PRIMARY EFFLUENT FILTRATION

FINAL REPORT 05 -08
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PRIMARY EFFLUENT FILTRATION

Final Report

Prepared for the

**New York State
Energy Research and
Development Authority**

Albany, NY
www.nyserda.org

Gregory Lampman, PE
Project Manager

and

Niagaga County Sewer District No.1

Niagara Falls, NY

Frank A. Nerone, PE
Project Manager

Prepared by

Wendel Duchscherer Architects & Engineers, PC

Amherst, NY
www.wd-ae.com

Jeffrey D. Telecky
Project Manager

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NOTICE

ABSTRACT

A demonstration project was performed at the Niagara County Sewer District No.1, evaluating the use of coarse, mono-media filtration for the treatment of primary and CSO/SSO type wastewater. A secondary objective of the project was to quantify the benefits of mono-media filtration compared to mixed-media filtration with regard to wet weather hydraulic capacity, solids removal efficiency, energy use and operational costs. An evaluation of coarse mono-media filtration versus standard mixed-media filtration was performed and a mono-media filtration system was installed. In a second phase of the project, additional piping was installed to allow the District to directly filter primary treated and CSO/SSO type wastewater. The demonstration project revealed several significant benefits of coarse, mono-media filtration, including the following:

- The hydraulic capabilities of the filters were increased with the capability to treat a peak hydraulic loading of 10 gpm/sf with mono-media filtration compared to 3.8 gpm/sf with mixed-media filtration.
- The mono-media filtration system was shown to save approximately 184,662 kWh per year based on an average flow of 6.8 MGD.
- The mono-media filtration system has reduced effluent TSS and BOD discharge levels by 55% and 21% respectively.
- The mono-media filtration system was shown to enhance the performance of the existing liquid chlorine disinfection system. The 7 and 30-day effluent fecal coliform levels have been reduced by 55% and 26%, respectively.
- The mono-media filtration system was also shown to increase wet weather treatment capacity while minimizing capital costs compared to the elimination of wet weather flow by rehab and repair measures in the collection system.
- Mono-media filtration was shown to be a viable treatment option for primary treated wastewater with a 75% TSS removal rate at a filtration rate of 4.13 gpm/sf.
- Mono-media filtration was shown to be a viable treatment option for SSO/CSO with a 77% TSS removal rate of 4.89 gpm/sf.

Keywords: Mono-media, deep bed filtration, sand filters, filter backwash, tertiary filtration, wet weather treatment

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SUMMARY

The Niagara County Sewer District No. 1 (NCSD No.1) operates an activated sludge treatment plant (with tertiary filtration facilities) that was designed for an average daily flow rate of 14 MGD. In 1998, the Niagara County Sewer District No. 1 decided to initiate an upgrade of its existing gravity sand filters. The District proceeded to replace its existing mixed-media sand filters with deep bed, mono-media sand filters. Under this demonstration project, co-founded by the New York State Energy Research and Development Authority (NYSERDA), the District proceeded to install bypass piping to allow for the filtration of primary and combined sewer overflow/sanitary sewer overflow (CSO/SSO) type wastewater during wet weather storm events.

Operational data collected since the startup of the new filter system has highlighted that the mono-media system provided longer filter run times, improved effort quality, reduced energy consumption, reduced backwash flow rates, and reduced bleach use for disinfection. It was therefore desired to quantify the performance of mono-media filtration versus mixed-media filtration during the demonstration project for the following items:

- Hydraulic capacities during wet weather events
- Energy use related to the filtration and backwash process
- Effluent quality and receiving body impact
- Performance of existing disinfection systems.

The following objectives were also evaluated for mono-media filtration:

- Show the opportunity to increase wet weather capacity while minimizing capital investment
- Show treatability of primary wastewater utilizing mono-media filtration
- Show treatability of CSO/SSO type wastewater utilizing mono-media filtration.

The demonstration project was a success, quantifying the increased hydraulic capacity and treatment performance of mono-media filtration as well as highlighting the potential for mono-media filtration to provide advanced treatment of CSO and SSO type wastewater. Table S-1, presented on the following page provides a summary of the results obtained during the demonstration project.

Table S-1 Summary of Results

Item	Mixed-Media	Mono-Media
Peak Hydraulic Loading	3.8 gpm/sf	10 gpm/sf
Backwash Energy Savings of Mono-Media vs Mixed-Media	-	142,548 kW-hrs per year
Energy Savings of Dry/Wet Weather Control System		42,114 kW-hrs per year
Effluent TSS	6.24 mg/L	2.81 mg/L
Chlorine for Disinfection	52,200 gal per year	43,475 gal per year
Effluent Fecal Coliform (7 Day Avg)	143 CFU / 100 ml	63 CFU / 100 ml
TSS Removal (Primary Wastewater)	-	75 Percent
TSS Removal (CSO/SSO Wastewater)	-	77 Percent
Total Operational & Energy Savings (Compared to Mixed-Media System)	-	$27,420 per year
Cost per lb TSS Removed	$0.358	$0.175

As highlighted in Table S-1, the mono-media filtration system outperformed traditional mixed-media filters related both to treatment performance and to operational costs. Mono-media filtration was also shown to remove 75 to 77% of total suspended solids (TSS) for primary treated or “CSO/SSO type wastewater” highlighting its promise as an advanced treatment technology.

The total operational cost savings of approximately $27,420 per year, results in a payback of approximately 13 years for the added cost of the mono-media conversion compared to replacement with mixed-media. The mono-media filtration system removed substantially more suspended solids than the previous mixed-media filtration system resulting in significantly lower cost per lb of TSS removed. The mono-media filtration system has been in operation for 6 years and removed approximately 96,310 lbs of TSS per year. Basing savings on both filter systems removing 96,310 lbs of TSS over one year, the mono-media filtration system would save approximately $43,460 resulting in a payback of 7.5 years.

The following conclusions are made based on the results of this demonstration project:

- Mono-media filtration is an excellent option for wastewater treatment plants that have capacity problems related to wet weather flows. The operational and energy savings when compared to traditional mixed-media filtration can help offset the capital cost of the upgrade.
- Mono-media filtration is a cost effective and energy-efficient process for treating CSO and SSO type wastewater.
- Mono-media filtration removes TSS at a substantially cheaper cost per lb. than mixed-media filtration and therefore should be considered for all new wastewater treatment plants as well as rehabilitating existing treatment plants.
- Mono-media filtration is an effective tool to help increase the efficiency of existing liquid bleach disinfection systems.

Section 1

INTRODUCTION

All wastewater treatment plants are challenged to meet capacity requirements related to infiltration and inflow events which cause degradation of effluent discharges to receiving streams, and limits plant capacities. Most sanitary sewer systems tributary to these areas have overflow points in the collection system that bypass sewage to adjacent water streams resulting in negative impacts on the environment. The United States Environmental Protection Agency (USEPA) has pending Sanitary Sewer Overflow (SSO) regulations to address these overflows on a national basis.

The Niagara County Sewer District No. 1 (NCSD No.1) operates an activated sludge treatment plant (Figure 1) with tertiary filtration facilities that were designed for an average daily flow rate of 14 MGD. The treatment plant was originally constructed in 1978 and is manned by 18 employees. The plant currently treats about 50% of its design flow on an annual average but experiences significant storm related peak flows up to approximately 32 MGD.

FIGURE 1 – Niagara County Sewer District No.1 Treatment Plant

The NCSD No.1 facility completed a tertiary filter upgrade utilizing mono-media sand and deep bed filtering technology that was recognized statewide with a design excellence award from the New York Association of Consulting Engineers, Inc. Operational data collected since the startup of the new filter system indicated that the mono-media system is capable of successfully filtering primary wastewater and wastewater similar to that discharged from sanitary sewer overflows. In addition, filter performance data has shown longer filter run times, improved effluent quality, reduced bleach use for disinfection, reduced energy consumption due to longer filter run times, and reduced backwash flow rates.

The outstanding performance of the upgraded filter system has led the NCSD No.1 to believe that additional opportunities exist for use of mono-media filters in the treatment of wastewater discharged during sanitary and combined sewer overflows. The NCSD No.1 decided to undertake a demonstration project with the New York State Energy Research and Development Authority to evaluate the use of mono-media filters for treating primary wastewater, sanitary sewer overflow (SSO) and combined sewer overflow (CSO) type wastewater. The objectives of this demonstration project are as follows:

Comparison of Mono-Media versus Mixed-Media Filtration System

- Quantify increased treatment capabilities within existing facilities
- Quantify energy savings related to filtration process
- Quantify improved effluent quality and receiving water body impact
- Quantify improvement of liquid bleach disinfection system performance
- Show opportunity to increase wet weather treatment capacity while minimizing capital investment.

Demonstration of Mono-Media Filtration for Treatment of Primary and SSO/CSO Type Wastewater

- Show treatability of primary wastewater utilizing mono-media filtration
- Show treatability of SSO/CSO type wastewater using mono-media filtration.

Successful completion of this project would prove to be significant to New York State. A June 1992 NYSDEC publication identifies 152 wastewater treatment plants in New York State with tertiary filters. Most were built in the 1970's with USEPA construction grant funds and they are at, or beyond, their projected service life. All are subject to wet weather flow events from infiltration/inflow with the related operational and treatability problems. Pending SSO regulation will result in large future capital outlays to either treat at SSO points, build interceptors to convey SSO flows to the wastewater treatment plants, and/or increase WWTP capacities. This demonstration project provides an opportunity for a full-scale pilot study to address all of these issues, minimize capital investment, save energy, and improve the environment in the process.

Section 2

MIXED-MEDIA VERSUS MONO-MEDIA FILTRATION

MIXED-MEDIA FILTER SYSTEM

Like most wastewater treatment plants constructed in the 1970s, the NCSD No.1 plant was equipped with mixed-media sand filters. These filters were shown to function adequately during average day loading and flow conditions but failed to provide the level of treatment needed during wet weather, high-flow and high-loading events.

The filtration process at the District treatment plant consisted of three identical mixed-media, gravity sand filters. The three filters are further broken down into two individual cells each for a total of six filter cells. Each filter cell is 31’ 9” by 10’ 9” for a total filtration area of 2,048 square feet.

The filters boxes were constructed of concrete and housed an underdrain system made of dual lateral, clay tile blocks and three levels of various sized media. This media consisted of:

- a bottom layer of 12-inches of silica gravel for support
- an intermediate layer of 24-inches of silica sand
- a top layer of 12-inches of anthracite coal.

The top layer of anthracite coal was larger than the intermediate layer of silica sand. In theory, the anthracite coal would remove the largest particles in the filter influent while the silica sand would remove the smaller particles that passed through the top layer. In practice, the top layer of anthracite would become blinded during a high-flow event and the filters would need to be taken out of service for cleaning by running a backwash cycle.

FIGURE 2 – Previous Filter Media

FIGURE 3 – Clay Underdrain Tile

The previous filter system was equipped with a water only backwash system with surface wash facilities which used large volumes of water during the backwash cycle and provided limited agitation to the upper media layers during this cleaning process. The large volumes of water resulted in the backwash holding tanks becoming completely full during a high flow event within an hour. Therefore, the filters had to be taken off-line and bypassed.

ANALYSIS OF ALTERNATIVES

The problem that needed to be addressed was how to equip the NCSD No.1 treatment plant to treat high flow, high-loading conditions in an economical manner. The following three alternatives were evaluated:

- Option 1 - Rehabilitate the existing filters in kind with minor modifications to media size and depth while adding air backwash capabilities
- Option 2 - Construct additional filter beds to provide more treatment capacity
- Option 3 - Modify the existing filters and utilize deep bed, coarse mono-media with simultaneous air and water backwash facilities.

Option 1 – Mixed-Media with Air/Water Backwash

Rehabilitating the existing filters with minor modifications to the media while adding air and water backwash facilities was not selected. This rehabilitation option would have had the following advantages and disadvantages:

Advantages

- Reduced water required for backwash
- Improved cleaning of filter beds

Disadvantages

- Increased potential for loss of media
- No improvement on filter run times
- No improvement of peak loading capacity
- Incorporation of air supply blowers for air backwash cycle.

Option 2 – Additional Mixed-Media Filters with Water Backwash

Construction of additional filters to provide more treatment capacity was not selected. This option had the following advantages and disadvantages:

Advantages

- Improved total flow and treatment capacity due to additional filter surface area

- Elimination of need for air supply blowers (no air and water backwash cycle)

Disadvantages

- Construction of new building required (high capital cost)
- No improvement on filter run times
- Increased total water required for backwash cycles.

Option 3 – Deep Bed Mono-Media with Air/Water Backwash

Modification of the existing filters to deep bed mono-media was selected as the most cost-effective solution to the District's wet weather treatment problems. This option has the following advantages and disadvantages:

Advantages

- Higher peak loading capacity
- Reuse of existing filter footprints
- Reduced water required for backwash
- Elimination of potential for media loss during backwash
- Longer filter run times
- Improved total flow and treatment capacity
- Reduced chlorine for effluent disinfection

Disadvantages

- Incorporation of air supply blowers for air backwash cycle
- Limited experience in New York State.

Option Three was selected as the most cost effective solution. It provided the advantages of higher filtering capacities with longer filter run times while utilizing the same filter footprints. The reduced use of chlorine for disinfection made up for the additional electrical costs of the air supply blowers. The numerous installations of deep bed, coarse mono-media filters in other areas of the Country provided adequate justification for this treatment system despite the limited operating record in New York State.

ADVANTAGES OF MONO-MEDIA SYSTEM

The key to the design of the deep bed, mono-media filtration system was the large diameter media. Table 1 presented below provides a comparison of the characteristics of the mono-media sand versus the anthracite and silica sand in the previous mixed-media system. The large diameter media allows for deeper penetration of solids into the filter bed providing for utilization of the whole filter volume instead of just the top layers. The deeper bed and the spherocity of media provide more volume for storage of trapped solids, allowing for higher filtration rates and longer run times. Figure 4 highlights the size difference between the large diameter sand and the anthracite from the previous filter system.

Table 1 Comparison of Filter Media

CHARACTERISTIC	MONO-MEDIA	ANTHRACITE	SILICA SAND
Filtration System	New	Previous	Previous
Effective Size	2.5 mm	1.0 mm	0.5mm
Uniformity Coefficient	< 1.35	< 1.8	< 1.8
Specific Gravity	2.65	1.55	2.65
Spherocity	0.9	0.5	0.7
MOH Hardness	6	2.7	6

FIGURE 4 – Comparison of Mono-Media vs Anthracite

The deep bed, mono-media system that was selected for the NCSD No.1 plant included plastic underdrain that interlock eliminating the need for grouting blocks together. The plastic underdrain block also does not contain orifices that plug over time. The filter media consisted of 54 inches of 2.5-mm silica sand and support gravel. The use of only one filter media eliminates the potential of media layers intermixing as was experienced with the previous filter system.

The spherocity of the coarse, mono-media sand allows the filter to be cleaned at lower water and air backwash rates because the round media gyrates and spins against one another causing scraping and scouring action that removes accumulated solids out of the filter bed. The lower water and air backwash rates result in energy savings due to decreased pumping requirements. The coarseness and high density of the mono-media sand makes fluidization of the filter bed impossible at feasible backwash rates. Despite this lack of fluidization during the backwash cycle, the spherocity of the media and the scouring action achieved during the simultaneous air-water backwash provide thorough cleaning without fluidization of the filter bed. This scouring and scraping action during backwash does lead to higher levels of erosion and decay of soft filter media. This made the selection of a hard, durable filter media an important design characteristic.

There are several advantages to not fluidizing the filter bed during the backwash cycle. First, no media is washed out of the filters during a backwash as was experienced with mixed-media filtration system. Second, without fluidization of the filter bed, no intermixing of the media and gravel layers take place. The lack of fluidization also allows a deeper layer of media to be utilized because the freeboard between the top of the media and the wash water troughs can be minimized.

The layer of anthracite in the mixed-media filters eroded away over a period of time. The fine particles were either washed away or made their way into the underdrain laterals. Over the course of several years, the fine anthracite particles started to plug the laterals in portions of the underdrain. These plugged areas would cause localized areas of high velocity currents during a backwash leading to increased intermixing and upset of filter media layers. These problems led to the selection of silica sand, with a MOH hardness of six, which has virtually eliminated the erosion of the media.

Another shortcoming of the previous filtration system that was addressed during the course of the design was that it was no longer required to only backwash one filter cell at a time. With the previous system, the backwash facilities were only sized to backwash one filter cell at a time causing one filter, made up of two cells, to be out of service for a longer time period than would otherwise be necessary. This situation provided additional stress on the two on-line filters during a backwash. The goal to backwash two filter cells at one time was an additional reason that a simultaneous air-water backwash system was desirable. The simultaneous air-water backwash system cleans the filter media with water rates in the neighborhood of 6 gpm/sf instead of 20 gpm/sf as was required with the previous filter system.

Due to the aforementioned limitations of the previous backwash system and the concerns about the underdrain age, a complete retrofit, including replacement of the underdrain and incorporation of an air-water backwash system was selected. HDPE underdrain block replaced the clay tile underdrain. This HDPE jacketed underdrain is specifically designed for wastewater, unlike the previous clay tile underdrain that is utilized in both water and wastewater applications. The underdrain selected is shaped to ensure uniform distribution of air during a backwash and does not contain any orifices to plug with solids or biological growth. The underdrain also interlocks together, eliminating the need for grouting between the individual blocks and associated future maintenance issues.

The existing relay/drum timer filter control system was also upgraded as part of the project to a PC/PLC driven automated control system. The new automated control system provides increased flexibility while requiring less operator attention. The filter control system allows each filter to be controlled by level or flow of water through the filters by modulating the effluent valves. The control system also automatically limits the number of filter feed pumps that are running during a backwash to keep from overwhelming the remaining online filters.

Backwashing is initiated either automatically, through headloss, time of day, and effluent valve position, or manually by operator initiation. The most energy efficient backwashing event happens automatically and is initiated by effluent valve position. This scenario maximizes the filtering capability of the equipment. The control system and piping layout allow either one or two filter cells to be backwashed simultaneously. Backwashing of one filter cell instead of two is not the standard operating procedure, but is beneficial if it is desired to increase the water backwash rate on filters that are extremely dirty. Backwashing only one filter cell at a time also allows the filters to be backwashed if one air supply blower is out of service. Two blowers are needed if both cells are backwashed simultaneously.

DRY WEATHER / WET WEATHER CONTROL SCHEME

In order to reduce energy usage from pumping during low-flow conditions, a two-mode operational control scheme was developed. The filter control system was designed to operate in either dry weather or wet weather mode. In the dry weather mode, the operating levels of the filters are reduced and the filter feed wet well is run at a higher level. These two factors decrease the amount of static lift that the filter feed pumps provide, thereby reducing pumping energy costs. In wet weather mode, one of the keys to the operation of the filtration system is that all water receives tertiary treatment. In order to ensure that all water receives tertiary treatment, the filters are operated at a higher level while the filter-feed wet-well level is dropped to a lower elevation reducing the threat that bypassing of the filters will occur. The filter-feed wet-well is operated at a lower water level because it overflows to the filter effluent channel at high levels.

PIPING UPGRADES

A second phase of construction was undertaken, as part of this NYSERDA Demonstration Project, that allowed the District to isolate primary treated effluent, which is similar to CSO/SSO type wastewater, directly to the filters while bypassing the filters with the biologically treated effluent. The two treatment trains were then blended and all received disinfection with liquid chlorine before discharge to the Niagara River.

The piping upgrades required to allow the District to isolate the primary treated effluent included construction of approximately 360 linear feet of 36 -inch cement lined ductile iron pipe, two 36” by 36” slide gates, and modifications to the existing high flow channels and filter-feed wet-wells.

Section 3

PROJECT CONSTRUCTION

PHASE 1 – FILTER UPGRADE

The first construction phase of the project started in June of 1998. Wendel Duchscherer performed the design and prepared contract documents including plans and specifications to convert the existing mixed-media filters to deep bed, coarse mono media filters at the Niagara County Sewer District No.1 treatment plant. The project consisted of General Construction and Electrical Construction contracts. The contracts consisted of the following:

1. General Construction Contract
    - Demolition of the existing filter underdrain system and the existing surface wash system
    - Extension of six existing filter gullet walls and raise twenty-four existing filter weir troughs
    - Sandblast and paint filter internals for six filter cells
    - Furnish and install 18" of silica sand support gravel for six filter cells
    - Furnish and install 54" of silica sand for six filter cells
    - Furnish and install air/water underdrain block for six filter cells
    - Construct concrete structural sump in six filter cells
    - Furnish and install one filter air backwash system
    - Furnish and install two 60 horsepower air supply blowers
    - Furnish and install stainless steel air supply piping connecting the blowers to the air backwash distribution system
    - Furnish and install six air valves and electric actuators
    - Furnish and install one PLC based filter control system, three differential pressure transmitters and two ultrasonic level transmitters.

2. Electrical Construction Contract
    - Demolition of three local control panels and one main control panel
    - Provide three new local control panels and one main control panel
    - Provide wiring to all electrical devices.

The contract for the General Construction work was awarded to Kohl Construction, Inc. of Alden, New York for $565,000. The coarse mono-media filtration system was supplied by Severn Trent (Tetra Technologies) as a sub-contractor to Kohl Construction, Inc. The contract for Electrical Construction was awarded to O'Connell Electric, Inc. of Lancaster, New York for $30,900.

Construction of the project commenced in May of 1999 and was completed in October of 1999.

Phase 2

The second phase of the project started in June of 2002 with Wendel Duchscherer providing design services including preparation of contract documents, which consisted of drawings and specifications. The project consisted of a General Construction Contract including the following components:

- Provide and install 360 linear feet of 36" cement lined ductile iron gravity sewer piping and five manholes
- Provide and install two new slide gates with electric actuators
- Perform core drilling in the existing concrete walls to allow for connection of piping into the existing filter feed wet well and the high flow routing chamber.

The contract for the General Construction work was awarded to Yarussi Construction, Inc of Niagara Falls, NY for approximately $140,000. Construction of the project commenced in May of 2003 and was completed in July of 2004.

Section 4

ANALYSIS OF PROJECT RESULTS

The results of the demonstration project and the evaluation of coarse mono-media filtration for treatment of primary treated effluent and SSO/CSO type wastewater at the Niagara County Sewer District No. 1 Water Pollution Control Facility are presented in this section. This includes a comparison of the effectiveness of the mixed-media filters versus the mono-media filters for the following parameters:

<u>Comparison of Mono-Media versus Mixed-Media Filtration System</u>

- Quantify increased treatment capabilities within existing facilities
- Quantify energy savings related to filtration process
- Quantify improved effluent quality and receiving water body impact
- Quantify improvement of liquid bleach disinfection system performance
- Show opportunity to increase wet weather treatment capacity while minimizing capital investment.

<u>Demonstration of Mono-Media Filtration for Treatment of Primary and SSO/CSO Type Wastewater</u>

- Show treatability of primary wastewater utilizing mono-media filtration
- Show treatability of SSO/CSO type wastewater using mono-media filtration.

FILTER COMPARISON

The performance of the mono-media filtration system has been superior to the mixed-media filtration system. The District has experienced increased filtering capacity without sacrificing filter performance. The tertiary filters now treat approximately 2.5 times more water between backwashes while being able to handle a peak hydraulic loading rate that is 2.6 times higher than the previous filter system. As a result of this project, the plant now performs half as many backwashes while filtering more water. Filter bypassing has been virtually eliminated. Table 2 below provides filtering rates and run times for dry weather, wet weather and peak flow, hydraulic loading conditions.

Table 2 Filter Hydraulic Loading Rates and Run Times

Flow Scenario	**Mixed-Media Filters**		**Mono-Media Filters**	
	Flow Rate (gpm/sq. ft.)	Run Time (hours)	Flow Rate (gpm/sq. ft.)	Run Time (hours)
Dry Weather	1.7	20	2.3	38
Wet Weather	2.8	10	5.3	24
Peak Flow	3.8	2	10	8

The District has also experienced the added benefit of increased levels of treatment since startup of the new filter system. Table 3 highlights the enhanced treatment performance of the mono-media filter system. Effluent total suspended solids concentrations have been reduced by 44%, effluent phosphorus concentrations have reduced by 40% and fecal coliform levels in the effluent have been reduced 55% and 26% respectively for 7 day and 30 day averages. The turbidity of the effluent discharged from the treatment plant was enhanced with the upgrade to the mono-media filtration system. The effluent turbidity after the filter improvements was typically 2 Nephelometric Turbidity Units (NTUs) with minimum values of 0.3 NTUs.

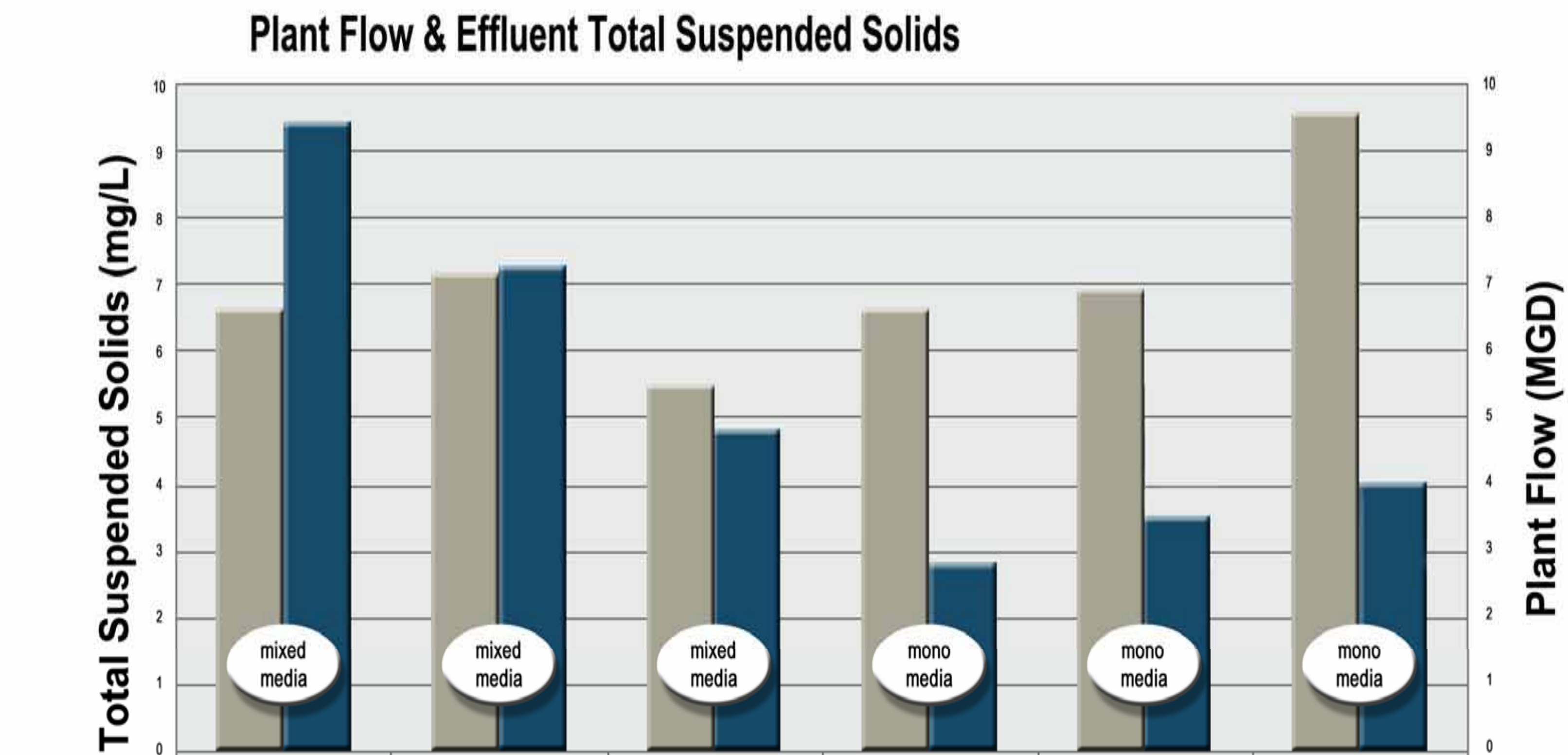
In addition to the enhanced performance of the filtration process, the efficiency of the plant's existing disinfection system has increased. The District uses liquid bleach for disinfection, which loses effectiveness when high solids levels are present because the bleach is soaked up by the solids. With lower levels of solids, a larger percentage of the individual bacteria and bacteria in small clumps are destroyed. The reduced suspended solids levels in the filter effluent have resulted in the District utilizing less bleach for disinfection per million gallon of water treated.

Table 3 Filter Effluent Comparison

Effluent Characteristics	***Mono-Media***	***Mixed-Media***
Total Suspended Solids	3.49 mg/L	6.24 mg/L
Total Phosphorous	0.21 mg/L	0.35 mg/L
Fecal Coliform (7 day avg)	63 CFU/100 ml	143 CFU/100 ml
Liquid Bleach Used	3623 gallons/month	4350 gallons/month

The average influent total suspended solids (TSS) loading to the mono-media filters has been 18.2 mg/L with a maximum loading of 44.8 mg/L. With an average filter effluent total suspended solids concentration of 3.49 mg/L the mono-media filters are removing approximately 80% of solids entering the filters. The District is removing greater than 95% of the plant influent total suspended solids. Figure 5 graphically highlights the improved total suspended solids removal performance of the deep bed, mono-media filtration system.

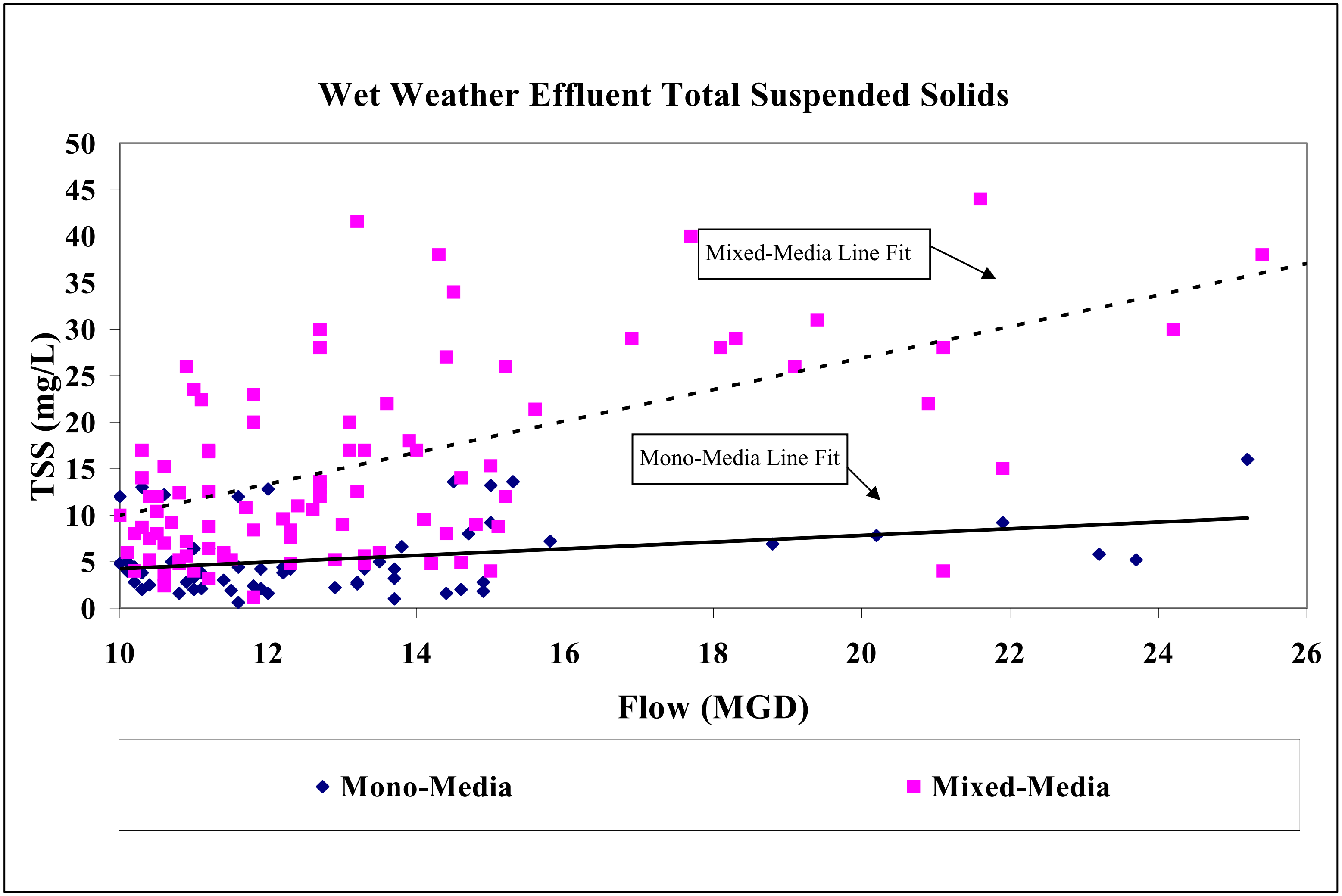
FIGURE 5 Comparison of Effluent Total Suspended Solids



	1994	1995-96	1997-98	1999-00	2001-02	2003-04
Plant Flow	6.61	7.31	5.57	6.61	6.96	9.58
TSS	9.52	7.36	4.76	2.81	3.64	4.02

As one of the primary goals of the project was to enhance the performance of the tertiary filters during high flow events, it was necessary to compare the performance of the deep bed, mono-media filtration system against the previous mixed-media filtration system for flows greater than 10 MGD. The comparison data set included 146 days with flow greater than 10 MGD for the mono-media filtration system and 101 days with flows greater than 10 MGD for the mixed-media filtration system. The effluent quality produced by the mono-media filtration system was substantially better than the effluent produced by the mixed-media system during high flow wet weather conditions. The average flow and effluent TSS concentration for the mono-media filtration system was 13.27 MGD and 5.87 mg/L, respectively, while the maximum total suspended solids concentration was 16 mg/l. The average flow and effluent TSS concentration for the mixed-media filtration system was 13.84 MGD and 16.45 mg/L, respectively, while the maximum total suspended solids concentration was 65 mg/L. Figure 6 entitled "Wet Weather Effluent Total Suspended Solids", presented on the following page, plots effluent total suspended solids concentrations versus flow for the mono-media and mixed-media filtration systems during wet weather flow conditions.

