RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

April 12, 2012

CERTIFIED MAIL

Mr. James DeCelles, PE
Chief Engineer
Pawtucket Water Supply Board
85 Branch Street
Pawtucket, RI 02860

RE: Pawtucket Drinking Water Treatment Plant Final Permit
RIPDES Permit No. RI0001589

Dear Mr. DeCelles:

Enclosed is your final Rhode Island Pollutant Discharge Elimination System (RIPDES) Permit issued pursuant to the referenced application. State regulations, promulgated under Chapter 46-12 of the Rhode Island General Laws of 1956, as amended, require this permit to become effective on the date specified in the permit.

As outlined in the statement of basis for this permit, the Department of Environmental Management (DEM) is willing to enter into a Consent Agreement which will establish interim limits for any pollutants for which the Pawtucket Drinking Water Treatment Plant cannot comply and establish an enforceable compliance schedule for completing any treatment plant changes that will be necessary to bring the facility into permit compliance. Please note that, in order to enter into a Consent Agreement, the Pawtucket Water Supply Board will need to file a hearing request and a stay request in accordance with the attached instructions within thirty (30) days of receipt of this letter.

Also enclosed is a copy of the Department's response to the comments received on the draft permit and information relative to hearing requests and stays of RIPDES Permits.

We appreciate your cooperation throughout the development of this permit. Should you have any questions concerning this permit, feel free to contact Brian Lafaille, PE of the State Permits Staff at (401) 222-4700, extension 7731.

Sincerely,

Joseph B. Haberek, PE
Principal Sanitary Engineer

Enclosures

cc: Traci Pena, RIDEM-OWR (electronic)
Annie McFarland, RIDEM-OWR (electronic)
James DeCelles, PWSB (electronic)

30% post-consumer fiber

RESPONSE TO COMMENTS

From March 2, 2012 to April 6, 2012, the Rhode Island Department of Environmental Management (DEM) solicited public comment on a draft Rhode Island Pollutant Discharge Elimination System (RIPDES) permit for the Pawtucket Drinking Water Treatment Plant. The following is a synopsis of the significant comments received and the DEM responses to those comments.

The following responses address the comments that were raised by the Pawtucket Water Supply Board in a letter dated March 16, 2012.

Comment 1: The Pawtucket Water Supply Board (PWSB) is in receipt of draft RIPDES Permit No. RI0001589 for the discharge from the PWSB treatment facility lined residual sedimentation basins and the associated notice of public comment.

As part of the public comment period, the PWSB would like to notify RIDEM that the PWSB will be unable to comply with the new permit limits for pH and total aluminum at our existing outfall serial number 002A. In accordance with our consent agreement with DEM, the PWSB is in the process of constructing a pipeline that will convey the discharge from the lined residual sedimentation basins to a new outfall no. 002B. The construction of this pipeline will be bid in April for summer construction and the new outfall should be operational in September.

Response 1: As previously indicated the DEM is willing to enter into a consent agreement with the PWSB which includes a compliance schedule that provides time for the implementation of changes necessary to comply with the limitations for pH and Total Aluminum at outfall 002A. In addition, the anticipated consent agreement revision will also address Total Residual Chlorine, Total Iron, Total Cadmium, and Total Lead compliance at outfall 002A. Although the existing consent agreement will need to be modified to reflect the resolution of the attached permit, it is anticipated that all the major components of the existing consent agreement (i.e. RIA-383) will be carried forward into the anticipated consent agreement revision.

HEARING REQUESTS

If you wish to contest any of the provisions of this permit, you may request a formal hearing within thirty (30) days of receipt of this letter. The request should be submitted to the Administrative Adjudication Division at the following address:

Bonnie Stewart, Clerk
Department of Environmental Management
Office of Administrative Adjudication
One Capitol Hill - Second Floor
Providence, Rhode Island 02903

Any request for a formal hearing must conform to the requirements of Rule 49 of the State Regulations.

STAYS OF RIPDES PERMITS

Should the Department receive and grant a request for a formal hearing, the contested conditions of the permit will not automatically be stayed. However, the permittee, in accordance with Rule 50, may request a temporary stay for the duration of adjudicatory hearing proceedings. Requests for stays of permit conditions should be submitted to the Office of Water Resources at the following address:

Angelo S. Liberti, P.E.
Chief of surface Water Protection
Office of Water Resources
235 Promenade Street
Providence, Rhode Island 02908

All uncontested conditions of the permit will be effective and enforceable in accordance with the provisions of Rule 49.

AUTHORIZATION TO DISCHARGE UNDER THE
RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of Chapter 46-12 of the Rhode Island General Laws, as amended,

The City of Pawtucket, Pawtucket Water Supply Board
85 Branch Street
Pawtucket, RI 02860

is authorized to discharge from the following facility

Pawtucket Water Treatment Plant
87 Branch Street
Pawtucket, RI 02860

to receiving waters named

Abbott Run Brook Tributary to the Blackstone River

&

Blackstone River

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on July 1, 2012.

This permit and the authorization to discharge expire at midnight, five (5) years from the effective date.

This permit supersedes the permit issued on September 13, 2006.

This permit consists of ten (10) pages in Part I including effluent limitations, monitoring requirements, etc. and 10 pages in Part II including General Conditions.

Signed this 13th day of April, 2012.

Angelo S. Liberti

Angelo S. Liberti, P.E., Chief of Surface Water Protection
Office of Water Resources
Rhode Island Department of Environmental Management
Providence, Rhode Island

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through permit expiration the permittee is authorized to discharge from outfall serial number 002A (The discharge from the Lined Residuals Settling Basins to Abbott Run Brook). Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations Quantity - lbs./day		Concentration - specify units		Monitoring Requirement		
	Average Monthly	Maximum Daily	Average Monthly *(Minimum)	Average Weekly *(Average)	Maximum Daily *(Maximum)	Measurement Frequency	Sample Type
Flow	1.6 MGD	--- MGD				Continuous	Recorder
TSS	200 lb/day	300 lb/day	30 mg/l		50 mg/l	2/Month	Composite[1]
Turbidity			--- NTU		--- NTU	2/Month	Composite[1]
pH			(6.5 S.U.)		(9.0 S.U.)	2/Month	Grab[2]
Total Residual Chlorine			11 ug/l[3]		19 ug/l[3]	2/Month	Grab
Total Aluminum			70 ug/l		600 ug/l	2/Month	Grab
Total Iron			--- ug/l		240 ug/l	2/Month	Grab
Total Cadmium			0.08 ug/l[4]		0.42 ug/l[4]	1/Quarter	Grab
Total Lead			0.44 ug/l[4]		11.18 ug/l	1/Quarter	Grab

[1] All composite sampling must consist of a minimum of four (4) grabs spaced equally apart during the discharge from the LRSB network.

[2] Compliance with these limitations shall be determined by taking a minimum of one (1) grab sample. The grab sample must be analyzed for pH immediately (<15 minutes after sample collection). The maximum value to be reported is the highest individual measurement obtained during the monitoring period. The minimum value to be reported is the lowest individual measurement obtained during the monitoring period.

[3] The following methods may be used to analyze the grab samples: (1) Low Level Amperometric Titration, Standard Methods (18th Edition) No. 4500-Cl E; (2) DPD Spectrophotometric, EPA No. 330.5 or Standard Methods (18th Edition) No. 4500-Cl G. The limit at which compliance/noncompliance determinations will be based is the Quantitation Limit which is defined as 20 ug/l for TRC. These values may be reduced by permit modification as more sensitive methods are approved by EPA and the State.

[4] The limit at which compliance/noncompliance determinations will be based is the Quantitation Limit, which is defined as 0.5 ug/l for Cadmium and 3 ug/l for Lead.

--- signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

* Values in parentheses ( ) are to be reported as Minimum/Maximum for the reporting period rather than Average Monthly/Maximum Daily.

**Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 002A (Discharge from the Lined Residuals Settling Basins to Abbott Run Brook).

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning on the date when the discharge from the Lined Residuals Sedimentation Basin network is redirected to the Blackstone River and lasting through permit expiration the permittee is authorized to discharge from outfall serial number(s) 002B (The discharge from the Lined Residuals Settling Basins to the Blackstone River). Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirement		
	Quantity - lbs./day		Concentration - specify units				
	Average Monthly	Maximum Daily	Average Monthly *(Minimum)	Average Weekly *(Average)	Maximum Daily *(Maximum)	Measurement Frequency	Sample Type
Flow	1.6 MGD	--- MGD				Continuous	Recorder
TSS	200 lb/day	300 lb/day	30 mg/l		50 mg/l	2/Month	Composite[1]
Turbidity			--- NTU		--- NTU	2/Month	Composite[1]
pH			(6.0 S.U.)		(9.0 S.U.)	2/Month	Grab[2]
Total Residual Chlorine			0.53 mg/l[3]		0.91 mg/l[3]	2/Month	Grab
Total Aluminum			3.3 mg/l		28.7 mg/l	2/Month	Grab

[1] All composite sampling must consist of a minimum of four (4) grabs spaced equally apart during the discharge from the Lined Residuals Sedimentation Basin network.

