

Binghamton-Johnson City
Joint Sewage Treatment Plant
Comprehensive Flood Risk Reduction Project

Appendix E
Permits

New York State Department of Environmental Conservation

Division of Environmental Permits, 4th Floor

625 Broadway, Albany, NY 12233-1750

Phone: (518) 402-9167 • Fax: (518) 402-9168

Website: www.dec.ny.gov



Joe Martens
Commissioner

DA

APR 27 2012

9 FACILITY INFORMATION

Superintendent
Binghamton-Johnson City Joint Sewer Board
4480 Old Vestal Rd.
Vestal, NY 13850

NAME: Binghamton-Johnson City Joint
Sewage Treatment Plant
LOCATION: Vestal (T)
COUNTY: Broome
SPDES NO: NY 002 4414
DEC ID NO.: 7-0348-00007/00001

Dear SPDES Permittee:

Enclosed please find a validated NOTICE/RENEWAL APPLICATION/PERMIT form renewing your State Pollutant Discharge Elimination System (SPDES) permit for the referenced facility. This validated form, together with the previously issued permit (see issuance date of this permit in Part 3 of the NOTICE/RENEWAL APPLICATION/PERMIT form), and any subsequent permit modifications constitute authorization to discharge wastewater in accordance with all terms, conditions and limitations specified therein.

The Instructions and other information that you received with the NOTICE/RENEWAL APPLICATION/PERMIT package fully described procedures for renewal and modification of your SPDES permit under the Environmental Benefit Permit Strategy (EBPS). As a reminder, SPDES permits are renewed at a central location in Albany in order to make the process more efficient. All other concerns with your permit such as applications for permit modifications, permit transfers to a new owner, name changes, and other questions should be directed to the Regional Permit Administrator at the following address:

Joseph Dlugolenski
NYSDEC - Region 7 Sub Office
1285 Fisher Avenue
Cortland, NY 13045-1090
(607) 753-3095

If you have already filed an application for modification of your permit, it will be processed separately through our regional office. If you have questions concerning this permit renewal, please contact Lindy Sue Czubernat at (518) 402-9165.

Sincerely,

Agency Program Aide

Enclosure

cc: RPA
RWE
BWP

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
State Pollutant Discharge Elimination System (SPDES)
NOTICE / RENEWAL APPLICATION / PERMIT

RECEIVED
JAN 20 2012



BY: _____

Please read ALL instructions on the back before completing this application form. Please TYPE or PRINT clearly in ink.

PART 1 - NOTICE 01/17/2012

Permittee Contact Name, Title, Address

Facility and SPDES Permit Information

BINGHAMTON-JOHNSON CITY JOINT SEWAGE BR
SUPERINTENDENT
4480 OLD VESTAL RD
VESTAL NY 13850

Name: BINGHAMTON-JOHNSON CITY JOINT SEW
Ind. Code: 4952 County: BROOME
DEC No.: 7-0348-00007/00001
SPDES No.: NY 002 4414
Expiration Date: 05/31/2012
Application Due By: 12/03/2011

Are these name(s) & address(es) correct? If not, please write corrections above.

The State Pollutant Discharge Elimination System Permit for the facility referenced above expires on the date indicated. You are required by law to file a complete renewal application at least 180 days prior to expiration of your current permit. Note the "Application Due By" date above.

CAUTION: This short application form and attached questionnaire are the only forms acceptable for permit renewal. Sign Part 2 below and mail only this form and the completed questionnaire using the enclosed envelope. Effective April 1, 1994 the Department no longer assesses SPDES application fees.

If there are changes to your discharge, or to operations affecting the discharge, then in addition to this renewal application, you must also submit a separate permit modification application to the Regional Permit Administrator for the DEC region in which the facility is located, as required by your current permit. See the reverse side of this page for instructions on filing a modification request.

PART 2 - RENEWAL APPLICATION

CERTIFICATION: I hereby affirm that under penalty of perjury that the information provided on this form and all attachments submitted herewith is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to section 210.45 of the Penal Law.

Catherine P. Aingworth Superintendent
Name of person signing application (see instructions on back) Title
Catherine Aingworth 1/31/12
Signature Date

PART 3 - PERMIT (Below this line - Official Use Only)

Effective Date: 10/1/12 Expiration Date: 5/31/17
Permit Administrator: Arthur M. Fox Address: NYSDEC - Division of Environmental Permits
Arthur M. Fox APR 27 2012
Signature Date
Bureau of Environmental Analysis
825 Broadway, Albany, NY 12233-1750

This permit together with the previous valid permit for this facility issued 10/1/07 and subsequent modifications constitute authorization to discharge wastewater in accordance with all terms, conditions and limitations specified in the previously issued valid permit, modifications thereof or issued as part of this permit, including any special or general conditions attached hereto. Nothing in this permit shall be deemed to waive the Department's authority to initiate a modification of this permit on the grounds specified in 6NYCRR §621.14, 6NYCRR §754.4 or 6NYCRR §757.1 existing at the time this permit is issued or which arise thereafter.

Attachments: General Conditions dated / /

RECEIVED
ENVIRONMENTAL PERMITS
NYSDEC
APR 11 2012
12 FEB -6 AM 11:56



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
State Pollutant Discharge Elimination System (SPDES)
DISCHARGE PERMIT
Special Conditions

First 3.99

Industrial Code:	4952	SPDES Number:	NY- 0024414
Discharge Class (CL):	05	DEC Number:	7-0348-00007/00001
Toxic Class (TX):	T	Effective Date (EDP):	06/01/07
Major Drainage Basin:	06	Expiration Date (ExDP):	05/31/12
Sub Drainage Basin:	03	Modification Dates:	6/14/07, 7/23/07, 12/4/07, 3/6/08
Water Index Number:	SR		
Compact Area:	SRBC		

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

CO-PERMITTEE NAMES AND ADDRESSES - see page 2 for addresses and contact information

Names: **Binghamton Johnson City Joint Sewage Board, City of** Attention:
Binghamton, Village of Johnson City

Street:
City: State: Zip Code:

is authorized to discharge from the facility described below:

FACILITY NAME AND ADDRESS

Name: **Binghamton-Johnson City Joint Sewage Treatment Plant**

Location (C,T,V): **Vestal (T)** County: **Broome**

Facility Address: **Old Vestal Road**

City: **Vestal** State: **NY** Zip Code: **13850**

NYTM -E: **420.092** NYTM - N: **4661.129**

From Outfall No.: **001** at Latitude: **42 ° 05 ' 53 "** & Longitude: **75 ° 57 ' 44 "**

into receiving waters known as: **Susquehanna River** Class: **A**

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

in accordance with the effluent limitations, monitoring requirements and other conditions set forth in 6 NYCRR 750-1.2(a) and 750-2:

DISCHARGE MONITORING REPORT (DMR) MAILING ADDRESS

Mailing Name: **Binghamton-Johnson City Joint Sewage Treatment Plant**

Street: **4480 Old Vestal Road**

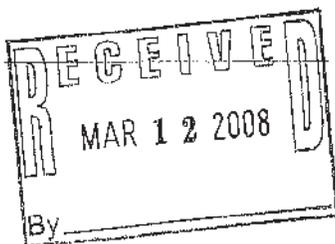
City: **Vestal** State: **NY** Zip Code: **13850**

Responsible Official or Agent: **Superintendent** Phone: **(607) 729-2975**

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

DISTRIBUTION:

Bureau of Water Permits
Region 7 Water Engineer
Permit Coordinator - BWP
USEPA - Region II



Permit Administrator: Michael Barylski	
Address: NYS Department of Environmental Conservation 1285 Fisher Ave. Cortland, NY 13045	
Signature: <i>Michael N. Barylski</i>	Date: 03/06/08

CO - PERMITTEE NAMES AND ADDRESSES**PERMITTEE NAME AND ADDRESS**

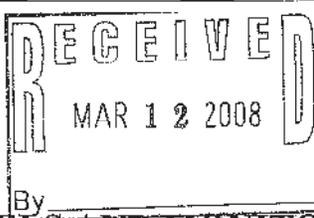
Name: **Binghamton-Johnson City Joint Sewage Board** Attention: **Superintendent**
Street: **4480 Old Vestal Road**
City: **Vestal** State: **NY** Zip Code: **13850**
Phone: **607-729-2975**

PERMITTEE NAME AND ADDRESS

Name: **City of Binghamton** Attention: **Mayor**
Street: **City Hall, 38 Hawley Street**
City: **Binghamton** State: **NY** Zip Code: **13901**
Phone: **607-772-7001**

PERMITTEE NAME AND ADDRESS

Name: **Village of Johnson City** Attention: **Mayor**
Street: **Johnson City Village Office, 243 Main Street**
City: **Johnson City** State: **NY** Zip Code: **13790**
Phone: **607-798-7861**



PERMIT LIMITS, LEVELS AND MONITORING DEFINITIONS

OUTFALL	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING		
	This cell describes the type of wastewater authorized for discharge. Examples include process or sanitary wastewater, storm water, non-contact cooling water.	This cell lists classified waters of the state to which the listed outfall discharges.	The date this page starts in effect. (e.g. EDP or EDPM)	The date this page is no longer in effect. (e.g. ExDP)		
PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQ.	SAMPLE TYPE	
e.g. pFI, TRC, Temperature, D.O.	The minimum level that must be maintained at all instants in time.	The maximum level that may not be exceeded at any instant in time.	SU, °F, mg/l, etc.			
PARA-METER	EFFLUENT LIMIT	PRACTICAL QUANTITATION LIMIT (PQL)	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE
	Limit types are defined below in Note 1. The effluent limit is developed based on the more stringent of technology-based limits, required under the Clean Water Act, or New York State water quality standards. The limit has been derived based on existing assumptions and rules. These assumptions include receiving water hardness, pH and temperature; rates of this and other discharges to the receiving stream; etc. If assumptions or rules change the limit may, after due process and modification of this permit, change.	For the purposes of compliance assessment, the analytical method specified in the permit shall be used to monitor the amount of the pollutant in the outfall to this level, provided that the laboratory analyst has complied with the specified quality assurance/quality control procedures in the relevant method. Monitoring results that are lower than this level must be reported, but shall not be used to determine compliance with the calculated limit. This PQL can be neither lowered nor raised without a modification of this permit.	Type I or Type II Action Levels are monitoring requirements, as defined below in Note 2, that trigger additional monitoring and permit review when exceeded.	This can include units of flow, pH, mass, Temperature, concentration. Examples include µg/l, lbs/d, etc.	Examples include Daily, 3/week, weekly, 2/month, monthly, quarterly, 2/yr and yearly.	Examples include grab, 24 hour composite and 3 grab samples collected over a 6 hour period.