Figure 6 Effluent TSS During Wet Weather Events



CSO/SSO RESULTS

As part of the demonstration project the District installed high flow piping and an inline filter influent sampler that allowed primary and SSO/CSO type wastewater to be sent to the filters directly and the filter influent to be sampled for TSS levels. These improvements allowed the District to evaluate the mono-media filters for their ability to treat primary wastewater and SSO/CSO type wastewater. The influent to the District treatment plant during a wet weather event is similar to an SSO/CSO type wastewater. The 2004 EPA Report to Congress presents sampling data which reports the median municipal Wet Weather SSO TSS concentration at 91 mg/L and the median municipal CSO TSS concentration at 127 mg/L. The wastewater strength is diluted by storm water that makes it way into the sewer system through inflow and infiltration.

During the performance of this demonstration project, a high flow event was considered to be a sampled day when the average daily flow for the NCSD No. 1 WPCC was above 10.0 MGD. There were 78 high flow events evaluated during the six-month demonstration project from January through June of 2004. For the purpose of this demonstration project, filter influent for days when flow was above 10.0 MGD and the filter influent TSS concentration was above 30 mg/L most closely resembled CSO/SSO TSS values and was considered to be "CSO/SSO type wastewater." Filter influent for days when flow was above 10 MGD and the influent TSS concentration was below 30 mg/L was considered to be primary type wastewater.

Table 4 NCSD No.1 Demonstration Project Results

Wastewater Type	Influent TSS (mg / L)	Effluent TSS (mg / L)	Percent TSS Removal
"CSO/SSO"	**41.8**	**9.4**	**77 %**
Primary	**20.0**	**4.9**	**75 %**
Dry Weather	**17.6**	**3.3**	**81%**

As shown in Table 4, the mono-media filters are effective filtering both primary and CSO/SSO type wastewater. The influent to the NCSD No.1 WPCC during wet weather events is similar to SSO type wastewater. Based on TSS removal levels experienced by the District, an effluent TSS concentration of 20.9 mg/L is projected when utilizing mono-media filtration on SSO type wastewater with a TSS concentration of 91.0 mg/L. These results show that deep bed mono-media filters are an effective technique for the treatment of SSO and CSO type wastewater whether used in combination with primary treatment or as a standalone process.

Additional sampling on the removal of Phosphorus was performed during the demonstration project. Samples were collected on eight days with plant influent Phosphorus averaging 9.17 mg/L, filter influent Phosphorus averaging 0.43 mg/L and effluent Phosphorus averaging 0.26 mg/L. The data collected is presented in the appendices of this report.

Section 5

ENERGY, ECONOMIC AND ENVIRONMENTAL BENEFITS

The demonstration project highlighted that the NCSD No. 1 has experienced significant energy and economics savings and environmental benefits through the installation of deep-bed, mono-media filters. The energy savings experienced have been from the reduction of filter backwashes, which has resulted in a reduction of backwash water pumping, a decrease in the operation of wash water pumps, and a reduction of the volume of wash water recycled to the headwork of the treatment plant. Additional energy savings have also been seen due to the use of the dry weather/wet weather operating scheme that reduces pumping heads.

ENERGY SAVINGS

The mono-media filtration system has been shown to reduce the amount of energy used for cleaning of the filters during backwash. The reduced energy savings are due to the following changes in the operation of the backwash operation:

- Decrease in the duration of a backwash cycle reducing water use
- Decrease in the frequency of filter backwash
- Decrease in the rate of water per square foot for a filter backwash
- Decrease in the volume of water recycled to the front end of the plant
- Decrease in energy use due to the dry weather / wet weather control system
- Energy reduction during high flow events due to the use of the dual treatment trains.

Table 5 below compares the energy usage related to filter backwash on an annual basis of the previous mixed-media filtration system versus a deep-bed, mono-media filtration system. The additional solids storage capacity of the deep-bed, mono-media filters has resulted in a 75% reduction in the number of backwashes performed per year. This reduction in the number of backwash events, along with the 70% reduction in the volume of water used per filter backwash, has resulted in a decreased energy usage of approximately 142,548 kW-hrs per year. This energy savings is due to the reduction in pumping of backwash water and recycling of wash water to the front of the treatment plant. Due to typical operation during high flow events, no demand reduction is expected.

Table 5 Filter Backwash Energy Usage

Filter System	Backwashes Per Year	Backwash Step	kWhrs per Backwash	Annual Energy Use (kWhrs per year)
Mixed-Media	2190	Water Backwash*	66.7	146,073
		Water Pumping	36.3	79,497
Deep-Bed Mono-Media	548	Water Backwash*	10.7	58,636
		Air Scour Cleaning	23.5	12,878
		Water Pumping	21.0	11,508
Total Yearly Savings				142,548

* These water backwash values are based on the NCSD No.1 filling their elevated storage tank by pumping.

The use of a dry weather/wet weather operating control mode has allowed the District to achieve further energy savings. By operating with lower operating levels in the filters and higher operating water levels in the filter feed wet well, the District reduces the head that the filter feed pumps must overcome by approximately 10 feet. Over the course of one year, assuming that the district is in dry weather mode approximately 50% of the time, 42,114 kW-hrs are saved.

Table 6 Total Annual Energy Savings

Item	Cost Savings
Filter Backwash Energy Savings	$14,250
Dry Weather/Wet Weather Operating Scheme	$4,420
Total Savings	**$18,670**

CHLORINE REDUCTION FOR DISINFECTION

The Sewer District utilizes liquid bleach for disinfection, which loses effectiveness when elevated suspended solids levels are present because the liquid bleach is soaked up by the clumps of solids and does not reach the bacteria organisms. With lower solids levels, a larger percentage of the individual bacteria and bacteria in small clumps are destroyed. The decreased levels of suspended solids in the filter effluent has resulted in the Sewer District utilizing less bleach for disinfection per million gallon of water treated.

The District has experienced a 17% reduction in the use of liquid bleach due to the enhanced removal of effluent suspended solids, which results in an annual savings of approximately $8,750.

ENVIRONMENTAL BENEFITS

Numerous environmental benefits were demonstrated during the project. They included improving the effluent quality to the Niagara River through reduced effluent TSS, effluent Phosphorous and effluent Fecal Coliform. The reduction of the above mentioned parameters is as follows:

- Effluent Total Suspended Solids concentrations were reduced by 55% which results in the elimination of the discharge of approximately 45 tons of solids to the Niagara River over the course of one year.
- Effluent Phosphorous concentrations were reduced by 40% which results in the elimination of the discharge of 2,690 pounds of phosphorous to the Niagara River over the course of one year.
- Effluent Fecal Coliform concentrations were reduced by 55% which results in a substantial reduction in the Colony Forming Units of Fecal Coliform discharged to the Niagara River. This reduction helps to make the river safer for fishing, boating, water skiing and other forms of water surface recreation.
- Chlorine utilized for disinfection was reduced 17%, which will help reduce the formation of chlorine disinfection by-products in the wastewater effluent. The reduction of chlorine disinfection by-products will help the impact to Niagara River aquatic population.

ECONOMIC BENEFITS

Several parameters were selected at the onset of the project for verification of the cost effectiveness of deep-bed, coarse mono-media filtration. These parameters included the following:

- Treatment performance – required filter square footage versus loading rate. As shown in Table 2, the mono-media filters can treat a peak hydraulic loading of 10 gpm/sf while the mixed-media filters were shown to only treat a peak hydraulic loading of 3.8 gpm/sf. Based on this flow to area relationship, approximately 2.5 square feet of mixed-media filter area is needed for every 1 square foot of mono-media filter area.
- Disinfection system efficiency – comparison of chlorine usage and cost. The mono-media filters were shown to utilize 17% less chlorine for disinfection resulting in annual savings of $8,750.
- Treatment cost versus inflow and infiltration elimination in collection system. The concerns that have been expressed by the Environmental Protection Agency and other regulatory agencies in the proposed SSO regulations leads one to ponder the cost effectiveness of sewer system repair work to eliminate inflow and infiltration versus the cost of treatment. As part of the demonstration project, the cost of treatment versus removal was evaluated based on the specific conditions experienced by the NCSD No. 1.

In order to provide a thorough and realistic economic evaluation comparing the costs of treating Inflow/Infiltration (I/I) versus locating and eliminating I/I, the Hamlet of Bergholtz, a small sub-area of the NCSD No.1 collection system, was selected for evaluation. Bergholtz was selected because it is a known problem area, with previously measured I/I rates, and a small enough system in size to allow for a reasonable projection of rehabilitation costs.

An evaluation of the NCSD's cost of treatment for a peak day flow was performed. The additional incremental cost of treating a peak flow of 26 MGD was calculated. The following items were used as the basis of the District's increased treatment costs on a peak flow day:

- Increased pumping costs at the remote stations
- Increased pumping costs at the WPCC influent station
- Increased aeration (air supply blower) costs of the activated sludge system
- Increased filter feed pumping costs
- Increased backwash air scour blower costs
- Increased backwash holding tank pumping
- Increased disinfection costs.

The analysis showed that the peak flow event resulted in an additional cost of approximately $2000 per day for a flow of 26 MGD versus an average-flow of approximately 6.6 MGD. (See Appendix A for peak flow versus average day treatment costs). In order to compare the cost of treating the additional flow versus eliminating it in the distribution system, two I/I control measures were evaluated based on the financial impact to the district. The scenarios were evaluated as follows:

- Utilize the WPCC's existing capacity to treat all incoming flows
- Perform infrastructure and rehabilitation work in the collection system to attempt to eliminate I/I.

An analysis was performed on the Hamlet of Bergholtz sub-area because flow rates and repair costs were readily available. The following assumptions were made:

- The calculation to determine the total I/I for Bergholtz for one year was based on the peak I/I of 7500 gpd/in.mi., or 0.345 MGD, being experienced 365 days a year to determine the treatment cost of the additional flow
- A $650,000 capital cost was identified for repair costs (See capital cost estimate in appendices)
- The reduction of flow by I/I capital work was based on a 50% effectiveness, meaning a removal of 0.173 MGD and treatment of the remaining 0.173 MGD

The results are of the evaluation are summarized below in Table 7.

Table 7 Inflow/Infiltration Management Options

Scenario	Flow Treated (MGD)	Treatment Cost	Capital Improvement Costs	Total Annual Cost
Utilize Existing Plant Capacity	0.345	$12,595 per year	$0 per year	$12,595
Perform Infrastructure Work	0.173	$6,300 per year	$65,000 per year*	$71,300

*The capital improvements costs were based on the District bonding the $650,000 project over 20 years with a 6% annual interest rate with $65,000 being the first year repayment amount.

Through utilization of the treatment plant's existing capacity, greatly increased by recent capital projects at the plant, the District can treat all additional wet weather flow at a cost of approximately $100/MGD. The $100/MGD was calculated based on the difference in treatment costs for an average day versus a peak day loading condition and is based on the assumption that the fixed costs of the District remain constant while the cost to dewater sludge also remains constant. Utilizing the Bergholtz area as an example, the District can treat all additional flow for $12,595 per year instead of the $71,300 per year cost to attempt to eliminate the I/I. Additional information on the calculations utilized during the evaluation can be found in Appendix B.

TSS REMOVAL COSTS

The mono-media filtration system was also shown to remove TSS at half the cost per pound than the mixed-media filtration system. A summary of the removal cost is presented in Table 8 below.

Table 8 Cost Per Pound of TSS Removed

Filter System	Backwash Energy Costs per Year	Disinfection Costs Per Year	Daily Cost / lb TSS Removed
Mixed-Media	$22,550	$52,220	$0.358
Deep-Bed Mono-Media	$8,300	$43,470	$0.173
Total Savings	**$14,250**	**$8,750**	**$0.183**

Section 6

PROJECTED RESULTS VERSUS ACTUAL RESULTS

In the proposal submitted for this project, several performance goals were provided based on projected performance of the mono-media filtration system. Table 9 below provides a summary of the projected results versus the actual results obtained from the demonstration project.

Table 9 Projected versus Actual Results

Item	Projected Result	Actual Result
Reduced Water per Backwash	40%	70%
Backwashes per Year	1095	548
Reduction in Disinfection Bleach	20%	17%
Number of High Flow Events (Flow Greater than 10 MGD)	10	78

As highlighted in Table 9, the mono-media filtration system reduced both the number of backwashes per year and the water per backwash significantly more than the projected values. The reduction of bleach utilized for disinfection was slightly less than projected. The amount of bleach added to the effluent has both a manual and an automatic adjustment component. The component of the bleach setpoint that is manually adjusted can effect the amount of bleach added and appears to be the reason the bleach reduction was slightly less than projected.

Other project goals were stated in the proposal but did not include a projected performance level. A summary of the results of these project goals were as follows:

- The hydraulic capabilities of the existing filters were increased with the capability to treat peak hydraulic loadings of 10 gpm/sf versus 3.8 gpm/sf with the previous mixed-media filtration system.
- The mono-media filtration system was shown to save approximately 184,662 kW-hrs per year compared to the mixed-media filtration system.
- Effluent TSS and BOD from the plant were reduced 44% and 21% respectively.
- The mono-media filtration system was shown to enhance the performance of the existing disinfection system. The 7 and 30-day effluent fecal coliform levels were reduced 55% and 26% respectively.
- The mono-media filtration system was also shown to increase wet weather treatment capacity while minimizing capital costs instead of the elimination of wet weather flow by rehab and repair measures in the collection system.

- Mono-media filtration was shown to be a viable treatment option for primary treated wastewater with a 75% TSS removal rate.
- Mono-media filtration was shown to be a viable treatment option for SSO/CSO with a 77% TSS removal rate.

Section 7

DEMONSTRATION PROJECT SUMMARY AND CONCLUSIONS

The demonstration project was a success, quantifying the increased hydraulic capacity and treatment performance of mono-media filtration, as well as highlighting the potential for mono-media filtration to provide advanced treatment of CSO and SSO type wastewater. Table 10 provides a summary of results obtained during the demonstration project.

Table 10 Summary of Results

Item	Mixed-media	Mono-media
Peak Hydraulic Loading	3.8 gpm/sf	10 gpm/sf
Energy Savings	-	142,548 kW-hrs per year
Effluent TSS	6.24 mg/L	2.81 mg/L
Chlorine for Disinfection	52,200 gal per year	43,475 gal per year
Effluent Fecal Coliform (7 Day Avg)	143 CFU / 100 ml	63 CFU / 100 ml
TSS Removal (Primary Wastewater)	-	75 Percent
TSS Removal (CSO/SSO Wastewater)	-	77 Percent
Total Operational & Energy Savings	-	$23,000 per year
Operating Cost per lb TSS Removed*	$124.63	$51.78

* The cost per lb. of TSS removed was based on the energy savings due to reduced backwash requirements and the operation of the dry/wet weather control scheme. Other factors in the treatment process were assumed to remain the same.

As highlighted in Table 10, the mono-media filtration system outperformed traditional mixed-media filters related both to treatment performance and operational costs. Mono-media filtration was also shown to be a promising advanced treatment technology for TSS removal related to both primary treated wastewater and CSO/SSO wastewater.

The following conclusions are made based on the results of this demonstration project:

- Mono-media filtration is an excellent option for wastewater treatment plants that have capacity problems related to wet weather flows. The operational and energy savings when compared to traditional mixed-media filtration can help offset the capital cost of the upgrade.

- Mono-media filtration is a cost-effective and energy-efficient process for treating CSO and SSO type wastewater.
- Mono-media filtration removes TSS at approximately half the cost per lb than mixed-media filtration and therefore should be considered for all new wastewater treatment plants as well as rehabilitating existing treatment plants.
- Mono-media filtration is an effective tool to help increase the efficiency of existing liquid bleach disinfection systems.
- A dry weather/wet weather control scheme is an effective tool to optimize energy efficiency of a filter system and should be investigated for all filtration systems.
- The treatment of wet weather inflow and infiltration was shown to be substantially cheaper than the elimination of inflow and infiltration by collection system repair work. For the pilot area, the cost of treatment of wet weather flow was shown to be $100 / MGD versus the cost of $205,000 per MGD for the collection system repair work.

Appendix A
Cost Evaluation of Wet Weather Treatment vs Removal

Bergholz I/I Reduction Costs

Street	Length of 8" Sewer	Number of Manholes	Service Connects
Stoelting Street	2700	10	35
Washington Street	2600	12	29
Niagara Street (N)	4450	21	52
Niagara Street (S)	4550	26	34
Cayuga Street	2100	11	43
Wurl Street	1000	3	13
Sy Road	1400	6	23
Reynolds Street	450	2	11
Luther Street	2300	7	29
Sylvan Place	400	2	17
Old Falls Blvd	2950	14	22
Shultz Street	1900	2	19
Rohr Street	2300	3	11
Hunt Street	1500	3	17
Totals	30600	122	355

Smoke Testing and CCTV Costs

Percentage of length to test:	50%
Cost per LF for smoke testing:	$0.20
Smoke Testing Cost:	**$3,060.00**
Percentage of length to TV:	50% of line smoked
Cost per LF for TV:	$1.50
TV Cost (Includes Cleaning):	**$11,475.00**

Slip Lining of 8" Sewer

Percentage of length to repair:	50% of line TV'd
Cost per LF of repair	$25.00
Cost for slip lining (w/o laterals)	**$95,625.00**

Lateral Repairs

% of service laterals to repair:	75%
Cost per lateral to repair:	$1,000.00
Lateral Repair Cost:	**$266,250.00**

Manhole Recoating

% of manholes to repair:	50%
Estimated manhole depth:	8 feet
Cost per LF to repair:	$140.00
Cost for repairs:	**$68,320.00**

Total Repair Costs

Smoke Testing	$3,060.00
CCTV	$11,475.00
Slip Lining	$95,625.00
Lateral Repairs	$266,250.00
Manhole Recoating	$68,320.00
Sub Total	$444,730.00
Contingency	$75,270.00
ELA	$130,000.00
Total Repair Costs	**$650,000.00**

NCSD No.1 Peak Flow vs Average Day Treatment Costs

Conveyance/Treatment Item	Average Cost Per Day	Peak Cost Per Day
Remote Pump Stations		
Shawnee	$ 4.56	$ 35.77
Mapleton	$ 9.23	$ 47.56
Moyer	$ 3.34	$ 15.22
East Canal	$ 46.94	$ 334.71
Townline	$ 26.19	$ 204.38
Tonawanda	$ 17.13	$ 73.21
	$ 107.39	$ 710.85
Influent Raw Pumps		
Influent Raw Pumps	$ 133.63	$ 445.63
Aeration System		
Air Supply Blowers	$ 190.00	$ 337.73
Filtration System		
Filter Feed Pumps	$ 44.56	$ 200.32
Backwash Air Scour Blowers	$ 5.57	$ 48.72
Backwash Holding Tank Pumps	$ 2.55	$ 10.44
Dewatering Costs		
Centrifuging, Polymer, etc	Negligible	Negligible
Disinfection		
Bleach Use	$60	$110
Total Cost	$ 651.09	$ 2,574.54

Appendix B
Total Suspended Solids Summary
(Demonstration Project Sampling Results)

JAN 2004

DATE	FLOW	INF,SS	FILT,INF SS	EFF,SS	% TSS Removal
1	21.700	168.00	23.2	2.00	91
2	12.005	216.00	16.0	3.20	80
3	13.610	180.00	18.8	2.00	89
4	10.966	108.00	15.6	1.60	90
5	11.168	112.00	14.8	5.20	65
6	9.500	140.00	13.6	2.60	81
7	8.237	176.00	13.6	2.20	84
8	8.867	116.00	8.4	1.80	79
9	7.120	340.00	8.0	2.00	75
10	7.818	328.00	8.4	2.20	74
11	8.473	80.00	9.2	2.20	76
12	7.825	88.00	20.0	1.80	91
13	7.173	120.00	18.8	2.20	88
14	7.781	136.00	18.8	2.10	89
15	7.371	60.00	20.4	2.80	86
16	7.082	80.00	12.0	2.20	82
17	6.808	248.00	3.6	1.20	67
18	6.886	324.00	24.0	1.60	93
19	6.134	188.00	16.0	2.00	88
20	7.627	344.00	14.4	2.00	86
21	6.083	208.00	16.0	2.40	85
22	6.821	260.00	16.0	1.70	89
23	6.744	232.00	16.8	1.40	92
24	6.668	272.00	12.8	1.70	87
25	6.594	284.00	15.6	1.80	88
26	6.572	252.00	16.8	1.70	90
27	6.532	244.00	12.8	1.90	85
28	6.447	212.00	10.4	1.60	85
29	6.882	268.00	17.5	2.20	87
30	6.412	260.00	14.8	2.80	81
31	6.753	176.00	16.4	1.40	91
Totals	**8.28**	**200.65**	**14.95**	**2.11**	**86**

CSO/SSO Type Events	FLOW	INF,SS	FILT,INF SS	EFF,SS	% TSS, Removal
0	0.0	0.0	0.0	0.0	0

Primary Type Events	FLOW	INF,SS	FILT,INF SS	EFF,SS	% TSS, Removal
5	13.9	156.8	17.7	2.8	84

FEB 2004

DATE	FLOW	INF,SS	FILT,INF SS	EFF,SS	% TSS Removal
1	6.557	184.00	15.2	2	87
2	6.761	220.00	14.4	2.8	81
3	8.095	212.00	27.3	2.8	90
4	9.550	136.00	14.5	3.8	74
5	9.052	68.00	17.2	6	65
6	9.762	80.00	13.5	4	70
7	11.512	104.00	19.5	4	79
8	10.545	124.00	23.5	6.25	73
9	10.836	104.00	55.5	8.25	85
10	8.920	188.00	18.5	6.8	63
11	10.258	116.00	18.0	6.8	62
12	10.548	120.00	22.0	7.4	66
13	7.867	80.00	21.6	5.2	76
14	9.050	96.00	22.4	4.4	80
15	7.191	76.00	18.0	5.6	69
16	7.932	64.00	16.4	5.6	66
17	7.526	84.00	18.0	4.4	76
18	6.971	44.00	14.8	4	73
19	11.068	88.00	14.4	3.8	74
20	8.355	80.00	15.2	4.4	71
21	13.104	72.00	25.3	7.5	70
22	11.916	36.00	20.0	7	65
23	11.635	24.00	20.0	8.4	58
24	11.098	96.00	19.6	7.2	63
25	10.672	112.00	33.3	9.5	71
26	10.114	176.00	23.6	9.4	60
27	10.200	112.00	26.0	9.8	62
28	10.235	104.00	25.6	9.6	63
29	12.128	68.00	25.6	8	69
Totals	9.64	105.79	21.34	6.02	72

CSO/SSO Type Events	FLOW	INF,SS	FILT,INF SS	EFF,SS	% TSS, Removal
2	10.8	108.0	44.4	8.9	80

Primary Type Events	FLOW	INF,SS	FILT,INF SS	EFF,SS	% TSS, Removal
13	11.1	95.4	21.8	7.3	67

MARCH 2004

DATE	FLOW	INF,SS	FILT,INF SS	EFF,SS	% TSS Removal
1	15.462	60.00	31.6	8.80	72
2	26.302	188.00	35.0	12.60	64
3	21.515	116.00	24.0	5.60	77
4	17.711	96.00	30.0	7.00	77
5	20.730	92.00	15.2	7.50	51
6	19.670	72.00	21.0	5.00	76
7	13.890	132.00	15.2	6.40	58
8	13.825	124.00	15.6	6.20	60
9	13.747	40.00	14.4	4.20	71
10	11.390	100.00	14.8	6.00	59
11	11.974	116.00	16.4	6.40	61
12	10.244	88.00	18.4	6.20	66
13	11.552	88.00	18.0	6.80	62
14	8.322	68.00	19.6	5.40	72
15	9.375	96.00	19.2	6.80	65
16	8.968	60.00	27.6	5.75	79
17	9.746	20.00	20.5	5.40	74
18	8.879	108.00	21.0	4.50	79
19	9.385	76.00	14.0	6.20	56
20	12.043	36.00	24.5	3.50	86
21	18.463	96.00	25.5	10.50	59
22	13.055	56.00	20.5	9.25	55
23	10.473	68.00	27.5	9.00	67
24	11.645	52.00	20.4	8.75	57
25	14.204	92.00	21.6	9.25	57
26	15.388	36.00	20.6	7.25	65
27	18.379	72.00	43.0	15.50	64
28	14.456	52.00	19.0	8.80	54
29	12.060	52.00	34.8	7.20	79
30	11.501	80.00	23.0	9.20	60
31	10.120	124.00	27.0	8.40	69
Totals	**13.69**	**82.45**	**22.55**	**7.40**	**67**

CSO/SSO Type Events	FLOW	INF,SS	FILT,INF SS	EFF,SS	% TSS, Removal
5	18.0	93.6	34.9	10.2	71

Primary Type Events	FLOW	INF,SS	FILT,INF SS	EFF,SS	% TSS, Removal
20	14.0	83.0	20.1	7.2	64

APRIL 2004

DATE	FLOW	INF,SS	FILT,INF SS	EFF,SS	% TSS Removal
1	11.437	40.00	29.0	4.40	85
2	16.276	32.00	17.0	11.00	35
3	15.853	40.00	20.0	5.60	72
4	17.424	36.00	26.0	4.80	82
5	16.231	36.00	16.0	5.20	68
6	13.429	40.00	13.0	4.60	65
7	13.387	88.00	20.0	6.00	70
8	12.192	44.00	11.2	3.20	71
9	11.403	68.00	14.0	3.20	77
10	9.657	20.00	19.2	3.60	81
11	8.568	20.00	14.4	4.00	72
12	9.122	28.00	20.0	3.00	85
13	12.031	40.00	19.5	3.60	82
14	20.212	628.00	41.0	12.40	70
15	13.966	20.00	18.5	5.40	71
16	12.584	16.00	18.5	2.20	88
17	11.485	88.00	16.5	3.00	82
18	13.007	124.00	42.7	2.20	95
19	14.711	280.00	22.0	8.60	61
20	12.275	40.00	21.0	15.40	27
21	11.538	40.00	23.0	2.40	90
22	14.063	40.00	26.0	4.40	83
23	12.063	60.00	21.0	1.80	91
24	10.928	48.00	31.0	4.00	87
25	10.529	44.00	29.0	3.20	89
26	12.847	28.00	25.0	4.60	82
27	10.944	12.00	25.0	5.20	79
28	9.049	64.00	27.5	3.40	88
29	9.655	48.00	26.0	3.20	88
30	8.390	88.00	24.0	3.40	86
Totals	**12.50853**	**73.33333**	**22.6**	**4.9**	**78**

CSO/SSO Type Events	FLOW	INF,SS	FILT,INF SS	EFF,SS	% TSS, Removal
3	14.8	266.7	38.2	6.2	84

Primary Type Events	FLOW	INF,SS	FILT,INF SS	EFF,SS	% TSS, Removal
21	13.2	53.9	20.5	5.1	75

MAY 2004

DATE	FLOW	INF,SS	FILT,INF SS	EFF,SS	% TSS Removal
1	8.753	72.00	17.0	2.60	85
2	10.297	40.00	36.0	2.20	94
3	11.387	448.00	12.0	2.20	82
4	9.918	40.00	14.0	3.00	79
5	9.831	44.00	26.0	2.80	89
6	9.120	32.00	20.0	4.40	78
7	8.658	52.00	12.0	4.00	67
8	8.606	40.00	26.0	3.40	87
9	10.271	76.00	22.0	3.60	84
10	9.980	84.00	26.0	5.00	81
11	9.187	56.00	31.0	4.80	85
12	8.578	112.00	13.0	1.40	89
13	8.300	72.00	13.6	4.40	68
14	7.896	24.00	11.6	2.20	81
15	7.994	40.00	15.0	2.00	87
16	7.773	36.00	8.4	2.30	73
17	7.698	31.00	10.4	1.40	87
18	8.144	172.00	3.6	1.00	72
19	7.723	204.00	6.8	1.80	74
20	7.229	416.00	6.8	1.20	82
21	7.258	340.00	9.6	3.40	65
22	7.624	380.00	8.4	1.00	88
23	11.015	484.00	12.0	2.60	78
24	21.327	792.00	42.0	14.40	66
25	15.121	188.00	18.0	8.40	53
26	12.726	116.00	22.0	3.80	83
27	10.684	116.00	26.0	3.80	85
28	10.546	108.00	31.0	2.00	94
29	8.855	164.00	24.0	4.20	83
30	8.123	108.00	11.0	1.90	83
31	10.126	124.00	11.0	2.20	80
Totals	9.70	161.6	17.6	3.3	81

CSO/SSO Type Events	FLOW	INF,SS	FILT,INF SS	EFF,SS	% TSS, Removal
3	14.1	313.3	36.3	6.2	83

Primary Type Events	FLOW	INF,SS	FILT,INF SS	EFF,SS	% TSS, Removal
7	11.6	221.7	17.6	3.8	78

JUNE 2004

DATE	FLOW	INF,SS	FILT,INF SS	EFF,SS	% TSS, Removal
1	13.850	248.00	9.2	2.8	70
2	10.783	120.00	6.8	2.0	71
3	9.651	240.00	4.8	1.4	71
4	8.640	240.00	6.8	2.2	68
5	8.075	428.00	6.8	2.0	71
6	7.765	380.00	16.0	2.4	85
7	7.968	280.00	6.0	1.8	70
8	7.666	324.00	4.0	2.2	45
9	7.340	260.00	5.2	1.5	71
10	8.776	256.00	2.0	0.5	75
11	7.284	212.00	3.8	1.4	63
12	7.137	184.00	3.6	0.7	81
13	7.040	184.00	3.6	0.9	75
14	7.177	256.00	5.6	0.5	91
15	7.740	364.00	4.4	1.3	70
16	7.097	308.00	5.8	1.8	69
17	7.526	304.00	5.6	1.6	71
18	7.500	244.00	6.0	0.6	90
19	7.069	228.00	10.8	2.2	80
20	7.038	224.00	4.4	0.2	95
21	7.000	268.00	3.6	0.2	94
22	7.216	340.00	4.4	2.6	41
23	7.076	332.00	4.4	0.8	82
24	7.044	252.00	4.4	0.8	82
25	7.543	252.00	6.0	1.2	80
26	6.968	204.00	10.8	1.2	89
27	6.577	244.00	4.8	1.9	60
28	6.593	248.00	4.0	1.3	68
29	6.514	360.00	5.0	1.7	66
30	6.527	336.00	2.0	2.0	0
Totals	7.7	270.7	5.69	1.46	74

Primary Type Events	FLOW	INF,SS	FILT,INF SS	EFF,SS	% TSS, Removal
2	12.317	184.000	8.0	2.4	70

Appendix C
Fecal Coliform Summary
(Demonstration Project Sampling Results)