[2] Compliance with these limitations shall be determined by taking a minimum of one (1) grab sample. The grab sample must be analyzed for pH immediately (<15 minutes after sample collection). The maximum value to be reported is the highest individual measurement obtained during the monitoring period. The minimum value to be reported is the lowest individual measurement obtained during the monitoring period.

[3] The following methods may be used to analyze the grab samples: Preferred Methods: (1) DPD spectrophotometric, EPA No. 330.5 or Standard Methods (18th edition) No. 4500-Cl G; (2) DPD titrimetric (ferrous titrimetric), EPA No. 330.4 or Standard Methods (18th edition) No. 4500-Cl F; (3) Amperiometric titration , EPA No. 330.1 or Standard Methods (18th edition) No. 4500-Cl D or ASTM No. D1253-86(92); Alternate Methods: (4) Iodometric direct titration, EPA No. 330.3 or Standard Methods (18th edition) No. 4500-Cl B; (5) Iodometric back titration (either end point), EPA No. 330.2 or Standard Methods (18th edition), No. 4500-Cl C.

--- signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

* Values in parentheses ( ) are to be reported as Minimum/Maximum for the reporting period rather than Average Monthly/Maximum Daily.

**Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 002B (The discharge from the Lined Residuals Settling Basins to the Blackstone River).

PART I

A. **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

3. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number(s) 003A (Emergency discharges of pretreated water originating from the Raw Water Pump Supply Line to the Blackstone River) Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations Quantity - lbs./day		Concentration - specify units		Monitoring Requirement		
	Average Monthly	Maximum Daily	Average Monthly *(Minimum)	Average Weekly *(Average)	Maximum Daily *(Maximum)	Measurement Frequency	Sample Type
Flow	--- MGD	--- MGD				Continuous	Recorder
pH			(6.5 S.U.)		(9.0 S.U.)	1/Day[2]	4 Grabs[1]

[1] Compliance with these limitations shall be determined by taking a minimum of four (4) grab samples equally spaced over the sampling day. The grab samples must be analyzed for pH immediately (<15 minutes after sample collection). The maximum value to be reported is the highest individual measurement obtained during the monitoring period. The minimum value to be reported is the lowest individual measurement obtained during the monitoring period.

[2] Monitoring is required for each day that there is a discharge to the Blackstone River from the emergency raw water drain line.

--- signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

*Values in parentheses ( ) are to be reported as Minimum/Maximum for the reporting period rather than Average Monthly/Maximum Daily.

**Samples taken in compliance with the monitoring requirements specified above shall be taken at Outfall 003A (Emergency discharges of pretreated water originating from the Raw Water Pump Station to the Blackstone River).

4. The pH of the effluent discharges from outfall 002A and 003A must be in the range of 6.5-9.0 s.u.

5. The pH of the effluent discharges from outfall 002B must be in the range of 6.0-9.0 s.u.

6. The discharge shall not cause visible discoloration of the receiving waters.

7. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.

8. The turbidity of the receiving water downstream of outfall 002A shall not exceed 5 NTU over natural background during discharges to Abbott Run Brook a Class AA surface water body.

9. The turbidity of the receiving water downstream of outfall 002B shall not exceed 10 NTU over natural background during discharges to the Blackstone River a Class B1 surface water body.

10. Solids, sludges, or biosolids removed in the course of treatment or control of wastewaters, shall be properly disposed of in compliance with applicable state laws, regulations, and permit requirements, and in a manner such as to prevent any pollutant from such materials from entering the waters of the state.

11. The permittee is required to maintain and implement a comprehensive Residuals Management Plan. The components of the Residuals Management Plan must include the following:

    a. Characterization of the form, quantity, and quality of the residuals;

    b. Determination of the appropriate regulatory requirements;

    c. Identification of feasible disposal options;

    d. Selection of appropriate residuals processing/treatment technologies and development of a residuals management strategy that meets the regulatory goals established for the water treatment facility;

    e. Development of best management practices which at a minimum include the following: a) an evaluation of the water treatment residuals storage capacity within each residuals treatment unit and identification of criteria which will serve as a trigger to determine when treatment units (i.e. lagoons, equalization basins, etc.) need to be pulled offline in order to avoid short circuiting and potential permit violations; b) development of procedures and periodic evaluation techniques necessary to gauge the remaining storage capacity of residuals treatment units; c) an evaluation of the need for coordination between WTP operators and personnel responsible for the operation of the WTP residuals treatment units; d) development of maintenance procedures to deactivate and prepare treatment units for sludge removal. These maintenance procedures must identify the appropriate steps necessary to temporarily lower the water level in the treatment unit, remove settled sludges, and restore the flow through the treatment unit in such a way that degradation of the receiving waters and permit violations will be prevented;

    f. A requirement that all critical activities associated with the operations and maintenance of the water treatment plant residuals treatment units be documented and copies of such documentation be kept on site at all times throughout the effective life of the permit;

    g. A requirement to review the Residuals Management Plan (at a minimum) on a yearly basis, which also requires the Plan to be updated as necessary. A copy of the Residuals Management Plan and records of the annual reviews must be available on site at all times throughout the effective life of the permit;

The DEM may notify the permittee at any time that the Residuals Management Plan is deficient or does not meet one or more of the minimum requirements of the permit. After such notification from the DEM, the permittee shall make changes to the Residuals Management Plan and shall submit to the DEM a written certification that the requested changes have been made. Unless otherwise provided by the DEM, the permittee shall have thirty (30) days after such notification to make the necessary changes. The permittee shall immediately amend the Residuals Management Plan if it proves to be ineffective in achieving the general objectives of controlling pollutants in discharges associated with the water treatment facility. Changes must be noted and then submitted to the DEM within thirty (30) days of amending the Residuals Management Plan. Amendments to the Residuals Management Plan may be reviewed by the DEM in the same manner as specified above.

12. This permit only authorizes the use of Aluminum-based chemicals and Superfloc as primary coagulation agents. The permittee must notify the DEM and request a permit modification prior to using any other coagulation agents including iron-based chemicals.

13. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

    a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

        (1) One hundred micrograms per liter (100 ug/l);

        (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitro-phenol; and one milligram per liter (1 mg/l) for antimony;

        (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. s122.21(g)(7); or

        (4) Any other notification level established by the Director in accordance with 40 C.F.R. s122.44(f) and Rhode Island Regulations.

    b. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

        (1) Five hundred micrograms per liter (500 ug/l);

        (2) One milligram per liter (1 mg/l) for antimony;

        (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. s122.21(g)(7); or

(4) Any other notification level established by the Director in accordance with 40 C.F.R. s122.44(f) and Rhode Island Regulations.

c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or by-product any toxic pollutant which was not reported in the permit application.

14. This permit serves as the State's Water Quality Certificate for the discharges described herein.

B. DETECTION LIMITS

The permittee shall assure that all wastewater testing required by this permit, is performed in conformance with the method detection limits listed below. In accordance with 40 CFR Part 136, EPA approved analysis techniques, quality assurance procedures and quality control procedures shall be followed for all reports required to be submitted under the RIPDES program. These procedures are described in "Methods for the Determination of Metals in Environmental Samples" (EPA/600/4-91/010) and "Methods for Chemical Analysis of Water and Wastes" (EPA/600/4-79/020).

The report entitled "Methods for the Determination of Metals in Environmental Samples" includes a test which must be performed in order to determine if matrix interferences are present, and a series of tests to enable reporting of sample results when interferences are identified. Each step of the series of tests becomes increasingly complex, concluding with the complete Method of Standard Additions analysis. The analysis need not continue once a result which meets the applicable quality control requirements has been obtained. Documentation of all steps conducted to identify and account for matrix interferences shall be documented and maintained onsite.

If, after conducting the complete Method of Standard Additions analysis, the laboratory is unable to determine a valid result, the laboratory shall report "could not be analyzed". Documentation supporting this claim shall be maintained onsite. If valid analytical results are repeatedly unobtainable, DEM may require that the permittee determine a method detection limit (MDL) for their effluent or sludge as outlined in 40 CFR Part 136, Appendix B.

When calculating sample averages for reporting on discharge monitoring reports (DMRs):

1. "could not be analyzed" data shall be excluded, and shall not be considered as failure to comply with the permit sampling requirements;

2. results reported as less than the MDL shall be reported as zero in accordance with the DEM's DMR Instructions, provided that all appropriate EPA approved methods were followed.

Therefore, all sample results shall be reported as: an actual value, "could not be analyzed", or zero. The effluent or sludge specific MDL must be calculated using the methods outlined in 40 CFR Part 136, Appendix B. Samples which have been diluted to ensure that the sample concentration will be within the linear dynamic range shall not be diluted to the extent that the analyte is not detected. If this should occur the analysis shall be repeated using a lower degree of dilution.

LIST OF TOXIC POLLUTANTS

The following list of toxic pollutants has been designated pursuant to Section 307(a)(1) of the Clean Water Act. The Method Detection Limits (MDLs) represent the required Rhode Island MDLs.

