

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 Town of Jamestown**  
93 Narragansett Avenue  
Jamestown, RI 02835

is authorized to discharge from a facility located at

**Jamestown Water Treatment Plant**  
North Road  
Jamestown, RI 02835

to receiving waters named

Unnamed Tributary to West Passage

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

This permit shall become effective on \_\_\_\_\_, \_\_\_\_\_.

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

This permit supersedes the permit issued on April 13, 2012.

This permit consists of eight (8) pages in Part I including effluent limitations, monitoring requirements, etc. and 10 pages in Part II including General Conditions.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 2018.

**DRAFT**

Angelo S. Liberti, PE, 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

- During the period beginning on the effective date of the permit and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 002A. (The combined flow from the residuals clarifier and the residuals drying bed prior to discharge to the drainage swale). Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	<u>Discharge Limitations</u>			<u>Monitoring Requirement</u>		
	Quantity - lbs./day		Concentration - specify units			Sample Type
	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Average Monthly</u> *(Minimum)	<u>Average Weekly</u> *(Average)	<u>Maximum Daily</u> *(Maximum)	
Flow	--- MGD	--- MGD				Continuous
TSS	6 lb/day	10 lb/day	30 mg/l		50 mg/l	2/Month <sup>4</sup> Composite <sup>1</sup>
Turbidity			--- NTU		--- NTU	2/Month <sup>4</sup> Composite <sup>1</sup>
pH			(6.5 S.U.)		(8.5 S.U.)	2/Month <sup>4</sup> Grab <sup>2</sup>
Total Residual Chlorine			7.5 ug/l <sup>3</sup>		13 ug/l <sup>3</sup>	2/Month <sup>4</sup> Grab
Total Aluminum <sup>4</sup>			--- ug/l		--- ug/l	2/Month <sup>4</sup> Grab

<sup>1</sup> All composite sampling must consist of a minimum of four (4) grabs spaced equally apart during a typical discharge day.

<sup>2</sup> 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.

<sup>3</sup> The following methods may be used to analyze the grab samples: (1) Low Level Amperometric Titration, Standard Methods (18<sup>th</sup> Edition) No. 4500-Cl E; (2) DPD Spectrophotometric, EPA No. 330.5 or Standard Methods (18<sup>th</sup> 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. This value may be reduced by permit modification as more sensitive methods are approved by EPA and the State.

<sup>4</sup> Every month at least one of the two samples will be taken during the clean in place process. During months when a quarterly membrane cleaning event takes place, one of the monthly samples must be taken at the time when the discharge from the quarterly membrane cleaning event occurs.

--- 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 (The combined flow from the residuals clarifier and the residuals drying bed prior to discharge to the drainage swale).

2. The pH of the effluent must be in the range of 6.5-8.5 standard units and shall not cause the receiving water to be more than 0.2 standard units outside of its normally occurring range.
3. The discharge shall not cause visible discoloration of the receiving waters.
4. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.
5. The turbidity of the receiving water shall not exceed 5 NTU over background.
6. 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.
7. 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 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 and that it must 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 this 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.

8. This permit only authorizes the use of aluminum sulfate, chlorine dioxide, potassium hydroxide, citric acid, sodium hypochlorite, muriatic acid, and sodium bisulfate as indicated in the permit application. The permittee must notify the DEM and obtain written approval prior to using any other chemicals.
9. 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.

10. 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	chlordan	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
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## 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
Iron, Total	50
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
Phosphorus, Total	10
Aluminum, Total	5.0
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 40 CFR Part 136 unless other procedures are explicitly required in the permit.

**2. Reporting**

Unless otherwise specified in this permit, the permittee shall submit reports, requests, and information and provide notices in the manner described in this section.

**A. Submittal of DMRs Using NetDMR**

The permittee shall continue to submit its monthly monitoring data in discharge monitoring reports (DMRs) to DEM no later than the 15th day of the month electronically using NetDMR. When the permittee submits DMRs using NetDMR, it is not required to submit hard copies of DMRs to DEM.

**B. Submittal of Reports as NetDMR Attachments**

Unless otherwise specified in this permit, the permittee must submit electronic copies of documents in NetDMR that are directly related to the DMR. These include the following:

- DMR Cover Letters
- Below Detection Limit summary tables

**C. Submittal of Reports in Hard Copy Form**

The following notifications and reports shall be submitted as hard copy with a cover letter describing the submission. These reports shall be signed and dated originals submitted to DEM.