NIAGARA COUNTY SEWER DISTRICT #1
SECONDARY CLARIFIER FECAL COLIFORM SUMMARY
2004

DATE	SEC CLAR FECAL 1st Sample	SEC CLAR FECAL 2nd Sample
01/02/04	12,000	10,000
01/09/04	11,000	18,000
01/11/04	9,000	12,000
01/16/04	14,000	10,000
01/23/04	28,000	37,000
02/06/04	35,000	20,000
02/08/04	39,000	45,000
02/13/04	28,000	26,000
02/20/04	46,000	58,000
02/22/04	84,000	95,000
03/05/04	62,000	58,000
03/07/04	42,000	57,000
03/12/04	37,000	35,000
03/20/04	9,000	8,000
03/26/04	7,000	9,000
04/02/04	13,000	9,000
04/04/04	17,000	22,000
04/16/04	8,000	9,000
04/18/04	47,000	44,000
04/29/04	98,000	95,000
05/02/04	28,000	31,000
05/06/04	11,000	9,000
05/14/04	58,000	69,000
05/16/04	34,000	39,000
05/23/04	24,000	26,000
06/04/04	25,000	30,000
06/06/04	26,000	31,000
06/11/04	21,000	23,000
06/14/04	68,000	84,000
06/25/04	11,000	15,000
07/02/04	32,000	31,000
07/04/04	29,000	35,000
07/11/04	27,000	40,000
07/16/04	14,000	17,000
07/18/04	25,000	21,000
08/01/04	60,000	52,000
08/06/04	74,000	84,000
08/13/04	35,000	38,000
08/27/04	4,000	5,000
08/28/04	4,000	5,000
08/31/04	8,000	8,000
09/03/04	42,000	55,000
09/10/04	59,000	46,000
09/17/04	116,000	91,000
09/19/04	95,000	89,000

Appendix D
Treatment Plant Summary Reports
(Demonstration Project Sampling Results)

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Oct-98

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
716-693-8759 FAX

FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
T	1	4.280	17.2	20.3	7.3	7.4	7.4	7.6	15	<0.1	107.5	3.2	180	3.6
F	2	3.602	17.0	19.3	7.1	7.4	7.3	7.8	15.0	<0.1	116.5	2.0	164	4.4
S	3	3.653	16.9	19.1	7.3	7.4	7.6	7.7	14.0	<0.1	141.3	3.4	136	22.4
S	4	3.517	16.9	19.0	7.2	7.3	7.5	7.7	13.0	<0.1			132	8.8
M	5	3.815	16.8	18.7	7.1	7.3	7.4	7.7	16.0	<0.1			152	4.0
T	6	3.941	16.8	19.4	7.1	7.4	7.5	7.8	15.0	<0.1			156	2.0
W	7	3.708	17.0	19.9	7.0	7.2	7.3	7.7	13.0	<0.1	123.3	3.9		
T	8	5.306	16.9	19.6	7.0	7.2	7.2	7.6	17.0	<0.1	111.0	3.7	216	11.6
F	9	3.977	16.7	19.4	6.8	7.2	7.1	7.5	12.0	<0.1	124.2	2.5	208	7.6
S	10	3.592	16.5	19.4	6.9	7.6	7.6	7.6	11.5	<0.1			144	7.2
S	11	3.627	16.5	19.3	6.9	7.2	7.5	7.5	15.0	<0.1			160	7.6
M	12	3.300	16.7	19.2	6.7	6.8	7.1	7.4	20.0	<0.1			184	5.6
T	13	3.768	16.7	20.6	6.7	7.0	6.8	7.5	16.0	<0.1			192	10.4
W	14	4.039	16.6	19.3	6.6	6.8	6.8	7.6	17.0	<0.1	150.5	4.1		
T	15	4.072	16.5	18.7	6.7	6.9	7.3	7.4	15.0	<0.1	113.3	3.4	152	4.8
F	16	3.473	16.3	18.8	6.9	7.4	7.0	7.1	14.0	<0.1	182.4	12.3	212	1.2
S	17	3.528	16.3	18.4	6.9	7.4	6.8	7.2	14.0	<0.1	123.3	5.8	168	8.8
S	18	4.190	16.5	19.1	6.6	6.7	6.9	7.1	16.0	<0.1			212	2.4
M	19	3.771	16.4	15.8	6.7	7.0	6.8	7.1	11.0	<0.1			212	3.6
T	20	3.428	16.1	16.4	6.3	7.2	6.4	7.4	11.0	<0.1			148	5.2
W	21	3.738	15.8	15.9	7.2	8.4	7.4	8.3	14.0	<0.1	130.0	5.3		
T	22	3.421	15.9	15.4	7.2	7.3	7.2	7.6	10.0	<0.1	144.2	3.3	168	2.8
F	23	3.551	15.9	15.2	6.9	7.2	7.1	7.6	10.0	<0.1	138.9	3.7	188	5.2
S	24	3.700	15.6	17.7	7.0	7.2	7.2	7.5	11.0	<0.1	148.6	1.8	88	3.2
S	25	3.471	15.9	18.6	6.8	7.2	6.9	7.2	13.0	<0.1			232	5.6
M	26	3.857	16.7	18.7	6.8	7.0	6.9	7.0	17.0	<0.1			212	3.6
T	27	4.107	16.2	18.8	6.9	7.0	6.7	7.3	25.0	<0.1			220	7.2
W	28	4.340	16.3	19.5	6.9	7.1	6.7	7.3	20.0	<0.1	170.1	7.0		
T	29	4.116	16.1	18.4	7.1	7.2	6.8	7.9	19.0	<0.1	202.1	3.2	252	4.4
F	30	3.761	15.9	17.9	7.0	7.3	7.3	7.7	18.0	<0.1			324	4.0
S	31	3.635	15.8	17.8	7.1	7.4	7.4	7.8	18.0	<0.1			244	7.2
	AVERAGE	3.816	16.4	18.5	6.3	8.4	6.4	8.3	25.0	0.0	138.7	4.2	188.4	6.1
		Monthly	ave.	ave.	min	max	min	max	max	max	96.9%	138.3	96.7%	194.1

NIAGARA COUNTY SEWER DISTRICT #1

Oct-98

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
T	1	4.280	4.13	0.38	0.48	0.64	0.58		
F	2	3.602	4.50	0.31	0.70	0.76	0.73	28	
S	3	3.653	3.36	0.39	0.67	0.71	0.69	55	
S	4	3.517	4.66	0.34	0.68	0.77	0.73		
M	5	3.815	4.13	0.42	0.32	0.72	0.49	45	
T	6	3.941			0.27	1.28	0.62		
W	7	3.708	3.36	0.55	0.86	1.18	1.04	42	
T	8	5.306	3.36	0.44	0.87	1.13	0.96		
F	9	3.977	8.86	0.61	0.70	0.81	0.76	39	
S	10	3.592	2.63	0.57	0.63	0.79	0.73	105	
S	11	3.627	1.90	0.30	0.58	0.80	0.67		
M	12	3.300	8.22	0.32	0.59	0.64	0.62		
T	13	3.768			0.45	0.53	0.50		
W	14	4.039	3.32	0.55	0.57	0.68	0.63	8	
T	15	4.072	1.82	0.33	0.40	0.60	0.53		
F	16	3.473	4.69	0.28	0.47	0.71	0.60	3	
S	17	3.528	3.12	0.49	0.44	0.52	0.49	20	
S	18	4.190	2.06	0.31	0.50	0.67	0.57		
M	19	3.771	4.70	0.32	0.49	0.72	0.61	9	
T	20	3.428			0.42	0.61	0.51		
W	21	3.738	3.81	0.81	0.36	0.43	0.39	24	
T	22	3.421	3.85	0.35	0.40	0.54	0.46		
F	23	3.551	4.17	0.31	0.40	0.48	0.44	16	
S	24	3.700	5.02	0.31	0.65	0.83	0.72	4	
S	25	3.471	4.81	0.39	0.62	0.70	0.66		
M	26	3.857	3.32	0.46	0.51	0.61	0.55	3	
T	27	4.107			0.40	0.56	0.47	3	
W	28	4.340	8.59	0.52	0.59	0.70	0.65	3	
T	29	4.116	6.20	0.43	0.36	0.58	0.44		
F	30	3.761	5.83	0.34	0.25	0.62	0.45	25	
S	31	3.635	6.28	0.34	0.25	0.64	0.44	45	
	AVERAGE	3.816	4.46	0.42	0.25	1.28	1.04	15.3	30 day geom
				13.2				55.6	7 day geom

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Nov-98

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
716-693-8759 FAX

FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
T	1	3.899	15.7	17.7	7.0	7.7	7.1	7.7	17	<0.1			316	4.4
F	2	3.736	15.7	16.9	6.8	7.4	7.2	7.6	18.0	<0.1			184	7.2
S	3	3.600	15.5	17.1	7.1	7.8	7.4	7.8	16.0	<0.1			260	9.6
S	4	3.309	15.5	16.6	7.1	7.8	7.5	7.8	15.0	<0.1	160.6	8.5		
M	5	3.996	15.2	17.3	6.8	7.1	6.8	7.4	16.0	<0.1	192.8	6.6	228	11.2
T	6	3.866	15.5	17.0	6.7	7.0	6.9	7.5	27.0	<0.1	187.8	7	304	7.6
W	7	4.016	15.0	16.3	6.7	7.1	7.1	7.2	17.0	<0.1	131.8	6.8	220	8.0
T	8	3.925	15.4	16.9	6.9	7.2	7.2	7.2	20.0	<0.1			272	9.6
F	9	3.082	14.2	16.5	6.8	7.2	7.0	7.2	21.0	<0.1			172	6.4
S	10	3.935	15.3	16.7	6.9	7.3	6.8	7.4	22.0	<0.1			308	5.2
S	11	4.013	15.1	16.7	6.9	7.3	7.3	7.4	28.0	<0.1	245.3	6.9	284	6.0
M	12	3.834	15.3	16.4	7.0	7.5	7.3	7.5	14.0	<0.1	147.2	5.6	212	10.0
T	13	3.276	14.3	15.9	7.0	7.2	7.0	7.2	16.0	<0.1	148.6	5.8	232	8.4
W	14	3.841	14.6	16.6	6.8	7.2	6.9	7.2	25.0	<0.1	153.0	10.2	296	9.2
T	15	3.796	14.7	16.5	6.6	6.9	6.7	7.1	23.0	<0.1			396	8.8
F	16	3.873	14.8	16.3	6.9	7.0	7.0	7.0	23.0	<0.1			232	6.0
S	17	4.086	14.8	16.3	6.9	7.6	7.2	7.6	14.0	<0.1			260	7.6
S	18	3.637	14.6	16.2	7.4	7.6	7.1	7.6	17.0	<0.1	150.4	10.9	240	18.1
M	19	3.649	14.2	16.2	6.7	7.9	7.2	7.6	14.0	<0.1	133.1	9.1	176	6.5
T	20	4.643	16.8	16.8	7.6	7.9	7.6	8.2	15.0	<0.1	124.7	12.4	252	10.0
W	21	3.879	15.0	15.6	6.8	7.9	7.0	7.9	16.0	<0.1	110.9	12.8	224	9.0
T	22	3.607	14.9	16.1	7.3	7.7	7.2	8.2	17.0	<0.1			344	9.6
F	23	3.343	14.9	16.1	7.4	8.1	7.4	8.0	10.0	<0.1			188	5.0
S	24	3.341	15.0	15.7	7.3	7.5	7.5	7.9	22.0	<0.1			276	7.4
S	25	3.717	14.9	15.1	7.2	7.8	7.7	7.8	20.0	<0.1	256.2	12	236	7.6
M	26	3.496	14.5	15.9	7.2	7.7	7.7	7.7	20.0	<0.1	236.1	8.2	304	14.0
T	27	3.409	14.4	15.5	7.2	7.7	7.7	7.7			234.8	5.2	204	4.0
W	28	3.551	14.3	15.2	7.1	7.6	7.2	7.6	9.0	<0.1	175.8	4.7	224	9.9
T	29	3.572	14.2	16.4	7.0	7.6	7.5	7.6	12.0	<0.1			216	4.0
F	30	3.401	14.3	16.6	7.1	7.5	7.5	7.6	15.0	<0.1			184	8.5
	AVERAGE	3.711	15.0	16.4	6.6	8.1	6.7	8.2	28.0	0.0	171.9	8.2	250.4	8.1
		Monthly	ave.	ave.	min	max	min	max	max	max	95.2%	258.4	96.8%	253.2

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1

Nov-98

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
T	1	3.899	5.10	0.44	0.60	0.70	0.64		
F	2	3.736	4.33	0.45	0.54	0.65	0.60	8	
S	3	3.600			0.54	0.62	0.59		
S	4	3.309	8.46	0.91	0.40	0.77	0.58	11	
M	5	3.996	4.00	0.47	0.94	1.12	1.01		
T	6	3.866	3.56	0.40	1.33	1.50	1.41	3	
W	7	4.016	4.21	0.46	1.05	1.12	1.08	3	
T	8	3.925			0.92	1.12	1.00		
F	9	3.082	3.80	0.38	1.02	1.06	1.04	3	
S	10	3.935	4.94	0.43	1.00	1.06	1.03		
S	11	4.013	3.88	0.48	1.24	1.31	1.27	30	
M	12	3.834	3.44	0.74	0.53	0.85	0.72		
T	13	3.276	6.60	0.33	1.14	1.34	1.23	32	
W	14	3.841	5.14	0.36	0.99	1.27	1.15	22	
T	15	3.796	6.64	0.55	0.91	1.10	1.03		
F	16	3.873	1.01	0.53	0.91	1.20	1.04	34	
S	17	4.086			0.98	1.25	1.07		
S	18	3.637	5.02	0.80	0.89	1.08	0.97	9	
M	19	3.649	3.24	0.49	0.74	0.92	0.80		
T	20	4.643	0.64	0.39	0.77	0.90	0.84	3	
W	21	3.879	3.32	0.40	0.80	0.93	0.85	16	
T	22	3.607	2.95	0.46	0.95	1.06	1.00		
F	23	3.343	4.37	0.52	0.90	1.07	0.99	20	
S	24	3.341			0.78	1.00	0.92		
S	25	3.717	3.73	0.24	0.68	0.82	0.77	72	
M	26	3.496	4.50	0.58	0.56	0.70	0.64		
T	27	3.409	4.62	0.44	0.61	0.75	0.68	11	
W	28	3.551	3.93	0.41	0.68	0.72	0.70	14	
T	29	3.572	4.17	0.38	0.67	0.80	0.75		
F	30	3.401	3.75	0.51	0.37	0.78	0.62	11	
	AVERAGE	3.711	4.21	0.48	0.37	1.50	1.41	11.8	30 day geom
				14.9				28.9	7 day geom

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Dec-98

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
716-693-8759 FAX

FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
T	1	3.998	14.1	16.5	7.2	7.4	7.7	7.8	17	<0.1			184	12.0
W	2	3.961	14.2	16.6	7.4	7.5	7.8	7.8	14.0	<0.1	115.5	9.6		
T	3	4.089	14.1	16.3	7.4	7.6	7.5	7.8	18.0	<0.1	136.2	14.3	204	15.0
F	4	3.672	14.4	17.2	7.3	7.4	7.6	7.7	13.5	<0.1	140.2	10.4	176	7.0
S	5	4.066	14.2	17.5	7.3	7.6	7.6	7.7	16.0	<0.1	158.2	12.0	184	6.0
S	6	4.261	13.8	17.5	7.2	7.3	7.7	7.7	20.5	<0.1			260	8.5
M	7	4.291	14.2	17.6	7.3	7.4	7.7	7.9	15.0	<0.1			92	5.0
T	8	3.948	14.0	16.4	7.1	7.4	7.7	7.9	14.0	<0.1			232	10.0
W	9	3.983	13.9	15.5	7.2	7.4	7.7	8.1	15.0	<0.1	123.3	24.5		
T	10	3.552	14.0	15.8	7.4	7.5	7.5	7.8	19.5	<0.1	155.9	11.0	220	12.0
F	11	4.488	13.7	15.2	7.3	7.5	7.3	7.7	16.0	<0.1	145.7	8.7	216	7.0
S	12	3.901	13.7	15.2	7.2	7.3	7.4	7.6	21.0	<0.1	153.9	14.4	300	13.0
S	13	3.809	13.5	15.4	7.1	7.3	7.4	7.7	19.0	<0.1			280	3.6
M	14	3.745	13.7	15.1	7.2	7.3	7.3	7.6	22.0	<0.1			180	5.0
T	15	4.104	13.6	15.0	6.9	7.4	7.2	7.6	21.0	<0.1			208	9.0
W	16	3.501	13.6	15.5	6.8	7.2	7.5	7.6	18.0	<0.1	175.5	6.8		
T	17	3.638	13.5	15.4	6.8	7.1	6.6	7.5	22.0	<0.1	290.0	4.5	756	10.4
F	18	3.338	13.2	14.8	6.6	7.0	6.6	7.2	18.0	<0.1	187.6	5.0	212	5.2
S	19	3.868	13.6	14.6	7.1	7.4	7.5	7.7	16.0	<0.1	142.2	3.3	260	6.0
S	20	3.340	13.2	15.1	7.1	7.3	7.5	7.7	18.0	<0.1			256	7.2
M	21	4.027	13.3	15.0	7.0	7.2	7.5	7.7	17.0	<0.1			244	12.1
T	22	5.501	12.9	14.0	7.1	7.2	7.2	7.5	18.5	<0.1			244	12.0
W	23	4.145	12.8	12.8	7.1	7.1	7.5	7.6	21.0	<0.1	144.4	19.1		
T	24	3.837	12.6	13.3	6.8	7.2	7.5	7.6	14.0	<0.1	144.4	8.0	132	7.3
F	25	3.820	12.6	12.9	7.0	7.1	7.5	7.5	15.0	<0.1	158.9	7.2	148	12.0
S	26	3.747	12.4	13.4	6.8	7.0	7.1	7.6	19.0	<0.1	164.7	10.2	164	15.0
S	27	3.928	12.3	13.5	6.8	6.9	7.1	7.6	16.0	<0.1			152	4.0
M	28	4.010	12.6	13.9	7.0	7.2	7.0	7.4	32.0	<0.1			500	4.0
T	29	3.892	12.3	13.8	7.1	7.2	7.3	7.5	18.0	<0.1			204	14.0
W	30	3.792	12.3	12.2	7.2	7.4	7.1	7.3	15.0	<0.1	154.0	16.0		
T	31	3.488	12.6	12.2	7.0	7.3	7.3	7.5	9.5	<0.1	136.7	6.4	176	9.5
	AVERAGE	3.927	13.4	15.0	6.6	7.6	6.6	8.1	32.0	0.0	156.1	10.8	236.8	9.0
		Monthly	ave.	ave.	min	max	min	max	max	max	93.1%	344.5	96.2%	294.2

NIAGARA COUNTY SEWER DISTRICT #1

Dec-98

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
T	1	3.998			0.67	0.76	0.70		
W	2	3.961	4.29	0.60	0.46	0.70	0.60	22	
T	3	4.089	3.28	0.55	0.28	0.41	0.35		
F	4	3.672	5.75	0.21	0.20	0.48	0.34	159	
S	5	4.066	6.15	0.38	0.18	0.25	0.21	420	
S	6	4.261	2.26	0.34	0.94	1.28	1.14		
M	7	4.291	5.14	0.45	1.16	1.40	1.24	9	
T	8	3.948			1.34	1.94	1.56		
W	9	3.983	3.11	0.54	1.47	1.96	1.74	3	
T	10	3.552	1.30	0.50	1.20	1.69	1.45		
F	11	4.488	1.42	0.39	1.02	1.36	1.19	24	
S	12	3.901	4.45	0.47	1.13	1.37	1.25	13	
S	13	3.809	6.97	0.34	1.22	1.56	1.39		
M	14	3.745	2.06	0.35	0.98	1.10	1.04	6	
T	15	4.104		0.60	0.86	1.04	0.98		
W	16	3.501	11.90	0.52	0.71	1.01	0.90	3	
T	17	3.638	4.70	0.50	0.72	0.94	0.83		
F	18	3.338	6.16	0.45	0.54	0.75	0.63	30	
S	19	3.868	4.25	0.43	0.62	0.90	0.72	14	
S	20	3.340	4.50	0.43	0.70	0.84	0.77		
M	21	4.027	3.81		0.80	1.01	0.94	7	
T	22	5.501		0.41	0.54	1.02	0.82		
W	23	4.145	3.56	0.29	0.55	0.83	0.70		
T	24	3.837	3.24	0.45	0.54	0.75	0.66		
F	25	3.820	3.48	0.49	0.60	0.84	0.75	25	
S	26	3.747	5.14	0.35	0.70	0.88	0.81	20	
S	27	3.928	3.36	0.36	0.78	0.98	0.90		
M	28	4.010	3.85		0.60	0.87	0.76	26	
T	29	3.892		0.87	0.75	0.93	0.82		
W	30	3.792	4.13	0.50	0.52	0.81	0.63	3	
T	31	3.488	4.81	0.00	0.63	0.77	0.72		
	AVERAGE	3.927	4.29	0.44	0.18	1.96	1.74	16.2	30 day geom
				14.3				60.3	7 day geom

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Nov-99

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK
716-693-0001
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FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
M	1	4.997	16.5	20.1	7.1	7.4	7.4	7.4	24	<0.1				
T	2	8.187	16.9	18.7	6.7	7.3	7.4	7.5	20.0	<0.1			312	3.5
W	3	21.379	15.4	14.8	6.6	7.1	7.5	7.6	11.0	<0.1			324	4.8
T	4	10.983	15.2	14.9	6.6	7.2	7.3	7.3	8.0	<0.1	90.2	6.8	228	15.0
F	5	8.486	15.5	15.9	6.7	7.2	6.8	7.0	11.0	<0.1	77.3	23.6	164	9.5
S	6	6.968	15.9	16.1	6.7	7.3	7.0	7.2	12.0	<0.1	114.8	3.7	88	3.8
S	7	5.474	15.7	15.0	6.3	7.0	6.6	7.1	12.0	<0.1	97.3	5.2	108	4.2
M	8	4.953	15.9	15.6	6.6	7.0	6.8	7.1	12.0	<0.1			120	5.6
T	9	5.341	16.1	16.7	6.7	6.9	6.9	7.0	13.0	<0.1			84	0.9
W	10	5.252	16.2	17.7	6.6	7.1	6.9	6.9	15.0	<0.1			128	1.5
T	11	5.823	15.9	16.4	6.9	7.2	6.8	6.9	15.0	<0.1	135.6	3.1		
F	12	5.438	15.7	16.0	6.8	7.2	6.8	7.0	10.0	<0.1	116.0	3.3	40	1.0
S	13	4.864	15.7	16.5	7.0	7.1	6.8	7.0	10.0	<0.1	92.7	1.4	128	1.2
S	14	5.115	15.9	16.9	6.7	7.0	6.9	7.1	3.0	<0.1	85.9	1.5	140	2.5
M	15	5.171	15.8	16.4	6.9	7.0	6.9	7.0	15.0	<0.1			140	1.4
T	16	5.094	15.2	15.6	6.7	7.1	7.0	7.0	7.0	<0.1			184	1.3
W	17	4.643	15.3	15.2	6.3	6.9	6.7	6.7	13.0	<0.1			216	2.2
T	18	4.425	15.2	15.6	6.8	7.2	7.0	7.1	0.0	<0.1	197.2	3.0		
F	19	4.147	15.3	16.2	7.0	7.1	6.9	7.1	22.0	<0.1	218.7	2.5	688	2.2
S	20	5.408	15.4	16.8	7.0	7.4	6.7	6.8	15.0	<0.1	204.2	1.8	316	2.4
S	21	4.419	15.2	16.9	7.0	7.5	6.9	6.9	11.0	<0.1	32.8	1.9	204	2.4
M	22	4.659	15.2	17.0	7.0	7.3	7.1	7.2	10.0	<0.1			212	3.0
T	23	4.482	15.2	17.6	7.2	7.7	7.3	7.3	12.0	<0.1			184	2.6
W	24	4.476	15.2	17.4	7.4	7.7	7.4	7.6	13.0	<0.1			228	3.2
T	25	4.410	15.1	16.7	7.3	7.8	7.4	7.4	18.0	<0.1	136.2	2.0		
F	26	6.870	14.9	16.4	7.3	7.5	7.4	7.5	12.0	<0.1	194.6	2.7	320	2.4
S	27	9.628	14.3	15.4	7.2	7.3	7.2	7.3	10.0	<0.1	132.9	3.0	220	4.0
S	28	6.702	14.3	15.0	7.2	7.3	7.4	7.5	7.0	<0.1	105.9	2.1	164	2.0
M	29	5.809	14.6	15.1	7.2	7.4	7.4	7.5	12.0	<0.1			100	2.0
T	30	4.689	14.6	15.0	7.1	7.4	7.1	7.5	15.0	<0.1			128	3.4
													264	2.8
	AVERAGE	6.276	15.5	16.3	6.3	7.8	6.6	7.6	24.0	0.0	120.0	5.6	195.2	4.7
		Monthly	ave.	ave.	min	max	min	max	max	max	95.3%	331.3	97.6%	250.9

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1

Nov-99

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	COMMENTS
M	1	4.997	5.47	0.24	0.52	0.60	0.56		
T	2	8.187			0.41	0.58	0.52		
W	3	21.379	1.70	0.40	0.39	0.73	0.53	84	
T	4	10.983	1.82	0.24	0.21	0.43	0.33		
F	5	8.486	2.02	0.23	0.30	0.78	0.50	26	
S	6	6.968	3.56	0.21	0.19	1.33	0.87	3	
S	7	5.474	3.03	0.01	0.91	1.07	1.00		
M	8	4.953	1.94	0.02	0.58	1.09	0.88	3	
T	9	5.341			0.72	0.80	0.76		
W	10	5.252	1.86	0.05	0.84	0.95	0.89	3	
T	11	5.823	6.48	0.02	0.63	0.85	0.77		
F	12	5.438	2.88	0.06	0.72	0.78	0.76	3	
S	13	4.864	2.67	0.09	0.64	0.95	0.82	3	
S	14	5.115	3.28	0.14	0.70	0.73	0.72		
M	15	5.171	4.17	0.16	0.66	0.70	0.68		
T	16	5.094			0.70	0.83	0.75		
W	17	4.643	7.57	0.25	0.41	0.78	0.64	3	
T	18	4.425	21.34	0.19	0.45	0.92	0.75		
F	19	4.147	7.45	0.23	0.55	0.68	0.61	3	
S	20	5.408	3.93	0.20	0.57	0.65	0.60	3	
S	21	4.419	3.32	0.29	0.62	0.72	0.68		
M	22	4.659	4.41	0.21	0.56	1.01	0.73	3	
T	23	4.482			0.56	0.70	0.61		
W	24	4.476	5.10	0.17	0.31	0.48	0.38	3	
T	25	4.410	7.49	0.19	0.23	0.50	0.34		
F	26	6.870	3.32	0.21	0.25	0.39	0.34	3	
S	27	9.628	2.19	0.14	0.33	0.49	0.43	3	
S	28	6.702	2.27	0.15	0.39	0.60	0.49		
M	29	5.809	1.54	0.19	0.50	0.65	0.56		
T	30	4.689			0.33	0.48	0.42		
	AVERAGE	6.276	3.78	0.20	0.19	1.33	1.00	4.4	
				10.5				18.7	

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Dec-99

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FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
W	1	4.753	14.5	14.7	7.1	7.4	7.0	7.4		<0.1	172.7	14.8		
T	2	5.353	14.5	14.4	7.1	7.4	7.1	7.3	14.0	<0.1	192.6	7.3	216	8.4
F	3	4.906	14.7	15.6	6.9	7.3	7.3	7.5	15.0	<0.1	162.7	7.5	180	3.4
S	4	5.600	14.8	16.1	6.6	7.3	7.3	7.4	11.0	<0.1	148.4	3.2	188	2.4
S	5	5.339	14.6	16.6	6.9	7.3	7.1	7.5	15.0	<0.1			184	1.2
M	6	5.556	15.0	16.1	6.9	7.1	7.1	7.2	14.0	<0.1			160	0.7
T	7	5.368	14.7	15.5	6.6	7.2	6.7	7.2	11.0	<0.1			132	1.8
W	8	5.540	14.5	15.4	6.5	7.0	6.6	7.2	13.0	<0.1	127.2	1.5		
T	9	5.630	14.7	15.5	6.7	7.2	6.6	7.1	13.0	<0.1	170.3	5.5	160	2.0
F	10	7.563	14.5	15.7	6.7	7.1	6.9	7.2	16.0	<0.1	119.7	1.5	180	2.0
S	11	7.439	14.0	14.5	6.8	6.8	6.9	7.0	10.0	<0.1	21.0	3.4	156	3.0
S	12	7.264	13.7	14.3	7.0	7.1	6.8	7.1	16.0	<0.1			160	2.2
M	13	7.517	14.0	14.6	6.8	6.9	7.0	7.0	14.0	<0.1			200	3.0
T	14	8.580	13.9	14.3	6.9	7.0	6.8	7.1	14.0	<0.1			108	0.6
W	15	11.839	13.1	13.8	6.7	6.8	6.6	6.9	14.0	<0.1	133.2	6.2	228	1.6
T	16	13.154	12.8	12.9	6.8	7.1	6.8	6.8	7.0	<0.1	72.6	3.2	164	3.2
F	17	11.754	12.4	12.6	6.8	7.1	6.6	7.0	10.0	<0.1	95.4	2.8	192	1.3
S	18	6.147	12.5	12.7	6.9	7.0	6.9	7.0	8.5	<0.1	105.6	3.6	112	3.2
S	19	5.595	12.7	12.9	6.9	7.2	7.0	7.2	14.0	<0.1			156	1.6
M	20	5.416	13.0	13.3	7.0	7.2	6.9	7.1	15.0	<0.1			132	1.0
T	21	6.950	12.4	12.8	7.1	7.3	7.0	7.3	12.0	<0.1			76	1.1
W	22	5.745	12.1	11.4	7.3	7.4	7.3	7.4	15.0	<0.1	120.2	2.8		
T	23	4.694	12.1	11.5	6.4	7.2	6.4	7.1	13.0	<0.1	176.3	1.0	124	1.2
F	24	4.313	11.8	11.3	6.5	7.3	6.5	7.2	9.0	<0.1	147.0	2.1	140	1.2
S	25	4.561	11.7	11.5	6.7	6.9	6.8	6.9	13.0	<0.1	158.8	3.0	148	0.8
S	26	5.152	11.9	11.3	6.7	6.7	6.6	6.9	15.0	<0.1			236	0.9
M	27	4.848	11.8	11.6	6.6	7.2	6.6	6.9	14.0	<0.1			232	0.9
T	28	4.614	11.9	11.5	6.9	6.9	6.8	7.2	11.0	<0.1			348	0.2
W	29	5.028	11.9	11.6	7.0	7.2	6.2	7.2	16.0	<0.1	158.0	2.8		
T	30	4.903	12.0	12.0	7.1	7.2	7.0	7.1	16.0	<0.1	180.2	2.4	124	0.5
F	31	4.687	11.6	12.2	7.3	7.4	7.4	7.5	14.0	<0.1	142.2	6.8	128	0.9
	AVERAGE	6.316	13.2	13.6	6.4	7.4	6.2	7.5	16.0	0.0	127.2	3.9	169.5	1.9
		Monthly	ave.	ave.	min	max	min	max	max	max	96.9%	213.6	98.9%	101.2

NIAGARA COUNTY SEWER DISTRICT #1

Dec-99

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
W	1	4.753	4.94	0.26	0.37	0.55	0.46	3	
T	2	5.353	6.60	0.25	0.38	0.80	0.52		
F	3	4.906	4.66	0.27	0.54	0.59	0.57	3	
S	4	5.600	4.86	0.19	0.24	0.38	0.33	3	
S	5	5.339	6.16	0.16	0.05	0.13	0.08		
M	6	5.556	5.59	0.13	0.15	0.43	0.30		
T	7	5.368			0.08	0.85	0.39		
W	8	5.540	5.71	0.19	1.08	1.15	1.11	3	
T	9	5.630	1.70	0.25	0.94	0.95	0.94		
F	10	7.563	7.33	0.21	0.92	0.97	0.95	3	
S	11	7.439	3.68	0.17	0.72	0.90	0.81	3	
S	12	7.264	2.43	0.19	0.45	0.86	0.72		
M	13	7.517	3.32	0.22	0.77	1.05	0.88		
T	14	8.580			0.70	0.82	0.78		
W	15	11.839	3.40	0.30	0.45	0.49	0.46	25	
T	16	13.154	1.99	0.18	0.41	1.15	0.87		
F	17	11.754	2.88	0.12	0.68	0.95	0.83	9	
S	18	6.147	0.69	0.13	0.62	0.94	0.79	4	
S	19	5.595	2.79	0.16	0.67	0.83	0.76		
M	20	5.416	3.28	0.13	0.64	0.66	0.65		
T	21	6.950			0.57	0.65	0.62		
W	22	5.745	2.06	0.18	0.52	0.68	0.62	3	
T	23	4.694	2.79	0.14	0.38	0.80	0.63		
F	24	4.313	3.24	0.15	0.49	0.60	0.56	11	
S	25	4.561	4.94	0.17	0.42	0.62	0.50	3	
S	26	5.152	3.60	0.20	0.39	0.52	0.44		
M	27	4.848	3.48	0.18	0.46	0.55	0.52		
T	28	4.614			0.44	0.59	0.50		
W	29	5.028	3.89	0.17	0.32	0.48	0.41	9	
T	30	4.903	4.05	0.16	0.36	0.42	0.39		
F	31	4.687	1.78	0.17	0.25	0.33	0.28	15	
	AVERAGE	**6.316**	**3.65**	**0.19**	**0.05**	**1.15**	**1.11**	**5.2**	
				10.2				**9.8**	