Volatiles - EPA Method 624		MDL ug/l (ppb)
1V	acrolein	10.0
2V	acrylonitrile	5.0
3V	benzene	1.0
5V	bromoform	1.0
6V	carbon tetrachloride	1.0
7V	chlorobenzene	1.0
8V	chlorodibromomethane	1.0
9V	chloroethane	1.0
10V	2-chloroethylvinyl ether	5.0
11V	chloroform	1.0
12V	dichlorobromomethane	1.0
14V	1,1-dichloroethane	1.0
15V	1,2-dichloroethane	1.0
16V	1,1-dichloroethylene	1.0
17V	1,2-dichloropropane	1.0
18V	1,3-dichloropropylene	1.0
19V	ethylbenzene	1.0
20V	methyl bromide	1.0
21V	methyl chloride	1.0
22V	methylene chloride	1.0
23V	1,1,2,2-tetrachloroethane	1.0
24V	tetrachloroethylene	1.0
25V	toluene	1.0
26V	1,2-trans-dichloroethylene	1.0
27V	1,1,1-trichloroethane	1.0
28V	1,1,2-trichloroethane	1.0
29V	trichloroethylene	1.0
31V	vinyl chloride	1.0

Acid Compounds - EPA Method 625		MDL ug/l (ppb)
1A	2-chlorophenol	1.0
2A	2,4-dichlorophenol	1.0
3A	2,4-dimethylphenol	1.0
4A	4,6-dinitro-o-cresol	1.0
5A	2,4-dinitrophenol	2.0
6A	2-nitrophenol	1.0
7A	4-nitrophenol	1.0
8A	p-chloro-m-cresol	2.0
9A	pentachlorophenol	1.0
10A	phenol	1.0
11A	2,4,6-trichlorophenol	1.0

Pesticides - EPA Method 608		MDL ug/l (ppb)
1P	aldrin	0.059
2P	alpha-BHC	0.058
3P	beta-BHC	0.043
4P	gamma-BHC	0.048
5P	delta-BHC	0.034
6P	chlordane	0.211
7P	4,4 ' -DDT	0.251
8P	4,4 ' -DDE	0.049
9P	4,4 ' -DDD	0.139
10P	dieldrin	0.082
11P	alpha-endosulfan	0.031
12P	beta-endosulfan	0.036
13P	endosulfan sulfate	0.109
14P	endrin	0.050
15P	endrin aldehyde	0.062
16P	heptachlor	0.029
17P	heptachlor epoxide	0.040

Pesticides - EPA Method 608		MDL ug/l (ppb)
18P	PCB-1242	0.289
19P	PCB-1254	0.298
20P	PCB-1221	0.723
21P	PCB-1232	0.387
22P	PCB-1248	0.283
23P	PCB-1260	0.222
24P	PCB-1016	0.494
25P	toxaphene	1.670

Base/Neutral - EPA Method 625		MDL ug/l (ppb)
1B	acenaphthene *	1.0
2B	acenaphthylene *	1.0
3B	anthracene *	1.0
4B	benzidine	4.0
5B	benzo(a)anthracene *	2.0
6B	benzo(a)pyrene *	2.0
7B	3,4-benzofluoranthene *	1.0
8B	benzo(ghi)perylene *	2.0
9B	benzo(k)fluoranthene *	2.0
10B	bis(2-chloroethoxy)methane	2.0
11B	bis(2-chloroethyl)ether	1.0
12B	bis(2-chloroisopropyl)ether	1.0
13B	bis(2-ethylhexyl)phthalate	1.0
14B	4-bromophenyl phenyl ether	1.0
15B	butylbenzyl phthalate	1.0
16B	2-chloronaphthalene	1.0
17B	4-chlorophenyl phenyl ether	1.0
18B	chrysene *	1.0
19B	dibenzo (a,h)anthracene *	2.0
20B	1,2-dichlorobenzene	1.0
21B	1,3-dichlorobenzene	1.0
22B	1,4-dichlorobenzene	1.0
23B	3,3 ' -dichlorobenzidine	2.0
24B	diethyl phthalate	1.0
25B	dimethyl phthalate	1.0
26B	di-n-butyl phthalate	1.0
27B	2,4-dinitrotoluene	2.0
28B	2,6-dinitrotoluene	2.0
29B	di-n-octyl phthalate	1.0
30B	1,2-diphenylhydrazine (as azobenzene)	1.0
31B	fluoranthene *	1.0
32B	fluorene *	1.0
33B	hexachlorobenzene	1.0
34B	hexachlorobutadiene	1.0
35B	hexachlorocyclopentadiene	2.0
36B	hexachloroethane	1.0
37B	indeno(1,2,3-cd)pyrene *	2.0
38B	isophorone	1.0
39B	naphthalene *	1.0
40B	nitrobenzene	1.0
41B	N-nitrosodimethylamine	1.0
42B	N-nitrosodi-n-propylamine	1.0
43B	N-nitrosodiphenylamine	1.0
44B	phenanthrene *	1.0
45B	pyrene *	1.0
46B	1,2,4-trichlorobenzene	1.0

OTHER TOXIC POLLUTANTS

	MDL ug/l (ppb)
Antimony, Total	3.0
Arsenic, Total	1.0
Beryllium, Total	0.2
Cadmium, Total	0.1
Chromium, Total	1.0
Chromium, Hexavalent	20.0
Copper, Total	1.0
Lead, Total	1.0
Mercury, Total	0.2
Nickel, Total	1.0
Selenium, Total	2.0
Silver, Total	0.5
Thallium, Total	1.0
Zinc, Total	5.0
Asbestos	**
Cyanide, Total	10.0
Phenols, Total***	50.0
TCDD	**
MTBE (Methyl Tert Butyl Ether)	1.0

* Polynuclear Aromatic Hydrocarbons
** No Rhode Island Department of Environmental Management (RIDEM) MDL

NOTE:

The MDL for a given analyte may vary with the type of sample. MDLs which are determined in reagent water may be lower than those determined in wastewater due to fewer matrix interferences. Wastewater is variable in composition and may therefore contain substances (interferents) that could affect MDLs for some analytes of interest. Variability in instrument performance can also lead to inconsistencies in determinations of MDLs.

To help verify the absence of matrix or chemical interference the analyst is required to complete specific quality control procedures. For the metals analyses listed above the analyst must withdraw from the sample two equal aliquots; to one aliquot add a known amount of analyte, and then dilute both to the same volume and analyze. The unspiked aliquot multiplied by the dilution factor should be compared to the original. Agreement of the results within 10% indicates the absence of interference. Comparison of the actual signal from the spiked aliquot to the expected response from the analyte in an aqueous standard should help confirm the finding from the dilution analysis. (Methods for Chemical Analysis of Water and Wastes EPA-600/4-79/020).

For Methods 624 and 625 the laboratory must on an ongoing basis, spike at least 5% of the samples from each sample site being monitored. For laboratories analyzing 1 to 20 samples per month, at least one spiked sample per month is required. The spike should be at the discharge permit limit or 1 to 5 times higher than the background concentration determined in Section 8.3.2, whichever concentration would be larger. (40 CFR Part 136 Appendix B Method 624 and 625 subparts 8.3.1 and 8.3.11).

C. MONITORING AND REPORTING

1. Monitoring

All monitoring required by this permit shall be done in accordance with sampling and analytical testing procedures specified in Federal Regulations (40 CFR Part 136). Special attention should be put towards following the sampling techniques, preservation, and holding times listed in Table II of 40 CFR Part 136.

2. Reporting

Monitoring results obtained during the previous month shall be summarized and reported on Discharge Monitoring Report Form(s) postmarked no later than the 15th day of the month following the completed reporting period.

Signed copies of these, and all other reports required herein, shall be submitted to:

RIPDES Program
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, Rhode Island 02908

PART II
TABLE OF CONTENTS

GENERAL REQUIREMENTS

DEFINITIONS

GENERAL REQUIREMENTS

(a) Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of Chapter 46-12 of the Rhode Island General Laws and the Clean Water Act (CWA) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

(1) The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

(2) The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307 or 308 of the Act is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment of not more than 1 year, or both.

(3) Chapter 46-12 of the Rhode Island General Laws provides that any person who violates a permit condition is subject to a civil penalty of not more than $5,000 per day of such violation. Any person who willfully or negligently violates a permit condition is subject to a criminal penalty of not more than $10,000 per day of such violation and imprisonment for not more than 30 days, or both. Any person who knowingly makes any false statement in connection with the permit is subject to a criminal penalty of not more than $5,000 for each instance of violation or by imprisonment for not more than 30 days, or both.

(b) Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The permittee shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Director. (The Director shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

(c) Need to Halt or Reduce Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(d) Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(e) Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures, and, where applicable, compliance with DEM "Rules and Regulations Pertaining to the Operation and Maintenance of Wastewater Treatment Facilities" and "Rules and Regulations Pertaining to the Disposal and Utilization of Wastewater Treatment Facility Sludge." This provision requires the operation of back-up or auxiliary facilities or similar systems only when the operation is necessary to achieve compliance with the conditions of the permit.

