual Conference  
1976 Penfold Way  
Baldwinsville, NY 13027

Mr. & Mrs. Joseph M. Aiello  
1972 Penfold Way  
Baldwinsville, NY 13027

Mr. & Mrs. Patrick J. Abold  
1968 Penfold Way  
Baldwinsville, NY 13027

Mr. & Mrs. Mark E. Trynski  
1964 Penfold Way  
Baldwinsville, NY 13027

Mr. & Mrs. Robert S. Messina  
8267 Ashington Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. Robert B. Sholler  
8262 Ashington Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. Patrick Nicholson  
8266 Ashington Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. James W. Lowery  
8279 Ashington Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. James L. Delmonico  
8275 Ashington Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. Mark W. Bednarczyk  
8271 Ashington Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. Keith E. Peck  
8259 Ashington Dr.  
Baldwinsville, NY 13027

Mr. & Mrs. Jeffrey S. Tennant  
8255 Ashington Dr.  
Baldwinsville, NY 13027



Joanne M. Mahoney, County Executive  
Patricia M. Pastella, P.E., BCEE, Commissioner  
Plumbing Control Section  
7120 Henry Clay Boulevard  
Liverpool, NY 13088-5344  
Phone (315) 435-6614  
Fax (315) 435-5425  
<http://www.ongov.net>

---

July 27, 2010

Mr. Barry Bullis  
Town of Lysander Supervisor

Mr. Bullis *PKes*

We are pleased to provide you with the following information on the Whispering Oaks I and I surveys.

- 31 Homes have been surveyed
- 21 Homes have the following violations
  - Water Softener discharges tied into the sanitary drain system
  - Floor Drains
  - Sump Pumps
- 10 Homes have been found to be code compliant
- 1 Pool Backwash has been disconnected
- 2 Sump pumps have been disconnected

3 of the homes have made corrections to the water softener discharge in the last week.

Thank you,

*John Williams Jr.*  
John Williams Jr.

Plumbing Control Supervisor

**Appendix C**  
**Baldwinsville West Pump Station**  
**Capacity Evaluation**



Engineers • Environmental Scientists • Planners • Landscape Designers

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 Phone 315-457-5200 • Fax 315-451-0052

JOB 236.228 Whispering Oaks

SHEET NO. 1 OF 1

CALCULATED BY JMT DATE 1/20/2011

CHECKED BY MAB DATE 1/20/2011

SCALE

**Baldwinsville West Pump Station (BWPS) Capacity Analysis-**

Existing Capacity of the Baldwinsville West Pump Station :

Two (2) 1,150 gpm pumps and two (2) 500 gpm pumps.

Existing Capacity with two large pumps operating at BWPS:

(Assume 30% additional capacity from the second large pump,  
 and contribution from "small" pumps is negligible):

	=	(30% x 1150 gpm) + 1150 gpm
	=	345 gpm+ 1150gpm
	=	1,495 gpm

2010 Monthly Flow Totals

January	0.2972 MGD	July	0.1155 MGD
February	0.1426 MGD	August	0.1615 MGD
March	0.3956 MGD	September	0.1007 MGD
April	0.1873 MGD	October	0.2711 MGD
May	0.1436 MGD	November	0.3563 MGD
June	0.1454 MGD	December	0.3081 MGD

Peak Month (March) Average Daily Flow = 0.3956 MGD = 275 gpm

Assumed peaking factor = 4

Estimated existing peak flow = 4 x 275 gpm = 1100 gpm

Therefore, the BWPS currently operates at 73% capacity during peak flows.

Estimated additional flow from Whispering Oaks Sewer District

Whispering Oaks PS Design Operating Flow =	100	gpm	
Additional flow from approximately 41 grinder pumps =	66	gpm	(assuming 6 simultaneous operations
Total additional flow to the BWPS =	166	gpm	at 11 gpm each)
Existing BWPS peak flow =	1100	gpm	
Estimated future peak flow to BWPS =	<b>1,266</b>	<b>gpm</b>	

Following the connection of Whispering Oaks Sewer District and West Genesee Sewer District Extension No. 1, the BWPS would utilize 85% capacity of two "large" pumps during peak flows.