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 May-01

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
716-693-8759 FAX

FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
T	1	5.129	10.4	15.6	7.1	7.4	7.1	7.1	24	<0.1				
W	2	5.296	10.4	16.2	7.1	7.3	7.1	7.1	24.0	<0.1			236	5.2
T	3	5.021	10.8	16.2	7.1	7.3	7.1	7.1	25.0	<0.1	263.4	10.2		
F	4	4.877	10.7	16.6	7.0	7.2	7.0	7.1	28.0	<0.1	237.5	6.3	244	10.0
S	5	5.178	10.9	16.6	7.0	7.2	7.0	7.0	30.0	<0.1	246.0	1.8	268	10.0
S	6	4.290	10.9	16.0	7.0	7.2	7.0	7.1	30.0	<0.1	269.6	5.7	308	6.4
M	7	5.333	10.5	15.7	7.0	7.3	7.0	7.0	31.0	<0.1			372	3.6
T	8	4.988	10.6	15.6	6.7	6.9	6.7	6.9	31.0	<0.1			280	9.6
W	9	5.716	10.4	16.0	6.5	7.0	6.8	6.9	23.0	<0.1			272	4.0
T	10	5.067	10.7	16.4	6.8	7.1	6.9	7.1	26.0	<0.1	243.9	1.7	232	2.0
F	11	5.277	11.4	15.7	6.6	7.3	6.8	6.9	30.0	<0.1	224.6	3.2	232	2.0
S	12	6.364	11.1	16.4	7.1	7.3	7.1	7.2	7.0	<0.1	246.5	2.4		
S	13	5.597	11.7	15.2	7.0	7.3	7.0	7.0	5.0	<0.1	158.9	2.1	124	3.2
M	14	5.403	11.7	15.1	6.8	7.2	6.8	7.1	2.0	<0.1			108	2.5
T	15	4.977	12.2	15.8	6.8	7.1	6.8	7.1	4.0	<0.1			176	5.3
W	16	5.115	11.9	16.3	7.0	7.3	7.0	7.3	5.0	<0.1			140	4.3
T	17	5.118	12.1	16.4	6.8	7.2	7.0	7.2	6.0	<0.1	163.4	4.4		
F	18	5.243	12.3	15.9	6.8	7.1	6.9	7.0	5.0	<0.1	180.9	7.2	136	4.6
S	19	4.661	12.4	16.6	6.8	7.1	6.9	7.0	6.0	<0.1	163.6	3.2	96	2.4
S	20	5.298	11.7	17.0	6.9	7.1	7.0	7.1	4.5	<0.1	207.3	3.3	116	3.4
M	21	6.286	12.1	16.6	6.7	7.1	6.8	7.1	5.0	<0.1			112	2.5
T	22	10.188	12.6	15.9	6.6	7.1	6.6	7.1	5.0	<0.1			120	3.3
W	23	13.024	13.2	15.2	6.6	7.2	6.6	7.2	4.5	<0.1			188	5.0
T	24	8.968	12.6	15.7	7.1	7.3	7.1	7.2	3.0	<0.1	81.3	2.7		
F	25	7.758	12.6	15.9	7.2	7.5	7.2	7.3	2.5	<0.1	81.7	3.1	68	10.0
S	26	5.782	12.6	16.4	7.2	7.5	7.2	7.5	4.0	<0.1	113.5	2.3	48	2.0
S	27	9.219	12.3	16.5	7.3	7.4	7.3	7.4	4.5	<0.1	121.0	2.1	96	5.0
M	28	12.158	12.5	15.1	6.9	7.4	6.9	7.4	3.5	<0.1			72	2.8
T	29	11.520	12.7	14.6	6.8	7.4	6.9	7.4	2.5	<0.1			64	9.2
W	30	8.432	13.0	15.2	7.0	7.4	7.2	7.4	5.5	<0.1			92	4.0
T	31	7.630	12.7	15.5	7.2	7.3	7.2	7.3	5.0	<0.1	104.1	4.5		8.8
									0.0	<0.1	88.7	9.8	84	5.2
	AVERAGE	6.610	11.7	15.9	6.5	7.5	6.6	7.5	31.0	0.0	161.9	4.1	149.1	5.2
		Monthly	ave.	ave.	min	max	min	max	max	max	97.5%	219.0	96.5%	284.0

NIAGARA COUNTY SEWER DISTRICT #1

May-01

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	COMMENTS
T	1	5.129			0.23	0.39	0.30		
W	2	5.296	6.16	1.74	0.52	0.85	0.66	3	
T	3	5.021	7.17	1.02	0.00	0.14	0.08		
F	4	4.877	3.69	0.85	0.12	1.06	0.61	3000	
S	5	5.178	11.83	0.82	0.09	0.85	0.44	1020	
S	6	4.290	1.58	0.43	0.28	0.45	0.37		
M	7	5.333	1.46	0.54	0.31	0.39	0.36		
T	8	4.988			0.39	0.65	0.52		
W	9	5.716	2.27	0.26	0.55	0.90	0.68	4	
T	10	5.067	3.24	0.22	0.41	0.51	0.47		
F	11	5.277	3.52	0.20	0.40	0.53	0.46	3	
S	12	6.364	1.01	0.30	0.37	0.39	0.38	3	
S	13	5.597	3.64	0.32	0.37	0.40	0.39		
M	14	5.403	3.81	0.30	0.20	0.42	0.29		
T	15	4.977			0.08	0.28	0.19		
W	16	5.115	3.04	0.47	0.27	0.32	0.29	520	
T	17	5.118	0.32	0.35	0.08	0.42	0.27		
F	18	5.243	3.04	0.34	0.32	0.97	0.60	640	
S	19	4.661	4.53	0.20	0.74	1.12	0.97	115	
S	20	5.298	2.91	0.35	0.72	1.04	0.85		
M	21	6.286	2.34	0.41	0.72	1.12	0.97		
T	22	10.188			0.52	0.80	0.66		
W	23	13.024	2.59	0.35	0.68	0.89	0.78	9	
T	24	8.968	1.54	0.27	0.34	0.84	0.51		
F	25	7.758	1.62	0.28	0.39	0.75	0.58	4	
S	26	5.782	2.67	0.39	0.39	0.80	0.61	4	
S	27	9.219	1.50	0.33	0.62	0.78	0.71		
M	28	12.158	4.78	0.16	0.46	0.60	0.55		
T	29	11.520			0.65	0.95	0.81		
W	30	8.432	2.18	0.49	0.75	0.81	0.78	3	
T	31	7.630	2.35	0.29	0.73	1.02	0.89		
	AVERAGE	6.610	3.13	0.42	0.00	1.12	0.97	28.1	
				22.6				337.0	

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Jun-01

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
716-693-8759 FAX

FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
F	1	6.838	12.8	15.6	7.2	7.3	7.3	7.3	5.5	<0.1	145.4	6.7	128	4.0
S	2	6.974	12.7	16.0	7.3	7.3	7.3	7.3	3.0	<0.1	116.7	6.2	116	4.4
S	3	6.612	12.6	16.4	7.1	7.3	7.0	7.0	5.0	<0.1			144	3.6
M	4	6.370	12.7	15.9	7.0	7.4	7.0	7.0	4.0	<0.1			112	9.6
T	5	6.612	12.9	15.0	6.9	7.4	7.2	7.2	5.0	<0.1			104	5.3
W	6	7.127	13.1	17.1	7.2	7.3	7.3	7.3	5.0	<0.1	128.1	3.0	88	5.5
T	7	5.600	13.0	17.5	7.2	7.4	7.3	7.3	5.0	<0.1	165.8	3.6	57	4.0
F	8	6.717	13.2	17.6	7.2	7.5	7.2	7.2	5.5	<0.1	143.1	2.4	80	4.4
S	9	5.544	13.1	17.6	7.2	7.5	7.2	7.2	4.5	<0.1	151.2	3.2	56	2.4
S	10	5.913	13.4	17.8	7.2	7.3	7.1	7.1	5.0	<0.1			100	4.0
M	11	6.444	13.5	17.4	7.0	7.4	7.2	7.2	5.0	<0.1			104	5.8
T	12	6.003	15.9	16.3	6.8	7.4	7.0	7.0	14.5	<0.1			208	4.0
W	13	5.925	13.5	18.3	7.0	7.2	7.2	7.2	5.0	<0.1	168.2	6.5	104	3.6
T	14	5.349	13.7	18.1	7.0	7.2	7.0	7.0	8.0	<0.1	181.4	12.9	160	3.8
F	15	5.475	13.9	18.5	6.8	7.2	7.1	7.1	18.0	<0.1	319.1	13.0	212	3.0
S	16	5.072	14.1	19.0	7.1	7.3	7.2	7.2	18.0	<0.1	429.0	18.3	160	2.2
S	17	4.825	13.9	19.0	7.0	7.3	7.2	7.2	25.0	<0.1			376	3.0
M	18	5.219	13.9	18.5	6.3	7.1	7.0	7.0	24.0	<0.1			252	4.0
T	19	5.024	14.2	18.9	6.2	6.8	7.1	7.1	24.0	<0.1			244	3.5
W	20	5.466	14.2	18.7	7.1	7.3	7.4	7.4	35.0	<0.1	285.1	5.6	348	11.6
T	21	5.343	14.0	18.0	7.2	7.3	7.3	7.3	20.0	<0.1	171.3	9.4	372	11.6
F	22	5.399	14.5	18.7	7.1	7.5	7.4	7.4	18.0	<0.1	212.8	3.4	176	5.2
S	23	5.781	14.3	17.5	7.1	7.3	7.3	7.3	18.5	<0.1	206.2	4.3	172	6.8
S	24	5.444	14.3	18.0	7.2	7.3	7.1	7.1	4.5	<0.1			128	6.5
M	25	4.995	14.2	18.5	6.9	7.0	6.9	6.9	5.0	<0.1			268	11.2
T	26	5.017	14.5	18.7	6.9	7.2	7.2	7.2	4.0	<0.1			184	9.2
W	27	4.274	15.1	19.5	6.8	7.1	7.2	7.2	8.5	<0.1	148.1	1.4	212	6.7
T	28	4.631	15.1	19.7	6.9	7.2	7.1	7.1	5.0	<0.1	152.1	4.1	132	5.3
F	29	4.616	15.3	19.7	6.8	7.3	6.9	6.9	12.0	<0.1	234.8	3.8	192	3.7
S	30	4.944	14.5	19.2	7.1	7.2	7.2	7.2	5.5	<0.1			152	7.3
	AVERAGE	5.652	13.9	17.9	6.2	7.5	6.9	7.4	35.0	0.0	193.8	6.3	165.7	5.5
		Monthly	ave.	ave.	min	max	min	max	max	max	96.8%	295.6	96.7%	257.5

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1
Jun-01

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
F	1	6.838	2.67	0.25	0.84	0.96	0.91	3	
S	2	6.974	1.22	0.24	0.64	1.08	0.80	3	
S	3	6.612	1.70	0.23	0.63	0.94	0.76		
M	4	6.370	3.04	0.41	0.40	0.70	0.54		
T	5	6.612			0.56	0.66	0.63		
W	6	7.127	2.23	0.24	0.67	0.76	0.72	3	
T	7	5.600	2.02	0.28	0.49	0.66	0.59		
F	8	6.717	2.51	0.48	0.51	0.70	0.59	3	
S	9	5.544	1.66	0.35	0.52	0.70	0.60	4	
S	10	5.913	3.60	0.38	0.47	0.66	0.57		
M	11	6.444	3.32	0.43	0.42	0.50	0.47		
T	12	6.003			0.49	0.52	0.50		
W	13	5.925	2.67	0.34	0.38	0.56	0.45	10	
T	14	5.349	5.46	0.40	0.45	0.48	0.47		
F	15	5.475	8.54	0.33	0.36	0.63	0.52	3	
S	16	5.072	3.84	0.38	0.41	0.58	0.49	3	
S	17	4.825			0.34	0.55	0.45		
M	18	5.219	5.39	0.35	0.30	0.44	0.39		
T	19	5.024	3.32	0.31	0.12	0.38	0.27		
W	20	5.466	4.45	0.30	0.18	0.29	0.24	171	
T	21	5.343	3.69	0.12	0.21	0.34	0.27		
F	22	5.399	3.69	0.34	0.22	0.26	0.24	1060	
S	23	5.781	3.77	0.40	0.18	0.50	0.31	55000	
S	24	5.444	3.93	0.44	0.35	0.38	0.36		
M	25	4.995	5.27	0.67	0.18	0.26	0.22		
T	26	5.017			0.10	0.18	0.15		
W	27	4.274	5.06	0.60	0.50	0.59	0.54	3	
T	28	4.631	3.97	0.49	0.45	0.50	0.48		
F	29	4.616	5.35	0.44	0.28	0.40	0.35	77	
S	30	4.944	5.55	0.49	0.10	0.44	0.30	2400	
	AVERAGE	**5.652**	**3.64**	**0.37**	**0.10**	**1.08**	**0.91**	**27.7**	
				17.2				**2151.4**	

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Jul-01

7346 LIBERTY DRIVE
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FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
S	1	4.139	14.9	19.6	7.1	7.5	7.1	7.4	5	<0.1				
M	2	5.431	14.9	18.0	7.1	7.4	7.1	7.4	6	<0.1			100	4.0
T	3	3.645	15.3	18.7	7.0	7.4	7.0	7.2	4	<0.1			144	1.6
W	4	4.967	15.2	18.9	7.0	7.2	7.0	7.2	5	<0.1			80	3.3
T	5	4.430	14.8	18.9	7.1	7.4	7.2	7.2	6	<0.1	186.6	3.0		
F	6	4.167	14.8	18.5	6.9	7.3	7.0	7.1	5	<0.1	174.4	3.2	136	4.6
S	7	4.167	15.1	18.8	6.9	7.3	6.9	7.1	5.5	<0.1	200.3	3.5	76	3.0
S	8	4.300	15.3	18.9	6.8	7.2	6.8	7.0	5	<0.1	205.2	3.9	160	6.8
M	9	5.533	14.9	19.5	7.0	7.1	7.0	7.0	4.5	<0.1			148	6.8
T	10	4.567	14.9	19.7	6.7	7.3	6.7	7.1	4	<0.1			80	8.0
W	11	4.761	15.6	19.5	7.1	7.4	7.2	7.4	5.5	<0.1			104	6.0
T	12	4.675	16.0	19.2	7.0	7.3	7.1	7.1	6	<0.1	190.1	19.4	132	6.3
F	13	3.831	16.1	19.1	7.0	7.2	7.0	7.2	6	<0.1	179.7	13.0	128	5.0
S	14	4.841	15.9	18.7	7.1	7.3	7.1	7.3	7	<0.1	198.3	3.5	128	4.7
S	15	4.018	15.4	19.4	6.9	7.2	7.1	7.2	5.5	<0.1	175.5	15.6	232	8.3
M	16	4.519	15.8	19.6	6.9	7.3	7.1	7.3	7	<0.1			96	3.7
T	17	4.446	15.6	19.8	6.9	7.3	7.1	7.3	5	<0.1			112	6.3
W	18	4.311	16.1	20.5	7.3	7.4	7.4	7.4	5	<0.1			120	5.3
T	19	4.474	16.0	20.5	7.2	7.5	7.4	7.5	5	<0.1	181.8	0.8		
F	20	4.721	16.0	20.8	7.3	7.5	7.4	7.5	5	<0.1	347.5	1.6	100	4.8
S	21	4.449	17.4	20.9	7.0	7.2	7.2	7.2	5	<0.1	169.8	4.0	116	4.5
S	22	4.376	17.3	21.5	6.9	7.2	6.9	7.2	6	<0.1	143.8	3.4	124	3.5
M	23	4.400	16.3	21.4	6.8	7.2	6.8	7.1	6	<0.1			104	4.3
T	24	4.179	17.0	21.5	6.8	7.1	6.8	6.9	4	<0.1			128	2.6
W	25	4.550	17.6	21.7	6.8	7.1	7.1	7.1	9	<0.1			208	2.6
T	26	5.343	17.5	20.7	6.8	7.2	6.9	7.1	9.5	<0.1			144	5.0
F	27	4.563	17.1	20.6	6.8	7.1	7.0	7.1	6	<0.1	170.7	3.5	180	3.6
S	28	4.485	16.6	20.2	6.6	7.1	6.8	7.1	7	<0.1	176.3	2.8	184	3.8
S	29	4.459	16.9	20.5	6.9	7.0	6.9	7.0	6.5	<0.1	179.1	5.5	164	3.6
M	30	4.706	17.7	20.6	6.7	6.9	6.7	6.9	14	<0.1			104	1.6
T	31	5.284	17.0	19.5	6.8	7.2	6.8	7.1	9.5	<0.1			96	1.2
									7	<0.1			192	3.2
	AVERAGE	4.540	16.0	19.9	6.6	7.5	6.7	7.5	14.0	0.0	191.3	5.9	132.7	4.4
		Monthly	ave.	ave.	min	max	min	max	max	max	96.9%	223.7	96.7%	167.1

NIAGARA COUNTY SEWER DISTRICT #1

Jul-01

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
S	1	4.139	2.96	0.47	0.59	0.63	0.61		
M	2	5.431	4.25	0.48	0.32	0.58	0.44		
T	3	3.645			0.28	0.88	0.53		
W	4	4.967	3.24	0.64	0.64	0.84	0.75	3	
T	5	4.430	3.20	0.73	0.79	0.94	0.87		
F	6	4.167	3.24	0.91	0.90	1.03	0.95	3	
S	7	4.167	3.32	0.92	0.94	0.99	0.97	3	
S	8	4.300	2.79	0.82	0.85	0.93	0.90		
M	9	5.533	2.88	0.71	0.66	0.98	0.79		
T	10	4.567			0.58	0.87	0.77		
W	11	4.761	3.28	0.52	0.69	0.95	0.82	3	
T	12	4.675	4.62	0.56	1.04	1.11	1.07		
F	13	3.831	3.60	0.52	0.47	1.36	0.92	48	
S	14	4.841	3.60	0.50	0.67	0.96	0.78	3	
S	15	4.018	4.98	0.65	0.56	0.63	0.59		
M	16	4.519	3.97	0.82	0.60	0.64	0.62		
T	17	4.446			0.45	0.53	0.49		
W	18	4.311	3.32	0.81	0.38	0.70	0.55		
T	19	4.474	3.65	0.71	0.59	0.61	0.60		
F	20	4.721	5.10	0.68	0.42	0.66	0.53	16	
S	21	4.449	2.55	0.52	0.55	1.04	0.72	4	
S	22	4.376	3.16	0.52	0.34	0.49	0.40		
M	23	4.400	2.67	0.44	0.24	0.54	0.35		
T	24	4.179			0.25	0.37	0.33		
W	25	4.550	4.13	0.48	0.14	0.28	0.22		
T	26	5.343	4.37	0.45	0.17	0.29	0.23		
F	27	4.563	3.48	0.45	0.43	0.68	0.59	3	
S	28	4.485	9.51	0.56	0.51	0.57	0.54	3	
S	29	4.459	4.41	0.60	0.49	0.72	0.58		
M	30	4.706	28.90	0.61	0.36	0.61	0.51		
T	31	5.284			0.48	0.60	0.54		
	AVERAGE	4.540	4.85	0.62	0.14	1.36	1.07	4.8	
				23.4				12.0	

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Aug-01

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
716-693-8759 FAX

FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
W	1	4.911	17.7	21.5	6.6	7.2	6.6	7.2	10	<0.1	163.1	2.1		
T	2	5.044	17.5	21.3	6.9	7.3	6.9	7.1	18	<0.1	145.6	2.8	316	6.6
F	3	4.052	16.9	21.6	7.0	7.3	7.1	7.1	10	<0.1	155.5	1.7	156	1.8
S	4	3.872	18.2	21.7	6.8	7.1	6.8	6.9	5	<0.1	132.7	2.7	132	2.8
S	5	3.716	16.9	21.3	6.9	7.3	6.9	7.0	8	<0.1			162	2.4
M	6	3.882	16.7	21.3	6.9	7.1	6.9	7.0	6	<0.1			196	3.6
T	7	4.039	17.3	22.0	6.2	7.6	6.2	7.2	11	<0.1			204	3.2
W	8	5.284	17.8	21.2	6.8	7.2	6.9	7.2	7	<0.1	138.6	3.7		
T	9	4.232	18.0	20.4	6.9	7.3	6.9	6.9	4.5	<0.1	131.0	1.5	152	3.4
F	10	3.557	18.0	21.1	6.7	7.2	6.7	7.0	7	<0.1	169.2	2.1	96	2.0
S	11	3.947	17.7	19.4	6.9	7.2	6.9	7.0	9.5	<0.1	176.8	9.1	312	1.2
S	12	4.050	16.9	20.7	6.7	7.0	6.7	6.8	9.5	<0.1			84	1.2
M	13	3.944	17.7	20.7	6.7	8.0	6.7	6.8	10	<0.1			264	3.2
T	14	4.016	17.5	20.9	6.8	7.2	6.8	7.0	7	<0.1			196	2.2
W	15	3.908	17.2	20.8	6.8	7.6	6.8	7.0	6.5	<0.1	150.7	1.9		
T	16	3.977	17.9	20.7	6.9	7.3	6.9	7.1	8	<0.1	149.6	1.2	216	3.8
F	17	3.867	18.0	21.3	6.9	7.3	6.9	7.1	9	<0.1	141.1	2.1	196	1.2
S	18	3.678	17.4	21.2	6.9	7.2	6.9	7.0	7	<0.1	144.1	1.6	200	0.6
S	19	4.294	17.1	21.8	6.7	7.2	6.7	7.1	7	<0.1			236	1.4
M	20	4.526	17.9	21.3	6.8	7.4	6.8	6.9	7	<0.1			252	1.4
T	21	4.067	17.9	21.7	6.9	7.3	6.9	7.1	9	<0.1			232	0.2
W	22	3.917	17.7	21.2	6.8	7.4	6.8	7.0	12	<0.1	211.6	4.3	276	2.2
T	23	4.335	17.7	21.8	6.8	7.4	6.8	6.9	12	<0.1	158.5	4.3	216	2.0
F	24	3.787	18.2	21.5	6.7	7.5	6.7	7.1	19	<0.1	232.8	2.0	440	3.6
S	25	3.526	18.4	21.7	6.7	7.0	6.8	6.9	9	<0.1	247.8	4.2	205	2.2
S	26	3.779	18.2	21.8	6.7	7.4	6.7	7.0	17.5	<0.1			252	2.0
M	27	3.949	18.0	21.7	6.7	7.3	6.7	6.9	11	<0.1			204	0.8
T	28	3.675	18.3	21.4	6.6	7.1	6.7	6.9	10.5	<0.1			164	1.4
W	29	3.868	18.4	22.0	6.6	7.2	6.7	7.0	23	<0.1	236.4	3.0	352	1.2
T	30	3.504	18.9	21.6	6.6	7.3	6.8	7.3	20	<0.1	190.6	3.4		
F	31	4.259	18.5	22.5	6.7	6.9	6.7	6.8	10	<0.1	169.4	5.4	212	2.8
	AVERAGE	4.047	17.8	21.3	6.2	8.0	6.2	7.3	23.0	0.0	169.0	3.1	220.6	2.3
		Monthly	ave.	ave.	min	max	min	max	max	max	98.2%	105.9	99.0%	76.0

NIAGARA COUNTY SEWER DISTRICT #1

Aug-01

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
W	1	4.911	6.04	0.55	0.43	0.57	0.52	15	
T	2	5.044	7.81	0.47	0.19	0.33	0.28		
F	3	4.052	14.82	0.41	0.11	0.30	0.19	3	
S	4	3.872	10.24	0.45	0.31	0.40	0.36	8	
S	5	3.716	6.44	0.48	0.14	0.31	0.21		
M	6	3.882	5.35	0.62	0.16	0.25	0.20		
T	7	4.039			0.59	0.96	0.79		
W	8	5.284	5.39	0.44	0.65	0.87	0.73	3	
T	9	4.232	3.65	0.32	0.65	0.78	0.72		
F	10	3.557	4.86	0.34	0.53	0.64	0.59	3	
S	11	3.947	5.67	0.27	0.42	0.53	0.48	3	
S	12	4.050	7.29	0.31	0.21	0.27	0.24		
M	13	3.944	17.44	0.27	0.12	0.35	0.26		
T	14	4.016			0.29	0.43	0.38		
W	15	3.908	7.04	0.35	0.13	0.87	0.60	3	
T	16	3.977	5.99	0.29	0.97	0.99	0.98		
F	17	3.867	2.31	0.28	0.23	0.90	0.62	3	
S	18	3.678	4.13	0.33	0.65	0.89	0.77	3	
S	19	4.294	6.07	0.31	0.65	0.89	0.79		
M	20	4.526	4.49	0.33	0.55	0.75	0.63		
T	21	4.067			0.14	0.26	0.20		
W	22	3.917	5.62	0.41	0.22	0.26	0.24		
T	23	4.335	6.72	0.41	0.12	0.26	0.18		
F	24	3.787	2.59	0.43	0.06	0.94	0.57	3	
S	25	3.526	4.94	0.45	0.28	0.30	0.29	30	
S	26	3.779	10.70	0.41	0.20	0.75	0.40		
M	27	3.949	5.02	0.36	0.65	1.36	0.92		
T	28	3.675			0.39	0.96	0.59		
W	29	3.868	10.60	0.24	0.18	0.27	0.23	3200	
T	30	3.504	8.74	0.20	0.09	0.20	0.15		
F	31	4.259	3.88	0.21	0.10	0.25	0.16	123	
	AVERAGE	**4.047**	**6.78**	**0.37**	**0.06**	**1.36**	**0.98**	**10.0**	
				12.6				**66.0**	

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Sep-01

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK
716-693-0001
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FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
S	1	4.200	17.8	21.7	7.1	7.5	6.9	7.1	18	<0.1	366.8	6.1	304	1.0
S	2	4.200	17.6	21.2	7.0	7.1	6.9	7.4	15.0	<0.1			260	2.0
M	3	4.218	17.6	21.0	6.9	7.3	6.7	7.1	15.0	<0.1			244	1.4
T	4	4.324	17.7	21.9	7.1	7.3	6.6	7.2	18.0	<0.1			252	2.0
W	5	4.154	17.9	21.8	7.1	7.4	6.9	7.2	18.5	<0.1	199.0	6.4	280	1.8
T	6	4.154	18.3	21.2	7.1	7.3	7.0	7.1	19.0	<0.1	179.5	21.9	208	2.4
F	7	4.429	18.1	21.6	7.1	7.2	6.7	7.1	20.0	<0.1	279.4	2.4	248	2.0
S	8	4.225	17.8	22.6	7.2	7.2	6.9	7.1	20.0	<0.1	240.5	3.3	276	5.8
S	9	3.924	18.3	22.6	6.9	7.2	7.0	7.1	19.0	<0.1			232	0.8
M	10	3.927	18.5	22.3	6.8	7.1	6.9	7.1	19.0	<0.1			200	1.1
T	11	4.239	18.1	22.5	6.9	7.0	6.9	7.0	20.0	<0.1			268	1.1
W	12	4.239	18.4	22.2	6.9	7.1	6.8	7.1	24.0	<0.1	210.4	3.2		
T	13	4.089	18.7	21.8	6.9	7.4	6.7	7.0	25.0	<0.1	257.9	3.6	372	2.0
F	14	3.924	18.3	20.8	7.0	7.2	6.9	7.2	29.0	<0.1	182.3	3.6	344	1.2
S	15	3.600	18.1	21.3	7.1	7.1	6.8	6.9	25.0	<0.1	283.9	1.8	276	0.8
S	16	3.850	18.2	20.5	6.9	6.9	6.6	6.9	23.0	<0.1			216	0.4
M	17	3.724	18.4	20.8	6.7	7.0	6.7	6.8	15.0	<0.1			252	0.8
T	18	3.825	18.6	21.6	6.7	7.1	6.5	6.6	23.0	<0.1			128	0.6
W	19	3.469	18.5	21.8	6.9	7.1	6.6	7.0	22.0	<0.1	221.3	3.2		
T	20	3.621	18.1	21.6	6.9	7.3	6.9	7.1	24.0	<0.1	211.5	2.5	168	0.4
F	21	4.417	18.4	21.5	7.2	7.4	7.0	7.1	21.0	<0.1	171.2	2.1	276	0.9
S	22	4.019	18.7	20.7	7.1	7.3	6.8	7.1	19.0	<0.1	230.7	2.3	184	0.8
S	23	4.007	18.2	20.6	7.1	7.2	6.9	7.0	28.0	<0.1			144	0.4
M	24	3.203	19.0	20.3	7.2	7.3	6.8	7.0	24.0	<0.1			232	0.6
T	25	4.567	18.4	20.4	7.1	7.3	6.8	7.1	18.0	<0.1			492	2.6
W	26	5.650	18.5	19.9	7.1	7.2	7.0	7.3	18.0	<0.1	220.1	6.4		
T	27	7.459	18.3	19.5	7.1	7.3	7.0	7.1	20.0	<0.1	281.2	3.8	292	1.6
F	28	6.850	18.3	19.6	7.0	7.1	6.8	7.1	17.0	<0.1	128.7	2.5	180	1.2
S	29	4.692	18.0	20.1	7.0	7.1	6.8	6.9	16.0	<0.1	171.5	2.4	172	2.0
S	30	4.333	17.4	20.1	7.0	7.2	6.8	6.9	20.0	<0.1			236	1.6
	AVERAGE	4.318	18.2	21.2	6.7	7.5	6.5	7.4	29.0	0.0	227.0	4.6	250.6	1.5
		Monthly	ave.	ave.	min	max	min	max	max	max	98.0%	175.2	99.4%	53.5

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1

Sep-01

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
S	1	4.200	7.65	0.21	0.21	0.34	0.26	540	
S	2	4.200	4.29	0.20	0.52	0.58	0.54		
M	3	4.218	4.45	0.24	0.52	0.79	0.63		
T	4	4.324			0.32	0.43	0.37		
W	5	4.154	5.50	0.38	0.00	0.92	0.45	3	
T	6	4.154	6.08	0.43	0.72	1.12	0.88		
F	7	4.429	6.16	0.39	0.36	0.65	0.49	8	
S	8	4.225	6.16	0.44	0.39	0.66	0.55	3	
S	9	3.924	4.57	0.41	0.53	0.67	0.60		
M	10	3.927	3.44	0.44	0.05	0.57	0.35		
T	11	4.239			0.46	0.55	0.50		
W	12	4.239	1.29	0.42	0.35	0.50	0.43	3	
T	13	4.089	7.24	0.46	0.06	0.68	0.27		
F	14	3.924	6.07	0.35	0.15	0.45	0.27	66	
S	15	3.600	5.83	0.31	0.19	0.47	0.29	2100	
S	16	3.850	4.86	0.34	0.51	0.53	0.52		
M	17	3.724	6.03	0.26	0.00	0.52	0.25		
T	18	3.825			0.79	1.32	1.05		
W	19	3.469	5.30	0.25	0.49	0.53	0.51	3	
T	20	3.621	4.53	0.23	0.50	0.65	0.60		
F	21	4.417	3.56	0.24	0.52	0.76	0.61	3	
S	22	4.019	6.32	0.33	0.58	0.68	0.62	3	
S	23	4.007	4.57	0.40	0.53	0.60	0.57		
M	24	3.203	4.78	0.35	0.50	0.70	0.59		
T	25	4.567			0.33	0.98	0.64		
W	26	5.650	4.90	0.31	0.35	0.54	0.46	5	
T	27	7.459	0.57	0.28	0.25	0.68	0.51		
F	28	6.850	3.77	0.19	0.44	0.65	0.56	3	
S	29	4.692	1.22	0.23	0.52	0.67	0.61	3	
S	30	4.333	3.73	0.28	0.47	0.51	0.49		
	AVERAGE	4.318	4.55	0.32	0.00	1.32	1.05	10.5	
				11.4				74.5	