(f) Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause, including but not limited to: (1) Violation of any terms or conditions of this permit; (2) Obtaining this permit by misrepresentation or failure to disclose all relevant facts; or (3) A change in any conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(g) Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

(h) Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

(i) Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

(1) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

(2) Have access to and copy, at reasonable times any records that must be kept under the conditions of this permit;

(3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

(4) Sample or monitor any substances or parameters at any location, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA or Rhode Island law.

(j) Monitoring and Records

(1) Samples and measurements taken for the purpose of monitoring shall be representative of the volume and nature of the discharge over the sampling and reporting period.

(2) The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings from continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 5 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

(3) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;

(ii) The individual(s) who performed the sampling or measurements;

(iii) The date(s) analyses were performed;

(iv) The individual(s) who performed the analyses;

(v) The analytical techniques or methods used; and

(vi) The results of such analyses.

(4) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 and applicable Rhode Island regulations, unless other test procedures have been specified in this permit.

(5) The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall upon conviction, be punished by a fine of not more than $10,000 per violation or by imprisonment for not more than 6 months per violation or by both. Chapter 46-12 of the Rhode Island General Laws also provides that such acts are subject to a fine of not more than $5,000 per violation, or by imprisonment for not more than 30 days per violation, or by both.

(6) Monitoring results must be reported on a Discharge Monitoring Report (DMR).

(7) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR Part 136, applicable State regulations, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

(k) Signatory Requirement

All applications, reports, or information submitted to the Director shall be signed and certified in accordance with Rule 12 of the Rhode Island Pollutant Discharge Elimination System (RIPDES) Regulations. Rhode Island General Laws, Chapter 46-12 provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $5,000 per violation, or by imprisonment for not more than 30 days per violation, or by both.

(l) Reporting Requirements

(1) Planned changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.

(2) Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with the permit requirements.

(3) Transfers. This permit is not transferable to any person except after written notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under State and Federal law.

(4) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(5) Twenty-four hour reporting. The permittee shall immediately report any noncompliance which may endanger health or the environment by calling DEM at (401) 222-3961, (401) 222-6519 or (401) 222-2284 at night.

A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The following information must be reported immediately:

(i) Any unanticipated bypass which causes a violation of any effluent limitation in the permit; or

(ii) Any upset which causes a violation of any effluent limitation in the permit; or

(iii) Any violation of a maximum daily discharge limitation for any of the pollutants specifically listed by the Director in the permit.

The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

(6) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (1), (2), and (5), of this section, at the time monitoring reports are submitted. The reports shall contain the information required in paragraph (l)(5) of the section.

(7) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, they shall promptly submit such facts or information.

(m) Bypass

"Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

(1) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (2) and (3) of this section.

(2) Notice.

(i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten (10) days before the date of the bypass.

(ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Rule 14.18 of the RIPDES Regulations.

(3) Prohibition of bypass.

(i) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage, where "severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production;

(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(C) The permittee submitted notices as required under paragraph (2) of this section.

(ii) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph (3)(i) of this section.

(n) Upset

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(1) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph (2) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(2) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(a) An upset occurred and that the permittee can identify the cause(s) of the upset;

(b) The permitted facility was at the time being properly operated;

(c) The permittee submitted notice of the upset as required in Rule 14.18 of the RIPDES Regulations; and

(d) The permittee complied with any remedial measures required under Rule 14.05 of the RIPDES Regulations.

(3) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

(o) Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. Discharges which cause a violation of water quality standards are prohibited. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, production increases, or process modifications which will result in new, different or increased discharges of pollutants must be reported by submission of a new NPDES application at least 180 days prior to commencement of such discharges, or if such changes will not violate the effluent limitations specified in this permit, by notice, in writing, to the Director of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by the permit constitutes a violation.

(p) Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner consistent with applicable Federal and State laws and regulations including, but not limited to the CWA and the Federal Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq., Rhode Island General Laws, Chapters 46-12, 23-19.1 and regulations promulgated thereunder.

(q) Power Failures

In order to maintain compliance with the effluent limitation and prohibitions of this permit, the permittee shall either:

> In accordance with the Schedule of Compliance contained in Part I, provide an alternative power source sufficient to operate the wastewater control facilities;

or if such alternative power source is not in existence, and no date for its implementation appears in Part I,

> Halt reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

(r) Availability of Reports

Except for data determined to be confidential under paragraph (w) below, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the DEM, 291 Promenade Street, Providence, Rhode Island. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the CWA and under Section 46-12-14 of the Rhode Island General Laws.

(s) State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law.

(t) Other Laws

The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, nor does it relieve the permittee of its obligation to comply with any other applicable Federal, State, and local laws and regulations.

(u) Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

(v) Reopener Clause

The Director reserves the right to make appropriate revisions to this permit in order to incorporate any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the CWA or State law. In accordance with Rules 15 and 23 of the RIPDES Regulations, if any effluent standard or prohibition, or water quality standard is promulgated under the CWA or under State law which is more stringent than any limitation on the pollutant in the permit, or controls a pollutant not limited in the permit, then the Director may promptly reopen the permit and modify or revoke and reissue the permit to conform to the applicable standard.

(w) Confidentiality of Information

(1) Any information submitted to DEM pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, DEM may make the information available to the pubic without further notice.

(2) Claims of confidentiality for the following information will be denied:

(i) The name and address of any permit applicant or permittee;

(ii) Permit applications, permits and any attachments thereto; and

(iii) NPDES effluent data.

(x) Best Management Practices

The permittee shall adopt Best Management Practices (BMP) to control or abate the discharge of toxic pollutants and hazardous substances associated with or ancillary to the industrial manufacturing or treatment process and the Director may request the submission of a BMP plan where the Director determines that a permittee's practices may contribute significant amounts of such pollutants to waters of the State.

(y) Right of Appeal

Within thirty (30) days of receipt of notice of a final permit decision, the permittee or any interested person may submit a request to the Director for an adjudicatory hearing to reconsider or contest that decision. The request for a hearing must conform to the requirements of Rule 49 of the RIPDES Regulations.

DEFINITIONS

1. For purposes of this permit, those definitions contained in the RIPDES Regulations and the Rhode Island Pretreatment Regulations shall apply.

2. The following abbreviations, when used, are defined below.

cu. M/day or M^3/day	cubic meters per day
mg/l	milligrams per liter
ug/l	micrograms per liter
lbs/day	pounds per day
kg/day	kilograms per day
Temp. °C	temperature in degrees Centigrade
Temp. °F	temperature in degrees Fahrenheit
Turb.	turbidity measured by the Nephelometric Method (NTU)
TNFR or TSS	total nonfilterable residue or total suspended solids
DO	dissolved oxygen
BOD	five-day biochemical oxygen demand unless otherwise specified
TKN	total Kjeldahl nitrogen as nitrogen
Total N	total nitrogen
NH_3-N	ammonia nitrogen as nitrogen
Total P	total phosphorus
COD	chemical oxygen demand
TOC	total organic carbon
Surfactant	surface-active agent
pH	a measure of the hydrogen ion concentration
PCB	polychlorinated biphenyl
CFS	cubic feet per second
MGD	million gallons per day
Oil & Grease	Freon extractable material
Total Coliform	total coliform bacteria
Fecal Coliform	total fecal coliform bacteria
ml/l	milliliter(s) per liter
NO_3-N	nitrate nitrogen as nitrogen
NO_2-N	nitrite nitrogen as nitrogen
NO_3-NO_2	combined nitrate and nitrite nitrogen as nitrogen
$C1_2$	total residual chlorine

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
235 PROMENADE STREET
PROVIDENCE, RHODE ISLAND 02908-5767

STATEMENT OF BASIS

RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM (RIPDES) PERMIT TO DISCHARGE TO WATERS OF THE STATE

RIPDES PERMIT NO.

RI0001589

NAME AND ADDRESS OF APPLICANT:

The City of Pawtucket, Pawtucket Water Supply Board
85 Branch Street
Pawtucket, RI 02860

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Pawtucket Water Treatment Plant
87 Branch Street
Pawtucket, RI 02860

RECEIVING WATER:

Abbott Run Brook Tributary to the Blackstone River & The Blackstone River

CLASSIFICATION:

AA & B1

I. Proposed Action, Type of Facility, and Discharge Location

The above named applicant has applied to the Rhode Island Department of Environmental Management (DEM) for reissuance of a RIPDES permit to discharge into the designated receiving waters. The facility is involved in the production of potable water for "domestic" and "industrial" uses. The proposed permit authorizes the Pawtucket Water Treatment Plant to discharge from three outfalls: Outfall 002A, 003A, and 002B. The Pawtucket Water Treatment Plant discharges filter backwash and settled solids to a pair of sedimentation lagoons designated as Lined Residuals Sedimentation Basins (LRSBs). The supernatant from those lagoons currently discharges to Abbott Run Brook via outfall 002A. The City of Pawtucket ("the City") is taking steps to relocate this discharge directly to the Blackstone River in accordance with Consent Agreement No. RIA-383. The proposed discharge location on the Blackstone River is designated as outfall 002B. This permit also authorizes the discharge of raw water, after pretreatment with caustic soda and potassium permanganate, from outfall 003A during emergency periods when the raw water pipeline needs to be drained for repairs. The plant also has an emergency overflow of potable water from its 5.0 million gallon storage tank. This overflow will only occur during emergency situations. Since this is a discharge of potable water and will only occur during emergency situations, the DEM has determined that it does not need to be monitored under this permit and

will be evaluated in accordance with the permit's "upset" provisions.

