

Seneca County  
Board of Supervisors Special Meeting  
Tuesday, February 28, 2017

Call to Order

Chairman Shipley called the meeting to order at 6:00 p.m.

Roll Call of Members by the Clerk

Thirteen members of the Board of Supervisors answered roll call. Sprvr. Hayssen was not present.

Pledge of Allegiance and Moment of Silence

Public Hearings:

a. To hear comment on the proposal to approve the amendment to the Map Plan for the Route 318 Corridor Sewer Improvement District. The proposed amendment outlines the excess capacity included in the Plan, allowing for future expansion and permitting use of up to Two Million Dollars (\$2,000,000) in County funds in construction of the District's facilities.

Sprvr. Westfall offered a motion, second by Sprvr. Wadhams to open the floor to receive comments regarding the proposed amendment to the 318 sewer map plan. No comments were heard or received. Sprvr. Westfall moved the public hearing closed.

**RESOLUTIONS & MOTIONS**

**BOARD OF SUPERVISORS APPROVES AMENDMENT TO MAP PLAN FOR THE  
ROUTE 318 CORRIDOR SEWER IMPROVEMENT DISTRICT**

RESOLUTION NO. 22-17 moved by Sprvr. Trout, second by Sprvr. Davidson and adopted by 640 ayes and 110 not present (Churchill and Hayssen).

WHEREAS, the Board of Supervisors by Resolution 250-16 directed preparation and submission of a report specifying the particulars in which the Board proposes to amend the Map Plan and Report for the Route 318 Corridor Sewer Improvement District; and

WHEREAS, a report prepared by the firm of Barton and Loguidice has been submitted by the administrative head of the District so specifying the proposed amendments to the Map Plan; and

WHEREAS, the Board of Supervisors by Resolutions numbered 3-17 and 6-17 directed a public hearing on such amendment and that notice of such public hearing be published as provided by law; and

WHEREAS, notice of such public hearing, setting forth the particulars in which it is proposed that the Map Plan be amended was duly published in the County's official newspapers; and

WHEREAS, a public hearing was duly held regarding such amendment on February 28, 2017, and all parties wishing to be heard thereon having been heard; and

WHEREAS, this Resolution has been approved by the Board of Supervisors Public Works

Committee; now, therefore be it

RESOLVED, that the Seneca County Board of Supervisors hereby approves the amendment to the Map Plan and Report for the Route 318 Corridor Sewer Improvement District as indicated in the report of Barton and Loguidice submitted by the District Head and that such Report be filed with the County Clerk as provided under §253-b of the New York State County Law.

New Business

Patrick Nicoletta P.E. and Greg Hotaling P.E., of MRB provided a summary of preliminary information related to the possible changes to the Hillside/Five Points SPDES permit and the potential changes to the sanitary sewer system as a result. Included in the summary is the current estimated construction costs for the improvements planned at the Willard facility and discuss potential changes to that SPDES permit as well. All estimates are based on a concept level assessment (excludes soft costs) and subject to change as more information becomes available. A copy of the report is included herewith.

Special Order of the Day

The meeting was adjourned at 6:15 p.m.

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### Report by MRB

#### SPDES Permit Changes to Hillside/Five Points

On January 5, 2017 a meeting was held that included representatives for the County, DOCCS, NYSDEC, MRB Group and CT Male. At this meeting the County was informed that the Hillside/Five Points SPDES permit is under a full technical review and a permit change is underway. A compliance schedule has been included with the interim SPDES permit dated (03/01/2017), the NYSDEC has asked the County to consider consolidation of facilities as well as notify the County/DOCCS of the potential changes to the SPDES effluent limits.

It is anticipated that the SPDES permit will be separated for these two facilities and the discharge location for both facilities expected to remain discharging to Reeder Creek. Reeder Creek is anticipated to be included as the Impaired Water Body List with phosphorus identified as the pollutant of concern. Therefore, it is also anticipated that both these facilities will have a phosphorus limit imposed and require significant changes to comply.

#### Five Points

Five Points is currently under an evaluation authorized by DOCCS performed by CT Male Associates that identifies anticipated limits as:

1. Ammonia Limit of 0.9 mg/L (winter) and 0.33 mg/L (summer)
2. Total phosphorus of 0.2 mg/L
3. Chlorine residual of 0.02 mg/L

The anticipated total phosphorus limit will result in significant upgrades/changes to the Five Points facility that will impact multiple phases of the existing treatment system. For instance, when providing treatment for phosphorus down to 0.2 mg/L the following can be expected:

1. The surface overflow rates for the clarifiers are reduced from 1200 lb/day/ft<sup>2</sup> to 900 lb/day/ft<sup>2</sup>. The existing clarifiers should be evaluated against this design criterion.
2. Chemical precipitation will need to be added to the treatment system.
3. Tertiary filtration will need to be enhanced. The current treatment step is a rapid sand filter that is not technologically feasible to achieve the 0.2mg/L limit. The CT Male Evaluation of Five Points recommends disc filtration.
4. Sludge production will increase by 25 – 35%. The aerobic digester should be evaluated to determine if adequate Mean Cell Residence Time is provided with the new waste sludge production rates.
5. Chlorination/Dechlorination or some other means for disinfection (UV) will need to be added the treatment system.