**Appendix D**  
**Estimated Project Costs**

Description	Quantity	Unit	Unit Cost	Total
<b>Whispering Oaks Pump Station</b>				
<b>General Construction</b>				
Mobilization and Demobilization	Nec	LS	\$5,000	\$5,000
Clearing & General Conditions	Nec	LS	\$5,000	\$5,000
8-inch PVC Influent Pipe	50	LF	\$60	\$3,000
Furnish and Install Influent Manhole	2	EA	\$2,500	\$5,000
5 HP Submersible Sewage Pumps	2	EA	\$15,000	\$30,000
6-foot I.D. Precast Concrete Top Slab	1	EA	\$4,000	\$4,000
48-inch x 30-inch Aluminum Access Hatch with Safety Grate	1	EA	\$1,100	\$1,100
Wet Well Structural Grout Injection and Epoxy Coating	Nec	LS	\$12,500	\$12,500
4-inch Discharge Elbows	2	EA	\$800	\$1,600
S.S. Lifting Chain Kit	40	LF	\$25	\$1,000
S.S. Brackets and Cable Holder	2	EA	\$400	\$800
Freestanding Pump Control Panel and Backboard	1	EA	\$50,000	\$50,000
Level Transducer	1	EA	\$2,500	\$2,500
Backup Floats	2	EA	\$660	\$1,320
Chlorination System	Nec	LS	\$11,000	\$11,000
Chlorination System Building	192	SF	\$340	\$65,280
Septic Tank Sump Pump	Nec	LS	\$2,000	\$2,000
Landscaping	Nec	LS	\$8,000	\$8,000
Miscellaneous Site Work, Erosion and Sediment Control	Nec	LS	\$5,000	\$5,000
				<b>Subtotal:</b>
				<b>\$214,700</b>
<b>Electrical Construction</b>				
50 KW Diesel Generator (with weatherproof enclosure)	Nec	LS	\$35,000	\$35,000
Automatic Transfer Switch	1	EA	\$8,000	\$8,000
7KW Electric Heater	1	EA	\$940	\$940
Main Disconnect Switch	1	EA	\$1,700	\$1,700
Lighting Panel	1	EA	\$1,800	\$1,800
Duct Banks	Nec	LS	\$5,000	\$5,000
Wires and Conduit	Nec	LS	\$8,000	\$8,000
Miscellaneous Electrical Work	Nec	LS	\$1,000	\$1,000
				<b>Subtotal:</b>
				<b>\$61,440</b>
<b>Plumbing Construction</b>				
Utility Sink and Trim	1	EA	\$1,200	\$1,200
Instantaneous Water Heater	1	EA	\$690	\$690
1-inch Copper Water Service	Nec	LS	\$1,300	\$1,300
Water Meter	1	EA	\$550	\$550
Backflow Preventer	1	EA	\$770	\$770
Building Water Spigot	1	EA	\$900	\$900
Stainless Steel, Wall Mounted Eye Wash	1	EA	\$610	\$610
Miscellaneous Plumbing Work	Nec	LS	\$1,000	\$1,000
				<b>Subtotal:</b>
				<b>\$7,020</b>
				<b>Pump Station Total:</b>
				<b>\$282,560</b>
<b>Force Main - Within the Whispering Oaks Sewer District</b>				
Mobilization and Demobilization, Clearing	Nec	LS	\$6,000	\$6,000
Maintenance and Protection of Traffic	Nec	LS	\$1,000	\$1,000
Connection to Existing PVC Force Main	Nec	LS	\$3,500	\$3,500
Air Vacuum Release Valve and Manhole	1	EA	\$3,500	\$3,500
6-inch HDPE DR 17 Force Main (Open-Cut or Directional Bore Lawn Areas) <sup>1</sup>	2,850	LF	\$48	\$136,800
Town Road Crossing and Driveway Restoration Allowance	Nec	LS	\$10,000	\$10,000
NYS Route 370 Highway Crossing No. 1	Nec	LS	\$15,000	\$15,000
				<b>Force Main Subtotal:</b>
				<b>\$175,800</b>
<b>Force Main - Along NYS Route 370 Connected to Existing Sewer at Dexter Parkway</b>				
Mobilization and Demobilization, Clearing	Nec	LS	\$6,000	\$6,000
Maintenance and Protection of Traffic <sup>1</sup>	Nec	LS	\$8,000	\$8,000
Furnish and Install Lateral Kits <sup>1</sup>	42	EA	\$900	\$37,800
Air Vacuum Release Valve and Manhole	1	EA	\$3,500	\$3,500
6-inch HDPE DR 17 Force Main (Open-Cut or Directional Bore Lawn Areas) <sup>1</sup>	6,850	LF	\$48	\$328,800
Connection to Existing Trunk Sewer	1	EA	\$2,500	\$2,500
NYS Route 690 Crossing <sup>1</sup>	Nec	LS	\$25,000	\$25,000
NYS Route 370 Highway Crossing No. 2 <sup>1</sup>	Nec	LS	\$15,000	\$15,000
				<b>Force Main Subtotal:</b>
				<b>\$426,600</b>
				<b>Force Main Total:</b>
				<b>\$602,400</b>
<b>Notes:</b>				
1. A portion of the costs for these items are included in the provision for excess capacity.				
Construction Subtotal				\$884,960
Contingency (~10%)				\$88,040
2010 Construction Total				\$973,000
Pump Station Utility Allowance				\$5,000
Inflation, 2011 (~4%)				\$39,000
2011 Construction Total				\$1,017,000
<b>Whispering Oaks Sewer District Engineering Costs</b>				
Planning Phase - Interim Operation and Maintenance Plan and Consent Order Assistance				\$29,900
Planning Phase - Engineering Report and Map and Plan (202-b)				\$8,000
Subsurface Exploration and Survey Services				\$26,500
Final Design and Bidding Phases				\$131,000
Construction Observation and Administrative Phases				\$102,000
Bond Counsel				\$5,000
Misc., Administrative, and Land Acquisition				\$4,600
Estimated Total Soft Costs				\$307,000
<b>ESTIMATE OF TOTAL PROBABLE PROJECT COST (2011\$)</b>				
				<b>\$1,324,000</b>

