Village of Wellsville

152 Bolivar
Wellsville, New York 14895

PRELIMINARY ENGINEERING REPORT

For the

VILLAGE OF WELLSVILLE
WASTEWATER TREATMENT PLANT

Revised December 2016

MRB Group Project No. 2314.15001

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I. EXECUTIVE SUMMARY

The Village of Wellsville is evaluating the need for improvements at the Wastewater Treatment Plant (WWTP) to address recent changes to its State Pollution Discharge Elimination System (SPDES) permit, specifically a new effluent Ammonia limit. The WWTP currently treats influent flow from the Village and accepts and processes leachate from local landfills. The primary source of leachate comes from the Hyland Landfill in Angelica New York. The current changes to the SPDES permit have a direct effect on the amount of leachate that the WWTP can adequately treat and therefore accept. The acceptance of leachate also has a direct effect on the Village's Sewer budget as it is a source of revenue for their Sewer Fund.

This Preliminary Engineering Report generally presents the following:

- The existing unit processes can meet the required limits specified in their SPDES permit only under current flow and loading conditions experienced at the treatment plant. To meet design flows and loadings, the plant would need capacity upgrades. In addition, leachate acceptance would be severely limited.

- An outline of the major upgrades needed at the WWTP can be reviewed within the report and their associated cost estimates. To allow the WWTP to maintain its rated capacity and in preparation to meet future limits, major capital improvements are needed.

- This analysis concludes that the addition of plastic media, along with mechanicals and covers for the filters will allow the plant to process much more leachate (40,000-50,000 gallons per day) and still meet the new effluent ammonia limits. In order to store and release leachate into the plant at a controlled rate, we note that additional storage may be required. The Village should also update the headworks analysis to verify acceptable leachate quantities.

- The cost benefit analysis for disinfection identifies Ultra-violet disinfection (UV disinfection) as being a more cost effective solution than chlorination/de-chlorination for the Village of Wellsville. Major contributing factors include the handling costs of chlorination and de-chlorination chemicals, the need for increased tankage for chlorine contact time, regulatory requirements associated

with chemical storage and the low electrical cost associated with the Village of Wellsville utilities.

- Due to the significant cost associated with these improvements, it is recommended the Village apply for funding, including the CWSRF through NYS EFC. Upon approval of the funds, the Village can determine the best economical approach.

- In conjunction with any potential improvements to the WWTP, it is important that the Village continue (on an annual basis) to identify and attempt to reduce Infiltration and Inflow (I&I) in order to keep excessive I&I flows to a minimum. The Village is aware of Inflow and Infiltration issues within the collection system. Previous smoke testing and wet/dry analysis show significant repairs are required to the collection system.

Some other minor and inter-related upgrades needed at the WWTP are discussed and included in the report as part of the WWTP project. These issues were evaluated in previous reports and have been included in the scope of this project to provide a more comprehensive solution in regards to upgrading the WWTP.

If the Village were to undertake all recommended improvements, the project cost is estimated at approximately $10.2 million in capital costs. The Village MHI (median household income) is $39,792 based 2010-2014 ACS census data. With this capital cost financed at 4.5% interest and considering that the operational and maintenance costs would be relatively the same as they are now (due to improvements in efficiencies associated with the upgrades), an EDU cost has been projected to rise from $196 to $342. This represents an approximate increase in the overall sewer budget of approximately 75% which would require the same increase in sewer rates to cover this additional expense. Any potential low interest financing or grant will help reduce this significant increase in costs.

In accordance with NYS CWSRF requirements, this investigation and report evaluated, where applicable, the most efficient water use, reuse, and recapture conservation efforts. As examples, treated effluent water is used to wash equipment and tanks, and gas from the digesters is proposed to fuel the heating system. Modern, energy efficient motors and equipment is recommended to replace outdated, less conservative models where possible. Upgrades that were evaluated, considered the costs of operating and maintaining the project over its effective life span, along with replacement costs.

II. INTRODUCTION

A. PURPOSE OF REPORT

This report has been prepared to evaluate the potential need to upgrade the existing Village of Wellsville WWTP to address the following issues:

- Recent modifications to the SPDES permit to include Ammonia limits
- Evaluating the capacity of the existing trickling filters and their ability to treat BOD and NH3 (Ammonia) with the existing rock media and with proposed plastic high rate filter media.
- Evaluating the feasibility and benefits of adding covers to the Trickling filters.
- Determining the amount of leachate the existing WWTP can take without exceeding the biological capacity of the plant.
- Determining the amount of leachate the WWTP can take if the trickling filters were upgraded, and evaluate options for the storage and discharge of the leachate.
- Analyze plant process components with respect to capacity and service life
- Provide cost estimates for recommended upgrades

This report will assess the capacity of the processes to meet both current and future conditions.

B. BACKGROUND

The Village of Wellsville WWTP is located off Bolivar Road on the west side of the Genesee River in the Village of Wellsville. The WWTP takes and treats waste from within the Village of Wellsville, special districts within the Town of Wellsville as well as taking leachate from a number of different landfills. The average influent flow at the plant, including leachate, is 1.15 MGD.

For this evaluation, the Village POTW is considered to serve approximately 4,270 Equivalent Dwelling Units (EDU's). This is calculated based on the number of residential sewer accounts and the ratio of flow contributed by non-residential users to the average residential customer, which is approximately 38,145 gallons per year or 105 gallons per day (see Appendix B).

The WWTP accepts leachate from the Allegany County Landfill, the Hyland Facility in Angelica NY and from the Village of Wellsville. The total average monthly leachate accepted at the WWTP is approximately 30,000 gpd. The WWTP started operations in 1937. Over the years the plant has seen numerous upgrades and expansions. A map showing the plant location is presented in Figure 1.

The general arrangement of the existing treatment process is as follows. Influent passes through bar racks and a disc screen directs solids into a channel grinder. Aerated grit removal follows, then on to primary clarification. The main treatment components of the plant are the two trickling filters that were constructed as part of one of the plants upgrades in the 70's. Each trickling filter has a 120' diameter with a 6' media depth. A 16" influent pipe carries flows to a center feed distributor with four (4) rotating arms. Each trickling filter has approximately 6' of filter rock media and is open to ambient air temperatures. The two filters are generally run in series however, during the colder winter temperatures (due to freezing) one filter is typically taken off line resulting in a decrease in treatment capacity and nitrification (Ammonia processing). Following the filters, flow is directed to final clarifiers for further settling and phosphorus removal. Sludge is then digested anaerobically, pressed, dried and disposed of at the Allegany County Landfill.

With the recent modification to the Villages SPDES permit (see Appendix A), to require nitrification the plant will be limited in the amount of leachate it can accept without violating its permit.

The Village is interested in modifications at the plant that will allow them to continue to accept the same amount of leachate or more.

III. EXISTING FACILITIES

A. EXISTING WWTP COMPONENTS

A site plan of the existing plant is presented in Figure 2. The plant consists of the following treatment processes:

Wastewater treatment

- Influent sewer to disc screen and sewage grinder, aerated grit removal system with alternate grit chamber.
- Leachate unloading station with two 8000 gallon holding tanks and pumps.
- On site structure to take all influent from grit chambers and from leachate holding tank.
- Primary settling tanks (3)
- Trickling filters (2) (with flow meter and recirculation) only one filter utilized during cold winter months.
- Final settling tanks (3)
- Chlorine contact tank and associated chemical feed system (not currently utilized)
- Outfall sewer to Genesee River

Biosolids treatment

- Primary and secondary digesters
- Belt filter press
- Sludge drying beds
- Removal of solids to the Allegheny County Landfill.

The existing treatment processes are summarized in the process flow diagram shown in Figure 3.

Samples for monitoring compliance with permit requirements are taken as specified in the permit. The influent samples are taken prior to the aerated grit chamber, but following the grinder. The effluent samples are taken from the effluent chamber prior to discharge into the Genesee River.

The receiving water body for the effluent discharge is the Genesee River, Class C (T), and discharges through Outfall 001. (See Appendix C).

B. EXISTING LOADING CONDITIONS

Data was collected for the period 2012 to 2014 for this evaluation (see Appendix D). Generally, average daily flow and peak hourly flow conditions are used to evaluate capacity, and the maximum of average daily flows averaged monthly is additionally used to monitor compliance with permitted organic limits in the effluent. Minimum flow conditions are also used to monitor the range of the equipment for purposes of efficiency. Note that maximum (peak) and minimum flows are typically recorded on an instantaneous basis.

1. Hydraulic Loading

The following influent flow conditions were observed (flow includes leachate):

Table III.1: Existing Flows

Flow condition	Plant Value (With Leachate)	Leachate Value	Plant Value (Without Leachate)
Average Daily Flow (ADF)[1]	1.153 MGD	0.031 MGD	1.122 MGD
Maximum Month Average Daily Flow (MMF)[1]	1.815 MGD	0.074 MGD	1.741 MGD
Peak Hourly Flow (PHF)[2]	5.00 MGD	-	
Minimum Flow (PHF)[2]	0.78 MGD	0.018 MGD	0.762 MGD
ADF to MMF peaking factor	1.57	-	
ADF to PHF peaking factor	4.34	-	

Notes: 1. On a monthly average basis
2. On an instantaneous maximum/minimum basis

2. Organic Loading

a. Influent Data

The following organic loading parameters were observed in the plant influent:

Table III.2: Existing Influent Organic Loading

Parameter	Average Day[1]	Maximum Month Average[1]
5-day Biochemical Oxygen Demand (BOD)	1,641 lb/d 171 mg/L	2,240 lb/d 148 mg/L
Total Suspended Solids (TSS)	2,191 lb/d 228 mg/L	4,843 lb/d 320 mg/L
Total Kjeldahl Nitrogen (TKN)	206 lb/d 21 mg/L	356 lb/d 24 mg/L
Ammonia Nitrogen (NH_3)	Not monitored	
Total Phosphorus (TP)	Not monitored	

Notes: 1. Concentrations calculated based on flow rates presented in Table III.1 (Plant Value with Leachate)

The following leachate parameters were observed in the plant influent:

Parameter	Average Day[1]	Maximum Month Average[1]
5-day Biochemical Oxygen Demand (BOD)	82 lb/d 320 mg/L	759 lb/d 1,230 mg/L
Total Suspended Solids (TSS)	11 lb/d 44 mg/L	270 lb/d 438 mg/L
Total Kjeldahl Nitrogen (TKN)	48 lb/d 186 mg/L	710 lb/d 1150 mg/L
Ammonia Nitrogen (NH_3) (June 1 – Oct 31)	61 lb/d 235 mg/L	710 lb/d 1150 mg/L
Ammonia Nitrogen (NH_3) (Nov 1 – May 31)	202 lb/d 779 mg/L	1129 lb/d 1830 mg/L
Total Phosphorus (TP)	1 lb/d 4 mg/L	4 lb/d 6 mg/L

Notes: 1. Concentrations calculated based on flow rates presented in Table III.1 (Leachate Value) and the compiled data from the WWTP included as Appendix D.

b. Effluent Data

The following organic loading parameters were observed in the plant effluent:

Table III.3: Existing Effluent Organic Loading

Parameter	Average Day[1]	Maximum Month Average[1]	SPDES Permit Limits (monthly avg.)
5-day Biochemical Oxygen Demand (BOD)	124 lb/d 12 mg/L	323 lb/d 27 mg/L	459 lb/d 25 mg/l
Total Suspended Solids (TSS)	120 lb/d 12 mg/L	245 lb/d 20 mg/L	550 lb/d 30 mg/l
Total Kjeldahl Nitrogen (TKN)	120 lb/d 13 mg/L	498 lb/d 53 mg/L	Monitor
Ammonia Nitrogen (NH_3) [2]	119 lb/d 13 mg/L	566 lb/d 61 mg/L	128:239 lb/d[2] 7:13 mg/l[2]
Total Phosphorus (TP)	7 lb/d 0.73 mg/L	14 lb/d 0.98 mg/L	1 mg/l
Total Aluminum	1.30 lb/d 0.13 mg/L	5.06 lb/d 0.5 mg/L	4.5 lb/d Daily max.

Notes: 1. Concentrations calculated based on flow rates presented in Table III.1 and compiled data from the WWTP included as Appendix D.
2. Summer and winter limits respectively.

c. Future Loading Conditions

Population projections prepared by the Southern Tier West Regional Planning and Development Board were reviewed for this evaluation. Population estimates for the Village of Wellsville and the Town of Wellsville are presented in **Table III.3**.

Table III.3. Population Projections

	2013[1]	2020[2]	2030[2]	2040[2]	2040 Net Change	2040 % Change
Village of Wellsville	4,621	4,528	4,436	4,344	-277	-6%
Town of Wellsville	2,718	2,681	2,644	2,608	-110	-4%

Notes: 1. US Census *American Community Survey Estimates 2009-2013*. Town of Palmyra data extrapolated from Town total population subtracting Village total population.
2. STWRPDB *Forecasts May 2013*.

IV. BASIS FOR EVALUATION CONDITIONS

In addition to the existing loading conditions, design parameters have been established to evaluate the plant's ability to address the future conditions presented in Section II.

A. PERMIT REQUIREMENTS

The current SPDES permit is included in Appendix A.

B. DESIGN SCENARIOS

Existing Design Condition

The current operating conditions at the plant are a combination of Village/Towns influent flow as well as Village and landfill leachate.

Proposed Design Condition

Design influent flows and loadings are presented in Table 4.

Table IV.5: Design Flows and Loading

Influent Parameters	Existing	Future	Total	Design
Ave. Daily Flow (mgd)	1.15	1.05	2.20	2.20
Max. Monthly Flow (mgd)	1.82	1.57	3.39	3.50
Max. Daily Flow (mgd)	3.74	2.09	5.84	6.00
Peak Hourly Flow (mgd)[1]	5.00	3.43	8.43	7.50
Ave. CBOD (mg/l)	173	220	194	220
Ave. CBOD (lbs/day)	1631	1921	3552	3575
Max. Monthly CBOD (mg/l)	**148**	**220**	**181**	**176**
Max. Monthly CBOD (lbs/day)	**2240**	**2882**	**5122**	**5150**
Ave. TSS (mg/l)	229	220	224	230
Ave. TSS (lbs/day)	2184	1921	4105	4150
Max. Monthly TSS (mg/L)	**320**	**190**	**260**	**275**
Max. Monthly TSS (lbs/day)	**4843**	**2489**	**7332**	**7350**
Ave. Ammonia (mg/l) estimated	25	25	25	26
Ave. Ammonia (lbs/day) estimated	240	218	459	475
Max. Monthly Ammonia (mg/L) est.	**25**	**25**	**25**	**25**
Max. Monthly Ammonia (lbs/day) est.	**378**	**327**	**706**	**720**
Ave. TKN (mg/l)	25	40	30	31
Ave. TKN (lbs/day)	203	349	552	560
Max. Monthly TKN (mg/l)	**24**	**35**	**29**	**28**
Max. Monthly TKN (lbs/day)	**356**	**458**	**814**	**820**
Ave Phosphorous (mg/l) estimated	8	8	8	10
Ave. Phosphorous (lbs/day) estimated	77	70	147	150
Max. Monthly Phosphorous (mg/l) est.	**8**	**8**	**8**	**8**
Max. Monthly Phosphorous (lbs/day) est.	**121**	**105**	**226**	**230**
Peak Factor - Max Month	1.57	1.50		1.59
Peak Factor - Max Day	3.25	2.00		2.73
Peak Factor - Peak Hourly	4.34	3.28		3.41

Effluent Parameters	Design	
CBOD (mg/l)	25	Monthly Average
TSS (mg/l)	30	Monthly Average
Ammonia (mg/L) Jun1st- Oct31st	7.0	Monthly Average
Ammonia (lbs/day) Jun1st- Oct31st	128	Monthly Average
Ammonia (mg/L) Nov 1st - May 31st	13.0	Monthly Average
Ammonia (lbs/day) Nov 1st - May 31st	239	Monthly Average
Total Nitrogen (mg/l)	Monitor	Annual Average
Total Phosphorous (mg/l)[3]	1	Monthly Average
Fecal Coliform (No./100 ml)	200	Monthly Max

Environmental Conditions	
Min. Wastewater Temp. (Degrees C)	6
Max. Wastewater Temp. (Degrees C)	23
Site Elevation (ft above sea level)	1500

1: Need to reduce I+I to lower future design PHF. Under current conditions, future design PHF would be 8.50

V. WWTP COMPONENT EVALUATION

The evaluation of the Trickling Filters at the WWTP focuses on the ability to meet the design conditions presented in Table 4

To aid in the evaluation, reference standards, including the *Recommended Standards for Wastewater Facilities* (also known as *Ten States' Standards*), and the *Technical Report 16: Guides for the Design of Wastewater Treatment Works* (also known as *TR-16*), have been used to compare baseline performance of the unit processes.

Detailed capacity evaluation calculations are presented in Appendix F. It should be noted that all calculations are preliminary, and sizing of any proposed facilities or equipment presented herein will need to be reviewed during design to meet actual conditions.

It is assumed for this evaluation that the trickling filter will continue to be the primary mode of secondary treatment, and that improvement of the treatment capacity will be based on cost effective upgrades to the plant, such as replacement of the existing rock media with new plastic media, the addition of covers, with the possibility of a new leachate storage tank that would allow leachate to flow into the influent stream at a steady controlled pace. While the trickling filters are the focus of this evaluation, the remainder of the plant is in need of upgrading as well. The headworks of the plant have become antiquated, along with solids dewatering equipment. BOD levels must first be reduced down to approximately 20 mg/l before effective nitrification will begin. The existing primary and final clarifiers were also evaluated for capacity and service life. Recommended process improvements are discussed further in Section IV.

A. INFLUENT SCREEN

Influent flows are passed through a disc screen which directs solids, rags and larger debris toward a sewage grinder for emulsification. The disc screen was installed in the 1996 upgrade that replaced the old comminutor. The disc screen and grinder themselves have become worn and inefficient. Operator reports show that the grinder requires replacement every 5 to 6 years which is a clear sign of overloading.

B. AERATED GRIT REMOVAL

After the sewage grinder flow enters an aerated chamber that settles grit to the bottom for mechanical removal with a clam shell bucket. The system is functional and this type of design is still installed today. The mechanical bucket is very labor intensive however. A new grit pump and dewatering system would make the process more efficient.

C. PRIMARY CLARIFIERS

Following preliminary treatment, the flow enters into a junction box shared by three, rectangular peripheral feed clarifiers. The clarifier's dimensions are outlined in Table ~~V~~II.1. All three clarifiers are identical in size.

Table V.6: Primary Clarifier Dimensions

Dimension	EA	Total
Length	50 ft	150 ft
Width	16 ft	48 ft
Total surface area	800 sq ft	2400 sq ft
Depth	9.7 ft	9.7 ft
Volume	7,760 cu ft 58,045 gal	23,280 cu ft 174,134 gal
Weir Length	80 ft	240 ft

The capacity of the primary clarifiers is based primarily on two conditions: overflow rate based on surface area loading, and overflow rate based on weir loading. *Ten States' Standards* recommends the following overflow rates for primary clarifiers that do not receive waste activated sludge:

- Surface overflow rate @ ADF: 1,000 gpd/sq ft
- Surface overflow rate @ PHF: 1,500-2,000 gpd/sq ft (assume 2,000 gpd/sq ft for evaluation)
- Weir loading rate @ PHF (ADF ≤ 1.0 MGD): 20,000 gpd/ft

Detailed capacity evaluation calculations for the primary clarifiers are summarized in Appendix F.

Table V.7: Primary Clarifiers Capacity

Design condition	Flow, MGD	Flow at max. surface overflow rate, MGD	Flow at max. weir overflow rate, MGD	Actual Surface Overflow rate G/d*ft²	Capacity[1]
Existing ADF	1.15	2.40	N/A	480	OK
Existing MMF	1.82	2.40	N/A	756	OK
Existing PHF	5.00	4.80	7.20	2,083	Marginal
Design ADF	2.20	2.40	N/A	917	OK
Design MMF	3.50	2.40	N/A	1458	OK
Design PHF	7.50[2]	4.80	7.20	3,542	Inadequate

Notes: 1. Based on both overflow rates being satisfied
2. Need to reduce I+I to lower design PHF. Under current conditions future PHF would be 8.50 MGD

The capacity of the primary clarifier's appears to be marginal to meet existing peak flow and insufficient to meet design max monthly and peak flow conditions at the recommended overflow rates. Detailed capacity evaluation calculations for the primary clarifiers are summarized in Appendix F.

The condition of the primary clarifier's structure appears to be adequate at this time. Two clarifiers were installed when the plant was built in 1937. The third was installed when the plant was upgraded in 1996. At that time the existing two had the mechanicals rebuilt and tanks evaluated. At this time, the Village should plan and consider additional or alternative primary clarification, should flows approach the design limit of the plant. In addition, reduction of I+I into the system would minimize the peak flows to the primary clarifier.

D. TRICKLING FILTERS

Capacity Evaluation

The dimensions of the existing trickling filters are as follows:

- Diameter 120 ft.
- Surface area 11,310 sf.
- Media depth (approx.) 6.0 ft.
- Media volume (approx.) 67,858 cf.

The trickling filter capacity is currently limited by the rock media used in the original design. As discussed in Section III, under current loadings, the plant has seen some effluent BOD concentrations that would have exceeded the limit in the most current SPDES permit on a maximum monthly average basis.

Detailed capacity evaluation calculations of the trickling filters with rock media and plastic media are presented in Appendix F.

The calculations show that, on average, the rock media would have to be replaced if the WWTP were to receive flows beyond the existing design condition. Assuming plastic media is used, the treatment capability of the trickling filter was re-evaluated, expanding the dosing rate recommended by the manufacturer. The capacity of the trickling filter is greatly improved by adding the plastic media.

E. Final Clarifiers

The WWTP currently has three 40' diameter final clarifiers. Two were installed in 1977 and are in need of repairs. It should be noted that the current configuration does not meet ten states standards for design peak hourly flow rates. Considering the importance of the final clarifiers for phosphorus removal, additional clarification should be considered.

Detailed capacity evaluation calculations of the final clarifiers are presented in Appendix F.

Table V.8 Final Clarifier Capacity

Design condition	Flow, MGD	Flow at max. surface overflow rate, MGD	Actual Surface Overflow rate G/d*ft²	Capacity[1]
Existing ADF	1.15	3.39	306	N/A
Existing MMF	1.82	3.39	481	N/A
Existing PHF	5.00	3.39	1,326	Inadequate
Design ADF	2.20	3.39	584	N/A
Design MMF	3.50	3.39	928	Inadequate
Design PHF	7.50	3.39	1989	Inadequate

Notes: 1. Based on surface overflow rates of 900 gpd/sf being satisfied

F. SOLIDS HANDLING

The WWTP utilizes 3 anaerobic digesters to stabilize sludge. Two are considered primary and one secondary. The Primary digesters are currently in need of a new sludge mixing and heating system. The sludge flows from the digesters to a belt filter press for de watering. The existing press was installed in 1988 and has outlived original service life.

VI. NITRIFICATION CONDITION EVALUATION

A. TRICKLING FILTERS

The current condition of the trickling filters and its equipment is consistent with original design life. Both filters were installed in 1975 when the plant was upgraded. The tanks appear to be in decent condition. If any improvements are considered, it is recommended to remove the rock media and ascertain the condition of the bottom of the tank. The distributors and hydraulic arms are functional but outdated and showing signs of wear. If any upgrades are performed on the trickling filters it is recommended to replace these components as well. The rock media is in poor condition. Operator reports show that the rock is deteriorating and falling apart. Periodic cleaning is necessary to prevent clogging and ponding of the filter. In addition, new plastic media technology has improved, and will provide significant added capacity.

As mentioned above, the colder weather has significant adverse effects to the efficiency of the trickling filters. Not only do they freeze up when temperatures get low, but the nitrification (Ammonia removal) process is greatly reduced.

B. LEACHATE RECEIVING STATION

Along with the upgrade in 1996, the leachate receiving station was improved. New transfer pumps and piping were installed, as well as a dedicated receiving slab with trench drain. The only improvement in this area would be increased storage capacity. The plant currently has 16,000 gallons of permanent leachate storage, and 21,000 gallons of temporary storage. If improvements to the filters are undertaken, the Village should consider increasing this capacity. In that regard the plant could accept more leachate, and allow for more controlled distribution into the treatment process.

C. RECIRCULATION SYSTEM

When the Trickling filters were installed in 1975 they were outfitted with a dedicated pumping/recirculation station. The station is comprised of 3 Allis Chalmers centrifugal pumps, each capable of pumping 3175 gallons per minute. These pumps were more than capable when installed and are still in operation today. Two of the drive motors have been replaced/remanufactured but with more than 40 years of service this is to be expected. If the filters are upgraded with new plastic media the existing pumps are going to need to be re designed based on the new media recommended wetting rates. To operate efficiently, the new media will require a much higher rate of flow than the existing pumps can provide. Based on the age of this equipment, and the proposed upgrades to the trickling filter, it is recommended to replace the pumps and evaluate the condition of piping and components as well.

VII. PROPOSED DESIGN IMPROVEMENTS

Based on the capacity evaluations presented in Section V, the following improvements are presented for each of the design conditions.

A. EXISTING DESIGN CONDITION

The capacity evaluation shows that certain plant components are insufficient in capacity to meet design flows and loadings at the existing design condition. Ten states standards recommended capacity is only surpassed on the existing peak hourly flow condition. This is not a critical issue considering peak flows have only approached design limits three times in the last three years. The real issue arises when evaluating design max monthly and peak hourly flows. At the current capacity both scenarios are insufficient. These scenarios are in regard to future flow and loading conditions. If no improvements are made this will severely hamper the ability of the plant to support development both inside and outside of the Village, as well as accept leachate. Addressing these concerns will also have an improvement on the treatment efficiency of the plant, as the full capacity of existing unit processes will be better utilized.

One alternative would be to do no improvements at this time and wait till flows or loadings increase to the point of nearing violation. Deferring necessary improvements is undesirable from a long term financial perspective. Not only are the same upgrades expected to increase in cost over time due to inflation; current financing rates are significantly lower than historical rates, and the available financing programs tend to prioritize comprehensive improvement projects that address multiple issues over piecemeal component upgrades (as other similar Villages have experienced in attempting to secure financing for upgrades to their waste water plants.)

Due to the above concerns, this alternative is not recommended.

B. PROPOSED DESIGN CONDITION

Proposed design incorporates the following improvements. Any one of these potential options could be undertaken individually if the Village chooses.

Replace rock media in existing trickling filters with crossflow plastic media. Conceptually, AccuPAC CF-1900 manufactured by Brentwood Industries (specific media packing surface area = 48 sq ft / cu ft) is proposed, and has been assumed for the capacity evaluation calculations. Per manufacturer, minimum dosing rate is recommended to be 0.25 gpm/sq ft. When the rock is removed the tanks can be cleaned and evaluated for signs of wear, repairs made if necessary and recoat concrete surfaces. Calculations have been completed and are included in Appendix F showing that the existing media although currently adequate, is highly dependent on the temperatures and therefore time of year (so whether one filter is running or if both are running), the influent flows and the amount of leachate discharged at the plant. The existing media is also degrading and falling apart. The operator reports having to rearrange the media at times to prevent ponding on top of the filters.

Replace trickling filter hydraulic distributors and arms with upgraded stainless steel motorized units, providing more control and flexibility to the operator. With motorized units, the operator can directly control the dosing (wetting) rate to the filters responding to changes needed in treatment.

Replace trickling filter pumps with larger units capable of meeting recommended wetting rates of new media. It is cost effective to continue use of self-priming pumps to minimize alterations to the pump system and wet well setup. Suction and discharge piping has adequate capacity to support the new pumps. These components can remain as long as they are found to be in good condition.

Install geo dome covers with mechanical venting over both trickling filters to control temperatures and air flow. This will vastly improve the efficiency of the filters

by regulating the internal temperatures and oxygen content. This will also allow for year round operation of both filters, without the laborious task of chipping ice off the filters.

Increase leachate storage capacity. The plant currently has two storage tanks for leachate. The existing night soils holding tank and a modified chemical holding tank. Both tanks have a total capacity of approximately 16,000 gallons. If the filters are upgraded the plant will require more storage capacity. Construction of a new, underground 50,000 gallon concrete tank would provide approximately two days of storage (33,000 gallons a day along with current storage), if the plant has an issue and cannot process leachate. This will also allow for the most consistent addition of leachate into the treatment process.

C. Inflow and Infiltration Improvements

The Village has been aware for some time that a good portion of the sewage collection system is in need of repair. During wet weather events the WWTP experiences much higher flows than normal. This is due to aging pipes and manholes allowing storm water to leak in. The Village recently hired MRB to do some testing on the existing system. The results show the need to reline approximately 7500 linear feet of sewer main, and repair and seal at least 5 manholes. The reduction of I+I will reduce peak flows to the plant, and save capacity for additional growth to the Village.

D. New Influent Screen

The current disc screen and sewage grinder are very high maintenance and inefficient at removing rags and other debris. That material is currently passing downstream clogging pumps and nozzles. The current influent structure is also exposed to the elements. A new center flow band screen with washing compactor will capture this material, and dewater it for easy disposal. It is recommended to house the new equipment in a fiberglass or CMU structure to avoid exposure to the elements.

E. New Effluent Disinfection System

The NYS DEC has notified several WWTP's in the region of upcoming disinfection requirements in the next one to three years. A cost benefit analysis was performed to ascertain the most cost efficient approach to disinfect effluent for the Village of Wellsville. Results show that U.V. (ultra violet) disinfection is more economical over a 20 year period. See appendix H for the cost benefit analysis breakdown.

If a capital project is undertaken, it is recommended to install a new U.V. disinfection system in the project.

F. Final Clarifier Improvements

Two of the three existing final clarifiers are in need of mechanical repairs. It is recommended to drain the tanks, check for wear and recoat the tanks if necessary and replace the mechanicals. A new 40' diameter final clarifier is also recommended, as the current configuration does not meet ten states standards for overflow rates at existing peak hourly flow or design max monthly and peak hourly flows.

G. New solids de watering press

The Current belt filter press has become worn and inefficient. Operator reports show significant labor and frequent repairs are required to keep it running. A new solids de watering screw press is recommended to replace the existing press. A new screw press would be less labor intensive, and offer the operator more control over operations.

H. New SCADA system

The WWTP currently does not have a SCADA (supervisory control and data acquisition) system. These systems are critical for plants of Wellsville's size to more accurately control and respond to changes in conditions and equipment maintenance. In addition, a new system would simplify the acquisition of data such as influent and effluent concentrations.

VIII. PROJECT COST ESTIMATES

A. CAPITAL PROJECT COSTS

The capital project costs associated with the improvements described in Section VI are estimated in Appendix G and summarized in Table 8

Table VIII.9: Capital Project Costs

Description	Probable Cost[1]
Construction	
Site Work	$339,000
Trickling Filter Improvements	$2,327,000
Increase Leachate Storage	$119,000
Inflow and Infiltration Improvements	$463,000
Influent Screen and Enclosure	$253,000
Effluent UV Disinfection System	$380,000
Final Clarification Improvements	$651,000
Solids Handling upgrades	$708,000
SCADA system	$340,000
M.E.P. Contracts	$1,265,000
Mobilization, Bonds, Insurance	$446,000
Construction Subtotal	**$7,291,000**
Associated Costs	
Construction Contingency	$1,093,000
Engineering Services	$1,458,000
Administrative, Financial, and Legal Services	$364,000
TOTAL PROJECT COST	**$10,206,000**

Notes: 1. Costs rounded to nearest $1,000.

B. TOTAL ANNUAL USER COSTS

Estimates for the total annual cost per EDU is presented in Appendix B and summarized in Table 9. Estimates are based on various debt service rates assuming 30-year financing through the CWSRF, administered by NYSEFC.

Table VIII.10 Total Annual User Costs

Capital Project @ 4.5% Financing			
EDU COST		**EDU COST BREAKDOWN**	
Total Project Cost	$ 10,204,000.00	Existing O&M Cost Per EDU	$ 176.35
Loan Rate	4.50%	Current Debt Service Per EDU	$ 19.15
Loan Period	30	Existing Annual Cost Per EDU	$ 195.50
New Debt Service	$ 626,439		
Existing Debt Service	$ 81,750.00	Proposed Annual Debt Service Per EDU	$ 146.72
Total Annual Debt Service	$ 708,189	Proposed O&M Increase Per EDU	$ 0.35
O&M Annual Cost	$ 752,952.00	Proposed Annual Cost Per EDU Increase	$ 147.07
Total Proposed Annual Cost	$ 1,461,141.30		
EDUs	4,270	Proposed Annual Cost Per EDU	$ 343
Proposed Annual Cost Per EDU (Present Value)	**$ 342**		
		percent increase	75%

Capital Project @ 0% Financing			
EDU COST		**EDU COST BREAKDOWN**	
Total Project Cost	$ 10,204,000.00	Existing O&M Cost Per EDU	$ 176.35
Loan Rate	0.00%	Current Debt Service Per EDU	$ 19.15
Loan Period	30	Existing Annual Cost Per EDU	$ 195.50
New Debt Service	$ 340,133		
Existing Debt Service	$ 81,750.00	Proposed Annual Debt Service Per EDU	$ 79.66
Total Annual Debt Service	$ 421,883	Proposed O&M Increase Per EDU	$ 0.35
O&M Annual Cost	$ 752,952.00	Proposed Annual Cost Per EDU Increase	$ 80.01
Total Proposed Annual Cost	$ 1,174,835.33		
EDUs	4,270	Proposed Annual Cost Per EDU	$ 276
Proposed Annual Cost Per EDU (Present Value)	**$ 275**		
		percent increase	41%

Included in this evaluation are preliminary cost estimates for all plant components that the operator has outlined for replacement. See Appendix G for detailed estimates.

IX. RECOMMENDATIONS

The existing Village of Wellsville WWTP is currently functioning sufficiently well to meet the existing permitted effluent limits. This is attributed to good operations and maintenance practices, as well as the plant influent loadings being far below the original design capacity. However, it is anticipated the plant will be faced with a number of challenges in the near future that will necessitate capital improvements. Some of these are imposed externally (e.g. changes in regulatory requirements), and others are a consequence of the age of the facility and equipment, as well as the original process design and deviations from it.

It has been demonstrated in this evaluation that future design conditions will not be met without improvements to multiple components. Fortunately, it is believed that many of the existing unit processes can be reused and upgraded without requiring a total redesign of the plant – the only new structures recommended are a new leachate storage tank, and a new final clarifier.

The imposition of new effluent limits in the Villages SPDES permit will limit the amount of leachate the plant can process. The recommended improvements are needed to address these requirements. If no improvements are undertaken, the Village will be severely limited in the amount of leachate they can process, in the colder months maybe none at all. If the Village determines that it will continue to generate revenue from processing leachate, implementing the capital improvements will provide additional capacity for acceptance and treatment of leachate. Therefore, it is recommended for the Village to proceed with a capital project at this time.

A possible project schedule is presented in Table VIII.1.

Table IX.11 Possible Project Schedule

Milestone	Date
Submit Project Engineering Report for Review	August 2016
Complete Environmental Review Process	November 2016
Submit Application for Project Financing	December 2016
Submit Plans and Specifications for Review	January 2017
Advertise for Bids	February 2017
Commence Construction	June 2017
Complete Construction	June 2019

FIGURES

APPENDIX A

CURRENT WWTP SPDES PERMIT

APPENDIX B

SEWER EDU DETERMINATION

APPENDIX C

NYSDEC WI/PWL LISTING FOR GENESSEE RIVER AT WELLSVILLE

APPENDIX D

EXISTING FLOW AND LOADINGS

APPENDIX E

LEACHATE DATA

APPENDIX F

WWTP DESIGN PARAMETERS

APPENDIX G

WWTP CAPACITY EVALUATION CALCULATIONS

APPENDIX H

PROJECT COST ESTIMATES

APPENDIX I

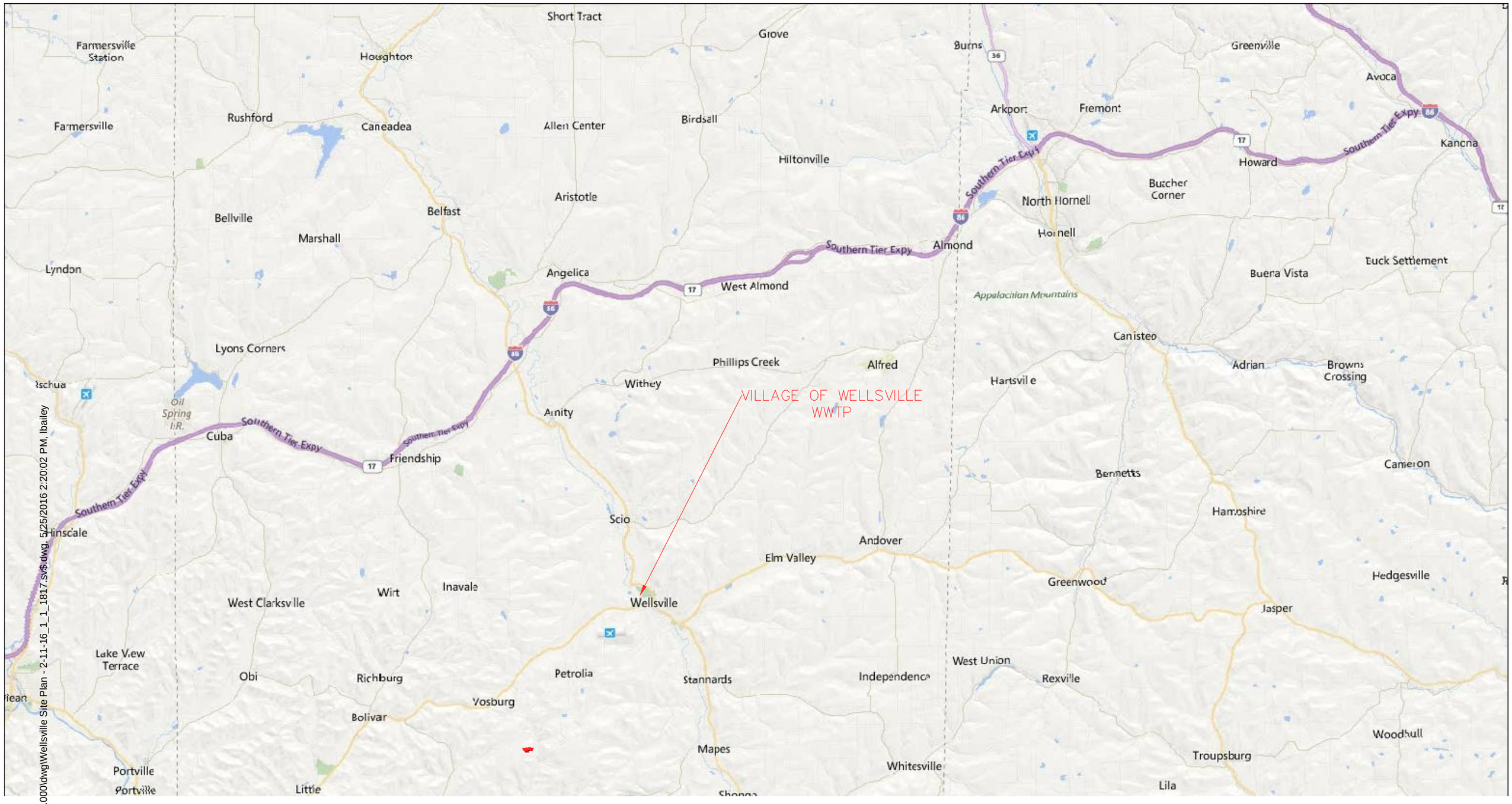
WELLSVILLE ACS MEDIAN HOUSEHOLD INCOME DATA

APPENDIX J

VILLAGE OF WELLSVILLE

SEWER BUDGET

FIGURES



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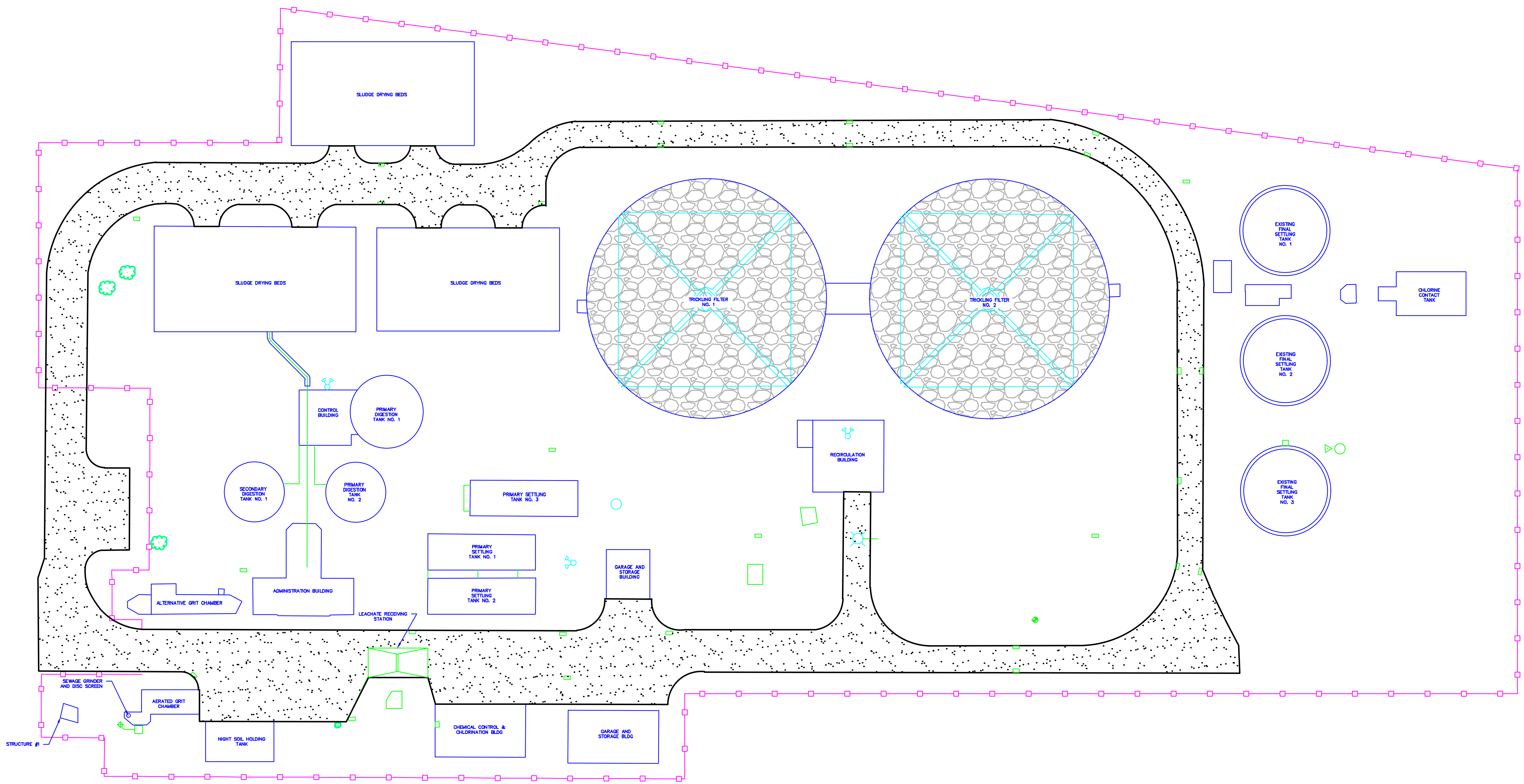


DRAWING ALTERATION
THE FOLLOWING IS AN EXCERPT FROM THE NEW YORK EDUCATION LAW ARTICLE 145 SECTION 7209 AND APPLIES TO THIS DRAWING.
"IT IS A VIOLATION OF THIS LAW FOR ANY PERSON UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ENGINEER OR LAND SURVEYOR IS ALTERED, THE ALTERING ENGINEER OR LAND SURVEYOR SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND THE DATE OF SUCH ALTERATION AND A SPECIFIC DESCRIPTION OF THE ALTERATION".