II. Permit Limitations and Conditions

The effluent limitations, monitoring requirements, and any implementation schedule (if required) may be found in the draft permit. A quantitative description of the discharge in terms of significant effluent parameters based on discharge monitoring report (DMR) data submitted to the DEM over the past five years is shown in Attachment A. When the 2006 permit was issued it was determined that the discharge from outfall 002A would not comply with the permit limitations assigned to that outfall. In the fall of 2006, the City requested an administrative hearing and moved to stay certain conditions of the RIPDES permit for flow, TSS, turbidity, pH, TRC, and total aluminum. The DEM granted the stay request for outfalls 001A and 002A. A consent agreement was subsequently signed which provided interim limitations for outfalls 001A and 002A and a schedule for the City to comply with the final discharge conditions at outfall 002A from the new WTP. The City originally proposed constructing a filter backwash recycling system that would eliminate all discharges from the LRSB lagoons at Outfall 002A. However, after an evaluation period, the City documented in June 2008 that the volume of overflows from the system would exceed the amount that the Rhode Island Department of Health would allow to be recycled to the facility. As a result the DEM revised the original consent agreement to allow the City time to evaluate and submit a final engineering report to propose a compliance option with a defined construction and implementation schedule. The City of Pawtucket is currently required to evaluate and select a feasible compliance option that will enable it to attain compliance with the Total Suspended Solids, pH, Total Residual Chlorine, and Total Aluminum limitations assigned to outfall 002A. The DEM is aware that the City of Pawtucket intends to relocate the discharge from the LRSBs to the Blackstone River. The relocation of the discharge in accordance with RIA-383 will enable the City to obtain new permit limitations that it will be able to comply with due to the increased dilution available in the Blackstone River. The DEM has made updates to the limitations page applicable to outfall 002A resulting in additional limits for Total Iron, Total Cadmium, and Total Lead that the City will not be able to comply with. The DEM is willing to modify the current consent agreement RIA-383 to include interim limits for these additional parameters. Relocating the discharge to the Blackstone River will enable the City to meet these new permit limitations.

III. Permit Basis and Explanation of Effluent Limitation Derivation

The Pawtucket Water Supply Board (PWSB) is a water supplier that serves a population of over 100,000. The retail service area includes the Cities of Pawtucket and Central Falls and the Valley Falls section of the Town of Cumberland. The PWSB owns and operates the water systems in Pawtucket and Valley Falls, and the City of Central Falls owns and operates the system in Central Falls. The water resources of the PWSB consist of both surface water and groundwater within the Abbott Run watershed, a tributary of the Blackstone River. The watershed lies within the Town of Cumberland in Rhode Island and the Towns of Wrentham, Plainville and Attleboro in Massachusetts. The PWSB owns about 10% of the Abbott Run watershed.

The PWSB constructed a new water treatment plant which came online in early 2008. The previous RIPDES permit was issued on September 13, 2006. The permit expiration date was September 13, 2011 however because the City submitted a complete and timely reapplication the permit was administratively continued. The previous permit authorized discharges from the previous water treatment plant as well as the new water treatment plant. As indicated previously, a new water treatment plant came online in early 2008 and at that time the discharges from outfall 001A

associated with the 120 Mill Street, Cumberland, RI water treatment plant were eliminated. The City has reapplied for permit coverage to discharge from three outfalls, 002A, 003A, and 002B. Outfall 002A consists of flow from the Lined Residuals Sedimentation Basins to Abbott Run Brook. Outfall 003A will be used on an emergency basis to drain the Raw Water supply line which connects the Raw Water Pump Station to the water treatment facility. Outfall 002B establishes a new outfall number for the discharges from the Lined Residuals Sedimentation Basins to the Blackstone River. A more detailed description of the treatment process and sources of the permitted discharges can be found below.

Treatment Process

The water treatment process begins with pumping raw water into the plant from the Happy Hollow Reservoir in combination with water pumped from groundwater wells. The raw water is initially aerated prior to chemical addition in the raw water pumping station. At this location there is a 4-inch overflow line from the well water aerator that terminates approximately two feet above ground on the north face of the raw water pump station. Under emergency conditions this line may be forced to overflow to a rip-rap slope that then flows to a grassy slope. The aeration process and this overflow occurs prior to any chemical addition and therefore does not require monitoring under this permit. After the raw water has been aerated, it is drawn into the Raw Water Pump Station where it is pretreated with caustic soda and potassium permanganate. Located after the raw water pump station is an Emergency Raw Water Drain line which discharges to the Blackstone River. This overflow point is designated as outfall 003A. After the Raw Water Pump Station, pretreated water enters the plant where it is dosed with hypochlorite, lime, acid, polyaluminum chloride (in winter), aluminum sulfate, and polymer (Superfloc). After the water is chemically treated it enters an up-flow clarifier where coagulation and flocculation is processed within the bottom 9-12 inches of non-buoyant media. Periodically the filters will require backwashing. Spent filter backwashing is an integral part of treatment plant operation. Filters are typically cleaned by flushing them with water in the reverse direction to normal flow. The water flow must have sufficient force to separate particles from filter media so a greater than normal flow is used. The resulting water, which carries particles flushed from the filters including raw water particles, and any remaining particles from the coagulation process is called waste or spent filter backwash water. The water treatment plant will first direct the spent filter backwash water to backwash equalization basins. Water from the equalization basins is then directed to the two Lined Residuals Settling Basins (LRSB) located adjacent to the former 120 Mill Street water treatment plant. It is here that the spent filter backwash and other treatment plant residuals will undergo further solid liquid separation. The filter backwash water discharged from the LRSBs currently enters Abbott Run Brook at the base of the Happy Hollow Reservoir Dam and the location where this occurs has been designated as Outfall 002A. As indicated above, this discharge is in the process of being re-routed to the Blackstone River, where it will be called Outfall 002B.

As potable water exits the filtration units the water is treated with hypochlorite and acid prior to entering the Clearwells. Water leaving the clearwells is then dosed with hypochlorite, lime, ammonium sulfate, and Calciquest prior to entering the distribution system as potable water. When the potable water enters the distribution system a portion of the flow is stored in a 5.0 MG storage tank. In the case of an emergency this tank has an overflow which is directed to the Blackstone River. In addition, during emergency situations discharges from either the filter backwash equalization basin and overflows from the clearwell tank will enter the Blackstone at this same location. Emergency discharges from these locations will be evaluated in accordance with the "Upset" provisions outlined in Part II.(n) of this permit. Attachment B includes a process flow diagram for this plant.

In accordance with the PWSB's current Residuals Management Plan the LRSBs will need to be

cleaned periodically to remove accumulated settled solids. Under the current plan a licensed contractor will perform the cleaning of the LRSBs. Contractors periodically bring in heavy equipment to rake the residuals from the settling basins and load this material onto trailers for transport to a licensed disposal or reuse facility.

Receiving Water

The Abbott Run Brook, tributary to the Blackstone River at the location where outfall 002A discharges is designated as Water Use Classification "AA" designating these waters as a source of public drinking water supply, for primary and secondary contact recreational activities and for fish and wildlife habitat. They shall be suitable for compatible industrial processes and cooling, hydropower, aquacultural uses, navigation, and irrigation and other agricultural uses. These waters shall have good aesthetic value. The Blackstone River at the location where outfall 003A and 002B will discharge is classified as Water Use Classification "B1". Because the Blackstone River is classified as a B1 water body, it is designated for primary and secondary contact recreational activities and fish and wildlife habitat. They shall be suitable for compatible industrial processes and cooling, hydropower, aquacultural uses, navigation, and irrigation and other agricultural uses. These waters shall have good aesthetic value. Primary contact recreational activities may be impacted due to pathogens from approved wastewater discharges. However all Class B criteria must be met.

General Requirements

Development of RIPDES permit limitations is a multi-step process consisting of the following steps: identifying applicable technology-based limits; calculating allowable water-quality based discharge levels based on instream criteria, background data and available dilution; establishing Best Professional Judgement (BPJ) limits in accordance with Section 402 of the CWA; and assigning the most stringent as the final discharge limitations.

Water quality criteria are comprised of numeric and narrative criteria. Numeric criteria are scientifically derived ambient concentrations developed by EPA or States for various pollutants of concern to protect human health and aquatic life. Narrative criteria are statements that describe the desired water quality goal. A technology-based limit is a numeric limit, which is determined by examining the capability of a treatment process to reduce or eliminate pollutants.