Note 1: DAILY DISCHARGE: The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for the purposes of sampling. For pollutants expressed in units of mass, the 'daily discharge' is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the 'daily discharge' is calculated as the average measurement of the pollutant over the day.

DAILY MAX.: The highest allowable daily discharge. **DAILY MIN.:** The lowest allowable daily discharge.

MONTHLY AVG: The highest allowable average of daily discharges over a calendar month, calculated as the sum of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

7 DAY ARITHMETIC MEAN (7 day average): The highest allowable average of daily discharges over a calendar week.

30 DAY GEOMETRIC MEAN: The highest allowable geometric mean of daily discharges over a calendar month, calculated as the antilog of : the sum of the log of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

7 DAY GEOMETRIC MEAN: The highest allowable geometric mean of daily discharges over a calendar week.

RANGE: The minimum and maximum instantaneous measurements for the reporting period must remain between the two values shown.

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

The permittee is not authorized to discharge any of the listed parameters at levels which may cause or contribute to a violation of water quality standards. **TYPE I:** The additional monitoring requirement is triggered upon receipt by the permittee of any monitoring results in excess of the stated Action Level. **TYPE II:** The additional monitoring requirement is triggered upon receipt by the permittee of any monitoring results that show the stated action level exceeded for four of six consecutive samples, or for two of six consecutive samples by 20 % or more, or for any one sample by 50 % or more.

INTERIM PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL No.	LIMITATIONS APPLY:	RECEIVING WATER				EFFECTIVE	EXPIRING			
001	[X] All Year [] Seasonal from _____ to _____	Susquehanna River				See footnote 10				
PARAMETER	EFFLUENT LIMIT					MONITORING REQUIREMENTS				
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		FN
								Inf.	Eff.	
Flow	12 month rolling avg	35	MGD			Continuous	Recorder	X		
CBOD ₅	Monthly average	18	mg/l	5254	lbs/d	1/day	24-hr. Comp.	X	X	1
CBOD ₅	7 day average	27	mg/l	7881	lbs/d	1/day	24-hr. Comp.	X	X	1
CBOD ₅	Monthly average	25	mg/l	7298	lbs/d	1/day	24-hr. Comp.	X	X	2
CBOD ₅	7 day average	40	mg/l	Monitor	lbs/d	1/day	24-hr. Comp.	X	X	2
CBOD ₅	Daily Max.	40	mg/l	Monitor	lbs/d	1/day	24-hr. Comp.	X	X	3
Solids, Suspended	Monthly average	20	mg/l	5838	lbs/d	1/day	24-hr. Comp.	X	X	1
Solids, Suspended	7 day average	30	mg/l	8757	lbs/d	1/day	24-hr. Comp.	X	X	1
Solids, Suspended	Monthly average	30	mg/l			1/day	24-hr. Comp.	X	X	2
Solids, Suspended	7 day average	45	mg/l			1/day	24-hr. Comp.	X	X	2
Solids, Suspended	Daily Max	45	mg/l			1/day	24-hr. Comp.	X	X	3
Solids, Settleable	Daily Max.	0.3	ml/l			6/day	Grab	X	X	
pH	Range	6.0-9.0	SU			Continuous	Recorder	X	X	
Nitrogen, Total	Monthly Average	6	mg/l	Monitor	lbs/d	1/day	24-hr. Comp.	X	X	4,5,6
Nitrogen, Total	12 month rolling avg	Monitor	mg/l	Monitor	lbs/d	1/day	24-hr. Comp.	X	X	5, 6, 10
Ammonia (as NH ₃)	Monthly Average	Monitor	mg/l	2200	lbs/d	1/week	24-hr. Comp.	X	X	4,5,6,7
Ammonia (as NH ₃)	Maximum	Monitor	mg/l	Monitor	lbs/d	1/week	24-hr. Comp.	X	X	8
Nitrogen, TKN (as N)	Daily Maximum	45	mg/l	13700	lbs/d	1/week	24-hr. Comp.	X	X	4
Phosphorus, Total (as P)	Monthly average	Monitor	mg/l	Monitor	lb/d	1/week	24-hr. Comp.	X	X	

ACTION LEVELS AND MONITORING

PARAMETER	MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	LOCATION	FN
	TYPE I						
	Monthly Avg.	Daily Max.					
Silver, Total Recoverable		1.7	lbs/day	1/month	24-hr comp.	Effluent	
Chloroform, ug/l	Monitor		lbs/day	1/month	Grab	Effluent	
Toluene, ug/l	Monitor		lbs/day	1/month	Grab	Effluent	
1, 4-dichlorobenzene, ug/l	Monitor		lbs/day	1/month	Grab	Effluent	
Ethylbenzene, ug/l	Monitor		lbs/day	1/month	Grab	Effluent	
Antimony, Total	Monitor		lbs/day	1/month	24-hr comp.	Effluent	11
Arsenic, Total	Monitor		lbs/day	1/month	24-hr comp.	Effluent	11
Beryllium, Total	Monitor		lbs/day	1/month	24-hr comp.	Effluent	11
Selenium, Total	Monitor		lbs/day	1/month	24-hr comp.	Effluent	11
Thallium, Total	Monitor		lbs/day	1/month	24-hr comp.	Effluent	11
Methyl Bromide	Monitor		lbs/day	1/month	Grab	Effluent	11
Methyl Chloride	Monitor		lbs/day	1/month	Grab	Effluent	11
Trichloroethylene	Monitor		lbs/day	1/month	Grab	Effluent	11

Footnote:

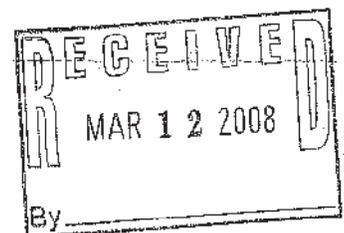
11. Permittee shall conduct a two year monitoring program for these parameters. Final limits and/or action levels, if necessary, shall be developed by the Department upon completion of the two year monitoring program.

TOXICITY TESTING PROGRAM, TIER 1 - ACUTE TEST

The Department has determined that an acute effluent toxicity monitoring program is required. The permittee shall implement the program as follows:
Effluent Toxicity Monitoring Requirements

Outfall No.	Effluent Parameters (Units)	Reason for Testing Requirement	Sample Frequency	Sample Type
001	Toxicity (% Effluent)	The possibility of complex or synergistic interactions of chemicals.	Quarterly for a period of one year during calendar years ending in [7] and [2].	24 hr. Composite/static renewal

- a. The effluent toxicity monitoring program shall begin in January of the years noted in the table above. Subsequent modification or renewal of this permit does not reset or revise the deadline(s) set forth in the preceding sentence unless a new deadline is set explicitly by such modification or renewal.
- b. The results of each toxicity test shall be submitted no later than 60 days following the end of each test period. These reports shall be submitted to the NYS DEC Regional Water Engineer at 615 Eric Blvd West, Syracuse, NY 13204-2400 and to the Toxicity Testing Unit, Bureau of Watershed Assessment and Research, 625 Broadway, Albany, NY 12233-3502.
- c. Effluent Toxicity shall mean the toxicity of the effluent in acute static renewal tests specified as Tier 1 testing in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fourth Edition, EPA/600/4-90/027F (1993) or most recent edition (herein referred to as the EPA Acute Manual). Both a vertebrate and invertebrate species shall be used for the tests. Where the outfall being tested discharges to estuarine or ocean waters, the marine organisms shall be tested. Where the outfall being tested discharges to fresh waters, freshwater organisms shall be tested. Dilution water shall be collected according to the EPA Acute Manual. Receiving water shall be used as dilution water unless the Department approves a different source. Effluent sampling and holding shall be done as outlined in the EPA Acute Manual, and should consist of 24 hour composite samples. Any deviation from procedures in the EPA Acute Manual requires prior written approval by the Department.
- d. The 48-hour EC_{50} and 48-hour LC_{50} in % Effluent for both a vertebrate and an invertebrate species shall be determined and reported in accordance with the specified frequency. The 48-hour EC_{50} and 48-hour LC_{50} in % Effluent shall be compared to the Instream Waste Concentration (IWC) of the effluent calculated based on the daily average effluent flow at the time of the test and the critical flow in Susquehanna River of 315 cubic feet per second (cfs).
- e. Where practicable, monitoring of chemical and physical parameters limited in this permit shall be coordinated so that the resulting analysis is also representative of the sample used for toxicity testing.
- f. Discharges which use chlorination as part of the waste treatment process for disinfection should be dechlorinated prior to toxicity testing or samples shall be taken immediately prior to the chlorination system.
- g. In accordance with NYSDEC guidance, the Department may require the permittee to conduct additional toxicity testing. If such additional testing is necessary, the permittee shall be notified in writing by the NYS DEC Regional Water Engineer. The written notification shall include the reason(s) why such testing is required.



TOXICITY TESTING PROGRAM, TIER 2 - CHRONIC TEST

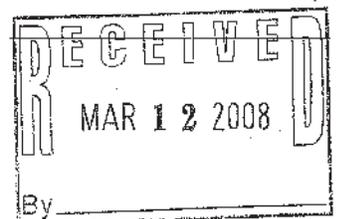
Effluent Toxicity Monitoring Requirements

Outfall No.	Effluent Parameters (Units)	Reason for Testing Requirement	Sample Frequency	Sample Type
001	Toxicity (% Effluent)	The possibility of complex or synergistic interactions of chemicals.	Quarterly for a period of one year during calendar years ending in [7] and [2].	24 hr. Composite/static renewal.