- A. Written notifications required under Part II
- B. Notice of unauthorized discharges

This information shall be submitted to DEM at the following address:

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

**D. Verbal Reports and Verbal Notifications**

Any verbal reports or verbal notifications, if required in Parts I and/or II of this permit, shall be made to the DEM. This includes verbal reports and notifications which require reporting within 24 hours. (See Part II.(I)(5) General Requirements for 24-hour reporting) Verbal reports and verbal notifications shall be made to DEM at (401) 222-4700 or (401) 222-3070 at night.

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.

**RI0001619**

NAME AND ADDRESS OF APPLICANT:

**The Town of Jamestown**  
93 Narragansett Avenue  
Jamestown, RI 02835

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Jamestown Water Treatment Plant  
North Road  
Jamestown, Rhode Island

RECEIVING WATER:

Unnamed Tributary to West Passage (Water body ID# RI0007027E-03A)

CLASSIFICATION:

SA

**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 water. The facility is involved in the production of potable water for "domestic" and "industrial" uses. The water treatment plant operates as using conventional treatment plant processes in addition to an ultrafiltration membrane filtration unit. The discharge from outfall 002A is associated with the treatment of membrane filter backwash and membrane filter cleaning discharges. During the backwashing and cleaning process the water treatment residuals resulting from the operation of the membrane filtration units are directed to a sedimentation tank. The supernatant from the sedimentation tank is discharged to a clarifier and from there the clarifier effluent discharges to an unnamed tributary to the West Passage of Narragansett Bay via outfall 002A. The settled residuals are periodically pumped from the sedimentation and clarification tanks onto a drying bed, allowed to dewater, and are then disposed of offsite. Any water that is separated from the settled residuals in the drying bed also discharges via outfall 002A.

**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 from January 2013 through December 2017 is shown in Attachment A.

**III. Permit Basis and Explanation of Effluent Limitation Derivation**

*The Facility*

The Town of Jamestown operates a Water Treatment Plant on North Road in Jamestown, RI. The Water Treatment Plant (WTP) is engaged in the treatment of surface and groundwater to produce potable water for "domestic" and "industrial" uses. Jamestown depends on a limited supply of fresh water replenished only by rainfall. Forty-three percent of residents rely on municipal water provided by the Jamestown Water District. Public water comes from two surface reservoirs, both part of the Jamestown Brook watershed, and bedrock wells closely associated with the northern reservoir. The Carr Pond Reservoir, also known as North Pond, is the primary supply. Its outlet forms Jamestown Brook. The Watson Pond Reservoir, or South Pond, is a 7-acre impoundment at the southern end of Jamestown Brook. Although the watershed is much larger, this is a secondary supply with much lower yield. The Jamestown Wellhead Protection Area (WHPA) overlaps large portions of the Jamestown Brook watershed. Groundwater pumped from wells just south of Carr Pond is discharged directly into the reservoir intake to augment the surface supply.

*Treatment Process and Membrane Filtration Backwash Procedure*

The plant currently treats raw surface water by a series of processes before potable water can be distributed to consumers. The water treatment plant receives incoming raw water which is treated with chlorine dioxide prior to entering the raw water wet well. As the water is pumped to the flocculation basin potassium hydroxide and aluminum sulfate (alum) are added. After leaving the flocculation basin, pretreated water then enters the zenon membrane filtration basin for solids removal. At this point in the process the following chemicals are added at various stages of operation: potassium hydroxide (as required for pH neutralization), citric acid and sodium hypochlorite (for periodic membrane cleaning; muriatic acid is also used during the quarterly membrane cleaning process), and sodium bisulfate (for chlorine neutralization). During operation of the membrane filtration system coagulated water is introduced into a membrane process tank where vacuum permeate pumps draw water through the membrane filters. The clean permeate water is disinfected with sodium hypochlorite and piped to the clearwell where a corrosion inhibitor, Calgon C-9, and potassium hydroxide (for pH adjustment) are added for corrosion control prior to distribution as potable water. In order to maintain the flow through the membranes at a relatively constant rate, while not requiring excessive vacuum from the permeate pump, short back-flush cycles are performed where clean permeate water is forced backwards through the membrane to dislodge solids that may have collected on the membrane. The back-pulse water remains in the membrane process tank. Periodically the solids that accumulate in the process tank need to be discharged to waste. To remove these solids the facility drains the process tank to the existing equalization tank wetwell and from there it is pumped to the sedimentation tank where the solids settle and the supernatant is recycled back to the raw water wetwell. Any remaining volume that enters the sedimentation tank that is not recycled is directed to a clarifier for additional solids removal prior to discharge to the receiving water. Solids that collect in the sedimentation tank and clarifier are periodically discharged to the existing residuals drying bed. All

filtered water leaving the bottom of the sand filter and the supernatant from the clarifier are directed to outfall 002A.