**Appendix E**  
**Hydraulic Calculations – Alternative D**



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Syracuse, New York 13220

JOB Whispering Oaks Sewer District  
 SHEET NO. 1 OF 6  
 CALCULATED BY JMT DATE 10/20/2010  
 CHECKED BY MAB DATE 1/24/2011  
 SCALE \_\_\_\_\_

<u>Excess Capacity Alternative</u>			
<u>Hydraulic Calculations - Pump Station</u>			
Length Of Pipe: 6"HDPE DR 17	880	ft	
Diameter of Pipe	6.056	in	
Total Equivalent Length of Pipe:	937	ft	
<u>Equivalent Lengths of Pipe</u>			
	<u>Type of Connection</u>		<u># of Each</u>
10 ft	45° Elbow 10" diameter		3
2.4 ft	Gate valve(open) 4" diameter		1
25 ft	Check valve(open) 4" diameter		1
<u>Condition A: Low Wet Well Level to Force Main High Point</u>			
Equivalent Length of Pipe(to FM High Point):	937	ft	
C Factor :	120		
Static Head (Hs):	44	ft	
<u>Flow</u>	<u>HF</u>		<u>TDH</u>
0	0.0		44.0
150	2.3		46.3
200	3.9		47.9
250	6.0		50.0
400	14.2		58.2
<u>Condition A: Low Wet Well Level to Force Main High Point</u>			
Equivalent Length of Pipe(to FM High Point):	937	ft	
C Factor :	140		
Static Head (Hs):	44	ft	
<u>Flow</u>	<u>HF</u>		<u>TDH</u>
0	0.0		44.0
75	0.5		44.5
150	1.7		45.7
300	6.3		50.3
500	16.1		60.1



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JOB Whispering Oaks Sewer District

SHEET NO. 2 OF 6

CALCULATED BY JMT DATE 10/20/2010

CHECKED BY MAB DATE 1/24/11

SCALE \_\_\_\_\_

Hydraulic Calculations - Pump Station			
Length Of Pipe: 6"HDPE DR 17	1250	ft	
Diameter of Pipe	6.056	in	
Total Equivalent Length of Pipe:	1327	ft	
Equivalent Lengths of Pipe	Type of Connection	# of Each	
10 ft	45° Elbow 10" diameter	5	
2.4 ft	Gate valve(open) 4" diameter	1	
25 ft	Check valve(open) 4" diameter	1	
Condition B : Low Wet Well Level to Localized High Point			
Equivalent Length of Pipe(to FM High Point):	1327	ft	
C Factor :	120		
Static Head (Hs):	36	ft	
<u>Flow</u>	<u>HF</u>	<u>TDH</u>	
0	0.0	36.0	
75	0.9	36.9	
150	3.3	39.3	
300	11.8	47.8	
500	30.4	66.4	
Condition B : Low Wet Well Level to Localized High Point			
Equivalent Length of Pipe(to FM High Point):	1327	ft	
C Factor :	140		
Static Head (Hs):	36	ft	
<u>Flow</u>	<u>HF</u>	<u>TDH</u>	
0	0.0	36.0	
75	0.7	36.7	
150	2.5	38.5	
300	8.9	44.9	
500	22.8	58.8	



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Saratoga New York 12220

JOB Whispering Oaks Sewer District

SHEET NO. 3 OF 6

CALCULATED BY JMT DATE 10/20/2010

CHECKED BY MAB DATE 1/24/11

SCALE \_\_\_\_\_

<u>Hydraulic Calculations - Pump Station</u>			
Length Of Pipe: 6"HDPE DR 17	2625	ft	
Diameter of Pipe	6.056	in	
Total Equivalent Length of Pipe:	2712	ft	
<u>Equivalent Lengths of Pipe</u>	<u>Type of Connection</u>	<u># of Each</u>	
10 ft	45° Elbow 10" diameter	6	
2.4 ft	Gate valve(open) 4" diameter	1	
25 ft	Check valve(open) 4" diameter	1	
<u>Condition C : Low Wet Well Level to Localized High Point #2</u>			
Equivalent Length of Pipe(to FM High Point):	2712	ft	
C Factor :	120		
Static Head (Hs):	25	ft	
<u>Flow</u>	<u>HF</u>	<u>TDH</u>	
0	0.0	25.0	
75	1.9	26.9	
150	6.7	31.7	
300	24.1	49.1	
500	62.1	87.1	
<u>Condition C : Low Wet Well Level to Localized High Point #2</u>			
Equivalent Length of Pipe(to FM High Point):	2712	ft	
C Factor :	140		
Static Head (Hs):	25	ft	
<u>Flow</u>	<u>HF</u>	<u>TDH</u>	
0	0.0	25.0	
75	1.4	26.4	
150	5.0	30.0	
300	18.1	43.1	
500	46.7	71.7	



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JOB Whispering Oaks Sewer District