- a. The permittee shall implement this effluent toxicity monitoring program beginning in the first month of the first full calendar quarter, i.e. January, April, July, or October, that is within 3 months of written notification from the NYSDEC Regional Water Engineer that chronic toxicity testing is necessary. The written notification will include the reasons why the chronic toxicity testing program is necessary and the sample frequency. The effluent toxicity monitoring program shall begin in January of the years noted in the table above. Subsequent modification or renewal of this permit does not reset or revise the deadline(s) set forth in the preceding sentence unless a new deadline is set explicitly by such modification or renewal.
- b. The results of each toxicity test shall be submitted no later than 60 days following the end of each test period. These reports shall be submitted to the NYS DEC Regional Water Engineer at 615 Erie Blvd West, Syracuse, NY 13204-2400 and to the Toxicity Testing Unit, Bureau of Watershed Assessment and Research, 625 Broadway, Albany, NY 12233-3502.
- c. Effluent toxicity shall mean the toxicity of the effluent in chronic static renewal tests as specified in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Third Edition, EPA/600/4-91/002 (1994), the EPA Chronic Manual for Marine Organisms (EPA/600/4-91/003(1994), or the most recent editions (herein referred to as the EPA Chronic Manuals). Both a vertebrate and invertebrate species shall be used for the tests. Where the outfall being tested discharges to estuarine or ocean waters, marine organisms shall be tested. Where the outfall being tested discharges to fresh waters, freshwater organisms shall be tested. Each test run shall be 'bracketed' with a test of pure effluent and a test of effluent diluted sufficiently such that at least one diluted sample shows no toxic effects. Appropriate dilutions between the endpoints shall be tested to allow calculation of the Maximum Allowable Waste Concentration. Dilution water shall be collected according to the EPA Chronic Manuals. Receiving water shall be used as dilution water unless the Department approves a different source. Effluent sampling and holding shall be done as outlined in of the EPA Chronic Manuals. Any deviation from procedures in the EPA Chronic Manuals requires prior written approval by the Department.
- d. The Maximum Allowable Waste Concentration (MAWC) in % Effluent, for both a vertebrate and an invertebrate species, shall be determined and reported. The MAWC in % Effluent shall be compared to the calculated Instream Waste Concentration (IWC) of the effluent. The IWC in % Effluent shall be determined using the daily average effluent flow at the time of sampling and a critical receiving water flow of 315 cubic feet per second for Susquehanna River.
- e. Where practicable, monitoring of chemical and physical parameters limited in this permit shall be coordinated so that the resulting analysis is also representative of the samples used for toxicity testing.
- f. Discharges which use chlorination as part of the waste treatment process for disinfection should be dechlorinated prior to toxicity testing or samples shall be taken immediately prior to the chlorination system.
- g. In accordance with NYSDEC guidance, the Department may require the permittee to conduct additional toxicity testing. If such additional testing is necessary, the permittee shall be notified in writing by the NYS DEC Regional Water Engineer. The written notification shall include the reason(s) why such testing is required.

TOXICITY REDUCTION EVALUATION COMPLIANCE SCHEDULE

- (a) In accordance with Department guidance on whole effluent toxicity monitoring and control, the Department will evaluate the results of acute and/or chronic toxicity testing of discharges authorized by this permit. Based on this evaluation, the Department may require the permittee to perform a Toxicity Reduction Evaluation (TRE). Should a TRE be required, the permittee shall be notified in writing by the NYS DEC Regional Water Engineer. The written notification shall include the reasons why the TRE is required.
- b. Within 60 days of the date of the written notification from the NYS DEC Regional Water Engineer in (a), the permittee shall submit an approvable proposal for Toxicity Reduction Evaluation to the Bureau of Watershed Assessment and Research, 625 Broadway, Albany, NY 12233-3502. The TRE proposal shall be directed towards identifying the source of the toxicity, describing procedures to reduce the toxicity to an acceptable level, identifying monitoring parameters suitable for insuring control of the toxicity, and proposing a schedule for completing the TRE.
- (c) Within 14 days of receipt of written approval of the TRE proposal from the DEC Regional Water Engineer, the permittee shall implement the approved TRE proposal in accordance with the approved schedule.
- (d) The completed TRE, including data findings and recommendations for corrective action, permit limits, and proposed self-monitoring requirements shall be submitted to the Bureau of Watershed Assessment and Research at the address noted in (b) on this page. The Department will review the TRE and may modify the permit, in accordance with applicable law & regulation, to incorporate one or more of the following: substance specific numerical limits, toxicity limits, monitoring requirements, and/or a schedule of compliance that will ensure acceptable toxicity levels of the effluent.



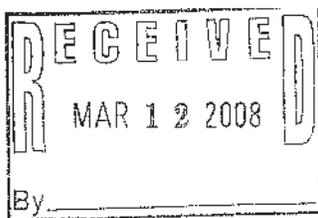
PRETREATMENT PROGRAM IMPLEMENTATION REQUIREMENTS

A. DEFINITIONS. Generally, terms used in this Section shall be defined as in the General Pretreatment Regulations (40 CFR Part 403). Specifically, the following definitions apply to terms used in this Section (PRETREATMENT PROGRAM IMPLEMENTATION REQUIREMENTS):

1. Categorical Industrial User (CIU)- an industrial user of the POTW that is subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N;
2. Local Limits - General Prohibitions, specific prohibitions and specific limits as set forth in 40 CFR 403.5.
3. The Publicly Owned Treatment Works (the POTW) - as defined by 40 CFR 403.3(o) and that discharges in accordance with this permit.
4. Program Submission(s) - requests for approval or modification of the POTW Pretreatment Program submitted in accordance with 40 CFR 403.11 or 403.18 and approved by letter dated September 20, 1985.
5. Significant Industrial User (SIU) -
 - a. CIUs;
 - b. Except as provided in 40 CFR 403.3(t)(2), any other industrial user that discharges an average of 25,000 gallons per day or more of process wastewater (excluding sanitary, non-contact cooling and boiler blowdown wastewater) to the POTW;
 - c. Except as provided in 40 CFR 403.3(t)(2), any other industrial user that contributes a process wastewater stream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant;
 - d. Any other industrial user that the permittee designates as having a reasonable potential for adversely affecting the POTW's operation or for violating a pretreatment standard or requirement.
6. Substances of Concern - Substances identified by the New York State Department of Environmental Conservation Industrial Chemical Survey as substances of concern.

B. IMPLEMENTATION. The permittee shall implement a POTW Pretreatment Program in accordance 40 CFR Part 403 and as set forth in the permittee's approved Program Submission(s). Modifications to this program shall be made in accordance with 40 CFR 403.18. Specific program requirements are as follows:

1. Industrial Survey. To maintain an updated inventory of industrial dischargers to the POTW the permittee shall:
 - a. Identify, locate and list all industrial users who might be subject to the industrial pretreatment program from the pretreatment program submission and any other necessary, appropriate and available sources. This identification and location list will be updated, at a minimum, every five years. As part of this update the permittee shall collect a current and complete New York State Industrial Chemical Survey form (or equivalent) from each SIU.
 - b. Identify the character and volume of pollutants contributed to the POTW by each industrial user identified in B.1.a above that is classified as a SIU.
 - c. Identify, locate and list, from the pretreatment program submission and any other necessary, appropriate and available sources, all significant industrial users of the POTW.
2. Control Mechanisms. To provide adequate notice to and control of industrial users of the POTW the permittee shall:

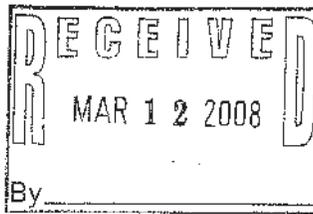


- a. Inform by certified letter, hand delivery courier, overnight mail, or other means which will provide written acknowledgment of delivery, all industrial users identified in B.1.a. above of applicable pretreatment standards and requirements including the requirement to comply with the local sewer use law, regulation or ordinance and any applicable requirements under section 204(b) and 405 of the Federal Clean Water Act and Subtitles C and D of the Resource Conservation and Recovery Act.
 - b. Control through permit or similar means the contribution to the POTW by each SIU to ensure compliance with applicable pretreatment standards and requirements. Permits shall contain limitations, sampling frequency and type, reporting and self-monitoring requirements as described below, requirements that limitations and conditions be complied with by established deadlines, an expiration date not later than five years from the date of permit issuance, a statement of applicable civil and criminal penalties and the requirement to comply with Local Limits and any other requirements in accordance with 40 CFR 403.8(f)(1).
3. Monitoring and Inspection. To provide adequate, ongoing characterization of non-domestic users of the POTW, the permittee shall:
- a. Receive and analyze self-monitoring reports and other notices. The permittee shall require all SIUs to submit self-monitoring reports at least every six months unless the permittee collects all such information required for the report, including flow data.
 - b. The permittee shall adequately inspect each SIU at a minimum frequency of once per year.
 - c. The permittee shall collect and analyze samples from each SIU for all priority pollutants that can reasonably be expected to be detectable at levels greater than the levels found in domestic sewage at a minimum frequency of once per year.
 - d. Require, through permits, each SIU to collect at least one 24 hour, flow proportioned composite (where feasible) effluent sample every six months and analyze each of those samples for all priority pollutants that can reasonably be expected to be detectable in that discharge at levels greater than the levels found in domestic sewage. The permittee may perform the aforementioned monitoring in lieu of the SIU except that the permittee must also perform the compliance monitoring described in 3.c.
4. Enforcement. To assure adequate, equitable enforcement of the industrial pretreatment program the permittee shall:
- a. Investigate instances of noncompliance with pretreatment standards and requirements, as indicated in self-monitoring reports and notices or indicated by analysis, inspection and surveillance activities. Sample taking and analysis and the collection of other information shall be performed with sufficient care to produce evidence admissible in enforcement proceedings or in judicial actions. Enforcement activities shall be conducted in accordance with the permittee's Enforcement Response Plan developed and approved in accordance with 40 CFR Part 403.
 - b. Enforce compliance with all national pretreatment standards and requirements in 40 CFR Parts 406 - 471.
 - c. Provide public notification of significant non-compliance as required by 40 CFR 403.8(f)(2)(vii).
 - d. Pursuant to 40 CFR 403.5(e), when either the Department or the USEPA determines any source contributes pollutants to the POTW in violation of Pretreatment Standards or Requirements the Department or the USEPA shall notify the permittee. Failure by the permittee to commence an appropriate investigation and subsequent enforcement action within 30 days of this notification may result in appropriate enforcement action against the source and permittee.
5. Record keeping. The permittee shall maintain and update, as necessary, records identifying the nature, character, and volume of pollutants contributed by SIUs. Records shall be maintained in accordance with Part II. Section 10.3.a.
6. Staffing. The permittee shall maintain minimum staffing positions committed to implementation of the Industrial Pretreatment Program in accordance with the approved pretreatment program.

- C. SLUDGE DISPOSAL PLAN. The permittee shall notify NYSDEC, and USEPA as long as USEPA remains the approval authority, 60 days prior to any major proposed change in the sludge disposal plan. NYSDEC may require additional pretreatment measures or controls to prevent or abate an interference incident relating to sludge use or disposal.
- D. REPORTING. The permittee shall provide to the offices listed on the Monitoring, Reporting and Recording page of this permit and to the Chief Water Permits and Compliance Branch; USEPA Region II; 290 Broadway; New York, NY 10007; a periodic report, prepared and submitted in accordance with the consistent periodic reporting format established by the Department in the document entitled NYSDEC POTW Periodic Pretreatment Report - 1994, that briefly describes the permittee's program activities over the previous year. This report shall be submitted to the above noted offices within 60 days of the end of the reporting period. The reporting period shall be annual, with reporting period ending on January 31.