No.	Revisions and Descriptions	By	Date

Drawn By: ANB
Checked By: LHB
Scale: 1"=25'
Date: 2/15/16

Project Title: VILLAGE OF WELLSVILLE WWTP EVALUATION

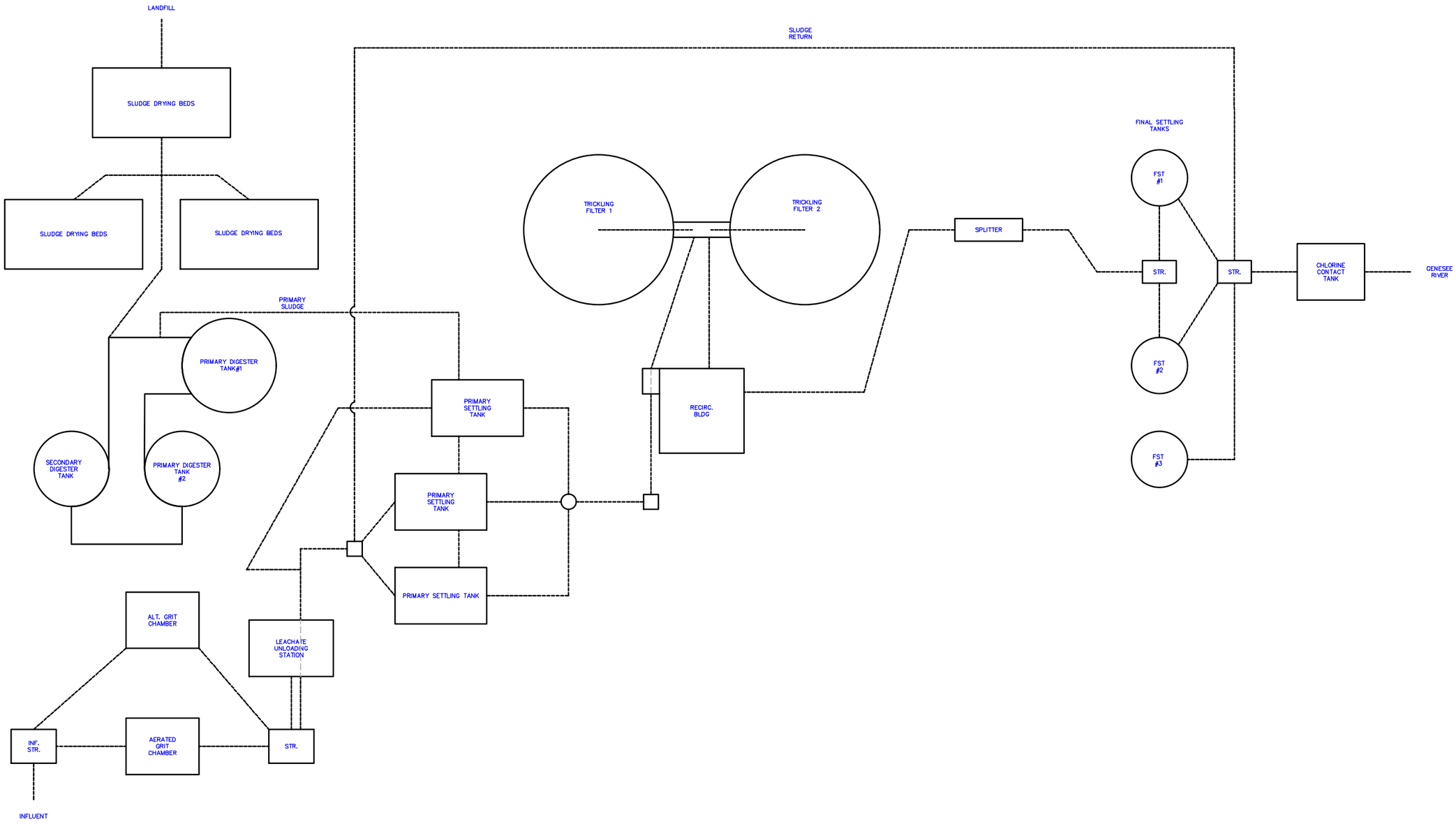
Drawing Title: EXISTING SITE PLAN

MRB | group
Engineering, Architecture, Surveying, P.C.
The Culver Road Armory, 145 Culver Road, Suite 160, Rochester, New York 14620
Phone: 585-381-9250
www.mrbgroup.com

Sheet No. G-1

1 of 4

Project No. 2314.15001



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Checked By: LHB
Scale: 1" = 40'
Date: 2/15/18

No.	Revisions and Descriptions	By	Date

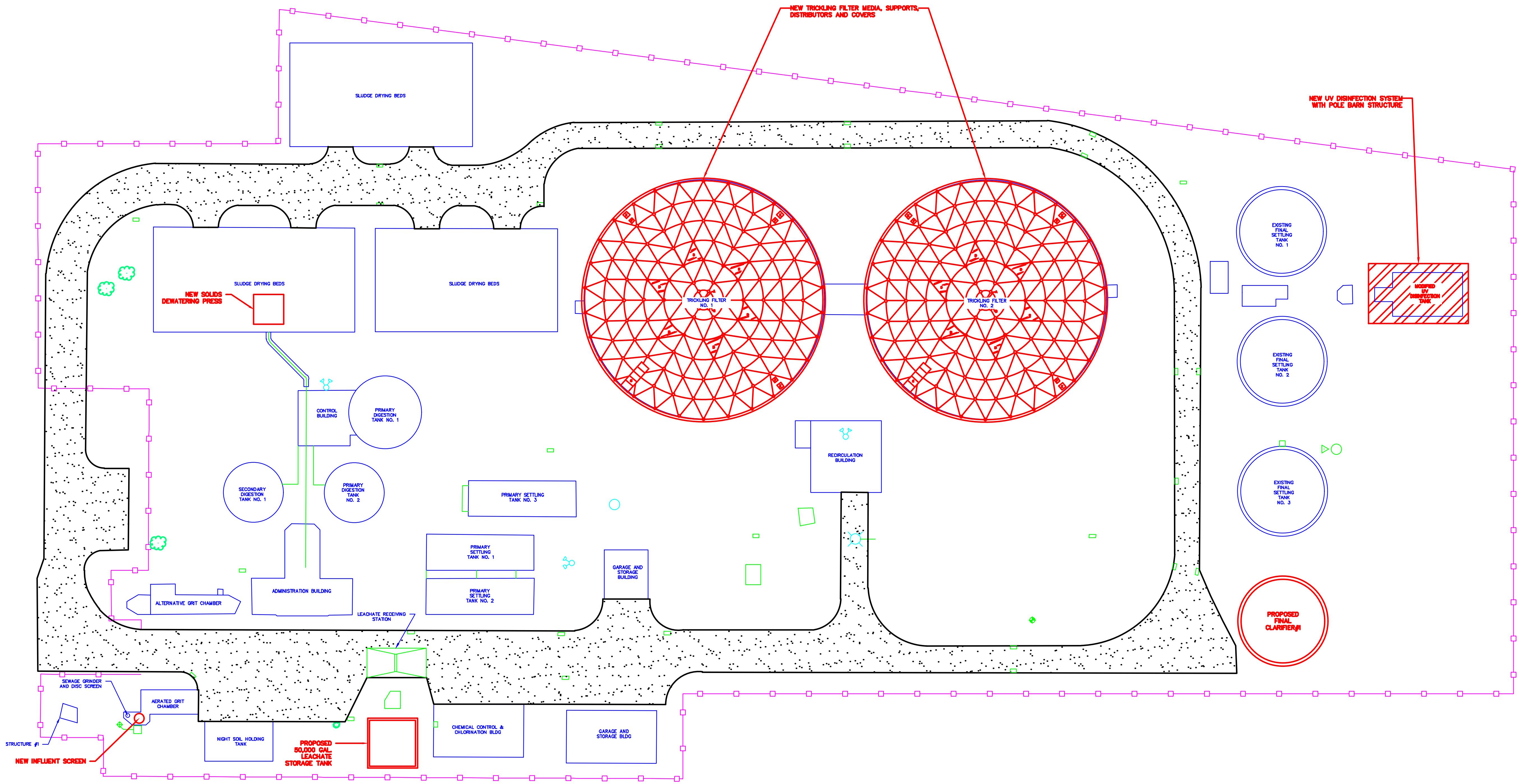
Project Title:
VILLAGE OF WELLSVILLE WWTP EVALUATION

Drawing Title:
EXISTING FLOW SCHEMATIC

MRB group
Engineering, Architecture, Surveying, P.C.
The Culver Road Armory, 145 Culver Road, Suite 160, Rochester, New York 14620
Phone: 585-381-9250
www.mrbgroup.com

Sheet No. G-2
2 of 4

Project No.
2314.15001



DRAWING ALTERATION
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No.	Revisions and Descriptions	By	Date

Drawn By: ANB
Checked By: LHB
Scale: 1"=25'
Date: 2/15/16

Project Title: VILLAGE OF WELLSVILLE WWTP EVALUATION

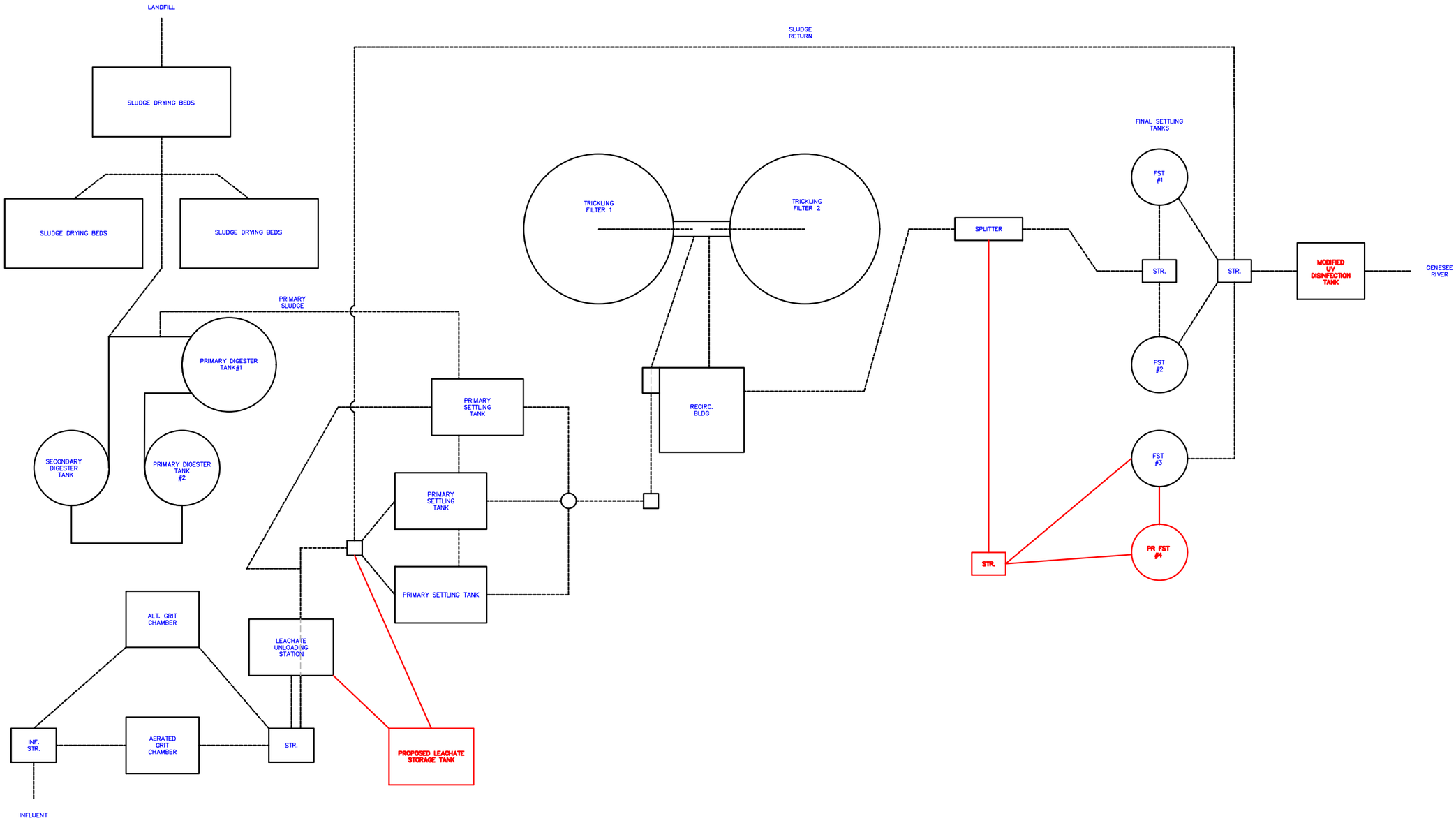
Drawing Title: PROPOSED SITE PLAN

MRB group
Engineering, Architecture, Surveying, P.C.
The Culver Road Armory, 145 Culver Road, Suite 160, Rochester, New York 14620
Phone: 585-381-9250
www.mrbgroup.com

Sheet No. G-3

3 of 4

Project No. 2314.15001



DRAWING ALTERATION
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"IT IS A VIOLATION OF THIS LAW FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR TO ALTER IN ANY WAY AN ITEM BEARING THE SEAL OF AN ENGINEER OR LAND SURVEYOR. IF AN ENGINEER OR LAND SURVEYOR IS ALTERING AN ITEM IN ANY WAY, HE SHALL ADD TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND THE DATE OF SUCH ALTERATION AND A SPECIFIC DESCRIPTION OF THE ALTERATION."

No.	Revisions and Descriptions	By	Date

Drawn By: MB
Checked By: LHB
Scale: 1" = 40'
Date: 2/15/16

Project Title:
VILLAGE OF WELLSVILLE
WWTP EVALUATION

Drawing Title:
PROPOSED FLOW SCHEMATIC

MRB group
Engineering, Architecture, Surveying, P.C.
The Culver Road Armory, 145 Culver Road, Suite 160, Rochester, New York 14620
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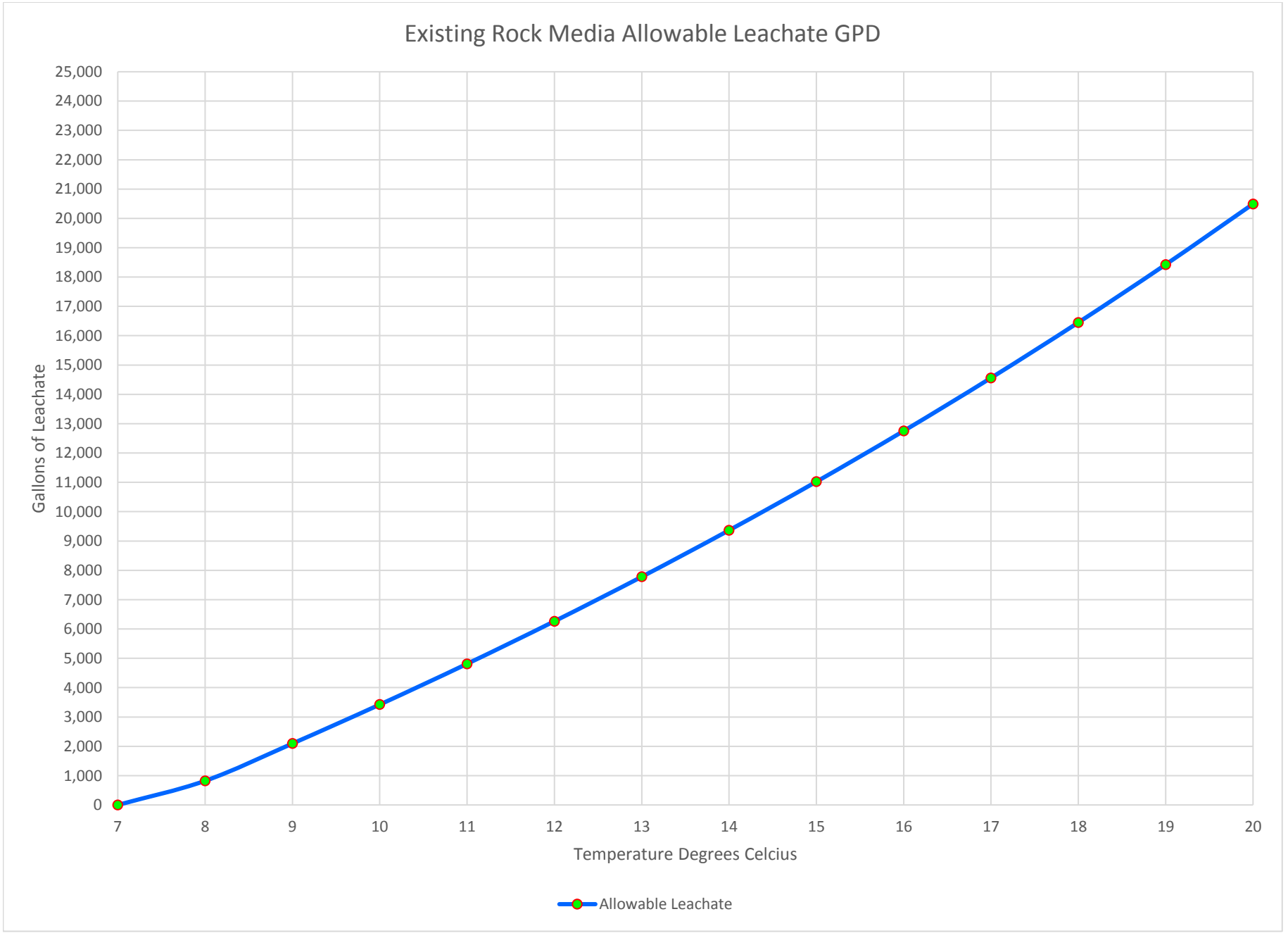
4 of 4

Project No.
2314.15001


Existing Rock Media Allowable Leachate GPD
Gallons of Leachate
25,000
24,000
23,000
22,000
21,000
20,000
19,000
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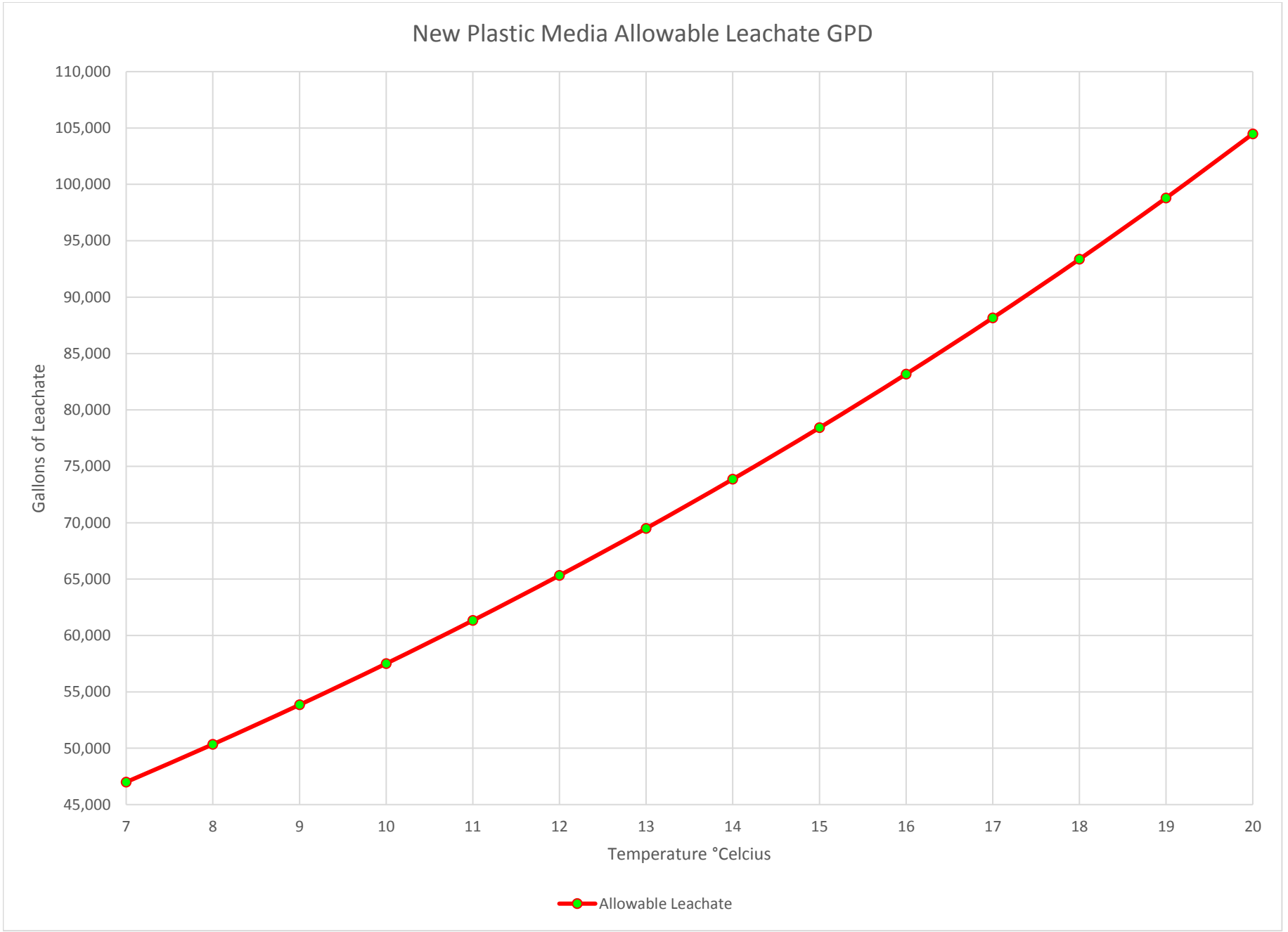
17,000
16,000
15,000
14,000
13,000
12,000
11,000
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
7
8
9
10
11
12
13
14
15
16
17
18
19
20
Temperature Degrees Celcius
Allowable Leachate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110,000
105,000
100,000
95,000
90,000
85,000
80,000
75,000
70,000
65,000
60,000
55,000
50,000
45,000
Gallons of Leachate
7
8
9
10
11
12
13
14
15
16
17
18
19
20
Temperature °Celcius
Allowable Leachate

APPENDIX A

CURRENT WWTP SPDES PERMIT

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

State Pollutant Discharge Elimination System (SPDES)
DISCHARGE PERMIT

Industrial Code:	**4952**	SPDES Number:	**NY0020621**
Discharge Class (CL):	**05**	DEC Number:	**9-0270-00023/00002**
Toxic Class (TX):	**T**	Effective Date (EDP):	**06/01/2015**
Major Drainage Basin:	**04**	Expiration Date (ExDP):	**05/31/2020**
Sub Drainage Basin:	**03**	Modification Dates: (EDPM)	
Water Index Number:	**ONT – 117 portion**		
Compact Area:	**IJC**		

This SPDES permit is issued in compliance with Title 8 of Article 17 of the Environmental Conservation Law of New York State and in compliance with the Clean Water Act, as amended, (33 U.S.C. §1251 et.seq.)(hereinafter referred to as "the Act").

PERMITTEE NAME AND ADDRESS

Name: **Village of Wellsville** Attention: **William D. Whitfield**

Street: **156 N. Main St**

City: **Wellsville** State: **NY** Zip Code: **14895**

is authorized to discharge from the facility described below:

FACILITY NAME AND ADDRESS

Name: **Village of Wellsville Wastewater Treatment Plant**

Location (C,T,V): **Wellsville (V)** County: **Allegany**

Facility Address: **152 Bolivar Rd**

City: **Wellsville** State: **NY** Zip Code: **14895**

From Outfall No.: **001** at Latitude: **42 ° 07 ' 45 "** & Longitude: **77 ° 57 ' 41 "**

into receiving waters known as: **Genesee River** Class: **C(T)**

and (list other Outfalls, Receiving Waters & Water Classifications)

in accordance with: effluent limitations; monitoring and reporting requirements; other provisions and conditions set forth in this permit; and 6 NYCRR Part 750-1and 750-2.

DISCHARGE MONITORING REPORT (DMR) MAILING ADDRESS

Mailing Name: **Village of Wellsville**

Street: **200 Bolivar Rd**

City: **Wellsville** State: **NY** Zip Code: **14895**

Responsible Official or Agent: **William D. Whitfield** Phone: **(585) 593-1850**

This permit and the authorization to discharge shall expire on midnight of the expiration date shown above and the permittee shall not discharge after the expiration date unless this permit has been renewed, or extended pursuant to law. To be authorized to discharge beyond the expiration date, the permittee shall apply for permit renewal not less than 180 days prior to the expiration date shown above.

DISTRIBUTION:

CO BWP - Permit Coordinator
RWE
RPA
USEPA Region 2
NYSEFC
IJC
NYSDOH District Office

Deputy Chief Permit Administrator: Stuart M. Fox

Address: Division of Environmental Permits
625 Broadway
Albany, NY 12233-1750

Signature: Stuart M. Fox Date: 5/6/15

PERMIT LIMITS, LEVELS AND MONITORING DEFINITIONS

OUTFALL	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
	This cell describes the type of wastewater authorized for discharge. Examples include process or sanitary wastewater, storm water, non-contact cooling water.	This cell lists classified waters of the state to which the listed outfall discharges.	The date this page starts in effect. (e.g. EDP or EDPM)	The date this page is no longer in effect. (e.g. ExDP)

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQ.	SAMPLE TYPE
e.g. pH, TRC, Temperature, D.O.	The minimum level that must be maintained at all instants in time.	The maximum level that may not be exceeded at any instant in time.	SU, °F, mg/l, etc.	See below	See below

PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL	COMPLIANCE LEVEL / ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE
	Limit types are defined below in Note 1. The effluent limit is developed based on the more stringent of technology-based limits, required under the Clean Water Act, or New York State water quality standards. The limit has been derived based on existing assumptions and rules. These assumptions include receiving water hardness, pH and temperature; rates of this and other discharges to the receiving stream; etc. If assumptions or rules change the limit may, after due process and modification of this permit, change.	For the purposes of compliance assessment, the permittee shall use the approved EPA analytical method with the lowest possible detection limit as promulgated under 40CFR Part 136 for the determination of the concentrations of parameters present in the sample unless otherwise specified. If a sample result is below the detection limit of the most sensitive method, compliance with the permit limit for that parameter was achieved. Monitoring results that are lower than this level must be reported, but shall not be used to determine compliance with the calculated limit. This Minimum Level (ML) can be neither lowered nor raised without a modification of this permit.	Action Levels are monitoring requirements, as defined below in Note 2, which trigger additional monitoring and permit review when exceeded.	This can include units of flow, pH, mass, temperature, or concentration. Examples include µg/l, lbs/d, etc.	Examples include Daily, 3/week, weekly, 2/month, monthly, quarterly, 2/yr and yearly. All monitoring periods (quarterly, semiannual, annual, etc) are based upon the calendar year unless otherwise specified in this Permit.	Examples include grab, 24 hour composite and 3 grab samples collected over a 6 hour period.

Notes:

1. EFFLUENT LIMIT TYPES:
   a. DAILY DISCHARGE: The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for the purposes of sampling. For pollutants expressed in units of mass, the 'daily discharge' is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the 'daily discharge' is calculated as the average measurement of the pollutant over the day.
   b. DAILY MAX: The highest allowable daily discharge. DAILY MIN: The lowest allowable daily discharge.
   c. MONTHLY AVG: The highest allowable average of daily discharges over a calendar month, calculated as the sum of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
   d. 7 DAY ARITHMETIC MEAN (7 day average): The highest allowable average of daily discharges over a calendar week.
   e. 30 DAY GEOMETRIC MEAN: The highest allowable geometric mean of daily discharges over a calendar month, calculated as the antilog of: the sum of the log of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
   f. 7 DAY GEOMETRIC MEAN: The highest allowable geometric mean of daily discharges over a calendar week.
   g. RANGE: The minimum and maximum instantaneous measurements for the reporting period must remain between the two values shown.

2. ACTION LEVELS: Routine Action Level monitoring results, if not provided for on the Discharge Monitoring Report (DMR) form, shall be appended to the DMR for the period during which the sampling was conducted. If the additional monitoring requirement is triggered as noted below, the permittee shall undertake a short-term, high-intensity monitoring program for the parameter(s). Samples identical to those required for routine monitoring purposes shall be taken on each of at least three consecutive operating and discharging days and analyzed. Results shall be expressed in terms of both concentration and mass, and shall be submitted no later than the end of the third month following the month when the additional monitoring requirement was triggered. Results may be appended to the DMR or transmitted under separate cover to the same address. If levels higher than the Action Levels are confirmed, the permit may be reopened by the Department for consideration of revised Action Levels or effluent limits. The permittee is not authorized to discharge any of the listed parameters at levels which may cause or contribute to a violation of water quality standards.

PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL	LIMITATIONS APPLY:	RECEIVING WATER	EFFECTIVE	EXPIRING
001	All year unless otherwise noted	Genesee River	06/01/2015	05/31/2020

PARAMETER	EFFLUENT LIMIT					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location Inf.	Location Eff.	
Flow	Monthly average	Monitor		2.2	mgd	Continuous	Recorder	X	-	-
$CBOD_5$	Monthly average	25	mg/L	459	lbs/d	1/week	24 hr comp	X	X	1,2
$CBOD_5$	7 day average	40	mg/L	734	lbs/d	1/week	24 hr comp	X	X	1,2
UOD (Jun 1st - Oct 31st)	Daily Max	-	mg/L	625	lbs/d	1/week	24 hr comp	X	X	3
Dissolved Oxygen (Jun 1st - Oct 31st)	Daily Minimum	5.0	mg/L	-	-	1/week	Grab	-	X	-
Nitrogen, Ammonia (as NH_3) (Jun 1st - Oct 31st)	Monthly Average	7.0	mg/L	128	lbs/d	1/week	24 hr comp	-	X	5
Nitrogen, Ammonia (as NH_3) (Nov 1st - May 31st)	Monthly Average	13.0	mg/L	239	lbs/d	1/week	24 hr comp	-	X	5
Nitrogen, TKN (as N) (Jun 1st - Oct 31st)	Daily Max	Monitor	mg/L	-	-	1/week	24 hr comp	-	X	-
pH	Range	6.0 – 8.5	SU	-	-	2/day	Grab	X	X	-
Phosphorus (as P)	Monthly Average	1.0	mg/L	-	-	1/week	24 hr comp	-	X	-
Solids, Suspended	Monthly average	30	mg/L	550	lbs/d	1/week	24 hr comp	X	X	1,2
Solids, Suspended	7 day average	45	mg/L	826	lbs/d	1/week	24 hr comp	X	X	1,2
Solids, Settleable	Daily Max	0.1	mL/L	-	-	2/day	Grab	X	X	-
Solids, Dissolved	Daily Max	Monitor	mg/L	-	-	1/week	24 hr comp	X	X	-
Phenolics, Total	Monthly Average	Monitor	mg/L	0.46	lbs/d	2/month	24 hr Comp	-	X	4
Action Levels	**Type**	**Action Level**	**Units**	**Action Level**	**Units**	**Sample Frequency**	**Sample Type**	**Inf**	**Eff**	**FN**
Aluminum, Total	Daily Max	Monitor	mg/L	4.5	lbs/d	1/quarter	24 hr Comp	-	X	-
Copper, Total	Daily Max	Monitor	mg/L	0.40	lbs/d	1/quarter	24 hr Comp	-	X	-
Temperature	Daily Max	70	°F	-	-	2/day	Grab	X	X	7
Whole Effluent Toxicity (WET) Testing										
WET - Acute Invertebrate	See footnote	0.3	TUa	-	-	1/quarter	See footnote	-	X	6
WET - Acute Vertebrate	See footnote	0.3	TUa	-	-	1/quarter	See footnote	-	X	6
WET - Chronic Invertebrate	See footnote	5.0	TUc	-	-	1/quarter	See footnote	-	X	6
WET - Chronic Vertebrate	See footnote	5.0	TUc	-	-	1/quarter	See footnote	-	X	6

Footnotes listed on page 4 of this permit.

FOOTNOTES:

(1) Effluent shall not exceed 15 % and 15 % of influent concentration values for $CBOD_5$ & TSS respectively from June 1st to October 31st.

(2) Effluent shall not exceed 25 % and 15 % of influent concentration values for $CBOD_5$ & TSS respectively from November 1st to May 31st.

(3) Ultimate Oxygen Demand shall be computed as follows: UOD = 1.5 X $CBOD_5$ + 4.5 X TKN (Total Kjeldahl Nitrogen).

(4) Total Phenolics is the sum of chlorinated and unchlorinated Phenolics. Total Phenolics shall be analyzed using EPA 420.4 for Total Recoverable Phenolics in water.

(5) The proposed Interim Limit is to monitor the effluent for Ammonia (as NH_3) until plant operations can be optimized to achieve the calculated Water Quality Based Effluent Limits. The enforceable limits as described above shall apply on EDP + 6months.

(6) Whole Effluent Toxicity (WET) Testing:

(i) Testing Requirements - WET testing shall consist of **Chronic only**. WET testing shall be performed in accordance with 40 CFR Part 136 and TOGS 1.3.2 unless prior written approval has been obtained from the Department. The test species shall be *Ceriodaphnia dubia* (water flea - invertebrate) and *Pimephales promelas* (fathead minnow - vertebrate). Receiving water collected upstream from the discharge should be used for dilution. All tests conducted should be static-renewal (two 24 hr composite samples with one renewal for Acute tests and three 24 hr composite samples with two renewals for Chronic tests). The appropriate dilution series bracketing the IWC and including one exposure group of 100% effluent should be used to generate a definitive test endpoint, otherwise an immediate rerun of the test is required. WET testing shall be coordinated with the monitoring of chemical and physical parameters limited by this permit so that the resulting analyses are also representative of the sample used for WET testing. The ratio of critical receiving water flow to discharge flow (i.e. dilution ratio) is 1:2 for acute, and 1:4 for chronic. Discharges which are disinfected using chlorine should be dechlorinated prior to WET testing or samples shall be taken immediately prior to the chlorination system.

(ii) Monitoring Period - WET testing shall be performed during calendar years ending in 1 and 6.

(iii) Reporting - Toxicity Units shall be calculated and reported on the DMR as follows: TUa = (100)/(48 hr LC50) or (100)/(48 hr EC50) (note that Acute data is generated by both Acute and Chronic testing) and TUc = (100)/(NOEC) when Chronic testing has been performed or TUc = (TUa) x (10) when only Acute testing has been performed and is used to predict Chronic test results, where the 48 hr LC50 or 48 hr EC50 and NOEC are expressed in % effluent. This must be done for both species and using the Most Sensitive Endpoint (MSE) or the lowest NOEC and corresponding highest TUc. Report a TUa of 0.3 if there is no statistically significant toxicity in 100% effluent as compared to control.

(iv) The complete test report including all corresponding results, statistical analyses, reference toxicity data, daily average flow at the time of sampling and other appropriate supporting documentation, shall be submitted within 60 days following the end of each test period to the Toxicity Testing Unit. A summary page of the test results for the invertebrate and vertebrate species indicating TUa, 48 hr LC50 or 48 hr EC50 for Acute tests and/or TUc, NOEC, IC25, and most sensitive endpoints for Chronic tests, should also be included at the beginning of the test report.

(v) WET Testing Action Level Exceedances - If an action level is exceeded then the Department may require the permittee to conduct additional WET testing including Acute and/or Chronic tests. Additionally, the permittee may be required to perform a Toxicity Reduction Evaluation (TRE) in accordance with Department guidance. If such additional testing or performance of a TRE is necessary, the permittee shall be notified in writing by the Regional Water Engineer. The written notification shall include the reason(s) why such testing or a TRE is required.

(7) Sampling Requirements – If the discharge temperature exceeds the Action Level of 70 degrees Fahrenheit the permittee shall, within one week, undertake the following one day monitoring program:

Monitoring Program – Temperature shall be measured at the following three locations, on the same day once in the morning and once in the afternoon:

1. effluent as close as practical to the outfall without influence from the receiving water,
2. receiving water at the bridge downstream from effluent, as shown on page 10 of 12,
3. receiving water 0 to 10 feet upstream of the outfall

The receiving water sampling locations shall be documented by the permittee and used for all subsequent monitoring, depicted on the Monitoring Locations page, locations 2 and 3 above, shall be used for monitoring unless a different location is approved by the Department. Temperature monitoring (i.e., collection and analysis of one round of influent, effluent, upstream, and downstream samples) shall be completed within one hour. In addition, the permittee shall provide a qualitative measure of streamflow during the monitoring program.

The permittee is exempt from this temperature monitoring program whenever conditions at or near the in-stream monitoring locations are unsafe due to weather.

Reporting – Results shall be appended to the corresponding Discharge Monitoring Report (DMR) and emailed in spreadsheet format to spdes.temperaturedata@dec.ny.gov.

Mercury Minimization Program for Low Priority POTWs

The permittee shall inspect each tributary dental facility at least once every five years to verify compliance with the wastewater treatment operation, maintenance, and notification elements of 6NYCRR Part 374.4. Inspection and/or outreach to other industrial/commercial sectors which may contribute mercury is also recommended. All new or increased tributary discharges, including hauled wastes, which are from sources that are industrial in nature must be evaluated for mercury content and if levels exceed 500 ng/L then authorization must be obtained from the Department prior to acceptance. Equipment and materials which may contain mercury shall also be evaluated by the permittee and replaced with mercury-free alternatives where environmentally preferable. A file shall be maintained containing the notices submitted by dental offices and all other pertinent information. This file shall be available for review by DEC representatives and copies shall be provided upon request. A permit modification may be necessary to include more stringent requirements for POTWs which do not maintain low mercury effluent levels. Note – the mercury-related requirements in this permit conform to the mercury Multiple Discharge Variance specified in NYSDEC policy *DOW 1.3.10*.

Discharge Notification Requirements

(1) Except as provided in (c) and (g) of these Discharge Notification Act requirements, the permittee shall install and maintain identification signs at all outfalls to surface waters listed in this permit. Such signs shall be installed before initiation of any discharge.

(2) Subsequent modifications to or renewal of this permit does not reset or revise the deadline set forth in (a) above, unless a new deadline is set explicitly by such permit modification or renewal.

(3) The Discharge Notification Requirements described herein do not apply to outfalls from which the discharge is composed exclusively of storm water, or discharges to ground water.

(4) The sign(s) shall be conspicuous, legible and in as close proximity to the point of discharge as is reasonably possible while ensuring the maximum visibility from the surface water and shore. The signs shall be installed in such a manner to pose minimal hazard to navigation, bathing or other water related activities. If the public has access to the water from the land in the vicinity of the outfall, an identical sign shall be posted to be visible from the direction approaching the surface water.

The signs shall have **minimum** dimensions of eighteen inches by twenty four inches (18" x 24") and shall have white letters on a green background and contain the following information:

N.Y.S. PERMITTED DISCHARGE POINT

SPDES PERMIT No.: NY_____

OUTFALL No. :____

For information about this permitted discharge contact:

Permittee Name: _____

Permittee Contact: _____

Permittee Phone: ( ) - ### - ####

OR:

NYSDEC Division of Water Regional Office Address:

NYSDEC Division of Water Regional Phone: ( ) - ### -####

Discharge Notification Requirements - Continued

(5) For each discharge required to have a sign in accordance with a), the permittee shall, concurrent with the installation of the sign, provide a repository of copies of the Discharge Monitoring Reports (DMRs), as required by the **RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS** page of this permit. This repository shall be open to the public, at a minimum, during normal daytime business hours. The repository may be at the business office repository of the permittee or at an off-premises location of its choice (such location shall be the village, town, city or county clerk's office, the local library or other location as approved by the Department). In accordance with the **RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS** page of your permit, each DMR shall be maintained on record for a period of five years

(6) The permittee shall periodically inspect the outfall identification sign(s) in order to ensure they are maintained, are still visible, and contain information that is current and factually correct. Signs that are damaged or incorrect shall be replaced within 3 months of inspection.

(7) All requirements of the Discharge Notification Act, including public repository requirements, are waived for any outfall meeting any of the following circumstances, provided Department notification is made in accordance with (h) below:

(i) such sign would be inconsistent with any other state or federal statute;

(ii) the Discharge Notification Requirements contained herein would require that such sign could only be located in an area that is damaged by ice or flooding due to a one-year storm or storms of less severity;

(iii) instances in which the outfall to the receiving water is located on private or government property which is restricted to the public through fencing, patrolling, or other control mechanisms. Property which is posted only, without additional control mechanisms, does not qualify for this provision;

(iv) instances where the outfall pipe or channel discharges to another outfall pipe or channel, before discharge to a receiving water; or

(v) instances in which the discharge from the outfall is located in the receiving water, two-hundred or more feet from the shoreline of the receiving water.

(8) If the permittee believes that any outfall which discharges wastewater from the permitted facility meets any of the waiver criteria listed in (g) above, notification (form enclosed) must be made to the Department's Bureau of Water Permits, Central Office, of such fact, and, provided there is no objection by the Department, a sign and DMR repository for the involved outfall(s) are not required. This notification must include the facility's name, address, telephone number, contact, permit number, outfall number(s), and reason why such outfall(s) is waived from the requirements of discharge notification. The Department may evaluate the applicability of a waiver at any time, and take appropriate measures to assure that the ECL and associated regulations are complied with.

SCHEDULE OF SUBMITTALS

(1) The permittee shall submit the following information to the Regional Water Engineer at the address listed on the Recording, Reporting and Monitoring page of this Permit, and to the Bureau of Water Permits, 625 Broadway, Albany NY 12233-3505:

Outfall	Parameter Affected	Required Action	Due Date
001	Bis(2-Ethylhexyl) Phthalate	The permittee shall collect 12 samples representative of normal discharge conditions and treatment plant operations over a 12 month period for the identified parameters. The permittee shall use the approved EPA analytical method with the lowest possible detection limit as promulgated under 40CFR Part 136 for the determination of the concentrations of parameters listed. The permittee shall submit a summary of the results of the analyses to the addresses listed above.	06/01/2016

(2) The above actions are one time requirements. The permittee shall submit the results of the above actions to the Department's satisfaction once. When this permit is administratively renewed by NYSDEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT," the permittee is not required to repeat the submittal(s) noted above. The above due dates are independent from the effective date of the permit stated in the letter of "SPDES NOTICE/RENEWAL APPLICATION/PERMIT."

SCHEDULE OF COMPLIANCE

(1) The permittee shall comply with the following schedule:

Outfall	Parameter Affected	Interim Effluent Limit	Compliance Action	Due Date
001	Ammonia (as NH_3)	Monitor	The Permittee shall optimize plant operations to comply with the final effluent limits.	12/01/2015

The above compliance actions are one time requirements. The permittee shall comply with the above compliance actions to the Department's satisfaction once. When this permit is administratively renewed by NYSDEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT," the permittee is not required to repeat the submission(s) noted above. The above due dates are independent from the effective date of the permit stated in the "SPDES NOTICE/RENEWAL APPLICATION/PERMIT" letter.

(2) For any action where the compliance date is greater than 9 months past the previous compliance due date, the permittee shall submit interim progress reports to the Department every nine (9) months until the due date for these compliance items are met.

(3) The permittee shall submit a written notice of compliance or non-compliance with each of the above schedule dates no later than 14 days following each elapsed date, unless conditions require more immediate notice as prescribed in 6 NYCRR Part 750-1.2(a) and 750-2. All such compliance or non-compliance notification shall be sent to the locations listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS. Each notice of non-compliance shall include the following information:

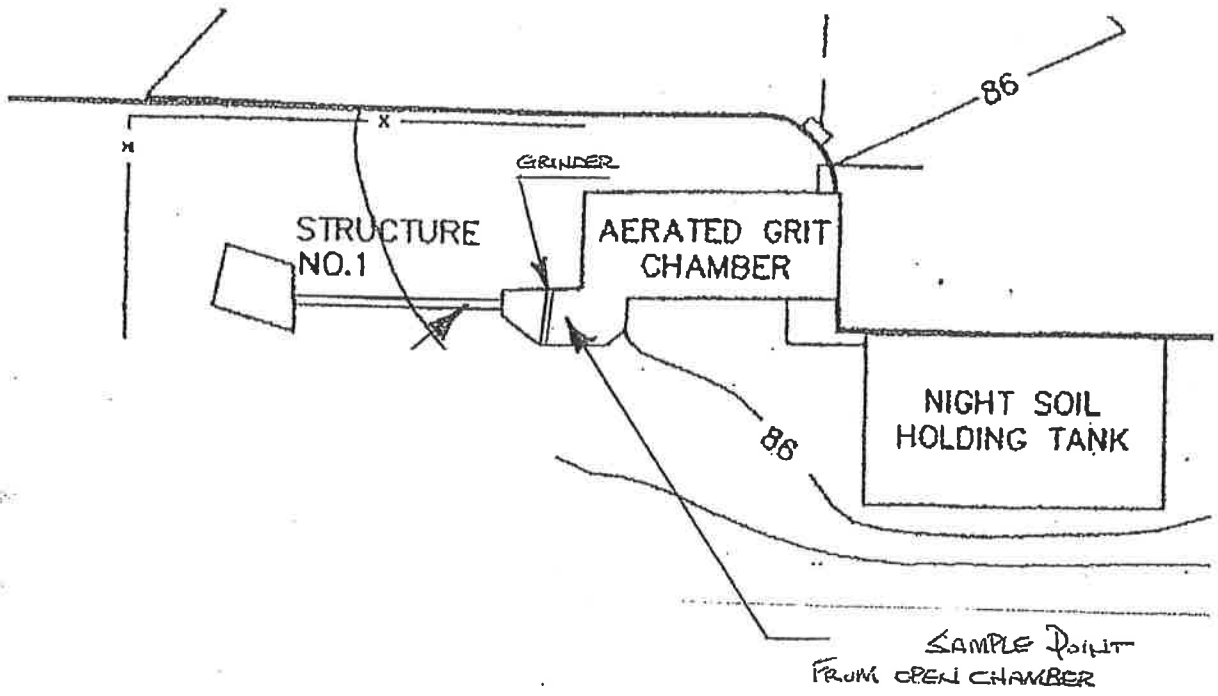
1. A short description of the non-compliance;
2. A description of any actions taken or proposed by the permittee to comply with the elapsed schedule requirements without further delay and to limit environmental impact associated with the non-compliance;
3. A description or any factors which tend to explain or mitigate the non-compliance; and
4. An estimate of the date the permittee will comply with the elapsed schedule requirement and an assessment of the probability that the permittee will meet the next scheduled requirement on time.

(4) The permittee shall submit copies of any document required by the above schedule of compliance to NYSDEC Regional Water Engineer at the location listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS and to the Bureau of Water Permits, 625 Broadway, Albany, N.Y. 12233-3505, unless otherwise specified in this permit or in writing by the Department.

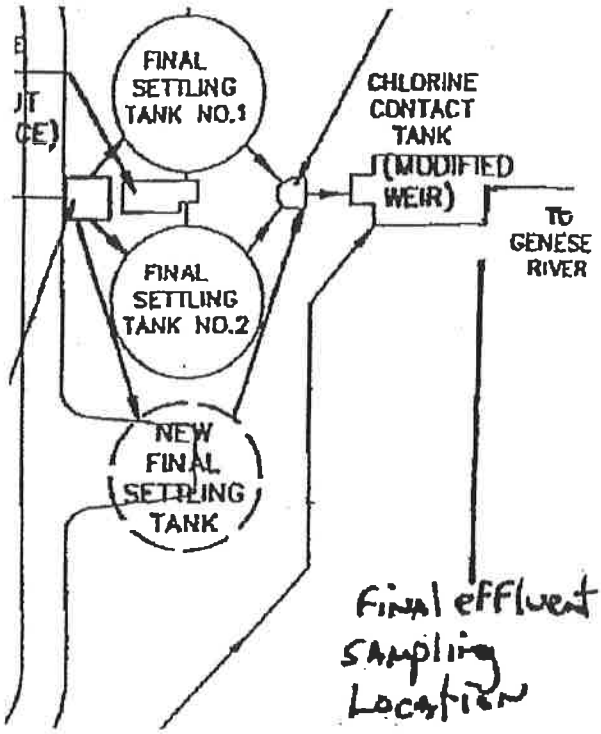
MONITORING LOCATIONS

The permittee shall take samples and measurements, to comply with the monitoring requirements specified in this permit, at the location(s) specified below:

- Influent sampling location – Prior to any plant internal waste returns and prior to the aerated grit chamber and following the grinder.