At this planning level, project estimates to make all of the improvements listed above could range between \$2,000,000 to \$4,000,000, the high end of the range is assuming modifications to the clarifiers/aerobic digesters is required.

#### Current Five Points Improvements

Recently, MRB Group designed and bid a wetwell rehabilitation project for Five Points. This project was awarded to a contractor in the amount of \$140,000.00.

#### Hillside

As part of the initial notification of the potential SPDES permit changes, the NYSDEC suggested changes to the following effluent limits:

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1. Chlorine residual reduced to 0.02 mg/L

It is anticipated however that because this facility discharges to Reeder Creek, a total phosphorus limit will be imposed similar to limit identified for Five Points. Similar to Five Points, the new treatment for phosphorus removal will require treatment changes to this facility and at a minimum require the addition of disc filtration. Planned improvements previously suggested by NYSDEC to the Hillside facility have been suspended pending the result of the anticipated consolidation feasibility study required by the NYSDEC.

At this planning level, project estimates to make the improvements listed above could range between \$500,000 to \$1,000,000.

### Current Hillside Improvements

Recently, MRB Group designed and bid concrete structural repairs for Hillside. This project has not been awarded to a contractor. The bid amount was \$100,000.00.

### SPDES Permit Changes to Willard

At the January 5, 2017 meeting MRB Group requested the NYSDEC review SPDES permit for the Willard facility since the potential consolidation discussion indicated that this facility could potentially become a regional treatment facility. The current SPDES permit expires at the end of 2017 and it was noted that the last time the NYSDEC performed a technical review of the permit was in 1987.

On January 31, 2017 an email from Don Cardinal (of the NYSDEC) provided a table of anticipated limits for the Willard facility without consideration of plant expansion. The most significant changes indicated are the following:

1. A Total phosphorus limit of 0.2 mg/L
2. A Total coliform limit of 50 cfu/100 ml
3. A chlorine residual of 0.05 mg/L

Further, if the facility were to be expanded such that the design flow was 1.0 MGD or greater, then a Nitrate limit of 20 mg/L would be required according to TOGS 1.1.1.

The anticipated total phosphorus limit is significant to the Willard facility as it likely require treatment upgrades/changes that will impact multiple phases of the existing treatment system. For instance, when providing treatment for phosphorus down to 0.2 mg/L the following can be expected:

1. The surface overflow rates for the clarifiers (currently in the center of the aeration tanks) is reduced from 1200 GPD/ft<sup>2</sup> to 900 GPD/ft<sup>2</sup> or in other words the existing clarifiers are too small. At minimum, new clarifiers will need to added to the treatment system.
2. Chemical precipitation will need to be added to the treatment system.
3. Tertiary filtration will need to be added to the treatment system. Most likely to achieve the 0.2 mg/L limit, disc filtration will be required. It is not likely that the existing sand filter could achieve the limit.
4. Sludge production will increase by 25 – 35% and will likely require modifications to how solids are handled at the facility.
5. Dechlorination will need to be added the treatment system which will include expansion of the chlorine contact tank.

At this planning level, project estimates to make the improvements listed above could range between \$4,000,000 to \$6,000,000, the high end of the range is assuming modifications to hydraulic profile are required to accommodate new clarifiers, disc filters, and digesters.

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Current Willard Improvements

MRB Group has designed improvements to the Willard facility including:

- Replacement of the influent screw pumps
- Replacement of the grit removal system
- Improvements to the HVAC/Lighting in the headworks room (code issue)
- Improvements to the aeration tanks
- Rehab of the chlorine contact tank.