SHEET NO. 4 OF 6

CALCULATED BY JMT DATE 10/20/2010

CHECKED BY MAB DATE 1/24/2011

SCALE \_\_\_\_\_

<u>Hydraulic Calculations - Pump Station</u>			
Length Of Pipe: 6"HDPE DR 17	4625	ft	
Diameter of Pipe	6.056	in	
Total Equivalent Length of Pipe:	4732	ft	
<u>Equivalent Lengths of Pipe</u>	<u>Type of Connection</u>		<u># of Each</u>
10 ft	45° Elbow 10" diameter		8
2.4 ft	Gate valve(open) 4" diameter		1
25 ft	Check valve(open) 4" diameter		1
<u>Condition D : Low Wet Well Level to Localized High Point #3</u>			
Equivalent Length of Pipe(to FM High Point):	4732	ft	
C Factor :	120		
Static Head (H <sub>s</sub> ):	9	ft	
<u>Flow</u>	<u>HF</u>	<u>TDH</u>	
0	0.0	9.0	
100	5.5	14.5	
200	19.9	28.9	
300	42.1	51.1	
500	108.3	117.3	
<u>Condition D : Low Wet Well Level to Localized High Point #3</u>			
Equivalent Length of Pipe(to FM High Point):	4732	ft	
C Factor :	140		
Static Head (H <sub>s</sub> ):	9	ft	
<u>Flow</u>	<u>HF</u>	<u>TDH</u>	
0	0.0	9.0	
75	2.4	11.4	
150	8.8	17.8	
300	31.7	40.7	
500	81.4	90.4	



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JOB Whispering Oaks Sewer District