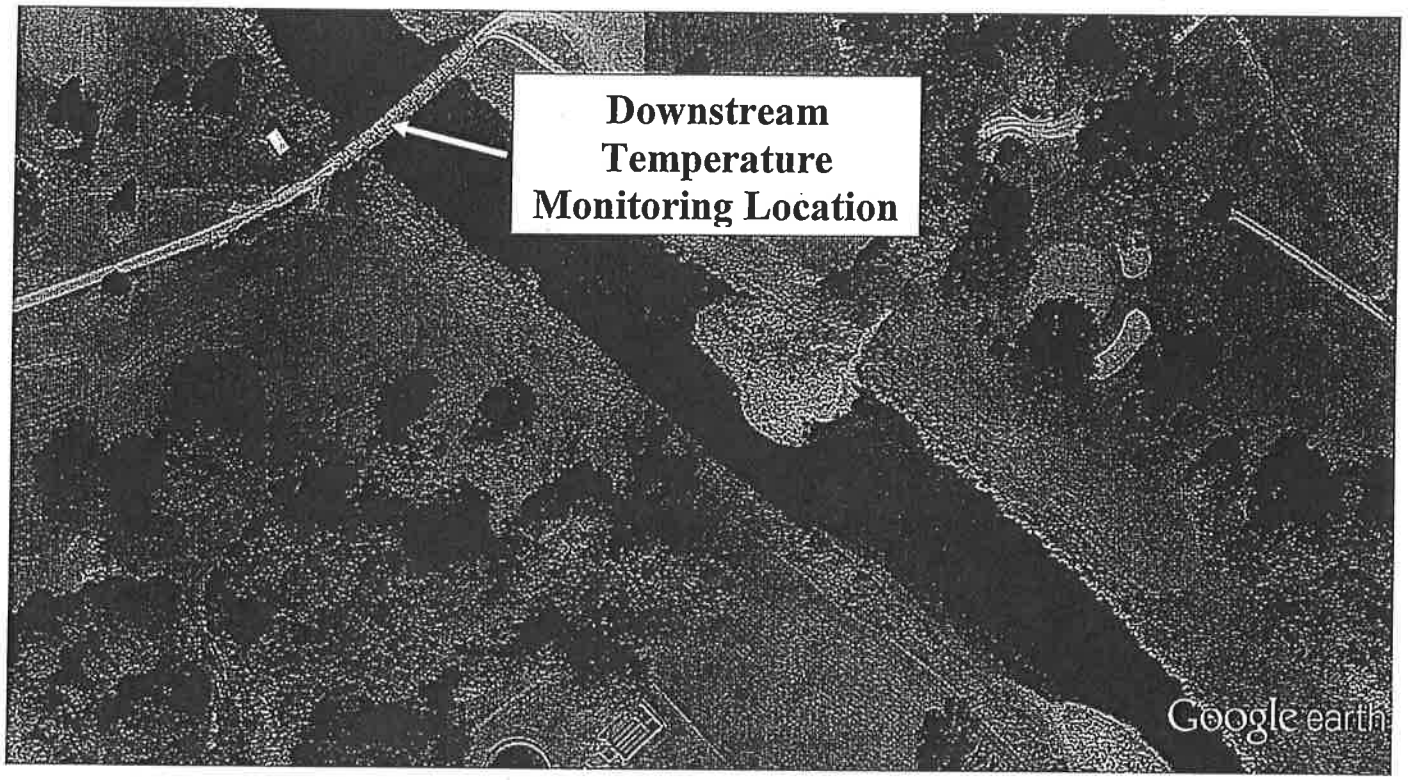


- Effluent sampling location – Effluent chamber prior to discharge to the Genesee River.



MONITORING LOCATIONS – Continued

- Downstream temperature sampling location – sample shall be taken within 25 feet of the southwest shore.



GENERAL REQUIREMENTS

A. The regulations in 6 NYCRR Part 750 are hereby incorporated by reference and the conditions are enforceable requirements under this permit. The permittee shall comply with all requirements set forth in this permit and with all the applicable requirements of 6 NYCRR Part 750 incorporated into this permit by reference, including but not limited to the regulations in paragraphs B through H as follows:.

B. General Conditions

1. Duty to comply	6 NYCRR Part 750-2.1(e) & 2.4
2. Duty to reapply	6 NYCRR Part 750-1.16(a)
3. Need to halt or reduce activity not a defense	6 NYCRR Part 750-2.1(g)
4. Duty to mitigate	6 NYCRR Part 750-2.7(f)
5. Permit actions	6 NYCRR Part 750-1.1(c), 1.18, 1.20 & 2.1(h)
6. Property rights	6 NYCRR Part 750-2.2(b)
7. Duty to provide information	6 NYCRR Part 750-2.1(i)
8. Inspection and entry	6 NYCRR Part 750-2.1(a) & 2.3

C. Operation and Maintenance

1. Proper Operation & Maintenance	6 NYCRR Part 750-2.8
2. Bypass	6 NYCRR Part 750-1.2(a)(17), 2.8(b) & 2.7
3. Upset	6 NYCRR Part 750-1.2(a)(94) & 2.8(c)

D. Monitoring and Records

1. Monitoring and records	6 NYCRR Part 750-2.5(a)(2), 2.5(c)(1), 2.5(c)(2), 2.5(d) & 2.5(a)(6)
2. Signatory requirements	6 NYCRR Part 750-1.8 & 2.5(b)

E. Reporting Requirements

1. Reporting requirements	6 NYCRR Part 750-2.5, 2.6, 2.7 & 1.17
2. Anticipated noncompliance	6 NYCRR Part 750-2.7(a)
3. Transfers	6 NYCRR Part 750-1.17
4. Monitoring reports	6 NYCRR Part 750-2.5(e)
5. Compliance schedules	6 NYCRR Part 750-1.14(d)
6. 24-hour reporting	6 NYCRR Part 750-2.7(c) & (d)
7. Other noncompliance	6 NYCRR Part 750-2.7(e)
8. Other information	6 NYCRR Part 750-2.1(f)
9. Additional conditions applicable to a POTW	6 NYCRR Part 750-2.9
10. Special reporting requirements for discharges that are not POTWs	6 NYCRR Part 750-2.6

F. Planned Changes

1. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

   a. The alteration or addition to the permitted facility may meet of the criteria for determining whether facility is a new source in 40 CFR §122.29(b); or
   b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, or to notification requirements under 40 CFR §122.42(a)(1); or
   c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

   In addition to the Department, the permittee shall submit a copy of this notice to the United States Environmental Protection Agency at the following address: U.S. EPA Region 2, Clean Water Regulatory Branch, 290 Broadway, 24th Floor, New York, NY 10007-1866.

GENERAL REQUIREMENTS continued

G. Notification Requirement for POTWs

1. All POTWs shall provide adequate notice to the Department and the USEPA of the following:
   a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; or
   b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
   c. For the purposes of this paragraph, adequate notice shall include information on:
      i. the quality and quantity of effluent introduced into the POTW, and
      ii. any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

POTWs shall submit a copy of this notice to the United States Environmental Protection Agency, at the following address: U.S. EPA Region 2, Clean Water Regulatory Branch, 290 Broadway, 24th Floor, New York, NY 10007-1866.

H. Sludge Management

The permittee shall comply with all applicable requirements of 6 NYCRR Part 360.

RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

A. The monitoring information required by this permit shall be summarized, signed and retained for a period of at least five years from the date of the sampling for subsequent inspection by the Department or its designated agent. **Also, monitoring information required by this permit shall be summarized and reported by submitting;**

[X] (if box is checked) completed and signed Discharge Monitoring Report (DMR) forms for each 1 month reporting period to the locations specified below. Blank forms are available at the Department's Albany office listed below. The first reporting period begins on the effective date of this permit and the reports will be due no later than the 28th day of the month following the end of each reporting period.

[ ] (if box is checked) an annual report to the Regional Water Engineer at the address specified below. The annual report is due by February 1 each year and must summarize information for January to December of the previous year in a format acceptable to the Department.

[X] (if box is checked) a monthly "Wastewater Facility Operation Report..." (form 92-15-7) to the:
[X] Regional Water Engineer and/or [ ] County Health Department or Environmental Control Agency specified below

Send the **original** (top sheet) of each DMR page to:
Department of Environmental Conservation
Division of Water, Bureau of Water Compliance
625 Broadway, Albany, New York 12233-3506
Phone: (518) 402-8177

Send the **first copy** (second sheet) of each DMR page to:
Department of Environmental Conservation
Regional Water Engineer, Region 9
270 Michigan Avenue, Buffalo, New York 14023-2999
Phone: (716) 851-7070

Send an **additional copy** of each DMR page to:

B. Monitoring and analysis shall be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

C. More frequent monitoring of the discharge(s), monitoring point(s), or waters of the State than required by the permit, where analysis is performed by a certified laboratory or where such analysis is not required to be performed by a certified laboratory, shall be included in the calculations and recording of the data on the corresponding DMRs.

D. Calculations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

E. Unless otherwise specified, all information recorded on the DMRs shall be based upon measurements and sampling carried out during the most recently completed reporting period.

F. Any laboratory test or sample analysis required by this permit for which the State Commissioner of Health issues certificates of approval pursuant to section 502 of the Public Health Law shall be conducted by a laboratory which has been issued a certificate of approval. Inquiries regarding laboratory certification should be directed to the New York State Department of Health, Environmental Laboratory Accreditation Program.

Municipal SPDES Permit Fact Sheet

I. SUMMARY OF PROPOSED PERMIT CHANGES

A SPDES permit renewal is proposed. The following is a summary of the proposed changes in the draft permit as compared to the currently effective permit; the details of these changes are specified below and in the draft permit:

- Water Quality Based Effluent Limits (WQBELs) for Ammonia and Total Phenolics.
- A six month period will be granted to the permittee to optimize plant operations to achieve the effluent limit for Ammonia.
- Action levels for Total Copper and Temperature have been included in the permit.
- Monitoring has been added for Total Dissolved Solids.
- The action level for Aluminum has been reduced to reflect an effluent loading that is consistently achievable through proper operation of the POTW. The monitoring frequency has also been reduced.
- A short-term high intensity monitoring program for Bis(2-Ethylhexyl) Phthalate will be included in the permit.
- Influent sampling location has been moved to after the grinder because of excessive debris that builds up on sample tube.
- A Mercury Minimization Program for low priority POTWs will be included in the permit.
- WET testing has been included in the permit.

Please note that when the Department updates a permit this typically includes updated forms incorporating the latest general conditions.

II. BACKGROUND INFORMATION

As noted throughout this document, SPDES permits are based on both federal and state requirements - law, regulation, policy, and guidance. These can generally be found on the internet. Current locations include: Clean Water Act (CWA) *www.epa.gov/lawsregs/laws/index.html#env*; Environmental Conservation Law (ECL) *www.dec.ny.gov/regulations/40195.html*; federal regulations *www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR*; state environmental regulations *www.dec.ny.gov/regulations/regulations.html*; NYSDEC water policy *www.dec.ny.gov/regulations/2654.html*.

A. Administrative History

The current SPDES permit for the facility became effective on May 1, 2008 and has an expiration date of January 1, 2013.

On August 4, 2012, the permittee submitted a permit renewal application form NY-2A and sampling data. The permittee also has submitted a request for permit modification. Due to the excessive debris that builds on the sampling tube the permittee has requested to move the influent sampling location to after the grinder.

B. Outfall and Receiving Water Information

The facility discharges wastewater to the Genesee River, Class C(T), via the following outfall:

The facility discharges treated sewage through Outfall 001. The treatment plant began operating in 1937 and since then the plant has been upgraded and expanded to treat the current design flow of 2.2 mgd. The most recent plant revisions were completed in 1997. The current treatment plant includes: grinder, aerated grit chamber, primary settling, two stage trickling filter, final clarification, and chemical removal of phosphorus. Sludge is digested anaerobically, dried, pressed and disposed of at the Allegany County Landfill.

The 7Q10 was obtained from the existing Fact Sheet. The 30Q10 flow was estimated by applying a multiplier of 1.2 to the 7Q10 flow. Mixing zone analyses are conducted in accordance with the following documents: EPA T.S.D, entitled "Water Quality Based Toxics Control," dated March, 1991; EPA Region VIII "Mixing Zones and Dilution Policy", dated December, 1994; NYSDEC TOGS 1.3.1, entitled "Total Maximum Daily Loads and Water Quality Based Effluent Limits." Other critical receiving water data, e.g., temperature, pH, and hardness were determined from the Rotating Integrated Basin Study (RIBS). This monitoring station was located on The Genesee River in the town of Scio, NY at Knights Creek Rd (Station #: 04030133, Lat: 42.170834 N, Long: 77.984726 W). The information collected from this RIBS station was compared to values used in previous water quality analyses. This critical receiving water information is listed in the *Pollutant Summary Table* at the end of this fact sheet.

C. Discharge Composition

The *Pollutant Summary Table* at the end of this fact sheet presents the existing effluent quality of the facility. Concentration and mass data are presented, based on Discharge Monitoring Report (DMR), permit application, and possibly other data submitted by the permittee for the period August 31, 2009 to September 30, 2012. The statistical methods utilized to calculate 95th and 99th percentiles are in accordance with TOGS 1.2.1 and the USEPA, Office of Water, Technical Support Document For Water Quality-based Toxics Control, March 1991, Appendix E. Statistical calculations were not performed for parameters with insufficient data. Generally, ten or more data points are needed to calculate percentiles (See TOGS 1.2.1 Appendix D). Non-detects were included in the statistical calculations.

D. Compliance History

A review of the facility's DMRs and other compliance information from August 31, 2009 to September 30, 2012 shows that the facility had the following violations:

Parameter	*Type*	*Current Limit*	*Reported Value*	*Units*	*Date*
$CBOD_5$	Monthly Ave	25	26	lbs/d	2/28/2011
UOD	Daily Max	625	795	lbs/d	10/31/2011
UOD	Daily Max	625	786	lbs/d	6/30/2012
Phosphorus, total (as P)	Monthly Ave	1	1.1	mg/L	1/31/2010
Phosphorus, total (as P)	Monthly Ave	1	1.1	mg/L	4/30/2012

III. PROPOSED PERMIT REQUIREMENTS

Sections 101, 301(b), 304, 308, 401, 402, and 405 of the Clean Water Act (CWA) and Titles 5, 7, and 8 of Article 17 ECL provide the basis for the effluent limitations and other conditions in the draft permit. The NYSDEC evaluates discharges with respect to these sections of the CWA, New York State Environmental Conservation Law, and the relevant federal/state regulations, policy, and guidance to determine which conditions to include in the draft permit.

For existing permittees, the previous permit typically forms the basis for the next permit. Permit revisions are implemented where justified due to changed conditions at the facility and/or in response to updated regulatory requirements.

A. Effluent Limitations

If applicable, the existing permit limits are evaluated to determine if these should be continued, revised, or deleted. Generally, existing limits are continued unless there is justification to do otherwise. Other pollutant monitoring data are also reviewed to determine the presence of additional contaminants that should be included in the permit.

The permit writer determines the **technology-based effluent limits (TBELs)** that must be incorporated into the permit. A TBEL requires a minimum level of treatment for industrial point sources based on currently available treatment technologies and/or Best Management Practices (BMPs). The Department then evaluates the water quality expected to result from technology controls to determine if any exceedances of water quality criteria in the receiving water might result. If there is a reasonable potential for exceedances to occur, **water quality-based effluent limits (WQBELs)** must be included in the permit. A WQBEL is designed to ensure that the water quality standards of receiving waters are being met. In general, the Clean Water Act requires that the effluent limits for a particular pollutant are the more stringent of either the TBEL or WQBEL.

1. TBELs & Anti-Backsliding:

CWA sections 301(b)(1)(B) and 304(d)(1) and ECL section 17-0509 require technology-based controls, known as secondary treatment, on POTW effluents. The applicable regulations are specified in 40 CFR Part 133.102 and 6 NYCRR Part 750-1.11. These and other requirements are summarized in TOGS 1.3.3.

Anti-backsliding requirements are specified in the CWA, sections 402(o) and 303(d)(4), ECL 17-0809 and regulations at 40 CFR 122.44(l) and 6 NYCRR Part 750-1.10. These requirements are summarized in TOGS 1.2.1. Generally, the regulations prohibit the relaxation of effluent limits in reissued permits unless one of the specified exceptions applies. In practice, limits in reissued permits will generally be no less stringent than previous permit limits to ensure compliance with anti-backsliding requirements. Otherwise, the specific exceptions that allow backsliding will be cited on a case-by-case basis.

Following is the TBEL & Anti-backsliding assessment for each pollutant present in the discharge. A summary of this analysis is provided in the *Pollutant Summary Table* at the end of this fact sheet.

Pollutant-Specific TBEL & Anti-Backsliding Analysis:

In addition to the concentration limits noted below, 40 CFR 122.45(f) requires that SPDES permits contain mass-based limits for most pollutants. Mass-based limits in lbs/day are derived by multiplying the design flow in mgd by the concentration limit in mg/l by a conversion factor of 8.34. Limits are typically expressed using two significant figures.

Flow – Consistent with TOGS 1.3.3, a monthly average flow limit of 2.2 mgd is specified, which is equal to the design capacity of the treatment plant.

pH range – The effluent pH range of 6.0 to 8.5 standard units (SU) from the previous permit is being rolled over in accordance with anti-backsliding requirements.

Temperature – An action level of 70 °F has been added. For more information see the WQBEL section below.

Aluminum – Based on a statistical analysis of the data submitted as part of the NY-2A application an action level of 4.5 lbs/d is appropriate. This action level is based on the 99th percentile loading.

Nitrogen, Ammonia (as NH_3) – See WQBEL section.

Nitrogen, Total Kjeldahl (as N) – Rollover previous monitoring requirements.

5 day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$) – 40 CFR 133.102 requires that the 30-day (monthly) average be limited to 25 mg/l, the 7-day (weekly) average be limited to 40 mg/l. The minimum percent removal of 85% in the summer and 75% in winter is retained; Wellsville meets the criteria for equivalent secondary treatment presented in TOGS 1.3.3.

Ultimate Oxygen Demand (UOD) – The 625 lbs/d WQBEL from the previous permit is being rolled over in accordance with anti-backsliding requirements. See WQBEL section for more basis.

Dissolved Oxygen – The 5.0 mg/l WQBEL from the previous permit is being rolled over in accordance with anti-backsliding requirements.

Phosphorus – The previous limit meets both departmental guidance and the GLWQA. The limit of 1.0 mg/l as a monthly average will be rolled over.

Total Suspended Solids (TSS) – 40 CFR 133.102 requires that the 30-day average effluent concentration to be limited to 30 mg/l and the 7-day average to be limited to 45 mg/l. The guidance document also states the 30-day average percent removal shall be at least 85%.

Settleable Solids – In accordance with TOGS 1.3.3 a limit of 0.1 ml/l is appropriate.

Total Dissolved Solids – Monitoring has been added for informational purposes.

Chromium, Copper, Nickel, Zinc, Total Phenols, and Bis (2-Ethyhexyl) Phthalate – Detected in the effluent, see WQBEL section below.

Mercury – See WQBEL section below.

2. WQBELs & Anti-Degradation:

In addition to the TBELs previously discussed, the NYSDEC evaluated the discharge to determine compliance with Sections 101 and 301(b)(1)(C) of the CWA and 40 CFR 122.44(d)(1). These require that permits include limits for all pollutants or parameters which are or may be discharged at a level which will cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality. The limits must be stringent enough to ensure that water quality standards are met and must be consistent with any available wasteload allocation (WLA).

The procedure for developing WQBELs includes knowing the pollutants present in the discharge(s), identifying water quality criteria applicable to these pollutants, determining if WQBELs are necessary (reasonable potential), and calculating the WQBELs. Factors also considered in this analysis include available dilution of effluent in the receiving water, receiving water chemistry, and other pollutant sources. If the expected concentration of the pollutant of concern in the receiving water may exceed the ambient water quality standard or guidance value then there is reasonable potential that the discharge may cause or contribute to a violation of the water quality, and a WQBEL or WLA for the pollutant is required.

Antidegradation Policy: New York State implements the antidegradation portion of the CWA based upon two documents: (1) Organization and Delegation Memorandum #85-40, entitled "Water Quality Antidegradation Policy," signed by the Commissioner of NYSDEC, dated September 9, 1985; and, (2) TOGS 1.3.9, entitled "Implementation of the NYSDEC Antidegration Policy – Great Lakes Basin (Supplement to Antidegradation Policy dated September 9, 1985)." A SPDES permit cannot be issued that would result in the water quality criteria being violated. The permit for the facility contains effluent limits which ensure that the existing beneficial uses of the receiving waters will be maintained.

Following is the WQBEL analysis for each pollutant present in the discharge(s). Anti-degradation analysis which justifies applying water quality standards of a higher classification is noted below, if applicable. Refer to section II.B. above for information on discharge location, receiving water information (class, dilution, chemistry), and

the existence of any TMDLs. A summary of this analysis is provided in the *Pollutant Summary Table* at the end of this fact sheet.

Pollutant-Specific WQBEL & Anti-Degradation Analysis:

pH range –The TBEL is acceptable to water quality.

Temperature – Following Departmental guidance for municipal discharges to streams classified as trout or trout spawning an action level is required. While the discharge temperature is not expected to contravene the standard in 6 NYCRR Part 704, the 70 °F action level will provide data to assess the actual effect of the discharge. Data collected by this monitoring program (see permit for details) may be used at a later date to determine the applicability of additional limitations or modifications in accordance with 6 NYCRR Part 704.4.

Please note temperature exceedances within the same calendar week only require 1 temperature monitoring program the following week. For example the following monitoring results would only result in the need for 1 monitoring program to be completed within the following calendar week.

Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Temperature	70 °F	74 °F	72 °F	69 °F	71 °F	70 °F	70 °F

Qualitative streamflow measurements must simply indicate during the monitoring program that streamflow is either absent or present.

Aluminum – The TBEL is more stringent than the calculated WQBEL. The WQBEL was determined to be 9.17 lbs/d.

Dissolved Oxygen – The TBEL is acceptable to water quality.

5 day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$) – The TBEL is acceptable to water quality. Ultimately $CBOD_5$ is limited by the UOD limits. See UOD below.

Total Suspended Solids (TSS) – The TBEL is acceptable to water quality.

Settleable Solids – The narrative water quality standards provided in 6 NYCRR Part 703.2 state that the discharge of settleable solids shall not cause deposition or impair the receiving waters for their best usages. At dilution ratios less than 10:1 a daily maximum WQBEL of 0.1 ml/l is required.

Ultimate Oxygen Demand (UOD) – Completing a dissolved oxygen sag point analysis showed the previous summer limit meets the numerical criteria of 5.0 mg/L presented in 6 NYCRR part 703. Roll over previous limit of 625 lbs/d. No UOD limit is proposed for the winter. Completing a dissolved oxygen sag point analysis proved the waste assimilating capacity of the stream could handle the calculated long-term average UOD in the winter with an anoxic effluent.

Total Kjeldahl Nitrogen – TKN is limited by the UOD limits. Rollover previous monitoring requirement for informational and control purposes.

Ammonia (as NH_3) – The ammonia limit is a function of the receiving water body's seasonal temperature and pH. In accordance with departmental guidance and critical stream quality data obtained from the referenced RIBS station the proposed summer and winter limits are 7 mg/l/ 128 lbs/d and 13 mg/l/ 239 lbs/d respectively.

Phosphorus – The TBEL is acceptable to water quality.

Total Phenolics – Total Phenolics is water quality limited. The calculated WQBEL is 0.46 lbs/d. This is based on the water quality standard of 0.005 ug/l and a 7Q10 flow of 13.8 cfs.

Chromium, Nickel, and Zinc – These pollutants have shown up on the priority scan. They all have been detected below the water quality standards presented in TOGS 1.1.1. Completing a reasonable potential analysis to determine the PEQ has shown these pollutants are not of concern. The concentrations detected in the priority scan are as follows, Chromium – 0.004 mg/l, Nickel – 0.01 mg/l, and Zinc – 0.039 mg/l.

Total Copper – An action level of 0.40 lbs/d is proposed. This action level is based on water quality and best professional judgment. The action level represents a loading that is eighty percent of the calculated water quality based effluent limit.

Bis(2-Ethylhexyl) Phthalate– Detected at a level higher than the ambient water quality standard presented in TOGS 1.1.1. It is proposed that a short-term high intensity monitoring program be included in the draft permit.

Mercury – Mercury was tested for but resulted in a concentration less than the PQL of the EPA approved method (EPA Method 1631E, Low Level Mercury). However, mercury is believed to be present in this discharge at a level which marginally exceeds the water quality standard of 0.7 ng/l due solely due to one or more of the following factors: presence in rainfall; water supply; and/or low level societal use of mercury. Considering the very low levels expected in this effluent, their likely source, and that the ubiquitous nature of mercury contamination currently makes it impractical for any dischargers to achieve the calculated water quality based effluent limit, it has been determined that meaningful reductions in mercury can be achieved by this permittee solely by implementation of a mercury minimization program. No mercury effluent limits or routine monitoring requirements have been included in the permit. This is in accordance with New York State's mercury multiple discharge variance (MDV) in TOGS 1.3.10. Refer to the MDV for further detail.

Whole Effluent Toxicity (WET) Testing - WET tests use small vertebrate and invertebrate species to measure the aggregate toxicity of an effluent. There are two different durations of toxicity tests: acute and chronic. Acute toxicity tests measure survival over a 96-hour test exposure period. Chronic toxicity tests measure reductions in survival, growth, and reproduction over a 7-day exposure. Per TOGS 1.3.2, WET testing may be required when any one of the following seven criteria are applicable:

1. There is the presence of substances in the effluent for which ambient water quality criteria do not exist.
2. There are uncertainties in the development of TMDLs, WLAs, and WQBELs, caused by inadequate ambient and/or discharge data, high natural background concentrations of pollutants, available treatment technology, and other such factors.
3. There is the presence of substances for which WQBELs are below analytical detectability.
4. There is the possibility of complex synergistic or additive effects of chemicals, typically when the number of metals or organic compounds discharged by the permittee equals or exceeds five.
5. There are observed detrimental effects on the receiving water biota.
6. Previous WET testing indicated a problem.
7. Treatment plants which exceed a discharge of 1 MGD. Facilities of less than 1 MGD may be required to test, e.g., POTWs < 1 MGD which are managing industrial pretreatment programs.

A Reasonable Potential analysis was performed, including an evaluation of the discharge against the seven criteria noted above. Criteria applicable to the discharge include numbers 6 and 7. Based upon this evaluation, WET testing action levels of 0.3 TUa and 5 TUc have been included in the draft permit for each species. The chronic limit/action level is equal to the chronic dilution ratio. The acute limit/action level is equal to 50% of the chronic dilution ration multiplied by 0.3. Refer to the SPDES permit for details.

B. Monitoring & Reporting Requirements

Section 308 of the Clean Water Act and federal regulations 40 CFR 122.44(i) require that monitoring be included in permits to determine compliance with effluent limitations. Additional effluent monitoring may also be required to gather data to determine if effluent limitations may be required. The permittee is responsible for conducting the monitoring and for reporting results on DMRs. The permit contains the monitoring requirements for the facility. Monitoring frequency is based on the minimum sampling necessary to adequately monitor the facility's performance. For municipal facilities, sampling frequency is based on guidance provided in TOGS 1.3.3.

C. Other Conditions Specific to This Permit

Compliance Schedule: A six month compliance period is included to allow the facility time to optimize ammonia removal.

Schedule of Submittals: A short term high intensity monitoring program is included for Bis (2-Ethylhexyl) Phthalate.

Discharge Notification Act: In accordance with Discharge Notification Act (ECL 17-0815-a), the permittee is required to post a sign at each point of wastewater discharge to surface waters. The permittee is also required to provide a public repository for DMRs as required by the SPDES permit. This requirement is being continued from the previous permit.

D. General Conditions Applicable To All Permits

The permit contains standard regulatory language that is required to be in all SPDES permits. These permit provisions, based largely upon 40 CFR 122 subpart C and 6 NYCRR Part 750, include requirements pertaining to monitoring, recording, reporting, and compliance responsibilities. These "general conditions" of permits are typically specified, summarized, or referenced on the first and last pages of the permit.

Permittee: Village of Wellsville
Facility: Village of Wellsville WWTP
SPDES No: NY0020621

Date: 5/6/2015
Permit Writer: Cameron Ross

OUTFALL & RECEIVING WATER LOCATION TABLE

Outfall Number	Latitude	Longitude	Receiving Water Name	Water Class	Water Index Number	Major/Sub Basin
001	42° 07' 45"	77° 57' 41"	Genesee River	C (T)	ONT-117 (Portion 9)	04-03

POLLUTANT SUMMARY TABLE(S)

Outfall #	001

Effluent Parameter (concentration in mg/l and mass in lbs/day unless otherwise specified)	Existing Effluent Quality				TBELs				Water Quality Data & WQBELs					Permit Basis
	concentration		mass					PQL	Ambient Criteria	Ambient Background	WQBEL			(T or WQ or NA)
	Avg	Max	Avg	Max	conc.	mass	Type	conc.	conc.	conc.	conc.	mass	Type	
Flow Rate, units = mgd	Average	1.02	Maximum	1.8	2.2		30 day	NA	7Q10 = 8.9mgd, 30Q10 = 10.7mgd, Dilution/Mixing = 5:1					T
pH (su)	Minimum	6.2	Maximum	7.9	6.0 – 8.5		Range		-	80% = 7.6	-	-	-	T
Temperature (°F)	Minimum	45	Maximum	75	70	-	AL	-	70	-	-	-	-	T
Hardness	58	-	-	-	-	-	-	-	-	63	-	-	-	-
Aluminum, Total[1]	ave/max	1.4 / 3.2	95% / 99%	3.1 / 4.5	-	4.5	AL		0.1	0.1	-	9.17	-	T
Copper, Total	0.015	-	0.112	-	-	0.40	AL	-	8.7a / 6.0c	-	0.027	0.50	DM	T
Phenols, Total	0.051	-	0.382	-	-	-	-	-	5.0	-	0.025	0.46	30-day	WQ
Nitrogen, Ammonia (as NH_3) (Jun 1-Oct 31)	3.4	7.7	-	-	See WQ	-	-	-	1.2	0.02	7	128	30 day	WQ
Nitrogen, TKN (as N) (Jun1-Oct31)	6.6	12.6	-	-	See WQ	-	-	-	-	0.2	Limited by the UOD limit.			
Nitrogen, Ammonia (as NH_3) (Nov1-May 31)	9.6	23.3	-	-	See WQ	-	-	-	2.2	-	13	239	30 day	WQ
Nitrogen, TKN (as N) (Nov 1-May 31)	24.1	68	-	-	See WQ	-	-	-	-	-	Limited by the UOD limit.			

Permittee: Village of Wellsville
Facility: Village of Wellsville WWTP
SPDES No: NY0020621

Date: 5/6/2015
Permit Writer: Cameron Ross

Effluent Parameter (concentration in mg/l and mass in lbs/day unless otherwise specified)	Existing Effluent Quality				TBELs				Water Quality Data & WQBELs					Permit Basis
	concentration		mass					PQL	Ambient Criteria	Ambient Background	WQBEL			(T or WQ or NA)
	Avg	Max	Avg	Max	conc.	mass	Type	conc.	conc.	conc.	conc.	mass	Type	
$CBOD_5$ - 7 day	13.9	32	132.5	407	40	734	7 day	-	-	-	Acceptable		-	T
$CBOD_5$ - 30 day	10.9	26	91.9	221	25	459	30 day	-	-	-	Acceptable		-	T
CBOD5, % removal	92.9	97	-	-	-	-	-	-	-	-	-	-	-	-
UOD (Jun 1-Oct 31)	-	-	394.5	794	625	-	-	-	-	-	Acceptable		-	T
Oxygen, Dissolved (DO) (Jun 1-Oct 31)	6.5	7.5	-	-	5.0	-	daily min	-	6	9.8	Acceptable		-	T
Phosphorus, Total (as P)	0.8	1.1	-	-	1.0	-	30 day ave	-	-	0.2	Acceptable		-	T
Solids, Settleable	0.1	0.1	-	-	0.1	-	DM	-	-	-	Acceptable		-	T
Solids, Total Suspended - 7 day	15.6	29	163.9	533	45	826	7 day	-	-	-	Acceptable		-	T
Solids, Total Suspended – 30 day	11.9	17	107.1	277	30	550	30 day	-	-	-	Acceptable		-	T
Solids, Suspended % removal	93.9	97	-	-	-	-	-	-	-	-	-	-	-	-
Solids, Total Dissolved	-	-	-	-	Monitor	-	-	-	500	-	2500	-	-	T
Bis (2-Ehtylhexyl) Phthalate	0.014	-	.105	-	-	-	-	-	0.6	-	-	-	-	-
Chromium, Total	0.004	-	0.030	-	-	-	-	-	390a / 51c	-	-	-	-	-
Nickel, Total	0.010	-	0.075	-	-	-	-	-	317a / 35c	-	-	-	-	-
Zinc, Total	0.039	-	0.292	-	-	-	-	-	79a / 56c	-	0.243	4.46	-	-
WET-Acute Invertebrate	-	-	-	-	-	-	-	-	-	-	-	0.3	AL	WQ
WET-Acute Vertebrate	-	-	-	-	-	-	-	-	-	-	-	0.3	AL	WQ
WET-Chronic Invertebrate	-	-	-	-	-	-	-	-	-	-	-	5.0	AL	WQ
WET-Chronic Vertebrate	-	-	-	-	-	-	-	-	-	-	-	5.0	AL	WQ

1. Based on the data provided in the NY-2A application. Aluminum values are in #/d.
2. a is acute criterion, c is chronic criterion.

APPENDIX B

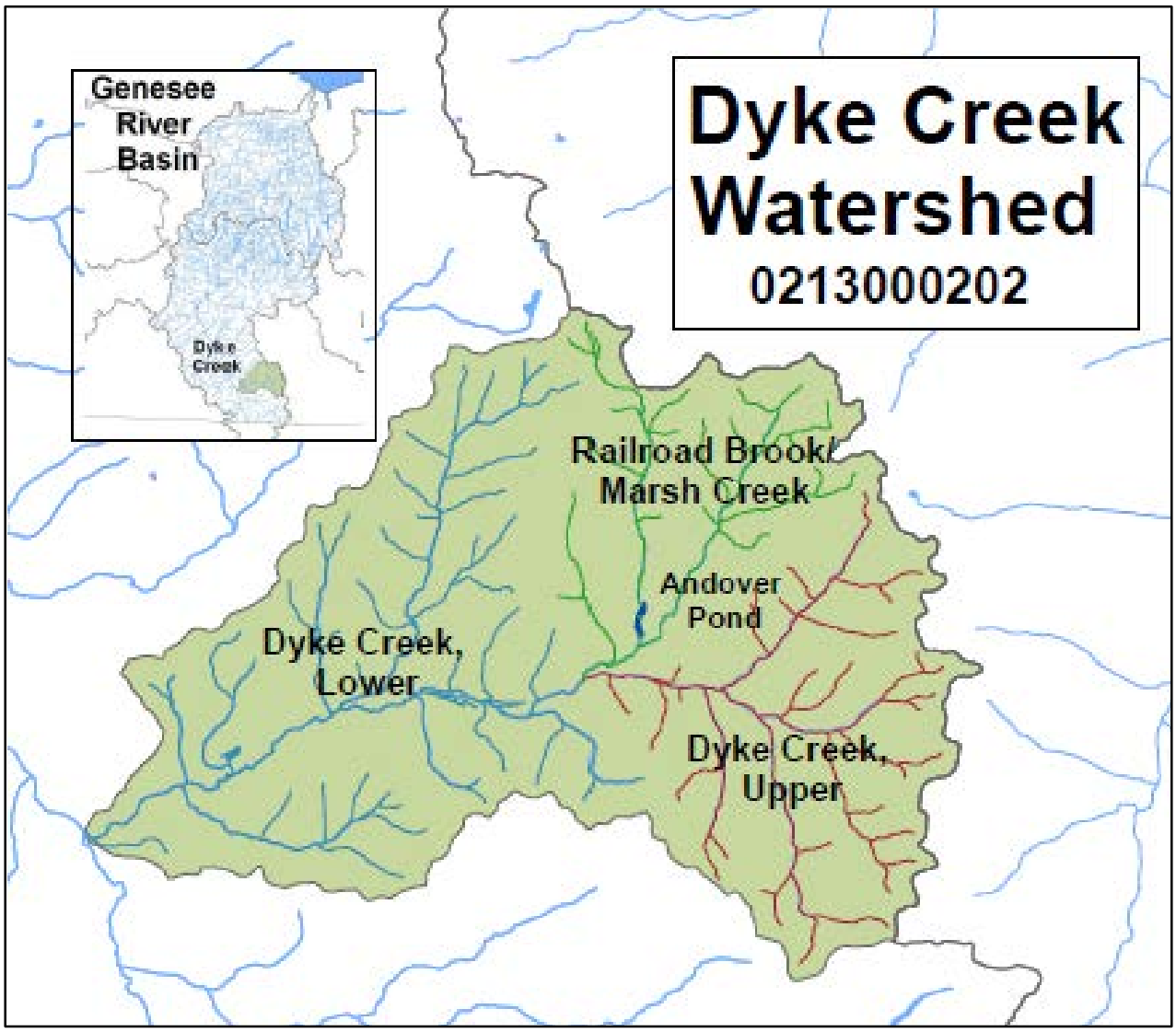
SEWER EDU DETERMINATION

Wellsville EDU Determination

		Residential			Commercial		Institutional		Industrial			
	Total Usage (1000 gal)	Residential Usage (1000 gal)	Connections	Unit Flowrate (gpd/conn)	Commercial Usage (1000 gal)	Connections	Institutional Usage (1000 gal)	Connections	Industrial Usage (1000 gal)	Connections		Total Connections
1st Quarter	36112	16028	1910	93	16211	594	108	11	3758	4		2519
2nd Quarter	32829	14571	1910	85	14738	594	98	11	3417	4		2519
3rd Quarter	75507	33514	1910	195	33896	594	225	11	7858	4		2519
4th Quarter	19698	8743	1910	51	8843	594	59	11	2050	4		2519
Total/Average	164146	72857	1910	106	73688	594	489	11	17083	4	Average =	2519
EDU's	**4270**		1910		1905		13		442		Assume	2519
Average Usage	449716	gpd										
Unit Usage	38445	gallon/yr/EDU										
Unit Usage	105	gpd/edu										

APPENDIX C

NYSDEC WI/PWL LISTING FOR GENESSEE RIVER AT WELLSVILLE



Dyke Creek Watershed
(0413000202)

Water Index Number	Waterbody Segment	Category
Ont 117-184	Dyke Creek, Lower, and tribs (0403-0004)	Minor Impacts
Ont 117-184	Dyke Creek, Upper, and tribs (0403-0071)	Minor Impacts
Ont 117-184-12	Railroad Brook, Marsh Creeks and tribs (0403-0072)	Unassessed
Ont 117-184-12-P164	Andover Pond (0403-0056)	Unassessed

Dyke Creek, Lower, and tribs (0403-0004) Minor Impacts

Waterbody Location Information

Revised: 05/01/2015

Water Index No:	Ont 117-184			**Drain Basin:**	Genesee River
Unit Code:	0413000202	**Class:**	C(T)		Upper Genesee River
Water Type/Size:	River	66.1 Miles		**Reg/County:**	9/Allegany Co. (2)
Description:	stream and tribs from mouth to Andover				

Water Quality Problem/Issue Information

Uses Evaluated	**Severity**	**Confidence**
Water Supply	N/A	-
Public Bathing	N/A	-
Recreation	Stressed	Unconfirmed
Aquatic Life	Stressed	Suspected
Fish Consumption	Fully Supported	Unconfirmed
Conditions Evaluated		
Habitat/Hydrology	Unknown	
Aesthetics	Unknown	

Type of Pollutant(s)

Known:	- - -
Suspected:	UNKNOWN POLLUTANTS (specify/biological impacts), Nutrients (Phosphorus)
Unconfirmed:	Low D.O./Oxygen Demand, Pathogens

Source(s) of Pollutant(s)

Known:	- - -
Suspected:	UNKNOWN SOURCE, Agriculture
Unconfirmed:	- - -

Management Information

Management Status:	Verification of Pollutants/Causes Needed
Lead Agency/Office:	ext/WQCC
IR/305(b) Code:	Water Attaining All Standards (IR Category 1)

Further Details

Overview

This portion of Dyke Creek is assessed as having minor impacts due to aquatic life that is thought to be stressed. No specific pollutant or sources have been identified, but sampling results and surrounding land use suggest nonpoint nutrient contributions from agriculture and/or onsite (septic) systems.

Use Assessment

This portion of Dyke Creek is a Class C(T) waterbody, suitable for general recreation use and support of aquatic life, but not as a water supply or for public bathing. The waterbody is also designated as a cold water (trout) fishery.

Aquatic life is evaluated as supported but stressed based on biological sampling that shows slight impacts. This

sampling can also be used to infer that there may be minor impacts to recreational (fishing) uses, although more specific sampling is necessary to confirm this is the case. (DEC/DOW, BWAM, February 2015)

There are no health advisories in place limiting the consumption of fish from this waterbody (beyond the general advice for all waters). Fish consumption is considered to be fully supported based on the absence of any waterbody-specific advisory, but is noted as unconfirmed since routine monitoring of contaminants in fish is limited. (NYS DOH Health Advisories and DEC/DOW, BWAM, January 2014)

Water Quality Information

A biological (macroinvertebrate) assessment of Dyke Creek in Andover (at Route 417) was conducted as part of the RIBS biological screening effort in 2009. Sampling results reflect fair to good water quality, with the macroinvertebrate community altered from what is expected under natural conditions and indications of nonpoint nutrient enrichment. Some expected sensitive species are not present and overall macroinvertebrate species richness is lower than expected. Some changes in community composition have occurred due to replacement of sensitive ubiquitous taxa by more tolerant taxa, but overall there is still balanced distribution of all expected taxa. In spite of these minor impacts, aquatic life is considered to be supported. This evaluation is consistent with results from previous sampling at the site and at a downstream location in Wellsville conducted in 1999. (DEC/DOW, BWAM/SBU, January 2015)

Source Assessment

Based on the biologic community composition, surrounding land use and other knowledge of the waterbody, the most likely source of nutrients to the waterbody is agricultural activities, though these sources should be verified. Organic inputs were identified as the likely cause of the impact in Andover. Livestock and other agricultural activity in the watershed are suspected sources of the organic and nutrient loads. Poorly operating onsite septic systems serving Andover have been previously noted. However individual system upgrades and some sewering have resulted in water quality improvements. Any impacts to recreation should be verified. (DEC/DOW, BWAM/SBU, January 2015)

Management Action

No specific management actions have been identified for the waterbody. Given the generally low level of impact, local stakeholders (SWCD/WQCC) – with input from Regional DOW staff – would be appropriate to oversee management activity.

Section 303(d) Listing

Lower Dyke Creek is not included on the current (2014) NYS Section 303(d) List of Impaired/TMDL Waters. There appear to be no impacts that would justify the listing of this waterbody. (DEC/DOW, BWAM/WQAS, January 2015)

Segment Description

This segment includes the portion of the stream and all tribs from the mouth to Railroad Brook (-12) in Andover. The waters of this portion of the stream are Class C from the mouth to a point one mile upstream, and Class C(T) for the remainder of the reach. Tribs to this reach, including Trapping Brook (-1), Elm Valley Brook (-5) and Indian Creek (-9), are primarily Class C; Indian Brook is Class C(TS). Railroad Brook (-12) and Marsh Creek (-12-1) listed separately.

Dyke Creek, Upper, and tribs (0403-0071) Minor Impacts

Waterbody Location Information

Revised: 05/01/2015

Water Index No:	Ont 117-184			**Drain Basin:**	Genesee River
Unit Code:	0413000202	**Class:**	C(T)		Upper Genesee River
Water Type/Size:	River	66.1 Miles		**Reg/County:**	9/Allegany Co. (2)
Description:	stream and tribs from mouth to Andover				

Water Quality Problem/Issue Information

Uses Evaluated	**Severity**	**Confidence**
Water Supply	N/A	-
Public Bathing	N/A	-
Recreation	Stressed	Unconfirmed
Aquatic Life	Stressed	Suspected
Fish Consumption	Fully Supported	Unconfirmed
Conditions Evaluated		
Habitat/Hydrology	Unknown	
Aesthetics	Unknown	

Type of Pollutant(s)

Known:	- - -
Suspected:	UNKNOWN POLLUTANTS (specify/biological impacts), Nutrients (Phosphorus)
Unconfirmed:	Low D.O./Oxygen Demand

Source(s) of Pollutant(s)

Known:	- - -
Suspected:	UNKNOWN SOURCE, Agriculture
Unconfirmed:	- - -

Management Information

Management Status: Verification of Pollutants/Causes Needed
Lead Agency/Office: ext/WQCC
IR/305(b) Code: Water Attaining All Standards (IR Category 1)

Further Details

Overview
This portion of Dyke Creek is assessed as having minor impacts due to aquatic life that is thought to be stressed. No specific pollutant or sources have been identified, but sampling results and surrounding land use suggest nonpoint nutrient contributions from agriculture and/or onsite (septic) systems.