The periodic report shall include:

1. Industrial Survey. Updated industrial survey information in accordance with 40 CFR 403.12(I)(1) (including any NYS Industrial Chemical Survey forms updated during the reporting period).
2. Implementation Status. Status of Program Implementation, to include:
 - a. Any interference, upset or permit violations experienced at the POTW directly attributable to industrial users.
 - b. Listing of significant industrial users issued permits.
 - c. Listing of significant industrial users inspected and/or monitored during the previous reporting period and summary of results.
 - d. Listing of significant industrial users notified of promulgated pretreatment standards or applicable local standards who are on compliance schedules. The listing should include for each facility the final date of compliance.
 - e. Summary of POTW monitoring results not already submitted on Discharge Monitoring Reports and toxic loadings from SIU's organized by parameter.
 - f. A summary of additions or deletions to the list of SIUs, with a brief explanation for each deletion.
3. Enforcement Status. Status of enforcement activities to include:
 - a. Listing of significant industrial users in Significant Non-Compliance (as defined by 40 CFR 403.8(f)(2)(vii)) with federal or local pretreatment standards at end of the reporting period.
 - b. Summary of enforcement activities taken against non-complying significant industrial users. The permittee shall provide a copy of the public notice of significant violators as specified in 40 CFR Part 403.8(f)(2)(vii).



BEST MANAGEMENT PRACTICES FOR COMBINED SEWER OVERFLOWS

The Best Management Practices (BMPs) for Combined Sewer Overflows (CSO) are designed to implement operation & maintenance procedures, utilize the existing treatment facility and collection system to the maximum extent practicable, and implement sewer design, replacement and drainage planning, to maximize pollutant capture and minimize water quality impacts from combined sewer overflows. The BMPs are equivalent to the "Nine Minimum Control (NMC) Measures" required under the USEPA National CSO policy. The NMCs are technology-based CSO control. DEC understands that the Binghamton-Johnson City Joint Treatment Board (Board) is not responsible for the collection system, therefore, only five of the 15 BMPs are included in this permit. The non-applicable BMPs will be placed in the permits of the owners and operators of the CSO satellite communities. Therefore, the Board and the owners must work cooperatively to implement all applicable BMPs in order to comply with the National Policy and the Clean Water Act.

1. CSO Maintenance/Inspection - Not Applicable.
2. Maximum Use of Collection System for Storage - Not Applicable.
3. Industrial Pretreatment - The approved Industrial Pretreatment Program shall consider CSOs in the calculation of local limits for indirect discharges. Discharge of persistent toxics upstream of CSOs will be in accordance with guidance under (NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.3.8 New Discharges to POTWs. For industrial operations characterized by use of batch discharge, consideration shall be given to the feasibility of a schedule of discharge during conditions of no CSO. For industrial discharges characterized by continuous discharge, consideration must be given to the collection system capacity to maximize delivery of waste to the treatment plant. Non-contact cooling water should be excluded from the combined system to the maximum extent practicable. Direct discharges of cooling water must apply for a SPDES permit.

To the maximum extent practicable, consideration shall be given to maximize the capture of industrial waste containing toxic pollutants and this wastewater should be given priority over residential/commercial service areas for capture and treatment by the POTW. For new industry, these factors shall be considered in siting with preference to service by areas not tributary to CSOs or having sufficient capacity to deliver all industrial wastewater during all conditions to the POTW.

4. Maximize Flow to POTW -The Board shall work cooperatively with the satellite facilities to ensure maximum delivery of "first flush" flows to the POTW. The BJC treatment plant shall be capable of receiving the peak design hydraulic loading rates for all process units. The Binghamton-Johnson City Joint treatment plant shall be capable of: receiving a minimum of 60 MGD through the plant headworks; receive and treat a minimum of 60 MGD through the primary clarifiers, carbon filters, nitrogen filters, and disinfection; and receive and treat a minimum of 33 MGD through the denitrification system during wet weather. The collection system and headworks must be capable of delivering these flows during wet weather. If the permittee cannot deliver maximum design flow for treatment, the permittee shall submit a plan and schedule for accomplishing this requirement within 12 months after the effective date of this permit.
5. Wet Weather Operating Plan - The permittee shall maximize treatment during wet weather events. This shall be accomplished by having a wet weather operating plan containing procedures so as to operate unit processes to treat maximum flows while not appreciably diminishing effluent quality or destabilizing treatment upon return to dry weather operation. The wet weather operations plan shall be submitted to the Region 7 Office for review and approval within 12 months after the effective date of this permit.

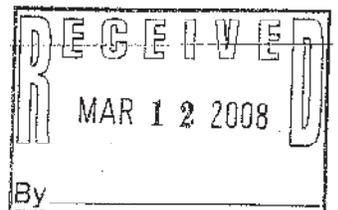
The submission of a wet weather operating plan is a one time requirement that shall be done to the Department's satisfaction once. However, a revised wet weather operating plan must be submitted whenever the POTW and/or sewer collection system is replaced or modified. When this permit is administratively renewed by NYSDEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT", the permittee is not required to repeat the submission. The above due dates are independent from the effective date of the

permit stated in the letter of "SPDES NOTICE/RENEWAL APPLICATION/PERMIT".

6. Prohibition of Dry Weather Overflow - Not Applicable.
7. Control of Floatable and Settleable Solids - Not Applicable.
8. Combined Sewer System Replacement - Not Applicable.
9. Combined Sewer/Extension - Not Applicable.
10. Extension of Surcharged Sewer - Not Applicable.
11. Septage and Hauled Waste - The discharge or release of septage or hauled waste upstream of a CSO is prohibited.
12. Control of Run-off - Not Applicable.
13. Public Notification - Not Applicable.
14. Characterization and Monitoring - Not Applicable.
15. Annual report - The permittee shall submit an annual report summarizing implementation of the above best management practices (BMPs). The report shall list existing documentation of implementation of the BMPs and shall be submitted by January 31st of each year to the offices listed on the Recording, Reporting and Additional Monitoring page of this permit. Examples of recommended documentation of the BMPs are found in Combined Sewer Overflows, Guidance for Nine Minimum Controls, EPA, 1995. The actual documentation shall be stored at a central location and be made available to DEC upon request.

CSO Long Term Control

CSO Long Term Control Plan (LTCP) is being addressed under the Village of Johnson City, and the Binghamton CSO permits. However, the permittee must work cooperatively with the owners and operators of all tributary municipalities to fulfill the CSO LTCP requirements.



DISCHARGE NOTIFICATION REQUIREMENTS

- a) The permittee shall, except as set forth in (c) below, maintain the existing identification signs at all outfalls to surface waters, which have not been waived by the Department in accordance with 17-0815-a. The sign(s) shall be conspicuous, legible and in as close proximity to the point of discharge as is reasonably possible while ensuring the maximum visibility from the surface water and shore. The signs shall be installed in such a manner to pose minimal hazard to navigation, bathing or other water related activities. If the public has access to the water from the land in the vicinity of the outfall, an identical sign shall be posted to be visible from the direction approaching the surface water.

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

N.Y.S. PERMITTED DISCHARGE POINT

SPDES PERMIT No.: NY _____

OUTFALL No. : _____

For information about this permitted discharge contact:

Permittee Name: _____

Permittee Contact: _____

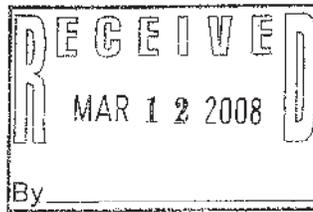
Permittee Phone: () - ### - ####

OR:

NYSDEC Division of Water Regional Office Address :

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

- b) For each discharge required to have a sign in accordance with a), the permittee shall provide for public review at a repository accessible to the public, copies of the Discharge Monitoring Reports (DMRs) as required by the **RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS** page of this permit. This repository shall be open to the public, at a minimum, during normal daytime business hours. The repository may be at the business office repository of the permittee or at an off-premises location of its choice (such location shall be the village, town, city or county clerk's office, the local library or other location as approved by the Department). In accordance with the **RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS** page of your permit, each DMR shall be maintained on record for a period of three years.
- 3. If, upon November 1, 1997, the permittee has installed signs that include the information required by 17-0815-a(2)(a), but do not meet the specifications listed above, the permittee may continue to use the existing signs for a period of up to five years, after which the signs shall comply with the specifications listed above.
- d) The permittee shall periodically inspect the outfall identification signs in order to ensure that they are maintained, are still visible and contain information that is current and factually correct.



SCHEDULE OF COMPLIANCE

a) The permittee shall comply with the following schedule.

Action Code	Outfall Number(s)	Compliance Action	Due Date
	001	The permittee shall develop an approvable plan for monitoring the individual treatment units during the following flow regimes: when flow is less than 35 MGD; when flow is equal to 35 MGD but less than 49.5 MGD; and when flow is greater than 49.5 MGD Submit Plan	3 months prior to plant startup
	001	Begin implementation of plan. Monitoring shall be performed a minimum of twice for each flow range during an 18 month period.	60 days after completion of plant startup
	001	Submit two copies of a tabularized report analyzing the result pertaining to the plant and individual unit capacity to the Regional Water Engineer, Region 7. The treatability study shall be considered an application for permit modification by this Department. Based on the results of the treatability study, the Department shall develop performance based BAT/BPJ effluent limits for the following parameters: cBOD ₅ Percent Removal; Total Suspended Solids Percent Removal; and Total Nitrogen.	23 months after completion of plant startup