SHEET NO. 5 OF 6

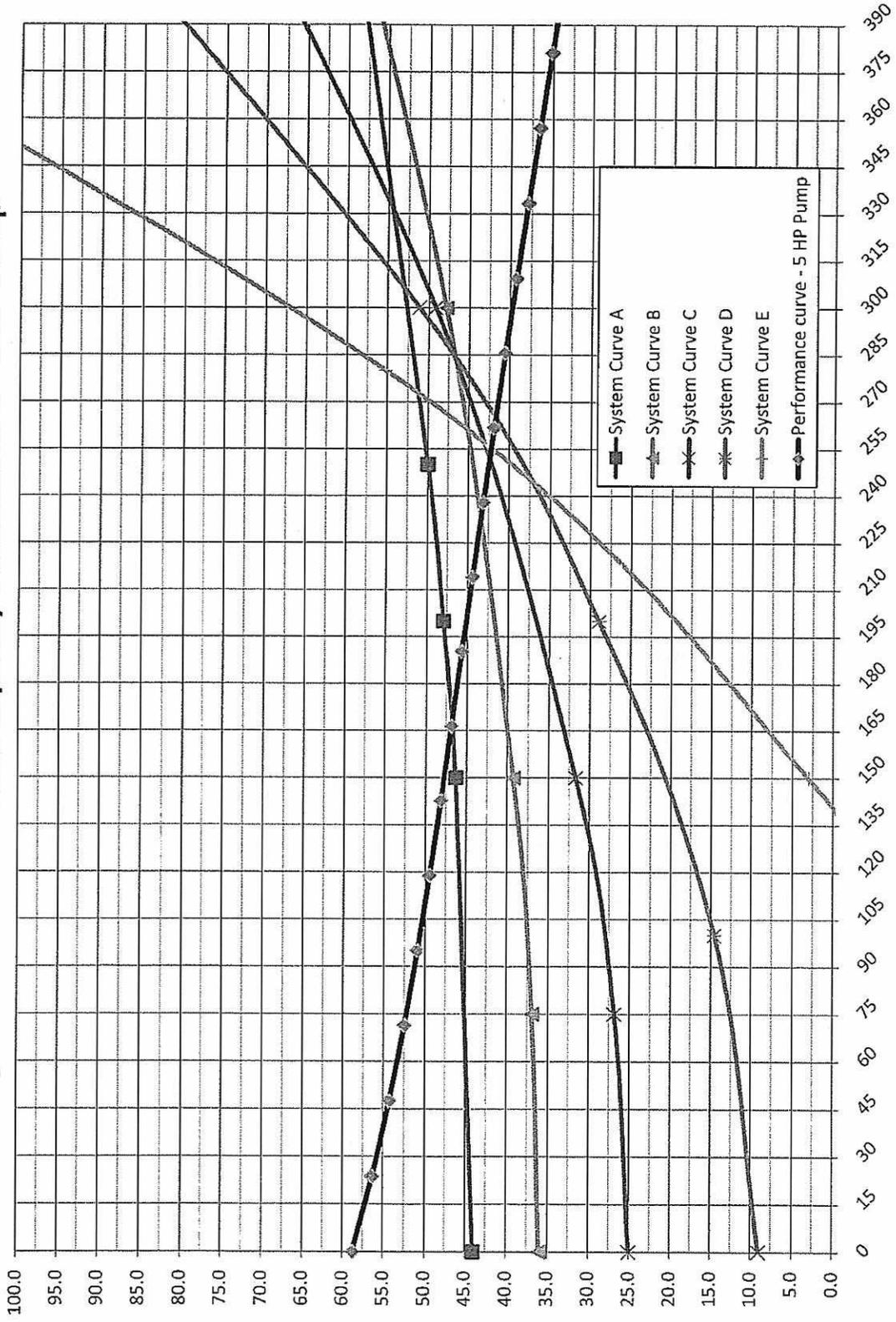
CALCULATED BY JMT DATE 10/20/2010

CHECKED BY MAB DATE 1/24/2011

SCALE \_\_\_\_\_

<u>Hydraulic Calculations - Pump Station</u>			
Length Of Pipe: 6"HDPE DR 17	9600	ft	
Diameter of Pipe	6.056	in	
Total Equivalent Length of Pipe:	9727	ft	
<u>Equivalent Lengths of Pipe</u>	<u>Type of Connection</u>	<u># of Each</u>	
10 ft	45° Elbow 10" diameter	10	
2.4 ft	Gate valve(open) 4" diameter	1	
25 ft	Check valve(open) 4" diameter	1	
<u>Condition E : Low Wet Well Level to Discharge at Dexter Parkway Manhole</u>			
Equivalent Length of Pipe(to FM High Point):	9727	ft	
C Factor :	120		
Static Head (H <sub>s</sub> ):	-21	ft	
<u>Flow</u>	<u>HF</u>	<u>TDH</u>	
0	0.0	-21.0	
75	6.7	-14.3	
150	24.0	3.0	
280	76.2	55.2	
500	222.6	201.6	
<u>Condition E : Low Wet Well Level to Discharge at Dexter Parkway Manhole</u>			
Equivalent Length of Pipe(to FM High Point):	9727	ft	
C Factor :	140		
Static Head (H <sub>s</sub> ):	-21	ft	
<u>Flow</u>	<u>HF</u>	<u>TDH</u>	
0	0.0	-21.0	
75	5.0	-16.0	
150	18.0	-3.0	
300	65.1	44.1	
500	167.4	146.4	