Use Assessment
This portion of Dyke Creek is a Class C waterbody, suitable for general recreation use and support of aquatic life, but not as a water supply or for public bathing.

Aquatic life is evaluated as supported but stressed based on biological sampling that shows slight impacts. This

sampling can also be used to infer that there may be minor impacts to recreational (fishing) uses, although more specific sampling is necessary to confirm this is the case. (DEC/DOW, BWAM, February 2015)

There are no health advisories in place limiting the consumption of fish from this waterbody (beyond the general advice for all waters). Fish consumption is considered to be fully supported based on the absence of any waterbody-specific advisory, but is noted as unconfirmed since routine monitoring of contaminants in fish is limited. (NYS DOH Health Advisories and DEC/DOW, BWAM, January 2014)

Water Quality Information

A biological (macroinvertebrate) assessment of Dyke Creek in Andover (at Route 417) was conducted as part of the RIBS biological screening effort in 2009. Sampling results reflect fair to good water quality, with the macroinvertebrate community altered from what is expected under natural conditions and indications of nonpoint nutrient enrichment. Some expected sensitive species are not present and overall macroinvertebrate species richness is lower than expected. Some changes in community composition have occurred due to replacement of sensitive ubiquitous taxa by more tolerant taxa, but overall there is still balanced distribution of all expected taxa. In spite of these minor impacts, aquatic life is considered to be supported. This evaluation is consistent with results from previous sampling at the site conducted in 1999. (DEC/DOW, BWAM/SBU, January 2015)

Source Assessment

Based on the biologic community composition, surrounding land use and other knowledge of the waterbody, the most likely source of nutrients to the waterbody is agricultural activities, though these sources should be verified. Organic inputs were identified as the likely cause of the impact in Andover. Livestock and other agricultural activity in the watershed are suspected sources of the organic and nutrient loads. Poorly operating onsite septic systems serving Andover have been previously noted. However individual system upgrades and some sewering have resulted in water quality improvements. Any impacts to recreation should be verified. (DEC/DOW, BWAM/SBU, January 2015)

Management Action

No specific management actions have been identified for the waterbody. Given the generally low level of impact, local stakeholders (SWCD/WQCC) – with input from Regional DOW staff – would be appropriate to oversee management activity.

Section 303(d) Listing

Upper Dyke Creek is not included on the current (2014) NYS Section 303(d) List of Impaired/TMDL Waters. There appear to be no impacts that would justify the listing of this waterbody. (DEC/DOW, BWAM/WQAS, January 2015)

Segment Description

This segment includes the portion of the stream and all tribs above Railroad Brook (-12) in Andover. The waters of this portion of the stream are Class C. Tribs to this reach are primarily Class C; Best Hollow Brook is Class C(TS). Railroad Brook (-12) and Marsh Creek (-12-1) are listed separately.

Railroad Brook, Marsh Creeks and tribs (0403-0072) Unassessed

Waterbody Location Information

Revised: 05/01/2015

Water Index No: Ont 117-184-12
Unit Code: 0413000202 **Class:** C
Water Type/Size: River 27.7 Miles
Description: entire length of both streams and tribs

Drain Basin: Genesee River
Upper Genesee River
Reg/County: 9/Allegany Co. (2)

Water Quality Problem/Issue Information

Uses Evaluated	Severity	Confidence
Water Supply	N/A	-
Public Bathing	N/A	-
Recreation	Unassessed	-
Aquatic Life	Unassessed	-
Fish Consumption	Unassessed	-
Conditions Evaluated		
Habitat/Hydrology	Unknown	
Aesthetics	Unknown	

Type of Pollutant(s)

Known:	- - -
Suspected:	- - -
Unconfirmed:	- - -

Source(s) of Pollutant(s)

Known:	- - -
Suspected:	- - -
Unconfirmed:	- - -

Management Information

Management Status: UnAssessed
Lead Agency/Office: DOW/BWAM
IR/305(b) Code: Water with Insufficient Data (IR Category 3)

Further Details

Overview
Currently there is inadequate data/information to evaluate uses and determine a water quality assessment for this waterbody.

Segment Description
This segment includes the entire length of both streams and all tribs. The waters of these stream and their tribs are primarily Class C; a portion of Marsh Creek is Class C(TS).

Andover Pond (0403-0056) Unassessed

Waterbody Location Information

Revised: 05/01/2015

Water Index No: Ont 117-184-12-P164
Unit Code: 0413000202 **Class:** C
Water Type/Size: Lake 7.6 Acres
Description: entire lake

Drain Basin: Genesee River
Upper Genesee River
Reg/County: 9/Allegany Co. (2)

Water Quality Problem/Issue Information

Uses Evaluated	Severity	Confidence
Water Supply	N/A	-
Public Bathing	N/A	-
Recreation	Unassessed	-
Aquatic Life	Unassessed	-
Fish Consumption	Unassessed	-
Conditions Evaluated		
Habitat/Hydrology	Unknown	
Aesthetics	Unknown	

Type of Pollutant(s)

Known:	- - -
Suspected:	- - -
Unconfirmed:	- - -

Source(s) of Pollutant(s)

Known:	- - -
Suspected:	- - -
Unconfirmed:	- - -

Management Information

Management Status: Assessment/Reassessment Scheduled
Lead Agency/Office: DOW/BWAM
IR/305(b) Code: Water with Insufficient Data (IR Category 3)

Further Details

Overview
Currently there is inadequate data/information to evaluate uses and determine a water quality assessment for this waterbody. The waterbody is scheduled to be sampled through the NYSDEC RIBS Program in 2015.

Segment Description
This segment includes the entire area of the lake. The waters of the lake are Class C.

APPENDIX D

EXISTING FLOW AND LOADINGS

Village of Wellsville
Influent Summary

BASED ON ENTIRE DATA SET

Date	Precip	Instant Max. Flow	Avg. Daily Flow Q,MGD	Instant Min. Flow	Daily Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
MAX.	2.10	5.00	3.743	1.96	23	379	3942	1244	12938	56	422			
MIN.	0.00	0.86	0.574	0.00	6	52	691	84	900	8	65			
AVERAGE	0.10	2.34	1.153	0.61	14	173	1631	229	2184	25	203			

MONTHLY DATA

Date	Precip	Instant Max. Monthly Flow	Avg. Monthly Flow Q,MGD	Instant Min. Flow	Avg. Monthly Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
Aug-12	0.06	1.89	0.777	0.430	21	207	1403	281	1947	37	250	593908	19158	0.019
Sep-12	0.13	2.48	0.799	0.332	20	184	1470	266	2164	15	126	526488	17550	0.018
Oct-12	0.19	2.33	1.037	0.456	17	172	1637	229	2261	21	191	757434	24433	0.024
Nov-12	0.02	2.49	1.096	0.537	14	209	1913	170	1569			1016835	33895	0.034
Dec-12	0.23	2.67	1.466	0.848	12	145	1991	167	2313			700622	22601	0.023
Jan-13	0.09	2.68	1.537	0.932	10	151	1801	156	1925			1313726	42378	0.042
Feb-13	0.06	2.38	1.300	0.771	9	154	1608	133	1371			1053097	37611	0.038
Mar-13	0.03	2.27	1.238	0.659	9	135	1511	158	1762			931843	30059	0.030
Apr-13	0.12	2.41	1.404	0.807	11	146	1552	164	1736			1028619	34287	0.034
May-13	0.15	2.38	1.185	0.631	15	199	2107	225	2457			982983	31709	0.032
Jun-13	0.13	2.50	1.264	0.683	17	166	1789	147	1513	15	161	888379	29613	0.030
Jul-13	0.11	2.27	1.057	0.499	20	177	1574	179	1629	17	153	734581	23696	0.024
Aug-13	0.08	2.16	0.847	0.310	20	235	1785	278	2110	24	184	585933	18901	0.019
Sep-13	0.10	1.90	0.782	0.285	20	259	1745	230	1547	23	154	641468	21382	0.021
Oct-13	0.16	2.16	0.892	0.394	18	220	1599	215	1543	24	173	1042368	33625	0.034
Nov-13	0.11	2.57	1.061	0.501	14	155	1520	251	2752	39	297	840738	28025	0.028
Dec-13	0.08	2.59	1.376	0.759	11	171	1725	271	2639			854273	27557	0.028
Jan-14	0.06	2.55	1.341	0.782	10	133	1448	158	1746			2285755	73734	0.074
Feb-14	0.09	2.31	1.101	0.563	9	175	1492	177	1522			947083	33824	0.034
Mar-14	0.09	2.52	1.359	0.807	8	208	2240	450	4843			997922	32191	0.032
Apr-14	0.08	2.84	1.666	1.062	10	90	1266	114	1641			1110583	37019	0.037
May-14	0.16	2.56	1.586	0.982	14	124	1571	187	2399			744302	24010	0.024
Jun-14	0.17	2.45	1.256	0.728	17	138	1407	206	2119	20	213	888379	29613	0.030
Jul-14	0.12		1.130		19	146	1468	221	2322	21	203	938457	30273	0.030
Aug-14	0.11	2.30	0.982	0.436	19	224	1941	259	2287	40	356	1444890	46609	0.047
Sep-14	0.06	1.94	0.836	0.319	19	223	1697	255	1963	34	258	1024391	34146	0.034
Oct-14	0.08	1.83	0.811	0.337	18	211	1553	420	3106	26	192	777083	25067	0.025
Nov-14	0.06	2.01	0.897	0.404	14	213	1647	230	1773	17	127	611213	20374	0.020
Dec-14	0.08	2.29	1.083	0.566	12	151	1382	169	1561			1190548	38405	0.038
Jan-15	0.03	2.19	0.998	0.497	10	174	1517	228	1935	25	256	1064457	34337	0.034
Feb-15	0.07	2.11	1.021	0.492	9	198	1743	274	2398			616516	22018	0.022
Mar-15	0.04	2.40	1.395	0.816	9	155	1729	227	2590			1174947	37902	0.038
Apr-15	0.11	2.91	1.815	1.261	10	108	1561	159	2301			1360229	45341	0.045
May-15	0.07	2.17	1.063	0.591	15	156	1459	239	2227			976156	31489	0.031
Jun-15	0.19	2.16	1.102	0.546	18	144	1403	285	2711	21	172	815565	27186	0.027
Jul-15	0.07	2.09	0.963	0.472	19	205	1835	477	4196	28	235	578691	18667	0.019
Max	0.23	2.91	1.815	1.261	21	259	2240	477	4843	40	356	2285755	73734	0.074
Average	0.10	2.34	1.153	0.614	14	174	1641	229	2191	25	206	945568	31075	0.031
Min	0.02	1.83	0.777	0.285	8	90	1266	114	1371	15	126	526488	17550	0.018
STD	0.05	0.26	0.264	0.232	4	38	215	82	715	8	61	324199	10477	0.010

Village of Wellsville
Effluent Summary

BASED ON ENTIRE DATA SET

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Effluent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
MAX.	3.743	24	34.00	347.00	33.00	459.07	53.40	498.35	60.70	566.48	1.60	23.69	0.50	5.06			
MIN.	0.574	5	4.00	37.30	3.00	31.05	1.40	13.36	0.10	0.62	0.20	2.64	0.03	0.15			
AVERAGE	1.153	14	11.84	119.86	11.78	119.80	9.29	81.35	8.14	74.90	0.73	7.32	0.13	1.27			

BASED ON ENTIRE DATA SET

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Effluent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
Aug-12	0.777	21	9.20	63.32	9.60	67.65	6.10	42.58	0.66	4.25	0.64	4.43	0.09	0.76	593908	19158	0.019
Sep-12	0.799	19	10.25	85.79	10.50	88.02	10.25	83.73	0.35	3.30	0.78	6.68	0.07	0.67	526488	17550	0.018
Oct-12	1.037	16	9.25	90.76	11.60	145.52	7.18	76.78	1.22	9.81	0.88	9.64	0.04	0.27	757434	24433	0.024
Nov-12	1.096	11	13.00	118.31	20.00	183.76					0.70	6.43	0.11	1.18	1016835	33895	0.034
Dec-12	1.466	10	11.50	162.62	17.25	245.44					0.93	13.60	0.21	2.52	700622	22601	0.023
Jan-13	1.537	9	14.00	165.26	17.20	217.37					0.94	12.14	0.14	1.40	1313726	42378	0.042
Feb-13	1.300	8	16.75	175.36	14.25	149.82					0.68	7.15	0.19	2.39	1053097	37611	0.038
Mar-13	1.238	9	14.50	162.41	9.00	106.93					0.70	7.84	0.07	0.65	931843	30059	0.030
Apr-13	1.404	11	9.40	100.80	12.00	131.02					0.68	7.22	0.08	0.77	1028619	34287	0.034
May-13	1.185	16	11.25	123.33	13.50	154.83					0.93	9.94	0.12	1.13	982983	31709	0.032
Jun-13	1.264	18	7.50	79.79	7.00	68.96	6.15	64.30	3.18	30.88	0.49	5.06	0.09	0.93	888379	29613	0.030
Jul-13	1.057	21	7.40	67.65	7.60	71.28	7.64	70.76	1.84	16.63	0.52	4.81	0.13	1.53	734581	23696	0.024
Aug-13	0.847	20	11.50	87.79	9.00	69.38	5.23	39.86	3.50	26.38	0.75	5.74	0.05	0.37	585933	18901	0.019
Sep-13	0.782	19	11.25	75.88	7.00	47.34	7.28	48.85	6.70	44.87	0.63	4.21			641468	21382	0.021
Oct-13	0.892	16	7.40	53.17	9.00	64.22	5.26	36.69	2.90	19.82	0.62	4.39	0.03	0.15	1042368	33625	0.034
Nov-13	1.061	11	8.75	85.71	12.50	119.28	17.10	129.35	9.70	80.33	0.90	8.80	0.13	1.00	840738	28025	0.028
Dec-13	1.376	9	9.00	93.64	9.25	95.64	14.40	149.16	11.40	118.08	0.71	7.13	0.13	1.43	854273	27557	0.028
Jan-14	1.341	7	16.60	180.14	10.80	117.29			21.60	262.18	0.60	6.59	0.19	1.91	2285755	73734	0.074
Feb-14	1.101	7	18.75	165.77	11.00	95.84			32.40	288.93	0.80	6.90	0.08	0.64	947083	33824	0.034
Mar-14	1.359	7	27.00	299.72	13.75	151.48	24.30	222.52	28.20	258.24	0.78	8.56	0.16	1.43	997922	32191	0.032
Apr-14	1.666	10	11.00	163.56	7.80	113.75					0.56	7.56	0.07	0.91	1110583	37019	0.037
May-14	1.586	14	12.75	163.18	10.25	132.56			14.00	154.59	0.65	8.22	0.06	0.64	744302	24010	0.024
Jun-14	1.256	18	7.75	80.32	8.25	87.29	5.65	58.56	4.97	52.61	0.58	5.95	0.09	0.99	888379	29613	0.030
Jul-14	1.130	19	7.80	80.97	11.40	112.15	6.41	63.69	3.50	33.76	0.62	6.30	0.22	2.02	938457	30273	0.030
Aug-14	0.982	20	7.75	70.95	8.75	80.71	14.00	126.93	9.89	89.03	0.75	6.88	0.08	0.74	1444890	46609	0.047
Sep-14	0.836	19	11.00	85.96	9.00	69.69	13.71	110.01	12.80	102.53	0.68	5.32	0.06	0.52	1024391	34146	0.034
Oct-14	0.811	16	10.00	73.74	14.20	105.52	11.27	86.94	8.83	68.89	0.91	6.70	0.20	1.26	777083	25067	0.025
Nov-14	0.897	11	9.50	74.29	17.25	134.86	22.80	169.81	14.50	107.99	0.98	7.61	0.20	1.49	611213	20374	0.020
Dec-14	1.083	10	10.60	98.00	17.80	165.67			14.00	113.49	0.78	7.35	0.18	1.46	1190548	38405	0.038
Jan-15	0.998	8	15.00	129.43	11.50	99.21			26.60	270.65	0.83	7.38	0.20	2.03	1064457	34337	0.034
Feb-15	1.021	7	24.00	210.34	20.25	176.51					0.85	7.47	0.20	2.04	616516	22018	0.022
Mar-15	1.395	8	27.00	322.73	16.75	203.21	53.40	498.35	60.70	566.48	0.70	8.42	0.11	0.98	1174947	37902	0.038
Apr-15	1.815	10	15.80	228.17	10.20	146.59					0.72	10.92	0.08	0.93	1360229	45341	0.045
May-15	1.063	16	10.00	94.65	8.25	78.06	33.20	336.14	30.70	310.83	0.55	5.22	0.50	5.06	976156	31489	0.031
Jun-15	1.102	19	7.75	76.69	15.25	160.19	6.15	57.94	3.68	33.00	0.75	7.78	0.23	1.87	815565	27186	0.027
Jul-15	0.963	20	6.40	58.01	7.20	64.52	4.02	37.08	1.68	15.83	0.78	7.06			578691	18667	0.019

BASED ON MONTHLY DATA SET

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day			
Max	1.815	21	27.00	322.73	20.25	245.44	53.40	498.35	60.70	566.48	0.98	13.60	0.50	5.06	2285755	73734	0.074
Average	**1.153**	**14**	**12.18**	**123.56**	**11.83**	**120.04**	**13.40**	**119.53**	**12.67**	**118.59**	**0.73**	**7.32**	**0.13**	**1.30**	945568	31075	0.031
Min	0.777	7	6.40	53.17	7.00	47.34	4.02	36.69	0.35	3.30	0.49	4.21	0.03	0.15	526488	17550	0.018
STD	0.264	5	5.20	65.06	3.80	47.76	11.89	113.10	13.81	133.53	0.13	2.06	0.09	0.90	324199	10477	0.010

Village of Wellsville
Influent

Date	Precip	Instant Max. Flow	Daily Avg Flow Q,MGD	Instant Min Flow	Daily Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
8/1/2012	0.02	2.85	1.058	0.55	21	173	1527	322	2841	30	266			
8/2/2012	0.00	3.00	0.941	0.55	21									
8/3/2012	0.00	2.85	0.872	0.45	21									
8/4/2012	0.00	1.30	0.713	0.45	20									
8/5/2012	0.00	1.30	0.702	0.45	20									
8/6/2012	0.00	1.80	0.830	0.45	21									
8/7/2012	0.00	1.55	0.805	0.45	21	176	1182	180	1208	42	285			
8/8/2012	0.25	2.00	0.793	0.40	21									
8/9/2012	0.47	2.30	0.903	0.50	22									
8/10/2012	0.14	2.25	0.868	0.50	22									
8/11/2012	0.00	2.25	0.675	0.25	20									
8/12/2012	0.02	2.15	0.664	0.35	20									
8/13/2012	0.01	2.45	0.808	0.45	21									
8/14/2012	0.00	1.95	0.755	0.30	22	190	1196	356	2242	43	273			
8/15/2012	0.00	2.05	0.762	0.40	22									
8/16/2012	0.00	2.40	0.824	0.50	22									
8/17/2012	0.17	1.75	0.818	0.45	21									
8/18/2012	0.00	1.30	0.641	0.45	20									
8/19/2012	0.11	1.35	0.653	0.45	20									
8/20/2012	0.00	1.40	0.820	0.50	21									
8/21/2012	0.00	1.65	0.740	0.45	21	289	1784	302	1864	27	168			
8/22/2012	0.00	1.50	0.732	0.35	21									
8/23/2012	0.00	1.40	0.753	0.40	21									
8/24/2012	0.00	1.60	0.680	0.40	21									
8/25/2012	0.00	1.15	0.574	0.35	20									
8/26/2012	0.00	1.15	0.591	0.35	20									
8/27/2012	0.00	2.20	0.918	0.50	22									
8/28/2012	0.73	2.15	0.769	0.40	21	207	1328	246	1578	41	260			
8/29/2012	0.00		0.835		22									
8/30/2012	0.00		0.791		21									
8/31/2012	0.00		0.808		20									
9/1/2012	0.00	1.20	0.666	0.30	20									
9/2/2012	0.00	1.20	0.647	0.30	20									
9/3/2012	0.00	1.50	0.735	0.30	21									
9/4/2012	1.30	3.40	1.166	0.30	22	204	1984	302	2937	25	247			
9/5/2012	0.00	2.00	0.904	0.50	22									
9/6/2012	0.00	2.80	0.822	0.40	22									
9/7/2012	0.00	4.60	0.839	0.35	23									
9/8/2012	0.54	2.60	0.821	0.35	21									
9/9/2012	0.04	1.30	0.743	0.40	20									
9/10/2012	0.00	2.80	0.792	0.35	22									
9/11/2012	0.00	3.15	0.792	0.30	20	205	1354	308	2034	10	67			
9/12/2012	0.00	3.20	0.784	0.30	21									
9/13/2012	0.00	3.20	0.810	0.30	20									
9/14/2012	0.27	2.80	0.817	0.30	21									
9/15/2012	0.00	1.80	0.642	0.30	20									
9/16/2012	0.00	3.00	0.685	0.30	19									
9/17/2012	0.15	3.45	0.810	0.30	20									
9/18/2012	1.00	5.00	1.210	0.30	20	130	1312	226	2281	12	123			
9/19/2012	0.00	4.80	0.908	0.40	20									
9/20/2012	0.00	2.30	0.814	0.40	20									
9/21/2012	0.03	2.30	0.750	0.30	20									
9/22/2012	0.23	1.65	0.700	0.35	19									
9/23/2012	0.03	1.20	0.662	0.40	19									
9/24/2012	0.00	2.15	0.877	0.30	19									
9/25/2012	0.00	2.00	0.746	0.30	19	198	1232	226	1406	10	65			
9/26/2012	0.00	2.10	0.750	0.30	20									
9/27/2012	0.00	1.85	0.840	0.30	19									
9/28/2012	0.00	2.15	0.865	0.30	19									
9/29/2012	0.00	1.25	0.688	0.35	18									
9/30/2012	0.30	1.65	0.696	0.30	18									
10/1/2012	0.01	1.80	0.793	0.30	19									
10/2/2012	0.00	1.70	0.826	0.30	19	211	1454	268	1846	33	229			
10/3/2012	0.00	1.80	0.815	0.30	19									
10/4/2012	0.00	1.90	0.812	0.30	19									
10/5/2012	0.40	4.30	0.775	0.30	20									
10/6/2012	0.00	1.40	0.751	0.30	19									
10/7/2012	0.15	2.60	0.703	0.30	18									
10/8/2012	0.00	2.00	0.893	0.35	18									
10/9/2012	0.00	1.80	0.876	0.30	16	229	1673	314	2294	26	190			
10/10/2012	0.12	2.00	0.915	0.30	18									
10/11/2012	0.00	1.90	0.916	0.30	19									
10/12/2012	0.12	3.10	0.813	0.30	18									
10/13/2012	0.00	1.50	0.768	0.35	16									
10/14/2012	0.00	1.50	0.750	0.35	16									
10/15/2012	0.10	1.90	0.874	0.35	18									
10/16/2012	0.03	1.70	0.840	0.30	17	203	1422	234	1639	25	178			
10/17/2012	0.00	1.70	0.890	0.30	18									
10/18/2012	0.63	2.50	1.134	0.60	18									
10/19/2012	0.03	1.90	0.910	0.40	17									
10/20/2012	0.03	1.40	0.773	0.40	17									
10/21/2012	0.00	1.70	0.771	0.40	17									
10/22/2012	0.26	1.90	0.931	0.35	17									
10/23/2012	1.23	4.50	1.846	0.40	16	153	2356	232	3572	14	211			
10/24/2012	0.05	2.70	1.297	0.60	17									
10/25/2012	0.00	2.50	1.167	0.50	17									
10/26/2012	0.00	2.40	1.034	0.50	18									
10/27/2012	0.16	1.90	0.925	0.50	16									
10/28/2012	0.28	2.20	1.073	0.60	16									
10/29/2012	2.10	5.00	2.110	1.10	15									
10/30/2012	0.20	4.00	2.367	1.40	15	65	1283	99	1954	8	148			
10/31/2012	0.06	3.10	1.790	1.10	16									
11/1/2012	0.10	2.90	1.647	1.00	16									

Village of Wellsville
Influent

Date	Precip	Instant Max. Flow	Daily Avg Flow Q,MGD	Instant Min Flow	Daily Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
11/2/2012	0.00	3.10	1.488	0.90	16									
11/3/2012	0.00	2.40	1.296	0.80	15									
11/4/2012	0.00	2.50	1.265	0.70	14									
11/5/2012	0.00	2.60	1.342	0.70	15									
11/6/2012	0.00	2.50	1.270	0.70	15	172	1822	154	1631					
11/7/2012	0.00	1.60	1.060	0.60	15									
11/8/2012	0.00	2.20	1.208	0.60	15									
11/9/2012	0.00	4.80	1.110	0.60	15									
11/10/2012	0.12	2.90	1.007	0.50	13									
11/11/2012	0.00	5.00	0.996	0.50	14									
11/12/2012	0.45	2.40	1.151	0.50	14									
11/13/2012	0.00	2.50	1.154	0.50	15	183	1761	175	1684					
11/14/2012	0.00	2.00	1.100	0.50	14									
11/15/2012	0.00	2.60	1.111	0.50	15									
11/16/2012	0.00	2.30	1.021	0.50	14									
11/17/2012	0.00	1.60	0.897	0.50	13									
11/18/2012	0.00	1.80	0.911	0.50	12									
11/19/2012	0.00	2.30	1.048	0.40	14									
11/20/2012	0.00	2.50	1.010	0.40	14	246	2072	156	1314					
11/21/2012	0.00	2.50	1.051	0.50	14									
11/22/2012	0.00	2.00	0.945	0.40	13									

Village of Wellsville
Influent

Date	Precip	Instant Max. Flow	Daily Avg Flow Q,MGD	Instant Min Flow	Daily Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
11/23/2012	0.00	2.30	1.013	0.40	13									
11/24/2012	0.00	1.50	0.908	0.50	13									
11/25/2012	0.00	1.70	0.925	0.50	13									
11/26/2012	0.00	2.20	1.014	0.40	13									
11/27/2012	0.00	1.90	1.024	0.40	13	234	1998	193	1648					
11/28/2012	0.00	2.80	0.995	0.40	12									
11/29/2012	0.00	2.50	1.000	0.40	13									
11/30/2012	0.00	2.70	0.919	0.30	12									
12/1/2012	0.00	1.30	0.792	0.40	11									
12/2/2012	0.50	1.80	0.986	0.50	13									
12/3/2012	0.00	3.60	1.038	0.50	14									
12/4/2012	0.70	3.00	1.472	0.70	14	223	2738	310	3806					
12/5/2012	0.00	2.30	1.356	0.60	12									
12/6/2012	0.00	2.70	1.254	0.50	13									
12/7/2012	0.31	2.70	1.363	0.80	13									
12/8/2012	0.02	2.10	1.144	0.60	11									
12/9/2012	0.35	3.00	1.244	0.70	12									
12/10/2012	0.34	2.90	1.910	1.10	13									
12/11/2012	0.00	3.00	1.623	0.90	13	168	2274	119	1611					
12/12/2012	0.00	3.00	1.474	0.80	12									
12/13/2012	0.00	4.00	1.431	0.50	13									
12/14/2012	0.00	2.90	1.289	0.60	12									
12/15/2012	0.00	1.90	1.103	0.70	12									
12/16/2012	0.40	2.40	1.265	0.90	12									
12/17/2012	0.57	3.30	2.033	1.20	12									
12/18/2012	0.38	3.70	2.486	1.20	12	74	1534	104	2156					
12/19/2012	0.00	3.20	1.838	1.30	13									
12/20/2012	0.44	2.90	1.948	1.40	12									
12/21/2012	0.20	3.10	2.133	1.40	12									
12/22/2012	0.00	2.60	1.659	1.00	10									
12/23/2012	0.00	2.10	1.546	1.00	10									
12/24/2012	0.17	2.90	1.615	0.90	11									
12/25/2012	0.00	2.20	1.361	0.90	11									
12/26/2012	1.80	2.60	1.493	0.90	11	114	1419	135	1681					
12/27/2012	0.00	2.20	1.362	0.90	9									
12/28/2012	0.42	2.60	1.262	0.90	12									
12/29/2012	0.17	2.10	1.386	0.90	12									
12/30/2012		2.50	1.227	0.80	11									
12/31/2012	0.00	2.10	1.358	0.80	11									
1/1/2013	0.00	2.10	1.235	0.80	10	158	1627	147	1514					
1/2/2013		2.80	1.412	0.75	11									
1/3/2013	0.00	2.50	1.339	0.70	11									
1/4/2013		2.30	1.305	0.75	11									
1/5/2013	0.00	2.30	1.194	0.70	10									
1/6/2013	0.17	2.15	1.199	0.70	10									
1/7/2013	0.00	2.90	1.336	0.70	10									
1/8/2013	0.00	2.70	1.291	0.70	10	151	1626	130	1400					
1/9/2013	0.00	3.75	1.385	0.70	10									
1/10/2013	0.00	2.50	1.375	0.80	10									
1/11/2013	0.10	2.40	1.643	0.80	11									
1/12/2013	0.00	2.70	2.081	1.10	9									
1/13/2013	0.03	3.00	2.180	1.40	9									
1/14/2013	0.00	2.90	1.930	1.60	11									
1/15/2013	0.05	2.90	1.775	1.30	11	101	1495	151	2235					
1/16/2013		2.90	1.748	1.20	12									
1/17/2013	0.08	3.10	1.703	1.10	10									
1/18/2013		2.65	1.542	0.95	10									
1/19/2013	0.00	2.35	1.384	0.90	9									
1/20/2013	0.00	2.20	1.314	0.80	11									
1/21/2013	0.06	2.40	1.417	0.80	11									
1/22/2013	0.02	2.40	1.311	0.80	9	173	1892	142	1553					
1/23/2013	0.00	2.30	1.368	0.80	10									
1/24/2013	0.00	2.00	1.269	0.70	10									
1/25/2013	0.05	2.80	1.229	0.70	9									
1/26/2013	0.00	1.90	1.052	0.70	10									
1/27/2013		1.60	1.069	0.70	10									
1/28/2013	0.23	2.20	1.343	0.75	11									
1/29/2013	0.43	3.10	1.668	1.00	11	170	2365	210	2921					
1/30/2013	1.11	4.70	2.859	1.70	10									
1/31/2013	0.10	4.70	2.697	1.80	9									
2/1/2013	0.02	2.90	1.993	1.39	9									
2/2/2013	0.00	2.43	1.717	1.28	8									
2/3/2013	0.06	2.47	1.559	1.08	8									
2/4/2013	0.04	3.22	1.640	0.90	10									
2/5/2013	0.00	2.58	1.519	0.93	10	133	1685	100	1267					
2/6/2013	0.00	2.85	1.492	0.90	10									
2/7/2013	0.00	3.17	1.503	0.86	9									
2/8/2013	0.10	2.57	1.336	0.83	9									
2/9/2013	0.01	1.70	1.155	0.76	9									
2/10/2013	0.00	2.25	1.182	0.74	11									
2/11/2013	0.00	2.50	1.354	0.75	10									
2/12/2013	0.00	2.37	1.283	0.78	9	154	1648	119	1273					
2/13/2013	0.00	2.65	1.324	0.72	9									
2/14/2013	0.00	2.89	1.354	0.79	10									
2/15/2013		2.31	1.274	0.71	10									
2/16/2013		1.77	1.108	0.71	9									
2/17/2013	0.00	1.53	1.025	0.66	9									
2/18/2013	0.00	2.69	1.169	0.63	9									
2/19/2013	0.11	2.27	1.186	0.68	9	155	1533	143	1414					
2/20/2013	0.10	2.49	1.235	0.65	9									
2/21/2013		2.17	1.138	0.57	10									
2/22/2013	0.00	2.24	1.130	0.62	10									
2/23/2013	0.00	1.44	0.963	0.58	9									

Village of Wellsville
Influent

Date	Precip	Instant Max. Flow	Daily Avg Flow Q,MGD	Instant Min Flow	Daily Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
2/24/2013	0.00	1.94	0.970	0.57	8									
2/25/2013	0.00	2.15	1.080	0.50	10									
2/26/2013	0.46	2.38	1.079	0.54	9	174	1566	170	1530					
2/27/2013	0.38	2.15	1.289	0.73	10									
2/28/2013	0.12	2.58	1.344	0.74	10									
3/1/2013		3.11	1.233	0.60	10									
3/2/2013		1.84	1.071	0.64	9									
3/3/2013	0.01	1.74	1.030	0.59	9									
3/4/2013	0.00	2.37	1.219	0.61	10									
3/5/2013	0.00	1.99	1.161	0.62	9	170	1646	179	1733					
3/6/2013	0.00	2.27	1.171	0.56	10									
3/7/2013		2.45	1.214	0.59	9									
3/8/2013	0.00	2.36	1.151	0.62	9									
3/9/2013	0.00	1.98	1.183	0.71	9									
3/10/2013	0.00	2.17	1.282	0.80	8									
3/11/2013	0.22	3.12	1.709	1.09	9									
3/12/2013	0.10	3.16	1.736	0.90	10	123	1781	142	2056					
3/13/2013	0.06	2.52	1.573	0.86	10									
3/14/2013	0.00	2.56	1.479	0.85	9									
3/15/2013	0.00	2.77	1.426	0.83	10									
3/16/2013	0.00	1.75	1.175	0.73	9									

Village of Wellsville
Influent

Date	Precip	Instant Max. Flow	Daily Avg Flow Q,MGD	Instant Min Flow	Daily Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
3/17/2013	0.00	2.07	1.155	0.71	8									
3/18/2013	0.22	2.57	1.324	0.72	9									
3/19/2013	0.11	2.62	1.344	0.72	9	130	1457	146	1637					
3/20/2013	0.02	2.17	1.273	0.68	9									
3/21/2013		2.30	1.221	0.01	10									
3/22/2013	0.00	2.41	1.185	0.67	10									
3/23/2013	0.00	1.78	1.047	0.61	10									
3/24/2013	0.00	1.80	1.069	0.63	10									
3/25/2013	0.00	2.16	1.178	0.57	10									
3/26/2013	0.00	2.28	1.187	0.60	11	117	1158	164	1624					
3/27/2013	0.05	2.16	1.190	0.62	10									
3/28/2013	0.00	1.99	1.174	0.55	10									
3/29/2013	0.00	2.09	1.150	0.56	11									
3/30/2013	0.00	1.86	1.010	0.58	8									
3/31/2013	0.00	1.86	1.043	0.59	8									
4/1/2013	0.20	2.58	1.252	0.65	10									
4/2/2013	0.00	2.35	1.191	0.64	10	147	1460	161	1599					
4/3/2013	0.00	2.52	1.214	0.57	10									
4/4/2013	0.00	2.08	1.132	0.59	12									
4/5/2013	0.00	2.24	1.127	0.63	11									
4/6/2013	0.00	1.51	0.986	0.60	10									
4/7/2013	0.00	1.78	0.988	0.57	9									
4/8/2013	0.00	2.26	1.119	0.58	11									
4/9/2013	0.17	2.36	1.163	0.64	12	186	1804	236	2289					
4/10/2013	1.38	2.50	2.344	0.70	12									
4/11/2013	0.03	2.84	1.863	1.08	11									
4/12/2013	0.00	2.70	2.606	1.60	10									
4/13/2013	0.00	2.61	1.843	1.36	10									
4/14/2013		2.36	1.636	1.14	10									
4/15/2013	0.00	2.83	1.658	1.02	12									
4/16/2013	0.90	2.90	1.672	1.00	11	110	1534	115	1604					
4/17/2013	0.00	2.70	1.580	0.94	12									
4/18/2013	0.00	2.80	1.555	0.97	12									
4/19/2013	0.00	2.29	1.542	0.98	13									
4/20/2013	0.00	1.98	1.318	0.88	10									
4/21/2013	0.00	2.04	1.236	0.78	11									
4/22/2013	0.00	2.55	1.348	0.74	12									
4/23/2013	0.00	3.33	1.299	0.72	12	137	1484	154	1668					
4/24/2013	0.50	2.46	1.384	0.76	12									
4/25/2013	0.00	2.49	1.309	0.73	12									
4/26/2013	0.00	2.03	1.230	0.69	12									
4/27/2013	0.00	1.84	1.076	0.68	12									
4/28/2013	0.20	2.57	1.091	0.66	12									
4/29/2013	0.00	2.34	1.201	0.64	13									
4/30/2013	0.00	2.50	1.167	0.70	13	152	1479	156	1518					
5/1/2013	0.00	2.22	1.196	0.61	14									
5/2/2013	0.00	2.23	1.163	0.57	14									
5/3/2013	0.00	1.91	1.069	0.59	15									
5/4/2013	0.00	1.43	0.956	0.59	14									
5/5/2013	0.00	1.65	0.965	0.54	14									
5/6/2013	0.00	2.08	1.129	0.52	14									
5/7/2013	0.00	2.08	1.019	0.55	15	238	2023	330	2804					
5/8/2013	0.63	2.14	1.156	0.67	15									
5/9/2013	0.64	3.62	1.562	0.75	15									
5/10/2013	0.00	2.42	1.351	0.87	15									
5/11/2013	0.45	1.87	1.221	0.75	13									
5/12/2013	0.05	1.68	1.118	0.68	13									
5/13/2013	0.00	2.42	1.258	0.66	14									
5/14/2013	0.00	2.06	1.139	0.56	14	210	1995	155	1472					
5/15/2013	0.00	2.26	1.185	0.60	15									
5/16/2013	0.00	2.73	1.164	0.54	15									
5/17/2013	0.00	2.34	1.068	0.54	15									
5/18/2013	0.00	1.48	0.920	0.55	14									
5/19/2013	0.00	1.87	0.948	0.53	14									
5/20/2013	0.00	2.52	1.084	0.52	16									
5/21/2013	0.00	2.22	1.031	0.51	16	181	1556	183	1574					
5/22/2013	0.22	2.67	1.069	0.50	18									
5/23/2013	1.00	3.17	1.368	0.64	17									
5/24/2013	0.05	2.43	1.164	0.60	16									
5/25/2013	0.00	1.65	0.969	0.57	15									
5/26/2013	0.00	1.68	0.903	0.55	14									
5/27/2013	0.00	1.94	0.979	0.48	15									
5/28/2013	1.63	4.82	2.074	0.91	16	165	2854	230	3978					
5/29/2013	0.00	3.26	1.735	0.94	16									
5/30/2013	0.00	3.07	1.490	0.82	16									
5/31/2013	0.00	4.03	1.289	0.85	17									
6/1/2013	0.04	1.94	1.078	0.70	16									
6/2/2013	0.40	1.77	1.168	0.64	15									
6/3/2013	0.00	2.51	1.248	0.63	17									
6/4/2013	0.00	2.49	1.183	0.54	17	174	1717	160	1579	9	91			
6/5/2013	0.00	2.22	1.149	0.56	17									
6/6/2013	0.80	4.67	1.619	0.70	17									
6/7/2013	0.00	2.75	1.487	0.91	17									
6/8/2013	0.00	1.85	1.202	0.74	16									
6/9/2013	0.00	1.79	1.141	0.72	15									
6/10/2013	0.75	3.07	1.790	1.15	17									
6/11/2013	0.10	2.82	1.646	0.93	17	177	2430	97	1332	16	224			
6/12/2013	0.03	3.17	1.520	0.85	17									
6/13/2013	0.53	3.58	1.871	1.07	18									
6/14/2013	0.00	3.36	1.525	0.92	17									
6/15/2013	0.00	2.17	1.264	0.79	17									
6/16/2013	0.02	2.11	1.212	0.77	17									
6/17/2013	0.00	3.24	1.326	0.65	17									

Village of Wellsville
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Date	Precip	Instant Max. Flow	Daily Avg Flow Q,MGD	Instant Min Flow	Daily Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
6/18/2013	0.00	2.53	1.241	0.61	17	172	1780	156	1615	18	185			
6/19/2013	0.00	2.34	1.253	0.61	17									
6/20/2013	0.00	2.37	1.195	0.59	17									
6/21/2013	0.00	2.16	1.123	0.59	18									
6/22/2013	0.00	1.68	0.993	0.51	16									
6/23/2013	0.01	1.65	0.964	0.51	16									
6/24/2013	0.00	2.45	1.127	0.52	18									
6/25/2013	0.00	2.10	1.059	0.47	19	139	1228	173	1528	16	144			
6/26/2013	0.09	3.05	1.102	0.48	19									
6/27/2013	0.52	2.48	1.228	0.60	18									
6/28/2013	0.16	2.00	1.092	0.54	18									
6/29/2013	0.04	1.81	0.948	0.52	17									
6/30/2013	0.53	2.91	1.168	0.72	18									
7/1/2013	0.63	2.90	1.667	0.92	19									
7/2/2013	0.00	2.53	1.388	0.70	19	100	1158	142	1644	9	98			
7/3/2013	0.00	2.65	1.294	0.62	19									
7/4/2013	0.00	2.27	1.112	0.59	18									
7/5/2013	0.00	4.38	1.100	0.60	20									
7/6/2013	0.22	1.90	0.994	0.65	20									
7/7/2013	0.00	1.87	1.005	0.57	20									
7/8/2013	0.02	2.72	1.159	0.53	20									

Village of Wellsville
Influent

Date	Precip	Instant Max. Flow	Daily Avg Flow Q,MGD	Instant Min Flow	Daily Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
7/9/2013	0.00	2.13	1.079	0.49	19	165	1485	148	1332	17	153			
7/10/2013	0.15	2.04	1.131	0.46	19									
7/11/2013	0.00	2.42	1.121	0.49	19									
7/12/2013	0.00	1.93	0.971	0.49	18									
7/13/2013	0.00	1.71	0.879	0.47	18									
7/14/2013	0.00	1.39	0.847	0.45	20									
7/15/2013	0.00	2.44	1.016	0.41	20									
7/16/2013	0.00	2.09	0.962	0.37	20	216	1733	175	1404	20	164			
7/17/2013	0.00	2.30	1.010	0.42	20									
7/18/2013	0.70	3.54	1.111	0.40	21									
7/19/2013	0.00	2.11	1.000	0.43	21									
7/20/2013	0.00	1.66	0.872	0.40	21									
7/21/2013		1.95	0.834	0.40	19									
7/22/2013	0.90	2.57	1.194	0.48	21									
7/23/2013	0.24	2.05	1.138	0.50	21	156	1481	194	1841	18	175			
7/24/2013	0.00	1.98	1.003	0.46	20									
7/25/2013	0.00	2.46	1.111	0.50	20									
7/26/2013	0.00	2.03	0.938	0.44	20									
7/27/2013	0.50	1.70	0.953	0.54	19									
7/28/2013	0.02	2.13	0.938	0.48	19									
7/29/2013	0.00	2.29	0.999	0.43	20									
7/30/2013	0.00	2.40	0.970	0.40	20	249	2014	238	1925	22	176			
7/31/2013	0.00	2.00	0.977	0.41	20									
8/1/2013	0.03	2.21	0.972	0.04	20									
8/2/2013	0.00	2.21	0.909	0.35	21									
8/3/2013	0.00	1.59	0.744	0.37	18									
8/4/2013	0.00	1.33	0.766	0.36	18									
8/5/2013	0.00	2.14	0.932	0.37	20									
8/6/2013	0.00	2.19	0.891	0.38	20	305	2266	446	3314	29	214			
8/7/2013	0.00	2.36	0.948	0.37	20									
8/8/2013	0.42	2.56	0.983	0.33	20									
8/9/2013	0.45	2.48	0.984	0.40	21									
8/10/2013	0.00	1.64	0.758	0.37	20									
8/11/2013	0.00	1.68	0.754	0.37	18									
8/12/2013	0.54	2.27	1.003	0.39	20									
8/13/2013	0.06	2.40	0.969	0.35	21	172	1390	200	1616	17	141			
8/14/2013	0.00	2.50	0.841	0.30	20									
8/15/2013	0.00	1.90	0.889	0.32	20									
8/16/2013	0.00	2.25	0.854	0.30	20									
8/17/2013	0.00	1.30	0.653	0.28	18									
8/18/2013	0.00	1.63	0.700	0.27	19									
8/19/2013	0.00	2.25	0.806	0.29	20									
8/20/2013	0.00	1.96	0.853	0.27	20	211	1501	197	1401	26	184			
8/21/2013	0.00	2.08	0.808	0.27	20									
8/22/2013	0.10	2.18	0.866	0.33	20									
8/23/2013	0.00	2.21	0.797	0.27	21									
8/24/2013	0.00	1.52	0.664	0.30	19									
8/25/2013	0.00	1.17	0.632	0.24	19									
8/26/2013	0.00	2.08	0.903	0.30	21									
8/27/2013	0.77	4.70	0.944	0.30	21	252	1984	268	2110	25	196			
8/28/2013	0.20	4.45	0.994	0.33	21									
8/29/2013	0.00	2.34	0.901	0.28	21									
8/30/2013	0.00	2.22	0.856	0.30	20									
8/31/2013	0.00	1.30	0.670	0.20	21									
9/1/2013	0.18	1.92	0.654	0.30	21									
9/2/2013	0.05	1.97	0.793	0.26	20									
9/3/2013	0.05	2.13	0.818	0.29	21	309	2108	204	1392	23	153			
9/4/2013	0.00	2.18	0.932	0.41	21									
9/5/2013	0.00	2.17	0.793	0.28	21									
9/6/2013	0.00	1.83	0.773	0.25	20									
9/7/2013	0.50	1.46	0.676	0.25	19									
9/8/2013	0.00	1.28	0.669	0.26	19									
9/9/2013	0.01	1.69	0.808	0.30	20									
9/10/2013	0.00	1.81	0.816	0.32	21	187	1273	228	1552	26	178			
9/11/2013	0.76	2.28	1.009	0.37	21									
9/12/2013	0.35	2.81	1.051	0.38	21									
9/13/2013	0.05	2.12	0.808	0.29	20									
9/14/2013	0.00	1.38	0.692	0.31	19									
9/15/2013	0.00	1.25	0.687	0.28	18									
9/16/2013	0.00	2.05	0.866	0.27	20									
9/17/2013	0.00	1.83	0.815	0.28	19	279	1896	252	1713	23	153			
9/18/2013	0.00	2.23	0.833	0.28	20									
9/19/2013	0.00	3.12	0.869	0.25	19									
9/20/2013	0.00	1.68	0.649	0.25	20									
9/21/2013	0.90	1.85	0.874	0.34	19									
9/22/2013	0.00	1.85	0.736	0.32	19									
9/23/2013	0.00	2.08	0.763	0.28	19									
9/24/2013	0.00	1.96	0.785	0.27	19	260	1702	234	1532	20	133			
9/25/2013	0.00	1.98	0.805	0.26	19									
9/26/2013	0.00	1.91	0.740	0.28	20									
9/27/2013	0.00	1.84	0.768	0.27	19									
9/28/2013	0.00	1.35	0.606	0.24	17									
9/29/2013	0.00	1.21	0.613	0.20	17									
9/30/2013	0.00	1.86	0.756	0.22	18									
10/1/2013	0.00	1.91	0.737	0.27	19	260	1598	258	1586	31	192			
10/2/2013	0.00	2.06	0.773	0.24	19									
10/3/2013	0.20	2.21	0.777	0.27	19									
10/4/2013	0.00	1.79	0.624	0.30	20									
10/5/2013	0.26	3.75	0.925	0.44	19									
10/6/2013	1.25	2.12	0.887	0.38	19									
10/7/2013	0.50	2.41	1.137	0.49	19									
10/8/2013	0.00	2.11	0.923	0.40	19	171	1316	202	1555	19	149			
10/9/2013	0.00	2.10	0.901	0.37	19									