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

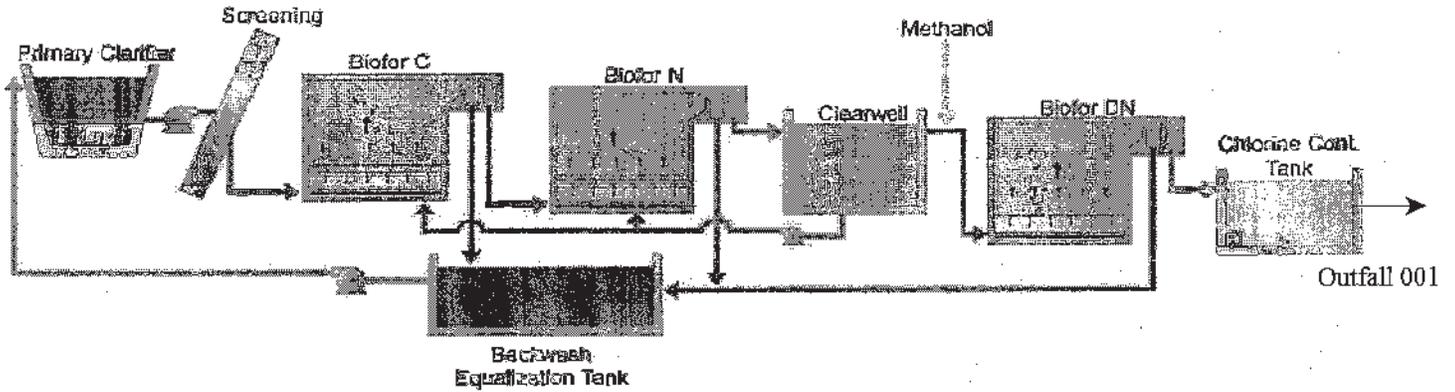
- b) The permittee shall submit a written notice of compliance or non-compliance with each of the above schedule dates no later than 14 days following each elapsed date, unless conditions require more immediate notice under terms of the 6 NYC RR Part 750. All such compliance or non-compliance notification shall be sent to the locations listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS. Each notice of non-compliance shall include the following information:
1. A short description of the non-compliance;
 2. A description of any actions taken or proposed by the permittee to comply with the elapsed schedule requirements without further delay and to limit environmental impact associated with the non-compliance;
 3. A description or any factors which tend to explain or mitigate the non-compliance; and
 4. An estimate of the date the permittee will comply with the elapsed schedule requirement and an assessment of the probability that the permittee will meet the next scheduled requirement on time.
- c) The permittee shall submit copies of any document required by the above schedule of compliance to NYSDEC Regional Water Engineer at the location listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS and to the Bureau of Water Permits, 625 Broadway, Albany, N.Y. 12233-3505, unless otherwise specified in this permit or in writing by the Department.

SCHEDULE OF COMPLIANCE

Action Code	Outfall Number(s)	Compliance Action	Due Date
	001	<p><u>Pollution Minimization Plan</u> For Bioaccumulative Chemicals of Concern¹ that are present at detectable levels in the influent of the WPCP (using the most sensitive analytical method in NYSDEC's <u>Analytical Detectability and Quantitation Guidelines for Selected Environmental Parameters</u>), the permittee shall submit an approvable pollutant minimization plan (PMP) which contains a pollutant mass balance and source track down using the EPA <u>Guidance Manual on the Development of Local Discharge Limitations Under the Pretreatment Program</u> as a guideline. The PMP shall include an analysis of potential significant sources (at least 5% of the estimated headworks loading) of the pollutant including industrial and non-industrial sources, non-active hazardous waste sites, storm water runoff, and wet and dry atmospheric deposition.</p> <p>If the PMP identifies controllable sources of the pollutant, it shall include a schedule to reduce the amount of the pollutant to the maximum extent practicable. It is recommended that the PMP examine voluntary source reductions (domestic and non-domestic sources), product substitutions, and other pollutant minimization programs to reduce the pollutant loading to the system, including but not limited to the following examples: household hazardous waste collection, dental and photo processing BMPs, sewer user notification of consequences of disposing toxic substances to the sewer system, and other pollution prevention methods.</p> <p>1. mercury</p>	EDPM ± 18 months

MONITORING LOCATIONS

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



RECEIVED
MAR 12 2008
By _____

RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

- a) The permittee shall also refer to the 6 NYCRR Part 750 of this permit for additional information concerning monitoring and reporting requirements and conditions.
- b) The monitoring information required by this permit shall be summarized, signed and retained for a period of three years from the date of the sampling for subsequent inspection by the Department or its designated agent. **Also, monitoring information required by this permit shall be summarized and reported by submitting;**

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

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

(if box is checked) a monthly "Wastewater Facility Operation Report..." (form 92-15-7) to the:

Regional Water Engineer and/or County Health Department or Environmental Control Agency specified below

Send the **original** (top sheet) of each DMR page to:

Department of Environmental Conservation
Division of Water
Bureau of Watershed Compliance Programs
625 Broadway
Albany, New York 12233-3506

Phone: (518) 402-8177

Send the **first copy** (second sheet) of each DMR page to:

Department of Environmental Conservation
Regional Water Engineer
615 Erie Blvd W
Syracuse, NY 13204-2400

(315) 426-7500

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

Broome County Health Department
225 Front Street
Binghamton, New York 13901

- c) Noncompliance with the provisions of this permit shall be reported to the Department as prescribed in the 6 NYCRR Part 750.
- d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.
- e) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculations and recording of the data on the Discharge Monitoring Reports.
- f) Calculation for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.
- g) Unless otherwise specified, all information recorded on the Discharge Monitoring Report shall be based upon measurements and sampling carried out during the most recently completed reporting period.
- h) Any laboratory test or sample analysis required by this permit for which the State Commissioner of Health issues certificates of approval pursuant to section five hundred two of the Public Health Law shall be conducted by a laboratory which has been issued a certificate of approval. Inquiries regarding laboratory certification should be sent to the Environmental Laboratory Accreditation Program, New York State Health Department Center for Laboratories and Research, Division of Environmental Sciences, The Nelson A. Rockefeller Empire State Plaza, Albany, New York 12201.

New York State Department of Environmental Conservation
Division of Management & Budget Services
Regulatory Fee Unit, 10th Floor
625 Broadway, Albany, NY 12233-5013
Phone: (518) 402-9343 • Fax: (518)402-9356
Website: www.dec.ny.gov



THIS INVOICE IS FOR YOUR 2014
ANNUAL AIR FACILITY
REGISTRATION PERMIT FEE.

IF YOU HAVE QUESTIONS
REGARDING THE AMOUNT OF THE
INVOICE, PLEASE CONTACT THE
REGULATORY FEE UNIT AT
(518)402-9343.

IF YOU HAVE QUESTIONS
REGARDING THE PERMIT, PLEASE
CONTACT THE DIVISION OF AIR AT
(518)402-8401.

PLEASE SUBMIT YOUR PAYMENT
WITH A COPY OF YOUR INVOICE IN
THE ENCLOSED ENVELOPE.

THANK YOU

RECEIVED
JUN 16 2014

BY: _____



Customer Number
Invoice

20324
9990000218077

Environmental Conservation Law (ECL) Article 72 and 6NYCRR Part 481 of this Department provide that all persons who require a permit, certificate, or approval pursuant to a State environmental regulatory program, or who are subject to regulation under a State environmental regulatory program, are required to submit an annual fee to this Department.

Checks should be made payable to:
NYS Department of Environmental Conservation.

Remit To:
NYS DEPARTMENT OF ENVIRONMENTAL
CONSERVATION
CHURCH STREET STATION
PO BOX 3782
NEW YORK, NY 10008-3782

Remittance must be received by the payment due date shown on the invoice to avoid interest and penalty charges. Interest rates are set by the Commissioner of Taxation and Finance, and assessed pursuant to Article 72 of the Environmental Conservation Law. Penalties are assessed based on the amount of the payment deficiency at a rate of five percent of that deficiency per month, not to exceed twenty-five percent. NOTE: The penalty rate for the Operating Permit Program may differ and is shown on your invoice, if applicable.

DISPUTES: Please take notice that pursuant to 6 NYCRR 481.9(c) challenges to a Regulatory Program Fee may be rejected under the following circumstances; (1) failure to make a request for a recalculation of the fee within 30 business days of the date of the Department's original invoice; or (2) failure to make payment in full of the undisputed amount of the annual program fee; or (3) failure to give a specific reason for challenging the fee. A new fee recalculation request must be submitted for each year's assessment, regardless of the status of the previous years recalculation request.

COPY

SubTotal(\$)	800.00
Interest(\$)	0.00
Penalties(\$)	0.00
Payments(\$)	0.00
Credits(\$)	0.00
Outstanding balance as of 05-Jun-2014 in USD	800.00

IF A DETERMINATION IS MADE IN FAVOR OF THE DEPARTMENT, DISPUTED AMOUNTS NOT PREPAID AT THE TIME OF DISPUTE ARE SUBJECT TO INTEREST AND PENALTY CHARGES, RETROACTIVE FROM THE DUE DATE.

If you have any questions regarding this bill, you may call the Regulatory Fee Determination Unit's INFORMATION LINE (518) 402-9343 between 9:00am-12:00pm and 1:30pm-4:00pm Monday through Friday.

Dispute Forms, Change of Address Forms and Permit Transfer Forms can all be requested at any Regional DEC Office or you may download them directly at <http://www.dec.ny.gov/about/45325.html>

To:
CATHERINE P AINGWORTH
BINGHAMTON JOHNSON CITY JOINT SEWAGE
BOARD
4480 OLD VESTAL RD
VESTAL, NY 13850

RECEIVED
JUN 16 2014

BY:

Customer Number
Invoice

20324
9990000218077

Customer Number
20324

Please include a copy of this
page with all payments.

Mail To:
CATHERINE P AINGWORTH
BINGHAMTON JOHNSON CITY
JOINT SEWAGE BOARD
4480 OLD VESTAL RD
VESTAL, NY 13850

Legally Responsible Party(LRP):
BINGHAMTON JOHNSON CITY JT
SEWER BRD
GOVERNMENT PLZ
BINGHAMTON, NY 13903

Transaction
9990000218077
Billing Date
05-Jun-2014

Remit To:
NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CHURCH STREET STATION
PO BOX 3782
NEW YORK, NY 10008-3782

Terms	Due Date	Mail To Contact	Contact Phone	Contact Fax			
30 NET	05-Jul-2014	CATHERINE P AINGWORTH					
AIR ID	Facility Name and Address	Billing Year	Emission Point ID	Description	Qty	Unit Price	Fees
7034800007	BINGHAMTON JOHNSON CITY STP, 4480 OLD VESTAL RD, VESTAL, NY 13901	2014	001	A PROC < 25 TPY	1.00	160.00	160.00
		2014	002	A PROC < 25 TPY	1.00	160.00	160.00
		2014	R0003	PROC < 25 TPY	1.00	160.00	160.00
		2014	R0004	PROC < 25 TPY	1.00	160.00	160.00
		2014	R0005	PROC < 25 TPY	1.00	160.00	160.00

Special Instructions

Please include the first page of this invoice with all payments.
All payments must be in U.S. dollars only.