#### *Membrane Recovery - Chemical Cleaning*

During the operation of the membrane system, despite periodic back-pulsing, fouling of the membrane will occur which necessitates chemical cleaning of the membranes. Chemical cleaning consists of two separate processes: maintenance cleaning and clean in place (CIP). Maintenance cleaning is currently conducted on a quarterly basis, while CIP discharges will take place on a monthly basis. Both cleaning processes take place in the membrane process tank. Each membrane cleaning process entails soaking the membrane filters in a citric acid solution (pH 2.2) for several hours and then draining the process tank. The maintenance cleaning process also involves the use of muriatic acid in addition to citric acid to clean the membrane. The waste from this process will be neutralized in the tank with potassium hydroxide. Following cleaning with citric acid, the membranes are allowed to soak in the process tank in a chlorine solution (250 mg/L) for several hours. Following this process, any remaining chlorine will be neutralized within the process tank with sodium bisulfite and pH adjusted with potassium hydroxide prior to discharge to the equalization tank wet well. The maintenance cleaning process and the clean in place (CIP) process are the same in all respects with the exceptions that (1) the CIP process will be completed on a monthly basis, while the maintenance cleaning process is longer in duration and is conducted on a quarterly basis, and (2) the maintenance cleaning process involves the use of muriatic acid in addition to citric acid to clean the membrane. The discharges associated with the membrane plant were identified as outfall 002A in the previous permit and this naming convention has been continued in this permit. A copy of the Ultrafiltration Membrane Treatment System Schematic is included in Attachment B.

#### *Receiving Water*

The water body segment that receives the discharge from the Jamestown Water Treatment Plant is described as an unnamed tributary to West Passage. The waterbody identification # for this water body is RI0007027E-03A. This segment is located in Jamestown and is classified as a class SA water body according to the Rhode Island Water Quality Regulations. SA waters are designated for shellfish harvesting for direct human consumption, primary and secondary contact recreational activities, and fish and wildlife habitat. They shall be suitable for aquacultural uses, navigation and industrial cooling. These waters shall have good aesthetic value. Currently, this segment is not listed as impaired for any parameter in the DEM's 2016 303(d) List of Impaired Waters. (The water body name from the facility's 2012 RIPDES permit, Unnamed Tributary to West Passage, was incorrect, so that water body name has been corrected in the 2018 draft RIPDES permit. However, the ultimate discharge location is the same.)

#### *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; taking the most stringent of the water quality-based, technology-based, and BPJ-based limits as the new allowable discharge levels; comparing existing permit limits to the new allowable discharge levels and performing an antidegradation/antibacksliding analysis to determine the final permit limits; and evaluating the ability of the facility to meet the final permit limits.

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.

The requirements set forth in this permit are from the State's Water Quality Regulations and the State's Regulations for the Rhode Island Pollutant Discharge Elimination System, both filed pursuant to Chapter 46-12, as amended. RIDEM's primary authority over the permit comes from EPA's delegation of the program in September 1984 under the Federal Clean Water Act (CWA).

#### Dilution Factor

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 7 consecutive day low flow with an average recurrence frequency of once in 10 years (7Q10). Because Outfall 002A discharges directly into an unnamed wetland complex prior to flowing into the West Passage of Narragansett Bay, and there is no current background or dilution data available for the point of discharge, a dilution factor of one (1) was used in the determination of water quality-based discharge limits.

#### *Water Quality Based Permit Limitations*

Using the above-mentioned dilution factor of 1, the allowable discharge limits were calculated as follows:

The allowable effluent limitations were established based on the saltwater 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 and 90% allocation when background data is available. Due to a lack of available background data, the potential permit limit for each parameter was calculated as follows:

$$Limit_1 = (DF) * (Criteria) * (80\%)$$

Where: DF = acute dilution factor = chronic dilution factor = 1

Based on the above dilution factors and the saltwater aquatic life and non-Class A human health criteria from the Rhode Island Water Quality regulations, allowable discharge concentrations were established using 80% allocation.

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.

The formulas and data noted above were applied with the following exceptions:

- A) Pollutants that, based on the acute and chronic dilution factors, have a higher allowable chronic limit than allowable acute limit. For this situation, both the "Monthly Average" and "Daily Maximum" limits were set at the allowable acute limit.

- B) Total Residual Chlorine (TRC). The limits for TRC were established in accordance with the DEM Effluent Disinfection Policy. The "Daily Maximum" limit was based on a 100% allocation, a zero background concentration, and the appropriate dilution factor. The 100% allocation factor for TRC was used due to the non-conservative nature of chlorine and the improbability of the receiving water having a detectable background TRC concentration.