Village of Wellsville
Influent

Date	Precip	Instant Max. Flow	Daily Avg Flow Q,MGD	Instant Min Flow	Daily Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
10/10/2013	0.02	1.89	0.870	0.36	19									
10/11/2013	0.00	1.89	0.864	0.40	18									
10/12/2013	0.00	1.47	0.706	0.35	16									
10/13/2013	0.50	1.53	0.823	0.44	17									
10/14/2013	0.03	3.62	0.922	0.00	19									
10/15/2013	0.00	2.22	0.875	0.38	18	189	1379	254	1854	21	151			
10/16/2013	0.20	2.00	0.924	0.46	18									
10/17/2013	0.69	3.21	1.287	0.70	18									
10/18/2013	0.00	2.44	1.015	0.49	18									
10/19/2013	0.00	1.38	0.879	0.53	17									
10/20/2013	0.00	1.47	0.863	0.50	17									
10/21/2013	0.04	2.33	0.928	0.43	17									
10/22/2013	0.10	1.99	0.962	0.45	18	292	2343	172	1380	23	181			
10/23/2013	0.02	2.88	0.973	0.45	18									
10/24/2013	0.14	1.67	0.915	0.41	17									
10/25/2013	0.00	2.10	0.858	0.36	17									
10/26/2013	0.00	1.67	0.704	0.36	15									
10/27/2013	0.05	1.41	0.729	0.35	15									
10/28/2013	0.00	2.11	0.859	0.33	16									
10/29/2013	0.00	1.94	0.856	0.33	17	190	1356	188	1342	27	190			
10/30/2013	0.00	2.32	0.876	0.33	18									

Village of Wellsville
Influent

Date	Precip	Instant Max. Flow	Daily Avg Flow Q,MGD	Instant Min Flow	Daily Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
10/31/2013	1.04	2.88	1.282	0.66	17									
11/1/2013	0.00	2.60	1.252	0.40	17									
11/2/2013	0.00	1.78	0.908	0.48	15									
11/3/2013	0.00	3.02	0.852	0.44	14									
11/4/2013	0.00	3.50	0.949	0.42	14									
11/5/2013	0.00	3.50	0.907	0.48	15	152	1150			39	297			
11/6/2013	0.54	4.15	1.077	0.53	16									
11/7/2013	0.10	4.34	1.142	0.61	16									
11/8/2013		4.61	1.031	0.00	15									
11/9/2013	0.00	2.13	0.682	0.00	14									
11/10/2013	0.28	2.01	0.680	0.00	14									
11/11/2013		1.44	0.880	0.00	14									
11/12/2013		2.24	1.079	0.55	14	146	1314	166	1494					
11/13/2013	0.00	2.68	1.067	0.56	15									
11/14/2013	0.00	2.17	1.046	0.51	14									
11/15/2013	0.00	2.50	0.963	0.53	13									
11/16/2013	0.00	1.44	0.833	0.49	13									
11/17/2013	0.52	2.32	1.169	0.61	14									
11/18/2013	0.00	2.52	1.284	0.69	13									
11/19/2013	0.00	2.23	1.160	0.66	14	166	1605	254	2456					
11/20/2013	0.00	2.08	1.107	0.61	13									
11/21/2013	0.20	2.40	1.173	0.58	13									
11/22/2013	0.00	2.39	1.042	0.58	14									
11/23/2013	0.00	1.89	0.921	0.52	13									
11/24/2013	0.01	1.57	0.895	0.51	12									
11/25/2013	0.00	2.42	1.063	0.49	14									
11/26/2013	1.18	3.20	1.546	0.80	13	156	2011	334	4306					
11/27/2013	0.10	3.03	1.653	0.88	12									
11/28/2013		2.27	1.230	0.77	9									
11/29/2013	0.00	2.77	1.160	0.66	11									
11/30/2013	0.00	1.90	1.086	0.68	10									
12/1/2013	0.00	1.69	1.032	0.64	10									
12/2/2013	0.00	2.14	1.209	0.68	12									
12/3/2013	0.00	2.50	1.242	0.60	12	163	1688	155	1606					
12/4/2013	0.30	2.79	1.309	0.76	13									
12/5/2013	0.00	2.58	1.473	0.93	12									
12/6/2013	0.00	2.70	1.484	0.80	12									
12/7/2013		1.92	1.208	0.82	10									
12/8/2013	0.00	1.76	1.162	0.78	12									
12/9/2013	0.01	2.33	1.266	0.73	12									
12/10/2013	0.01	2.39	1.187	0.64	12	134	1327	160	1584					
12/11/2013	0.03	2.83	1.159	0.64	12									
12/12/2013	0.00	2.34	1.034	0.58	12									
12/13/2013	0.04	2.00	0.974	0.52	11									
12/14/2013	0.37	1.43	0.899	0.51	11									
12/15/2013	0.01	1.86	0.944	0.52	11									
12/16/2013	0.03	2.43	1.017	0.42	12	267	2265	600	5089					
12/17/2013	0.04	1.92	0.989	0.55	11									
12/18/2013	0.00	2.13	1.084	0.51	11									
12/19/2013	0.00	2.68	1.187	0.48	10									
12/20/2013	0.40	2.74	1.545	0.48	12									
12/21/2013	0.60	5.00	3.117	1.57	11									
12/22/2013	0.20	3.95	2.640	1.65	11									
12/23/2013	0.00	3.48	1.982	1.30	11									
12/24/2013	0.00	2.50	1.606	1.05	11	121	1621	170	2277					
12/25/2013	0.04	2.50	1.382	0.98	10									
12/26/2013	0.00	2.88	1.546	0.92	11									
12/27/2013	0.04	3.10	1.395	0.86	11									
12/28/2013	0.00	2.33	1.220	0.78	11									
12/29/2013	0.20	2.27	1.560	1.05	11									
12/30/2013	0.00	4.11	1.472	0.01	11									
12/31/2013	0.01	3.07	1.339	0.81	9									
1/1/2014	0.08	2.33	1.196	0.78	10	99	987	91	908					
1/2/2014	0.30	2.70	1.319	0.77	11									
1/3/2014	0.00	2.25	1.264	0.60	10									
1/4/2014	0.00	2.02	1.124	0.65	9									
1/5/2014	0.30	3.16	1.431	0.89	10									
1/6/2014	0.13	3.10	1.723	0.70	9									
1/7/2014	0.00	2.90	1.455	0.72	9	145	1760	164	1990					
1/8/2014	0.00	2.06	1.299	0.74	10									
1/9/2014	0.00	3.20	1.424	0.70	10									
1/10/2014	0.07	3.80	1.295	0.80	11									
1/11/2014	0.43	3.10	1.830	0.94	11									
1/12/2014	0.00	2.15	1.454	0.96	10									
1/13/2014	0.12	3.10	1.605	1.15	10									
1/14/2014		3.17	1.720	1.01	10	89	1277	140	2008					
1/15/2014	0.00	3.01	1.564	0.96	11									
1/16/2014		2.71	1.691	1.20	10									
1/17/2014	0.14	2.90	1.631	0.95	10									
1/18/2014	0.00	2.26	1.199	0.77	10									
1/19/2014	0.00	2.02	1.204	0.76	9									
1/20/2014	0.01	2.60	1.327	0.74	10									
1/21/2014	0.00	2.39	1.273	0.71	9	133	1412	150	1593					
1/22/2014		2.12	1.223	0.68	9									
1/23/2014		1.88	1.180	0.65	9									
1/24/2014	0.00	2.35	1.131	0.67	9									
1/25/2014	0.00	1.86	1.056	0.61	9									
1/26/2014	0.01	2.05	1.029	0.62	9									
1/27/2014	0.05	2.09	1.066	0.61	9									
1/28/2014	0.00	2.31	1.087	0.58	10	199	1804	246	2230					
1/29/2014	0.00	2.38	1.302	0.88	8									
1/30/2014	0.00	2.65	1.372	0.91	10									
1/31/2014	0.00	2.47	1.107	0.54	9									

Village of Wellsville
Influent

Date	Precip	Instant Max. Flow	Daily Avg Flow Q,MGD	Instant Min Flow	Daily Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
2/1/2014	0.75	1.91	0.989	0.55	9									
2/2/2014	0.00	1.64	0.990	0.49	9									
2/3/2014	0.00	2.43	1.095	0.53	10									
2/4/2014	0.22	1.76	0.994	0.54	9	231	1915	149	1235					
2/5/2014	0.34	2.15	1.007	0.48	9									
2/6/2014	0.00	2.49	1.038	0.50	10									
2/7/2014	0.00	3.10	0.984	0.50	10									
2/8/2014	0.00	2.75	0.889	0.52	9									
2/9/2014	0.10	1.75	0.821	0.51	9									
2/10/2014	0.00	2.17	1.009	0.53	9									
2/11/2014	0.00	1.90	0.938	0.51	10	236	1846	223	1745					
2/12/2014	0.00	2.26	1.204	0.02	10									
2/13/2014	0.13	3.08	1.283	0.80	9									
2/14/2014	0.00	2.12	1.040	0.53	10									
2/15/2014	0.00	2.18	0.887	0.51	7									
2/16/2014	0.07	1.94	0.841	0.47	7									
2/17/2014	0.01	2.22	0.965	0.49	9									
2/18/2014	0.06	2.03	0.987	0.51	8	84	691	155	1276					
2/19/2014	0.00	2.26	1.097	0.49	9									
2/20/2014	0.30	2.65	1.376	0.76	8									
2/21/2014	0.21	3.29	1.662	0.74	8									

Village of Wellsville
Influent

Date	Precip	Instant Max. Flow	Daily Avg Flow Q,MGD	Instant Min Flow	Daily Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
2/22/2014	0.14	2.37	1.292	0.78	11									
2/23/2014	0.00	2.43	1.344	0.80	9									
2/24/2014	0.01	2.62	1.313	0.72	9									
2/25/2014		2.09	1.220	0.67	9	149	1516	180	1831					
2/26/2014	0.00	2.21	1.216	0.66	8									
2/27/2014		2.46	1.239	0.61	9									
2/28/2014	0.00	2.43	1.097	0.57	9									
3/1/2014	0.10	1.60	0.938	0.52	8									
3/2/2014	0.07	1.41	0.939	0.55	8									
3/3/2014	0.00	3.51	1.043	0.50	8									
3/4/2014	0.00	2.77	1.098	0.53	8	163	1493	145	1328					
3/5/2014	0.00	3.66	1.052	0.51	9									
3/6/2014	0.00	2.08	1.034	0.50	8									
3/7/2014	0.00	1.77	1.067	0.49	10									
3/8/2014	0.00	1.46	0.867	0.46	8									
3/9/2014	0.00	1.52	0.882	0.49	9									
3/10/2014	0.00	2.28	1.362	0.86	9									
3/11/2014	0.05	2.31	1.515	0.93	10	158	1996	298	3765					
3/12/2014	0.82	3.56	1.800	0.97	8									
3/13/2014	0.00	3.08	1.430	0.81	8									
3/14/2014	0.00	3.68	2.128	1.40	8									
3/15/2014	0.00	2.74	1.897	1.19	8									
3/16/2014	0.00	2.43	1.428	0.95	9									
3/17/2014	0.00	2.42	1.399	0.80	8									
3/18/2014	0.00	2.58	1.411	0.82	9	130	1530	114	1342					
3/19/2014	0.28	2.96	1.640	1.10	9									
3/20/2014		2.84	1.551	0.94	9									
3/21/2014	0.00	2.55	1.422	0.93	9									
3/22/2014	0.00	1.83	1.356	0.93	8									
3/23/2014	0.02	2.31	1.268	0.83	8									
3/24/2014	0.01	2.78	1.334	0.79	9									
3/25/2014		2.19	1.247	0.75	8	379	3942	1244	12938					
3/26/2014		2.28	1.277	0.70	7									
3/27/2014	0.10	2.49	1.272	0.62	8									
3/28/2014		2.31	1.197	0.77	8									
3/29/2014	0.88	3.34	1.765	1.05	8									
3/30/2014	0.00	2.33	1.654	1.11	6									
3/31/2014	0.00	3.10	1.848	1.22	8									
4/1/2014	0.00	2.75	1.681	1.15	9	111	1556	121	1696					
4/2/2014	0.00	2.50	1.632	1.05	9									
4/3/2014	0.18	3.01	1.718	1.00	9									
4/4/2014	0.00	3.18	2.169	1.10	9									
4/5/2014	0.00	2.64	1.775	1.26	8									
4/6/2014	0.00	2.09	1.580	1.14	9									
4/7/2014	0.78	2.80	1.917	1.08	9									
4/8/2014	0.07	3.79	2.557	1.02	8	52	1109	97	2069					
4/9/2014	0.00	3.26	2.040	1.43	10									
4/10/2014	0.00	2.89	1.919	1.27	10									
4/11/2014	0.00	3.36	2.005	1.24	10									
4/12/2014	0.00	2.69	1.653	1.20	9									
4/13/2014	0.00	2.47	1.572	1.11	9									
4/14/2014	0.00	2.85	1.643	1.30	11									
4/15/2014	0.00	3.76	2.340	1.56	10									
4/16/2014		4.34	1.929	1.30	10	80	1287	84	1351					
4/17/2014	0.00	3.50	1.775	1.18	10									
4/18/2014	0.00	4.87	1.650	1.11	11									
4/19/2014	0.00	2.31	1.435	1.02	10									
4/20/2014	0.00	2.13	1.385	0.97	10									
4/21/2014	0.00	2.62	1.510	0.91	11									
4/22/2014	0.12	2.50	1.495	0.94	12	105	1309	129	1608					
4/23/2014	0.00	2.24	1.430	0.85	12									
4/24/2014	0.10	2.50	1.352	0.82	11									
4/25/2014	0.10	2.27	1.281	0.76	11									
4/26/2014	0.00	1.88	1.129	0.73	11									
4/27/2014	0.00	1.59	1.110	0.73	10									
4/28/2014	0.00	3.14	1.305	0.70	12									
4/29/2014	0.15	2.24	1.266	0.74	13	101	1066	140	1478					
4/30/2014	0.84	2.88	1.737	1.20	13									
5/1/2014	0.06	2.74	1.609	1.00	12									
5/2/2014	0.00	2.80	1.453	1.00	13									
5/3/2014	0.36	2.12	1.347	1.02	12									
5/4/2014	0.00	2.01	1.328	0.90	11									
5/5/2014	0.00	2.52	1.402	0.82	13									
5/6/2014	0.00	2.20	1.324	0.77	13	136	1502	120	1325					
5/7/2014	0.03	2.96	1.291	0.73	13									
5/8/2014	0.05	2.46	1.311	0.67	13									
5/9/2014	0.23	2.64	1.221	0.78	14									
5/10/2014	0.00	1.91	1.091	0.69	13									
5/11/2014	0.00	1.70	1.031	0.67	13									
5/12/2014	0.00	2.35	1.236	0.69	14									
5/13/2014	0.60	2.96	1.527	0.83	15	94	1197	171	2178					
5/14/2014	0.22	2.35	1.425	0.93	15									
5/15/2014	1.55	2.50	2.250	1.05	14									
5/16/2014	0.59	2.72	3.743	1.02	14									
5/17/2014	0.00	3.23	2.417	1.85	14									
5/18/2014	0.00	2.67	1.963	1.50	14									
5/19/2014	0.00	3.18	1.887	1.27	14									
5/20/2014	0.33	3.15	1.789	1.30	14	86	1283	100	1492					
5/21/2014	0.52	3.16	2.164	1.60	14									
5/22/2014	0.05	2.90	1.920	1.30	14									
5/23/2014	0.04	2.90	1.700	1.14	14									
5/24/2014	0.00	2.45	1.459	1.05	12									
5/25/2014	0.00	2.10	1.332	0.95	13									

Village of Wellsville
Influent

Date	Precip	Instant Max. Flow	Daily Avg Flow Q,MGD	Instant Min Flow	Daily Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
5/26/2014	0.00	2.07	1.314	0.87	13									
5/27/2014	0.37	3.12	1.541	0.95	15	179	2300	358	4601					
5/28/2014	0.00	3.08	1.420	0.83	15									
5/29/2014	0.00	2.44	1.367	0.86	15									
5/30/2014	0.00	2.39	1.228	0.74	14									
5/31/2014	0.00	1.74	1.072	0.70	15									
6/1/2014	0.00	1.55	1.038	0.68	14									
6/2/2014	0.00	2.37	1.367	1.00	16									
6/3/2014	0.45	2.86	1.258	0.71	16	120	1259	163	1710	20	205			
6/4/2014	0.00	2.34	1.224	0.63	17									
6/5/2014	0.00	2.17	1.159	0.65	16									
6/6/2014	0.00	2.01	1.035	0.60	16									
6/7/2014	0.00	1.64	0.953	0.57	16									
6/8/2014	1.13	3.52	1.488	0.84	16									
6/9/2014	0.00	2.79	1.400	0.77	16									
6/10/2014	0.18	2.31	1.388	0.84	17	106	1227	205	2373	24	276			
6/11/2014	0.30	2.03	1.372	0.93	17									
6/12/2014	0.19	2.56	1.409	0.85	17									
6/13/2014	0.00	2.23	1.259	0.74	17									
6/14/2014	0.00	1.72	1.090	0.71	15									
6/15/2014	0.00	2.39	1.071	0.66	15									

Village of Wellsville
Influent

Date	Precip	Instant Max. Flow	Daily Avg Flow Q,MGD	Instant Min Flow	Daily Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
6/16/2014	0.00	2.54	1.229	0.66	17									
6/17/2014	0.40	2.35	1.179	0.70	18	135	1327	175	1721	22	216			
6/18/2014	0.55	3.01	1.323	0.85	18									
6/19/2014	0.07	2.59	1.335	0.66	18									
6/20/2014	0.00	1.95	1.095	0.63	17									
6/21/2014	0.00	1.96	0.982	0.58	16									
6/22/2014	0.00	1.68	0.943	0.61	16									
6/23/2014	0.00	2.23	1.060	0.54	18									
6/24/2014	0.58	1.73	1.144	0.72	18	190	1813	280	2671	16	156			
6/25/2014	1.10	4.83	2.251	1.06	18									
6/26/2014	0.00	3.56	1.634	0.96	18									
6/27/2014	0.00	2.68	1.331	0.82	18									
6/28/2014	0.00	2.73	1.205	0.78	18									
6/29/2014	0.05	2.82	1.216	0.60	19									
6/30/2014	0.00	2.52	1.238	0.50	19									
7/1/2014	0.06		1.124		18	148	1387	263	2465	21	195			
7/2/2014	0.00		1.182		19									
7/3/2014	0.94		1.388		18									
7/4/2014	0.00		1.030		17									
7/5/2014	0.00		0.978		16									
7/6/2014	0.00		0.969		16									
7/7/2014	0.52		1.248		18									
7/8/2014	0.59		1.340		19	164	1833	397	4437	19	207			
7/9/2014	0.21		1.233		20									
7/10/2014	0.00		1.212		19									
7/11/2014	0.00		1.104		19									
7/12/2014	0.00		0.888		17									
7/13/2014	0.00		1.256		17									
7/14/2014	0.43		1.416		19									
7/15/2014	0.38		1.725		19	84	1208	153	2201	9	135			
7/16/2014	0.00		1.382		19									
7/17/2014	0.00		1.314		20									
7/18/2014	0.00		1.212		18									
7/19/2014	0.22		1.155		19									
7/20/2014	0.00		0.995		18									
7/21/2014	0.00		1.141		18									
7/22/2014	0.00		1.090		19	158	1436	99	900	19	175			
7/23/2014	0.00		1.125		20									
7/24/2014	0.00		1.032		19									
7/25/2014	0.00		0.954		19									
7/26/2014	0.00		0.803		20									
7/27/2014	0.07		0.810		19									
7/28/2014	0.20		1.003		20									
7/29/2014	0.00		0.994		20	178	1476	194	1608	36	302			
7/30/2014	0.00		0.960		19									
7/31/2014	0.00		0.975		20									
8/1/2014	0.00	2.15	0.864	0.41	19									
8/2/2014	0.82	2.90	1.083	0.63	17									
8/3/2014	0.49	2.12	1.277	0.74	18									
8/4/2014	0.00	2.73	1.196	0.49	20									
8/5/2014	0.27	2.28	1.116	0.53	19			150	1396	35	323			
8/6/2014	0.00	1.87	1.057	0.53	19									
8/7/2014	0.00	2.83	1.079	0.45	19									
8/8/2014	0.00	2.21	0.980	0.46	19									
8/9/2014	0.00	1.96	0.819	0.45	18									
8/10/2014	0.00	2.29	0.809	0.42	18									
8/11/2014	0.38	2.41	1.138	0.50	19									
8/12/2014	0.74	3.79	1.370	0.52	20	124	1417	191	2182	30	344			
8/13/2014	0.10	2.42	1.239	0.60	20									
8/14/2014	0.00	3.01	1.173	0.51	19									
8/15/2014	0.00	2.02	0.991	0.51	19									
8/16/2014	0.00	2.22	0.877	0.49	17									
8/17/2014	0.11	2.12	0.860	0.46	18									
8/18/2014	0.00	2.67	1.040	0.44	20									
8/19/2014	0.00	2.44	1.002	0.38	20	241	2014	267	2231	51	422			
8/20/2014	0.00	2.32	0.972	0.42	20									
8/21/2014	0.00	2.23	1.023	0.37	20									
8/22/2014	0.00	2.61	0.928	0.34	20									
8/23/2014	0.00	2.20	0.767	0.35	22									
8/24/2014	0.00	2.27	0.789	0.35	21									
8/25/2014	0.00	2.07	0.918	0.32	20									
8/26/2014	0.00	2.01	0.937	0.32	20	306	2391	427	3337	43	334			
8/27/2014	0.00	2.47	0.927	0.28	21									
8/28/2014	0.00	1.81	0.915	0.33	20									
8/29/2014	0.00	2.23	0.848	0.31	19									
8/30/2014	0.00	1.29	0.646	0.26	19									
8/31/2014	0.48	1.52	0.787	0.34	19									
9/1/2014	0.10	2.16	0.833	0.31	19									
9/2/2014	0.40	2.49	1.045	0.36	21	181	1577	274	2388	33	286			
9/3/2014	0.00	2.63	0.993	0.33	21									
9/4/2014	0.00	2.10	0.926	0.35	22									
9/5/2014	0.00	2.13	0.916	0.36	21									
9/6/2014	0.20	1.39	0.695	0.26	20									
9/7/2014	0.00	1.50	0.725	0.34	18									
9/8/2014	0.00	2.30	0.876	0.32	20									
9/9/2014	0.00	1.77	0.856	0.33	20	247	1763	227	1621	56	400			
9/10/2014	0.23	2.15	0.885	0.29	20									
9/11/2014	0.11	2.43	1.018	0.21	20									
9/12/2014	0.00	2.14	0.788	0.33	22									

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CHART ERROR

Village of Wellsville
Influent

Date	Precip	Instant Max. Flow	Daily Avg Flow Q,MGD	Instant Min Flow	Daily Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
9/13/2014	0.12	1.64	0.687	0.32	18									
9/14/2014	0.00	1.49	0.713	0.32	18									
9/15/2014	0.40	1.92	0.969	0.45	19									
9/16/2014	0.00	2.57	0.970	0.36	19	226	1828	240	1942	23	185			
9/17/2014	0.00	1.99	0.947	0.36	19									
9/18/2014	0.00	2.02	0.918	0.33	19									
9/19/2014	0.00	2.77	0.957	0.32	19									
9/20/2014	0.00	1.31	0.674	0.32	19									
9/21/2014	0.10	1.41	0.713	0.32	19									
9/22/2014	0.00	1.88	0.834	0.33	19									
9/23/2014	0.00	1.88	0.823	0.30	19	236	1620	277	1901	24	162			
9/24/2014	0.00	1.86	0.810	0.29	19									
9/25/2014	0.00	1.82	0.769	0.28	19									
9/26/2014	0.00	1.81	0.697	0.29	19									
9/27/2014	0.00	1.26	0.631	0.29	18									
9/28/2014	0.00	1.39	0.675	0.26	18									
9/29/2014	0.00	2.18	0.869	0.29	19									
9/30/2014	0.00	1.97	0.879	0.35	19									
10/1/2014	0.00	1.64	0.831	0.28	20	199	1379	353	2446	30	207			
10/2/2014	0.00	2.07	0.830	0.31	20									
10/3/2014	0.12	1.71	0.795	0.34	20									

Village of Wellsville
Influent

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10/4/2014	0.08	1.28	0.662	0.36	18									
10/5/2014	0.00	1.37	0.693	0.33	18									
10/6/2014	0.20	1.87	0.844	0.35	18									
10/7/2014	0.16	2.11	0.930	0.45	18	223	1730	378	2932	30	233			
10/8/2014	0.00	1.80	0.845	0.33	19									
10/9/2014	0.00	2.07	0.853	0.31	19									
10/10/2014	0.10	1.48	0.725	0.32	18									
10/11/2014	0.00	1.35	0.619	0.28	17									
10/12/2014	0.00	1.27	0.633	0.27	17									
10/13/2014	0.00	1.89	0.834	0.32	16									
10/14/2014	0.00	1.53	0.754	0.26	18	201	1264	354	2226	24	153			
10/15/2014	0.70	2.68	1.036	0.39	19									
10/16/2014	0.01	2.68	0.921	0.33	19									
10/17/2014	0.00	1.94	0.775	0.32	18									
10/18/2014	0.20	1.40	0.701	0.33	17									
10/19/2014	0.00	1.91	0.718	0.30	16									
10/20/2014	0.12	1.88	0.877	0.39	17									
10/21/2014	0.28	2.01	0.985	0.38	18	187	1536	344	2826	21	174			
10/22/2014	0.02	2.02	0.908	0.37	17									
10/23/2014	0.00	2.15	0.829	0.36	17									
10/24/2014	0.00	2.31	0.831	0.34	17									
10/25/2014	0.00	1.24	0.673	0.34	16									
10/26/2014	0.00	1.27	0.669	0.31	16									
10/27/2014	0.00	1.74	0.818	0.28	16									
10/28/2014	0.40	2.14	0.931	0.41	17	L								
10/29/2014	0.02	2.00	0.913	0.36	17	244	1858	670	5102	26	194			
10/30/2014	0.00	1.92	0.890	0.35	16									
10/31/2014	0.00	2.11	0.831	0.41	16									
11/1/2014	0.00	1.40	0.725	0.39	15									
11/2/2014	0.00	1.43	0.784	0.40	15									
11/3/2014	0.00	2.17	0.946	0.35	15									
11/4/2014	0.17	2.30	0.893	0.36	16	210	1564	298	2219	17	127			
11/5/2014	0.00	1.92	0.896	0.37	16									
11/6/2014	0.70	3.28	1.294	0.61	15									
11/7/2014	0.00	2.46	1.003	0.48	16									
11/8/2014	0.10	1.72	0.835	0.46	15									
11/9/2014	0.00	1.95	0.837	0.41	14									
11/10/2014	0.00	2.26	0.956	0.41	15									
11/11/2014	0.01	2.17	0.873	0.39	15	251	1827	227	1653					
11/12/2014	0.00	2.50	0.950	0.39	15									
11/13/2014	0.08	2.07	0.946	0.40	15									
11/14/2014	0.02	1.90	0.874	0.39	14									
11/15/2014	0.03	1.34	0.731	0.38	14									
11/16/2014	0.06	1.42	0.768	0.36	14									
11/17/2014	0.23	2.30	1.122	0.49	14									
11/18/2014	0.00	2.41	0.990	0.40	14	202	1668	195	1610					
11/19/2014	0.01	2.07	0.961	0.40	13									
11/20/2014	0.05	1.98	0.939	0.40	15									
11/21/2014	0.00	2.23	0.846	0.35	13									
11/22/2014	0.00	1.42	0.750	0.40	12									
11/23/2014	0.18	1.54	0.859	0.44	12									
11/24/2014	0.02	2.71	1.032	0.41	13									
11/25/2014	0.00	2.20	0.970	0.40	13	189	1529	199	1610					
11/26/2014	0.10	2.84	0.984	0.39	11									
11/27/2014	0.05	1.64	0.826	0.38	14									
11/28/2014	0.00	1.46	0.784	0.39	13									
11/29/2014	0.00	1.50	0.737	0.35	13									
11/30/2014	0.03	1.72	0.804	0.37	13									
12/1/2014	0.00	1.97	0.906	0.40	13									
12/2/2014	0.18	1.97	0.972	0.50	12	200	1621	235	1905					
12/3/2014	0.01	2.24	1.000	0.45	13									
12/4/2014	0.00	1.83	0.941	0.41	12									
12/5/2014	0.27	2.86	1.056	0.52	12									
12/6/2014	0.50	2.87	1.426	0.66	10									
12/7/2014	0.00	1.70	1.053	0.59	13									
12/8/2014	0.00	2.66	1.153	0.55	13									
12/9/2014	0.01	2.09	1.081	0.48	13	184	1659	177	1596					
12/10/2014	0.48	2.45	1.083	0.55	13									
12/11/2014	0.20	2.43	1.017	0.52	10									
12/12/2014	0.00	2.38	0.962	0.48	11									
12/13/2014	0.00	1.85	0.862	0.48	11									
12/14/2014	0.00	1.62	0.974	0.60	12									
12/15/2014	0.00	2.42	1.198	0.65	11									
12/16/2014	0.20	2.60	1.424	0.90	12	111	1318	148	1758					
12/17/2014	0.02	2.74	1.387	0.75	10									
12/18/2014	0.02	2.65	1.244	0.65	12									
12/19/2014	0.00	2.48	1.112	0.59	11									
12/20/2014	0.00	2.17	0.959	0.57	11									
12/21/2014	0.00	2.00	0.938	0.54	11									
12/22/2014	0.00	2.60	1.104	0.52	13									
12/23/2014	0.00	2.15	1.070	0.51	11	124	1107	150	1339					
12/24/2014	0.20	2.19	1.113	0.59	12									
12/25/2014	0.00	1.97	1.041	0.63	11									
12/26/2014	0.25	2.39	1.080	0.56	12									
12/27/2014	0.00	2.03	1.050	0.67	11									
12/28/2014	0.00	2.13	1.082	0.62	11									
12/29/2014		2.64	1.175	0.56	12									
12/30/2014		2.70	1.064	0.52	12	136	1207	136	1207					
12/31/2014		2.14	1.043	0.54	11									
1/1/2015	0.00	1.60	0.967	0.50	9									
1/2/2015	0.00	2.13	1.024	0.55	10									
1/3/2015	0.00	2.19	1.107	0.58	9									
1/4/2015	0.00	2.69	1.360	0.77	11									

Village of Wellsville
Influent

Date	Precip	Instant Max. Flow	Daily Avg Flow Q,MGD	Instant Min Flow	Daily Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
1/5/2015	0.00	2.13	1.240	0.61	10									
1/6/2015	0.02	2.23	1.220	0.67	10	180	1831	147	1496	25	256			
1/7/2015	0.03	2.69	1.166	0.65	9									
1/8/2015	0.11	2.09	1.111	0.62	10									
1/9/2015	0.00	2.05	1.024	0.55	11									
1/10/2015	0.00	1.66	0.887	0.49	11									
1/11/2015	0.05	1.59	0.902	0.51	10									
1/12/2015	0.16	2.57	1.042	0.53	12									
1/13/2015	0.16	1.99	1.016	0.49	11	162	1373	215	1822					
1/14/2015	0.00	2.34	1.038	0.54	11									
1/15/2015	0.00	1.93	1.028	0.54	11									
1/16/2015	0.00	2.24	0.981	0.49	11									
1/17/2015	0.00	1.84	0.869	0.48	9									
1/18/2015	0.04	2.15	0.908	0.48	12									
1/19/2015	0.00	2.48	1.052	0.47	10									
1/20/2015	0.00	2.20	0.976	0.48	11									
1/21/2015	0.06	2.14	0.979	0.44	9									
1/22/2015	0.00	3.12	0.987	0.39	11	182	1498	225	1852					
1/23/2015	0.00	1.85	0.899	0.41	10									
1/24/2015	0.00	1.91	0.812	0.41	9									
1/25/2015	0.01	1.93	0.816	0.37	9									

Village of Wellsville
Influent

Date	Precip	Instant Max. Flow	Daily Avg Flow Q,MGD	Instant Min Flow	Daily Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
1/26/2015	0.31	3.83	0.990	0.39	10									
1/27/2015	0.00	2.31	0.951	0.43	9	172	1364	324	2570					
1/28/2015	0.00	1.90	0.955	0.42	10									
1/29/2015	0.05	2.33	0.967	0.39	11									
1/30/2015	0.00	2.60	0.906	0.39	9									
1/31/2015	0.00	1.27	0.748	0.38	9									
2/1/2015	0.40	1.30	0.763	0.35	10									
2/2/2015	0.40	2.32	0.967	0.39	9									
2/3/2015	0.00	2.42	1.222	0.80	9	187	1906	217	2212					
2/4/2015	0.19	2.01	0.971	0.38	10									
2/5/2015	0.01	2.01	1.016	0.40	9									
2/6/2015	0.22	2.40	1.059	0.35	9									
2/7/2015	0.00	1.41	0.790	0.38	9									
2/8/2015	0.00	1.51	0.843	0.38	10									
2/9/2015	0.08	2.79	0.936	0.38	10									
2/10/2015	0.00	1.96	0.953	0.37	10	180	1431	194	1542					
2/11/2015	0.06	2.73	1.005	0.42	11									
2/12/2015	0.04	1.94	1.002	0.39	9									
2/13/2015	0.00	1.95	0.883	0.39	10									
2/14/2015	0.20	1.39	1.057	0.59	9									
2/15/2015	0.00	1.41	0.935	0.61	7									
2/16/2015	0.00	2.27	1.346	0.91	7									
2/17/2015	0.00	2.22	1.090	0.43	10	232	2109	343	3118					
2/18/2015	0.05	1.93	0.968	0.43	9									
2/19/2015		2.98	1.059	0.45	8									
2/20/2015	0.00	1.92	0.980	0.40	9									
2/21/2015	0.00	1.64	1.199	0.90	9									
2/22/2015	0.06	1.82	1.010	0.36	9									
2/23/2015	0.00	1.90	0.949	0.38	9									
2/24/2015	0.00	2.73	1.260	0.40	9									
2/25/2015	0.05	3.21	0.959	0.50	9	191	1528	340	2719					
2/26/2015	0.00	3.19	1.067	0.60	8									
2/27/2015	0.00	2.02	1.206	0.72	7									
2/28/2015	0.00	1.78	1.099	0.73	6									
3/1/2015	0.18	1.99	1.087	0.69	8									
3/2/2015	0.00	2.29	1.154	0.37	10									
3/3/2015	0.30	2.12	1.111	0.43	9	168	1557	215	1992					
3/4/2015		2.35	1.038	0.39	9									
3/5/2015	0.00	2.17	0.996	0.39	9									
3/6/2015	0.00	2.08	0.931	0.34	9									
3/7/2015	0.00	1.50	0.773	0.39	8									
3/8/2015	0.00	1.94	0.837	0.34	10									
3/9/2015	0.00	2.13	1.046	0.48	9									
3/10/2015	0.02	1.95	1.119	0.61	10	202	1885	323	3014					
3/11/2015	0.00	2.68	1.600	0.90	9									
3/12/2015	0.00	2.34	1.410	0.80	7									
3/13/2015	0.15	2.38	1.474	0.95	8									
3/14/2015	0.00	2.80	2.044	1.36	8									
3/15/2015	0.00	2.86	1.576	1.02	7									
3/16/2015	0.05	2.99	2.005	0.96	9									
3/17/2015	0.01	3.22	2.113	1.37	9	96	1692	179	3154					
3/18/2015	0.00	2.86	1.699	1.10	8									
3/19/2015	0.00	2.59	1.592	0.99	8									
3/20/2015	0.04	2.64	1.476	0.95	10									
3/21/2015	0.00	2.46	1.489	1.05	8									
3/22/2015	0.00	1.96	1.347	0.93	7									
3/23/2015	0.00	2.46	1.440	0.84	11									
3/24/2015	0.00	2.30	1.389	0.83	9	154	1784	190	2201					
3/25/2015	0.11	2.39	1.420	0.84	9									
3/26/2015	0.35	2.85	1.913	1.27	8									
3/27/2015	0.01	2.57	1.568	1.03	9									
3/28/2015	0.00	2.24	1.375	0.92	8									
3/29/2015	0.01	2.20	1.307	0.90	8									
3/30/2015	0.00	2.42	1.490	0.97	8									
3/31/2015		2.54	1.429	0.89	9									
4/1/2015	0.00	2.60	1.388	1.30	9	125	1447	153	1771					
4/2/2015	0.13	2.51	1.684	1.32	9									
4/3/2015	0.00	2.47	1.990	1.28	9									
4/4/2015	0.28	2.46	1.734	1.26	7									
4/5/2015	0.31	2.52	1.775	1.42	7									
4/6/2015	0.01	3.60	1.968	1.20	9									
4/7/2015	0.42	3.66	2.076	1.37	10	95	1645	179	3099					
4/8/2015	0.05	3.82	2.414	1.65	9									
4/9/2015	0.40	3.37	2.498	1.96	9									
4/10/2015	0.00	3.86	2.405	1.74	9									
4/11/2015	0.00	2.67	1.908	1.48	9									
4/12/2015	0.00	2.70	1.808	1.31	8									
4/13/2015	0.54	3.15	2.100	1.17	11									
4/14/2015	0.00	2.96	2.009	1.37	11	77	1290	102	1709					
4/15/2015	0.00	3.24	1.797	1.22	10									
4/16/2015	0.13	2.45	1.705	1.16	11									
4/17/2015	0.00	3.29	1.688	1.13	11									
4/18/2015	0.00	2.65	1.515	1.01	10									
4/19/2015	0.19	2.47	1.485	1.05	11									
4/20/2015	0.65	3.40	2.109	1.46	12									
4/21/2015	0.10	3.23	2.016	1.35	11	99	1665	108	1816					
4/22/2015	0.20	3.17	2.033	1.42	11									
4/23/2015	0.00	2.97	1.866	1.30	11									
4/24/2015	0.00	3.28	1.733	1.15	10									
4/25/2015	0.00	2.51	1.547	1.09	10									
4/26/2015	0.00	2.22	1.445	1.03	10									
4/27/2015	0.00	2.48	1.511	0.95	11									
4/28/2015	0.00	2.92	1.474	0.94	12	143	1758	253	3110					

Village of Wellsville
Influent

Date	Precip	Instant Max. Flow	Daily Avg Flow Q,MGD	Instant Min Flow	Daily Influent Temp	Influent BOD, mg/L	Influent BOD, #/day	Influent TSS, mg/L	Influent TSS, #/day	Influent TKN, mg/L	Influent TKN, #/day	Total Monthly Leachate Treated (gal.)	Monthly Leachate Treated (gpd)	Monthly Leachate Treated (MGD)
4/29/2015	0.00	2.44	1.409	0.89	13									
4/30/2015	0.00	2.20	1.350	0.84	13									
5/1/2015	0.00	2.99	1.313	0.79	13									
5/2/2015	0.00	1.86	1.128	0.76	11									
5/3/2015	0.00	0.86	1.135	0.76	11									
5/4/2015	0.00	2.74	1.252	0.69	13									
5/5/2015	0.08	2.52	1.214	0.68	13	123	1245	196	1984					
5/6/2015	0.00	2.46	1.195	0.67	14									
5/7/2015	0.00	1.85	1.173	0.62	14									
5/8/2015	0.00	3.45	1.154	0.61	15									
5/9/2015	0.00	1.89	0.949	0.64	14									
5/10/2015	0.08	2.47	0.987	0.62	14									
5/11/2015	0.22	2.23	1.173	0.65	16									
5/12/2015	0.23	2.67	1.187	0.62	16	165	1633	187	1851					
5/13/2015	0.00	2.11	1.116	0.61	15									
5/14/2015	0.00	2.59	1.252	0.64	15									
5/15/2015	0.20	2.84	1.093	0.62	15									
5/16/2015	0.20	1.95	0.941	0.60	14									
5/17/2015	0.00	1.57	0.929	0.59	14									
5/18/2015	0.17	2.24	1.137	0.61	16									
5/19/2015	0.00	2.12	1.088	0.58	17									
5/20/2015	0.00	2.29	1.151	0.60	16	157	1507	272	2611					
5/21/2015		2.35	1.100	0.53	16									
5/22/2015	0.00	1.94	1.002	0.54	16									
5/23/2015	0.00	1.67	0.872	0.49	14									
5/24/2015	0.00	1.81	0.844	0.50	15									
5/25/2015	0.00	1.51	0.849	0.48	15									
5/26/2015	0.00	2.25	0.977	0.47	16	178	1450	302	2461					
5/27/2015	0.20	2.06	1.011	0.47	17									
5/28/2015	0.00	2.11	0.993	0.45	17									
5/29/2015	0.00	2.15	0.875	0.47	17									
5/30/2015	0.31	1.46	0.778	0.50	18									
5/31/2015	0.51	2.23	1.078	0.47	16									
6/1/2015	0.02	1.97	0.994	0.49	16									
6/2/2015	0.00	2.11	0.977	0.46	17	139	1133	324	2640	21	172			
6/3/2015	0.00	2.03	0.965	0.45	17									
6/4/2015		2.11	0.959	0.41	17									
6/5/2015	0.00	2.05	0.864	0.41	17									
6/6/2015	0.00	1.42	0.743	0.36	16									
6/7/2015	0.00	1.41	0.796	0.38	15									
6/8/2015	1.43	2.50	1.533	0.72	17									
6/9/2015	0.35	2.60	1.596	0.80	17	103	1371	170	2263					
6/10/2015	0.05	2.72	1.365	0.78	18									
6/11/2015	0.00	1.93	1.207	0.58	18									
6/12/2015	0.12	2.10	1.082	0.54	19									
6/13/2015	0.37	1.68	0.878	0.52	17									
6/14/2015	0.23	1.80	1.097	0.61	17									
6/15/2015	0.17	1.90	1.330	0.65	19									
6/16/2015	0.02	2.16	1.178	0.56	18	158	1552	252	2476					
6/17/2015	0.00	2.53	1.101	0.54	18									
6/18/2015	0.01	2.16	1.106	0.53	18									
6/19/2015	0.00	2.00	0.997	0.44	18									
6/20/2015	0.07	1.46	0.822	0.50	19									
6/21/2015	0.06	2.04	0.864	0.47	19									
6/22/2015	0.00	2.23	1.046	0.48	19									
6/23/2015	0.38	2.09	1.054	0.52	19	177	1556	394	3463					
6/24/2015	0.00	2.28	0.937	0.47	19									
6/25/2015	0.00	2.15	0.970	0.42	18									
6/26/2015	0.33	2.19	0.879	0.43	19									
6/27/2015	0.87	2.90	1.662	0.54	17									
6/28/2015	0.43	1.78	1.241	0.83	17									
6/29/2015	0.10	3.01	1.272	0.69	17									
6/30/2015	0.60	3.51	1.534	0.80	18									
7/1/2015	0.10	2.94	1.377	0.80	18	125	1436	270	3101					
7/2/2015	0.00	2.89	1.330	0.68	18									
7/3/2015	0.00	2.35	1.065	0.63	17									
7/4/2015	0.00	1.58	0.900	0.58	17									
7/5/2015	0.00	1.69	0.914	0.55	17									
7/6/2015	0.00	2.19	1.043	0.55	18									
7/7/2015	0.50	2.03	1.118	0.61	18	269	2508	484	4513	32	302			
7/8/2015	0.02	2.70	1.071	0.62	19									
7/9/2015	0.45	2.40	1.215	0.63	19									
7/10/2015	0.02	2.29	1.108	0.50	18									
7/11/2015	0.00	1.66	0.875	0.52	17									
7/12/2015	0.00	1.47	0.869	0.52	17									
7/13/2015	0.00	1.88	0.959	0.52	19									
7/14/2015	0.40	2.69	1.130	0.55	19	192	1809	374	3525	19	179			
7/15/2015	0.00	2.30	0.990	0.49	20									
7/16/2015	0.00	2.23	0.967	0.46	19									
7/17/2015	0.00	2.70	1.007	0.42	19									
7/18/2015	0.00	1.68	0.780	0.37	19									
7/19/2015	0.03	1.64	0.786	0.38	19									
7/20/2015	0.00	2.33	0.902	0.43	19									
7/21/2015	0.24	2.08	0.957	0.39	21	295	2355	977	7798	34	271			
7/22/2015	0.00	2.09	0.916	0.36	20									
7/23/2015	0.00	2.06	0.913	0.38	19									
7/24/2015	0.00	2.12	0.844	0.35	19									
7/25/2015	0.00	1.45	0.679	0.33	18									
7/26/2015	0.00	1.41	0.706	0.33	19									
7/27/2015	0.00	1.90	0.853	0.35	21									
7/28/2015	0.00	1.65	0.876	0.36	20	146	1067	280	2046	26	189			
7/29/2015	0.00	2.02	0.892	0.33	21									
7/30/2015	0.35	2.21	0.980	0.33	22									

Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
8/1/2012	1.058	21	9.00	79.41	13.00	114.71	7.30	64.41	0.20	1.76	0.70	6.18	0.09	0.76
8/2/2012	0.941	22												
8/3/2012	0.872	22												
8/4/2012	0.713	21												
8/5/2012	0.702	21												
8/6/2012	0.830	22												
8/7/2012	0.805	22	10.00	67.14	8.00	53.71	5.90	39.61	0.10	0.67	0.60	4.03		
8/8/2012	0.793	22												
8/9/2012	0.903	22												
8/10/2012	0.868	22												
8/11/2012	0.675	22												
8/12/2012	0.664	20												
8/13/2012	0.808	21												
8/14/2012	0.755	22	8.00	50.37	8.00	50.37	3.50	22.04	0.10	0.63	0.50	3.15		
8/15/2012	0.762	22												
8/16/2012	0.824	22												
8/17/2012	0.818	21												
8/18/2012	0.641	20												
8/19/2012	0.653	19												
8/20/2012	0.820	19												
8/21/2012	0.740	20	9.00	55.54	10.00	61.72	7.00	43.20	1.70	10.49	0.70	4.32		
8/22/2012	0.732	20												
8/23/2012	0.753	21												
8/24/2012	0.680	21												
8/25/2012	0.574	21												
8/26/2012	0.591	21												
8/27/2012	0.918	22												
8/28/2012	0.769	22	10.00	64.13	9.00	57.72	6.80	43.61	1.20	7.70	0.70	4.49		
8/29/2012	0.835	21												
8/30/2012	0.791	20												
8/31/2012	0.808	19												
9/1/2012	0.666	19												
9/2/2012	0.647	21												
9/3/2012	0.735	21												
9/4/2012	1.166	22	12.00	116.69	13.00	126.42	8.20	79.74	0.50	4.86	1.20	11.67	0.07	0.67
9/5/2012	0.904	22												
9/6/2012	0.822	22												
9/7/2012	0.839	22												
9/8/2012	0.821	22												
9/9/2012	0.743	19												
9/10/2012	0.792	18												
9/11/2012	0.792	19	9.00	59.45	7.00	46.24	10.20	67.37	0.10	0.66	0.40	2.64		
9/12/2012	0.784	19												
9/13/2012	0.810	20												
9/14/2012	0.817	21												
9/15/2012	0.642	20												
9/16/2012	0.685	18												
9/17/2012	0.810	18												
9/18/2012	1.210	19	11.00	111.01	11.00	111.01	12.20	123.12	0.70	7.06	0.80	8.07		
9/19/2012	0.908	19												
9/20/2012	0.814	17												
9/21/2012	0.750	18												
9/22/2012	0.700	19												
9/23/2012	0.662	17												
9/24/2012	0.877	17												
9/25/2012	0.746	16	9.00	55.99	11.00	68.44	10.40	64.71	0.10	0.62	0.70	4.36		
9/26/2012	0.750	18												
9/27/2012	0.840	18												
9/28/2012	0.865	17												
9/29/2012	0.688	16												
9/30/2012	0.696	16												
10/1/2012	0.793	17												
10/2/2012	0.826	17	9.00	62.00	10.00	68.89	6.50	44.78	0.10	0.69	1.00	6.89	0.04	0.27
10/3/2012	0.815	19												
10/4/2012	0.812	19												
10/5/2012	0.775	19												
10/6/2012	0.751	18												
10/7/2012	0.703	17												
10/8/2012	0.893	15												
10/9/2012	0.876	15	10.00	73.06	8.00	58.45	8.90	65.02	0.10	0.73	0.80	5.84		
10/10/2012	0.915	15												
10/11/2012	0.916	15												
10/12/2012	0.813	15												
10/13/2012	0.768	12												
10/14/2012	0.750	14												
10/15/2012	0.874	17												
10/16/2012	0.840	15	10.00	70.06	6.00	42.03	6.50	45.54	5.20	36.43	0.80	5.60		
10/17/2012	0.890	14												
10/18/2012	1.134	15												
10/19/2012	0.910	16												
10/20/2012	0.773	15												
10/21/2012	0.771	14												
10/22/2012	0.931	15												
10/23/2012	1.846	15	le		26.00	400.29	11.00	169.35	0.60	9.24	1.30	20.01		
10/24/2012	1.297	17												
10/25/2012	1.167	17												
10/26/2012	1.034	18												

Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
10/27/2012	0.925	16												
10/28/2012	1.073	15												
10/29/2012	2.110	14												
10/30/2012	2.367	14	8.00	157.93	8.00	157.93	3.00	59.22	0.10	1.97	0.50	9.87		
10/31/2012	1.790	14												
11/1/2012	1.647	14												
11/2/2012	1.488	14												
11/3/2012	1.296	12												
11/4/2012	1.265	11												
11/5/2012	1.342	12												
11/6/2012	1.270	12	9.00	95.33	16.00	169.47					0.60	6.36	0.11	1.18
11/7/2012	1.060	11												
11/8/2012	1.208	11												
11/9/2012	1.110	11												
11/10/2012	1.007	11												
11/11/2012	0.996	12												
11/12/2012	1.151	13												
11/13/2012	1.154	12	12.00	115.49	20.00	192.49					0.60	5.77		
11/14/2012	1.100	12												
11/15/2012	1.111	11												
11/16/2012	1.021	11												
11/17/2012	0.897	9												
11/18/2012	0.911	9												
11/19/2012	1.048	11												
11/20/2012	1.010	11	20.00	168.47	23.00	193.74					0.80	6.74		
11/21/2012	1.051	12												
11/22/2012	0.945	10												
11/23/2012	1.013	10												
11/24/2012	0.908	9												
11/25/2012	0.925	8												
11/26/2012	1.014	9												
11/27/2012	1.024	10	11.00	93.94	21.00	179.34					0.80	6.83		
11/28/2012	0.995	10												
11/29/2012	1.000	10												

Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
11/30/2012	0.919	10												
12/1/2012	0.792	10												
12/2/2012	0.986	11												
12/3/2012	1.038	13												
12/4/2012	1.472	14	15.00	184.15	20.00	245.53					1.20	14.73	0.21	2.52
12/5/2012	1.356	12												
12/6/2012	1.254	10												
12/7/2012	1.363	10												
12/8/2012	1.144	10												
12/9/2012	1.244	11												
12/10/2012	1.910	12												
12/11/2012	1.623	11	13.00	175.97	17.00	230.11					1.00	13.54		
12/12/2012	1.474	10												
12/13/2012	1.431	10												
12/14/2012	1.289	9												
12/15/2012	1.103	9												
12/16/2012	1.265	10												
12/17/2012	2.033	11												
12/18/2012	2.486	12	8.00	165.87	13.00	269.53					0.90	18.66		
12/19/2012	1.838	11												
12/20/2012	1.948	10												
12/21/2012	2.133	10												
12/22/2012	1.659	9												
12/23/2012	1.546	9												
12/24/2012	1.615	10												
12/25/2012	1.361	10												
12/26/2012	1.493	9	10.00	124.52	19.00	236.58					0.60	7.47		
12/27/2012	1.362	8												
12/28/2012	1.262	9												
12/29/2012	1.386	9												
12/30/2012	1.227	8												
12/31/2012	1.358	9												
1/1/2013	1.235	9	11.00	113.30	12.00	123.60					0.50	5.15	0.14	1.40
1/2/2013	1.412	9												
1/3/2013	1.339	9												
1/4/2013	1.305	9												
1/5/2013	1.194	8												
1/6/2013	1.199	9												
1/7/2013	1.336	10												
1/8/2013	1.291	9	14.00	150.74	13.00	139.97					0.80	8.61		
1/9/2013	1.385	9												
1/10/2013	1.375	10												
1/11/2013	1.643	10												
1/12/2013	2.081	10												
1/13/2013	2.180	10												
1/14/2013	1.930	11												
1/15/2013	1.775	9	15.00	222.05	15.00	222.05					1.60	23.69		
1/16/2013	1.748	10												
1/17/2013	1.703	9												
1/18/2013	1.542	9												
1/19/2013	1.384	9												
1/20/2013	1.314	10												
1/21/2013	1.417	9												
1/22/2013	1.311	7	16.00	174.94	13.00	142.14					0.60	6.56		
1/23/2013	1.368	7												
1/24/2013	1.269	7												
1/25/2013	1.229	7												
1/26/2013	1.052	6												
1/27/2013	1.069	7												
1/28/2013	1.343	9												
1/29/2013	1.668	10			33.00	459.07					1.20	16.69		
1/30/2013	2.859	11												
1/31/2013	2.697	8												
2/1/2013	1.993	7												
2/2/2013	1.717	6												
2/3/2013	1.559	7												
2/4/2013	1.640	7												
2/5/2013	1.519	8	16.00	202.70	16.00	202.70					0.70	8.87	0.19	2.39
2/6/2013	1.492	9												
2/7/2013	1.503	9												
2/8/2013	1.336	8												
2/9/2013	1.155	8												
2/10/2013	1.182	8												
2/11/2013	1.354	10												
2/12/2013	1.283	8	15.00	160.50	11.00	117.70					0.70	7.49		
2/13/2013	1.324	9												
2/14/2013	1.354	9												
2/15/2013	1.274	9												
2/16/2013	1.108	7												
2/17/2013	1.025	7												
2/18/2013	1.169	6												
2/19/2013	1.186	8	16.00	158.26	10.00	98.91					0.60	5.93		
2/20/2013	1.235	7												
2/21/2013	1.138	7												
2/22/2013	1.130	7												
2/23/2013	0.963	8												
2/24/2013	0.970	8												

Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
2/25/2013	1.080	9												
2/26/2013	1.079	9	20.00	179.98	20.00	179.98					0.70	6.30		
2/27/2013	1.289	9												
2/28/2013	1.344	9												
3/1/2013	1.233	9												
3/2/2013	1.071	9												
3/3/2013	1.030	8												
3/4/2013	1.219	8												
3/5/2013	1.161	8	17.00	164.61	6.00	58.10					0.70	6.78	0.07	0.65
3/6/2013	1.171	9												
3/7/2013	1.214	9												
3/8/2013	1.151	9												
3/9/2013	1.183	8												
3/10/2013	1.282	9												
3/11/2013	1.709	10												
3/12/2013	1.736	10	13.00	188.22	13.00	188.22					0.60	8.69		
3/13/2013	1.573	9												
3/14/2013	1.479	8												
3/15/2013	1.426	9												
3/16/2013	1.175	8												
3/17/2013	1.155	8												
3/18/2013	1.324	9												
3/19/2013	1.344	9	15.00	168.13	10.00	112.09					0.80	8.97		
3/20/2013	1.273	8												
3/21/2013	1.221	8												
3/22/2013	1.185	8												
3/23/2013	1.047	8												
3/24/2013	1.069	8												
3/25/2013	1.178	9												
3/26/2013	1.187	9	13.00	128.69	7.00	69.30					0.70	6.93		
3/27/2013	1.190	9												
3/28/2013	1.174	9												
3/29/2013	1.150	11												
3/30/2013	1.010	9												
3/31/2013	1.043	8												
4/1/2013	1.252	10												
4/2/2013	1.191	9	16.00	158.93	10.00	99.33					0.80	7.95	0.08	0.77
4/3/2013	1.214	9												
4/4/2013	1.132	9												

Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
4/5/2013	1.127	9												
4/6/2013	0.986	8												
4/7/2013	0.988	9												
4/8/2013	1.119	11												
4/9/2013	1.163	13	7.00	67.90	9.00	87.29					0.80	7.76		
4/10/2013	2.344	13												
4/11/2013	1.863	10												
4/12/2013	2.606	10												
4/13/2013	1.843	10												
4/14/2013	1.636	10												
4/15/2013	1.658	11												
4/16/2013	1.672	12	8.00	111.56	11.00	153.39					0.50	6.97		
4/17/2013	1.580	12												
4/18/2013	1.555	12												
4/19/2013	1.542	14												
4/20/2013	1.318	10												
4/21/2013	1.236	9												
4/22/2013	1.348	11												
4/23/2013	1.299	12	9.00	97.50	21.00	227.51					0.70	7.58		
4/24/2013	1.384	12												
4/25/2013	1.309	12												
4/26/2013	1.230	12												
4/27/2013	1.076	11												
4/28/2013	1.091	12												
4/29/2013	1.201	13												
4/30/2013	1.167	14	7.00	68.13	9.00	87.60					0.60	5.84		
5/1/2013	1.196	14												
5/2/2013	1.163	15												
5/3/2013	1.069	15												
5/4/2013	0.956	14												
5/5/2013	0.965	14												
5/6/2013	1.129	15												
5/7/2013	1.019	16	10.00	84.98	10.00	84.98					0.98	8.33		
5/8/2013	1.156	16												
5/9/2013	1.562	15												
5/10/2013	1.351	16												
5/11/2013	1.221	15												
5/12/2013	1.118	14												
5/13/2013	1.258	12												
5/14/2013	1.139	13	13.00	123.49	9.00	85.49					0.73	6.93	0.12	1.13
5/15/2013	1.185	14												
5/16/2013	1.164	16												
5/17/2013	1.068	16												
5/18/2013	0.920	15												
5/19/2013	0.948	15												
5/20/2013	1.084	17												
5/21/2013	1.031	19	11.00	94.58	18.00	154.77					1.18	10.15		
5/22/2013	1.069	19												
5/23/2013	1.368	19												
5/24/2013	1.164	17												
5/25/2013	0.969	17												
5/26/2013	0.903	16												
5/27/2013	0.979	14												
5/28/2013	2.074	15	11.00	190.27	17.00	294.05					0.83	14.36		
5/29/2013	1.735	17												
5/30/2013	1.490	18												
5/31/2013	1.289	19												
6/1/2013	1.078	18												
6/2/2013	1.168	19												
6/3/2013	1.248	18												
6/4/2013	1.183	17	9.00	88.80	9.00	88.80	10.10	99.65	8.50	83.86	0.54	5.33	0.09	0.93
6/5/2013	1.149	17												
6/6/2013	1.619	17												
6/7/2013	1.487	18												
6/8/2013	1.202	17												
6/9/2013	1.141	17												
6/10/2013	1.790	18												
6/11/2013	1.646	18	7.00	96.09	3.00	41.18	4.60	63.15	0.40	5.49	0.40	5.49		
6/12/2013	1.520	18												
6/13/2013	1.871	18												
6/14/2013	1.525	17												
6/15/2013	1.264	17												
6/16/2013	1.212	17												
6/17/2013	1.326	18												
6/18/2013	1.241	18	7.00	72.45	3.00	31.05	4.60	47.61	0.40	4.14	0.40	4.14		
6/19/2013	1.253	17												
6/20/2013	1.195	17												
6/21/2013	1.123	18												
6/22/2013	0.993	18												
6/23/2013	0.964	19												
6/24/2013	1.127	20												
6/25/2013	1.059	20	7.00	61.82	13.00	114.82	5.30	46.81	3.40	30.03	0.60	5.30		
6/26/2013	1.102	20												
6/27/2013	1.228	20												
6/28/2013	1.092	20												
6/29/2013	0.948	20												
6/30/2013	1.168	19												

Village of Wellsville
Effluent

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7/1/2013	1.667	19												
7/2/2013	1.388	20	6.00	69.46	9.00	104.18	6.80	78.72	0.20	2.32	0.50	5.79	0.13	1.53
7/3/2013	1.294	20												
7/4/2013	1.112	20												
7/5/2013	1.100	21												
7/6/2013	0.994	21												
7/7/2013	1.005	21												
7/8/2013	1.159	20												
7/9/2013	1.079	21	8.00	71.99	9.00	80.99	13.90	125.08	8.70	78.29	0.50	4.50		
7/10/2013	1.131	21												
7/11/2013	1.121	21												
7/12/2013	0.971	21												
7/13/2013	0.879	19												
7/14/2013	0.847	20												
7/15/2013	1.016	22												
7/16/2013	0.962	23	7.00	56.16	6.00	48.14	5.90	47.34	0.10	0.80	0.50	4.01		
7/17/2013	1.010	23												
7/18/2013	1.111	24												
7/19/2013	1.000	23												
7/20/2013	0.872	23												
7/21/2013	0.834	22												
7/22/2013	1.194	22												

Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
7/23/2013	1.138	22	8.00	75.93	7.00	66.44	6.30	59.79	0.10	0.95	0.60	5.69		
7/24/2013	1.003	21												
7/25/2013	1.111	20												
7/26/2013	0.938	20												
7/27/2013	0.953	19												
7/28/2013	0.938	19												
7/29/2013	0.999	19												
7/30/2013	0.970	20	8.00	64.72	7.00	56.63	5.30	42.88	0.10	0.81	0.50	4.04		
7/31/2013	0.977	20												
8/1/2013	0.972	21												
8/2/2013	0.909	20												
8/3/2013	0.744	20												
8/4/2013	0.766	19												
8/5/2013	0.932	19												
8/6/2013	0.891	19	11.00	81.74	9.00	66.88	4.90	36.41	<.1		0.60	4.46	0.05	0.37
8/7/2013	0.948	20												
8/8/2013	0.983	22												
8/9/2013	0.984	22												
8/10/2013	0.758	21												
8/11/2013	0.754	20												
8/12/2013	1.003	21												
8/13/2013	0.969	21	7.00	56.57	9.00	72.73	4.20	33.94	<.1		0.70	5.66		
8/14/2013	0.841	19												
8/15/2013	0.889	19												
8/16/2013	0.854	19												
8/17/2013	0.653	18												
8/18/2013	0.700	19												
8/19/2013	0.806	20												
8/20/2013	0.853	20	10.00	71.14	5.00	35.57	5.00	35.57	3.10	22.05	0.70	4.98		
8/21/2013	0.808	20												
8/22/2013	0.866	22												
8/23/2013	0.797	22												
8/24/2013	0.664	20												
8/25/2013	0.632	19												
8/26/2013	0.903	21												
8/27/2013	0.944	22	18.00	141.71	13.00	102.35	6.80	53.54	3.90	30.70	1.00	7.87		
8/28/2013	0.994	22												
8/29/2013	0.901	23												
8/30/2013	0.856	22												
8/31/2013	0.670	22												
9/1/2013	0.654	22												
9/2/2013	0.793	22												
9/3/2013	0.818	21	12.00	81.87	9.00	61.40	3.90	26.61			0.50	3.41	0.03	0.22
9/4/2013	0.932	21												
9/5/2013	0.793	21												
9/6/2013	0.773	19												
9/7/2013	0.676	18												
9/8/2013	0.669	18												
9/9/2013	0.808	19												
9/10/2013	0.816	21	12.00	81.67	7.00	47.64	6.40	43.55	4.80	32.67	0.60	4.08		
9/11/2013	1.009	23												
9/12/2013	1.051	22												
9/13/2013	0.808	20												
9/14/2013	0.692	18												
9/15/2013	0.687	17												
9/16/2013	0.866	18												
9/17/2013	0.815	16	10.00	67.97	7.00	47.58	8.60	58.46	7.10	48.26	0.70	4.76		
9/18/2013	0.833	16												
9/19/2013	0.869	17												
9/20/2013	0.649	19												
9/21/2013	0.874	20												
9/22/2013	0.736	18												
9/23/2013	0.763	17												
9/24/2013	0.785	16	11.00	72.02	5.00	32.73	10.20	66.78	8.20	53.68	0.70	4.58		
9/25/2013	0.805	17												
9/26/2013	0.740	17												
9/27/2013	0.768	18												
9/28/2013	0.606	17												
9/29/2013	0.613	16												
9/30/2013	0.756	17												
10/1/2013	0.737	19	9.00	55.32	12.00	73.76	7.90	48.56	4.70	28.89	0.90	5.53	0.03	0.15
10/2/2013	0.773	19												
10/3/2013	0.777	18												
10/4/2013	0.624	20												
10/5/2013	0.925	19												
10/6/2013	0.887	19												
10/7/2013	1.137	19												
10/8/2013	0.923	17	6.00	46.19	9.00	69.28	2.20	16.94	0.10	0.77	0.50	3.85		
10/9/2013	0.901	17												
10/10/2013	0.870	16												
10/11/2013	0.864	16												
10/12/2013	0.706	15												
10/13/2013	0.823	16												
10/14/2013	0.922	17												
10/15/2013	0.875	17	7.00	51.08	9.00	65.68	2.40	17.51	0.10	0.73	0.50	3.65		
10/16/2013	0.924	17												
10/17/2013	1.287	17												

Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
10/18/2013	1.015	16												
10/19/2013	0.879	16												
10/20/2013	0.863	16												
10/21/2013	0.928	15												
10/22/2013	0.962	15	7.00	56.16	6.00	48.14	2.20	17.65	0.20	1.60	0.40	3.21		
10/23/2013	0.973	14												
10/24/2013	0.915	13												
10/25/2013	0.858	13												
10/26/2013	0.704	12												
10/27/2013	0.729	12												
10/28/2013	0.859	13												
10/29/2013	0.856	13	8.00	57.11	9.00	64.25	11.60	82.81	9.40	67.11	0.80	5.71		
10/30/2013	0.876	14												
10/31/2013	1.282	15												

Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
11/1/2013	1.252	16												
11/2/2013	0.908	15												
11/3/2013	0.852	13												
11/4/2013	0.949	12												
11/5/2013	0.907	12	11.00	83.21	17.00	128.59	17.10	129.35	12.80	96.82	1.10	8.32	0.13	1.00
11/6/2013	1.077	13												
11/7/2013	1.142	14												
11/8/2013	1.031	12												
11/9/2013	0.682	12												
11/10/2013	0.680	12												
11/11/2013	0.880	12												
11/12/2013	1.079	10	7.00	62.99	9.00	80.99					0.80	7.20		
11/13/2013	1.067	10												
11/14/2013	1.046	10												
11/15/2013	0.963	11												
11/16/2013	0.833	11												
11/17/2013	1.169	12												
11/18/2013	1.284	13												
11/19/2013	1.160	11	7.00	67.70	13.00	125.72			6.60	63.83	0.70	6.77		
11/20/2013	1.107	10												
11/21/2013	1.173	10												
11/22/2013	1.042	12												
11/23/2013	0.921	10												
11/24/2013	0.895	6												
11/25/2013	1.063	7												
11/26/2013	1.546	10	10.00	128.94	11.00	141.83					1.00	12.89		
11/27/2013	1.653	10												
11/28/2013	1.230	6												
11/29/2013	1.160	7												
11/30/2013	1.086	6												
12/1/2013	1.032	6												
12/2/2013	1.209	10												
12/3/2013	1.242	11	11.00	113.94	10.00	103.58	14.40	149.16	11.40	118.08	0.70	7.25		
12/4/2013	1.309	11											0.13	1.43
12/5/2013	1.473	12												
12/6/2013	1.484	11												
12/7/2013	1.208	9												
12/8/2013	1.162	8												
12/9/2013	1.266	10												
12/10/2013	1.187	9	10.00	99.00	11.00	108.90					0.80	7.92		
12/11/2013	1.159	9												
12/12/2013	1.034	7												
12/13/2013	0.974	7												
12/14/2013	0.899	7												
12/15/2013	0.944	5												
12/16/2013	1.017	7	8.00	67.85	9.00	76.34					0.94	7.97		
12/17/2013	0.989	6												
12/18/2013	1.084	7												
12/19/2013	1.187	8												
12/20/2013	1.545	10												
12/21/2013	3.117	10												
12/22/2013	2.640	10												
12/23/2013	1.982	11												
12/24/2013	1.606	11	7.00	93.76	7.00	93.76					0.40	5.36		
12/25/2013	1.382	9												
12/26/2013	1.546	9												
12/27/2013	1.395	10												
12/28/2013	1.220	9												
12/29/2013	1.560	10												
12/30/2013	1.472	9												
12/31/2013	1.339	8												
1/1/2014	1.196	7	11.00	109.72	11.00	109.72			21.60	215.45	0.70	6.98	0.19	1.91
1/2/2014	1.319	8												
1/3/2014	1.264	6												
1/4/2014	1.124	7												
1/5/2014	1.431	8												
1/6/2014	1.723	9												
1/7/2014	1.455	5	14.00	169.89	10.00	121.35			22.00	266.96	0.50	6.07		
1/8/2014	1.299	6												
1/9/2014	1.424	8												
1/10/2014	1.295	8												
1/11/2014	1.830	9												
1/12/2014	1.454	9												
1/13/2014	1.605	9												
1/14/2014	1.720	10	11.00	157.79	8.00	114.76			21.20	304.11	0.50	7.17		
1/15/2014	1.564	10												
1/16/2014	1.691	8												
1/17/2014	1.631	9												
1/18/2014	1.199	7												
1/19/2014	1.204	7												
1/20/2014	1.327	8												
1/21/2014	1.273	8	24.00	254.80	9.00	95.55					0.60	6.37		
1/22/2014	1.223	6												
1/23/2014	1.180	7												
1/24/2014	1.131	7												
1/25/2014	1.056	6												
1/26/2014	1.029	6												

Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
1/27/2014	1.066	8												
1/28/2014	1.087	6	23.00	208.51	16.00	145.05					0.70	6.35		
1/29/2014	1.302	6												
1/30/2014	1.372	7												
1/31/2014	1.107	7												

Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
2/1/2014	0.989	7												
2/2/2014	0.990	8												
2/3/2014	1.095	8												
2/4/2014	0.994	8	17.00	140.93	7.00	58.03			29.90	247.87	0.70	5.80		
2/5/2014	1.007	7												
2/6/2014	1.038	7												
2/7/2014	0.984	7												
2/8/2014	0.889	5												
2/9/2014	0.821	5												
2/10/2014	1.009	7												
2/11/2014	0.938	7	19.00	148.64	11.00	86.05			28.00	219.04	0.80	6.26	0.08	0.64
2/12/2014	1.204	7												
2/13/2014	1.283	6												
2/14/2014	1.040	7												
2/15/2014	0.887	7												
2/16/2014	0.841	6												
2/17/2014	0.965	5												
2/18/2014	0.987	7	12.00	98.78	13.00	107.01					0.90	7.41		
2/19/2014	1.097	8												
2/20/2014	1.376	9												
2/21/2014	1.662	9												
2/22/2014	1.292	10												
2/23/2014	1.344	8												
2/24/2014	1.313	7												
2/25/2014	1.220	7	27.00	274.72	13.00	132.27			39.30	399.87	0.80	8.14		
2/26/2014	1.216	8												
2/27/2014	1.239	6												
2/28/2014	1.097	6												
3/1/2014	0.938	5												
3/2/2014	0.939	6												
3/3/2014	1.043	6												
3/4/2014	1.098	5	29.00	265.56	14.00	128.20	24.30	222.52	28.20	258.24	0.90	8.24	0.16	1.43
3/5/2014	1.052	7												
3/6/2014	1.034	6												
3/7/2014	1.067	8												
3/8/2014	0.867	8												
3/9/2014	0.882	8												
3/10/2014	1.362	9												
3/11/2014	1.515	10	25.00	315.88	15.00	189.53					0.90	11.37		
3/12/2014	1.800	8												
3/13/2014	1.430	5												
3/14/2014	2.128	7												
3/15/2014	1.897	8												
3/16/2014	1.428	8												
3/17/2014	1.399	6												
3/18/2014	1.411	8	27.00	317.73	13.00	152.98					0.80	9.41		
3/19/2014	1.640	8												
3/20/2014	1.551	8												
3/21/2014	1.422	9												
3/22/2014	1.356	8												
3/23/2014	1.268	8												
3/24/2014	1.334	8												
3/25/2014	1.247	8	LE		13.00	135.20					0.50	5.20		
3/26/2014	1.277	7												
3/27/2014	1.272	8												
3/28/2014	1.197	8												
3/29/2014	1.765	8												
3/30/2014	1.654	6												
3/31/2014	1.848	8												
4/1/2014	1.681	8	10.00	140.20	9.00	126.18					0.40	5.61	0.07	0.91
4/2/2014	1.632	9												
4/3/2014	1.718	9												
4/4/2014	2.169	9												
4/5/2014	1.775	9												
4/6/2014	1.580	8												
4/7/2014	1.917	8												
4/8/2014	2.557	9	10.00	213.25	6.00	127.95					0.20	4.27		
4/9/2014	2.040	9												
4/10/2014	1.919	9												
4/11/2014	2.005	11												
4/12/2014	1.653	9												
4/13/2014	1.572	10												
4/14/2014	1.643	13												
4/15/2014	2.340	11												
4/16/2014	1.929	8	13.00	209.14	9.00	144.79					0.50	8.04		
4/17/2014	1.775	9												
4/18/2014	1.650	10												
4/19/2014	1.435	10												
4/20/2014	1.385	10												
4/21/2014	1.510	12												
4/22/2014	1.495	13	12.00	149.62	6.00	74.81					1.00	12.47		
4/23/2014	1.430	11												
4/24/2014	1.352	10												
4/25/2014	1.281	10												
4/26/2014	1.129	10												
4/27/2014	1.110	10												
4/28/2014	1.305	13												

Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
4/29/2014	1.266	11	10.00	105.58	9.00	95.03					0.70	7.39		
4/30/2014	1.737	11												

Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
5/1/2014	1.609	13												
5/2/2014	1.453	13												
5/3/2014	1.347	12												
5/4/2014	1.328	11												
5/5/2014	1.402	12												
5/6/2014	1.324	13	9.00	99.38	8.00	88.34			14.00	154.59	0.60	6.63	0.06	0.64
5/7/2014	1.291	13												
5/8/2014	1.311	14												
5/9/2014	1.221	16												
5/10/2014	1.091	16												
5/11/2014	1.031	14												
5/12/2014	1.236	15												
5/13/2014	1.527	16	8.00	101.88	7.00	89.15					0.60	7.64		
5/14/2014	1.425	17												
5/15/2014	2.250	17												
5/16/2014	3.743	14												
5/17/2014	2.417	14												
5/18/2014	1.963	13												
5/19/2014	1.887	13												
5/20/2014	1.789	14	7.00	104.44	9.00	134.28					0.30	4.48		
5/21/2014	2.164	14												
5/22/2014	1.920	15												
5/23/2014	1.700	15												
5/24/2014	1.459	13												
5/25/2014	1.332	13												
5/26/2014	1.314	13												
5/27/2014	1.541	17	27.00	347.00	17.00	218.48					1.10	14.14		
5/28/2014	1.420	17												
5/29/2014	1.367	16												
5/30/2014	1.228	16												
5/31/2014	1.072	15												
6/1/2014	1.038	15												
6/2/2014	1.367	17												
6/3/2014	1.258	19	10.00	104.92	11.00	115.41	9.67	101.45	12.50	131.15	0.50	5.25	0.09	0.99
6/4/2014	1.224	18												
6/5/2014	1.159	17												
6/6/2014	1.035	17												
6/7/2014	0.953	16												
6/8/2014	1.488	16												
6/9/2014	1.400	17												
6/10/2014	1.388	18	7.00	81.03	11.00	127.34	3.47	40.17	3.83	44.34	0.60	6.95		
6/11/2014	1.372	18												
6/12/2014	1.409	19												
6/13/2014	1.259	19												
6/14/2014	1.090	17												
6/15/2014	1.071	15												
6/16/2014	1.229	17												
6/17/2014	1.179	20	6.00	59.00	5.00	49.16	8.06	79.25	3.42	33.63	0.60	5.90		
6/18/2014	1.323	19												
6/19/2014	1.335	19												
6/20/2014	1.095	18												
6/21/2014	0.982	17												
6/22/2014	0.943	17												
6/23/2014	1.060	19												
6/24/2014	1.144	20	8.00	76.33	6.00	57.25	1.40	13.36	0.14	1.35	0.60	5.72		
6/25/2014	2.251	19												
6/26/2014	1.634	19												
6/27/2014	1.331	19												
6/28/2014	1.205	18												
6/29/2014	1.216	19												
6/30/2014	1.238	20												
7/1/2014	1.124	21	6.00	56.24	7.00	65.62	3.38	31.68	1.25	11.72	0.60	5.62	0.22	2.02
7/2/2014	1.182	21												
7/3/2014	1.388	21												
7/4/2014	1.030	19												
7/5/2014	0.978	17												
7/6/2014	0.969	17												
7/7/2014	1.248	19												
7/8/2014	1.340	21	9.00	100.58	9.00	100.58	8.59	96.00	4.46	49.84	0.50	5.59		
7/9/2014	1.233	20												
7/10/2014	1.212	19												
7/11/2014	1.104	19												
7/12/2014	0.888	20												
7/13/2014	1.256	20												
7/14/2014	1.416	20												
7/15/2014	1.725	20	7.00	100.71	7.00	100.71	3.40	48.91	1.33	19.13	0.50	7.19		
7/16/2014	1.382	18												
7/17/2014	1.314	18												
7/18/2014	1.212	18												
7/19/2014	1.155	18												
7/20/2014	0.995	19												
7/21/2014	1.141	20												
7/22/2014	1.090	21	8.00	72.72	15.00	136.36	4.48	40.73	1.51	13.73	0.80	7.27		
7/23/2014	1.125	21												
7/24/2014	1.032	20												
7/25/2014	0.954	19												
7/26/2014	0.803	19												

Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
7/27/2014	0.810	20												
7/28/2014	1.003	21												
7/29/2014	0.994	19	9.00	74.61	19.00	157.51	12.20	101.14	8.97	74.36	0.70	5.80		
7/30/2014	0.960	19												
7/31/2014	0.975	20												

Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
8/1/2014	0.864	19												
8/2/2014	1.083	19												
8/3/2014	1.277	20												
8/4/2014	1.196	20												
8/5/2014	1.116	20	8.00	74.46	8.00	74.46	10.70	99.59	6.74	62.73	0.50	4.65	0.08	0.74
8/6/2014	1.057	20												
8/7/2014	1.079	20												
8/8/2014	0.980	19												
8/9/2014	0.819	19												
8/10/2014	0.809	19												
8/11/2014	1.138	20												
8/12/2014	1.370	20	7.00	79.98	9.00	102.83	12.30	140.54	8.31	94.95	0.80	9.14		
8/13/2014	1.239	20												
8/14/2014	1.173	19												
8/15/2014	0.991	18												
8/16/2014	0.877	17												
8/17/2014	0.860	18												
8/18/2014	1.040	20												
8/19/2014	1.002	20	8.00	66.85	9.00	75.21	17.90	149.58	12.90	107.80	0.80	6.69		
8/20/2014	0.972	20												
8/21/2014	1.023	21												
8/22/2014	0.928	22												
8/23/2014	0.767	22												
8/24/2014	0.789	20												
8/25/2014	0.918	20												
8/26/2014	0.937	21	8.00	62.52	9.00	70.33	15.10	118.00	11.60	90.65	0.90	7.03		
8/27/2014	0.927	22												
8/28/2014	0.915	21												
8/29/2014	0.848	20												
8/30/2014	0.646	19												
8/31/2014	0.787	19												
9/1/2014	0.833	21												
9/2/2014	1.045	22	10.00	87.15	9.00	78.44	16.00	139.44	12.60	109.81	0.80	6.97	0.06	0.52
9/3/2014	0.993	21												
9/4/2014	0.926	22												
9/5/2014	0.916	22												
9/6/2014	0.695	22												
9/7/2014	0.725	19												
9/8/2014	0.876	19												
9/9/2014	0.856	20	9.00	64.25	10.00	71.39	9.61	68.61	9.41	67.18	0.60	4.28		
9/10/2014	0.885	20												
9/11/2014	1.018	21												
9/12/2014	0.788	19												
9/13/2014	0.687	17												
9/14/2014	0.713	17												
9/15/2014	0.969	18												
9/16/2014	0.970	19	17.00	137.53	10.00	80.90	25.70	207.91	26.80	216.81	0.90	7.28		
9/17/2014	0.947	18												
9/18/2014	0.918	18												
9/19/2014	0.957	18												
9/20/2014	0.674	18												
9/21/2014	0.713	18												
9/22/2014	0.834	18												
9/23/2014	0.823	16	8.00	54.91	7.00	48.05	3.51	24.09	2.38	16.34	0.40	2.75		
9/24/2014	0.810	17												
9/25/2014	0.769	18												
9/26/2014	0.697	19												
9/27/2014	0.631	18												
9/28/2014	0.675	18												
9/29/2014	0.869	19												
9/30/2014	0.879	19												
10/1/2014	0.831	19	9.00	62.37	9.00	62.37	2.50	17.33	0.29	2.02	0.70	4.85		
10/2/2014	0.830	19												
10/3/2014	0.795	18												
10/4/2014	0.662	18												
10/5/2014	0.693	15												
10/6/2014	0.844	15												
10/7/2014	0.930	17	14.00	108.59	8.00	62.05	25.40	197.01	24.30	188.48	1.20	9.31		
10/8/2014	0.845	17												
10/9/2014	0.853	17												
10/10/2014	0.725	15												
10/11/2014	0.619	15												
10/12/2014	0.633	14												
10/13/2014	0.834	15												
10/14/2014	0.754	18	10.00	62.88	16.00	100.61	3.75	23.58	1.04	6.54	0.98	6.16	0.20	1.26
10/15/2014	1.036	18												
10/16/2014	0.921	19												
10/17/2014	0.775	17												
10/18/2014	0.701	16												
10/19/2014	0.718	14												
10/20/2014	0.877	13												
10/21/2014	0.985	15	9.00	73.93	22.00	180.73	14.50	119.12	10.90	89.54	0.99	8.13		
10/22/2014	0.908	15												
10/23/2014	0.829	16												
10/24/2014	0.831	16												
10/25/2014	0.673	15												
10/26/2014	0.669	15												

Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
10/27/2014	0.818	14												
10/28/2014	0.931	15	L											
10/29/2014	0.913	16	8.00	60.92	16.00	121.83	10.20	77.67	7.60	57.87	0.66	5.03		
10/30/2014	0.890	14												
10/31/2014	0.831	14												

Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
11/1/2014	0.725	13												
11/2/2014	0.784	12												
11/3/2014	0.946	12												
11/4/2014	0.893	14	8.00	59.58	15.00	111.71	22.80	169.81	14.50	107.99	0.90	6.70	0.20	1.49
11/5/2014	0.896	14												
11/6/2014	1.294	13												
11/7/2014	1.003	13												
11/8/2014	0.835	13												
11/9/2014	0.837	13												
11/10/2014	0.956	14												
11/11/2014	0.873	12	9.00	65.53	15.00	109.21					0.90	6.55		
11/12/2014	0.950	13												
11/13/2014	0.946	12												
11/14/2014	0.874	11												
11/15/2014	0.731	9												
11/16/2014	0.768	9												
11/17/2014	1.122	11												
11/18/2014	0.990	8	13.00	107.34	18.00	148.62					1.10	9.08		
11/19/2014	0.961	7												
11/20/2014	0.939	8												
11/21/2014	0.846	8												
11/22/2014	0.750	7												
11/23/2014	0.859	9												
11/24/2014	1.032	13												
11/25/2014	0.970	12	8.00	64.72	21.00	169.89					1.00	8.09		
11/26/2014	0.984	11												
11/27/2014	0.826	9												
11/28/2014	0.784	9												
11/29/2014	0.737	8												
11/30/2014	0.804	10												
12/1/2014	0.906	11												
12/2/2014	0.972	9	12.00	97.28	21.00	170.24			14.00	113.49	0.90	7.30	0.18	1.46
12/3/2014	1.000	10												
12/4/2014	0.941	9												
12/5/2014	1.056	9												
12/6/2014	1.426	10												
12/7/2014	1.053	9												
12/8/2014	1.153	9												
12/9/2014	1.081	10	9.00	81.14	19.00	171.30					0.90	8.11		
12/10/2014	1.083	10												
12/11/2014	1.017	8												
12/12/2014	0.962	8												
12/13/2014	0.862	7												
12/14/2014	0.974	8												
12/15/2014	1.198	10												
12/16/2014	1.424	10	9.00	106.89	17.00	201.89					0.90	10.69		
12/17/2014	1.387	11												
12/18/2014	1.244	10												
12/19/2014	1.112	9												
12/20/2014	0.959	8												
12/21/2014	0.938	8												
12/22/2014	1.104	10												
12/23/2014	1.070	11	12.00	107.09	19.00	169.55					0.50	4.46		
12/24/2014	1.113	12												
12/25/2014	1.041	11												
12/26/2014	1.080	11												
12/27/2014	1.050	10												
12/28/2014	1.082	12												
12/29/2014	1.175	10												
12/30/2014	1.064	9	11.00	97.61	13.00	115.36					0.70	6.21		
12/31/2014	1.043	8												
1/1/2015	0.967	8												
1/2/2015	1.024	9												
1/3/2015	1.107	9												
1/4/2015	1.360	10												
1/5/2015	1.240	9												
1/6/2015	1.220	8	13.00	132.27	10.00	101.75			26.60	270.65	1.20	12.21	0.20	2.03
1/7/2015	1.166	7												
1/8/2015	1.111	6												
1/9/2015	1.024	7												
1/10/2015	0.887	6												
1/11/2015	0.902	7												
1/12/2015	1.042	10												
1/13/2015	1.016	8	14.00	118.63	11.00	93.21					0.80	6.78		
1/14/2015	1.038	7												
1/15/2015	1.028	8												
1/16/2015	0.981	8												
1/17/2015	0.869	6												
1/18/2015	0.908	8												
1/19/2015	1.052	9												
1/20/2015	0.976	10												
1/21/2015	0.979	8												
1/22/2015	0.987	9	17.00	139.94	12.00	98.78					0.70	5.76		
1/23/2015	0.899	10												
1/24/2015	0.812	10												
1/25/2015	0.816	10												
1/26/2015	0.990	7												

Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
1/27/2015	0.951	7	16.00	126.90	13.00	103.11					0.60	4.76		
1/28/2015	0.955	7												
1/29/2015	0.967	7												
1/30/2015	0.906	8												
1/31/2015	0.748	5												