SubTotal(\$)
Interest(\$)
Penalties(\$)
Payments(\$)
Credits(\$)

800.00
0.00
0.00
0.00
0.00

Outstanding balance
as of 05-Jun-2014 in
USD

800.00

54802



RECEIVED
JUN 16 2014

BY:



CBS Number
7-000226

New York State Department of Environmental Conservation
CHEMICAL BULK STORAGE CERTIFICATE
625 Broadway, 11th Floor, Albany, NY 12233-7020 Phone: 518-402-9553

Region 7
615 Erie Boulevard West
Syracuse, NY 13204-2400
(315) 426-7519

TANK NUMBER	DATE INSTALLED	TANK LOCATION AND TYPE	CAPACITY (GALLONS)	HAZARDOUS SUBSTANCE	% HAZ SUBST	CHEMICAL ABSTRACT #
001A	01/01/2008	AST - Other	3,000	SODIUM HYPOCHLORITE	15.00	7681-52-9
002B	01/01/2008	AST - Other	3,000	SODIUM HYPOCHLORITE	15.00	7681-52-9
003C	01/01/2008	AST - Other	3,000	CAUSTIC SODA	50.00	1310-73-2
004D	01/01/2008	AST - Other	3,000	SULFURIC ACID	94.00	7664-93-9
007	06/01/2000	AST - Other	7,000	SODIUM HYPOCHLORITE	15.00	7681-52-9
008	06/01/2000	AST - Other	7,000	SODIUM HYPOCHLORITE	15.00	7681-52-9
009	06/01/2000	AST - Other	7,000	SODIUM HYPOCHLORITE	15.00	7681-52-9
010	09/01/2007	AST - Steel/Carbon Steel/Iron	12,000	METHANOL	100.00	67-56-1
011	09/01/2007	AST - Steel/Carbon Steel/Iron	12,000	METHANOL	100.00	67-56-1
012	02/11/2013	AST - Plastic	8,700	FERRIC CHLORIDE	35.00	7705-08-0

OWNER:
BINGHAMTON JOHNSON CITY JOINT
4480 VESTAL ROAD
VESTAL, NY 13850

SITE:
BINGHAMTON JOHNSON CITY JOINT
4480 VESTAL ROAD
VESTAL, NY 13850

OPERATOR: CATHERINE YOUNG
(607) 729-2975
EMERGENCY CONTACT: CATHERINE YOUNG
(607) 729-2975

MAILING CORRESPONDENCE:

ISSUED BY: Commissioner
Joe Martens
CBS NUMBER: 7-000226
DATE ISSUED: 03/11/2014
EXPIRATION DATE: 03/11/2016
FEE PAID: \$ 1,375.00

CATHERINE YOUNG
BINGHAMTON JOHNSON CITY
JOINT SEWAGE TREATMENT
4480 VESTAL ROAD
VESTAL, NY 13850

As an authorized representative of the above named facility, I hereby certify that the information on this form is true and correct. Additionally, I recognize that I am responsible for assuring that this facility is in compliance with all sections of ECL Article 40 and 6 NYCRR Parts 595, 596, 597, 598, and 599, not just those cited below:

- The facility must be re-registered if there is a transfer of ownership.
- The facility has maintained its requirements relating to daily, monthly, annual and five year inspections as required by Part 598.7 and has its SPR annually updated as required by Part 598.1(k).
- The Department must be notified within 3 business days prior to adding, replacing, reconditioning, or permanently closing a stationary tank.
- This certificate must be signed and posted on the premises at all times. Posting must be at the tank, at the entrance of the facility, or the main office where the storage tanks are located.
- Any person with knowledge of a spill, leak or discharge must report the incident to DEC within two hours (1-800-457-7362).

Catherine Young 3/19/14
Signature of Representative/Owner Date

Catherine Young, Superintendent
Name and Title of Authorized Representative/Owner (Please Print)



CBS Number

7-000226

New York State Department of Environmental Conservation

CHEMICAL BULK STORAGE CERTIFICATE

625 Broadway, 11th Floor, Albany, NY 12233-7020 Phone: 518-402-9553

Region 7

615 Erie Boulevard West
Syracuse, NY 13204-2400

(315) 426-7519

TANK NUMBER	DATE INSTALLED	TANK LOCATION AND TYPE	CAPACITY (GALLONS)	HAZARDOUS SUBSTANCE	% HAZ SUBST	CHEMICAL ABSTRACT #
013	02/11/2013	AST - Plastic	8,700	FERRIC CHLORIDE	35.00	7705-08-0

OWNER:

BINGHAMTON JOHNSON CITY JOINT
4480 VESTAL ROAD
VESTAL, NY 13850

SITE:

BINGHAMTON JOHNSON CITY JOINT
4480 VESTAL ROAD
VESTAL, NY 13850

MAILING CORRESPONDENCE:

CATHERINE YOUNG
BINGHAMTON JOHNSON CITY
JOINT SEWAGE TREATMENT
4480 VESTAL ROAD
VESTAL, NY 13850

OPERATOR: CATHERINE YOUNG
(607) 729-2975

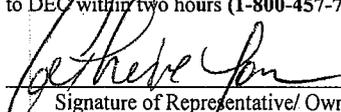
EMERGENCY CONTACT: CATHERINE YOUNG
(607) 729-2975

ISSUED BY: Commissioner
Joe Martens

CBS NUMBER: 7-000226
DATE ISSUED: 03/11/2014
EXPIRATION DATE: 03/11/2016
FEE PAID: \$ 1,375.00

As an authorized representative of the above named facility, I hereby certify that the information on this form is true and correct. Additionally, I recognize that I am responsible for assuring that this facility is in compliance with all sections of ECL Article 40 and 6 NYCRR Parts 595, 596, 597, 598, and 599, not just those cited below:

- The facility must be re-registered if there is a transfer of ownership.
- The facility has maintained its requirements relating to daily, monthly, annual and five year inspections as required by Part 598.7 and has its SPR annually updated as required by Part 598.1(k).
- The Department must be notified within 3 business days prior to adding, replacing, reconditioning, or permanently closing a stationary tank.
- This certificate must be signed and posted on the premises at all times. Posting must be at the tank, at the entrance of the facility, or the main office where the storage tanks are located.
- Any person with knowledge of a spill, leak or discharge must report the incident to DEC within two hours (1-800-457-7362).


Signature of Representative/Owner

3/19/14
Date

Catherine Young, Superintendent

Name and Title of Authorized Representative/Owner (Please Print)



JOINT APPLICATION FORM

For Permits/Determinations to undertake activities affecting streams, waterways, waterbodies, wetlands, coastal areas and sources of water supply.



New York State

You must separately apply for and obtain separate Permits/Determinations from each involved agency prior to proceeding with work. Please read all instructions.

US Army Corps of Engineers (USACE)

APPLICATIONS TO

<p>1. NYS Department of Environmental Conservation</p> <p>Check all permits that apply:</p> <p><input checked="" type="checkbox"/> Stream Disturbance <input checked="" type="checkbox"/> Excavation and Fill in Navigable Waters <input type="checkbox"/> Docks, Moorings or Platforms <input type="checkbox"/> Dams and Impoundment Structures <input type="checkbox"/> 401 Water Quality Certification <input type="checkbox"/> Freshwater Wetlands <input type="checkbox"/> Tidal Wetlands</p> <p><input type="checkbox"/> Coastal Erosion Management <input checked="" type="checkbox"/> Wild, Scenic and Recreational Rivers <input type="checkbox"/> Water Supply <input type="checkbox"/> Long Island Well <input type="checkbox"/> Aquatic Vegetation Control <input type="checkbox"/> Aquatic Insect Control <input type="checkbox"/> Fish Control <input type="checkbox"/> Incidental Take of Endangered/Threatened Species</p> <p><input type="checkbox"/> I am sending this application to this agency.</p>	<p>2. US Army Corps of Engineers</p> <p>Check all permits that apply:</p> <p><input checked="" type="checkbox"/> Section 404 Clean Water Act <input type="checkbox"/> Section 10 Rivers and Harbors Act <input type="checkbox"/> Nationwide Permit(s) - Identify Number(s): _____ _____ Preconstruction Notification - <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N</p> <p><input checked="" type="checkbox"/> I am sending this application to this agency.</p>	<p>3. NYS Office of General Services</p> <p>Check all permits that apply:</p> <p><input type="checkbox"/> State Owned Lands Under Water <input type="checkbox"/> Utility Easement (pipelines, conduits, cables, etc.) <input type="checkbox"/> Docks, Moorings or Platforms</p> <p><input type="checkbox"/> I am sending this application to this agency.</p>	<p>4. NYS Department of State</p> <p>Check if this applies:</p> <p><input type="checkbox"/> Coastal Consistency Concurrence</p> <p><input type="checkbox"/> I am sending this application to this agency.</p>
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5. Name of Applicant (use full name) Binghamton-Johnson City Joint Sewage Board		Applicant must be: <input type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator <input type="checkbox"/> Lessee (check all that apply)
Mailing Address 4480 Vestal Road		
Post Office City Vestal	Taxpayer ID (If applicant is NOT an individual): 943456178	
State NY	Zip Code 13850	
Telephone (daytime) 607-729-2975	Email bjcwwtp@stny.rr.com	

6. Name of Facility or Property Owner (if different than Applicant) City Of Binghamton and Village of Johnson City	
Mailing Address 38 Hawley Street	
Post Office City Binghamton	Zip Code 13901
State NY	Zip Code 13901
Telephone (daytime) 607-772-7007	Email ptkrey@cityofbinghamton.com

7. Contact/Agent Name Catherine Aingworth	
Company Name Binghamton Johnson City Joint Sewage Treatment Plant	
Mailing Address 4480 Vestal Road	
Post Office City Vestal	Zip Code 13850
State NY	Zip Code 13850
Telephone (daytime) 607-729-2975	Email caingworth@stny.rr.com

8. Project / Facility Name Binghamton Johnson City JSTP Flood Mitigation Improvement		Property Tax Map Section / Block / Lot Number 159.10-1-6	
Project Location - Provide directions and distances to roads, bridges and bodies of waters: Project is located on the south shore of the Susquehanna River, at the mouth of and east of Fuller Hollow Creek, behind the facility at 4480 Vestal Road.			
Street Address, if applicable 4480 Vestal Road		Post Office City Vestal	State Zip Code NY 13850
Town / Village / City Vestal		County Broome	
Name of USGS Quadrangle Map		Stream/Water Body Name Susquehanna River and Fuller Hollow Cree	
Location Coordinates: Enter NYTMs in kilometers, OR Latitude/Longitude			
NYTM-E	NYTM-N	Latitude 42.09745	Longitude -75.196353

or Agency Use Only	DEC Application Number:	USACE Number:
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September 27, 2012

Mr. Philip T. Krey, PE
City Engineer
City of Binghamton
City Hall, 38 Hawley Street
Binghamton, NY 13901

Re: Proposal for Feasibility, Preliminary and Final Design Phases of the Binghamton-Johnson City Joint Sewage Treatment Plant Flood Mitigation Improvements

Dear Mr. Krey:

Griffiths Engineering, LLC is pleased to provide this Proposal for the above referenced Flood Wall Project.