Appendix B of the Water Quality Regulations describes the flows used to determine compliance with the aquatic life criteria, specifying that the design flow to be utilized for aquatic life criteria shall not be exceeded at or above the lowest average seven consecutive day low flow with an average recurrence frequency of once in ten years (7Q10). Because Outfall 002A discharges to the base of a dam located at the foot of the Happy Hollow Reservoir, a dilution factor of one (1) was used in the determination of water quality-based discharge limits applicable to this discharge at this location. This assumption was made based on the fact that there is a net negative 7Q10 flow over the dam as determined by the following calculations:

The first step involved estimating the 7Q10 flow at the base of the Happy Hollow Dam by using the following equation taken from the USGS Water Resources Investigations Report 93-4046 – Low Flow Characteristics of Selected Streams in Rhode Island:

$$7Q10 = 0.67A_{sd} + 0.03A_{till}$$

where:

7Q10 = 7 day, 10 year low flow in cubic feet per second (cfs).
Asd = drainage area underlain by coarse-grained stratified drift in square miles
Atill = drainage area underlain by till covered bedrock in square miles

The total drainage area for the Happy Hollow Dam is estimated to be equal to 28 mi^2. The following assumptions were made concerning the ratio of stratified drift to till covered bedrock within the subject drainage area:

% till = 2%
% sd = 98%

With these assumptions the 7Q10 for the Happy Hollow Dam was determined:

7Q10 = 0.67 (28*0.98) + 0.03 (28*0.02) = 18.4 cfs

As indicated in the Water Division Line Drawing provided by the City of Pawtucket the average daily flow through the plant is was determined to be 13.83 MGD or 21.4 cfs. Therefore during 7Q10 periods there is the potential for net negative flows over the dam equal to -3.0 cfs. This is supported by the fact that, during the typical summer season, there is no flow over the dam for significant periods of time. Due to these conditions, the dilution factor for outfall 002A has been set = 1 for all water quality based limit calculations.

The DEM has also calculated the 7Q10 at the location of outfall 002B based on a comparison of the drainage areas for the Blackstone River at the USGS Woonsocket Gauging Station # 01112500, the drainage area for the location of outfall 002B, and the 7Q10 flow at USGS Station # 01112500. Using the following steps site specific 7Q10 flow values were determined:

Step 1: Determine the Drainage Area of the watershed that is upstream of the gauge station:

$$DA_{Upstream\ of\ Gauge} = 416\ mi^2$$

Step 2: Find the 7Q10 flow for the gauge station:

$$7Q10_{Gauge} = 102.25\ ft^3/sec$$

Step 3: Determine drainage area of the watershed that is upstream from the point of discharge:

$$DA_{Upstream\ of\ discharge} = 473\ mi^2$$

Step 4: Calculate the equivalent 7Q10 flow using the following formula:

$$7Q10_{Outfall\ 002B} = (7Q10_{Gauge}/DA_{Upstream\ of\ gauge}) \times (DA_{Upstream\ of\ discharge})$$

$$7Q10_{Outfall\ 002B} = 116\ ft^3/sec\ (cfs)$$

Based on the site specific 7Q10 flow in the Blackstone River at the location of outfall 002B, a dilution factor was then determined:

$$DF = \frac{Q_D + Q_{dis.}}{Q_{dis.}}$$

Where: DF = Dilution Factor
Q_D = Design Flow (Receiving Water 7Q10 Flow)
$Q_{dis.}$ = Discharge Flow

Outfall 002B

The dilution factor was determined to be 47.86, based on a 7Q10 flow of 116 cfs and a maximum daily discharge flow of 2.476 cfs (1.6 MGD).

Water Quality Based Permit Limitations

The allowable effluent limitations were established based on the freshwater acute and chronic aquatic life criteria and human health criteria specified in Appendix B of the Rhode Island Water Quality Regulations, as amended, using 80% allocation when no background data was available or background data is impacted by upstream sources and 90% allocation when background data is available. There is no background data available, therefore, the allowable water quality-based discharge levels are set equal to 80% of the water quality criteria for Class B waters as listed in Appendix B of the Rhode Island Water Quality Regulations. Aquatic life criteria have been established to ensure the protection and propagation of aquatic life while human health criteria represent the pollutant levels that would not result in a significant risk to public health from ingestion of aquatic organisms. The more stringent of the two criteria was then used in establishing allowable effluent limitations.

For water quality-based limitations the allowable discharge limits were calculated as follows:

Background concentration unknown or available data is impacted by sources that have not yet achieved water quality based limits.

$$Limit = (DF)^* (Criteria)^*(80\%)$$

In accordance with 40 CFR 122.44(d)(1)(iii), water quality based effluent limitations are only required for those pollutants in the discharge that have the reasonable potential to cause or contribute to the exceedence of instream criteria. In order to evaluate the need for permit limits, the allowable monthly average (chronic) and allowable maximum daily (acute) discharge concentrations are compared to the monthly average and maximum daily Discharge Monitoring Report (DMR) data or other monitoring data.

Total Aluminum

The previous permit issued on September 13, 2006 included permit limits for Total Aluminum at outfall 002A due to the fact that the water treatment plant utilizes aluminum sulfate and poly aluminum chloride as the primary coagulation agents in the water treatment process. Total Aluminum discharge monitoring data reported by the City for outfall 002A during the period November 2006 to September 2011 yield a mean monthly average total aluminum concentration of 593.34 ug/l and a mean daily maximum total aluminum concentration of 1088.76 ug/l. Applicable permit limitations for outfall 002A are 70 ug/l monthly average and 600 ug/l daily maximum. Given the fact that the facility is currently discharging Total Aluminum at levels above the applicable permit limitations the DEM has determined that these limits will continue to be applied as they were in the previous permit. Applicable permit limitations for outfall 002B were calculated to be 3.33 mg/l monthly average and 28.7 mg/l daily maximum. Although there is no reasonable potential for the discharge from outfall 002B to violate applicable permit limitations at current aluminum dosage rates monitoring and permit limits for Total Aluminum have been applied at outfall 002B to ensure that the plant does not cause water quality impacts in the future. The emergency discharge of pretreated raw water from Outfall 003A does not demonstrate reasonable potential to exceed applicable permit limitations for Total Aluminum based on the fact that aluminum sulfate and/or poly aluminum chloride are not added at this point in the water treatment process.

Total Iron

The previous permit issued on September 13, 2006 required monitoring for Total Iron when iron based coagulation agents are used in the water treatment process. During the period extending from December 2006 through April 30, 2008 the City of Pawtucket collected data at outfall 002A for Total Iron and reported these results to the DEM on a monthly basis. This monitoring was conducted despite the fact that the facility does not use iron based water treatment chemicals. This data indicated that the discharge has a mean monthly average concentration of 3.44 mg/l. Since the last permit was issued water quality criteria have been established for Total Iron. Comparing the average DMR data to the applicable permit limitations at outfall 002A (a monthly average permit limit of 0.24 mg/l) demonstrated that there is reasonable potential for the discharge to exceed the applicable permit limits. Therefore, a Total Iron permit limit has been assigned to outfall 002A. Due to the increased dilution factor available at outfall 002B the allowable permit limit is 38.3 mg/l and, as a result, there is no reasonable potential for iron at this location and iron limits are not required at this outfall.

Total Residual Chlorine

When calculating TRC limits 100% allocation of TRC was used due to the fact that chlorine is not expected to be found in ambient water and it is a non-conservative pollutant. Therefore, the permit limits were calculated using the following equation:

$$Limit = (DF)^* (Criteria)^*(100\%)$$

Based on the above mentioned equation, limits for chlorine were calculated as follows: Outfall 002A: Monthly Average Limit (ug/l) = 11, and Maximum Daily Limit (ug/L) = 19; Outfall 002B: Monthly Average Limit (mg/l) = 0.53, and Maximum Daily Limit (mg/l) = 0.91. Based on the RIPDES evaluation it has been determined that the above listed limits for TRC are required for outfall 002A given the fact that this discharge has demonstrated reasonable potential to violate water quality criteria established for TRC. Permit limitations and monitoring is also required at outfall 002B to ensure that water quality will be protected.

Water Treatment Chemicals

As previously indicated the water treatment plant utilizes a series of chemical additives to aid in the production of potable water. The following additives have been identified as part of the treatment process: Caustic soda, potassium permanganate, sodium hypochlorite, hydrated lime, muriatic acid, poly-aluminum chloride, aluminum sulfate, superfloc-emulsion polyacrylamide polymer, hydrofluosilicic acid, ammonium sulfate, calciquest liquid.