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Oct-01

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
716-693-8759 FAX

FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
M	1	4.393	17.8	20.2	6.9	7.1	6.7	6.8	12.00	<0.1			184	1.9
T	2	4.505	18.0	20.7	6.8	7.3	6.9	7.1	15.00	<0.1			244	2.4
W	3	4.286	18.5	20.4	6.9	7.0	6.9	7.4	12.00	<0.1				
T	4	4.096	18.3	20.7	7.3	7.4	7.0	7.2	13.00	<0.1	173.2	22.8	180	2.3
F	5	5.818	18.3	20.2	7.1	7.7	7.2	7.2	10.00	<0.1	174.4	2.9	224	2.2
S	6	15.901	17.4	18.8	7.1	7.2	6.8	7.0	15.50	<0.1	170.9	14.6	432	5.8
S	7	7.935	17.6	18.4	7.1	7.3	6.9	6.9	9.00	<0.1			292	3.8
M	8	6.150	17.3	18.5	7.2	7.4	6.8	6.8	10.50	<0.1			88	0.2
T	9	5.381	17.4	18.6	7.1	7.3	6.9	7.1	16.00	<0.1			152	0.7
W	10	5.339	17.7	19.5	7.3	7.4	6.9	7.1	6.50	<0.1	167.7	1.5	184	1.6
T	11	5.196	17.7	20.3	7.2	7.4	7.1	7.2	10.50	<0.1	197.2	2.1	268	2.2
F	12	4.937	17.9	20.7	7.0	7.3	7.0	7.1	6.00	<0.1	142.9	1.7	164	1.0
S	13	4.767	17.7	20.6	7.2	7.3	6.9	7.1	5.00	<0.1	156.8	3.0	136	4.0
S	14	4.834	17.5	21.6	7.2	7.2	7.1	7.1	4.50	<0.1			152	3.6
M	15	5.624	17.5	19.8	7.3	7.5	6.9	7.0	4.00	<0.1			148	4.0
T	16	5.476	17.8	19.2	7.2	7.4	6.9	7.0	4.50	<0.1			156	3.2
W	17	8.560	17.4	18.3	7.0	7.5	7.0	7.0	4.00	<0.1	132.6	3.7		
T	18	6.482	17.1	18.0	7.4	7.5	7.0	7.1	4.00	<0.1	92.8	1.6	56	2.8
F	19	5.614	17.4	18.5	7.3	7.4	7.0	7.2	4.00	<0.1	108.0	2.4	112	2.0
S	20	4.886	17.1	19.5	7.3	7.4	6.9	7.1	5.00	<0.1	116.4	0.9	80	2.0
S	21	5.148	17.2	19.3	7.2	7.3	7.0	7.1	4.00	<0.1			104	1.8
M	22	5.257	17.5	19.4	7.2	7.3	6.9	7.1	4.00	<0.1			220	1.8
T	23	5.363	17.4	19.6	7.0	7.6	6.8	7.2	3.50	<0.1			136	1.0
W	24	5.713	17.7	19.6	7.3	7.3	6.8	7.0	6.00	<0.1	147.1	2.9	188	2.2
T	25	6.578	17.1	19.2	7.3	7.3	6.9	7.1	5.00	<0.1	121.2	2.8	140	1.4
F	26	8.168	16.8	17.5	7.3	7.4	6.9	7.0	3.00	<0.1	105.5	2.7	92	1.2
S	27	5.620	16.6	17.8	7.3	7.4	7.0	7.2	5.00	<0.1	124.6	1.5	116	2.0
S	28	5.383	16.4	18.3	7.2	7.3	6.9	7.0	4.00	<0.1			188	1.8
M	29	4.960	16.7	17.9	7.3	7.3	6.9	7.1	4.00	<0.1			120	1.8
T	30	4.858	16.6	18.5	7.2	7.3	6.9	7.1	4.00	<0.1			108	1.4
W	31	4.596	16.9	18.5	7.1	7.4	6.9	7.2	4.50	<0.1	106.9	14.0		
	AVERAGE	5.865	17.4	19.3	6.8	7.7	6.7	7.4	16.0	0.0	141.0	5.6	183.0	2.4
		Monthly	ave.	ave.	min	max	min	max	max	max	96.0%	298.4	98.7%	119.5

NIAGARA COUNTY SEWER DISTRICT #1

Oct-01

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	COMMENTS
M	1	4.393	4.29	0.35	0.48	1.48	0.83		
T	2	4.505			0.99	1.14	1.09		
W	3	4.286	3.85	0.41	0.81	1.03	0.94	3	
T	4	4.096	2.99	0.24	0.72	1.06	0.89		
F	5	5.818	1.58	0.54	0.50	0.99	0.70	3	
S	6	15.901	8.46	0.34	0.72	1.12	0.93	3	
S	7	7.935	2.34	0.15	0.75	0.78	0.77		
M	8	6.150			0.71	0.95	0.80		
T	9	5.381	2.22	0.18	0.76	0.81	0.78		
W	10	5.339	6.60	0.25	0.96	1.15	1.05	3	
T	11	5.196	16.60	0.28	0.60	0.99	0.84		
F	12	4.937	4.65	0.30	0.72	0.94	0.80	3	
S	13	4.767	3.40	0.39	0.62	0.82	0.75	3	
S	14	4.834	3.52	0.44	0.24	0.77	0.45		
M	15	5.624	4.09	0.53	0.06	0.29	0.19		
T	16	5.476			0.00	1.23	0.47		
W	17	8.560	2.83	0.61	0.73	1.00	0.91	3	
T	18	6.482	2.02	0.47	0.88	1.27	1.02		
F	19	5.614	2.51	0.49	0.58	0.94	0.75	3	
S	20	4.886	2.79	0.42	0.78	1.00	0.91	3	
S	21	5.148	3.32	0.44	0.91	1.18	1.03		
M	22	5.257	5.67	0.43	0.58	1.05	0.82		
T	23	5.363			0.67	0.80	0.75		
W	24	5.713	4.09	0.41	0.00	0.90	0.39	3	
T	25	6.578	2.71	0.43	0.57	0.73	0.63		
F	26	8.168	2.63	0.33	0.00	0.55	0.27	3	
S	27	5.620	2.19	0.33	0.80	0.94	0.86	3	
S	28	5.383	3.97	0.35	0.78	0.83	0.80		
M	29	4.960	3.28	0.36	0.81	1.06	0.92		
T	30	4.858			0.24	0.54	0.39		
W	31	4.596	2.88	0.36	0.20	0.22	0.21	3800	
	AVERAGE	5.865	4.25	0.38	0.00	1.48	1.09	5.2	
				18.9				13.6	

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Nov-01

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
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FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
T	1	4.612	16.8	18.5	7.2	7.3	6.9	7.0	4.5	<0.1	123.5	5.9	124	0.9
F	2	4.642	17.0	18.7	7.0	7.3	6.8	7.0	5.0	<0.1	118.6	2.0	132	1.3
S	3	4.234	16.7	19.1	7.0	7.3	6.9	7.1	7.0	<0.1	166.4	4.1	148	1.6
S	4	4.694	16.4	19.4	7.1	7.3	6.8	7.1	7.0	<0.1			120	1.8
M	5	4.841	16.4	18.0	6.8	7.2	6.7	7.2	5.0	<0.1			132	1.7
T	6	4.542	16.3	18.1	6.8	7.2	6.9	7.0	5.0	<0.1			104	0.8
W	7	4.678	16.3	18.5	6.8	6.9	6.9	7.2	11.0	<0.1	176.2	2.0	224	2.8
T	8	4.686	16.4	19.1	6.9	7.2	6.8	7.0	7.5	<0.1	178.7	2.1	160	1.8
F	9	4.969	16.2	18.8	6.9	7.4	7.0	7.0	10.0	<0.1	156.8	3.0	216	0.8
S	10	4.781	16.3	19.1	7.1	7.1	6.9	7.0	13.0	<0.1	238.5	5.0	188	2.1
S	11	4.616	15.7	18.4	7.0	7.1	6.9	7.0	14.0	<0.1			224	1.0
M	12	4.615	15.8	18.1	7.0	7.1	6.8	7.0	14.0	<0.1			160	1.2
T	13	4.435	16.2	18.0	6.9	7.5	6.8	7.1	10.0	<0.1			208	0.6
W	14	4.495	16.2	18.4	7.2	7.5	7.0	7.1	11.0	<0.1	156.9	3.0	208	
T	15	4.980	15.8	19.1	7.2	7.3	7.0	7.2	8.0	<0.1	137.5	4.6	124	1.6
F	16	4.416	16.1	18.9	7.3	7.6	6.9	7.2	8.0	<0.1	159.0	2.0	132	1.4
S	17	4.519	16.0	17.6	7.2	7.4	7.0	7.3	6.0	<0.1	157.9	3.6	200	1.8
S	18	3.889	15.5	16.6	6.8	7.3	6.6	7.2	9.0	<0.1			260	1.6
M	19	4.765	15.7	16.5	6.8	7.1	6.9	7.0	11.0	<0.1			220	0.6
T	20	5.056	15.7	15.8	6.7	7.0	6.9	7.1	8.0	<0.1			284	1.6
W	21	5.722	15.6	15.4	7.0	7.3	6.8	6.9	6.0	<0.1	152.8	6.0	104	1.4
T	22	5.399	15.5	15.6	6.7	6.9	6.8	7.2	9.0	<0.1	305.2	2.5	344	3.0
F	23	4.394	15.4	15.6	6.9	6.9	6.6	6.9	4.0	<0.1	146.9	2.2	116	1.4
S	24	4.499	15.2	15.6	6.9	6.9	6.8	6.9	5.0	<0.1	141.1	2.6	112	1.2
S	25	6.652	15.2	16.2	7.0	7.0	6.9	6.9	4.0	<0.1			168	1.2
M	26	6.116	15.2	15.6	6.9	7.0	6.8	6.9	3.0	<0.1			96	2.0
T	27	6.385	15.4	17.3	6.4	7.5	6.5	7.2	3.0	<0.1			84	1.2
W	28	6.291	15.5	17.7	7.3	7.3	7.1	7.2	4.5	<0.1	94.7	3.2		
T	29	9.854	14.8	16.6	7.3	7.4	7.1	7.2	5.0	<0.1	112.4	3.5	96	0.6
F	30	13.223	14.3	15.5	7.2	7.3	7.0	7.2	1.4	<0.1	56.2	5.9	92	4.0
	AVERAGE	5.367	15.8	17.5	6.4	7.6	6.5	7.3	14.0	0.0	144.0	3.7	157.4	1.6
		Monthly	ave.	ave.	min	max	min	max	max	max	97.4%	173.7	99.0%	73.7

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1

Nov-01

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
T	1	4.612	3.85	0.34	0.08	1.23	0.73		
F	2	4.642	3.77	0.32	0.73	1.14	0.93	3	
S	3	4.234	4.25	0.35	0.24	0.68	0.47	3	
S	4	4.694			0.16	0.56	0.39		
M	5	4.841	3.84	0.42	0.66	0.81	0.71		
T	6	4.542	3.88	0.34	0.65	0.70	0.67		
W	7	4.678	5.50	0.52	0.77	0.92	0.84	3	
T	8	4.686	3.96	0.50	0.61	0.84	0.75		
F	9	4.969	4.73	0.44	0.71	1.20	0.97	3	
S	10	4.781	4.09	0.49	0.80	1.12	0.95	3	
S	11	4.616	5.91	0.53	0.85	1.10	1.00		
M	12	4.615	6.48	0.35	0.93	1.27	1.08		
T	13	4.435			1.00	1.57	1.23		
W	14	4.495			1.27	1.41	1.36	3	
T	15	4.980	3.77	0.45	1.00	1.30	1.13		
F	16	4.416	4.09	0.41	1.10	1.57	1.26	3	
S	17	4.519	5.95	0.40	1.17	1.30	1.23	3	
S	18	3.889	10.77	0.49	1.20	1.54	1.34		
M	19	4.765	41.10	0.39	0.36	1.36	0.71		
T	20	5.056			0.12	0.23	0.17		
W	21	5.722	0.22	0.30	0.14	0.44	0.29	43	
T	22	5.399	10.41	0.36	0.15	0.84	0.44		
F	23	4.394	3.81	0.40	0.18	1.22	0.54	8	
S	24	4.499	3.81	0.55	1.35	1.52	1.42	3	
S	25	6.652	3.16	0.48	0.25	0.87	0.51		
M	26	6.116	3.40	0.37	0.46	0.95	0.69		
T	27	6.385			0.20	0.36	0.25		
W	28	6.291	3.24	0.38	0.19	0.26	0.22	3933	
T	29	9.854	2.31	0.30	0.70	1.08	0.84		
F	30	13.223	2.02	0.30	0.45	1.12	0.68	11	
	AVERAGE	5.367	5.43	**0.40**	**0.08**	**1.57**	**1.42**	7.6	
				17.9				17.4	

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1 | 7346 LIBERTY DRIVE | 716-693-0001 | FRANK A. Nerone, P.E.
SPDES # NY-0027979 | Dec-01 | NIAGARA FALLS,NEW YORK | 716-693-8759 FAX | CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
S	1	10.065	14.4	15.3	7.1	7.4	7.1	7.2	2.00	<0.1	56.5	6.6	44	3.6
S	2	7.786	14.4	15.7	7.2	7.3	7.0	7.1	1.30	<0.1			44	2.0
M	3	9.665	14.9	16.1	6.7	7.4	7.1	7.2	3.00	<0.1			64	1.2
T	4	5.889	14.9	16.1	7.1	7.2	7.0	7.3	2.00	<0.1			108	1.4
W	5	4.975	14.8	17.2	7.2	7.4	7.0	7.4	4.00	<0.1	131.6	6.4	88	0.9
T	6	5.720	15.1	16.7	7.2	7.4	6.8	7.3	7.50	<0.1	123.3	3.7	208	1.2
F	7	4.847	14.9	16.4	7.2	7.6	6.8	7.3	4.00	<0.1	100.1	4.5	108	3.0
S	8	8.426	14.5	16.1	6.8	7.2	6.9	7.0	2.00	<0.1	103.0	6.0	72	1.6
S	9	4.571	14.5	16.3	7.0	7.3	6.9	7.1	3.00	<0.1			68	1.3
M	10	7.857	14.5	15.9	7.1	7.3	6.8	7.1	3.50	<0.1			96	1.3
T	11	4.770	15.0	16.9	7.0	7.3	7.0	7.2	12.00	<0.1			256	1.4
W	12	4.358	14.7	16.7	6.6	7.4	6.8	7.1	8.00	<0.1	160.2	3.8		
T	13	4.803	14.9	17.0	7.2	7.5	7.2	7.3	4.00	<0.1	170.8	5.3	72	0.4
F	14	5.492	14.9	17.0	7.3	7.5	7.1	7.3	7.00	<0.1	100.6	4.4	108	0.3
S	15	9.874	13.5	15.8	7.3	7.5	7.1	7.2	3.00	<0.1	91.9	6.9	112	1.8
S	16	8.280	13.4	14.5	7.3	7.4	6.8	7.1	2.00	<0.1			84	1.2
M	17	13.898	13.6	14.4	7.0	7.3	6.8	7.2	8.00	<0.1			184	3.1
T	18	14.157	13.1	13.6	6.9	7.3	7.0	7.1	2.00	<0.1			60	7.3
W	19	10.673	13.4	13.7	6.8	7.1	6.7	7.1	2.00	<0.1	86.4	9.6	36	3.2
T	20	9.073	13.3	14.2	6.8	7.2	6.7	7.0	3.00	<0.1	63.1	15.5	32	2.3
F	21	9.990	13.3	13.9	6.8	6.9	6.8	6.9	3.00	<0.1	67.6	7.1	96	3.3
S	22	6.194	13.3	13.6	6.7	6.9	6.9	6.9	2.00	<0.1	62.9	9.4	80	4.4
S	23	6.814	13.3	13.6	6.8	7.0	6.8	7.0	5.00	<0.1			204	5.3
M	24	7.268	13.2	13.4	6.8	7.3	6.9	6.9	2.00	<0.1			240	1.1
T	25	7.153	13.2	12.7	7.0	7.0	6.9	7.0	2.00	<0.1			80	1.6
W	26	6.683	13.1	12.5	6.9	7.4	6.8	7.0	2.50	<0.1	80.9	3.0		
T	27	7.499	13.0	12.3	6.8	6.9	6.9	6.9	3.50	<0.1	88.3	5.5	20	4.6
F	28	7.022	13.0	12.4	6.7	7.3	6.7	6.8	2.00	<0.1	63.8	2.8	48	1.3
S	29	6.741	12.9	12.2	6.8	7.0	6.9	7.0	2.50	<0.1	73.0	8.0	48	0.7
S	30	6.526	12.9	11.7	7.0	7.2	6.9	7.1	7.50	<0.1			72	2.1
M	31	6.593	12.7	11.4	7.0	7.2	6.9	7.1	1.50	<0.1			40	1.6
	AVERAGE	7.537	13.9	14.7	6.6	7.6	6.7	7.4	12.0	0.0	90.6	6.7	94.3	2.4
		Monthly	ave.	ave.	min	max	min	max	max	max	92.6%	400.3	97.5%	153.1

NIAGARA COUNTY SEWER DISTRICT #1

Dec-01

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
S	1	10.065	1.01	0.25	0.69	0.82	0.76	6	
S	2	7.786	1.70	0.15	0.61	1.21	0.94		
M	3	9.665	1.94	0.24	0.65	1.30	0.88		
T	4	4.975			0.85	1.05	0.94		
W	5	5.720	2.02	0.26	0.79	1.20	0.96	3	
T	6	4.847	5.38	0.40	0.43	0.93	0.72		
F	7	8.426	3.68	0.38	0.21	0.24	0.22	760	
S	8	4.571	2.43	0.34	0.15	1.06	0.70	3	
S	9	7.857	12.63	0.36	0.98	1.05	1.01		
M	10	4.770	2.95	0.43	0.77	0.92	0.84		
T	11	4.358			0.70	0.81	0.76		
W	12	4.803	6.80	0.53	0.81	1.32	1.02	3	
T	13	5.492	3.61	0.54	0.10	0.69	0.46		
F	14	9.874	4.37	0.62	0.78	1.41	1.04	3	
S	15	8.280	2.35	0.46	0.51	0.75	0.65	3	
S	16	13.898	1.01	0.45	0.60	0.82	0.68		
M	17	14.157	3.12	0.42	0.28	0.75	0.51		
T	18	10.673			0.56	0.63	0.59		
W	19	9.073	1.25	0.24	0.77	1.55	1.13	3	
T	20	9.990	1.38	0.19	1.04	1.50	1.27		
F	21	6.194	1.58	0.18	0.60	1.18	0.87	3	
S	22	6.814	1.26	0.28	0.75	1.52	1.05	3	
S	23	7.268	2.35	0.26	1.16	1.48	1.31		
M	24	7.153	1.78	0.35	1.05	1.31	1.15		
T	25	6.683			0.64	0.87	0.74		
W	26	7.499	1.82	0.32	1.10	1.30	1.17	3	
T	27	7.022	1.90	0.31	0.72	0.97	0.82		
F	28	6.741	0.49	0.22	0.80	0.95	0.89	3	
S	29	6.526	5.71	0.24	0.73	0.99	0.82	3	
S	30	6.593	1.45	0.48	0.66	0.71	0.68	3	
M	31	0.000	2.14	0.46	0.18	0.44	0.33		
	AVERAGE	7.348	2.86	0.35	0.10	1.55	1.31	4.9	
				22.1				24.3	

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Jan-02

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
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FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
T	1	6.365	12.6	11.2	6.7	7.2	6.8	7.3	2.00	<0.1			5	1.9
W	2	6.395	12.7	11.7	7.2	7.4	7.3	7.4	4.00	<0.1	97.0	2.7	88	1.7
T	3	6.037	12.9	12.4	7.3	7.3	7.1	7.2	3.00	<0.1	80.8	7.3	60	1.2
F	4	5.961	13.0	13.3	7.3	7.4	7.1	7.2	6.50	<0.1	82.9	2.8	136	1.8
S	5	6.378	12.8	13.5	7.3	7.4	7.1	7.2	2.00	<0.1	70.7	2.8	56	2.9
S	6	6.002	12.7	14.3	7.3	7.4	7.2	7.4	3.00	<0.1			48	1.1
M	7	6.933	12.6	13.8	7.1	7.4	7.0	7.2	2.00	<0.1			56	1.6
T	8	6.697	12.7	13.0	7.1	7.6	7.1	7.4	7.00	<0.1			196	1.4
W	9	5.938	12.6	13.2	7.3	7.4	7.2	7.2	9.50	<0.1	157.2	4.0		
T	10	13.151	11.7	12.9	7.2	7.4	7.1	7.1	6.00	<0.1	64.6	21.2	148	8.6
F	11	11.321	11.3	12.4	7.3	7.4	7.0	7.3	2.00	<0.1	51.1	5.3	48	2.3
S	12	21.389	11.2	12.2	7.3	7.3	7.1	7.2	2.00	<0.1	42.0	5.0	68	2.2
S	13	9.630	11.4	11.8	7.2	7.3	7.1	7.2	3.00	<0.1			48	2.6
M	14	9.434	11.5	12.1	7.2	7.2	7.2	7.3	4.00	<0.1			88	2.4
T	15	11.155	12.4	11.8	7.1	7.3	7.2	7.6	9.50	<0.1			132	2.2
W	16	9.853	11.7	12.3	7.2	7.3	7.2	7.7	7.50	<0.1	111.9	9.7	160	2.0
T	17	9.006	11.7	12.4	7.2	7.4	7.1	7.3	11.00	<0.1	108.4	5.5	128	2.2
F	18	7.771	11.6	11.9	7.3	7.4	7.2	7.3	12.00	<0.1	180.8	7.6	180	1.6
S	19	6.611	11.7	11.9	7.1	7.3	7.1	7.3	14.00	<0.1	204.0	4.5	275	1.6
S	20	6.865	11.7	11.7	7.0	7.3	7.1	7.3	12.00	<0.1			160	2.6
M	21	6.500	11.9	11.8	6.9	7.6	7.0	7.2	14.00	<0.1			124	2.2
T	22	6.980	12.0	13.3	6.8	7.5	6.9	7.3	15.00	<0.1			188	4.4
W	23	7.460	11.8	13.0	6.9	7.5	7.1	7.3	15.00	<0.1	126.3	25.8		
T	24	13.988	11.3	12.8	7.4	7.4	7.3	7.4	12.00	<0.1	162.6	8.8	272	4.8
F	25	12.761	10.7	11.2	6.9	7.2	7.0	7.2	10.00	<0.1	154.8	7.1	104	5.0
S	26	9.528	11.1	12.1	7.2	7.3	7.2	7.2	10.00	<0.1	81.2	6.7	128	3.8
S	27	9.786	11.3	11.6	7.3	7.4	7.3	7.4	14.00	<0.1			84	2.2
M	28	7.880	11.7	11.8	7.2	7.5	7.0	7.3	15.00	<0.1			148	3.6
T	29	8.272	11.9	12.6	7.3	7.3	7.1	7.3	15.00	<0.1			140	3.0
W	30	7.754	11.7	12.5	7.3	7.5	7.2	7.5	18.00	<0.1	175.0	4.1	172	1.4
T	31	8.232	11.5	11.9	7.5	7.5	7.0	7.4	18.00	<0.1	192.9	11.1	144	2.2
	AVERAGE	8.775	11.9	12.4	6.7	7.6	6.8	7.7	18.0	0.0	112.4	8.2	123.7	2.9
		Monthly	ave.	ave.	min	max	min	max	max	max	92.7%	645.3	97.7%	213.1

NIAGARA COUNTY SEWER DISTRICT #1

Jan-02

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
T	1	6.365			0.03	0.38	0.24		
W	2	6.395	2.26	0.62	0.05	0.93	0.62	3	
T	3	6.037	3.44	0.60	0.73	0.80	0.77		
F	4	5.961	4.45	0.54	0.92	1.12	1.01	3	
S	5	6.378	2.35	0.97	0.80	0.97	0.88	3	
S	6	6.002	2.91	0.77	0.52	0.99	0.82		
M	7	6.933	1.94	0.78	0.52	1.01	0.77		
T	8	6.697			0.59	0.72	0.67		
W	9	5.938	4.29	0.50	0.51	0.99	0.75	3	
T	10	13.151	2.31	0.48	0.15	0.54	0.29		
F	11	11.321	1.74	0.40	0.30	0.37	0.34	15	
S	12	21.389	2.55	0.23	0.32	0.76	0.48	333	
S	13	9.630	3.32	0.32	0.44	0.69	0.58		
M	14	9.434	3.07	0.37	0.23	0.50	0.40		
T	15	11.155			0.09	0.54	0.32		
W	16	9.853	4.33	0.35	0.00	0.32	0.21	1333	
T	17	9.006	3.04	0.36	0.09	1.06	0.45		
F	18	7.771	6.48	0.36	0.74	1.10	0.97	3	
S	19	6.611	4.54	0.40	0.77	0.88	0.81	3	
S	20	6.865	4.25	0.46	0.30	0.83	0.49		
M	21	6.500	4.86	0.53	0.17	1.22	0.56		
T	22	6.980			1.00	1.26	1.10		
W	23	7.460	4.90	0.69	0.85	1.01	0.94		
T	24	13.988	4.50	0.49	0.93	1.46	1.22		
F	25	12.761	3.12	0.29	0.74	0.96	0.88	3	
S	26	9.528	2.59	0.24	0.70	0.83	0.76	3	
S	27	9.786	2.63	0.32	0.47	1.17	0.86		
M	28	7.880	3.76	0.33	0.63	1.60	1.00		
T	29	8.272			0.97	1.19	1.05		
W	30	7.754	3.32	0.52	0.75	1.29	1.07	3	
T	31	8.232	3.24	0.62	0.75	1.00	0.86		
	AVERAGE	8.775	3.47	0.47	0.00	1.60	1.22	8.4	
				35.2				186.3	

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Feb-02

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

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FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
F	1	23.136	10.9	10.6	7.2	7.6	7.4	7.5	2	<0.1	161.5	17.4	448	15.6
S	2	16.699	9.2	9.4	7.2	7.4	7.2	7.3	7.0	<0.1	99.9	12.5	92	13.6
S	3	15.066	10.3	11.3	7.3	7.5	7.3	7.4	8.0	<0.1			100	10.8
M	4	11.094	10.9	10.6	7.0	7.6	7.1	7.3	13.0	<0.1			184	4.4
T	5	9.842	10.9	11.3	6.7	7.6	6.8	7.3	11.0	<0.1			80	2.8
W	6	8.875	11.1	11.3	7.2	7.6	7.2	7.5	17.0	<0.1	164.5	8.4		
T	7	8.875	11.1	11.6	7.2	7.5	7.3	7.4	18.0	<0.1	244.5	7.2	244	4.8
F	8	9.188	11.0	12.1	7.4	7.5	7.4	7.5	17.0	<0.1	179.8	4.5	92	1.8
S	9	10.504	10.5	11.4	7.5	7.6	7.5	7.5	19.0	<0.1	185.6	4.6	196	9.4
S	10	10.490	10.8	11.2	7.3	7.6	7.3	7.4	16.0	<0.1			120	2.8
M	11	14.123	10.2	10.5	6.5	7.4	7.3	7.4	18.0	<0.1			200	7.2
T	12	11.644	10.0	10.1	7.3	7.5	7.3	7.5	15.0	<0.1			228	5.0
W	13	11.207	10.1	10.3	7.3	7.5	7.3	7.4	17.0	<0.1	146.3	8.1	196	5.2
T	14	9.655	9.9	10.5	7.4	7.5	7.4	7.5	20.0	<0.1	196.1	10.0	308	5.8
F	15	9.858	10.2	10.9	7.2	7.4	7.2	7.4	21.0	<0.1	194.7	6.3	348	12.2
S	16	13.230	10.0	10.7	7.2	7.4	7.2	7.3	24.0	<0.1	87.3	5.1	392	6.4
S	17	12.023	9.6	10.1	7.2	7.4	7.2	7.4	25.0	<0.1			172	4.0
M	18	10.766	9.7	9.8	7.2	7.4	7.2	7.3	21.0	<0.1			172	1.6
T	19	9.445	10.1	10.4	7.2	7.7	7.2	7.7	19.0	<0.1			284	4.8
W	20	9.634	10.1	11.1	7.2	7.5	7.2	7.4	21.0	<0.1	195.6	6.4		
T	21	14.768	9.6	10.4	7.2	7.5	7.2	7.3	22.0	<0.1	183.6	11.8	180	6.2
F	22	12.300	9.6	10.0	7.2	7.4	7.3	7.3	20.5	<0.1	125.1	9.2	132	10.2
S	23	10.248	9.6	10.2	7.2	7.4	7.2	7.3	18.0	<0.1	114.9	12.9	92	6.0
S	24	9.327	9.8	10.5	7.1	7.5	7.1	7.3	25.0	<0.1			224	9.6
M	25	9.086	10.2	11.7	7.1	7.5	7.1	7.5	23.0	<0.1			152	4.2
T	26	8.893	10.4	11.5	7.2	7.5	7.2	7.3	20.0	<0.1			188	8.0
W	27	8.773	10.3	10.5	7.3	7.4	7.3	7.3	18.0	<0.1	195.7	5.3	224	7.0
T	28	8.420	10.2	10.8	6.8	7.4	7.2	7.3	24.0	<0.1	190.0	14.1	244	9.2
	AVERAGE	11.327	10.2	10.7	6.5	7.7	6.8	7.7	25.0	0.0	161.1	9.4	205.7	7.4
		Monthly	ave.	ave.	min	max	min	max	max	max	94.2%	922.2	96.4%	712.2

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1

Feb-02

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	COMMENTS
F	1	23.136	4.21	0.62	0.53	0.88	0.65	20	
S	2	16.699	1.94	0.43	0.21	0.88	0.63	38	
S	3	15.066	2.51	0.39	0.42	0.80	0.56		
M	4	11.094	3.44	0.36	0.57	0.88	0.74		
T	5	9.842			0.48	0.84	0.60		
W	6	8.875	2.79	0.51	0.56	0.67	0.61	3	
T	7	8.875	2.47	0.46	0.57	0.78	0.66		
F	8	9.188	2.47	0.38	0.42	1.00	0.78	3	
S	9	10.504	3.93	0.59	0.68	0.78	0.72	3	
S	10	10.490	3.40	0.67	0.56	0.90	0.78		
M	11	14.123	1.42	0.66	0.48	0.70	0.60		
T	12	11.644			0.55	0.75	0.66		
W	13	11.207	4.74	0.75	0.65	0.83	0.77	3	
T	14	9.655	4.21	0.87	0.32	0.88	0.68		
F	15	9.858	4.54	0.83	0.51	0.85	0.67	3	
S	16	13.230	4.50	0.79	0.61	0.65	0.63	3	
S	17	12.023	4.25	0.66	0.59	0.69	0.64		
M	18	10.766	4.99	0.57	0.52	0.72	0.64		
T	19	9.445			0.48	0.88	0.70		
W	20	9.634	4.25	0.72	0.56	0.73	0.62	3	
T	21	14.768	0.94	0.76	0.56	1.18	0.78		
F	22	12.300	3.31	0.67	0.03	0.77	0.47	6	
S	23	10.248	3.59	0.63	0.00	0.88	0.39	3	
S	24	9.327			0.18	1.06	0.70		
M	25	9.086	4.68	0.64	0.62	0.90	0.78		
T	26	8.893	6.04	0.72	0.62	1.10	0.82		
W	27	8.773	4.01	0.64	0.85	1.47	1.16		
T	28	8.420	7.80	0.64	0.00	0.57	0.31		
	AVERAGE	11.327	3.63	0.63	0.00	1.47	1.16	4.8	
				60.5				13.2	