The potential ammonia limitations were derived from acute and chronic water quality criteria for saltwater from Table 3 of the Rhode Island Water Quality Regulations, which are based upon a winter pH of 8.4 SU, a summer pH of 8.2 SU, a winter temperature of 10.0°C, and a summer temperature of 20.0°C. These parameters were used to calculate the allowable water quality-based discharge levels for Ammonia.

Reference Attachment C for calculations of allowable limits based on Aquatic Life and Human Health Criteria.

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.

#### **Anti-backsliding/Anti-degradation**

##### *Antibacksliding*

Antibacksliding restricts the level of relaxation of water quality-based limits from the previous permit. Section 303(d)(4) of the Clean Water Act addresses antibacksliding as the following:

##### *Section 303(d)(4)*

- A) Standards not attained - For receiving waters that have not attained the applicable water quality standards, limits based on a TMDL or WLA can only be revised if the water quality standards will be met. This may be done by (i) determining that the cumulative effect of all such revised limits would assure the attainment of such water quality standards; or (ii) removing the designated use which is not being attained in accordance with regulations under Section 303.
- B) Standards attained - For receiving waters achieving or exceeding applicable water quality standards, limits can be relaxed if the revision is consistent with the State's Antidegradation Policy.

Therefore, in order to determine whether backsliding is permissible, the first question that must be answered is whether or not the receiving water is attaining the water quality standard. The Office has determined the most appropriate evaluation of existing water quality is by calculating the pollutant levels, which would result after consideration of all currently valid RIPDES permit limits or historic discharge data (whichever is greater), background data (when available), and any new information (i.e.: dilution factors).

*Antidegradation*

The RIDEM's "Policy on the Implementation of the Antidegradation Provisions of the Rhode Island Water Quality Regulations July 2006" (the Policy) establishes four tiers of water quality protection:

**Tier 1.** In all surface waters, existing uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

**Tier 2.** In waters where the existing water quality exceeds levels necessary to support propagation of fish and wildlife, and recreation in and on the water, that quality shall be maintained and protected, except for insignificant changes in water quality as determined by the Director and in accordance with the Antidegradation Implementation Policy, as amended. In addition, the Director may allow significant degradation which is determined to be necessary to achieve important economic or social benefits to the State in accordance with the Antidegradation Implementation Policy, as amended.

**Tier 2½.** Where high quality waters constitute a Special Resource Protection Water SRPW<sup>1</sup>, there shall be no measurable degradation of the existing water quality necessary to protect the characteristic(s) which cause the waterbody to be designated a SRPW. Notwithstanding that all public drinking water supplies are SRPWs, public drinking water suppliers may undertake temporary and short-term activities within the boundary perimeter of a public drinking water supply impoundment for essential maintenance or to address emergency conditions in order to prevent adverse effect on public health or safety. These activities must comply with the requirements set forth in Tier 1 and Tier 2.

**Tier 3.** Where high quality waters constitute an Outstanding Natural Resource ONRWs<sup>2</sup>, that water quality shall be maintained and protected. The State may allow some limited activities that result in temporary and short-term changes in the water quality of an ONRW. Such activities must not permanently degrade water quality or result in water quality lower than necessary to protect the existing uses in the ONRW.

The formulas previously presented ensure that permit limitations are based upon water quality criteria and methodologies established to ensure that all designated uses will be met.

In terms of the applicability of Tier 2 of the Policy, a water body is assessed as being high quality on a parameter-by-parameter basis. In accordance with Part II of the Policy, "Antidegradation applies to all new or increased projects or activities which may lower water quality or affect existing water uses, including but not limited to all 401 Water Quality Certification reviews and any new, reissued, or modified RIPDES permits." Part VI.A of the Policy indicates that it is not applicable to activities which result in insignificant (i.e.: short-term minor) changes in water quality and that significant changes in water quality will only be allowed if it is necessary to accommodate important economic and social development in the area in which the receiving waters are located (important benefits demonstration). Part VI.B.4 of the Policy states that: "Theoretically, any new

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<sup>1</sup>SRPWs are surface waters identified by the Director as having significant recreational or ecological uses.