MRB group has prepared an updated construction estimate based on the design drawings. At this time, we would caution the County in proceeding with these improvements outlined above since it is very likely that future improvements either to comply with future SPDES effluent discharge limits or expansion of the facility expansion will render these improvements obsolete. A detailed estimate is included below:

<b>Willard WWTP Improvements 2016</b>						
<b>1904.16004</b>						
<b>Seneca County</b>						
<b>2/21/2017</b>						
	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Estimated Total Cost</b>	<b>Comments</b>
	<b>BASE BID</b>					
	Mob/Demob	1	LS	\$ 30,000.00	\$ 30,000.00	
	Bonds/Insurance/Submittals	1	LS	\$ 15,000.00	\$ 15,000.00	
	Screw Pump Demo	1	LS	\$25,000	\$ 25,000.00	
	Influent Sluice Gates	2	LS	\$ 50,000.00	\$ 100,000.00	
	Screw Pumps/Control Panel	2	LS	\$ 137,500.00	\$ 275,000.00	
	Auto Grease System	2	LS	\$ 15,000.00	\$ 30,000.00	
	Bypass Pumping	1	LS	\$ 30,000.00	\$ 30,000.00	
	Screw Pump Electric	1	LS	\$ 15,000.00	\$ 15,000.00	
	Headworks Room Demo	1	LS	\$ 15,000.00	\$ 15,000.00	
	Grit Removal/Control Panel	1	LS	\$ 200,000.00	\$ 200,000.00	
	Grit Classifier	1	LS	\$ 100,000.00	\$ 100,000.00	
	Grating/Misc. Steel	1	LS	\$ 25,000.00	\$ 25,000.00	
	Air Piping Replacement	1	LS	\$ 7,500.00	\$ 7,500.00	
	Headworks Room HVAC	1	LS	\$ 20,000.00	\$ 20,000.00	
	Headworks Room Lighting	1	LS	\$ 20,000.00	\$ 20,000.00	
	Gas Detection System	1	LS	\$ 15,000.00	\$ 15,000.00	
	Headworks Room Electric	1	LS	\$ 25,000.00	\$ 25,000.00	
	Tank Demo/Cleaning	2	LS	\$12,000.00	\$24,000.00	
	Valves	2	LS	\$12,500.00	\$25,000.00	
	PVC Piping	2	LS	\$7,500.00	\$15,000.00	
	Piping Supports	1	LS	\$15,000.00	\$15,000.00	
	Diffuser Installation	2	LS	\$7,500.00	\$15,000.00	
	Chlorine Contact Tank Repair	1	LS	\$50,000.00	\$50,000.00	
	<b>ALTERNATES</b>					
				<b>Construction Subtotal</b>	\$ 1,091,500.00	
				<b>Construction Contingency 10%</b>	\$109,150.00	
				<b>TOTAL PROJECT BUDGET ESTIMATE - ROUNDED TO NEAREST</b>	<b>\$1,000</b>	<b>\$1,201,000.00</b>

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### Potential Consolidation

After review of the potential modifications to the SPDES permit as well as the underlying interest of the NYSDEC to have the facilities consolidated, MRB group reviewed the recent plant flow data to determine if modification of the SPDES permit is required to increase capacity. A summary of the existing 2015 - 2016 facility flows is included below:

Table 2 - Existing Facility Flows

	Willard	Five Points	Hillside	Totals
	MGD	MGD	MGD	MGD
Average Daily Flows	0.41	0.26	0.06	0.73
(Max. Month) Flows	0.6	0.38	0.11	1.09
Peak Instantons Flows	2.0	1.33	0.78	4.1
Permitted Flow	0.7	0.55	0.107	1.357

If all facilities are to be combined, the most feasible location for treatment is the Willard WWTP. Improvements are required to increase the capacity of the Willard WWTP since the current average daily flows (ADF) and maximum month flows (MMF) already exceed the permitted capacity of the Willard facility. Based on the current permitted flows we estimate that the facility's capacity should be increased to approximately 1.5 million gallons per day (MGD). A complete review of all inter-municipal agreements related to sanitary sewer service is required to determine the ultimate capacity of the Willard WWTP. The potential consolidation will include the decommissioning of two wastewater treatment plants, conveyance of flows to the Willard WWTP and a capacity expansion of the Willard WWTP.

### Conveyance - Hillside

The Hillside Waste Water Treatment Plant (WWTP) handles the Hillside operations. Based on NYSDEC correspondence it has been suggested that the Hillside Facility be taken off line and redirected to the Five Points WWTP or Willard WWTP. Redirecting flow to these facilities will require a combination of Pump Stations, force main, gravity sewer and connection to the existing system. The conveyance system that has been considered (although other options are available) is directing the flow to the west to the existing force main located on East Lake Road in the Town of Varick.

This conveyance system includes a pump station (with generator) at the Hillside Facility, 1,750 feet of force main down the access road to the plant, 10,600 feet of gravity sewer along NYS Route 96 A, Yale Farm Road that will empty into a proposed pump station/wet-well at the intersection with Dougherty Lane and 850 feet of force main to connect to the existing force main on East Lake Road. Although the flow from Hillside is relatively low the force main along East Lake Road needs to be evaluated to handle such flows.