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1

SPDES # NY-0027979 Mar-02

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

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FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
F	1	7.408	10.3	10.6	7.1	7.4	7.2	7.4	14.00	<0.1	167.8	16.6	148	8.0
S	2	7.608	10.3	10.7	7.3	7.5	7.3	7.4	30.00	<0.1	177.4	25.2	236	8.0
S	3	15.363	9.8	10.5	7.2	7.4	7.2	7.3	25.00	<0.1			320	14.8
M	4	11.624	9.6	9.6	7.1	7.3	7.2	7.4	15.00	<0.1			176	9.2
T	5	8.774	10.0	10.0	7.2	7.3	7.3	7.4	18.00	<0.1			184	8.0
W	6	6.679	10.1	10.4	6.7	7.5	6.9	7.3	7.00	<0.1	180.7	6.3		
T	7	9.264	10.1	11.2	7.5	7.5	7.3	7.4	14.00	<0.1	222.8	29.5	244	3.6
F	8	9.177	10.5	11.5	7.4	7.4	7.2	7.3	21.00	<0.1	182.2	3.5	188	3.6
S	9	14.403	10.1	11.7	7.4	7.4	7.2	7.3	18.00	<0.1	127.7	4.5	163	5.0
S	10	9.870	9.8	10.3	7.3	7.7	7.4	7.6	19.00	<0.1			124	8.4
M	11	9.457	9.8	10.0	6.7	7.5	6.5	7.2	19.00	<0.1			172	8.2
T	12	9.137	9.9	10.8	6.8	7.8	7.0	7.6	19.00	<0.1			232	3.4
W	13	9.136	10.5	11.5	7.2	7.9	7.3	7.7	20.00	<0.1	306.2	4.5		
T	14	7.700	10.6	12.1	7.2	7.5	7.2	7.4	20.00	<0.1	228.3	7.4	248	3.6
F	15	7.449	10.8	11.6	7.2	7.3	7.2	7.2	24.00	<0.1	220.1	4.4	268	2.4
S	16	7.284	10.7	12.0	7.2	7.3	7.0	7.2	25.00	<0.1	187.0	5.5	244	3.4
S	17	5.919	10.6	11.8	7.1	7.3	7.1	7.1	14.00	<0.1			156	1.8
M	18	7.854	10.7	12.0	6.6	7.4	6.9	7.4	25.00	<0.1			284	3.4
T	19	6.781	10.5	11.9	7.1	7.9	6.8	7.7	22.00	<0.1				
W	20	7.206	10.6	11.9	7.3	7.5	7.3	7.3	12.00	<0.1	189.4	7.1	176	4.2
T	21	9.296	10.6	11.5	7.3	7.5	7.1	7.2	13.50	<0.1	182.2	12.2	164	6.6
F	22	9.322	10.4	10.9	6.9	7.2	7.0	7.2	25.00	<0.1	225.3	3.1	192	3.4
S	23	7.714	10.2	10.5	7.1	7.5	7.0	7.1	25.50	<0.1	199.8	5.0	232	2.4
S	24	7.306	10.2	11.1	7.1	7.3	7.0	7.2	28.00	<0.1			272	2.4
M	25	6.614	10.3	10.9	7.2	7.4	7.0	7.2	22.00	<0.1			232	2.6
T	26	7.010	10.5	11.0	6.7	7.0	7.0	7.2	21.00	<0.1			312	2.8
W	27	8.463	10.1	11.0	7.3	7.4	7.2	7.3	28.00	<0.1	266.5	7.2		
T	28	10.348	10.0	10.7	7.2	7.4	7.2	7.3	23.00	<0.1	211.8	13.1	268	5.0
F	29	10.008	10.2	11.8	7.2	7.4	7.1	7.3	23.00	<0.1	296.0	7.2	196	3.2
S	30	17.389	9.5	10.6	7.2	7.3	7.1	7.2	17.00	<0.1	278.6	19.8	440	14.3
S	31	12.479	9.6	10.2	7.0	7.2	7.1	7.3	15.00	<0.1			168	6.8
	AVERAGE	9.163	10.2	11.0	6.6	7.9	6.5	7.7	30.0	0.0	216.4	10.5	229.9	6.2
		Monthly	ave.	ave.	min	max	min	max	max	max	95.1%	807.7	97.3%	486.7

NIAGARA COUNTY SEWER DISTRICT #1

Mar-02

DAY	DATE	FLOW	PHOSPHOROUS INF,mg/l	PHOSPHOROUS EFF,mg/l	CHLORINE RESIDUAL MIN,mg/l	CHLORINE RESIDUAL MAX,mg/l	CHLORINE RESIDUAL AVE,mg/l	F.COLI / 100 ml	COMMENTS
F	1	7.408	1.99	0.71	0.05	0.25	0.13	64	
S	2	7.608	1.40	0.67	0.00	0.27	0.15	2900	
S	3	15.363	4.52	0.62	0.15	0.18	0.17		
M	4	11.624	2.42	0.65	0.00	0.24	0.11		
T	5	8.774			0.66	0.72	0.70		
W	6	6.679	2.34	0.75	0.72	1.02	0.84	3	
T	7	9.264	17.55	0.47	0.72	0.80	0.77		
F	8	9.177	5.46	0.48	0.00	1.10	0.71	3	
S	9	14.403	5.50	0.47	0.88	1.20	1.05	3	
S	10	9.870	6.35	0.55	1.06	1.48	1.28		
M	11	9.457	3.35	0.64	0.65	1.20	0.98		
T	12	9.137			0.07	0.48	0.29		
W	13	9.136	5.15	0.55	0.43	1.25	0.73	3	
T	14	7.700	4.41	0.50	0.10	0.20	0.15		
F	15	7.449	3.59	0.59	0.98	1.24	1.09	3	
S	16	7.284	2.85	0.51	0.92	1.00	0.97	3	
S	17	5.919	4.45	0.70	1.04	1.27	1.15		
M	18	7.854	7.45	0.82	0.89	1.30	1.04		
T	19	6.781			0.74	0.95	0.87		
W	20	7.206	3.08	0.91	0.38	1.00	0.70	3	
T	21	9.296	3.40	0.57	0.71	0.85	0.78	3	
F	22	9.322	3.78	0.50	0.67	0.78	0.72		
S	23	7.714	3.51	0.48	0.86	1.08	0.95	3	
S	24	7.306	6.28	0.53	0.42	1.08	0.69		
M	25	6.614	8.19	0.56	0.82	0.93	0.87		
T	26	7.010			0.95	1.11	1.05		
W	27	8.463	5.46	0.40	0.73	0.98	0.82	3	
T	28	10.348	0.54	0.30	1.08	1.20	1.12		
F	29	10.008	2.83	0.24	0.00	0.41	0.26	37	
S	30	17.389	4.52	0.45	0.90	1.40	1.15	3	
S	31	12.479	1.48	0.36	0.41	1.20	0.80		
	AVERAGE	**9.163**	**4.61**	**0.55**	**0.00**	**1.48**	**1.28**	7.3	
				42.1				82.3	

NIAGARA COUNTY SEWER DISTRICT #1

SPDES # NY-0027979 Apr-02

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
716-693-8759 FAX

FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
M	1	11.284	10.0	11.0	7.2	7.3	7.1	7.1	19	<0.1			228	7.6
T	2	14.360	10.6	10.6	6.7	7.0	6.7	7.3	18.0	<0.1			188	8.6
W	3	9.930	9.2	9.8	6.7	7.1	7.1	7.2	14.0	<0.1	196.2	12.9		
T	4	13.911	9.6	10.2	7.0	7.2	7.2	7.4		<0.1				
F	5	12.509	9.9	10.6	6.9	7.1	6.9	7.2	14.0	<0.1	97.9	9.7	532	3.0
S	6	11.339	10.0	10.9	6.9	7.3	7.0	7.3	5.0	<0.1	80.2	8.3	206	6.8
S	7	9.459	10.0	10.6	7.0	7.2	7.1	7.2	6.0	<0.1			144	4.4
M	8	23.730	10.1	11.5	6.8	7.1	6.8	7.2	4.5	<0.1			100	6.2
T	9	10.404	10.5	12.5	6.9	7.4	6.8	7.2	4.5	<0.1			136	6.5
W	10	7.674	10.4	11.3	7.2	7.5	7.3	7.3	4.0	<0.1	118.0	9.9	64	3.4
T	11	6.782	10.4	11.9	7.1	7.4	7.1	7.3	5.0	<0.1	123.4	7.6	108	4.6
F	12	13.958	10.8	12.4	7.2	7.5	7.0	7.2	3.0	<0.1	87.5	3.3	104	4.0
S	13	17.298	10.9	12.8	7.1	7.3	7.0	7.2	31.0	<0.1	316.8	5.8	428	8.0
S	14	17.902	10.5	11.3	7.0	7.2	7.2	7.3	14.0	<0.1			152	11.6
M	15	10.369	11.4	11.0	6.9	7.2	7.2	7.5	14.0	<0.1			60	6.4
T	16	10.368	11.2	13.2	6.9	7.4	7.0	7.2	17.0	<0.1			136	5.8
W	17	9.936	11.0	12.8	7.0	7.1	7.0	7.2	13.0	<0.1	150.3	8.5	80	5.0
T	18	12.753	11.5	13.0	6.8	7.2	6.9	7.1	12.5	<0.1	156.4	6.5	124	3.2
F	19	19.345	11.9	14.1	7.0	7.0	7.0	7.2	23.0	<0.1	184.4	9.5	100	2.0
S	20	10.657	11.5	14.0	7.2	7.2	6.9	7.3	25.0	<0.1	178.2	6.3	220	4.0
S	21	8.753	11.6	13.6	6.9	7.0	6.8	7.2	30.0	<0.1			168	3.4
M	22	8.067	11.7	12.7	7.0	7.6	6.9	7.0	37.0	<0.1			332	2.0
T	23	7.063	11.5	12.7	6.7	7.9	6.6	6.9	28.0	<0.1			296	4.4
W	24	6.576	11.6	13.0	7.3	7.5	7.0	7.3	38.0	<0.1	308.5	8.8	356	4.2
T	25	7.019	12.0	13.7	7.2	7.3	7.2	7.2	37.0	<0.1	419.0	12.8	452	5.0
F	26	7.356	11.6	13.4	7.4	7.5	7.0	7.3	20.0	<0.1	138.5	4.5	100	2.6
S	27	6.003	11.8	13.6	7.1	7.4	7.2	7.4	20.0	<0.1	224.9	16.4	232	5.8
S	28	9.526	11.6	14.7	7.1	7.2	7.2	7.2	55.0	<0.1			616	5.4
M	29	13.285	11.3	12.1	6.7	7.3	6.8	7.2	32.0	<0.1			376	9.0
T	30	12.038	11.4	12.7	7.1	7.3	6.6	7.3	25.0	<0.1			240	5.8
	AVERAGE	11.322	10.9	12.3	6.7	7.9	6.6	7.5	55.0	0.0	185.8	8.6	217.0	5.6
		Monthly	ave.	ave.	min	max	min	max	max	max	95.4%	762.2	97.4%	527.9

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1
Apr-02

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	COMMENTS
M	1	11.284	1.48	0.36	0.60	0.80	0.68		
T	2	14.360	3.66	0.55	0.26	0.45	0.35		
W	3	9.930	2.92	0.60	0.66	1.58	1.02	81	
T	4	13.911			0.94	1.43	1.17		
F	5	12.509	19.23	0.40	0.00	1.55	0.89	3	
S	6	11.339	7.33	0.63	1.08	1.50	1.34	3	
S	7	9.459	4.02	0.48	0.87	1.27	1.04		
M	8	23.730	1.99	0.67	0.98	1.05	1.01		
T	9	10.404			0.94	1.40	1.22		
W	10	7.674	0.66	0.50	1.02	1.41	1.26	3	
T	11	6.782	2.61	0.54	1.02	1.51	1.29		
F	12	13.958	2.96	0.56	0.30	0.64	0.42		
S	13	17.298	6.24	0.64	0.25	1.88	1.01	74	
S	14	17.902	2.46	0.51	0.10	1.13	0.48	3	
M	15	10.369	2.03	0.42	1.18	1.50	1.39		
T	16	10.368			1.28	1.60	1.43		
W	17	9.936	2.65	0.47	0.64	1.24	0.92	3	
T	18	12.753	2.30	0.43	0.77	1.33	0.98		
F	19	19.345	4.21	0.42	0.61	1.02	0.80	3	
S	20	10.657	2.38	0.43	0.53	0.74	0.65	3	
S	21	8.753	5.69	0.45	0.34	0.57	0.42		
M	22	8.067	4.75	0.62	0.14	1.07	0.74		
T	23	7.063			0.53	1.18	0.91		
W	24	6.576	10.10	0.55	0.63	1.10	0.88	3	
T	25	7.019	10.18	0.53	0.51	1.02	0.80		
F	26	7.356	3.04	0.59	0.71	1.12	0.94	3	
S	27	6.003	3.98	0.63	0.52	1.21	0.78	3	
S	28	9.526	3.59	0.62	0.48	0.96	0.77		
M	29	13.285	5.07	0.60	1.12	1.32	1.21		
T	30	12.038			0.00	1.21	0.67		
	AVERAGE	**11.322**	**4.49**	**0.53**	**0.00**	**1.88**	**1.43**	**5.2**	
				50.5				**14.9**	

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1

SPDES # NY-0027979 May-02

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
716-693-8759 FAX

FRANK A. Nerone, P.E.
CERT. 4A

DAY	DATE	FLOW	TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
			INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
W	1	8.564	11.6	13.1	6.9	7.2	7.0	7.2	22.00	<0.1	155.4	12.7	280	5.6
T	2	4.657	14.6	13.4	6.9	7.4	7.1	7.4	23.00	<0.1	300.3	12.8	196	3.0
F	3	8.809	11.6	12.8	7.2	7.3	7.2	7.3	24.00	<0.1	237.2	3.4	112	4.2
S	4	7.893	11.7	13.2	7.1	7.3	7.0	7.2	14.00	<0.1	264.8	7.4	408	8.4
S	5	9.023	12.0	13.6	7.1	7.3	7.1	7.2	32.00	<0.1			320	5.8
M	6	7.688	12.2	14.1	6.7	7.2	7.0	7.2	14.00	<0.1			284	3.8
T	7	7.703	12.3	14.7	6.6	7.0	6.7	7.1	37.00	<0.1			328	3.8
W	8	8.828	12.2	14.2	7.0	7.2	7.2	7.2	14.00	<0.1		4.5	608	5.8
T	9	11.268	12.2	14.5	7.0	7.4	7.0	7.2	15.00	<0.1	342.3	10.9	372	5.0
F	10	10.098	12.0	14.3	7.2	7.3	6.9	7.2	34.00	<0.1	209.7	6.7	190	3.8
S	11	7.648	12.2	14.3	7.0	7.1	6.9	7.2	24.00	<0.1	340.5	4.6	320	3.6
S	12	10.177	12.3	13.9	6.8	7.2	6.8	7.3	18.00	<0.1			728	4.2
M	13	21.770	12.4	13.9	6.7	7.0	6.6	7.0	25.00	<0.1			376	9.0
T	14	31.769	12.1	12.2	6.6	7.5	6.5	7.2	15.00	<0.1			264	14.4
W	15	18.776	11.7	12.4	7.2	7.5	7.3	7.4	12.00	<0.1	82.9	8.9	116	14.5
T	16	13.641	12.1	13.3	7.2	7.4	7.2	7.3	18.00	<0.1	128.6	6.2	96	4.3
F	17	13.949	12.1	13.3	7.4	7.4	7.3	7.3	24.00	<0.1	91.7	4.0	180	4.2
S	18	12.636	12.1	13.2	7.2	7.4	7.2	7.3	23.00	<0.1	217.3	6.0	60	1.0
S	19	11.346	12.1	13.1	7.2	7.4	6.9	7.2	32.00	<0.1			260	2.5
M	20	9.266	12.3	13.2	7.0	7.3	7.0	7.2	70.00	<0.1			224	3.9
T	21	10.323	12.3	13.5	7.1	7.4	7.2	7.4	70.00	<0.1			460	2.6
W	22	8.266	12.5	13.7	7.4	7.4	7.2	7.3	65.00	<0.1	348.2	7.3	480	5.0
T	23	7.725	12.6	14.2	7.3	7.3	7.2	7.2	60.00	<0.1	368.9	6.4	440	3.8
F	24	6.913	12.6	14.5	7.2	7.5	7.2	7.3	52.00	<0.1	214.9	5.6	412	2.8
S	25	6.204	12.5	14.7	7.3	7.4	7.2	7.3	17.00	<0.1	155.2	5.7	264	3.2
S	26	6.803	12.5	14.2	7.2	7.4	7.2	7.2	9.00	<0.1			88	2.2
M	27	5.949	12.4	13.8	7.3	7.4	7.1	7.2	27.00	<0.1			260	2.6
T	28	6.220	12.5	14.3	7.3	7.4	7.0	7.1	32.00	<0.1			240	2.2
W	29	6.021	12.9	14.3	6.9	7.4	7.1	7.1	34.00	<0.1	247.6	3.9	276	3.2
T	30	5.572	13.0	15.2	7.3	7.4	7.1	7.2	34.00	<0.1	272.9	8.6	204	5.0
F	31	9.346	13.1	15.6	7.2	7.3	6.9	7.1	24.00	<0.1	223.9	3.2	376	1.4
	AVERAGE	10.156	12.3	13.8	6.6	7.5	6.5	7.4	70.0	0.0	214.9	6.7	290.2	5.9
		Monthly	ave.	ave.	min	max	min	max	max	max	96.9%	522.6	98.0%	498.5

NIAGARA COUNTY SEWER DISTRICT #1

May-02

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	COMMENTS
W	1	8.564	3.43	0.46	0.40	1.20	0.67	38	
T	2	4.657	3.63	0.43	0.45	1.75	1.28		
F	3	8.809	6.40	0.49	1.03	1.40	1.22	3	
S	4	7.893	3.82	0.57	0.95	1.15	1.08	3	
S	5	9.023	7.02	0.75	1.20	1.41	1.31		
M	6	7.688	6.63	0.60	1.12	1.44	1.26		
T	7	7.703			1.00	1.38	1.16		
W	8	8.828	4.76	0.62	1.08	1.51	1.30	3	
T	9	11.268	7.33	0.65	0.48	0.64	0.58		
F	10	10.098	6.86	0.57	0.50	0.67	0.56		
S	11	7.648	7.02	0.52	0.45	1.32	0.97		
S	12	10.177	5.89	0.63	0.73	1.35	0.98		
M	13	21.770	6.98	0.62	0.81	1.42	1.10	5	
T	14	31.769			0.24	0.62	0.47		
W	15	18.776	4.17	0.51	0.73	1.33	1.06	20	
T	16	13.641	6.75	0.31	0.55	1.21	0.92		
F	17	13.949	2.42	0.45	1.35	1.63	1.47	3	
S	18	12.636	2.18	0.39	1.09	1.64	1.34	3	
S	19	11.346	5.92	0.57	0.80	1.52	1.07		
M	20	9.266	6.27	0.54	0.79	1.33	1.08		
T	21	10.323			0.80	0.97	0.87		
W	22	8.266	12.87	0.79	0.95	1.47	1.25	3	
T	23	7.725	7.88	0.94	1.08	1.21	1.14		
F	24	6.913	2.88	1.05	0.86	1.16	1.06	3	
S	25	6.204	5.18	0.97	0.84	1.16	0.98	3	
S	26	6.803	3.39	1.05	0.32	1.04	0.60		
M	27	5.949	4.76	1.13	0.00	1.30	0.47		
T	28	6.220			0.35	0.73	0.55		
W	29	6.021	6.55	1.28	0.19	0.50	0.30	14	
T	30	5.572	4.84	1.24	1.21	1.52	1.41		
F	31	9.346	6.83	0.99	1.45	1.80	1.57	3	
	AVERAGE	**10.156**	**6.04**	**0.69**	**0.00**	**1.80**	**1.57**	**5.0**	
				55.3				**10.3**	

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Jun-02

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
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FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
S	1	7.610	12.5	16.2	7.4	7.4	7.1	7.2	23	<0.1	285.3	5.4	464	2.2
S	2	6.173	12.4	15.0	7.3	7.4	7.0	7.1	24.0	<0.1			340	1.4
M	3	5.430	12.5	14.6	7.2	7.4	7.0	7.1	24.0	<0.1			340	0.8
T	4	6.432	12.8	15.3	7.0	7.6	7.0	7.4	33.0	<0.1			300	2.0
W	5	10.582	12.7	16.0	7.3	7.4	7.1	7.2	34.0	<0.1	295.7	4.2	388	3.4
T	6	8.837	12.8	16.1	7.2	7.4	7.0	7.1	28.0	<0.1	267.0	3.3	244	3.0
F	7	6.782	12.8	16.1	7.2	7.4	7.2	7.2	28.0	<0.1	146.2	3.0	200	1.8
S	8	5.873	12.8	16.6	7.2	7.3	7.1	7.2	30.0	<0.1	197.4	9.0	256	3.2
S	9	5.981	12.9	16.4	7.0	7.3	7.0	7.1	34.0	<0.1			284	3.4
M	10	4.974	13.0	16.8	7.1	7.4	6.9	7.1	14.0	<0.1			200	2.2
T	11	6.307	13.3	17.6	7.2	7.4	7.2	7.3	28.0	<0.1			216	2.0
W	12	4.730	13.1	18.2	7.4	7.4	7.1	7.3	10.0	<0.1	173.0	2.7	152	3.6
T	13	4.979	13.0	17.7	7.3	7.3	7.1	7.2	27.0	<0.1	161.8	3.8	224	1.8
F	14	5.184	12.9	17.2	7.1	7.3	7.1	7.1	33.0	<0.1	218.8	1.4	232	1.0
S	15	5.699	12.9	17.1	7.1	7.3	7.0	7.2	30.0	<0.1	259.0	7.1	228	1.2
S	16	5.702	12.8	17.0	7.1	7.2	7.1	7.4	22.0	<0.1			216	1.2
M	17	11.085	12.9	16.4	6.8	7.1	6.9	7.2	34.5	<0.1			388	10.4
T	18	12.743	12.6	14.6	6.9	7.4	7.0	7.0	17.0	<0.1			216	10.5
W	19	8.632	13.3	16.6	7.1	7.3	7.0	7.1	21.0	<0.1	147.1	5.1	196	8.3
T	20	8.567	13.8	17.2	7.2	7.3	7.1	7.2	23.0	<0.1	145.8	1.7	228	0.6
F	21	6.316	13.9	17.5	6.9	7.3	6.6	7.1	26.0	<0.1	197.9	2.0	360	1.4
S	22	7.310	13.4	18.3	7.0	7.0	7.0	7.0	35.0	<0.1	250.5	22.8	268	2.2
S	23	5.997	13.6	18.3	6.9	7.0	6.8	7.0	34.0	<0.1			228	0.6
M	24	5.155	14.1	18.3	6.9	7.4	7.0	7.1	21.0	<0.1			120	2.6
T	25	5.658	14.1	18.1	7.0	7.2	7.0	7.3	35.0	<0.1			348	5.0
W	26	4.801	14.5	19.5	7.2	7.3	7.1	7.2	35.0	<0.1	249.9	15.6	340	2.4
T	27	5.729	15.1	19.7	7.1	7.3	7.1	7.3	21.0	<0.1	221.5	19.4	252	3.0
F	28	7.090	15.3	19.3	6.9	7.1	7.0	7.1	24.0	<0.1	164.6	4.1	168	6.0
S	29	5.066	15.1	19.1	7.1	7.3	6.9	7.2	20.0	<0.1			212	3.2
S	30	4.282	14.6	19.5	7.0	7.4	7.0	7.2	23.0	<0.1			216	2.0
	AVERAGE	6.657	13.4	17.2	6.8	7.6	6.6	7.4	35.0	0.0	219.0	7.0	266.9	3.6
		Monthly	ave.	ave.	min	max	min	max	max	max	96.8%	396.3	98.7%	199.3

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1

Jun-02

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	COMMENTS
S	1	7.610	10.18	0.80	1.45	1.91	1.63	3	
S	2	6.173	3.20	0.68	1.30	1.50	1.40		
M	3	5.430	8.77	1.05	1.36	1.81	1.56		
T	4	6.432			1.47	1.73	1.62		
W	5	10.582	8.81	0.87	1.11	1.35	1.22	3	
T	6	8.837	3.78	0.50	0.67	1.30	1.01		
F	7	6.782	4.41	0.38	0.94	1.40	1.18	3	
S	8	5.873	2.93	0.50	0.58	1.50	1.04	3	
S	9	5.981	3.86	0.56	0.94	1.58	1.26		
M	10	4.974	6.66	0.67	1.01	1.39	1.17		
T	11	6.307			0.92	0.98	0.94		
W	12	4.730	5.53	1.17	0.06	0.91	0.48	44	
T	13	4.979	3.59	1.21	0.73	1.10	0.93		
F	14	5.184	4.13	0.91	0.86	1.54	1.13	3	
S	15	5.699	10.14	0.66	0.66	1.25	0.98	3	
S	16	5.702	3.54	0.52	0.83	0.90	0.86		
M	17	11.085	7.44	0.61	0.62	1.13	0.91		
T	18	12.743			0.87	1.21	0.99		
W	19	8.632	2.37	0.45	0.90	1.31	1.07		
T	20	8.567	2.53	0.48	0.94	1.23	1.06	3	
F	21	6.316	7.56	0.63	0.31	1.31	0.75	124	
S	22	7.310	2.57	1.01	0.21	0.24	0.22	11	
S	23	5.997	15.99	0.70	0.20	1.10	0.66		
M	24	5.155	3.97	0.58	0.79	1.10	0.93		
T	25	5.658			0.78	1.31	1.13		
W	26	4.801	4.09	0.81	0.06	0.65	0.32	41	
T	27	5.729	4.60	0.65	0.00	0.27	0.18		
F	28	7.090	3.82	0.42	0.19	2.28	1.41	3	
S	29	5.066	4.52	0.45	0.67	1.65	1.14	3	
S	30	4.282	3.74	0.48	0.40	0.57	0.46		
	AVERAGE	**6.657**	**5.19**	**0.67**	**0.00**	**2.28**	**1.63**	**6.6**	
				36.3				**38.4**	

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Jul-02

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
716-693-8759 FAX

FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
M	1	4.670	14.7	19.4	7.1	7.3	6.7	7.3	25.00	<0.1				
T	2	4.363	14.7	20.1	7.2	7.3	7.1	7.3	24.00	<0.1			220	2.0
W	3	4.428	15.0	20.0	7.1	7.3	7.2	7.4	24.00	<0.1			176	3.0
T	4	4.211	15.1	20.6	7.2	7.2	7.4	7.4	22.00	<0.1	207.2	7.0	272	17.2
F	5	4.293	16.4	20.0	7.2	7.4	7.3	7.5	21.00	<0.1	266.8	8.9	224	4.6
S	6	3.812	16.1	20.2	7.1	7.3	7.4	7.5	16.00	<0.1	223.0	2.9	352	2.0
S	7	4.278	16.1	19.8	7.0	7.2	7.0	7.4	17.00	<0.1	215.3	5.0	184	2.0
M	8	4.905	16.1	21.8	7.0	7.1	6.8	7.3	14.00	<0.1			144	1.6
T	9	3.903	16.4	19.9	6.9	7.4	7.1	7.5	13.00	<0.1			276	2.8
W	10	4.197	16.3	19.8	7.3	7.4	7.2	7.5	21.00	<0.1			124	2.4
T	11	4.490	16.4	20.4	7.0	7.3	7.2	7.4	21.00	<0.1	237.5	2.7	256	2.2
F	12	4.905	16.1	19.8	7.2	7.3	7.1	7.3	21.00	<0.1	253.4	6.1	256	3.8
S	13	4.613	15.4	19.8	7.0	7.1	7.1	7.2	25.00	<0.1	226.4	4.3	208	1.6
S	14	4.584	15.7	20.1	6.9	7.2	7.0	7.2	26.00	<0.1			240	2.2
M	15	4.901	15.9	20.1	6.8	7.1	7.0	7.1	23.00	<0.1			252	2.4
T	16	4.715	16.4	20.1	7.0	7.1	6.5	7.1	24.00	<0.1			180	2.4
W	17	4.929	16.4	20.9	6.9	7.1	6.6	7.1	18.00	<0.1			244	5.6
T	18	4.342	16.7	23.2	6.4	7.4	6.8	7.1	15.00	<0.1	183.9	5.9	208	4.2
F	19	4.191	18.1	21.7	7.0	7.2	6.6	7.1	17.00	<0.1			316	3.2
S	20	4.102	18.1	21.3	6.8	7.1	6.9	7.1	14.00	<0.1	184.2	3.4	216	6.0
S	21	4.122	17.1	21.0	6.5	7.0	6.6	7.0	13.00	<0.1	191.0	5.1	196	3.8
M	22	4.550	17.4	21.0	7.0	7.4	6.9	7.2	28.00	<0.1			232	4.4
T	23	5.664	17.4	21.4	6.5	6.7	6.5	6.6	21.00	<0.1			248	4.2
W	24	4.927	17.4	20.7	6.7	7.3	6.8	7.1	28.00	<0.1			264	1.8
T	25	8.959	17.4	20.6	7.2	7.3	7.0	7.2	14.00	<0.1	274.6	11.6	296	2.0
F	26	4.652	17.1	20.9	7.1	7.3	7.0	7.2	21.00	<0.1	174.8	2.3	152	1.8
S	27	5.021	17.1	21.4	7.3	7.3	6.8	7.3	17.50	<0.1	255.4	2.3	180	2.0
S	28	5.591	17.4	21.5	7.2	7.4	7.1	7.3	24.00	<0.1	100.5	4.5	216	3.2
M	29	7.132	17.1	21.6	7.1	7.3	6.7	7.1	24.00	<0.1			180	4.4
T	30	6.723	17.2	21.1	7.1	7.2	7.0	7.1	24.50	<0.1			212	2.8
W	31	5.497	17.1	20.7	6.8	7.1	6 9	7.1	19.00	<0.1	158.1	1.7	288	2.4
													248	1.4
	AVERAGE	4.893	16.5	20.7	6.4	7.4	6.5	7.5	28.0	0.0	206.7	4.7	227.7	3.4
		Monthly	ave.	ave.	min	max	min	max	max	max	97.7%	191.4	98.5%	134.5

NIAGARA COUNTY SEWER DISTRICT #1

Jul-02

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
M	1	4.670	2.53	0.39	0.07	0.51	0.33		
T	2	4.363			0.00	0.45	0.22		
W	3	4.428	3.59	0.75	0.29	0.68	0.46	7	
T	4	4.211	6.40	0.51	0.00	0.57	0.24		
F	5	4.293	8.66	0.63	0.15	0.73	0.49	3	
S	6	3.812	3.78	0.80	0.07	0.47	0.30		
S	7	4.278	27.26	0.82	0.17	0.45	0.34		
M	8	4.905	5.03	0.76	0.20	0.95	0.45		
T	9	3.903			0.72	1.02	0.82		
W	10	4.197	12.51	0.67	0.74	1.82	1.19	3	
T	11	4.490	4.60	0.66	1.05	1.38	1.17		
F	12	4.905	4.80	0.61	1.10	1.21	1.16	3	
S	13	4.613	6.08	1.34	1.05	1.31	1.16	3	
S	14	4.584	4.21	0.92	0.82	1.36	1.16		
M	15	4.901	4.17	0.79	1.26	1.65	1.44		
T	16	4.715			0.91	1.20	1.07		
W	17	4.929	4.79	0.87	0.76	0.97	0.89		
T	18	4.342	4.79	0.86	0.32	0.54	0.46		
F	19	4.191	9.43	0.81	0.12	0.34	0.22	3	
S	20	4.102	4.68	0.80	0.10	0.76	0.50	3	
S	21	4.122	3.20	0.79	0.40	0.50	0.44		
M	22	4.550	5.03	0.81	0.20	0.32	0.27		
T	23	5.664			0.20	0.67	0.36		
W	24	4.927	4.76	0.67	0.03	1.14	0.73	3	
T	25	8.959	4.17	0.51	0.92	1.09	1.02		
F	26	4.652	4.10	0.60	1.01	1.22	1.10	3	
S	27	5.021	4.76	0.65	1.05	1.33	1.20	3	
S	28	5.591	3.35	0.83	1.09	1.35	1.24		
M	29	7.132	4.72	0.93	1.12	1.36	1.25		
T	30	6.723			1.02	1.18	1.09		
W	31	5.497	4.79	0.73	1.06	1.30	1.18	3	
	AVERAGE	**4.893**	**6.01**	**0.75**	**0.00**	**1.82**	**1.44**	**3.2**	
				31.0				**4.5**	