Background:

The BJCJSTP experienced substantial damage as a result of the June 2006 flood, and again from the September 2011 flood. The plant currently is only partially operational, due to the damage caused by the 2011 flood. Efforts are currently ongoing to restore the plant to full operation. Subsequent to the June 2006 flood, a hazard mitigation study was developed, which considered various systems and levels of flood protection. The selection and subsequent development of a flood protection system was not progressed.

The foundation system for the proposed barrier system will be dependent on the geotechnical evaluation and findings of the sub-grade soils. We have obtained a proposal from Haley & Aldrich to complete all geotechnical evaluations as per the USACE requirements. The flood wall will be designed in accordance with United States Army Corps of Engineers (USACE) *EM 1110-2-2502 Retaining and Flood Walls* and other applicable engineering and design guidelines from USACE and FEMA. The parameters used in the design will be based on findings and recommendations from the updated preliminary floodplain mapping currently being finalized by FEMA for the Susquehanna River and geotechnical engineering considerations provided by Haley & Aldrich. The sliding and overturning stability analysis for the typical flood wall sections will be verified by a USACE computer based analysis program CTWALL (X0153) that was developed in accordance with *EM 1110-2-2502*. The reinforced concrete requirements will be based on *ACI 350-06 Code Requirements for Environmental Engineering Concrete Structures*. Griffiths Engineering will also verify that the design meets the requirements for the



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USACE PL4899 Certification. This certification will allow the City of Binghamton to be included in the Corps Inspection Program. Griffiths Engineering will also evaluate the possible use of sheet pile walls, and other wall systems depending on FEMA acceptance and review comments.

The flood wall will be designed as per FEMA requirements to a minimum of 3 feet above base flood elevation or to the FEMA 500-year interval storm. (Whichever is higher). The project team will discuss these requirements with the City of Binghamton and agree if additional freeboard above the minimums are desired.

Structural Engineering Services:

1. Provide preliminary and final structural engineering services for the stability analysis and design of the proposed wall system including construction specifications.
2. Provide AutoCAD drawings of the Proposed Site Plan and Structural Details including interfaces with proposed utilities.
3. Response to United States Army Corps of Engineers, NYSDEC and other agency review comments. Please note from our experience this step can take numerous months and time to respond to agency comments.
4. Provide an engineer's opinion of probable construction cost.
5. Provide technical specifications. Front end will be completed and provided by the City of Binghamton.
6. Provide a preliminary submission set of contract documents for review prior to finalizing.

Phase 1 Preliminary Design Development

Task 1 – Project Background Review/Field Review

Griffiths Engineering (GE) and Woitd Engineering Consulting (WEC) will review the most recent flood protection studies for the facility including the Flood Mitigation Evaluation Report prepared by Savin Engineers in May 2012. WEC will also confirm that the hydraulic models utilized in a previous WEC hydraulic analysis (2010) are the most current and up to date FEMA models available for the Susquehanna River. WEC will conduct a desktop and site review of available information for the project area including a potential mitigation area at the confluence of the Susquehanna River/Fuller Hollow Creek confluence to note any changed conditions post the 2010 hydraulic analysis.



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Task 2- Provide Input to Design Team for Flood Protection Limits/Heights

GE and WEC will determine recommended flood protection locations, type and height of protection of the proposed flood protection system. Constraints at the Joint Sewage Treatment Plant location includes the 100-year floodway limits, the proximity of Fuller Hollow Creek at the western end of the plant facility and the proximity of Old Vestal Road located along the south property boundary of the plant.

Task 3 –Hydrologic and Hydraulic Investigations

Based on the flood protection concept and locations developed in Task 2, WEC will update our 2010 hydraulic analysis to reflect any changed Susquehanna River conditions and refinements in the flood protection system. In addition, WEC will conduct hydrologic and hydraulic analysis along Fuller Hollow Creek that will be utilized to guide decisions for the western end of the flood protection system. If necessary, WEC will provide design recommendations and then model proposed channel modifications/improvements along Fuller Hollow Creek to accommodate the proposed flood protection system.

GE and WEC will also investigate the feasibility of installing a vehicular closure structure across Old Vestal Road just to the east of the Fuller Hollow Creek crossing. The installation of such a structure can potentially eliminate the need for over 500' of floodwall protection along the north side of Old Vestal Road. WEC will evaluate the interior storm drainage system located along Old Vestal Road and will estimate the conceptual storm water pumping requirements to evacuate the interior stormwater during high Susquehanna River stages when the closure structure is engaged. WEC will provide input to the project team relative to this concept feasibility and cost effectiveness compared to extending the flood protection system eastward along Old Vestal Road.

Task 4- Flood Mitigation Analysis and Preliminary Design

For the purposes of this proposal it is assumed that portions of the proposed flood protection system will be located within the 100-year floodway. GE and WEC will review the municipalities regulations concerning impacts to the base flood's (1% annual chance or 100 year storm) water surface elevation and determine what mitigation is needed. WEC will complete a desktop geomorphic assessment using digital elevation maps (DEM) and the 100 year floodplain limits to determine the quality and quantity of the baseflood's floodway conveyance loss. This assessment will then be used to identify mitigation locations and approaches that meet local flood standards. WEC will produce three figures showing the locations of possible mitigation and design concepts to discuss with stakeholders.



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One possible mitigation location, due to its proximity to the encroached floodway is the large depositional feature at the confluence of Fuller Hollow Creek and the Susquehanna River. Increasing the base flood's floodway conveyance by removing parts of this depositional feature will help mitigate for the loss of floodway volume from the proposed flood protection system. WEC will determine the removal extent of this mitigation action and if this mitigation action will be self-sustaining. The depositional feature at the Fuller Hollow Creek confluence appears to be formed by deposited sediments from Fuller Hollow Creek and episodically flushed by the Susquehanna River. WEC will determine how frequently these flushing events occur to characterize this action's capacity to be self-mitigating and provide mitigation plan recommendations to inform stakeholder discussions.

Task 5 - Project Meetings, Coordination and Preliminary Design Refinement

Coordination with FEMA, NYSOEM, USACOE, NYSDEC and the City of Binghamton/Village of Johnson City throughout the design process will be a critical component of the eventual success of the project.

Using stakeholder feedback, the location of the mitigation site will be finalized. GE and WEC will refine the conceptual design to the level of detail needed for permitting.

Phase 2 Final Design and FEMA Submission Phase

Task 6 Final Hydraulic Modeling of Flood Protection System/Mitigation Areas

WEC will refine and finalize the preliminary hydraulic analysis and mitigation plan to reflect the final design components of the flood protection system. WEC will also provide guidance and review Savin Engineers final design for the interior flood pumping systems to insure compliance with FEMA levee/flood protection criteria.

Task 7 Annotation of NFIP Maps/Delineation of 100-year and 500-year flood Profiles and 100-year Floodway on Topographic Mapping:

WEC will delineate the revised 100-year flood and 500-year flooding limits on the certified topographic mapping provided by others along the areas affected by the proposed flood protection improvement area. In addition, WEC will delineate the 100-year and 500-year flooding limits and revised floodway limits on the appropriate Digital Flood Insurance Rate Map and Flood Hazard Boundary Maps for the City of Binghamton/Village of Johnson City.



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Task 8 Draft Operational and Maintenance (O&M) Plan:

WEC will prepare a draft O&M plan for the flood protection system that must be submitted with the Conditional Letter of Map Revision (CLOMR) Submission (Task 9). The O&M plan will be developed in compliance with USACOE and FEMA suggested standards. When submitted with the application for the CLOMR, comments received will be incorporated into the final plan prior to submission to FEMA for final LOMR approval.

Task 9 Conditional Letter of Map Revision Submission/Coordination with FEMA:

WEC will prepare the necessary information and forms required for a CLOMR Submission to FEMA. All required FEMA forms will be completed and required signatures obtained prior to submission. Assistance will be provided to the City of Binghamton and Village of Johnson City for the required notification of adjacent property owners and collection and submittal of copies of said notifications to FEMA. If required, WEC will attend a public hearing to answer questions regarding the CLOMR-LOMR process. All requests for additional information from FEMA will be coordinated with the City of Binghamton/Village of Johnson City as required.

Task 10 Final Operation & Maintenance Plan:

WEC will prepare the final O&M plan for the flood protection system incorporating any comments from the draft submission (Task 8). The O&M plan will be developed in compliance with USACOE and FEMA suggested standards.

Task 11 Letter of Map Revision Submission/Coordination with FEMA:

WEC will prepare and complete the LOMR submission to FEMA. The LOMR will include record drawing plans to identify any changes from the design plans that were submitted with the CLOMR. All follow up requests for additional information will be coordinated with the City of Binghamton/Village of Johnson City as necessary.

Assumptions

The Preliminary Flood Insurance Study (FIS) and Digital Flood Insurance Rate Map (DFIRM) and associated HEC-RAS hydraulic models for the Susquehanna River will be utilized for the hydrologic and hydraulic analysis. WEC will develop its own hydrologic and hydraulic models for Fuller Hollow Creek.

Mitigation location and preliminary mitigation design will be finalized before Phase II begins.

It is assumed that a public hearing will be required in conjunction with the submission of the CLOMR. WEC will provide the legal notice description and will attend the public hearing.



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The proposal cost does not include permit application costs for CLOMR and LOMR submissions. Joint Application for Permit Form submission will be Submitted by the project sponsor.

It is assumed that the City of Binghamton will be the project sponsor for the project.

WEC will assemble and organize all the materials into the CLOMR submission.

WEC will identify required supplemental Susquehanna River cross sections, and 2' contours of Fuller Hollow Creek and mitigation locations. It is assumed a maximum of 4 Susquehanna channel sections will be obtained. Fuller Hollow Creek survey will begin at the delta and extend 1,200' +/- upstream and include the necessary geomorphic features to complete the hydraulic model. Surveying for mitigation sites outside the confluence area is not included in these fees.