During the pretreatment process a combination of surface water and groundwater is treated with caustic soda (dosage rate = 5.0 mg/l) and potassium permanganate (dosage rate = 0.5 mg/l). Caustic soda is added to adjust the pH of the incoming water and potassium permanganate is used as an alternate pre-oxidant for disinfection by-product control. The effluent limitations for pH have been established to control the impacts associated with the addition of caustic soda. Limits associated with potassium permanganate have not been applied based on the fact that potassium permanganate is dosed to incoming raw water at a concentration of 0.5 mg/l. This concentration prior to being diluted by the incoming raw water flow of 13.83 MGD is below the aquatic toxicity data listed on the MSDS for potassium permanganate. The aquatic toxicity concentrations listed on the MSDS for potassium permanganate are as follows: Rainbow trout, 96 hour LC50 = 1.8 mg/l and Bluegill sunfish, 96 hour LC50 = 2.3 mg/l. Prior to the coagulation, flocculation, and filtration process incoming water is dosed with 0.6 mg/l of Hypochlorite, 5.0 mg/l of Lime, 15.0 mg/l Acid, 40.0 mg/l poly-aluminum chloride, 30.0 mg/l Aluminum sulfate, and 0.05 mg/l Superfloc polymer. Effluent limitations for total residual chlorine, total aluminum, and pH have been established to control the

impacts associated with hypochlorite, lime, muriatic acid, poly-aluminum chloride, and aluminum sulfate and therefore additional restrictions have not been included in the permit for these additives. In a submittal dated February 16, 2006 additional information was provided regarding the following chemical additives: Hydrofluosilicic acid, Superfloc polymer, Ammonium Sulfate, and Calciquest. Hydrofluosilicic acid is added to the treated water prior to entering the clearwell and is used at a dosage concentration of 1.0 mg/l. The MSDS provided lists toxic concentrations for this chemical at ≥ 10.5 mg/l. Due to the fact that the dosage concentration is injected well below the level at which toxicity has been demonstrated and given the fact that upon injection the chemical concentration will be diluted even further, the concentration of Hydrofluosilicic acid used at the plant will not have an adverse impact on the receiving water. SuperFloc, a flocculant, is added to the pretreated raw water prior to entering the filtration/ clarification stage of the treatment process. SuperFloc is used at a dosage concentration of 0.05 mg/L. The MSDS provided lists toxic concentrations for this chemical at > 100 mg/l. Due to the fact that the dosage concentration is injected well below the level at which toxicity has been demonstrated and given the fact that upon injection the chemical concentration will be diluted even further, the concentration of SuperFloc used at the plant will not have an adverse impact on the receiving water. Calciquest, will be added to the distribution system water and may be present in emergency overflows. Calciquest is dosed at a concentration of 1.1 mg/L. The MSDS provided lists toxic concentrations for this chemical at 3200 and 6500 mg/l. Due to the fact that the dosage concentration is injected well below the level at which toxicity has been demonstrated and given the fact that upon injection the chemical concentration will be diluted even further, the concentration of Calciquest used at the plant will not have an adverse impact on the receiving water if discharged. Ammonium sulfate, will be added to the distribution system water and may be present in emergency overflows. Ammonium sulfate is dosed at a concentration of 0.5 mg/L. The MSDS provided lists acute toxic concentrations for this chemical ranging from 40-1500 mg/l. Due to the fact that the dosage concentration is injected well below the level at which toxicity has been demonstrated and given the fact that upon injection the chemical concentration will be diluted even further, the concentration of Ammonium sulfate used at the plant will not have an adverse impact on the receiving water if discharged.

Receiving Water Body Impairments

The previous permit required monitoring for Total Cadmium and Total Lead at outfall 002A based on the fact that Abbott Run Brook was impaired for cadmium, lead, and biodiversity impacts according to the State of Rhode Island 2004 303(d) List, List of Impaired Waters dated May 2005. This monitoring identified the mean Cadmium concentration as 0.39 ug/l and the mean lead concentration as 3.36 ug/l. Currently Abbott Run Brook remains impaired for Cadmium as listed in the 2010 303(d) List of Impaired Waters. A review of monitoring data collected at outfall 002A reveals that there is reasonable potential for the discharge to exceed the applicable permit limitations for Cadmium (monthly average limit = 0.08 ug/l and daily maximum limit =0.42 ug/l) and Lead (monthly average limit = 0.44 ug/l and daily maximum limit =11.18 ug/l). Therefore, permit limitations have been applied for each of these parameters at outfall 002A.

According to the 2010 303(d) List of Impaired Waters the Blackstone River is currently impaired for Lead, Cadmium, Dissolved Oxygen, Total Phosphorus, Enterococcus, and Fecal Coliform. However, there is no reasonable potential for the proposed discharge from outfall 002B to violate the applicable permit limitations established for Lead (monthly average limit = 20.86 ug/l and daily maximum limit = 535.21 ug/l) and Cadmium (monthly average limit = 3.71 ug/l and daily maximum limit = 19.95 ug/l). In addition, the discharge from outfall 002B is not suspected to be a contributor of the other pollutants responsible for the remaining impairments in the Blackstone River. As a result permit limitations were not applied to outfall 002B in relation to the current water body impairments associated with the Blackstone River. Outfall 003A has not been assigned monitoring requirements for these pollutants due to the fact that these pollutants are not believed to be present in this discharge.

Residuals Management Requirements

Water treatment plant residuals form when suspended solids in the raw water react with chemicals added in the treatment process and from the addition of other process control chemicals such as lime and polymer. Some potable water treatment processes generate residuals that are relatively easy to process and dispose of. For example, leaves, limbs, logs, plastic bottles, and other large floating debris separated from water during the initial screening process can be disposed of at conventional solid waste landfills. However, most other treatment processes produce more complex residual waste streams that may require advanced processing and disposal methods to protect human health and the environment.

The primary residuals produced at the water treatment facility are sludges (i.e. water that contains suspended solids from the source water and the reaction products of chemicals added in the treatment process). The water treatment facility utilizes caustic soda, potassium permanganate, hypochlorite, lime, muriatic acid, poly-aluminum chloride, aluminum sulfate, and a polymer prior to beginning the flocculation, sedimentation, and filtration phases of the treatment process. For a typical coagulation, flocculation, and filtration system the typical disposal options for these residuals consist of the following: landfilling, directly discharging to the sanitary sewer under authorization of the local industrial pretreatment program, or by shipping the residuals to a facility which possesses an effective Solid Waste Beneficial Use Determination (BUD) issued by the DEM Office of Waste Management. This permit requires that a Residuals Management Plan be maintained and implemented at the water treatment facility in order to ensure that this waste stream is properly managed. The specific Residuals Management Plan requirements can be found in the permit.

Total Suspended Solids

The previous permit issued on September 13, 2006 included monthly average limits for TSS of 66 lb/day and maximum daily limits of 110 lb/day. The previous permit also established concentration based limits for TSS at 30 mg/l monthly average and 50 mg/l daily maximum based on Best Professional Judgement (BPJ) for the treatment capabilities of wastewater treatment systems currently used for the treatment of potable water treatment waste streams throughout the country. The DEM has determined that the use of the Best Available Treatment technologies are not cost prohibitive and that by using the Best Available Treatment technologies such as a settling lagoon or other device(s) whereby comparable control of suspended solids is possible, the 30 mg/l and 50 mg/l TSS limitations can be achieved. According to the U.S. Environmental Protection Agency Filter Backwash Recycling Rule Technical Guidance Manual, there are several options available for solids separation from spent filter backwash water and other residual waste streams. Typical treatment technologies that are available to meet these limits are settling lagoons, sand drying beds, mechanical dewatering systems such as tube and plate settlers and centrifuge equipment. The previous concentration based TSS limits have been carried forward for outfalls 002A and 002B. Mass based limits for outfall 002A and 002B have not been carried forward from the previous permit because it was determined that the monthly average flow limit originally established in the 2006 permit which is the basis for the TSS loading limitations was underestimated during the design of the new plant. Since that time the City has determined that 1.6 MGD is the monthly average flow limit that it can meet consistently. As a result, when the monthly average and daily maximum TSS loading limits were recalculated using the concentration based limits and the new 1.6 MGD monthly average flow limit, the monthly average and daily maximum loading limits generated were 400.32 lb/day and 667.2 lb/day respectively. Because the City never complied with the 66 lb/day monthly average and 110 lb/day daily maximum permit limitations the DEM is not required to hold the City to these limits. However, in order to comply with the Antibacksliding Provision of the Clean Water Act the DEM is required to

assign permit limitations at least as stringent as those included in the permit issued on September 30, 1987. As a result the TSS loading limits applied in the permit for outfalls 002A and 002B are the same as those included in the 1987 permit (200 lb/day monthly average and 300 lb/day daily maximum).

Turbidity

Turbidity monitoring requirements have been included in this permit in order to establish a database of NTU data that can be used to determine compliance with water quality criteria in the event that there are instream exceedences observed or suspected downstream of outfalls 002A or 002B. The turbidity of Abbott Run Brook shall not exceed 5 NTU over natural background during discharges from outfall 002A. The turbidity of the Blackstone River shall not exceed 10 NTU over natural background during discharges from outfall 002B.

pH

The effluent limitations for pH have been established in accordance with the Rhode Island Water Quality Regulations Table 1.8.D.(2) Class Specific Criteria –Class A & B1 Fresh Waters. Table 1.8.D.(2) specifies that the pH must be in the range of 6.5-9.0 s.u. or as naturally occurs for water bodies with Class AA & B1 classifications. Given the fact that significant dilution will be available when the discharge is relocated to the Blackstone River, the DEM conducted a dilution calculation to determine whether or not a modification to the numeric limitations is justified for outfall 002B. The dilution calculation assumed that the pH of the Blackstone River was 6.8 s.u. while the discharge from outfall 002B was assumed to be 6.0 s.u. The value of 6.0 s.u. selected to represent the pH of the discharge from outfall 002B was based on the fact that from November 2006 thru November 2011 the average minimum pH value reported by the PWSB for outfall 002A was 6.3 s.u. The pH value assumed for the Blackstone River was based on USGS data collected from October 1997 to September 1998 which listed pH levels as follows: Nov. 7.2 s.u., March 6.8 s.u., June 6.8 s.u., and August 7.3 s.u.. Using this pH information, the 7Q10 flow of the Blackstone River and the permitted monthly average flow value of 1.6 MGD, the pH value of the combined discharge was calculated to be 6.78 s.u., only 0.02 s.u. below the documented minimum pH of the Blackstone River. Given the fact that the discharge from outfall 002B at a pH of 6.0 s.u. will have minimal effect on the pH of the Blackstone River the numeric limitations of 6.5-9.0 s.u. have been modified to 6.0 – 9.0 s.u.