To construct these upgrades, the cost is in the range of \$1,300,000 to \$1,500,000. This is a conceptual opinion of cost and will become more defined as more information is evaluated and design begins.

### Conveyance – Five Points

The Five Points Correctional Facility waste is discharged to the Five Points Waste Water Treatment Plant (WWTP) and is the largest user. Currently the waste from Five points is pumped to the WWTP, the facility is located approximately 13,000 feet north of the jail. A consideration for this Plant is also to be taken off line and possibly discharge to the Willard WWTP. Redirecting the flow to Willard WWTP will

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require a combination of improvements. The conveyance system that has been considered is changing the flow from “South to North” to “North to South” of the existing force main between the Correctional Facility and the Plant assuming the line is in satisfactory condition. In addition, new pump stations, new force main, new gravity sewer and connection to the existing system will be required. The connection point will be in the Town of Romulus. Alternate routes can be considered to accomplish the same result.

This conveyance system includes two (2) pump Stations, changing the direction of the existing force main, 11,500 feet of new force main, 9,900 feet of gravity sewer and connection into the existing system. Each pump station will have a generator for emergency power. The route is south from the WWTP along Fayette Road, continuing south along Kime Road traveling west along NYS Route 96A and crossing over NYS Route 96 A and continuing along County Road 132 to the gravity system in the Town of Romulus. Capacity of the existing gravity system needs to be evaluated to confirm that the additional flow can be conveyed.

To construct these upgrades, the cost is in the range of \$2,100,000 to \$2,500,000. This is a conceptual opinion of cost and will become more defined as more information is evaluated and design begins.

### Capacity Expansion - Willard

A capacity expansion of the Willard WWTP will impact every step of the treatment system. As stated above, the NYSDEC indicated a nitrate limit that will require the treatment system to add a nitrification/denitrification step to the treatment chain. It may be possible to convert the existing aeration tanks into sequencing batch reactors (SBRs) to provide this treatment. It is anticipated that an expansion of the Willard WWTP would include a new head-works/pump station building, conversion to SBRs, a new equalization tank, disc filtration, new digesters, expansion of chlorine contact tank to include dechlorination and other miscellaneous improvements. At this planning level, project estimates to make the improvements listed above could range between \$7,000,000 to \$9,500,000.

### Potential Funding Sources

This type of project would typically be funded through the CWSRF program. It is not possible to submit an application for the last round of infrastructure grants this year, however the scope of this project would have made for a strong application. Recently announced, the State appears to be ready to pass the Clean Water Infrastructure Act of 2017 that will include approximately \$7 billion in water quality funding. It is likely a program of this scale will be administered by the Environmental Facilities Corporation (EFC). The County should explore grant opportunities available through the Consolidated Funding Application for consolidation of services.

### Financial Impacts

The County will need to complete improvements at each wastewater treatment plant to comply with the new SPDES effluent discharge limits. At this time the total cost of those improvements range from \$6,500,000 to \$11,000,000. Assuming the County financed the improvements for compliance with the SPDES permits (\$11,000,000) over a 30-year period at 3.0% interest, the annual principle and interest payment would be approximately \$562,000.

The existing annual operational budget of Hillside/Five points is \$390,000. Consolidation of these facilities could be expected to save \$350,000 annually if converted into a pump station and flows are conveyed to the Willard WWTP for treatment.

Consolidation of the facilities will include the cost of conveyance and the expansion of the Willard WWTP. At this time the total cost of those improvements range from \$10,400,000 to \$13,500,000. The net effect costs of consolidation would be the difference between the costs needed to comply with the new SPDES permit limits and the consolidation costs. At this planning level those costs are estimated to range

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between approximately \$3,000,000 to \$4,000,000. Assuming the County financed the improvements for consolidation (\$13,500,000) over a 30-year period at 3.0% interest, the annual principle and interest payment would be approximately \$689,000. Considering the expected consolidation savings of \$350,000 per year, the increase would be \$339,000. Note that once the bond expires, the consolidation would save \$350,000 annually.

### **Potential Timetable for Funding/Improvements**

The following is a preliminary timetable for funding and implementing the improvements necessary for consolidation of facilities:

- Apply for a Preliminary Engineering Grant (CFA Funding)– (7/1/2017)
- Award of Preliminary Engineering Grant – (12/1/2017)
- Complete SEQR – (4/1/2018)
- Completion of Preliminary Engineering Report – (6/1/2018)
- Submission of PER/Application for Funding – (6/1/2018)
- Potential Funding Award – (12/1/2018)
- Start of the Design of the Consolidation Project – (01/01/2019)
- Bidding of the Consolidation Project – (12/1/2019)
- Construction Start of the Consolidation Project – (04/01/2020)
- Construction Completion – (06/01/2021)