# System Curve for Excess Capacity Alternative D - 5 HP Pump





# PERFORMANCE CURVE

PRODUCT  
**CP3102.181**

TYPE  
**MT**

DATE  
**2010-10-11**

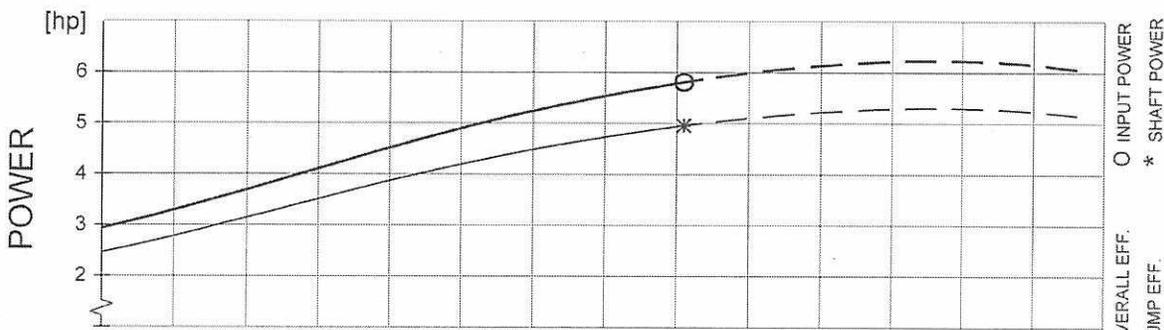
PROJECT

CURVE NO  
**63-435-00-3703**

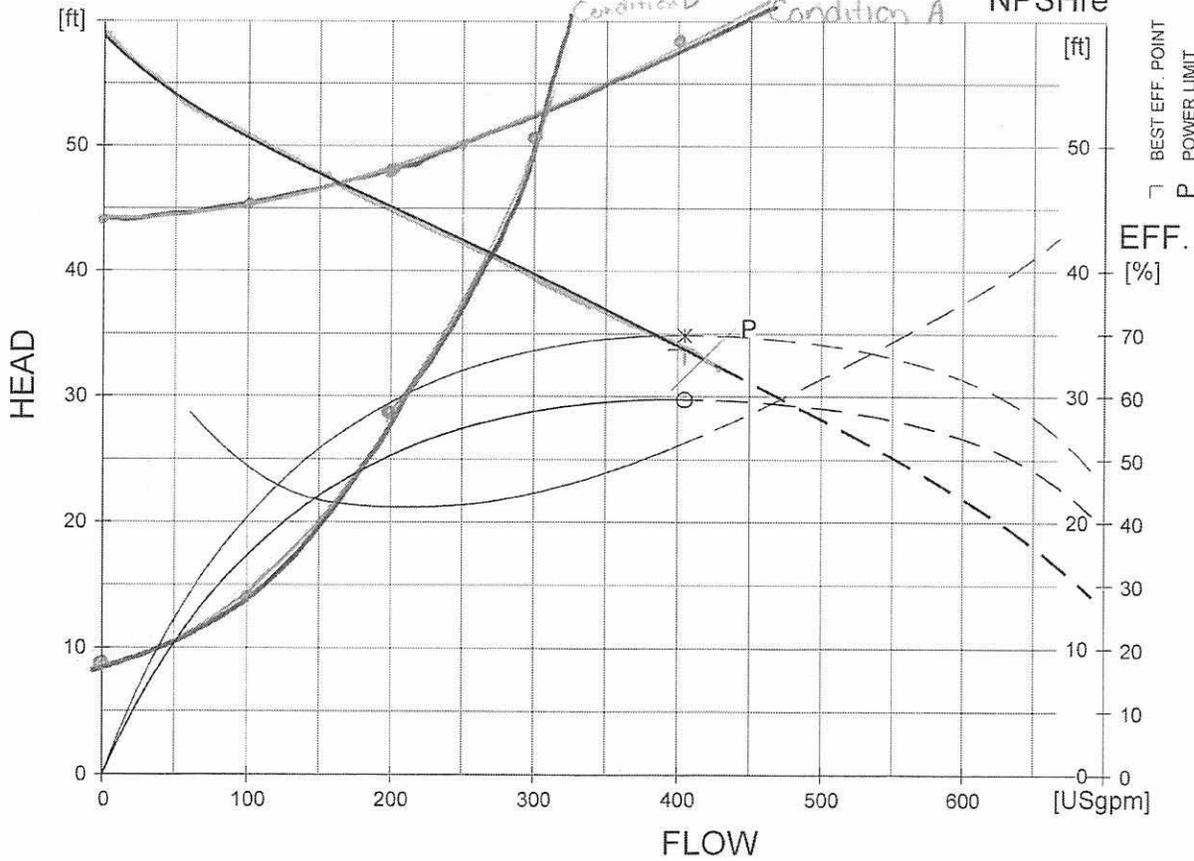
ISSUE  
**5**

	1/1-LOAD	3/4-LOAD	1/2-LOAD	RATED POWER .....	5	hp	IMPELLER DIAMETER		
POWER FACTOR	0.81	0.75	0.64	STARTING CURRENT ...	41	A	189 mm		
EFFICIENCY	85.0 %	85.5 %	84.0 %	RATED CURRENT ...	6.7	A	MOTOR #	STATOR	REV
MOTOR DATA	---	---	---	TOT. MOM. OF INERTIA ...	0.039	kgm2	18-11-4AL	61D	10

COMMENTS NEVACLOG	INLET/OUTLET	RATED SPEED .....	FREQ.	PHASES	VOLTAGE	POLES
	-/ 4 inch	1745 rpm	60 Hz	3	460 V	4
	IMP. THROUGHLET	NO. OF BLADES	GEARTYPE	RATIO		
	2.9 inch	1	---	---		



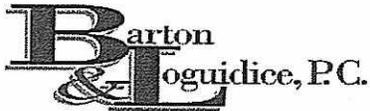
DUTY-POINT	FLOW [USgpm]	HEAD [ft]	POWER [hp]	EFF. [%]	NPSH <sub>req</sub> [ft]
B.E.P.	404.9	33.75	5.81 (4.96)	59.5 (59.7)	26.3



FLYPS3.1.6.6 (20090313)

NPSH<sub>req</sub> = NPSH<sub>3%</sub> + min. operational margin  
Performance with clear water and ambient temp 40 °C

HI B Curve



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JOB 236.228 Whispering Oaks Pump Station

SHEET NO. 1 OF 3

CALCULATED BY JMT DATE 10/20/2010

CHECKED BY MAB DATE 1/24/2011

SCALE \_\_\_\_\_

Whispering Oaks Pump Station Design Flows

*Historical Pump Run Times:*

<u>Month</u>	<u>2006 Hours</u>	<u>2007 Hours</u>	<u>2008 Hours</u>	<u>2009 Hours</u>
January	49.6	51.5	53.5	47.3
February	38.0	31.1	45.1	34.1
March	46.1	55.0	53.5	49.8
April	58.0	51.5	42.5	45.2
May	31.0	47.6	42.5	37.6
June	42.9	40.6	36.2	23.0
July	42.7	29.0	32.3	29.8
August	27.4	28.6	28.7	36.5
September	29.8	25.7	32.0	26.9
October	35.0	30.8	31.5	29.1
November	38.1	33.9	38.8	32.7
December	62.9	41.1	43.3	38.7

Average (2006 thru 2009): 39.1 hours/month

Peak (Dec 2006): 62.9 hours/month

Pumping Rate: 108 gallons per minute (B&L Pump Station drawdown test)

Average Daily Flow:

= (40.2 hours/month) x (1 month/30.4 days) x (60 min/hour) x (108 gal/min) = 8,300 gallons per day (5.8 gpm)

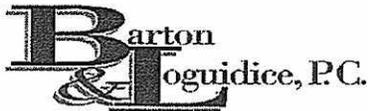
Average Daily Flow For Peak Month (December 2006)

ADF = (62.9 hours/month) x (1 month / 30.4 Days) x (60 minutes/ hour) x (108 gal per minute) =

ADF = 13,408 gallons per day = (9.3 gpm)

Estimated Peak Flow for Peak Month

PF = (9.3 gpm) x (4.2 Peaking Factor) = 39.1 gpm



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JOB 236.228 Whispering Oaks Pump Station  
SHEET NO. 2 OF 3  
CALCULATED BY JMT DATE 10/20/2010  
CHECKED BY MAB DATE 1/24/2011  
SCALE \_\_\_\_\_

Whispering Oaks Pump Station Wet Well Design Calculations

Proposed Level Settings:

Wet well rim elev. =	419.1	
Septic Tank Gravity inv =	408.10	(septic tank)
Overflow to Septic Tank	407.93	
HWL Alarm =	402.50	
Lag Pump On	402.00	
Lead Pump On =	401.75	
All Pumps Off =	400.50	
LWL Alarm =	400.00	
Bottom of wet well =	398.00	

Design Pump Rate = 150 gpm

Average daily flow = 8,300 gpd = 6 gpm  
Peak flow = 13,400 gpd x 4.2 = 39 gpm

WW Storage:  $6^2 \times \pi/4 \times (\text{lead on} - \text{all pumps off}) = 35 \text{ CF} = 262 \text{ gallons}$   
 $6^2 \times \pi/4 \times (\text{Gravity inv.} - \text{HWL Alarm}) = 158 \text{ CF} = 1182 \text{ gallons}$

Septic Tank Storage: 16,000 gallons  
(utilize existing septic tank for additional "emergency" wet well storage)

Fill time at average daily flow = 43.6 minutes  
flow out - flow in = 144 gpm empty time = 1.8 mins  
cycle time = 45.5 mins cycles per hour = 1.3 ~ 0.7 starts/hr/pump  
HWL Alarm response time (up to 408.1) = 2864 mins = 48 hrs (power failure)

Fill time at projected peak flow = 6.7 minutes  
flow out - flow in = 111 gpm empty time = 2.4 mins  
cycle time = 9.1 mins cycles per hour = 6.6 ~ 3.3 starts/hr/pump  
HWL Alarm response time (up to 408.1) = 441 mins = 7 hrs (power failure)



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JOB 236.228 Whispering Oaks Pump Station

SHEET NO. 3 OF 3

CALCULATED BY JMT DATE 10/20/2010

CHECKED BY MAB DATE 1/24/2011

SCALE \_\_\_\_\_

Whispering Oaks Pump Station Detention Time:

Whispering Oaks Force Main Volume = Volume of 6-inch force main

9600 LF of 6-inch force main (Inside diameter = 6.056 HDPE DR 17 Pipe)

$$\text{Volume} = \left( \left( \frac{6.056}{12} \right)^2 / 4 \times \pi \right) \times 9600 = 1,919 \text{ ft}^3$$

14,359 gallons

Volume per Pump Cycle (at Average Daily Flow) = (1.8 minutes x 150 gpm) = 270 gallons

Force Main Detention Time (at Average Daily Flow) =

$$(14,359 \text{ gallons} / (270 \text{ gallons} / \text{hour})) / (1.3 \text{ cycles} / \text{hour}) = 40.9 \text{ hours}$$

**Appendix F**  
**User Costs and Financing Calculations**

**Estimated First Year User Costs**

Estimated Total Whispering Oaks Sewer District Cost to be Funded by NYSEFC CWSRF Loan: **\$397,900**

Scenario 1 - WQIP Grant and CWSRF Subsidized Financing @ 2.1% , 50% Rule						
Financing Terms		Annual Debt Service	Annual Debt Service Per EDU (46 EDUs)	Onondaga County Sewer Charge	Annual O&M Charge	Total First Year User Charge
Years	Interest					
20	2.10%	\$19,656	\$427	\$338.33	\$80.00	\$845.63
30	2.10%	\$14,409	\$313	\$338.33	\$80.00	\$731.57

Scenario 2 - WQIP Grant and CWSRF Hardship Financing @ 0%, 50% Rule						
Financing Terms		Annual Debt Service	Annual Debt Service Per EDU (46 EDUs)	Onondaga County Sewer Charge	Annual O&M Charge	Total First Year User Charge
Years	Interest					
20	0.00%	\$15,916	\$346	\$338.33	\$80.00	\$764.33
30	0.00%	\$10,611	\$231	\$338.33	\$80.00	\$649.00

**Estimated First Year User Cost Based on Reclaimed Value of the Two Treatment Lots**

Estimated Total Project Costs	<b>\$397,900</b>
Approximate Value of Reclaimed Value	<u>\$50,000</u>
Estimated Project Costs	<b>\$347,900</b>

Scenario 3 - WQIP Grant and CWSRF Subsidized Financing @ 2.1%, 50% Rule, \$50,000 reduction for reclaimed land						
Financing Terms		Annual Debt Service	Annual Debt Service Per EDU (46 EDUs)	Onondaga County Sewer Charge	Annual O&M Charge	Total First Year User Charge
Years	Interest					
20	2.10%	\$17,186	\$374	\$338.33	\$80.00	\$791.94
30	2.10%	\$12,598	\$274	\$338.33	\$80.00	\$692.21

Scenario 4 - WQIP Grant and CWSRF Hardship Financing @ 0%, 50% Rule, \$50,000 reduction for reclaimed land						
Financing Terms		Annual Debt Service	Annual Debt Service Per EDU (46 EDUs)	Onondaga County Sewer Charge	Annual O&M Charge	Total First Year User Charge
Years	Interest					
20	0.00%	\$13,916	\$303	\$338.33	\$80.00	\$720.85
30	0.00%	\$9,277	\$202	\$338.33	\$80.00	\$620.01

Appendix F  
Town of Lysander - Whispering Oaks Sewer District  
User Cost Estimate and Financing Calculations  
Base Project with Excess Capacity