Village of Wellsville
Effluent

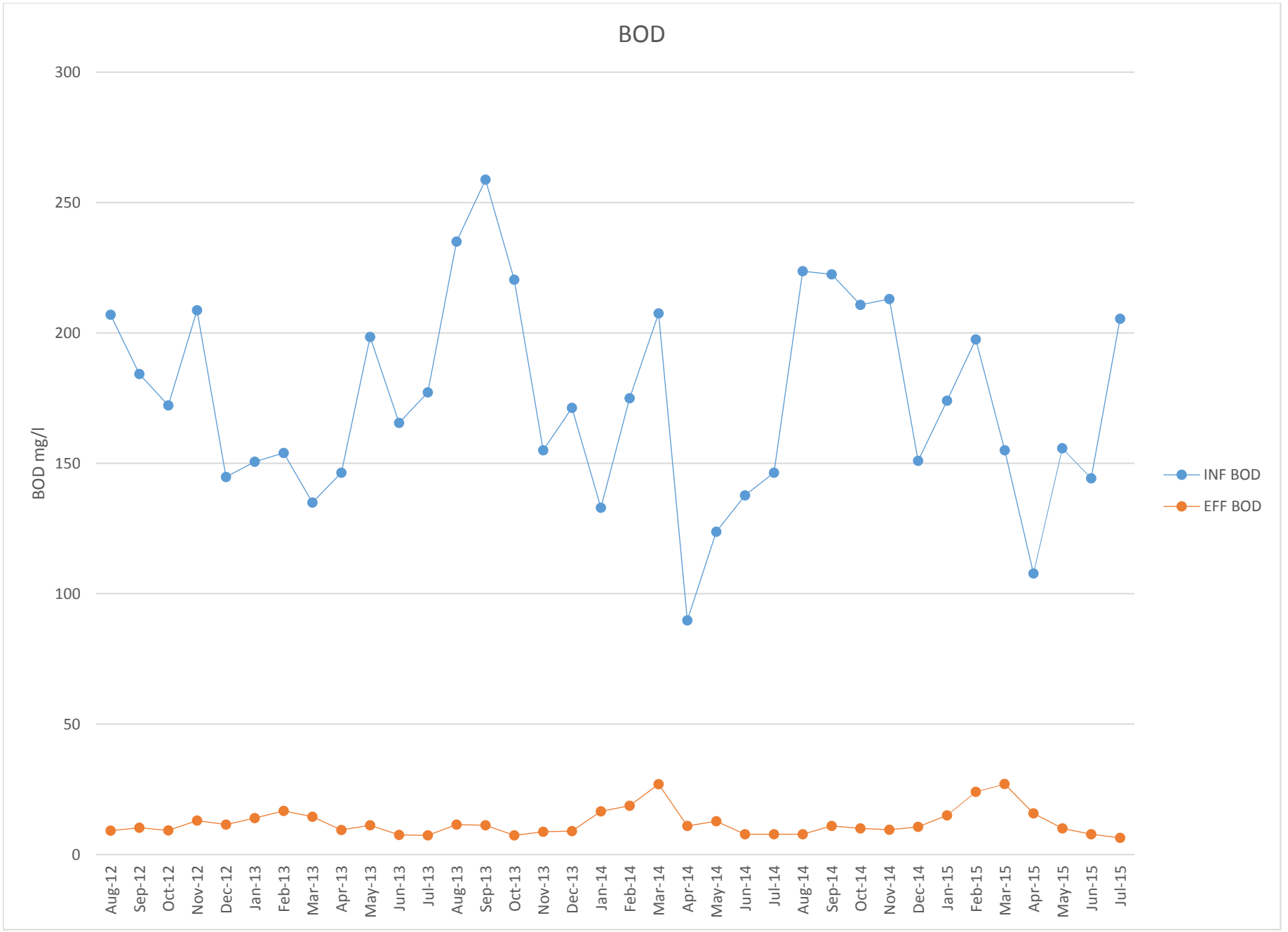
Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
2/1/2015	0.763	7												
2/2/2015	0.967	8												
2/3/2015	1.222	7	19.00	193.64	13.00	132.49					0.70	7.13	0.20	2.04
2/4/2015	0.971	8												
2/5/2015	1.016	8												
2/6/2015	1.059	7												
2/7/2015	0.790	8												
2/8/2015	0.843	9												
2/9/2015	0.936	8												
2/10/2015	0.953	7	18.00	143.06	18.00	143.06					0.70	5.56		
2/11/2015	1.005	9												
2/12/2015	1.002	9												
2/13/2015	0.883	6												
2/14/2015	1.057	7												
2/15/2015	0.935	7												
2/16/2015	1.346	6												
2/17/2015	1.090	6	30.00	272.72	28.00	254.54					1.10	10.00		
2/18/2015	0.968	6												
2/19/2015	1.059	6												
2/20/2015	0.980	6												
2/21/2015	1.199	6												
2/22/2015	1.010	7												
2/23/2015	0.949	6												
2/24/2015	1.260	7												
2/25/2015	0.959	7	29.00	231.94	22.00	175.96					0.90	7.20		
2/26/2015	1.067	6												
2/27/2015	1.206	6												
2/28/2015	1.099	5												
3/1/2015	1.087	7												
3/2/2015	1.154	8												
3/3/2015	1.111	6	34.00	315.04	22.00	203.85					0.80	7.41		
3/4/2015	1.038	8												
3/5/2015	0.996	8												
3/6/2015	0.931	6												
3/7/2015	0.773	6												
3/8/2015	0.837	8												
3/9/2015	1.046	8												
3/10/2015	1.119	9			12.00	111.99	53.40	498.35	60.70	566.48	0.50	4.67	0.11	0.98
3/11/2015	1.600	9												
3/12/2015	1.410	8												
3/13/2015	1.474	9												
3/14/2015	2.044	8												
3/15/2015	1.576	7												
3/16/2015	2.005	8												
3/17/2015	2.113	8	18.00	317.20	19.00	334.83					0.70	12.34		
3/18/2015	1.699	7												
3/19/2015	1.592	7												
3/20/2015	1.476	8												
3/21/2015	1.489	8												
3/22/2015	1.347	6												
3/23/2015	1.440	8												
3/24/2015	1.389	7	29.00	335.94	14.00	162.18					0.80	9.27		
3/25/2015	1.420	8												
3/26/2015	1.913	10												
3/27/2015	1.568	8												
3/28/2015	1.375	7												
3/29/2015	1.307	7												
3/30/2015	1.490	9												
3/31/2015	1.429	8												
4/1/2015	1.388	9	25.00	289.40	14.00	162.06					0.60	6.95	0.08	0.93
4/2/2015	1.684	9												
4/3/2015	1.990	11												
4/4/2015	1.734	8												
4/5/2015	1.775	7												
4/6/2015	1.968	9												
4/7/2015	2.076	9	15.00	259.71	7.00	121.20					0.80	13.85		
4/8/2015	2.414	9												
4/9/2015	2.498	10												
4/10/2015	2.405	10												
4/11/2015	1.908	10												
4/12/2015	1.808	8												
4/13/2015	2.100	11												
4/14/2015	2.009	11	12.00	201.06	8.00	134.04					0.70	11.73		
4/15/2015	1.797	11												
4/16/2015	1.705	11												
4/17/2015	1.688	11												
4/18/2015	1.515	10												
4/19/2015	1.485	11												
4/20/2015	2.109	12												
4/21/2015	2.016	11	13.00	218.57	10.00	168.13					0.80	13.45		
4/22/2015	2.033	11												
4/23/2015	1.866	9												
4/24/2015	1.733	11												
4/25/2015	1.547	9												
4/26/2015	1.445	9												
4/27/2015	1.511	11												
4/28/2015	1.474	12	14.00	172.10	12.00	147.52					0.70	8.61		

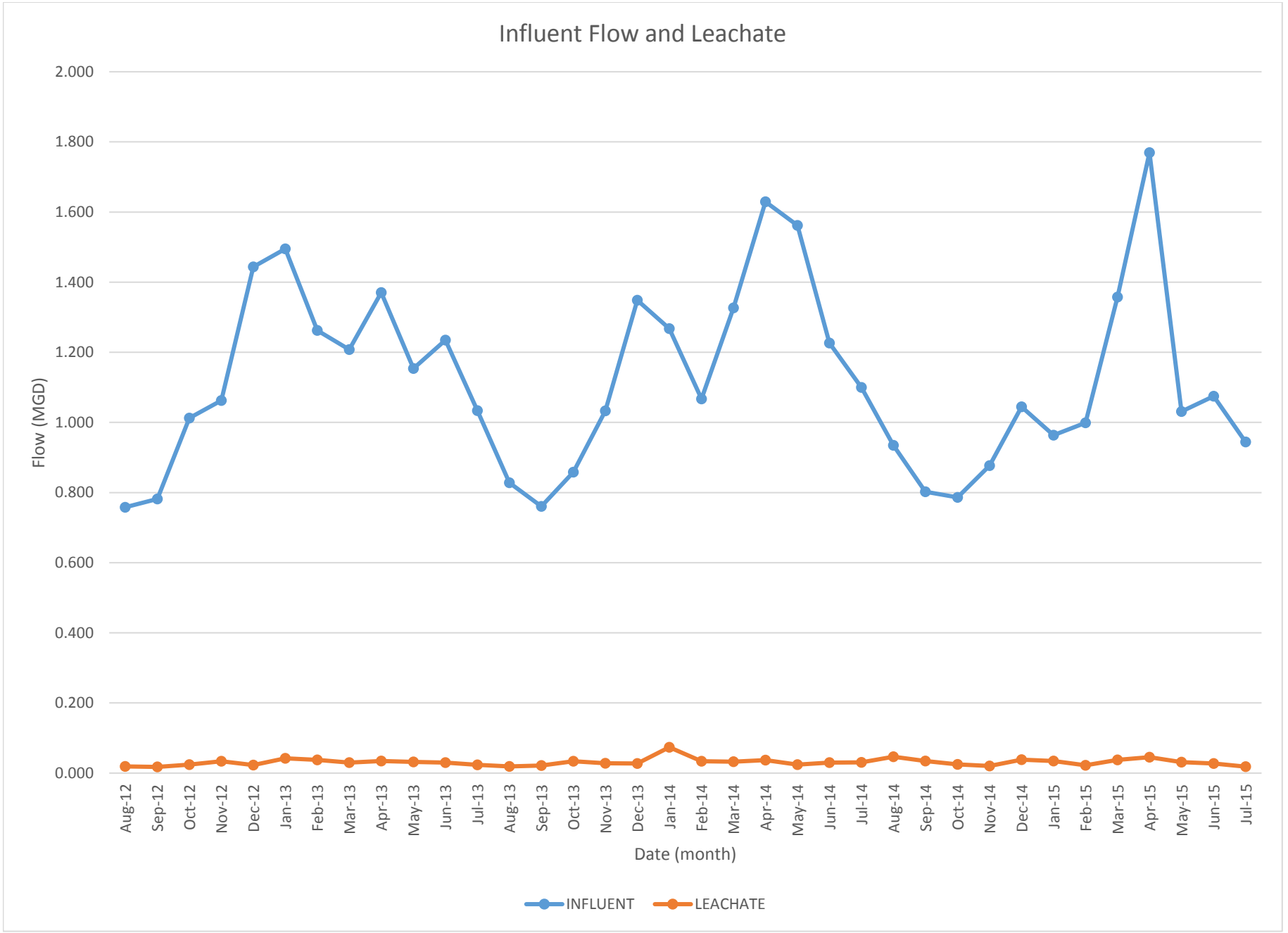
Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
5/1/2015	1.313	13												
5/2/2015	1.128	12												
5/3/2015	1.135	13												
5/4/2015	1.252	14												
5/5/2015	1.214	16	10.00	101.25	10.00	101.25	33.20	336.14	30.70	310.83	0.60	6.07	0.50	5.06
5/6/2015	1.195	15												
5/7/2015	1.173	16												
5/8/2015	1.154	16												
5/9/2015	0.949	15												
5/10/2015	0.987	15												
5/11/2015	1.173	17												
5/12/2015	1.187	18	13.00	128.69	6.00	59.40					0.60	5.94		
5/13/2015	1.116	15												
5/14/2015	1.252	15												
5/15/2015	1.093	16												
5/16/2015	0.941	16												
5/17/2015	0.929	16												
5/18/2015	1.137	18												
5/19/2015	1.088	18												
5/20/2015	1.151	16	7.00	67.20	9.00	86.39					0.50	4.80		
5/21/2015	1.100	17												
5/22/2015	1.002	16												
5/23/2015	0.872	15												
5/24/2015	0.844	15												
5/25/2015	0.849	17												
5/26/2015	0.977	18	10.00	81.48	8.00	65.19					0.50	4.07		
5/27/2015	1.011	19												
5/28/2015	0.993	19												
5/29/2015	0.875	20												
5/30/2015	0.778	20												
5/31/2015	1.078	19												
6/1/2015	0.994	17												
6/2/2015	0.977	17	11.00	89.63	14.00	114.07	9.88	80.50	8.75	71.30	0.80	6.52	0.23	1.87
6/3/2015	0.965	17												
6/4/2015	0.959	18												
6/5/2015	0.864	19												
6/6/2015	0.743	18												
6/7/2015	0.796	16												
6/8/2015	1.533	19												
6/9/2015	1.596	18	8.00	106.49	21.00	279.52	3.58	47.65	1.37	18.24	1.00	13.31		
6/10/2015	1.365	18												
6/11/2015	1.207	21												
6/12/2015	1.082	20												
6/13/2015	0.878	18												
6/14/2015	1.097	19												
6/15/2015	1.330	20												
6/16/2015	1.178	21	5.00	49.12	18.00	176.84	5.49	53.94	2.13	20.93	0.70	6.88		
6/17/2015	1.101	19												
6/18/2015	1.106	19												
6/19/2015	0.997	20												
6/20/2015	0.822	20												
6/21/2015	0.864	20												
6/22/2015	1.046	20												
6/23/2015	1.054	21	7.00	61.53	8.00	70.32	5.65	49.67	2.45	21.54	0.50	4.40		
6/24/2015	0.937	19												
6/25/2015	0.970	19												
6/26/2015	0.879	19												
6/27/2015	1.662	19												
6/28/2015	1.241	17												
6/29/2015	1.272	18												
6/30/2015	1.534	19												
7/1/2015	1.377	19	6.00	68.91	7.00	80.39	4.71	54.09	2.85	32.73	0.90	10.34		
7/2/2015	1.330	19												
7/3/2015	1.065	18												
7/4/2015	0.900	19												
7/5/2015	0.914	19												
7/6/2015	1.043	19												
7/7/2015	1.118	20	4.00	37.30	5.00	46.62	2.75	25.64	0.47	4.37	0.40	3.73		
7/8/2015	1.071	21												
7/9/2015	1.215	19												
7/10/2015	1.108	19												
7/11/2015	0.875	19												
7/12/2015	0.869	19												
7/13/2015	0.959	19												
7/14/2015	1.130	21	9.00	84.82	7.00	65.97	4.79	45.14	1.84	17.34	0.70	6.60		
7/15/2015	0.990	21												
7/16/2015	0.967	19												
7/17/2015	1.007	19												
7/18/2015	0.780	19												
7/19/2015	0.786	20												
7/20/2015	0.902	21												
7/21/2015	0.957	21	6.00	47.89	8.00	63.85	4.51	36.00	1.44	11.49	1.10	8.78		
7/22/2015	0.916	21												
7/23/2015	0.913	20												
7/24/2015	0.844	20												
7/25/2015	0.679	19												
7/26/2015	0.706	21												

Village of Wellsville
Effluent

Date	Avg. Daily Flow Q,MGD	Daily Effluent Temp	Effluent BOD, mg/L	Effluent BOD, #/day	Effluent TSS, mg/L	Effluent TSS, #/day	Effluent TKN, mg/L	Effluent TKN, #/day	Effluent NH3, mg/L	Influent NH3, #/day	Effluent TP, mg/L	Effluent TP, #/day	Effluent Alum, mg/L	Effluent Alum, #/day
7/27/2015	0.853	21												
7/28/2015	0.876	21	7.00	51.14	9.00	65.75	3.36	24.55	1.81	13.22	0.80	5.84		
7/29/2015	0.892	22												
7/30/2015	0.980	23												
7/31/2015	0.830	23												


BOD
BOD mg/l
300
250
200
150
100
50
0
Aug-12
Sep-12
Oct-12
Nov-12
Dec-12
Jan-13
Feb-13
Mar-13
Apr-13
May-13
Jun-13
Jul-13
Aug-13
Sep-13
Oct-13
Nov-13
Dec-13
Jan-14
Feb-14
Mar-14
Apr-14
May-14
Jun-14
Jul-14
Aug-14
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15
Feb-15
Mar-15
Apr-15
May-15
Jun-15
Jul-15
INF BOD
EFF BOD


Influent Flow and Leachate
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
Flow (MGD)
Aug-12
Sep-12
Oct-12
Nov-12
Dec-12
Jan-13
Feb-13
Mar-13
Apr-13
May-13
Jun-13
Jul-13
Aug-13
Sep-13
Oct-13
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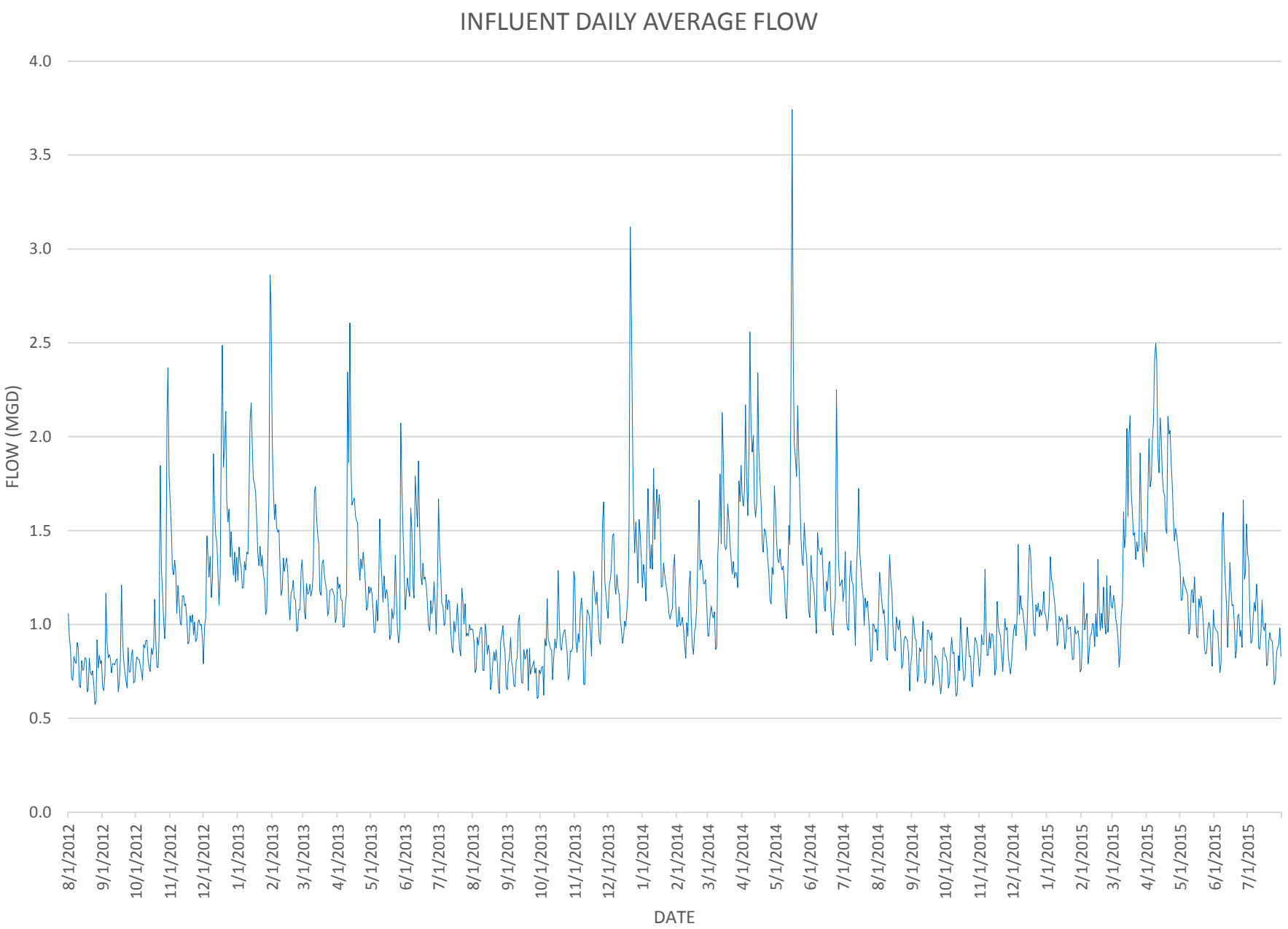
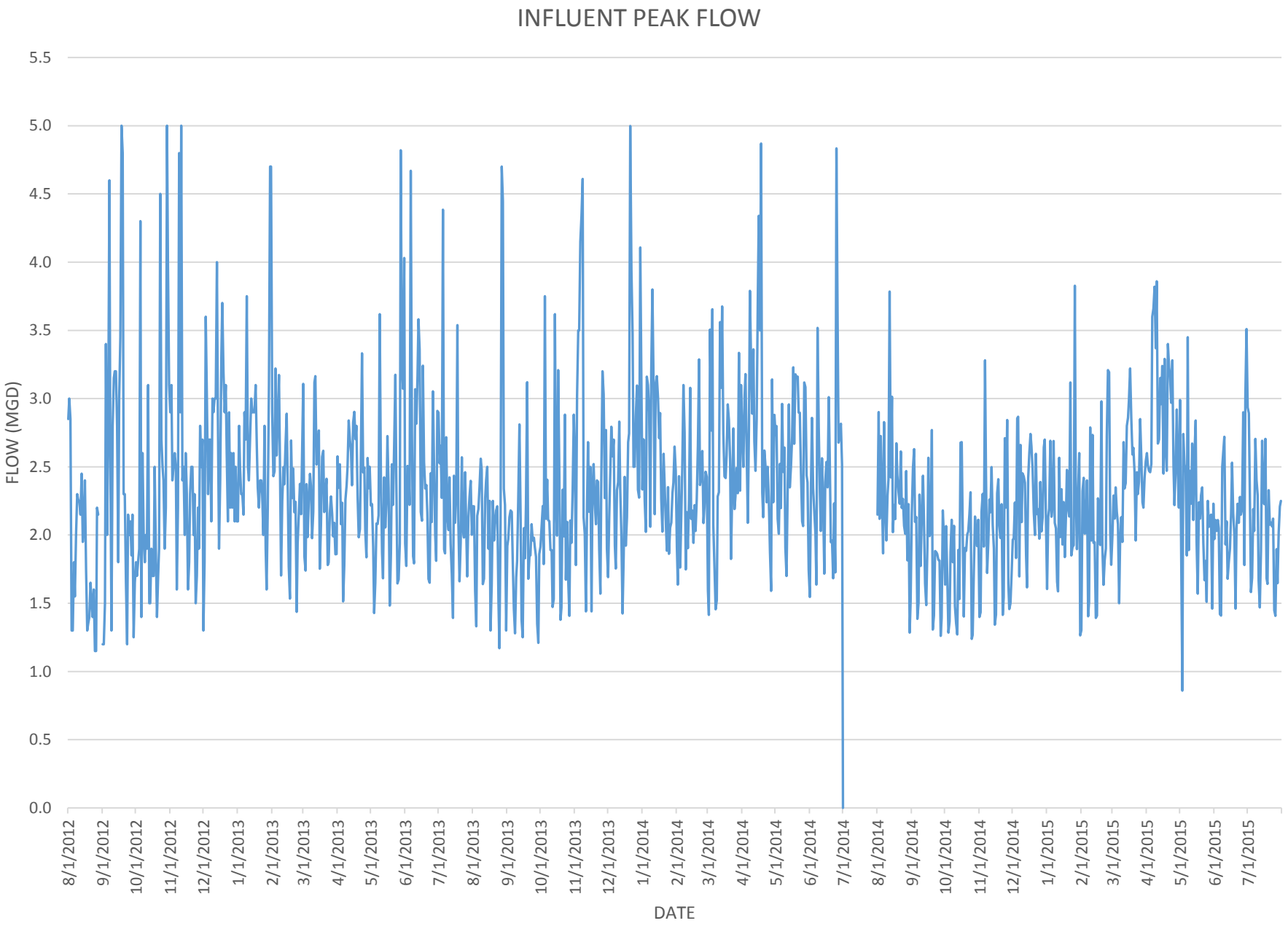
Jun-14
Jul-14
Aug-14
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15
Feb-15
Mar-15
Apr-15
May-15
Jun-15
Jul-15
Date (month)
INFLUENT
LEACHATE

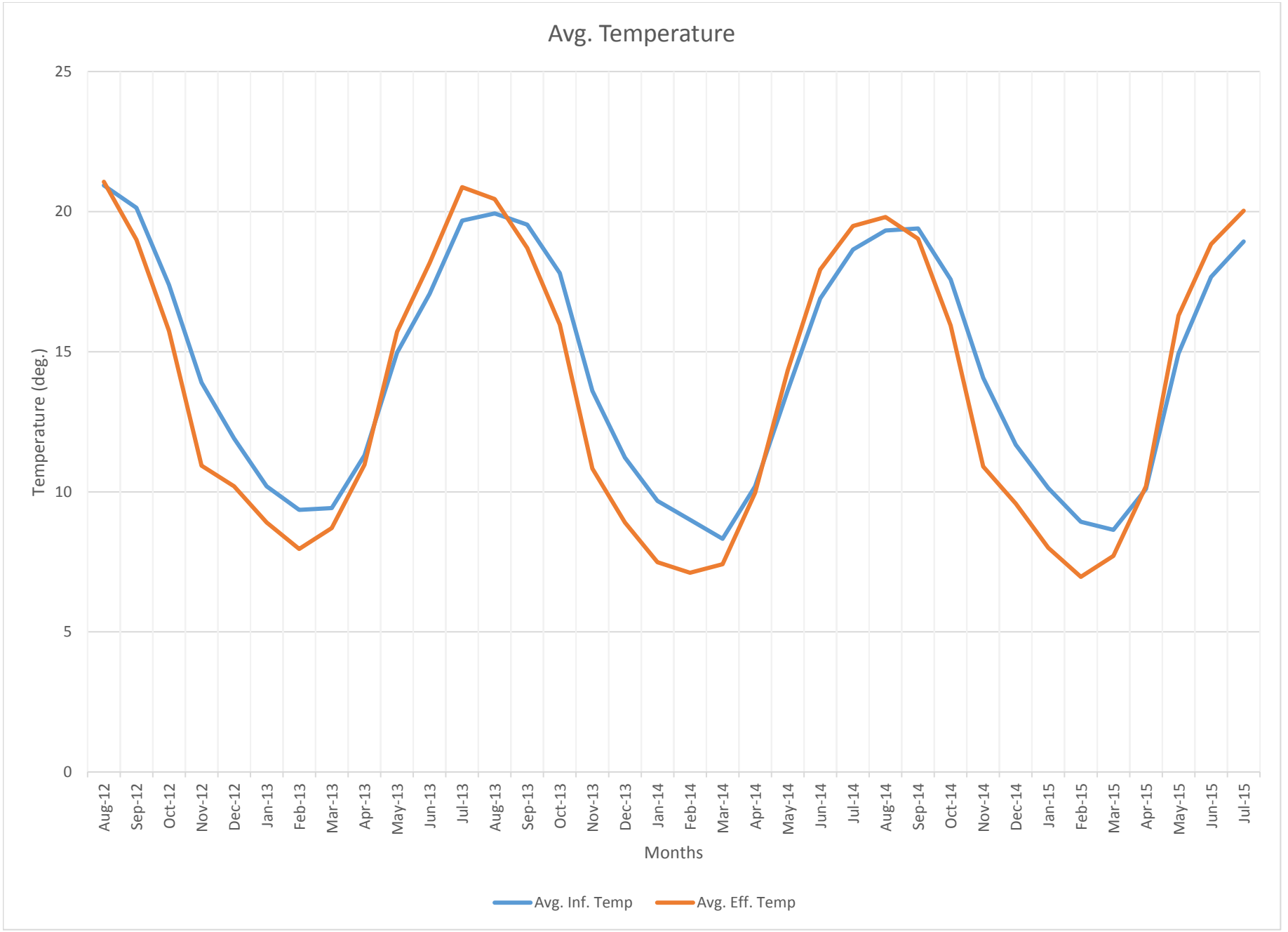

INFLUENT DAILY AVERAGE FLOW
FLOW (MGD)
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
8/1/2012
9/1/2012
10/1/2012
11/1/2012
12/1/2012
1/1/2013
2/1/2013
3/1/2013
4/1/2013
5/1/2013
6/1/2013
7/1/2013
8/1/2013
9/1/2013
10/1/2013
11/1/2013
12/1/2013
1/1/2014
2/1/2014
3/1/2014
4/1/2014
5/1/2014
6/1/2014
7/1/2014
8/1/2014
9/1/2014
10/1/2014
11/1/2014
12/1/2014
1/1/2015
2/1/2015
3/1/2015
4/1/2015
5/1/2015
6/1/2015
7/1/2015
DATE


INFLUENT PEAK FLOW
FLOW (MGD)
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
8/1/2012
9/1/2012
10/1/2012
11/1/2012
12/1/2012
1/1/2013
2/1/2013
3/1/2013
4/1/2013
5/1/2013
6/1/2013
7/1/2013
8/1/2013
9/1/2013
10/1/2013
11/1/2013
12/1/2013
1/1/2014
2/1/2014
3/1/2014
4/1/2014
5/1/2014
6/1/2014
7/1/2014
8/1/2014
9/1/2014
10/1/2014
11/1/2014
12/1/2014
1/1/2015
2/1/2015
3/1/2015
4/1/2015
5/1/2015
6/1/2015
7/1/2015
DATE

Village of Wellsville
Average Temperatures

Month	Avg. Inf. Temp	Avg. Eff. Temp
Aug-12	21	21
Sep-12	20	19
Oct-12	17	16
Nov-12	14	11
Dec-12	12	10
Jan-13	10	9
Feb-13	9	8
Mar-13	9	9
Apr-13	11	11
May-13	15	16
Jun-13	17	18
Jul-13	20	21
Aug-13	20	20
Sep-13	20	19
Oct-13	18	16
Nov-13	14	11
Dec-13	11	9
Jan-14	10	7
Feb-14	9	7
Mar-14	8	7
Apr-14	10	10
May-14	14	14
Jun-14	17	18
Jul-14	19	19
Aug-14	19	20
Sep-14	19	19
Oct-14	18	16
Nov-14	14	11
Dec-14	12	10
Jan-15	10	8
Feb-15	9	7
Mar-15	9	8
Apr-15	10	10
May-15	15	16
Jun-15	18	19
Jul-15	19	20

	SUMMER
	FALL
	WINTER
	SPRING


Avg. Temperature
25
20
15
10
5
0
Temperature (deg.)
Aug-12
Sep-12
Oct-12
Nov-12
Dec-12
Jan-13
Feb-13
Mar-13
Apr-13
May-13
Jun-13
Jul-13
Aug-13
Sep-13
Oct-13
Nov-13
Dec-13
Jan-14
Feb-14
Mar-14
Apr-14
May-14
Jun-14
Jul-14
Aug-14
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15
Feb-15
Mar-15
Apr-15
May-15
Jun-15
Jul-15
Months
Avg. Inf. Temp
Avg. Eff. Temp

APPENDIX E

LEACHATE DATA

MICROBAC®

Microbac Laboratories, Inc., Sayre Division

CERTIFICATE OF ANALYSIS

S6G0103

Village of Wellsville WWTP

Mike Smith
152 Bolivar Road
Wellsville, NY 14895

Project Name: Wastewater Testing

Project / PO Number: N/A
Received: 07/20/2016 18:34
Reported: 07/27/2016 11:39

Analytical Testing Parameters

Client Sample ID: Infuent
Lab Sample ID: S6G0103-01
Sample Type: Composite

Start Date: 07/19/16
Start Time: 07:30

Collected By: Deron Biechele
Collection Date: 07/20/16
Collection Time: 07:34

Inorganics	Result	PQL	Units	Note	Prepared	Analyzed	Lab
Method: EPA 351.2, Rv 2							
Total Kjeldahl Nitrogen (TKN)	**32.0**	5.00	mg/L		07/25/16 1450	07/26/16 1259	SAY
Method: SM2540 C-1997							
Total Dissolved Solids (TDS)	**431**	10.0	mg/L		07/22/16 1330	07/25/16 0825	SAY

Analytical Testing Parameters

3 Loads Leacht

Client Sample ID: Effluent
Lab Sample ID: S6G0103-02
Sample Type: Composite

Start Date: 07/19/16
Start Time: 07:27

Collected By: Deron Biechele
Collection Date: 07/20/16
Collection Time: 07:28

Inorganics	Result	PQL	Units	Note	Prepared	Analyzed	Lab
Method: EPA 350.1, Rv 2							
Ammonia as N	**2.98**	0.100	mg/L		07/21/16 1711	07/21/16 1824	SAY
Method: EPA 351.2, Rv 2							
Total Kjeldahl Nitrogen (TKN)	**6.34**	1.00	mg/L		07/25/16 1450	07/26/16 1300	SAY
Method: EPA 365.3, Rv 1978							
Phosphorus - Total as P	**1.25**	0.125	mg/L		07/25/16 1510	07/26/16 1115	SAY
Method: SM2540 C-1997							
Total Dissolved Solids (TDS)	**540**	10.0	mg/L		07/22/16 1330	07/25/16 0825	SAY

Laboratory

SAY: Microbac Laboratories, Inc., Sayre Division

Definitions

PQL: Practical Quantitation Limit

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.8°C

Cooler Inspection Checklist

Custody Seals Intact and/or No Evidence of Tampering	Yes	Containers Intact	Yes
COC/Labels Agree	Yes	Preservation Correct (or not required)	Yes
Received on Ice (or not required)	Yes		

MICROBAC®

Microbac Laboratories, Inc., Sayre Division

CERTIFICATE OF ANALYSIS

S6G0106

Village of Wellsville WWTP

Mike Smith
152 Bolivar Road
Wellsville, NY 14895

Project Name: Wastewater Testing

Project / PO Number: N/A
Received: 07/13/2016 18:15
Reported: 07/21/2016 17:23

Analytical Testing Parameters

Client Sample ID: Influent
Lab Sample ID: S6G0106-01
Sample Type: Composite

Start Date: 07/12/16
Start Time: 07:32

Collected By: Mike Smith - Client
Collection Date: 07/13/16
Collection Time: 07:40

Inorganics	Result	PQL	Units	Note	Prepared	Analyzed	Lab
Method: EPA 351.2, Rv 2							
Total Kjeldahl Nitrogen (TKN)	**49.0**	25.0	mg/L		07/14/16 1035	07/15/16 1339	SAY
Method: SM2540 C-1997							
Total Dissolved Solids (TDS)	**378**	10.0	mg/L		07/18/16 1900	07/19/16 1105	SAY

Analytical Testing Parameters

1.75 Caddy Length

Client Sample ID: Effluent
Lab Sample ID: S6G0106-02
Sample Type: Composite

Start Date: 07/12/16
Start Time: 07:27

Collected By: Mike Smith - Client
Collection Date: 07/13/16
Collection Time: 07:27

Inorganics	Result	PQL	Units	Note	Prepared	Analyzed	Lab
Method: EPA 350.1, Rv 2							
Ammonia as N	**1.24**	0.100	mg/L		07/19/16 1517	07/19/16 1737	SAY
Method: EPA 351.2, Rv 2							
Total Kjeldahl Nitrogen (TKN)	**5.02**	1.00	mg/L		07/14/16 1035	07/15/16 1340	SAY
Method: EPA 365.3, Rv 1978							
Phosphorus - Total as P	**0.954**	0.125	mg/L		07/18/16 1545	07/19/16 1130	SAY
Method: EPA 420.4, Rv 1							
Phenols	<0.0250	0.0250	mg/L		07/18/16 1145	07/20/16 1205	SAY
Method: SM2540 C-1997							
Total Dissolved Solids (TDS)	**571**	10.0	mg/L		07/18/16 1900	07/19/16 1105	SAY

Laboratory

SAY: Microbac Laboratories, Inc., Sayre Division

Definitions

PQL: Practical Quantitation Limit

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 4.8°C

MICROBAC®

Microbac Laboratories, Inc., Sayre Division

CERTIFICATE OF ANALYSIS

S6G0105

Village of Wellsville WWTP

Mike Smith
152 Bolivar Road
Wellsville, NY 14895

Project Name: Wastewater Testing

Project / PO Number: N/A
Received: 07/06/2016 17:30
Reported: 07/14/2016 17:40

Analytical Testing Parameters

Client Sample ID: Influent
Lab Sample ID: S6G0105-01
Sample Type: Composite

Start Date: 07/05/16
Start Time: 07:29

Collected By: Mike Smith
Collection Date: 07/06/16
Collection Time: 07:29

Inorganics	Result	PQL	Units	Note	Prepared	Analyzed	Lab
Method: EPA 351.2, Rv 2							
Total Kjeldahl Nitrogen (TKN)	**28.6**	5.00	mg/L		07/07/16 1151	07/11/16 1108	SAY
Method: SM2540 C-1997							
Total Dissolved Solids (TDS)	**312**	10.0	mg/L		07/07/16 1330	07/08/16 0830	SAY

Analytical Testing Parameters

1 Load Leacht

Client Sample ID: Effluent
Lab Sample ID: S6G0105-02
Sample Type: Composite

Start Date: 07/05/16
Start Time: 07:27

Collected By: Mike Smith
Collection Date: 07/06/16
Collection Time: 07:27

Inorganics	Result	PQL	Units	Note	Prepared	Analyzed	Lab
Method: EPA 350.1, Rv 2							
Ammonia as N	**0.472**	0.100	mg/L		07/08/16 1500	07/08/16 1733	SAY
Method: EPA 351.2, Rv 2							
Total Kjeldahl Nitrogen (TKN)	**3.46**	1.00	mg/L		07/07/16 1151	07/11/16 1110	SAY
Method: EPA 365.3, Rv 1978							
Phosphorus - Total as P	**0.775**	0.125	mg/L		07/11/16 1535	07/12/16 1038	SAY
Method: EPA 420.4, Rv 1							
Phenols	<0.0250	0.0250	mg/L		07/13/16 1235	07/14/16 1622	SAY
Method: SM2540 C-1997							
Total Dissolved Solids (TDS)	**391**	10.0	mg/L		07/07/16 1330	07/08/16 0830	SAY

Laboratory

SAY: Microbac Laboratories, Inc., Sayre Division

Definitions

PQL: Practical Quantitation Limit

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 3.5°C

WASTEWATER FACILITY OPERATION REPORT FOR JANUARY

SPDES - #0020621 - Wastewater Treatment Plant - Village of Wellsville 2016

			VOLUME OF SEWAGE TREATED			TEMPERATURE °C		----------pH (S.U.)----------				SET. SDS. (ML/L)	
		PRECIP	INS. MAX	AVE.	INS. MIN.	INF.	EFF.	INF.	INF.	EFF.	EFF.	INF.	EFF.
DAY	DATE	IN/DAY	MGD	MGD	MGD	(2)	(2)	MIN.	MAX.	MIN.	MAX.	MAX.	MAX.
f	1	0.20	2.80	1.998	1.63	53	49	7.0	7.0	7.1	7.1	1.0	<.1
s	2	t	2.34	1.859	1.51	53	49	7.3	7.3	7.4	7.4	0.5	<.1
s	3	0.00	2.54	1.786	1.44	52	48	7.0	7.0	7.1	7.1	0.3	<.1
m	4	0.20	3.21	1.755	1.28	53	47	7.1	7.3	6.9	7.3	6.0	<.1
t	5	0.00	2.46	1.374	0.87	54	45	7.0	7.7	6.7	7.2	6.0	<.1
w	6	0.00	2.50	1.372	0.86	53	45	7.0	7.4	6.7	7.5	4.0	<.1
t	7	0.00	2.61	1.406	0.85	50	46	7.2	7.5	6.7	7.2	13.0	<.1
f	8	0.00	2.85	1.300	0.83	52	47	7.3	7.4	6.8	7.3	4.0	<.1
s	9	0.57	1.94	1.272	0.86	51	47	7.4	7.4	6.8	6.8	0.5	<.1
s	10	0.11	3.02	1.786	0.90	52	50	7.2	7.2	7.5	7.5	3.0	<.1
m	11	0.02	2.45	1.582	1.11	51	46	7.2	7.2	7.2	7.3	4.0	<.1
t	12	0.14	2.70	1.548	1.10	52	45	7.1	7.4	6.8	7.4	5.4	<.1
w	13	0.02	2.39	1.470	1.01	51	45	7.1	7.3	6.8	7.3	6.0	<.1
t	14	0.00	2.38	1.419	0.92	49	44	7.2	7.2	6.8	6.8	2.5	<.1
f	15	0.00	2.83	1.383	0.97	52	49	6.9	7.4	6.7	7.4	5.5	<.1
s	16	0.00	1.84	1.300	0.96	51	49	7.0	7.0	7.1	7.1	1.0	<.1
s	17	0.15	1.72	1.241	0.88	49	49	7.2	7.2	7.3	7.3	1.0	<.1
m	18	0.04	2.25	1.338	0.86	52	45	7.3	7.7	7.3	7.4	6.0	<.1
t	19	0.01	2.31	1.321	0.82	50	44	7.1	7.5	6.6	7.3	6.0	<.1
w	20	t	2.36	1.287	0.80	51	43	7.2	7.2	6.6	7.3	4.0	<.1
t	21	0.04	2.21	1.246	0.76	50	45	7.1	8.5	6.7	7.6	6.0	<.1
f	22	0.00	2.00	1.145	0.70	58	44	7.1	7.4	6.7	7.2	19.0	<.1
s	23	0.00	1.72	1.089	0.69	49	42	7.1	7.1	7.1	7.1	1.0	<.1
s	24	0.00	2.35	1.081	0.68	50	44	7.1	7.1	6.5	6.5	0.3	<.1
m	25	0.00	2.94	1.144	0.65	51	47	6.9	8.9	6.9	7.4	7.0	<.1
t	26	0.00	2.46	1.110	0.64	50	48	7.2	8.8	6.7	7.3	4.0	<.1
w	27	0.00	2.56	1.149	0.65	51	46	7.3	8.0	6.6	7.4	5.0	<.1
t	28	t	2.40	1.148	0.65	51	47	7.1	8.7	6.6	7.1	4.5	<.1
f	29	t	2.03	0.997	0.58	51	47	7.3	7.6	6.8	7.4	6.5	<.1
s	30	0.00	1.50	0.933	0.61	49	44	7.4	7.4	6.6	6.6	2.5	<.1
s	31	0.05	2.38	1.020	0.63	51	47	7.3	7.3	7.4	7.4	1.0	<.1
TOT		1.55	74.04	41.86	27.70	1592	8	221.7	233.1	213.5	224.0	137	0.00
AVE		0.06	2.39	1.35	0.89	51	7	7.2	7.5	6.9	7.2	4.4	0.00
MAX		0.57	3.21	2.00	1.63	58	6	7.4	8.9	7.5	7.6	19	0.00
MIN		0.00	1.50	0.93	0.58	49	5	6.9	7.0	6.5	6.5	0.3	0.00

WASTEWATER FACILITY OPERATION REPORT FOR												JAN	
SPDES - #0020621 - Wastewater Treatment Plant - Village of Wellsville												2016	
		FLOW	C.B.O.D.5 (MG/L)		SUS. SLDS (MG/L		U.O.D. (MG/L)		U.O.D	T.K.N (MG/L)		AMMONIA (MG/L	Tphos mg/l
		MGD	INF	EFF	INF.	EFF.	INF.	EFF.	#/DAY	INF.	EFF.	EFF.	EFF.
DAY	DATE		24C	24C	24C	24C	24C	24C	EFF. TYPE	24C	24C	24.C	24C
t	1	1.998											
f	2	1.859											
s	3	1.786											
s	4	1.755											
m	5	1.374	96	7	162	12						8.54	0.7
t	6	1.372											
w	7	1.406											
t	8	1.300											
f	9	1.272											
s	10	1.786											
s	11	1.582											
m	12	1.548	101	6	215	12						9.86	1.0
t	13	1.470											
w	14	1.419											
t	15	1.383											
f	16	1.300											
s	17	1.241											
s	18	1.338											
m	19	1.321	111	8	139	12						13.20	0.6
t	20	1.287											
w	21	1.246											
t	22	1.145											
f	23	1.089											
s	24	1.081											
s	25	1.144											
m	26	1.110	223	10	394	10						13.50	0.8
t	27	1.149											
w	28	1.148											
t	29	0.997											
f	30	0.933											
s	31	1.020											
TOT		41.86	531	31	910	46							3.1
AVE		1.35	133	8	228	12							0.8
MAX		2.00	223	10	394	12							1.0
MIN		0.93	96	6	139	10							0.6
	30 DAY AVE QUANT LOAD			112		95							
	% CALCULATED REMOVAL			90		92							

APPENDIX F

WWTP DESIGN PARAMETERS

Completed By: L.Bailey
Checked By: B.Davis
Project Name: V/O Wellsville WWTP

MRB group
Engineering, Architecture, Surveying, P.C.

Job No: 2314.15001
Page: 1 **of** 1
Date: 2/8/2016

Subject: Existing and Future Design Parameters

Influent Parameters	Existing	Future	Total	Design
Ave. Daily Flow (mgd)	1.15	1.05	2.20	2.20
Max. Monthly Flow (mgd)	1.82	1.57	3.39	3.50
Max. Daily Flow (mgd)	3.74	2.09	5.84	6.00
Peak Hourly Flow (mgd)[1]	5.00	3.43	8.43	7.50
Ave. CBOD (mg/l)	173	220	194	220
Ave. CBOD (lbs/day)	1631	1921	3552	3575
Max. Monthly CBOD (mg/l)	**148**	**220**	**181**	**176**
Max. Monthly CBOD (lbs/day)	**2240**	**2882**	**5122**	**5150**
Ave. TSS (mg/l)	229	220	224	230
Ave. TSS (lbs/day)	2184	1921	4105	4150
Max. Monthly TSS (mg/L)	**320**	**190**	**260**	**275**
Max. Monthly TSS (lbs/day)	**4843**	**2489**	**7332**	**7350**
Ave. Ammonia (mg/l) estimated	25	25	25	26
Ave. Ammonia (lbs/day) estimated	240	218	459	475
Max. Monthly Ammonia (mg/L) est.	**25**	**25**	**25**	**25**
Max. Monthly Ammonia (lbs/day) est.	**378**	**327**	**706**	**720**
Ave. TKN (mg/l)	25	40	30	31
Ave. TKN (lbs/day)	203	349	552	560
Max. Monthly TKN (mg/l)	**24**	**35**	**29**	**28**
Max. Monthly TKN (lbs/day)	**356**	**458**	**814**	**820**
Ave Phosphorous (mg/l) estimated	8	8	8	10
Ave. Phosphorous (lbs/day) estimated	77	70	147	150
Max. Monthly Phosphorous (mg/l) est.	**8**	**8**	**8**	**8**
Max. Monthly Phosphorous (lbs/day) est.	**121**	**105**	**226**	**230**

Peak Factor - Max Month	1.57	1.50		1.59
Peak Factor - Max Day	3.25	2.00		2.73
Peak Factor - Peak Hourly	4.34	3.28		3.41

Effluent Parameters	Design	
CBOD (mg/l)	25	Monthly Average
TSS (mg/l)	30	Monthly Average
Ammonia (mg/L) Jun1st- Oct31st	7.0	Monthly Average
Ammonia (lbs/day) Jun1st- Oct31st	128	Monthly Average
Ammonia (mg/L) Nov 1st - May 31st	13.0	Monthly Average
Ammonia (lbs/day) Nov 1st - May 31st	239	Monthly Average
Total Nitrogen (mg/l)	Monitor	Annual Average
Total Phosphorous (mg/l)[3]	1	Monthly Average
Fecal Coliform (No./100 ml)	200	Monthly Max

Environmental Conditions	
Min. Wastewater Temp. (Degrees C)	6
Max. Wastewater Temp. (Degrees C)	23
Site Elevation (ft above sea level)	1500

1: Need to reduce I+I to lower future design PHF. Under current conditions, future design PHF would be 8.50

APPENDIX G

WWTP CAPACITY EVALUATION CALCULATIONS

		Plant Existing	Future	Total	Plant Design	Notes
	Population	4331	433.1	4764	4800	(1)
	Growth rate		10.0%			
	Average Daily Flow (MGD)	**1.15**	1.05	2.20	**2.20**	(2)
	Max Month Average Daily Flow (MGD)	**1.82**	1.57	3.39	**3.50**	(2)
	Peak Flow (MGD)	**5.00**	3.43	8.43	**7.50**	(2)(3)
	ADF-MMF peaking factor	1.57	1.50	-	1.59	
	ADF-PHF peaking factor	4.34	3.28	-	3.41	
	BOD influent loading @ ADF (lb/d)	**1631**	1921	3552	**3575**	(4)
	BOD influent concentration @ ADF (mg/L)	173	220	194	220	
	TSS influent loading @ ADF (lb/d)	**2184**	1921	4105	**4150**	(4)
	TSS influent concentration @ ADF (mg/L)	229	220	224	230	
	BOD influent loading @ MMF (lb/d)	**2240**	2882	5122	**5150**	(4)
	BOD influent concentration @ MMF (mg/L)	148	220	181	176	
	TSS influent loading @ MMF (lb/d)	**4843**	2489	7332	**7350**	(4)
	TSS influent concentration @ MMF (mg/L)	320	190	260	275	
Notes:						
1	GFLRPC projections 2010-2040. Projection shows decrease in Town; conservatively assume no change.					
2	Loading proportioned by flow.					
3	TP influent concentration assumed based on 85% removal rate to meet effluent limit of 1.0 mg/L.					