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Aug-02

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
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FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
T	1	4.273	18.1	21.1	6.8	7.3	6.8	7.2	17.00	<0.1	213.5	15.2	172	2.4
F	2	5.186	17.7	21.4	6.6	7.2	6.7	7.1	19.00	<0.1	258.9	0.0	396	3.8
S	3	4.030	17.7	21.3	6.7	6.9	6.5	6.8	19.00	<0.1	177.4	1.0	248	2.0
S	4	3.646	18.1	21.3	6.8	7.1	6.6	6.8	23.00	<0.1			260	5.4
M	5	4.227	18.4	21.8	6.6	7.0	6.7	7.0	25.00	<0.1			228	1.0
T	6	3.594	17.9	21.1	7.0	7.8	7.1	7.6	25.00	<0.1			192	1.8
W	7	3.543	18.1	21.5	7.3	7.7	7.0	7.6	26.00	<0.1			268	2.4
T	8	3.477	17.8	21.3	7.2	7.3	7.0	7.1	28.00	<0.1	296.6	2.3	296	2.4
F	9	3.619	18.1	21.5	7.0	7.4	7.0	7.2	19.00	<0.1	250.7	1.6	236	4.6
S	10	3.052	18.4	21.5	6.9	7.2	7.0	7.1	19.00	<0.1	327.7	3.5	224	2.8
S	11	4..258	18.4	21.9	7.0	7.3	6.8	6.9	30.00	<0.1		1.7	204	1.8
M	12	3.675	18.8	22.5	7.1	7.3	6.9	7.1	25.00	<0.1			208	2.8
T	13	4.238	18.7	21.7	6.9	7.3	7.1	7.2	18.00	<0.1			244	1.4
W	14	3.976	18.7	21.4	7.1	7.2	6.9	7.1	24.00	<0.1			220	0.6
T	15	3.892	18.7	21.5	7.3	7.4	6.9	7.1	19.00	<0.1	331.8	3.4	228	1.6
F	16	3.597	18.1	22.2	7.3	7.4	7.0	7.1	21.00	<0.1	226.4	2.6	216	5.2
S	17	3.711	18.4	22.1	7.4	7.5	7.1	7.2	21.00	<0.1	224.7	3.3	204	1.2
S	18	3.546	18.4	21.9	7.0	7.2	6.9	7.0	29.00	<0.1			240	0.4
M	19	3.916	18.4	21.3	7.1	7.2	6.8	7.0	31.00	<0.1			220	0.8
T	20	3.262	17.7	20.9	6.8	7.2	7.0	7.3	22.00	<0.1			196	2.4
W	21	3.327	18.1	20.9	7.1	7.2	7.0	7.4	21.00	<0.1	209.8	2.5	152	1.6
T	22	3.603	19.2	21.6	7.1	7.3	7.0	7.2	26.00	<0.1	217.9	3.1	236	3.2
F	23	3.060	18.5	21.8	7.1	7.3	7.1	7.1	26.00	<0.1	209.8	4.9	216	1.4
S	24	3.919	18.4	22.4	7.3	7.5	6.9	7.2	29.50	<0.1	136.9	11.8	228	2.2
S	25	3.603	17.9	21.6	7.3	7.4	7.0	7.1	32.00	<0.1			256	1.8
M	26	3.470	18.2	21.8	7.1	7.3	7.0	7.3	24.00	<0.1			256	2.6
T	27	3.067	18.5	21.4	6.8	7.3	7.0	7.2	31.00	<0.1			284	2.0
W	28	4.250	18.7	21.4	7.2	7.3	7.0	7.2	24.00	<0.1	185.2	0.8	228	2.0
T	29	3.542	18.7	21.4	7.2	7.5	7.0	7.1	29.00	<0.1	251.1	2.0	244	2.4
F	30	3.176	18.4	21.7	7.1	7.3	6.9	7.1	21.00	<0.1	432.5	3.7	276	2.8
S	31	3.208	18.4	22.4	7.2	7.3	7.1	7.1	28.00	<0.1	241.8		260	9.8
	AVERAGE	3.690	18.3	21.6	6.6	7.8	6.5	7.6	32.0	0.0	243.7	3.9	236.6	2.5
		Monthly	ave.	ave.	min	max	min	max	max	max	98.4%	120.7	98.9%	77.7

NIAGARA COUNTY SEWER DISTRICT #1
Aug-02

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
T	1	4.273	2.88	0.61	1.03	1.26	1.15		
F	2	5.186	3.04	0.65	0.25	0.80	0.54	141	
S	3	4.030	3.31	0.62	0.09	0.84	0.51	3200	
S	4	3.646	4.71	0.82	1.00	1.34	1.21		
M	5	4.227	4.72	0.89	0.82	0.98	0.91		
T	6	3.594			1.05	2.35	1.79		
W	7	3.543	4.56	0.99	1.29	2.04	1.55		
T	8	3.477	6.05	0.89	1.32	1.86	1.61		
F	9	3.619	3.86	0.86	0.93	1.45	1.21	3	
S	10	3.052	3.87	0.78	1.49	1.76	1.59	3	
S	11	4..258	4.83	0.80	0.85	1.54	1.28		
M	12	3.675	4.79	0.73	1.17	1.51	1.32		
T	13	4.238			0.85	1.60	1.28		
W	14	3.976	1.63	0.68	1.02	1.37	1.20	3	
T	15	3.892	1.91	0.63	1.39	1.62	1.54		
F	16	3.597	2.81	0.72	0.89	1.40	1.20	3	
S	17	3.711	2.92	0.80	0.32	0.98	0.58	3	
S	18	3.546	7.37	0.71	0.22	0.34	0.27		
M	19	3.916	3.94	0.61	0.20	0.39	0.29		
T	20	3.262			0.00	1.10	0.43		
W	21	3.327	2.96	0.55	1.15	1.33	1.23	3	
T	22	3.603	7.25	0.64	1.23	1.37	1.29		
F	23	3.060	4.88	1.18	0.84	1.31	1.13	3	
S	24	3.919	4.28	1.00	0.77	1.15	0.96	3	
S	25	3.603	4.48	0.69	0.86	1.37	1.19		
M	26	3.470	4.64	0.73	1.10	1.30	1.17		
T	27	3.067			0.87	1.05	0.94		
W	28	4.250	5.26	0.92	0.77	0.94	0.86	3	
T	29	3.542	5.93	0.89	0.81	1.01	0.91		
F	30	3.176	5.62	0.71	0.82	1.05	0.95	3	
S	31	3.208	1.87	0.64	0.49	0.97	0.78	2300	
	AVERAGE	3.690	4.24	0.77	0.00	2.35	1.79	11.5	
				23.6				671.7	

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Sep-02

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
716-693-8759 FAX

FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
S	1	3.763	18.4	18.4	7.1	7.4	7.1	7.2	23	<0.1			284	2.2
M	2	3.743	18.4	22.7	7.1	7.3	7.0	7.1	21.0	<0.1			216	2.0
T	3	4.304	18.4	22.9	7.3	7.4	6.9	7.1	21.0	<0.1			396	2.2
W	4	3.751	18.4	22.9	7.1	7.1	6.9	7.3	14.5	<0.1	250.8	1.8	244	1.2
T	5	4.012	18.4	22.8	7.2	7.3	6.9	7.0	23.0	<0.1	170.6	3.5	160	1.1
F	6	4.202	18.4	22.0	7.2	7.3	6.9	7.2	22.5	<0.1	145.9	2.3	168	1.3
S	7	4.002	18.4	22.6	7.1	7.3	6.9	7.1	24.0	<0.1	226.8	2.2	268	6.0
S	8	4.512	18.4	22.8	7.1	7.3	6.7	7.1	22.0	<0.1			236	1.6
M	9	4.469	18.7	22.8	7.2	7.4	6.9	7.3	22.0	<0.1			212	2.1
T	10	4.481	19.1	23.2	7.1	7.1	6.8	7.0	22.0	<0.1			232	1.3
W	11	5.678	19.7	22.6	7.3	7.4	6.8	7.0	23.0	<0.1	229.1	3.2	248	1.6
T	12	4.668	19.4	22.0	7.1	7.4	6.7	7.1	20.0	<0.1	137.3	2.4	192	0.4
F	13	3.836	19.1	22.2	7.1	7.4	6.8	7.5	24.0	<0.1	135.1	3.4	304	3.0
S	14	3.503	18.7	23.0	7.3	7.3	6.7	6.8	24.0	<0.1	173.3	1.8	212	2.4
S	15	4.336	18.4	22.9	7.2	7.3	6.8	6.8	22.0	<0.1			240	2.2
M	16	4.107	18.4	22.3	7.1	7.4	6.8	7.1	22.0	<0.1			264	2.0
T	17	3.571	18.1	22.4	6.6	7.3	6.7	7.0	23.0	<0.1			296	2.0
W	18	3.870	17.1	22.7	7.2	7.4	7.0	7.1	20.0	<0.1	149.1	1.4	404	1.0
T	19	3.815	17.8	23.4	7.3	7.3	6.9	7.2	24.0	<0.1	140.8	2.2	228	2.2
F	20	4.218	18.4	24.1	7.2	7.3	6.8	7.0	24.0	<0.1	199.3	1.4	224	1.2
S	21	3.694	19.1	24.1	7.3	7.5	7.0	7.2	22.0	<0.1	193.2	1.7	204	1.4
S	22	3.443	19.4	23.7	7.1	7.3	6.8	7.0	19.0	<0.1			248	3.6
M	23	3.555	19.1	23.1	7.2	7.3	6.7	7.0	22.0	<0.1			192	2.2
T	24	4.048	19.1	22.7	7.1	7.3	6.8	7.0	24.0	<0.1			316	1.4
W	25	4.071	18.5	23.1	7.0	7.4	6.9	7.1	21.0	<0.1	176.5	2.5	248	1.6
T	26	4.253	18.1	21.8	7.3	7.4	7.0	7.1	19.0	<0.1	183.7	3.5	204	1.6
F	27	7.608	18.4	20.1	7.0	7.4	7.1	7.2	27.0	<0.1	130.2	2.3	320	2.0
S	28	4.689	17.8	19.3	7.2	7.4	6.8	7.2	21.0	<0.1	283.0	2.0	364	2.2
S	29	4.469	17.4	19.6	7.2	7.4	6.9	6.9	15.0	<0.1			264	2.0
M	30	4.769	18.1	21.1	7.2	7.2	6.9	6.9	21.0	<0.1			148	2.0
	AVERAGE	4.248	18.5	22.3	6.6	7.5	6.7	7.5	27.0	0.0	185.6	2.4	252.8	1.9
		Monthly	ave.	ave.	min	max	min	max	max	max	98.7%	88.8	99.2%	68.8

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1

Sep-02

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
S	1	3.763	20.71	0.52	0.97	1.20	1.07		
M	2	3.743	3.78	0.57	0.60	1.25	0.97		
T	3	4.304			0.67	1.32	0.98		
W	4	3.751	8.42	0.46	0.67	1.03	0.83	3	
T	5	4.012	5.69	0.50	0.48	1.33	0.95		
F	6	4.202	11.11	0.65	0.70	0.81	0.75	3	
S	7	4.002	5.15	0.66	0.86	1.08	0.99	3	
S	8	4.512	17.35	0.68	1.15	1.42	1.31		
M	9	4.469	16.84	0.83	0.95	1.12	1.04		
T	10	4.481			1.03	1.33	1.21		
W	11	5.678	12.51	1.17	1.11	2.08	1.47	3	
T	12	4.668	6.75	0.80	1.15	1.57	1.35		
F	13	3.836	4.99	0.80	0.90	0.95	0.92	3	
S	14	3.503	5.56	0.92	0.90	1.04	0.95	3	
S	15	4.336	10.14	1.01	0.90	1.00	0.93		
M	16	4.107	5.07	0.82	0.92	1.22	1.11		
T	17	3.571			1.02	1.20	1.10		
W	18	3.870	6.78	0.64	0.80	0.83	0.82	3	
T	19	3.815	10.37	0.69	0.78	1.14	0.92		
F	20	4.218	5.69	0.71	0.24	1.65	0.86	124	
S	21	3.694	7.72	0.69	0.76	1.38	1.10	3	
S	22	3.443	5.12	0.90	0.79	1.10	0.93		
M	23	3.555	3.12	0.88	0.71	1.58	1.19		
T	24	4.048			0.62	1.19	0.97		
W	25	4.071	2.38	0.82	1.26	1.58	1.41	3	
T	26	4.253	5.97	0.89	1.00	1.33	1.18		
F	27	7.608	7.64	0.90	0.77	1.39	1.09	3	
S	28	4.689	5.88	0.55	1.17	1.44	1.34	3	
S	29	4.469	5.14	0.21	1.08	1.39	1.23		
M	30	4.769	2.10	0.23	1.44	1.66	1.53		
	AVERAGE	**4.248**	**7.24**	**0.72**	**0.24**	**2.08**	**1.53**	**4.1**	
				25.6				**10.4**	

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Oct-02

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK
716-693-0001
716-693-8759 FAX
FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
T	1	4.022	18.5	21.1	7.0	7.3	7.0	7.2	19.00	<0.1			208	2.0
W	2	4.104	19.5	21.4	7.0	8.0	7.1	7.2	21.00	<0.1	196.4	2.8	152	1.2
T	3	4.321	19.2	21.0	7.4	7.4	7.1	7.4	25.50	<0.1	218.9	4.4	220	1.2
F	4	4.268	19.1	20.7	7.2	7.2	6.8	7.1	22.00	<0.1	172.6	4.3	188	1.1
S	5	8.144	19.4	21.3	7.2	7.3	7.0	7.1	22.00	<0.1	212.8	3.2	352	0.9
S	6	3.945	18.5	20.7	7.2	7.2	6.9	7.0	23.00	<0.1			172	0.7
M	7	3.469	18.9	20.2	7.3	7.5	6.8	7.0	25.00	<0.1			201	1.0
T	8	4.107	19.1	20.1	7.2	7.4	6.8	7.2	25.00	<0.1			708	0.5
W	9	3.524	19.0	19.3	7.3	7.3	6.8	7.2	26.00	<0.1			192	0.6
T	10	3.678	18.9	20.0	7.3	7.5	6.9	7.0	23.00	<0.1	164.0	1.4	228	1.0
F	11	3.978	18.5	20.7	7.0	7.3	6.9	7.0	21.00	<0.1	218.2	3.3	232	0.8
S	12	4.523	20.0	21.3	7.0	7.3	6.9	7.1	27.00	<0.1	209.5	1.6	364	1.1
S	13	3.795	19.0	21.4	7.2	7.3	7.0	7.1	27.00	<0.1	231.4	5.1	292	0.6
M	14	3.960	18.3	20.2	7.3	7.4	7.1	7.3	28.00	<0.1			184	0.8
T	15	4.222	18.5	19.1	7.3	7.4	7.0	7.2	20.00	<0.1			308	0.8
W	16	5.730	18.7	19.6	7.2	7.4	7.0	7.1	26.00	<0.1	192.6	3.2	348	0.5
T	17	4.439	18.2	19.2	7.2	7.4	6.9	7.1	24.00	<0.1	254.8	3.9	316	1.2
F	18	8.389	18.0	18.9	7.2	7.4	6.9	7.1	19.00	<0.1	108.6	10.7	172	1.6
S	19	6.055	17.9	18.9	7.2	7.3	6.9	7.0	17.00	<0.1	70.1	3.6	360	2.4
S	20	5.032	17.5	18.2	7.2	7.3	6.9	7.2	16.00	<0.1			360	1.8
M	21	4.259	17.4	18.5	7.0	7.3	6.7	6.9	12.50	<0.1			144	2.0
T	22	4.348	17.5	18.7	7.1	7.4	7.0	7.3	11.00	<0.1			112	2.2
W	23	3.765	17.1	19.1	7.3	7.4	6.9	7.0	11.00	<0.1	152.9	2.0	184	2.2
T	24	3.874	17.2	18.6	7.4	7.5	6.9	7.0	15.00	<0.1	223.0	2.0	348	2.4
F	25	5.881	17.3	18.8	7.0	7.4	6.9	7.0	11.00	<0.1	150.4	1.8	212	2.0
S	26	4.906	17.0	18.0	7.1	7.4	6.9	7.1	16.00	<0.1	106.6	24.7	212	2.4
S	27	4.224	16.9	18.2	6.9	7.4	6.9	7.0	16.00	<0.1			164	1.8
M	28	4.646	16.8	18.1	7.1	7.4	6.8	7.0	15.00	<0.1			208	2.8
T	29	4.050	16.9	18.4	7.4	7.5	7.0	7.0	19.50	<0.1			176	2.0
W	30	3.968	17.2	18.1	7.4	7.5	7.0	7.1	22.00	<0.1	206.3	2.7	148	0.3
T	31	3.886	16.7	17.2	7.2	7.4	7.1	7.1	0.00	<0.1	188.0	20.6	212	1.0
	AVERAGE	4.565	18.2	19.5	6.9	8.0	6.7	7.4	28.0	0.0	176.7	5.8	247.6	1.4
		Monthly	ave.	ave.	min	max	min	max	max	max	96.7%	234.4	99.4%	53.7

NIAGARA COUNTY SEWER DISTRICT #1

Oct-02

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
T	1	4.022			1.17	1.29	1.23		
W	2	4.104	4.37	0.64	0.73	1.46	1.04	3	
T	3	4.321	2.81	0.39	0.82	1.18	1.04		
F	4	4.268	7.49	0.88	0.84	1.10	0.95	3	
S	5	8.144	1.99	0.94	0.72	1.13	0.98	3	
S	6	3.945	4.44	0.90	1.08	1.31	1.16		
M	7	3.469	6.16	0.96	1.30	1.80	1.52		
T	8	4.107			0.95	1.26	1.11		
W	9	3.524	3.90	0.97	1.50	1.64	1.55	3	
T	10	3.678	6.35	0.95	1.55	1.58	1.56		
F	11	3.978	3.39	0.83	1.20	1.80	1.52	3	
S	12	4.523	6.63	0.76	0.47	1.31	0.83	3	
S	13	3.795	4.25	0.66	0.53	0.72	0.60		
M	14	3.960	6.44	0.87	0.66	0.81	0.73		
T	15	4.222			0.17	0.95	0.51		
W	16	5.730	5.19	1.15	0.88	1.85	1.45	3	
T	17	4.439	6.39	0.90	0.92	0.98	0.95		
F	18	8.389	3.15	0.59	1.06	1.10	1.08	3	
S	19	6.055	4.48	0.53	1.23	1.75	1.52	3	
S	20	5.032	4.13	0.55	1.10	1.20	1.15		
M	21	4.259	2.07	0.25	0.74	1.12	0.89		
T	22	4.348			1.18	1.48	1.31		
W	23	3.765	3.23	0.51	1.10	1.54	1.31	3	
T	24	3.874	4.17	0.71	1.25	1.57	1.38		
F	25	5.881	4.60	0.84	1.01	1.23	1.10	3	
S	26	4.906	4.21	1.33	0.16	0.99	0.51	119	
S	27	4.224	4.29	0.73	1.28	1.57	1.39		
M	28	4.646	4.91	0.81	1.31	1.98	1.57		
T	29	4.050			0.99	1.51	1.25		
W	30	3.968	4.95	1.18	1.07	1.61	1.40		
T	31	3.886	9.86	1.03	1.04	1.94	1.37		
	AVERAGE	**4.565**	**4.76**	**0.80**	**0.16**	**1.98**	**1.57**	**4.1**	
				30.7				**10.2**	

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Apr-03

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
716-693-8759 FAX

FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
T	1	9.864	9.8	9.3	7.2	7.3	7.0	7.2	0.50	<0.1			24	2.6
W	2	9.316	9.9	10.1	7.0	7.3	6.9	7.1	1.50	<0.1			56	2.0
T	3	8.602	10.1	10.3	7.0	7.3	6.8	7.2	1.50	<0.1	82.0	23.8	84	2.2
F	4	9.455	10.0	9.8	7.2	7.3	7.1	7.3	1.40	<0.1	89.7	15.6	64	2.8
S	5	10.882	9.8	9.4	7.0	7.2	6.9	7.0	0.50	<0.1	81.9	11.4	44	2.2
S	6	12.802	9.4	9.3	6.9	7.1	7.0	7.3	0.70	<0.1	67.3	8.6	40	2.2
M	7	13.033	9.2	9.9	6.7	7.1	6.9	7.1	1.50	<0.1			40	2.0
T	8	11.222	9.3	9.4	6.8	7.5	6.8	7.2	0.40	<0.1			40	2.8
W	9	10.862	9.4	9.4	7.3	7.4	7.1	7.3	0.20	<0.1			36	4.6
T	10	12.452	9.3	9.4	7.4	7.4	7.1	7.1	0.20	<0.1	73.3	16.7	44	3.8
F	11	10.757	9.6	9.2	6.9	7.3	6.8	7.1	0.10	<0.1	57.8	7.5	40	8.8
S	12	14.922	9.6	9.5	7.2	7.4	6.9	7.1	14.00	<0.1	72.2	22.8	160	5.4
S	13	11.919	9.8	10.1	7.3	7.4	6.9	7.1	0.10	<0.1	134.9	7.3	40	2.8
M	14	10.309	9.8	10.4	7.2	7.3	7.0	7.0	0.20	<0.1			32	4.0
T	15	9.636	10.4	11.3	7.1	7.3	6.7	7.3	0.30	<0.1			72	6.0
W	16	9.170	10.6	11.4	7.2	7.4	7.1	7.2	11.00	<0.1	85.4	30.2	124	2.2
T	17	8.284	10.4	10.9	7.3	7.4	7.2	7.3	0.50	<0.1	88.3	14.8	36	3.2
F	18	7.993	10.6	11.0	7.2	7.4	7.2	7.2	0.50	<0.1	88.2	12.0	28	3.4
S	19	7.631	10.5	11.7	7.2	7.3	7.2	7.2	0.30	<0.1	83.2	5.7	12	1.2
S	20	7.409	10.8	13.1	7.2	7.3	7.2	7.3	2.00	<0.1			60	3.3
M	21	7.389	11.1	13.4	7.1	7.3	7.2	7.3	12.00	<0.1			144	1.7
T	22	7.436	11.1	12.9	7.2	7.3	7.2	7.4	3.50	<0.1			92	1.8
W	23	7.321	10.4	12.2	7.3	7.4	7.2	7.2	8.00	<0.1	120.5	4.6	176	3.8
T	24	7.063	9.4	11.6	7.2	7.3	7.0	7.2	1.00	<0.1	87.5	7.4	40	2.6
F	25	6.882	9.8	12.1	7.3	7.3	7.1	7.2	1.00	<0.1	105.1	10.5	40	2.0
S	26	6.671	9.9	12.3	7.3	7.4	7.1	7.2	3.00	<0.1	90.9	6.6	56	3.0
S	27	6.701	10.1	12.4	7.3	7.3	7.1	7.3	1.50	<0.1			68	3.6
M	28	6.699	10.2	13.2	7.2	7.3	7.3	7.7	1.70	<0.1			84	4.2
T	29	6.630	10.0	13.5	6.9	7.4	7.1	7.3	4.00	<0.1			108	5.8
W	30	6.312	11.0	11.0	7.3	7.3	7.2	7.3	1.50	<0.1	108.9	9.8	52	2.2
	AVERAGE	9.187	10.0	11.0	6.7	7.5	6.7	7.7	14.0	0.0	88.8	12.9	63.6	3.3
		Monthly	ave.	ave.	min	max	min	max	max	max	85.5%	976.0	94.7%	256.4

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1

Apr-03

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
T	1	9.864			0.14	0.63	0.40		
W	2	9.316	1.60	0.31	0.25	1.21	0.88	3	
T	3	8.602	2.64	0.30	0.64	1.23	0.95		
F	4	9.455	1.80	0.37	0.77	1.32	0.99	3	
S	5	10.882	2.20	0.47	0.88	1.14	0.99	3	
S	6	12.802	2.00	0.38	0.67	1.15	0.89		
M	7	13.033	2.08	0.35	0.75	1.14	0.93		
T	8	11.222			0.52	0.82	0.63		
W	9	10.862	1.56	0.39	0.56	0.64	0.61	7	
T	10	12.452	1.80	0.54	0.23	0.59	0.40		
F	11	10.757	1.92	0.90	0.41	0.85	0.60	4	
S	12	14.922	4.72	0.81	0.24	0.61	0.42	124	
S	13	11.919	1.32	0.47	0.08	0.50	0.29		
M	14	10.309	1.44	0.54	0.00	0.42	0.18		
T	15	9.636			0.33	0.47	0.42		
W	16	9.170	4.60	0.80	0.27	0.48	0.37	3	
T	17	8.284	1.52	0.91	0.39	1.08	0.80		
F	18	7.993	1.52	0.90	0.49	0.95	0.73	3	
S	19	7.631	0.80	0.74	0.61	1.45	1.16		
S	20	7.409	5.08	0.70	0.32	0.67	0.54	3	
M	21	7.389	6.44	0.74	0.00	0.71	0.34		
T	22	7.436			0.35	0.60	0.50		
W	23	7.321	4.88	0.54	0.33	0.50	0.43	3	
T	24	7.063	2.24	0.49	0.00	0.54	0.28		
F	25	6.882	3.12	0.71	0.41	0.52	0.46		
S	26	6.671	2.72	0.91	0.35	0.43	0.40	3	
S	27	6.701	2.44	0.77	0.28	0.38	0.34	1400	
M	28	6.699	4.04	0.71	0.34	0.74	0.48		
T	29	6.630			0.13	0.35	0.24		
W	30	6.312	2.48	0.55	0.69	1.03	0.91	3	
	AVERAGE	**9.187**	**2.54**	**0.59**	**0.00**	**1.45**	**1.16**	**7.0**	
				46.2				**23.3**	

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1

SPDES # NY-0027979 May-03

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
716-693-8759 FAX

FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
T	1	8.018	11.4	11.4	7.2	7.4	7.1	7.2	3.50	<0.1	111.0	12.6	80	4.0
F	2	9.709	11.5	11.5	7.1	7.4	7.1	7.3	2.00	<0.1	92.8	7.8	72	3.8
S	3	8.851	10.6	10.7	7.3	7.4	7.1	7.2	18.00	<0.1	259.2	9.9	912	3.8
S	4	7.989	10.8	11.1	7.3	7.4	7.1	7.4	0.50	<0.1			44	2.8
M	5	7.908	11.3	10.8	7.3	7.5	7.2	7.3	5.00	<0.1			68	2.2
T	6	10.517	11.5	11.1	7.3	7.4	7.2	7.3	0.50	<0.1			52	3.0
W	7	8.923	11.9	11.4	7.0	7.3	7.2	7.2	1.50	<0.1	80.4	21.6	32	3.4
T	8	7.979	12.0	11.8	6.9	7.3	6.8	7.1	0.50	<0.1	74.6	11.4	44	3.8
F	9	7.733	11.8	12.1	7.0	7.2	7.0	7.3	14.00	<0.1	179.6	12.3	188	4.4
S	10	7.214	12.0	12.9	7.0	7.2	7.0	7.2	15.00	<0.1	206.9	11.6	160	2.8
S	11	8.928	12.4	12.4	7.0	7.3	7.2	7.2	20.00	<0.1			292	2.8
M	12	9.663	12.3	11.7	6.7	7.2	6.8	6.9	12.00	<0.1			124	2.2
T	13	10.831	12.1	11.4	7.0	7.3	7.0	7.0	11.00	<0.1			132	4.6
W	14	9.655	11.8	11.5	7.1	7.1	7.1	7.1	11.00	<0.1	147.4	10.0	112	5.4
T	15	8.649	11.1	11.9	6.8	7.3	6.9	7.0	15.00	<0.1	142.2	10.4	168	4.2
F	16	9.852	10.8	12.2	7.0	7.1	7.0	7.1	21.00	<0.1	200.8	4.7	192	2.8
S	17	11.104	11.3	11.8	7.0	7.0	7.1	7.2	20.00	<0.1	174.9	9.0	192	3.4
S	18	9.375	11.0	12.2	6.7	7.1	7.1	7.2	25.00	<0.1			232	2.0
M	19	8.578	11.0	12.7	6.6	7.2	7.0	7.0	22.00	<0.1			192	2.6
T	20	8.369	11.5	13.1	7.3	7.4	7.1	7.2	26.00	<0.1			316	3.2
W	21	11.252	11.5	11.6	7.3	7.3	7.2	7.2	17.00	<0.1	187.5	16.2	256	4.2
T	22	9.306	11.9	11.5	7.3	7.4	7.1	7.1	26.00	<0.1	155.7	3.0	192	2.2
F	23	8.453	12.0	11.7	7.3	7.4	7.1	7.2	28.00	<0.1	178.6	7.0	228	4.2
S	24	9.965	12.2	12.0	7.1	7.4	6.9	7.2	29.00	<0.1	134.7	5.6	260	8.0
S	25	10.371	12.6	12.2	7.2	7.3	7.2	7.2	26.00	<0.1			184	5.2
M	26	8.884	12.5	12.2	7.1	7.3	7.1	7.2	32.00	<0.1			232	3.0
T	27	8.367	12.3	12.7	7.1	7.3	7.2	7.5	28.00	<0.1			264	5.0
W	28	8.379	12.5	13.0	7.3	7.3	7.1	7.2	18.00	<0.1	188.4	15.4	196	6.2
T	29	7.853	12.8	13.4	7.1	7.3	7.1	7.2	20.00	<0.1	153.6	10.2	260	3.2
F	30	7.958	12.3	12.9	7.2	7.3	7.1	7.2	19.00	<0.1	200.7	3.9	484	3.0
S	31	8.689	12.5	13.0	7.2	7.4	7.1	7.1	12.00	<0.1	131.7	3.0	120	2.0
	AVERAGE	9.010	11.8	12.0	6.6	7.5	6.8	7.5	32.0	0.0	158.0	9.7	201.5	3.7
		Monthly	ave.	ave.	min	max	min	max	max	max	93.8%	724.8	98.2%	277.2

NIAGARA COUNTY SEWER DISTRICT #1

May-03

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	COMMENTS
T	1	8.018	3.08	0.96	0.37	0.74	0.51		
F	2	9.709	2.72	0.67	0.05	0.48	0.23	3600	
S	3	8.851	15.76	0.39	0.82	1.02	0.92	3	
S	4	7.989	1.06	0.51	0.77	0.93	0.87		
M	5	7.908	3.28	0.62	0.00	1.13	0.51		
T	6	10.517			0.65	1.06	0.86		
W	7	8.923	1.76	0.68	0.28	1.45	0.77	6	
T	8	7.979	3.76	0.81	0.48	1.10	0.81		
F	9	7.733	3.92	0.93	0.20	0.80	0.51	560	
S	10	7.214	5.52	1.09	0.12	0.78	0.55	3	
S	11	8.928	6.88	0.91	0.18	0.72	0.48		
M	12	9.663	3.96	0.71	0.36	1.20	0.71		
T	13	10.831			0.82	0.92	0.87		
W	14	9.655	2.76	0.52	0.51	0.90	0.71		
T	15	8.649	9.84	0.52	0.63	0.76	0.69	3	
F	16	9.852	4.60	0.44	0.57	0.92	0.78	24	
S	17	11.104	6.20	0.58	0.72	0.81	0.77	7	
S	18	9.375	3.08	0.43	0.58	0.63	0.61		
M	19	8.578	3.64	0.52	0.67	0.91	0.81		
T	20	8.369			0.01	0.25	0.15		
W	21	11.252	4.72	0.83	0.44	0.84	0.69	3	
T	22	9.306	4.00	0.83	0.46	0.78	0.67		
F	23	8.453	3.60	1.01	0.15	0.46	0.32	1020	
S	24	9.965	4.12	1.29	0.91	0.98	0.94	3	
S	25	10.371	5.80	1.00	0.72	0.75	0.73		
M	26	8.884	4.28	1.06	0.83	0.88	0.86		
T	27	8.367			0.00	0.83	0.51		
W	28	8.379	3.20	1.24	0.30	0.94	0.55	3	
T	29	7.853	6.64	0.91	0.38	0.81	0.54		
F	30	7.958	11.68	0.72	0.34	1.03	0.61	867	
S	31	8.689	5.88	0.34	0.35	1.15	0.79	3	
	AVERAGE	9.010	5.05	0.77	0.00	1.45	0.94	21.4	
				57.7				41.0	

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Jun-03

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK
716-693-0001
716-693-8759 FAX
FRANK A. Nerone, P.E.
CERT. 4A