236.228  
1/24/2011  
JMT

**EDU Assessment:**

Residential EDUs	44
Vacant EDUs (Vacant Parcel = 0.5 EDU)	2
<b>Total Whispering Oaks EDUs</b>	<b>46</b>

**Whispering Oaks Sewer District Financing Calculations:**

Estimated Total Probable Project Cost	\$1,324,000
Less Estimated Excess Capacity Project Cost	\$190,000
<b>Maximum Amount to be Expended by Whispering Oaks Sewer District</b>	<b>\$1,134,000</b>

Estimated Total Probable Construction Cost	\$1,017,000
Less Estimated Total Probable Excess Capacity Construction Cost	\$151,000
<b>Estimated Total Whispering Oaks Base Improvements Construction Cost</b>	<b>\$866,000</b>

**Portion of Estimated Total Probable Project Costs to be financed by  
WQIP Grant (85% of Eligible Construction Costs Max.)** **\$736,100**

**Estimated Total Probable Project Costs to be Financed with NYSEFC CWSRF Loan** **\$397,900**

**Excess Capacity Provision Financing Calculations:**

Estimated Total Probable Excess Capacity Project Cost	\$190,000
Estimated Total Probable Excess Capacity Construction Cost	\$151,000

**Portion of Estimated Total Probable Project Costs to be financed by  
WQIP Grant (85% of Eligible Construction Costs Max.)** **\$128,350**

**Estimated Total Excess Capacity Amount Less WQIP Grant** **\$61,650**

**WQIP Grant Usage Summary:**

Total Maximum WQIP Grant Amount	\$1,240,150
Estimated Grant Amount to be Used For Whispering Oaks Sewer District Project Only	\$736,100
Estimated Grant Amount to be Used For Excess Capacity Provision	\$128,350
<b>Estimated Remaining Amount of WQIP Grant</b>	<b>\$375,700</b>

**Appendix G**  
**Project Schedule**

**ANTICIPATED PROJECT TIMELINE**  
TOWN OF LYSANDER  
WHISPERING OAKS PUBLIC SEWER EXTENSION  
FINAL PLANNING, DESIGN, BID & CONSTRUCTION PHASES

 Town Board Mtg. Action (Generally 2nd & 4th Mondays)  
 NYSDEC Consent Order Compliance Schedule Item w/ Date

01/24/11 - Reflects Final Compliance Sched.

Project Tasks/Milestones	2011												2012				
	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
No. Months from Consent Order Execution	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
<b>Planning Phase - Engineering Report and Map &amp; Plan (202-b Improvement)</b>																	
Revise Draft Map & Plan (alts., cap./user costs, cost sharing, sched., etc.); (T)/OCDWEP Reviews																	
Amend SEQR, coord. review (revise FEAF, agency contacts, etc.); Negative Declaration																	
Finalize Map & Plan; (T) Bd. Accepts M&P, Advertise Public Hearing																	
Whispering Oaks Public Hearing No. 2 under 202-b Town Law (not subject to Permis. Refer.)																	
Whispering Oaks Bond Resolution, 192-a Excess Capacity Resolution																	
Re-Submit Eng. Report and Map & Plan to NYSDEC, OCDWEP & OCDOH; Agency review/comment																	
Address NYSDEC and OCDWEP Review Comments; M&P Report Addendum (as nec.)																	
Prepare and Submit CWSRF Hardship & Full Applications (March 1, 2011 Deadline)																	
<b>Planning Phase - W. Genesee SD &amp; Extension No. 1</b>																	
Authorize Engineering Services for WGSD Map & Plan, and WGSD Ext. No. 1 Map Plan & Report																	
Prepare Draft MPR and M&P; Joint Public Informational Meeting																	
Finalize MPR and M&P; submit to (T) Board, NYSDEC, OCWEP, OCDOH; set/advertise Public Hearing date																	
Submit Reports to NYSDEC, OCDWEP & OCDOH; Agency review/comment																	
Address NYSDEC and OCDWEP Review Comments; M&P Report Addendum (as nec.)																	
WGSD and WGSD Ext No. 1 Public Hearings under 202-B and 12-A of Town Law; SEQR - Resolutions																	
WGSD Ext. No. 1 District Formation 30-day Referendum Period; Board Resolution forming district, bonding																	
<b>Preliminary &amp; Final Design, Bidding</b>																	
Design Contract Documents																	
NYS DOT, JAP permit applcs/obtain; easements prepare/obtain																	
<b>NYSDEC, OCDOH, OCDWEP &amp; Town Review; address comments final bid docs</b>																	
Ad for Bids; bid period; accept bids; certify; recommend award; (T) Bd award																	
Bonds & Insurance; sign contracts; Notice to Proceed																	
<b>Construction Phase</b>																	
Shop drawing review/approval; equipment fabrication & delivery																	
Mobilization																	
Construction Period for new PS, FM, and grinder pump connections (Refer to WQIP Project Sched.)																	
Start-up and testing; OCDWEP coord and acceptance																	
Decommission Existing community septic system																	
Substantial Completion; Demobilization																	
Final Surface Restoration; Punch List																	
WQIP Quarterly Repts ; Billing Complete (Conservative Estimate); June 1, 2013																	