Storm Water

This permit does not authorize the discharge of stormwater from the facility. The Pawtucket WTP falls under Standard Industrial Classification (SIC) 4941 – Water Supply, which applies to establishments primarily engaged in distributing water for sale for domestic, commercial, and industrial use. Based on the RIPDES Program's review it has been determined that facilities that fall under SIC code 4941 are not required to obtain coverage under the NPDES Storm Water Multi-Sector General Permit and therefore the facility is not required to apply.

Antibacksliding/Antidegradation

The Antibacksliding Provision of the Clean Water Act (found at Section 402(o) and repeated at 40 CFR 122.44(l)) prohibits reissuing a permit containing less stringent effluent limits than the comparable final limits from the previous permit. Since none of the permit limits, both concentration and mass loadings, are less stringent than the final limits in the previous permit, antibacksliding regulations are being met. The draft permit is being reissued with limitations as stringent or more stringent than those in the existing permit with no change to the outfall location.

Selection of Final Permit Limits

The effluent monitoring requirements have been specified in accordance with RIPDES regulations as well as 40 CFR 122.41(j), 122.44(l), and 122.48 to yield data representative of the discharge. The Office has determined that all permit limitations are consistent with the Rhode Island Antidegradation Policy.

The remaining general and specific conditions of the permit are based on the RIPDES regulations as well as 40 CFR Parts 122 through 125 and consisting primarily of management requirements common to all permits.

IV. Comment Period, Hearing Requests, and Procedures for Final Decisions

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the Rhode Island Department of Environmental Management, Office of Water Resources, 235 Promenade Street, Providence, Rhode Island, 02908-5767. Any person, prior to such date, may submit a request in writing for a public hearing to consider the draft permit to the Rhode Island Department of Environmental Management. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty (30) days public notice whenever the Director finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit the Director will respond to all significant comments and make these responses available to the public at DEM's Providence Office.

Following the close of the comment period, and after a public hearing, if such hearing is held, the Director will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within thirty (30) days following the notice of the final permit decision any interested person may submit a request for a formal hearing to reconsider or contest the final decision. Requests for formal hearings must satisfy the requirements of Rule 49 of the Regulations for the Rhode Island Pollutant Discharge Elimination System.

V. DEM Contact

Additional information concerning the permit may be obtained between the hours of 8:30 a.m. and 4:00 p.m., Monday through Friday, excluding holidays from:

Brian D. Lafaille, PE
Department of Environmental Management – RIPDES Program
235 Promenade Street
Providence, Rhode Island 02908
Telephone: (401) 222-4700, ext. 7731
Email: brian.lafaille@dem.ri.gov

2/21/12
Date

Joseph B. Haberek, PE
Principal Sanitary Engineer
RIPDES Permitting Section
Office of Water Resources
Department of Environmental Management

ATTACHMENT A

DESCRIPTION OF DISCHARGE: Treated Filter Backwash from the 87 Branch Street, Pawtucket RI Facility

DISCHARGE: 002A

AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE OF SELECTED POLLUTANTS:

PARAMETER	AVERAGE[1]	DAILY MAX[1]
Aluminum, total (as Al) (ug/l)	593.34	1088.76
Chlorine, total residual (ug/l)	24.51	32.24
Flow (MGD)	1.22	1.93
Iron, total (as Fe) (mg/l)	3.44[2]	6.80[2]
pH (s.u.)	6.30 (MIN)	6.82 (MAX)
TSS (lb/day)	63.25	96.62
TSS (mg/l)	7.20	11.77
Turbidity (NTU)	3.56	5.63
Cadmium, total (as Cd) (ug/l)	0.39	0.39
Lead, total (as Pb) (ug/l)	3.36	3.36

[1] All data represents the average of the monthly average data and the average of the daily maximum data submitted by the permittee for this outfall for the period from November 2006 thru September 2011.

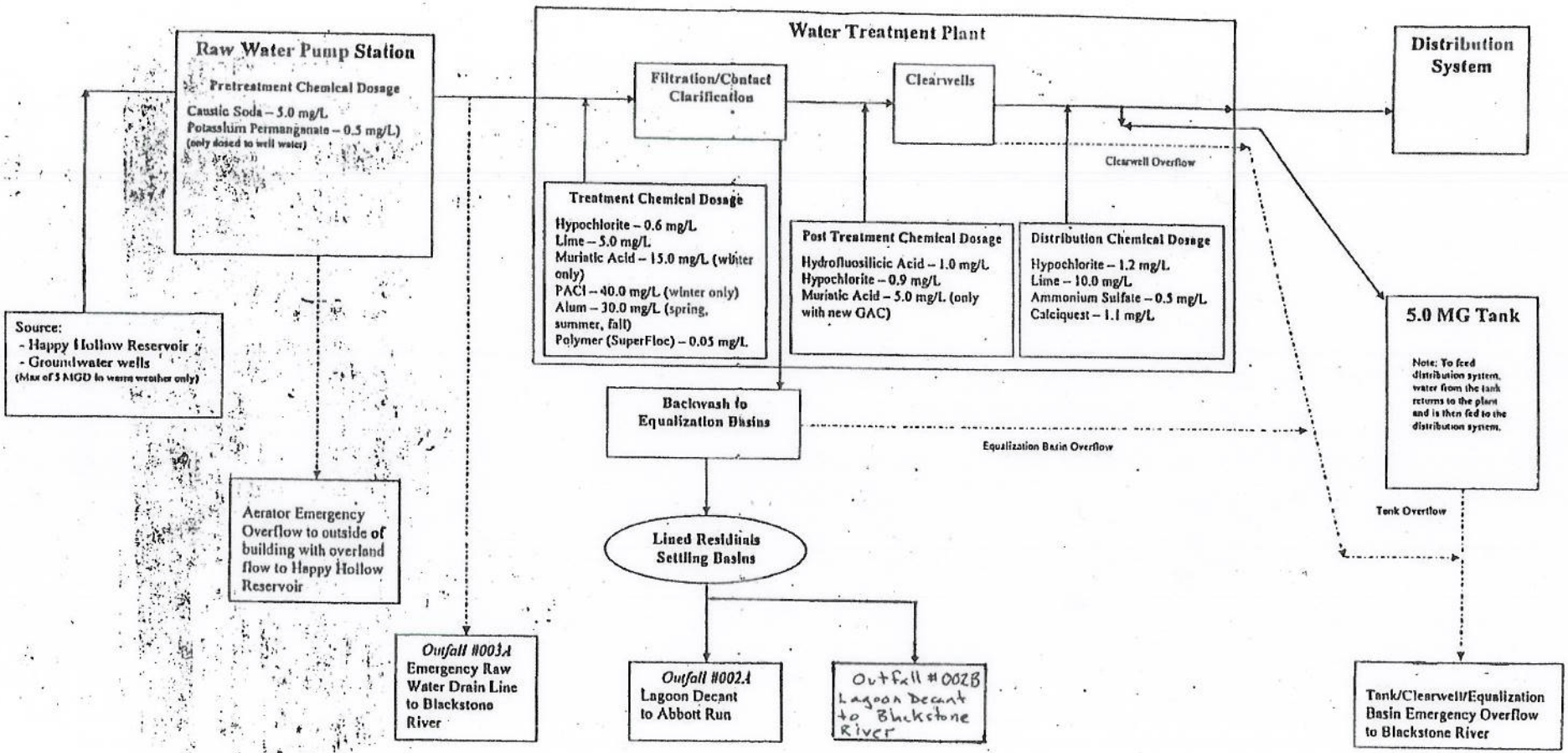
[2]Total iron data represents the average of the monthly average data and the average of the daily maximum data submitted by the permittee for this outfall for the period from December 2006 thru April 30, 2008.

DESCRIPTION OF DISCHARGE: Emergency discharges of pretreated water originating from the Raw Water Pipeline which runs between the raw water pump station and the water treatment facility.

DISCHARGE: 003A

NO DISCHARGE OCCURRED AT THIS OUTFALL DURING THE PERIOD FROM NOVEMBER 2006 THRU SEPTEMBER 2011.

ATTACHMENT B



Water Division Line Drawing For Average Day Flow*

* Max day flow will vary