DAY	DATE	FLOW	TEMPERATURE,C INF	TEMPERATURE,C EFF	pH INF, MIN	pH INF, MAX	pH EFF, MIN	pH EFF, MAX	SETT SOLIDS,1HR INF,ml/l	SETT SOLIDS,1HR EFF,ml/l	CBOD INF,mg/l	CBOD EFF,mg/l	SUSP SOLIDS INF,mg/l	SUSP SOLIDS EFF,mg/l
S	1	12.107	12.6	12.1	7.2	7.5	7.1	7.3	11.00	<0.1			176	4.4
M	2	9.659	13.0	12.5	7.2	7.4	7.1	7.3	9.00	<0.1			72	2.2
T	3	8.249	13.2	13.1	7.1	7.3	7.2	7.3	6.50	<0.1			164	2.2
W	4	7.909	13.1	13.2	7.3	7.4	7.2	7.3	9.00	<0.1	203.0	3.8	184	1.2
T	5	9.369	13.1	13.3	7.1	7.4	7.2	7.2	25.00	<0.1	230.2	3.0	272	1.0
F	6	8.199	13.6	13.4	7.3	7.4	7.2	7.2	20.00	<0.1	178.7	18.2	216	1.2
S	7	7.599	13.4	14.3	7.3	7.4	7.2	7.3	14.00	<0.1	219.0	3.2	284	1.2
S	8	7.579	13.5	14.0	7.2	7.4	7.1	7.3	17.00	<0.1			232	1.2
M	9	10.459	13.8	14.2	7.3	7.4	7.1	7.2	16.00	<0.1			200	1.8
T	10	8.649	14.0	14.1	6.5	7.2	7.0	7.2	11.00	<0.1			128	2.2
W	11	8.249	14.0	14.4	7.3	7.4	7.2	7.2	14.50	<0.1	211.7	3.8	212	0.7
T	12	8.059	14.1	14.5	7.3	7.4	7.2	7.2	16.00	<0.1	201.2	4.1	144	1.2
F	13	11.239	14.3	14.0	7.2	7.3	7.0	7.2	13.00	<0.1	134.0	3.2	116	1.0
S	14	9.999	14.0	14.3	7.2	7.3	6.9	7.2	8.60	<0.1	159.9	3.8	140	2.0
S	15	8.569	14.8	14.4	7.1	7.3	7.1	7.2	15.00	<0.1			92	0.4
M	16	7.959	14.7	15.0	7.0	7.3	7.1	7.2	17.00	<0.1			144	1.3
T	17	7.359	14.9	15.2	7.0	7.3	7.0	7.3	16.00	<0.1			232	1.0
W	18	7.159	15.1	15.8	7.1	7.2	7.0	7.2	17.00	<0.1	152.8	3.0	176	1.1
T	19	6.989	14.9	15.0	7.0	7.3	6.9	7.1	18.00	<0.1	210.5	3.0	196	2.0
F	20	6.639	14.6	15.0	7.2	7.3	7.2	7.3	15.00	<0.1	135.3	3.0	164	2.0
S	21	6.689	14.7	16.0	7.0	7.2	7.0	7.1	21.00	<0.1	200.8	3.3	324	2.2
S	22	6.779	14.5	15.7	7.0	7.1	7.1	7.2	19.00	<0.1			276	2.8
M	23	6.599	14.8	16.2	7.2	7.3	7.2	7.2	17.00	<0.1			192	2.6
T	24	6.359	15.3	16.1	7.0	7.2	7.1	7.2	20.00	<0.1			244	2.0
W	25	6.269	15.4	16.5	7.3	7.3	7.2	7.2	18.00	<0.1	178.7	3.0	192	1.6
T	26	6.270	15.9	17.2	7.3	7.4	7.1	7.2	20.00	<0.1	250.1	3.0	220	1.5
F	27	5.990	15.8	17.5	7.2	7.4	7.1	7.2	15.00	<0.1	201.8	3.0	160	2.2
S	28	5.990	16.8	17.3	7.2	7.3	7.1	7.2	14.00	<0.1	185.9	4.6	236	3.8
S	29	5.640	16.9	17.7	7.1	7.4	7.1	7.2	19.00	<0.1			212	2.6
M	30	5.870	16.7	17.4	7.3	7.3	7.2	7.3	22.00	<0.1			272	2.2
	AVERAGE	7.815	14.5	15.0	6.5	7.5	6.9	7.3	25.0	0.0	189.1	4.4	190.4	1.8
		Monthly	ave.	ave.	min	max	min	max	max	max	97.7%	280.1	99.0%	118.7

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1

Jun-03

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
S	1	12.107	5.20	0.43	0.58	1.00	0.79		
M	2	9.659	2.40	0.39	0.76	0.94	0.87		
T	3	8.249			0.26	0.50	0.41		
W	4	7.909	3.08	0.56	0.00	1.05	0.45	3	
T	5	9.369	6.16	0.44	0.44	0.81	0.68		
F	6	8.199	4.64	0.34	0.37	0.87	0.68	15	
S	7	7.599	4.08	0.38	0.30	0.68	0.48	9	
S	8	7.579	4.16	0.37	0.20	0.67	0.39		
M	9	10.459	4.88	0.36	0.41	0.88	0.60		
T	10	8.649			0.40	0.72	0.55		
W	11	8.249	4.00	0.43	0.42	0.88	0.72	16	
T	12	8.059	3.12	0.49	0.53	0.96	0.75		
F	13	11.239	3.40	0.41	0.44	0.95	0.64	3	
S	14	9.999	3.96	0.40	0.74	0.89	0.80	3	
S	15	8.569	2.52	0.42	0.75	0.84	0.79		
M	16	7.959	4.86	0.53	0.49	0.89	0.67		
T	17	7.359			0.59	0.84	0.76		
W	18	7.159	2.68	0.54	0.87	0.93	0.90	3	
T	19	6.989	4.56	0.55	0.59	0.80	0.68		
F	20	6.639	6.16	0.69	0.41	0.87	0.63	3	
S	21	6.689	6.76	0.82	0.32	0.36	0.34	3	
S	22	6.779	5.24	0.89	0.41	0.79	0.64		
M	23	6.599	4.52	0.84	0.15	0.55	0.37		
T	24	6.359			0.60	0.95	0.73		
W	25	6.269	4.32	1.09	0.63	0.95	0.77	3	
T	26	6.270	4.04	1.11	0.57	0.73	0.65		
F	27	5.990	4.08	1.04	0.45	0.70	0.56	3	
S	28	5.990	3.40	0.89	0.25	0.56	0.39	3	
S	29	5.640	3.40	0.94	0.38	0.49	0.44		
M	30	5.870	3.60	0.94	0.00	0.55	0.34		
	AVERAGE	7.815	4.16	0.57	0.00	1.05	0.90	4.3	
				37.7				12.9	

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Nov-02

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
716-693-8759 FAX

FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
F	1	3.898	17.1	17.9	7.4	7.5	7.0	7.1	30	<0.1	153.9		192	0.3
S	2	4.357	16.5	17.6	7.4	7.5	7.0	7.1	28.0	<0.1	191.7	5.2	272	1.0
S	3	3.977	16.5	18.0	7.4	7.5	7.0	7.0	24.0	<0.1			328	0.8
M	4	3.946	16.8	18.1	7.5	7.6	7.1	7.1	30.0	<0.1			240	18.4
T	5	4.727	16.7	17.8	7.3	7.6	7.1	7.2	16.0	<0.1			264	1.5
W	6	5.213	16.7	18.0	7.3	7.6	7.1	7.2	29.0	<0.1	213.6	3.8	276	1.6
T	7	5.334	16.7	18.1	7.4	7.5	7.0	7.1	26.0	<0.1	184.2	3.4	272	2.6
F	8	5.022	16.6	18.3	7.4	7.6	6.9	7.1	21.0	<0.1	148.8	3.9	212	6.2
S	9	4.929	16.4	19.8	7.4	7.5	7.0	7.1	28.0	<0.1	200.2	5.1	276	9.2
S	10	5.759	16.0	19.8	7.4	7.4	7.0	7.1	28.0	<0.1			288	9.0
M	11	6.507	16.1	19.0	7.4	7.5	6.9	7.1	15.0	<0.1			228	12.0
T	12	4.668	15.7	17.5	7.3	7.4	7.1	7.1	17.0	<0.1			1024	9.8
W	13	4.928	15.8	17.4	7.2	7.3	7.0	7.1	18.0	<0.1	119.9	5.0	220	6.8
T	14	5.368	15.6	17.1	7.2	7.5	7.1	7.2	27.0	<0.1	182.4	8.7	176	2.4
F	15	5.357	15.6	16.7	7.3	7.5	7.0	7.2	26.0	<0.1	173.6	4.1	320	7.2
S	16	5.003	15.2	16.4	7.1	7.5	7.1	7.2	24.0	<0.1	121.2	14.5	344	5.6
S	17	7.980	14.9	15.7	7.2	7.4	6.9	7.1	17.0	<0.1			232	5.6
M	18	9.125	14.4	14.9	7.3	7.4	7.0	7.1	25.0	<0.1			252	6.8
T	19	6.261	15.1	15.6	7.1	7.4	7.0	7.1	6.0	<0.1			1200	5.6
W	20	5.882	14.7	16.5	7.2	7.5	7.1	7.2	19.0	<0.1	96.7	11.9	152	9.6
T	21	5.271	14.8	16.9	6.9	7.5	7.2	7.4	20.0	<0.1	120.9	10.3	292	4.8
F	22	9.654	14.4	16.4	7.3	7.5	7.0	7.0	20.0	<0.1	135.6	7.2	260	5.2
S	23	13.171	13.4	13.6	7.0	7.5	7.0	7.2	16.0	<0.1	121.2	17.6	188	20.0
S	24	9.450	13.5	13.5	7.4	7.5	7.2	7.2	11.0	<0.1			140	12.2
M	25	8.214	13.6	13.8	7.4	7.5	7.1	7.2	14.0	<0.1			88	6.4
T	26	7.309	13.9	13.5	7.4	7.5	7.2	7.3	13.0	<0.1			216	3.2
W	27	5.065	13.8	13.3	7.0	7.4	7.1	7.3	13.0	<0.1	134.2	3.5	220	2.0
T	28	6.339	13.3	12.9	7.0	7.3	7.1	7.3	22.0	<0.1	137.9	3.0	220	0.8
F	29	6.302	12.7	12.6	7.2	7.4	7.1	7.2	23.0	<0.1	130.1	13.1	352	1.9
S	30	6.750	13.4	12.9	7.2	7.5	7.1	7.1	23.0	<0.1	122.7	4.2	228	1.1
	AVERAGE	6.192	15.2	16.3	6.9	7.6	6.9	7.4	30.0	0.0	147.0	8.2	299.1	6.0
		Monthly	ave.	ave.	min	max	min	max	max	max	94.4%	416.4	98.0%	344.4

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1

Nov-02

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
F	1	3.898	7.02	1.19	1.47	2.75	2.32	3	
S	2	4.357	7.29	1.31	0.98	1.67	1.21	3	
S	3	3.977	5.53	1.29	0.92	1.54	1.29		
M	4	3.946	5.77	1.16	0.82	1.66	1.26		
T	5	4.727			1.00	1.70	1.30		
W	6	5.213	4.36	1.02	1.35	1.91	1.55	3	
T	7	5.334	6.31	1.10	1.00	1.48	1.28		
F	8	5.022	25.70	1.58	1.18	1.57	1.43	3	
S	9	4.929	4.01	1.65	1.41	2.60	2.03	3	
S	10	5.759	6.66	0.86	0.46	0.68	0.55		
M	11	6.507	5.26	0.92	0.50	0.65	0.59		
T	12	4.668			0.06	1.78	0.64		
W	13	4.928	5.53	0.89	1.63	1.80	1.74	3	
T	14	5.368	4.48	1.32	1.44	3.05	2.03		
F	15	5.357	3.70	1.17	1.62	2.33	1.97	3	
S	16	5.003	3.74	1.03	1.65	1.78	1.73	3	
S	17	7.980	5.19	0.97	0.68	1.40	0.96		
M	18	9.125	3.90	0.78	1.20	1.53	1.31		
T	19	6.261			1.65	1.88	1.75		
W	20	5.882	2.07	0.94	1.60	1.77	1.71	3	
T	21	5.271	4.60	0.72	0.97	1.43	1.15		
F	22	9.654	4.25	0.60	0.90	1.09	1.00	3	
S	23	13.171	2.77	0.70	0.00	1.62	1.05	5700	
S	24	9.450	2.26	0.59	1.50	1.91	1.71		
M	25	8.214	2.92	0.64	1.03	1.51	1.35		
T	26	7.309	3.78	0.42	0.90	1.22	1.08		
W	27	5.065	2.85	0.36	0.35	0.73	0.54	3	
T	28	6.339	4.60	0.42	0.71	1.06	0.87		
F	29	6.302	1.79	0.18	0.64	0.87	0.79	3	
S	30	6.750	2.22	0.27	0.76	0.90	0.84	3	
	AVERAGE	**6.192**	**5.06**	**0.89**	**0.00**	**3.05**	**2.32**	**5.1**	
				43.8				**37.2**	

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Dec-02

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
716-693-8759 FAX

FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
S	1	5.690	12.7	12.5	7.3	7.4	7.2	7.2	18.00	<0.1			164	1.2
M	2	5.734	13.2	12.6	7.4	7.4	7.1	7.2	24.50	<0.1			280	2.7
T	3	5.030	13.1	13.3	7.3	7.4	7.2	7.3	29.00	<0.1			460	1.2
W	4	5.228	13.0	13.2	7.2	7.5	7.1	7.2	9.00	<0.1	138.4	2.0	176	1.5
T	5	5.014	13.4	14.1	7.2	7.4	7.1	7.2	13.00	<0.1	202.1	14.0	272	1.3
F	6	5.095	13.5	14.5	7.3	7.4	7.2	7.5	16.00	<0.1	134.7	1.0	248	1.4
S	7	5.199	13.4	14.4	7.3	7.4	7.1	7.2	24.00	<0.1	208.4	5.2	340	1.4
S	8	5.280	13.4	13.8	7.1	7.3	7.0	7.2	14.00	<0.1			212	1.2
M	9	4.616	13.4	13.5	7.2	7.4	7.0	7.3	10.00	<0.1			200	1.6
T	10	4.844	13.3	13.9	7.2	7.2	7.0	7.4	16.50	<0.1			180	1.0
W	11	4.537	13.3	14.1	7.2	7.3	7.0	7.2	20.00	<0.1	168.4	2.3	216	0.8
T	12	7.211	13.3	14.4	7.2	7.3	7.0	7.2	16.00	<0.1	160.9	3.0	172	1.8
F	13	8.687	12.9	14.1	7.1	7.3	7.0	7.1	21.00	<0.1	172.8	6.3	256	2.0
S	14	14.592	11.9	13.3	7.1	7.5	6.9	7.3	27.00	<0.1	197.2	8.3	428	3.6
S	15	12.610	11.5	12.5	7.2	7.2	7.0	7.1	18.00	<0.1			236	3.6
M	16	11.560	11.6	12.3	7.2	7.5	7.0	7.1	13.00	<0.1			108	2.2
T	17	8.400	11.7	12.0	6.9	7.4	7.1	7.2	20.00	<0.1			100	2.2
W	18	10.823	11.7	12.1	7.4	7.4	7.2	7.3	19.00	<0.1	224.8	7.2	168	2.4
T	19	9.327	11.8	12.3	7.4	7.5	7.3	7.4	17.00	<0.1	138.8	5.3	120	2.0
F	20	17.238	10.9	11.6	7.3	7.4	7.3	7.3	12.00	<0.1	185.4	24.0	160	3.0
S	21	12.786	10.6	10.9	7.1	7.4	7.0	7.1	10.00	<0.1	131.0	3.7	84	2.0
S	22	8.643	11.1	11.2	7.3	7.4	7.2	7.3	14.00	<0.1			228	1.1
M	23	10.780	11.2	11.2	7.3	7.3	7.1	7.4	14.00	<0.1			184	1.2
T	24	7.798	11.5	11.4	6.9	7.3	7.1	7.2	14.00	<0.1			188	2.0
W	25	5.418	11.6	11.6	7.2	7.4	6.9	7.5	17.00	<0.1	169.2	12.0	164	2.0
T	26	6.348	11.5	11.4	7.0	7.7	7.2	7.3	23.00	<0.1	229.1	5.0	164	0.3
F	27	5.901	11.7	11.3	7.0	7.3	6.8	7.1	14.00	<0.1	164.8	4.2	164	1.0
S	28	5.861	11.7	11.9	7.0	7.0	6.9	7.1	21.50	<0.1	157.4	8.9	140	0.3
S	29	6.341	11.8	12.2	7.1	7.4	6.9	7.2	13.00	<0.1			136	0.3
M	30	6.188	11.8	11.2	7.0	7.1	6.8	7.2	11.00	<0.1			156	1.0
T	31	14.234	11.3	10.9	7.0	7.0	7.0	7.1	0.00	<0.1			340	1.8
	AVERAGE	7.968	12.2	12.6	6.9	7.7	6.8	7.5	29.0	0.0	175.4	8.4	207.9	1.6
		Monthly	ave.	ave.	min	max	min	max	max	max	95.2%	563.6	99.2%	125.3

NIAGARA COUNTY SEWER DISTRICT #1

Dec-02

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
S	1	5.690	1.13	0.49	0.40	0.81	0.64		
M	2	5.734	4.25	0.49	0.40	0.77	0.64		
T	3	5.030			0.60	0.98	0.74		
W	4	5.228	6.24	0.27	0.64	0.80	0.74	3	
T	5	5.014	2.65	0.20	0.60	0.83	0.75		
F	6	5.095	4.13	0.19	0.45	0.60	0.52	3	
S	7	5.199	6.31	0.21	0.29	0.55	0.43	3	
S	8	5.280	1.99	0.18	0.06	1.05	0.63		
M	9	4.616	3.16	0.31	0.64	0.88	0.80		
T	10	4.844			0.73	1.10	0.91		
W	11	4.537	4.68	0.32	0.55	1.10	0.85	3	
T	12	7.211	3.74	0.25	0.80	1.06	0.95		
F	13	8.687	3.74	0.29	0.82	1.23	1.08	3	
S	14	14.592	5.89	0.31	1.10	1.67	1.42	3	
S	15	12.610	5.54	0.62	1.27	1.41	1.33		
M	16	11.560	1.68	0.23	1.15	1.25	1.20		
T	17	8.400			0.40	1.23	0.87	3	
W	18	10.823	3.08	0.22	0.82	1.12	0.97		
T	19	9.327	2.42	0.20	0.20	1.03	0.65		
F	20	17.238	2.50	0.43	1.25	1.74	1.50	3	
S	21	12.786	2.03	0.18	0.92	1.26	1.07	3	
S	22	8.643	2.03	0.20	0.73	1.05	0.91		
M	23	10.780	4.25	0.21	0.70	1.02	0.86		
T	24	7.798			0.45	0.91	0.61		
W	25	5.418	3.63	0.29	0.46	0.67	0.58	3	
T	26	6.348	6.63	0.24	0.56	0.75	0.63		
F	27	5.901	18.72	0.41	0.45	0.60	0.52	3	
S	28	5.861	4.09	0.40	0.34	0.49	0.39	3	
S	29	6.341	4.21	0.40	0.49	0.57	0.53		
M	30	6.188	4.64	0.46	0.41	0.64	0.53		
T	31	14.234			0.20	1.52	0.82		
	AVERAGE	7.968	4.36	0.31	0.06	1.74	1.50	3.0	
				21.7				3.0	

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Feb-03

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
716-693-8759 FAX

FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
S	1	5.552	11.2	11.4	7.0	7.2	7.0	7.2	5	<0.1	208.2	14.1	136	4.8
S	2	5.126	11.4	11.3	7.1	7.3	7.1	7.3	5.5	<0.1			144	2.4
M	3	6.599	11.2	11.8	7.1	7.4	7.1	7.3	5.0	<0.1			136	3.4
T	4	12.625	10.4	10.2	6.8	7.2	7.0	7.2	10.0	<0.1			216	3.8
W	5	10.688	9.7	8.8	7.0	7.6	7.0	7.1	3.0	<0.1	79.3	8.3	72	4.6
T	6	9.379	9.8	9.5	7.0	7.5	7.0	7.1	4.0	<0.1	92.3	9.5	92	3.4
F	7	8.297	10.1	10.0	7.1	7.6	7.1	7.3	2.0	<0.1	83.3	8.0	68	2.6
S	8	7.712	9.9	9.6	7.2	7.6	7.2	7.4	4.0	<0.1	104.6	8.1	80	3.2
S	9	6.784	10.0	9.4	7.2	7.5	7.2	7.3	21.0	<0.1			324	2.0
M	10	6.909	10.3	9.7	7.2	7.4	7.2	7.3	33.0	<0.1			352	2.0
T	11	6.114	10.3	9.5	7.1	7.3	7.1	7.2	12.0	<0.1			208	3.0
W	12	6.688	10.3	9.3	7.0	7.3	7.0	7.2	4.0	<0.1	144.9	8.6	120	3.4
T	13	5.970	10.2	9.2	7.1	7.3	7.1	7.2	8.0	<0.1	140.4	5.1	196	5.0
F	14	5.608	10.2	9.2	7.0	7.2	7.0	7.1	14.0	<0.1	315.5	3.4	236	3.4
S	15	5.181	10.3	9.7	6.8	7.2	6.9	7.1	20.0	<0.1	282.4	2.8	200	2.0
S	16	4.561	10.3	9.3	7.0	7.2	7.0	7.2	22.0	<0.1			340	1.6
M	17	4.683	10.2	9.0	7.0	7.3	7.1	7.2	20.0	<0.1			304	0.6
T	18	5.808	10.3	9.4	7.0	7.3	7.0	7.3	25.0	<0.1			368	1.2
W	19	4.653	10.5	10.2	6.9	7.1	6.9	7.0	19.0	<0.1	214.1	4.8	328	7.4
T	20	5.006	10.8	10.2	6.8	7.0	6.8	7.0	16.0	<0.1	253.3	3.0	260	3.4
F	21	5.406	10.8	10.3	6.9	7.4	7.1	7.4	13.0	<0.1	163.8	10.3	192	1.4
S	22	6.866	10.9	10.8	6.8	7.1	6.8	7.1	9.0	<0.1	167.7	13.8	184	3.2
S	23	13.620	9.5	9.8	6.8	7.1	6.8	7.1	31.0	<0.1			436	3.2
M	24	10.214	9.4	8.6	6.8	7.2	7.0	7.2	0.8	<0.1			48	6.2
T	25	8.040	9.7	8.8	6.6	7.5	6.8	7.2	0.5	<0.1			92	4.4
W	26	8.007	9.8	8.6	7.1	7.5	7.1	7.2	1.0	<0.1	130.3	20.2	48	5.2
T	27	7.970	9.9	9.1	7.1	7.5	7.1	7.2	0.2	<0.1	74.4	11.9	68	6.2
F	28	7.274	10.0	9.5	7.0	7.4	7.0	7.2	0.2	<0.1	84.4	16.2	60	15.0
	AVERAGE	7.191	10.3	9.7	6.6	7.6	6.8	7.4	33.0	0.0	144.7	9.7	189.6	3.9
		Monthly	ave.	ave.	min	max	min	max	max	max	93.3%	557.3	98.0%	239.8

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1

Feb-03

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	COMMENTS
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	
S	1	5.552	6.32	0.38	0.51	0.80	0.68	3	
S	2	5.126	3.62	0.39	0.73	0.85	0.79		
M	3	6.599	3.47	0.44	0.59	0.76	0.70		
T	4	12.625			0.48	1.04	0.81		
W	5	10.688	1.60	0.27	0.63	0.89	0.73	3	
T	6	9.379	1.87	0.31	0.66	0.70	0.68		
F	7	8.297	1.99	0.26	0.42	0.72	0.54	3	
S	8	7.712	2.50	0.21	0.61	0.71	0.66	3	
S	9	6.784	5.85	0.18	0.43	0.78	0.65		
M	10	6.909	12.36	0.29	0.68	0.84	0.74		
T	11	6.114			0.50	0.72	0.62		
W	12	6.688	2.92	0.47	0.41	0.60	0.49	3	
T	13	5.970	4.21	0.46	0.20	0.53	0.34		
F	14	5.608	4.88	0.34	0.41	0.70	0.53	3	
S	15	5.181	7.88	0.31	0.70	1.15	0.93	3	
S	16	4.561	7.68	0.65	0.73	1.65	1.04		
M	17	4.683	7.45	0.34	0.60	0.70	0.66		
T	18	5.808			0.62	0.73	0.66		
W	19	4.653	6.12	0.70	0.44	0.70	0.54		
T	20	5.006	6.04	0.22	0.40	0.47	0.44		
F	21	5.406	3.19	0.14	0.29	0.42	0.34	3	
S	22	6.866	1.99	0.24	0.26	0.44	0.32	3	
S	23	13.620	12.16	0.35	0.31	0.34	0.32		
M	24	10.214	1.09	0.22	0.32	0.37	0.34		
T	25	8.040			0.24	0.48	0.36		
W	26	8.007	0.66	0.28	0.20	0.80	0.56	3	
T	27	7.970	1.40	0.50	0.35	1.20	0.77		
F	28	7.274	1.13	0.80	0.30	0.58	0.42	3	
	AVERAGE	7.191	4.52	0.36	0.20	1.65	1.04	3.0	
				20.3				3.0	

FRANK A. NERONE

NIAGARA COUNTY SEWER DISTRICT #1
SPDES # NY-0027979 Mar-03

7346 LIBERTY DRIVE
NIAGARA FALLS,NEW YORK

716-693-0001
716-693-8759 FAX

FRANK A. Nerone, P.E.
CERT. 4A

			TEMPERATURE,C		pH	pH	pH	pH	SETT SOLIDS,1HR		CBOD		SUSP SOLIDS	
DAY	DATE	FLOW	INF	EFF	INF, MIN	INF, MAX	EFF, MIN	EFF, MAX	INF,ml/l	EFF,ml/l	INF,mg/l	EFF,mg/l	INF,mg/l	EFF,mg/l
S	1	6.923	10.1	10.1	7.1	7.4	7.0	7.1	0.20	<0.1	112.2	12.6	64	4.2
S	2	8.942	10.1	9.8	7.3	7.4	7.0	7.2	15.00	<0.1			264	4.8
M	3	9.017	9.7	8.8	7.3	7.5	7.1	7.3	0.20	<0.1			24	2.6
T	4	6.579	9.8	8.9	7.3	7.6	7.1	7.2	10.00	<0.1			808	3.0
W	5	8.748	10.1	9.8	7.3	7.4	7.2	7.2	3.50	<0.1	124.9	10.0	132	4.2
T	6	5.910	10.0	9.8	7.3	7.5	7.1	7.2	0.50	<0.1	137.4	19.6	60	2.8
F	7	7.317	9.9	9.4	7.4	7.4	7.2	7.2	0.50	<0.1	106.8	26.4	44	1.8
S	8	8.124	10.0	10.1	7.3	7.4	7.2	7.2	0.40	<0.1	96.0	16.2	60	3.2
S	9	14.625	9.2	8.3	7.4	7.4	7.2	7.3	3.50	<0.1			68	12.4
M	10	11.429	9.1	7.1	7.2	7.4	7.1	7.2	2.00	<0.1			60	4.4
T	11	9.811	9.3	8.0	6.7	7.3	6.8	7.1	4.50	<0.1			100	3.0
W	12	10.869	9.4	8.3	7.2	7.4	7.2	7.2	4.00	<0.1	107.0	19.1	88	5.2
T	13	9.845	9.5	8.9	7.3	7.4	7.1	7.2	11.00	<0.1	167.0	25.2	212	4.6
F	14	7.316	9.5	9.1	7.3	7.4	7.1	7.2	10.00	<0.1	163.4	12.4	92	4.8
S	15	10.024	9.7	9.9	7.2	7.4	7.0	7.2	14.00	<0.1	188.0	16.6	204	5.2
S	16	22.383	9.0	8.7	7.1	7.3	7.0	7.2	20.00	<0.1			416	7.0
M	17	23.017	7.9	8.5	7.1	7.2	6.9	7.1	15.00	<0.1			284	6.6
T	18	29.858	7.4	15.4	6.8	7.4	6.9	7.3	15.00	<0.1			324	18.8
W	19	20.023	7.7	12.9	7.3	7.4	7.0	7.3	12.00	<0.1	81.7	14.6	76	14.4
T	20	20.548	8.4	7.3	7.2	7.4	7.0	7.2	16.50	<0.1	110.8	12.2	132	6.4
F	21	20.387	8.4	7.6	7.2	7.3	6.9	7.1	15.00	<0.1	85.2	10.7	116	8.5
S	22	20.226	8.8	8.1	7.2	7.3	7.0	7.1	10.00	<0.1	57.5	7.7	88	8.5
S	23	17.356	8.8	8.2	7.2	7.3	7.1	7.2	12.00	<0.1			100	7.0
M	24	13.664	9.0	9.1	7.1	7.2	7.1	7.2	11.00	<0.1			100	3.6
T	25	12.450	9.3	9.3	7.2	7.5	7.1	7.3	30.00	<0.1			532	3.2
W	26	12.964	9.3	9.6	7.3	7.4	7.1	7.2	3.00	<0.1	96.1	14.1	80	5.0
T	27	9.337	9.7	9.6	7.1	7.6	7.0	7.4	1.50	<0.1	91.8	17.4	84	5.6
F	28	10.347	10.0	9.8	7.2	7.3	6.9	7.1	1.00	<0.1	66.0	13.7	112	8.8
S	29	10.169	10.3	10.5	7.1	7.3	6.9	7.0	0.50	<0.1	160.3	14.4	560	4.6
S	30	10.628	9.8	9.9	7.0	7.3	7.1	7.3	0.50	<0.1			40	4.0
M	31	9.515	9.9	9.4	7.2	7.5	7.0	7.1	15.00	<0.1			200	2.8
	AVERAGE	12.850	9.3	9.4	6.7	7.6	6.8	7.4	30.0	0.0	107.3	14.5	185.0	7.1
		Monthly	ave.	ave.	min	max	min	max	max	max	86.5%	1412.5	96.2%	760.6

NIAGARA COUNTY SEWER DISTRICT #1

Mar-03

			PHOSPHOROUS		CHLORINE RESIDUAL			F.COLI	
DAY	DATE	FLOW	INF,mg/l	EFF,mg/l	MIN,mg/l	MAX,mg/l	AVE,mg/l	/ 100 ml	COMMENTS
S	1	6.923	1.01	0.45	0.34	0.58	0.45	9	
S	2	8.942	2.76	0.44	0.45	0.46	0.45		
M	3	9.017	1.01	0.47	0.34	0.42	0.37		
T	4	6.579			0.17	0.32	0.27		
W	5	8.748	1.99	0.60	0.20	0.54	0.35	36	
T	6	5.910	1.68	0.80	0.12	0.48	0.35	3	
F	7	7.317	1.44	0.66	0.28	0.34	0.31	3	
S	8	8.124	1.83	0.72	0.41	0.50	0.45		
S	9	14.625	2.44	0.80	0.42	0.59	0.48		
M	10	11.429	2.16	0.48	0.77	1.22	0.92		
T	11	9.811			0.42	1.45	0.89		
W	12	10.869	3.60	0.56	0.24	1.22	0.70	55	
T	13	9.845	6.56	0.43	0.38	0.47	0.44		
F	14	7.316	2.76	0.31	0.35	1.20	0.72	3	
S	15	10.024	5.00	0.23	0.39	0.62	0.53	28	
S	16	22.383	7.76	0.30	0.62	1.03	0.84		
M	17	23.017	6.52	0.46	0.79	1.01	0.90		
T	18	29.858			0.44	0.60	0.52		
W	19	20.023	1.72	0.47	0.19	0.87	0.54	760	
T	20	20.548	7.92	0.36	0.91	0.95	0.93		
F	21	20.387	25.20	0.35	0.60	0.74	0.67	25	
S	22	20.226	1.48	0.21	0.86	1.09	0.97	3417	
S	23	17.356	1.12	0.22	0.78	1.09	0.96		
M	24	13.664	2.12	0.19	0.36	1.05	0.74		
T	25	12.450			0.34	0.56	0.46		
W	26	12.964	2.60	0.28	0.49	0.76	0.63		
T	27	9.337	1.60	0.09	0.40	0.55	0.47		
F	28	10.347	1.72	0.21	0.40	0.60	0.49	45	
S	29	10.169	1.96	0.22	0.35	0.45	0.40	440	
S	30	10.628	1.20	0.12	0.34	0.55	0.47		
M	31	9.515	4.04	0.16	0.47	0.67	0.58		
	AVERAGE	12.850	4.89	0.39	0.12	1.45	0.97	40.0	
				41.8				401.9	

Appendix E
Phosphorus Summary
(Demonstration Project Sampling Results)

NIAGARA COUNTY SEWER DISTRICT #1

DECEMBER 04 FILTER DATA

DATE	PHOSPHORUS			SUSPENDED SOLIDS			BOD	
Month/Day	Influent	Filter Feed	Effluent	Influent	Filter Feed	Effluent	Influent	Effluent
12/10	16.21	0.44	0.25	1012	4.8	2.2	>368	<3
12/11	3.97	0.52	0.30	152	10.8	1.2	126.3	<3
12/12	19.69	0.36	<.24	856	18.0	2.3	NO SET UP	
12/13	7.5	0.40	<.24	344	10.8	2.6	NO SET UP	
12/14	-	0.42	-	188	10.4	2.4	NO SET UP	
12/15	1.67	0.41	<.24	140	7.2	1.4	89.1	<3
12/16	5.96	0.46	0.31	296	7.2	1.0	132.0	<3
Average	**9.17**	**0.43**	**0.26**	**427**	**9.9**	**1.9**	**178.9**	**< 3**

MD\PlantGen\FilterDataDec04

For information on other
NYSERDA reports, contact:

New York State Energy Research
and Development Authority
17 Columbia Circle
Albany, New York 12203-6399

toll free: 1 (866) NYSERDA
local: (518) 862-1090
fax: (518) 862-1091

info@nyserda.org
www.nyserda.org

PRIMARY EFFLUENT FILTRATION

FINAL REPORT 05-08