It is assumed that the flood protection system at the Terminal Pump Station will not involve a flood wall system. Minor encroachments in the 100 year floodplain may occur due to improvements to the access roadway to the facility. GE and Savin are proposing to provide a new structure to elevate all electrical and VFD components at the Terminal Pump Station. All existing Submersible Pumps will remain in their current location.

It is assumed that the flood protection system at the Joint Sewage Treatment Plant will encroach into the 100-year floodway and will result in a rise of the 100-year baseflood elevation and some form of mitigation will be required.

SAVIN ENGINEERS SCOPE OF SERVICES BACKGROUND

This scope of work describes the Engineering Services associated with the design of the seepage/drainage collection and pumping improvements associated with the construction of the flood barrier wall at the Binghamton – Johnson City Joint Sewage Treatment Plant (BJCJSTP) as outlined in the Flood Mitigation Evaluation prepared by Savin Engineers, P.C. for the Engineering Plan dated May 2012.

The seepage/drainage collection system will consist of buried underdrains and at-grade catch basins to intercept groundwater and surface water which circumvents the flood barrier wall during flood events. The collection system will convey the flow to the seepage pumping stations which will discharge the water outside the perimeter of the flood barrier wall. A total of two seepage pumping stations are anticipated to be located within the existing limits of the plant property. The capacity of each pumping station is assumed to be 3.0 MGD.

In addition, the Engineering Services will include the design of the improvements necessary at the Terminal Pumping Station to raise the elevation of the electrical equipment above the design flood elevation as outlined in the Flood Mitigation Evaluation prepared by Savin Engineers, P.C. for the Engineering Plan dated May 2012. These improvements will include an elevated enclosure to house the main circuit breaker, motor control center and variable frequency drives



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for the pumping equipment including the foundation, superstructure and enclosure. It is assumed that the enclosure will be a pre-engineered structure. The design will include an emergency generator to provide power in the event of a utility outage. The design will also include removable flood barriers at each of the three exterior doorways as well as sump pump improvements within the pumping station including pumping equipment, controls and a flood alarm panel. The design of site improvements including the buildup and regrading of the existing access roadway to a higher elevation and the associated geotechnical, structural and drainage work is assumed to be by others.

I. ENGINEERING SERVICES

The Engineering Services consist of the following tasks:

- Savin Task 1 – Schematic Design Report
- Savin Task 2 – Design Development
- Savin Task 3 – Construction Documents
- Savin Task 4 – Permitting and Regulatory Assistance
- Savin Task 5 – Bidding Services
- Savin Task 6 – Design Services During Construction
- Savin Task 7 – QA/QC Peer Review

II. SCOPE OF WORK FOR ENGINEERING SERVICES

Savin Task 1 – Schematic Design Report

1. Based on the recommendations of others for the potential locations and rates of seepage, Savin will locate and size the underdrain piping to collect the seepage and convey it to the seepage pumping stations.
2. Savin will review the existing surface drainage features in order to determine which features should be connected to the seepage pumping systems.
3. Savin will locate the seepage pumping stations and determine their capacity requirements.
4. Savin will locate and size the new electrical platform at the Terminal Pumping Station.
5. Savin will determine the preliminary requirements and sizing of the emergency generator. A 500 kW diesel generator is assumed.
6. Savin will prepare sections of the Schematic Design Report to be prepared by Griffiths pertaining to the seepage collection and pumping systems and the improvements at the Terminal Pumping Station. The Schematic Design Report will outline the technical recommendations for the collection and discharge of seepage and surface drainage from within the flood barrier wall perimeter and outline the basis of design of the major project elements and establish the criteria by which the design will be developed to completion.



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The Schematic Design Report submission will include preliminary construction drawings, a listing of the technical specifications to be prepared and an Engineer's Opinion of Probable Construction Cost. This submittal will represent 30% completion of design.

Savin Task 2 – Design Development

1. During the Design Development Phase, Savin will further develop the schematic Savin design. Savin will prepare construction drawings and technical specifications for the project incorporating the features identified in the Schematic Design Report. An updated Engineer's Opinion of Probable Construction Cost will be submitted. The Design Development documents will represent 60% completion of design.
2. Savin will design the collection system piping including the selection of pipe size, materials, and routing including such manholes and other drainage structures that may be required.
3. Savin will design the connection of the existing surface drainage piping to the seepage collection system including the modification of the existing drainage piping and structures as may be required.
4. Savin will design the seepage pumping stations to discharge the seepage and drainage collected from the site including the design of the structures; pumping systems, instrumentation systems, electrical systems and ventilation systems required for a complete operating system.
5. Savin will coordinate the design of the collection and pumping systems with the improvements being designed under the project to restore the Biological Aerated Filtration (BAF) Complex to service.
6. Savin, with Griffiths Engineering, will coordinate the design of the structures associated with the flood barrier wall with the structures being designed under the project to restore the BAF Complex. All existing wall structures will be Savin Engineers responsibility.
7. Savin will design the foundation, structure and enclosure associated with the electrical platform and the foundation associated with the emergency generator at the Terminal Pumping Station.
8. Savin will design the electrical components associated with the main breaker, motor control center, variable frequency drives, switchgear and controls.
9. Savin will design the removable flood barriers at the exterior doorways and the interior sump pump improvements.



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Savin Task 3 – Construction Documents

1. During the Construction Documents Phase, Savin will prepare detailed construction drawings and technical specifications based upon the 60% documents and comments received on the 60% design documents. An updated Engineer's Opinion of Probable Construction Cost will be submitted. The Construction Documents will represent 90% completion of design.
2. Savin will prepare 100% documents incorporating the comments received to the 90% documents.
3. It is assumed that all contract documents will be included and bid with the project for the restoration of the BAF Complex.

Savin Task 4 – Permitting and Regulatory Assistance

1. Savin will prepare any related documentation for the seepage pumping systems as required in connection with the Owner's responsibility for filing documents, including but not limited to, permits, sign-offs and coordination with utilities, required for the approval of governmental authorities having jurisdiction over the project. The filing and obtaining of the permits is assumed to be by others.
2. Savin will prepare any related documentation for the electrical improvements at the Terminal Pumping Station as required in connection with the Owner's responsibility for filing documents, including but not limited to, permits, sign-offs and coordination with utilities, required for the approval of governmental authorities having jurisdiction over the project. The filing and obtaining of the permits is assumed to be by others.

Savin Task 5 – Bidding Services

1. Savin will incorporate the comments received on the 100% documents and will prepare final Contract Documents that can be used to bid the project.
2. Savin will attend the pre-bid meeting as scheduled by the Owner. Savin, when directed by the Griffiths, will provide responses to questions from potential bidders in writing or by addendum.

Savin Task 6 – Design Services During Construction

1. Savin will review and take appropriate action on the Contractor's submittals for the seepage pumping systems such as Schedules, Shop Drawings, Product Data, Samples, Coordination Drawings and Operation and Maintenance Manuals, but only for conformance with the design concept and the information given in the Contract Documents.



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2. When requested by Griffiths, Savin will prepare written responses to Requests for Information (RFIs) from the Contractor or as to the meaning and/or intent of the Drawings and Specifications regarding the seepage pumping systems. Such responses will be returned with reasonable promptness so as to cause no unnecessary delay in the work.
3. Savin will visit the work site approximately 1-2 times per month to attend project meetings and to observe the general progress of the work.
4. Savin will observe the final pressure testing and startup of the seepage pumping systems and their appurtenances.
5. Savin will perform the Design Services During Construction as described in items 1 thru 3 above as they relate to the improvements at the Terminal Pumping Station designed by Savin.
6. Savin will observe the final tests and startup of the electrical systems including the emergency generator.

Savin Task 7 – QA/QC Peer Review

1. Savin will perform a quality assurance / quality control (QA/QC) peer review of the structural design of the flood barrier wall at the BJCJSTP designed by others. Savin will review the design for structural integrity in terms of flexural and lateral capacity, as well as overturning and sliding, against FEMA and USACOE regulations and applicable building codes.
2. It is assumed that the design of the wall will be based on either: a) steel sheet piling; or b) cantilevered reinforced concrete (i.e., T-wall). Savin will review the design at different locations along the perimeter of the BJCJSTP property up to a total of 6 different cross sections and wall types. Design calculations including assumptions and material properties will be provided to Savin by the design engineer.
3. Savin will prepare a written summary of its findings.
4. Savin will provide one (1) QA/QC Peer Review using the 90% design submittal construction documents.
5. Savin will not design any components of the wall system.

4.7 Sediment Removal from Fuller Hollow Creek Outlet

4.7.1 Description

This flood control measure includes the removal of deposition from the Susquehanna River at the outlet of Fuller Hollow Creek. There is a considerable amount of sedimentation and other deposits which extends into the main channel that would reduce the flow capacity of the Susquehanna River at this location resulting in higher upstream water surface elevations along the river. Removal of these sediments would increase flow capacities within the Susquehanna River and increase the discharge capacity of Fuller Hollow Creek thereby reducing upstream water surface elevations due to backwater effects. This alternative was discussed in the 2007 C&S report under Section 9.

There appears to be a significant amount of deposition at the Creek outlet. The 2007 C&S report noted that the depth of the sediment appeared to be upwards of 20 feet in some places with up to approximately 100,000 cubic yards of material to be removed in total.

Removal of the sediments would result in an increase in the flow capacity of the Fuller Hollow Creek stream channel and a reduction of the elevation of the stream profile. Removal of the sediments may also result in improvements to the flow regime in the Susquehanna River. However, the extent of these improvements cannot be determined without performing a detailed hydraulic analysis of the river system and the corresponding reductions in the stream profiles of the river and of Fuller Hollow Creek cannot be readily determined. There are several structures downstream of the BJCJSTP on the Susquehanna River – including the Route 210 Bridge and a dam structure – that restrict flow in the river and would limit the degree to which the water level could be reduced.

Removal of the sediments would require permit approval from the USACE to dredge the Susquehanna River. If the sediments are found to contain harmful or regulated materials, additional requirements and permits may be imposed on their removal and disposal.

Assuming the removal of 100,000 cubic yards of non-hazardous sediments (i.e., general C&D debris disposal), the total probable construction cost is approximately \$7.9 million in May 2012 dollars. Including engineering, permitting, construction administration, project administration, legal fees and other project-related costs based on a factor of 25%, the calculated project costs are approximately \$9.8 million. These costs are shown in Table 4-7.

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