Phase	Flow regime	Q	Q max, overflow surf	Actual SOR		Q max, overflow weir	Q actual, overflow weir		t, det, PC#1	BOD removed, PC#1	TSS removed, PC#1	MBOD, PC#1 in	MBOD, PC#1 out	XBOD, PC#1 out	MTSS, PC#1 in	MTSS, PC#1 out	MTSS, PC#1 sludge	Q, PC#1 sludge
		MGD	MGD	g/d*sf		MGD	g/d/lf		hr			lb/d	lb/d	mg/L	lb/d	lb/d	lb/d	gpd
Existing	ADF	1.15	2.40	480	OK				3.6	38%	62%	1631	1011	105	2184	825	1359	5432
Existing	MMF	1.82	2.40	756	OK				2.3	36%	58%	2240	1435	95	4843	2037	2806	11216
Existing	PHF	5.00	4.80	2083	NG	7.20	20833	OK										
Design	ADF	2.20	2.40	917	OK				1.9	34%	56%	3575	2362	129	4150	1838	2312	9241
Design	MMF	3.50	2.40	1458	NG				1.2	29%	49%	5150	3682	126	7350	3726	3624	14485
Design	PHF	7.50	4.80	3125	NG	7.20	31250	NG										

Design parameters			
# of tanks, PC	3	ea	
Length, PC's	50	ft	
Width, PC's	16	ft	
A,surface total PC's	2400	sf	
H, PC's	9.7	ft	
V, PC's	23280	cf	
	174134	gal	
L, weir total, PC's	240	ft	
Overflow surf, max, ADF, TF only	1000	gpd/sf	
Overflow surf, max, PHF	2000	gpd/sf	
Overflow weir, max, PHF (ADF < 1 MGD)	20000	gpd/ft	
Overflow weir, max, PHF (ADF > 1 MGD)	30000	gpd/ft	
XTSS, PC sludge	30000	mg/L	

Design equations

Q max, overflow surf = (A surf, PC) x (Overflow surf, max)

Q max, overflow weir = (L, weir total, PC) x (Overflow weir, max)

t, det, PC = (V, PC) / Q

% BOD removed, PC = (t, det, PC) / [0.018 + 0.020 x (t, det, PC)] / 100

% TSS removed, PC = (t, det, PC) / [0.0075 + 0.014 x (t, det, PC)] / 100

Phase	Flow regime	Q	R	Qr	Qt	H	k20	q	E	XBOD, PC out	Si	XBOD, TF out		MBOD, TF out	Se trial	S0 difference	MBOD loading rate, TF#1	BOD Removal Rate mg/L /CF media	BOD to Remove down to 20 mg/l	Required Media for BOD Removal to 20mg/l	Remaining Media for Nitrification
		MGD		MGD	MGD	ft	(gpm/sf)^0.5)	gpm/sf		mg/L	mg/L	mg/L		lb/d	mg/L		lb/kcf/d			cf	cf
Existing	ADF	1.15	0.8	0.92	2.08	6	0.00276	0.127	1.544	105	75	38	Inadequate	366	38	0	14.902	0.00099	85.16	86147	-18289
Existing	MMF	1.82	0.8	1.45	3.27	6	0.00285	0.201	1.431	95	70	40	Inadequate	599	40	0	21.143	0.00081	74.78	91872	-24013
Design	ADF	2.20	0.8	1.76	3.96	6	0.00239	0.243	1.314	129	100	64	Inadequate	1171	64	0	34.810	0.00096	108.74	113674	-45816
Design	MMF	3.50	0.8	2.80	6.30	6	0.00237	0.387	1.239	126	102	71	Inadequate	2074	71	0	54.256	0.00081	106.13	130736	-62878

Design parameters			Design equations
Dia, TF	120	ft	Se = S0 / {[(R + 1) x E] - R}
H, TF	6	ft	
A surf, TF	11310	sf	S0 = Se x {[(R + 1) x E] - R}
V, TF	67858	cf	
T, min	8	deg-C	E = exp{[k20 x As x H x CorrT] / [q x (R + 1)^n]}
Theta	1.035		S0 = [(Si x Q) + (Se x Qr)] / (Q + Qr)
CorrT	0.662		Si = {[S0 x (Q + Qr)] - (Se x Qr)} / Q
As	19	sf/cf	q = (Q + Qr) / A surf, TF
kp	0.00107	(gpm/sf)^0.5	k20 = kp x (Hp / H)^0.5 x (Sp / Si)^0.5
Hp	20	ft	
Sp	150	mg/L	
n	0.5		
XBOD, Eff req	30	mg/L	288.5 lbs/day

Phase	Flow regime	Q	R	Qr	Qt	H	k20	q	E	XBOD, PC out	Si	XBOD, TF out		MBOD, TF out	Se trial	S0 difference	MBOD loading rate, TF#1	BOD Removal Rate mg/L /CF media	BOD to Remove down to 20 mg/l	Required Media for BOD Removal to 20mg/l	Remaining Media for Nitrification
		MGD		MGD	MGD	ft	(gpm/sf)^0.5)	gpm/sf		mg/L	mg/L	mg/L		lb/d	mg/L		lb/kcf/d			cf	cf
Existing	ADF	1.15	0.0	0.00	1.15	6	0.00233	0.071	5.319	105	105	20	OK	190	20	0	14.902	0.00126	85.16	81212	-13353
Existing	MMF	1.82	0.0	0.00	1.82	6	0.00246	0.111	4.068	95	95	23	OK	353	23	0	21.143	0.00105	74.78	85191	-17333
Design	ADF	2.20	0.0	0.00	2.20	6	0.00211	0.135	2.985	129	129	43	Inadequate	791	43	0	34.810	0.00126	108.74	103435	-35577
Design	MMF	3.50	0.0	0.00	3.50	6	0.00213	0.215	2.401	126	126	53	Inadequate	1533	53	0	54.256	0.00108	106.13	117425	-49567

Design parameters			Design equations
Dia, TF	120	ft	Se = S0 / {[(R + 1) x E] - R}
H, TF	6	ft	
A surf, TF	11310	sf	S0 = Se x {[(R + 1) x E] - R}
V, TF	67858	cf	
T, min	8	deg-C	E = exp{[k20 x As x H x CorrT] / [q x (R + 1)^n]}
Theta	1.035		S0 = [(Si x Q) + (Se x Qr)] / (Q + Qr)
CorrT	0.662		Si = {[S0 x (Q + Qr)] - (Se x Qr)} / Q
As	48	sf/cf	q = (Q + Qr) / A surf, TF
kp	0.00107	(gpm/sf)^0.5	k20 = kp x (Hp / H)^0.5 x (Sp / Si)^0.5
Hp	20	ft	
Sp	150	mg/L	
n	0.5		
XBOD, Eff req	30	mg/L	288.5 lbs/day
FS	1.2		

Phase	Flow regime	Q	R	Qr	Qt	H	k20	q	E	XBOD, TF#1 out	Si	XBOD, TF#2 out		MBOD, TF#2 out	Se trial	S0 difference	MBOD loading rate, TF#2	BOD Removal Rate mg/L /CF media	BOD to Remove down to 20 mg/l	Required Media for BOD Removal to 20mg/l	Remaining Media for Nitrification
		MGD		MGD	MGD	ft	(gpm/sf)^0.5)	gpm/sf		mg/L	mg/L	mg/L		lb/d	mg/L		lb/kcf/d			cf	cf
Existing	ADF	1.15	0.8	0.92	2.08	6	0.00481	0.127	2.132	38	25	8	OK	78	8	0	5.396	0.00044	18.08	41001	26857
Existing	MMF	1.82	0.8	1.45	3.27	6	0.00461	0.201	1.784	40	27	11	OK	169	11	0	8.822	0.00042	19.55	46747	21112
Design	ADF	2.20	0.8	1.76	3.96	6	0.00351	0.243	1.493	64	46	25	OK	451	25	0	17.258	0.00058	43.83	75782	-7923
Design	MMF	3.50	0.8	2.80	6.30	6	0.00324	0.387	1.341	71	54	34	Inadequate	986	34	0	30.560	0.00055	51.04	92943	-25085

Design parameters					
Dia, TF	120	ft	Design equations		
H, TF	6	ft	Se = S0 / {[(R + 1) x E] - R}		
A surf, TF	11310	sf	S0 = Se x {[(R + 1) x E] - R}		
V, TF	67858	cf			
T, min	8	deg-C	E = exp{[k20 x As x H x CorrT] / [q x (R + 1)^n]}		
Theta	1.035		S0 = [(Si x Q) + (Se x Qr)] / (Q + Qr)		
CorrT	0.662		Si = {[S0 x (Q + Qr)] - (Se x Qr)} / Q		
As	19	sf/cf	q = (Q + Qr) / A surf, TF		
kp	0.00107	(gpm/sf)^0.5	k20 = kp x (Hp / H)^0.5 x (Sp / Si)^0.5		
Hp	20	ft			
Sp	150	mg/L			
n	0.5				
XBOD, Eff req	30	mg/L	288.5	lbs/day	

Phase	Flow regime	Q	R	Qr	Qt	H	k20	q	E	XBOD, TF#1 out	Si	XBOD, TF#2 out		MBOD, TF#2 out	Se trial	S0 difference	MBOD loading rate, TF#2	BOD Removal Rate mg/L /CF media	BOD to Remove down to 20 mg/l	Required Media for BOD Removal to 20mg/l	Remaining Media for Nitrification
		MGD		MGD	MGD	ft	(gpm/sf)^0.5)	gpm/sf		mg/L	mg/L	mg/L		lb/d	mg/L		lb/kcf/d			cf	cf
Existing	ADF	1.15	0.0	0.00	1.15	6	0.00538	0.071	47.199	20	20	0	OK	4	0	0	2.802	0.00029	0.00	0	67858
Existing	MMF	1.82	0.0	0.00	1.82	6	0.00496	0.111	16.942	23	23	1	OK	21	1	0	5.198	0.00032	0.00	0	67858
Design	ADF	2.20	0.0	0.00	2.20	6	0.00364	0.135	6.614	43	43	7	OK	120	7	0	11.663	0.00054	23.13	42877	24981
Design	MMF	3.50	0.0	0.00	3.50	6	0.00330	0.215	3.885	53	53	14	OK	395	14	0	22.597	0.00057	32.53	56588	11270

Design parameters			Design equations
Dia, TF	120	ft	Se = S0 / {[(R + 1) x E] - R}
H, TF	6	ft	
A surf, TF	11310	sf	S0 = Se x {[(R + 1) x E] - R}
V, TF	67858	cf	
T, min	8	deg-C	E = exp{[k20 x As x H x CorrT] / [q x (R + 1)^n]}
Theta	1.035		S0 = [(Si x Q) + (Se x Qr)] / (Q + Qr)
CorrT	0.662		Si = {[S0 x (Q + Qr)] - (Se x Qr)} / Q
As	48	sf/cf	q = (Q + Qr) / A surf, TF
kp	0.00107	(gpm/sf)^0.5	k20 = kp x (Hp / H)^0.5 x (Sp / Si)^0.5
Hp	20	ft	
Sp	150	mg/L	
n	0.5		
XBOD, Eff req	30	mg/L	288.5 lbs/day

Phase	Flow regime	Q	Q max, overflow surf	Q actual, overflow surf		Q max, overflow weir	Q actual, overflow weir		MTSS, TF#2 out	MBOD, TF#2 out	MVSS in BOD, TF#2 out	MTSS in BOD, TF#2 out	MTSS, FC in	MTSS, FC sludge	Q, FC sludge	MTSS, FC out	XTSS, FC out
		MGD	MGD	gpd/sf		MGD			lb/d	lb/d	lb/d	lb/d	lb/d	lb/d	gpd	lb/d	mg/L
Existing	ADF	1.15	3.39	306	OK				8.2	78.4	39.2	49.0	57.2	51.5	411.4	5.7	0.6
Existing	MMF	1.82	3.39	481	OK				11.2	169.1	84.6	105.7	116.9	105.2	840.8	11.7	0.8
Existing	PHF	5.00	3.39	1326	NG	11.31	13263	OK									
Design	ADF	2.20	3.39	584	OK				24.6	451.0	225.5	281.9	306.5	275.8	2204.9	30.6	1.7
Design	MMF	3.50	3.39	928	NG				33.8	985.9	493.0	616.2	650.0	585.0	4676.1	65.0	2.2
Design	PHF	7.50	3.39	1989	NG	11.31	19894	OK									

Design parameters	3	ea	Design equations
D, FC	40	ft	
Area, FC	1257	sf	Q max, overflow surf = A surf, PST x Overflow surf max, PST
H, FC	10.000	ft	Q max, overflow weir = L, weir total, SST x Overflow weir max, SST
V , FC	12566	cf	MVSS in BOD, TF#2 out = (MBOD, PST out - MBOD, TF#2 out) x F/M ratio, TF#2
	93996	gal	MTSS in BOD, TF#2 out = MVSS in BOD, TF#2 out / Volatile fraction, TSS
L, weir ea, FC	126	ft	MTSS, SST in = (MTSS, PST out + MTSS in BOD, TF#2 out) x TSS capture, SST
Area total FC's	3770	sf	
Volume total FC's	37699	cf	
	281989	gal	
Length Weir total FC's	377	ft	
Overflow, surf max, PHF, FC's	1200	gpd/sf	
Overflow, surf max (alum), PHF, FC's	900	gpd/sf	
Overflow, weir max, PHF, FC's (ADF < 1 MGD)	20000	gpd/ft	
Overflow, weir max, PHF, FC's (ADF > 1 MGD)	30000	gpd/ft	
F/M ratio, TF	0.5	lb VSS/lb BOD	
Volatile fraction, TSS	0.8		
TSS capture, FC	90%		
XTSS, FC sludge	15000	mg/L	
XTSS, Eff req	30	mg/L	

Phase	Flow regime	Q	Q max, overflow surf	Q actual, overflow surf		Q max, overflow weir	Q actual, overflow weir		MTSS, TF#2 out	MBOD, TF#2 out	MVSS in BOD, TF#2 out	MTSS in BOD, TF#2 out	MTSS, FC in	MTSS, FC sludge	Q, FC sludge	MTSS, FC out	XTSS, FC out
		MGD	MGD	gpd/sf		MGD			lb/d	lb/d	lb/d	lb/d	lb/d	lb/d	gpd	lb/d	mg/L
Existing	ADF	1.15	4.52	229	OK				8.2	78.4	39.2	49.0	57.2	51.5	411.4	5.7	0.6
Existing	MMF	1.82	4.52	361	OK				11.2	169.1	84.6	105.7	116.9	105.2	840.8	11.7	0.8
Existing	PHF	5.00	4.52	995	NG	15.08	9947	OK									
Design	ADF	2.20	4.52	438	OK				24.6	451.0	225.5	281.9	306.5	275.8	2204.9	30.6	1.7
Design	MMF	3.50	4.52	696	OK				33.8	985.9	493.0	616.2	650.0	585.0	4676.1	65.0	2.2
Design	PHF	7.50	4.52	1492	NG	15.08	14921	OK									
Design parameters					4	ea		Design equations									
D, FC					40	ft											
Area, FC					1257	sf		Q max, overflow surf = A surf, PST x Overflow surf max, PST									
H, FC					10.000	ft		Q max, overflow weir = L, weir total, SST x Overflow weir max, SST									
V , FC					12566	cf		MVSS in BOD, TF#2 out = (MBOD, PST out - MBOD, TF#2 out) x F/M ratio, TF#2									
					93996	gal		MTSS in BOD, TF#2 out = MVSS in BOD, TF#2 out / Volatile fraction, TSS									
L, weir ea, FC					126	ft		MTSS, SST in = (MTSS, PST out + MTSS in BOD, TF#2 out) x TSS capture, SST									
Area total FC's					5027	sf											
Volume total FC's					50265	cf											
					281989	gal											
Length Weir total FC's					503	ft											
Overflow, surf max, PHF, FC's					1200	gpd/sf											
Overflow, surf max (alum), PHF, FC's					900	gpd/sf											
Overflow, weir max, PHF, FC's (ADF < 1 MGD)					20000	gpd/ft											
Overflow, weir max, PHF, FC's (ADF > 1 MGD)					30000	gpd/ft											
F/M ratio, TF					0.5	lb VSS/lb BOD											
Volatile fraction, TSS					0.8												
TSS capture, FC					90%												
XTSS, FC sludge					15000	mg/L											
XTSS, Eff req					30	mg/L											

Phase	Flow regime	Q	MTSS, PC sludge	MTSS, FC sludge	MTSS, AD sludge in	MVSS, AD sludge in	VSS loading rate		Q, PC sludge	Q, FC sludge	Q, AD in	MCRT, AD		MVSS, AD sludge out	MFSS, AD sludge out	MTSS, AD sludge out
		MGD	lb/d	lb/d	lb/d	lb/d	lb/kcf/d		gpd	gpd	gpd	d		lb/d	lb/d	lb/d
Existing	ADF	1.15	1359	51	1412	1129	29	OK	5432	411	5844	49.2	OK	565	282	847
Existing	MMF	1.82	2806	105	2913	2331	61	OK	11216	841	12057	23.8	OK	1165	583	1748
Design	ADF	2.20	2312	276	2590	2072	54	OK	9241	2205	11446	25.1	OK	1036	518	1554
Design	MMF	3.50	3624	585	4213	3370	88	OK	14485	4676	19161	15.0	OK	1685	843	2528

Design parameters						Design equations										
D, AD#1				35	FT	MCRT, AD = HRT, AD (for complete-mix digester)										
A surf, AD#1				962	SF	HRT, AD = V, AD primary / Q, AD in										
H, AD#1				20.0	FT	MVSS, AD sludge out = MVSS, AD sludge in x VSS destruction rate, AD										
V, AD#1				21751	CF	MFSS, AD sludge out = MFSS AD sludge in = MTSS, AD sludge in - MVSS, AD sludge in										
				162699	Gal	MTSS, AD sludge out = MVSS, AD sludge out + MFSS, AD sludge out										
D, AD#2				30	FT	AD production rate = MTSS, AD sludge out / Population equivalent										
A surf, AD#2				707	SF											
H, AD#2				20.0	FT											
V, AD#2				16646	CF											
				124513	Gal											
Total Digester Volume				38397	CF											
				287213	Gal											
Volatile fraction, AD sludge				0.8												
VSS loading rate max, AD				120												
MCRT, min @ 35C-55C				15												
VSS destruction rate, AD				50%												
Population equivalent, existing				4331												
Population equivalent, design				4800												
Min sludge production rate				0.09												

APPENDIX H

PROJECT COST ESTIMATES

Village of Wellsville
Cost Estimates

CONSTRUCTION

SITEWORK

Item Description	Unit Price	Quantity	Units	Cost
Site Grading	$ 40,000.00	1	LS	$ 40,000.00
Site Piping	$ 125,000.00	1	LS	$ 125,000.00
Rehab Gate Valves	$ 3,500.00	4	EA	$ 14,000.00
Rehab Drainage Inlets	$ 2,500.00	6	EA	$ 15,000.00
Site Restoration	$ 40,000.00	1	LS	$ 40,000.00
Site Asphalt Drives	$ 3.00	35000	SF	$ 105,000.00
Subtotal			**$**	**339,000.00**

TRICKLING FILTERS

Item Description	Unit Price	Quantity	Units	Cost
Existing Rock Media Removal and Tank Cleaning	$ 75,000.00	2	EA	$ 150,000.00
Recoat Concrete Walls and Base	$ 7.00	27250	SF	$ 190,750.00
Filter Dome Covers	$ 237,500.00	2	EA	$ 475,000.00
New Plastic Media	$ 7.00	135720	CF	$ 950,040.00
Media Supports (underdrain)	$ 100,000.00	2	EA	$ 200,000.00
Motor Driven Distibutor and arms (Stainless)	$ 128,140.00	2	EA	$ 256,280.00
Trickling Filter Feed Pumps	$ 35,000.00	3	EA	$ 105,000.00
Subtotal			**$**	**2,327,070.00**

Leachate Storage

Item Description	Unit Price	Quantity	Units	Cost
New 50,000 Gallon Storage Tank	$ 800.00	122	CY	$ 97,600.00
Coat Concrete Tank Walls and Base	$ 8.00	2625	SF	$ 21,000.00
Subtotal			**$**	**118,600.00**

Inflow and Infiltration Improvements

Item Description	Unit Price	Quantity	Units	Cost
Reline VC 8" Sewer Main	$ 60.00	7500	LF	$ 450,000.00
Repair and seal 5 Manholes	$ 2,500.00	5	EA	$ 12,500.00
Subtotal			**$**	**462,500.00**

New Influent Screen

Item Description	Unit Price	Quantity	Units	Cost
New S.S. Through Flow Screen and Compactor	$ 145,000.00	1	EA	$ 145,000.00
New NEMA 4X Control Panel	$ 2,500.00	1	EA	$ 2,500.00
Ultrasonic Level Sensor	$ 5,000.00	1	EA	$ 5,000.00
Fiberglass Enclosure Structure and Base	$ 100,000.00	1	LS	$ 100,000.00
Subtotal			**$**	**252,500.00**

Effluent UV Disinfection System

Item Description	Unit Price	Quantity	Units	Cost
UV disinfection equipment	$ 210,000.00	1	LS	$ 210,000.00
Concrete tank modifications	$ 50,000.00	1	LS	$ 50,000.00
Pole barn structure	$ 80.00	1500	SF	$ 120,000.00
Subtotal			**$**	**380,000.00**

Phosphorus Removal and Final Clarification

Item Description	Unit Price	Quantity	Units	Cost
Replace/Rebuild Existing Final Mechanicals	$ 130,000.00	2	EA	$ 260,000.00
Recoat Existing Final Concrete tanks	$ 8.00	7540	SF	$ 60,320.00
Polymer Mixing and Feed System	$ 8,000.00	1	EA	$ 8,000.00
Bulk Chemical Tanks	$ 1,750.00	3	EA	$ 5,250.00
Chemical Piping	$ 50.00	1000	LF	$ 50,000.00
Chemical Mixers	$ 4,500.00	2	EA	$ 9,000.00
New 40' Diameter Final Clarifier Concrete Tank	$ 800.00	135	CY	$ 108,000.00
Coat Final Clarifier Concrete Wall and Base	$ 8.00	2515	SF	$ 20,120.00
New Final Clarifier Mechanicals	$ 130,000.00	1	EA	$ 130,000.00
Subtotal			**$**	**650,690.00**

Solids Digestion and Dewatering

Item Description	Unit Price	Quantity	Units	Cost
Dewater and Clean Digester	$ 100,000.00	1	EA	$ 100,000.00
New Sludge Mixing System	$ 80,000.00	1	EA	$ 80,000.00
New Sludge Heating System	$ 210,000.00	1	EA	$ 210,000.00
Replace Raw Sludge Pumps	$ 5,000.00	2	EA	$ 10,000.00
Replace De Watering Pump	$ 7,500.00	1	EA	$ 7,500.00
Belt Filter Press Replacement	$ 300,000.00	1	EA	$ 300,000.00
Subtotal			**$**	**707,500.00**

New SCADA and Components

Item Description	Unit Price	Quantity	Units	Cost
New SCADA System	$ 325,000.00	1	EA	$ 325,000.00
New Phosphorus Analyzer	$ 15,000.00	1	EA	$ 15,000.00
Subtotal			**$**	**340,000.00**

Mobilization, bonds and insurance			$	446,000.00
Subtotal GC Costs			**$**	**6,023,860.00**
Subtotal EC Costs			$	722,863.20
Subtotal HVAC Costs			$	301,193.00
Subtotal PC Costs			$	240,954.40
CONSTRUCTION COSTS			**$**	**7,288,870.60**
Construction contingency (15%)			$	1,093,300.00
TOTAL CONSTRUCTION COSTS			**$**	**8,382,170.60**

ADMINISTRATIVE COSTS

Engineering, bidding and construction services			$	1,457,800.00
Admin, financial, bonding and legal services			$	364,400.00
SUBTOTAL ADMINISTRATIVE COSTS			**$**	**1,822,200.00**
TOTAL PROJECT COST			**$**	**10,204,000.00**

Capital Project @ 4.5% Financing

EDU COST		EDU COST BREAKDOWN	
Total Project Cost	$ 10,204,000.00	Existing O&M Cost Per EDU	$ 176.35
Loan Rate	4.50%	Current Debt Service Per EDU	$ 19.15
Loan Period	30	Existing Annual Cost Per EDU	$ 195.50
New Debt Service	$ 626,439		
Existing Debt Service	$ 81,750.00	Proposed Annual Debt Service Per EDU	$ 146.72
Total Annual Debt Service	$ 708,189	Proposed O&M Increase Per EDU	$ 0.35
O&M Annual Cost	$ 752,952.00	Proposed Annual Cost Per EDU Increase	$ 147.07
Total Proposed Annual Cost	$ 1,461,141.30		
EDUs	4,270	Proposed Annual Cost Per EDU	$ 343
Proposed Annual Cost Per EDU (Present Value)	**$ 342**		
		percent increase	75%

Capital Project @ 0% Financing

EDU COST		EDU COST BREAKDOWN	
Total Project Cost	$ 10,204,000.00	Existing O&M Cost Per EDU	$ 176.35
Loan Rate	0.00%	Current Debt Service Per EDU	$ 19.15
Loan Period	30	Existing Annual Cost Per EDU	$ 195.50
New Debt Service	$ 340,133		
Existing Debt Service	$ 81,750.00	Proposed Annual Debt Service Per EDU	$ 79.66
Total Annual Debt Service	$ 421,883	Proposed O&M Increase Per EDU	$ 0.35
O&M Annual Cost	$ 752,952.00	Proposed Annual Cost Per EDU Increase	$ 80.01
Total Proposed Annual Cost	$ 1,174,835.33		
EDUs	4,270	Proposed Annual Cost Per EDU	$ 276
Proposed Annual Cost Per EDU (Present Value)	**$ 275**		
		percent increase	41%

Village of Wellsville B/C Analysis
CL2 vs UV Disinfection

Completed By:	Luke Bailey	**Job No:**	2314.15001
Checked By:	B.Davis	**Page:**	1 of 1
Project Name:	V/O Wellsville WWTP PER	**Date:**	7/26/16

MRB group
Engineering, Architecture, Surveying, P.C.

Subject: Disinfection Cost Analysis - Chlorine Contact Tank vs. Ultraviolet Disinfection

Chlorine Disinfection					
Item Description		*Unit Price*	*Quantity*	*Units*	*Cost*
Concrete tank cleaning and patching		$ 35,000	1	LS	$ 35,000.00
Recoat Concrete base and walls		$ 12.00	3200	SF	$ 38,400.00
Replace Sluice Gates and Weirs		$ 35,000	1	LS	$ 35,000.00
Rehab Chlorine injection system		$ 25,000	1	LS	$ 25,000.00
DeChlorination Structure		$ 25,000	1	LS	$ 25,000.00
Subtotal				$	158,400.00

Alternative #1					
Effluent UV Disinfection System					
Item Description		*Unit Price*	*Quantity*	*Units*	*Cost*
UV disinfection equipment		$ 175,000.00	1	LS	$ 175,000.00
Equipment Installation		$ 35,000.00	1		$ 35,000.00
Concrete tank modifications		$ 50,000.00	1	LS	$ 50,000.00
Pole barn structure		$ 80.00	1500	SF	$ 120,000.00
Subtotal					$ 380,000.00

Manufacturer	**Capital Cost**	**Annual Operation and Maintenance Cost**	**Interest Rate**	**Investment (Years)**	**20 Year O&M Cost**	**20 Year Life Cycle Cost**
1) Chlorine Disinfection	$ 158,400	$109,800	3%	20	$2,950,367	**$3,108,767**
2) Ultraviolet Disinfection	$ 380,000	$42,909	3%	20	$1,152,976	**$1,532,976**

APPENDIX I

WELLSVILLE ACS MEDIAN HOUSEHOLD INCOME DATA

DP03: SELECTED ECONOMIC					
2010-2014 American Community Survey 5-Year Estimates					
Subject	Wellsville village, New York				
	Estimate		Margin of Error	Percent	Percent Margin of Error
EMPLOYMENT STATUS					
Population 16 years and over	3,763		+/-126	3,763	(X)
In labor force	2,212		+/-182	58.8%	+/-5.1
Civilian labor force	2,212		+/-182	58.8%	+/-5.1
Employed	1,963		+/-200	52.2%	+/-5.3
Unemployed	249		+/-89	6.6%	+/-2.4
Armed Forces	0		+/-11	0.0%	+/-0.8
Not in labor force	1,551		+/-212	41.2%	+/-5.1
INCOME AND BENEFITS (IN					
Total households	1,980		+/-137	1,980	(X)
Less than $10,000	172		+/-46	8.7%	+/-2.3
$10,000 to $14,999	206		+/-82	10.4%	+/-4.0
$15,000 to $24,999	313		+/-94	15.8%	+/-4.6
$25,000 to $34,999	228		+/-69	11.5%	+/-3.3
$35,000 to $49,999	266		+/-75	13.4%	+/-3.8
$50,000 to $74,999	380		+/-104	19.2%	+/-5.4
$75,000 to $99,999	196		+/-81	9.9%	+/-3.9
$100,000 to $149,999	154		+/-65	7.8%	+/-3.1
$150,000 to $199,999	44		+/-29	2.2%	+/-1.5
$200,000 or more	21		+/-18	1.1%	+/-0.9
Median household income	39,792		+/-5,804	(X)	(X)
Mean household income	55,359		+/-9,530	(X)	(X)

APPENDIX J

VILLAGE OF WELLSVILLE

SEWER BUDGET

1415					Expended		Encumbered		Balance			
	J	K			L		M		N		O	P
Old	11/12	12/13	13/14	14/15	14/15 Y-T-D		14/15				15/16 Prop.	Difference
Account #	Expended	Expended	Expended	Budget	Expended		Encumbered		Balance		Budget	(J-N)
ADMINISTRATION												
G8110.												
.101 Director	19404.30	20547.89	22007.56	22061.93	17088.28				4973.65		12353.08	-9708.85
.106 Village Treasurer	6731.62	6506.97	6871.21	7442.56	7161.41				281.15		7661.26	218.70
.107 Billing Officer	8658.51	8840.09	9602.66	9769.81	8854.96				914.85		9871.72	101.91
.108 Deputy Clerk	4710.30	3580.68	4251.54	3531.44	2645.24				886.20		3065.61	-465.83
.109 Village Clerk	8160.53	7540.81	8169.20	8831.19	8372.25				458.94		8730.99	-100.20
.111 Account Clerk	4311.55	7164.37	7712.02	7901.19	5926.89				1974.30		7760.49	-140.70
.112 DPW Sec'y.	12046.07	6765.15	7452.48	7356.37	7317.40				38.97		7274.95	-81.42
.113 W/E Sec'y	2493.09	2379.87	2526.94	2524.70	2575.75				-51.05		2575.19	50.49
.117 Comp.Oper.	7060.41	5251.96	6346.44	6257.10	6316.73				-59.63		6146.92	-110.18
.118 Meter Reading	8067.41	10537.57	5065.78	1446.24	986.82				459.42		1650.07	203.83
.124 Asst.Director	15457.17	12167.99	13031.64	12674.58	13502.57				-827.99		13514.70	840.12
						80748.3		0		9048.81		80604.98
G8110.												
.200 GIS Equipment	0.00			0.00					0.00		0.00	0.00
.201 DPW Equipment	0.00			0.00					0.00		0.00	0.00
.202 AED	0.00			0.00					0.00		0.00	0.00
.203 Radio Mun.Bld.	0.00			0.00					0.00		0.00	0.00
.203 Comp. Mike/1/2 Brad	0.00			0.00					0.00		0.00	0.00
.207 Billing Off.Equip				0.00	0				0.00		0.00	0.00
						0		0		0		0
DPW OFFICE												
G.8110.400.00												
.400 Off.Supp.	156.09	454.34	431.84	600.00	502.26				97.74		600.00	0.00
.405 Schooling	142.75	332.59	266.44	600.00	563.78				36.22		600.00	0.00
.413 Soft./Training	57.50	61.25	1866.25	1200.00	238.65				961.35		1200.00	0.00
.421 Telephone	203.59	108.74	196.62	300.00	221.07				78.93		300.00	0.00
.422 Cell Phone	161.81	161.84	192.99	1200.00	144.70				1055.30		600.00	-600.00
.460 Adm.Expenses	1259.73	1087.51	888.80	1500.00	1230.00				270.00		1200.00	-300.00
.499 DPW PoneSys.	183.93		110.41	300.00	305.36				-5.36		300.00	0.00
						3205.82		0.00		2494.18		4800.00
BILLING OFFICE												
G8110.												
.431 Software	160.00			300.00	0.00				300.00		300.00	0.00
.433 Postage	3503.28	3434.40	4134.00	3600.00	3476.97				123.03		3600.00	0.00
.435 Auditing	2228.04	3148.03	2725.78	3600.00	1932.98				1667.02		3000.00	-600.00
.436 Telephone	277.41	265.66	240.03	300.00	234.47				65.53		300.00	0.00
.437 Misc.Exp.		432.77	916.46	300.00	370.82				-70.82		600.00	300.00
.438 Office Sup.	335.36	163.27	220.32	300.00	66.26				233.74		300.00	0.00
.439 Comp.Maint.	4127.83	2916.38	4579.66	3600.00	1481.27				2118.73		4200.00	600.00
.440 Paper	118.11	473.94	635.87	300.00	345.98				-45.98		300.00	0.00
						7908.75		0.00		4391.25		12600.00
WWTP LABOR												
G8130.												
.110 Operations	137009.14	139726.78	146826.26	136978.73	139422.99				-2444.26		113917.31	-23061.42
.119 Overtime	250.68	1878.44	731.58	350.00	1251.96				-901.96		350.00	0.00
.121 Holiday O/T	1436.06	1080.21	463.76	1500.00	605.46				894.54		1500.00	0.00
.154 O/T Call Out	346.02	118.17	475.02	700.00	204.48				495.52		700.00	0.00
.130 T/L									0.00			0.00
						141484.89		0		-1956.16		116467.31
WWTP EQUIPMENT												
G8130.												

1415					Expended		Encumbered		Balance			
	J	K			L		M		N		O	P
Old	11/12	12/13	13/14	14/15	14/15 Y-T-D		14/15				15/16 Prop.	Difference
Account #	Expended	Expended	Expended	Budget	Expended		Encumbered		Balance		Budget	(J-N)
.200 Computer									0.00		2000.00	2000.00
.200 Resv. Plant Equip.	4560.39	13880.00		0.00					0.00		0.00	0.00
.207 Equip. (Pump, sludge conveyor, roof)	2889.98		15218.06	0.00					0.00			0.00
					0		0			0	2000	
WWTP UTILITIES												
G8130.												
.421 Telephone	800.84	638.34	667.14	1200.00	688.31				511.69		900.00	-300.00
.423 Bldg.Heat	11775.10	12866.68	13600.23	11500.00	12195.11				-695.11		11500.00	0.00
.424 Water	731.46	763.72	804.20	1200.00	1126.35				73.65		1200.00	0.00
.433 Plant Elec.	10766.91	11152.46	13641.65	12000.00	13084.83				-1084.83		12000.00	0.00
						27094.6		0		-1194.6		25600
WWTP CHEMICALS												
G.8130.400.00									0.00			
.483 Chemicals	30424.50	28308.00	27681.70	40000.00	30014.70				9985.30		42000.00	(10K leach 2000.00
.485 Sodium Bicar.									0.00			pre-treat) 0.00
.486 Polymers									0.00			0.00
.487 Chlorine									0.00			0.00
						30014.7		0		9985.3		42000
WWTP PERMITS												
G8130												
.430 Plant	7500.00	7698.75	7500.00	7800.00	7500.00				300.00		7800.00	0.00
.431 Lab	641.64	670.40	631.22	750.00	637.70				112.30		900.00	150.00
.432 Waste Hauler	496.17	207.12	450.00	600.00	200.00				400.00		600.00	0.00
						8337.7		0		812.3		9300
WWTP CONTRACTUAL												
G8130.												
.404 Off.Supp.	62.84	168.50	176.96	300.00	116.26				183.74		300.00	0.00
.419 Travel	2359.16	709.19	436.00	2400.00	977.00				1423.00		2400.00	0.00
.425 Misc.Exp.	1391.13	778.68	895.44	1200.00	1044.00				156.00		1200.00	0.00
.434 Mat'l/parts	2021.90	12883.13	11322.72	12000.00	8965.68				3034.32		12000.00	0.00
.435 Safety/PPE/Training	1472.09	1839.92	1384.50	1800.00	1863.32				-63.32		1800.00	0.00
.436 Liners	1295.59	1311.98	412.74	1500.00	1113.50				386.50		1200.00	-300.00
.437 PumpRebld.(to .434)	9070.74	1154.56	344.94	0.00					0.00		0.00	0.00
.438 Lab Equip.	4267.42	3118.37	2146.88	2400.00	2285.22				114.78		2400.00	0.00
.441 Comp.Equip	59.94	621.33		900.00	75.00				825.00		900.00	0.00
.443 Prev.Maint.	1004.50	805.62	721.38	1200.00	848.01				351.99		1200.00	0.00
.445 Other Equip.	309.54	3277.13	119.55	13500.00	3717.04				9782.96		13500.00	0.00
.446 Filter Press(to .434)	306.99								0.00			0.00
.447 Facility Maint.	7660.44	5458.4	6129.21	6000.00	3683.23				2316.77		6000.00	0.00
.449 Outside Lab	2692.98	3693.10	3644.92	15000.00	3179.09				11820.91		15000.00	(new spdes) 0.00
.451 Chem. Spill Prev.	1170.00	352.50		1500.00	64.93				1435.07		1200.00	-300.00
.453 Tipping Fee	28028.94	28946.06	20585.95	27000.00	19746.30				7253.70		27000.00	0.00
						47678.58		0		39021.42		86100
WWTP VEHICLE												
G5111												
9785.501 Backhoe Lease	4241.00	4241.00	4241.00	0.00					0.00			0.00
.203 Digester Cleaning												0.00
.202 Gen.Fuel Tank/Radio	9499.00	1701.92	49718.97	45000.00	25537.63				19462.37			-45000.00
.200 Vehicle Resv.-for dep		35681.00		25000.00	25000.00				0.00		0.00	-25000.00
.202 Equip.Resv.	1475.22								0.00		0.00	0.00
						50537.63		0		19462.37		0

1415						Expended		Encumbered	Balance			
	J	K			L		M	N		O	P
Old	11/12	12/13	13/14	14/15	14/15 Y-T-D		14/15			15/16 Prop.	Difference
Account #	Expended	Expended	Expended	Budget	Expended		Encumbered	Balance		Budget	(J-N)
G5111											
450 Misc.Exp.	40.37	13.75	122.98	300.00	91.82			208.18		300.00	0.00
461 Unleaded	3650.92	3075.31	2836.68	4200.00	2900.91			1299.09		3600.00	-600.00
462 Surcharge	228.38	247.32	201.42	300.00	279.51			20.49		300.00	0.00
463 Diesel	785.67	1904.02	348.63	1200.00	717.05			482.95		1200.00	0.00
465 Tires		59.00	1200.00	1200.00	0.00	Ins. Pmt		1200.00		900.00	-300.00
473 Veh/Equp.Maint.	1177.26	1981.64	274.47	2400.00	8271.63	1808.49		-5871.63		2400.00	0.00
476 Gen.Maint.Agr.	2708.97	25.99	570.56	2400.00	15.00			2385.00		2400.00	0.00
477 Off Road Repr.	633.78	486.63	57.00	600.00	553.15			46.85		600.00	0.00
478 CDL	84.99	95.50		0.00	65.62			-65.62		0.00	0.00
						12894.69	**0**		**-294.69**	**11700**	
Underground Facilitiies											
G8120											
121 O/T Emer.Maint	1577.81	1492.20	2175.53	1400.00	821.88			578.12		1400.00	0.00
123 O/T Pump Sta.	363.51	224.82	352.95	700.00				700.00		700.00	0.00
110 Routine Maint.	35603.28	43561.59	47748.62	49061.89	39714.23			9347.66		67659.54	18597.65
111 Repairs								0.00			0.00
112 I&I								0.00			0.00
						40536.11	**0**		**10625.78**	**69759.54**	
G8120											
202 Sewer Maint.			15.43	0.00				0.00		0.00	0.00
203 Safety Equip.	489.80	204.06						0.00			0.00
204 Computer Equip.								0.00			0.00
200 Saw/Met.Det.								0.00			0.00
						0	**0**		**0**	**0**	
G8120											
421 Phone	245.89	264.68	310.71	300.00	321.8			-21.80		300.00	0.00
429 Conrail	172.06	175.52	177.33	300.00	180.13			119.87		300.00	0.00
450 Misc.Exp.	1206.37	550.66	925.82	1500.00	1269.05			230.95		1800.00	300.00
452 N. Main PumpSta-EL	8747.58	717.88	799.07	1800.00	874.29			925.71		1200.00	-600.00
453 S.Main PumpSta -EL	3315.81	3101.01	3777.99	3600.00	4281.46			-681.46		3600.00	0.00
454 Chamberlain PS -EL	3132.61	3321.69	2704.80	3600.00	2881.13			718.87		3600.00	0.00
455 Manholes	1219.00	33.09	1032.98	1500.00	1172.91			327.09		1200.00	-300.00
456 Covers, etc.	89.48	193.24	140.00	600.00	0.00			600.00		600.00	0.00
457 Pipe/Fittings	31.88			600.00	0.00			600.00		600.00	0.00
458 SewerMach.Maint				0.00				0.00			0.00
459 Sewer Cam.								0.00			0.00
460 Repairs	40767.79	11692.35	19286.92	40000.00	19340.99	1778.50		20659.01		36000.00	-4000.00

1415					Expended		Encumbered		Balance			
	J	K			L		M		N		O	P
Old	11/12	12/13	13/14	14/15	14/15 Y-T-D		14/15				15/16 Prop.	Difference
Account #	Expended	Expended	Expended	Budget	Expended		Encumbered		Balance		Budget	(J-N)
.470 Propane - N.Main	952.14	272.12	300	900.00	103.48				796.52		600.00	-300.00
.463 N.Main Pump	2627.94	9.75	1079.30	3000.00	0.00				3000.00		1800.00	-1200.00
.464 S.Main Pump	210.00	636.92	1369.33	600.00	560.80				39.20		1800.00	1200.00
.465 Seneca Pump	20147.17	2648.68	1060.51	9000.00	0.00				9000.00		6000.00	-3000.00
.469 Gas - Chamberlain	314.97	284.22	293.90	600.00	250.19				349.81		600.00	0.00
						31236.23		0		36663.77		60000
DEBT SERVICES												
G9710.700	22800.00	14155.94	8100.00	6750.00	6750.00				0.00		5250.00	-1500.00
G9710.600	50000.00	51000.00	60000.00	75000.00	75000.00				0.00		75000.00	0.00
G9730.601									0.00			0.00
G9730.701									0.00			0.00
						81750		0		0		80250
EMPLOYEE BENEFITS												
G9010.800 Ret.	39494.26	38070.29	61026.94	56861.40	47569.34				9292.06		50091.80	-6769.60
G.9089.800 Acc.T									0.00			0.00
G9030.800 SS	18601.24	20846.72	21501.99	21372.41	19393.1				1979.31		20198.31	-1174.10
G9040.800 WC	12983.87	5664	5759	6000.00	6084				-84.00		6000.00	0.00
G9050.800 Unem									0.00			0.00
G9055.800 Dis.	209.5	188.71	180.43	300.00	174.88				125.12		300.00	0.00
G9060.800 Hosp	42152.69	48359.07	38106.42	50573.65	33508.41				17065.24		41601.33	-8972.32
G9070.800 PER									0.00			0.00
G9089.801 Cloth	1539.11	1866.89	1564.67	2000.00	1541.69				458.31		2000.00	0.00
						108271.42		0		28836.04		120191.44
INSURANCE												
G1910.												
.400 Plant F.I./Bldg.	12424.58	2387.00	15514.54	18000.00	12088.27				5911.73		15600.00	-2400.00
.401 Vehicle									0.00			0.00
.402 Contractor	14.00		14.00						0.00			0.00
.403 Insurance Appr.									0.00			0.00
						12088.27		0		5911.73		15600
LEGAL												
G1420.												
.100		2207.70	2207.40	2404.80	2265.77				139.03		2478.92	74.12
						2265.77		0		139.03		2478.92
ENGINEERING												
G1440												
.401 Other	2964.58	586.25	668.75	10000.00	15250.00				-5250.00		6000.00	-4000.00
.101 Leachate Study									0.00			0.00
.101 I&I Study									0.00			0.00
						15250		0		-5250		6000
G2122 - Refund	5.07								0.00			
						0		0	0.00	0		0
						704890.45		0	0.00	158696.53		745452.19	0.00
GRAND TOTAL	731847.23	692682.74	745221.99	859999.99	701303.46		0.00		158696.53		745452.19	-114547.80
	731847.23						% Remaining		21.68%			
							Actual decrease from F.Y. 14/15 is -114547.80			or	-13.32%	
							Revenues	$740,000		-74147.8		
							Expenditures	$745,452				
							DIFF	($5,452)				