<sup>2</sup>ONRWs are a special subset of high quality water bodies, identified by the State as having significant recreational or ecological water uses.

or increased discharge or activity could lower existing water quality and thus require the important benefits demonstration. However, RIDEM will: 1) evaluate applications on a case-by-case basis, using BPJ and all pertinent and available facts, including scientific and technical data and calculations as provided by the applicant; and 2) determine whether the incremental loss is significant enough to require the important benefits demonstration described below. [If not then as a general rule RIDEM will allocate no more than 20%.] Some of the considerations which will be made to determine if an impact is significant in each site specific decision are: 1) percent change in water quality parameter value and their temporal distribution; 2) quality and value of the resource; 3) cumulative impact of discharges and activities on water quality to-date; 4) measurability of the change; 5) visibility of the change; 6) impact on fish and wildlife habitat; and 7) impact on potential and existing uses. As a general guide, any discharge or activity which consumes greater than 20% of the remaining assimilative capacity (See Section VI.B.2) will be considered a significant impact and will be required to demonstrate important economic or social benefits to justify the activity (See Section VI.C. below). However, on a case-by-case basis, any proposed percent consumption of the remaining assimilative capacity may be deemed significant and invoke full requirements to demonstrate important economic or social benefits."

In terms of a RIPDES permit, an increased discharge is defined as an increase in any limitation, which would result in an increased mass loading to a receiving water. The baseline for this comparison would be the monthly average mass loading established by the previous permit. It would be inappropriate to use the daily maximum mass loading since the Policy is not applicable to short-term changes in water quality.

For the purposes of ensuring that the revised limit is consistent with the requirements of antidegradation, existing water quality must be defined. As explained earlier, RIDEM evaluates existing water quality by determining the pollutant levels which would result under the design conditions appropriate for the particular criteria (i.e., background water quality, when available and/or appropriate; non-point source inputs; and existing RIPDES permit limitations or recent historical discharge data, whichever is higher). In general, available data would be used to make this determination.

Using the above-mentioned criteria, the present instream water quality  $C_p$  is defined as:

$$C_p = \frac{(DF - 1) * C_b + (1 * C_d)}{DF}$$

where:  $C_b$  = background concentration<sup>3</sup>  
 $C_d$  = discharge data<sup>4</sup>  
DF = dilution factor

If the waterbody is a high quality water for the pollutant in question ( $C_p < C_{\text{criteria}}$ ), then the discharge requires an evaluation under Tier 2 protection. If the waterbody is not determined to be high quality for that parameter, then antidegradation will allow an increased permit limit only if it

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<sup>3</sup>Data collected at a location that is unimpacted by significant point source discharges.

<sup>4</sup>Discharge data refers to the maximum of the permit limit or the historic discharge level. The historic discharge level is determined by calculating the upper 95<sup>th</sup> percent confidence interval for the monthly average reported data for the past five (5) years. For specific cases, changes in treatment efficiency or pretreatment limitations may support the use of an alternative period of time.

can be assured that water quality standards would be attained. Therefore, the permit limit would be calculated to comply with Tier 1 protection, using the procedures noted previously (i.e., Limit<sub>1</sub>).

Assuming the receiving water has been designated as a high quality waterbody for the parameter under investigation, the next step is to determine whether the new or increased discharge is permissible and if so whether an important benefits demonstration is required. As explained above, for existing discharges RIDEM shall follow the general rule of allocating no more than 20% of the remaining assimilative capacity without the need to complete this demonstration (assuming the receiving water is not an SRPW or ONRW). On a case-by-case basis, the RIDEM may limit the allocation or determine that any incremental loss or impact to the receiving water is significant enough to require a detailed important benefits demonstration.

#### Water Quality Based Limits - Considering Antibacksliding and Antidegradation

The draft permit is being reissued with limitations as stringent as or more stringent than those in the existing permit with no change to the outfall location. 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 limits from the previous permit.

Since none of the permit limits, both concentration and mass loadings, are less stringent than in the previous permit, antibacksliding and antidegradation regulations are being met.

Attachment C includes a summary comparison of the allowable limits vs. the DMR (Discharge Monitoring Report) data.

#### *Total Suspended Solids*

The previous permits issued on June 6, 2006 and April 13, 2012 included monthly average limits for TSS of 6 lb/day and maximum daily limits of 10 lb/day. The June 6, 2006 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. These limits were maintained in the April 13, 2012 permit. 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 from the 2012 permit have been carried forward for outfall 002A. Mass based limits for outfall 002A from the 2012 permit have also been carried forward.

#### *Turbidity*

Turbidity monitoring requirements have been maintained in this permit in order to maintain a database of NTU data that can be used to determine compliance with water quality criteria. These limitations have been applied to outfall 002A. The permit also includes a narrative condition that the receiving water's turbidity not be increased more than 5 NTU over background.

#### *Total Aluminum*

The Jamestown WTP utilizes aluminum –based chemistry (e.g. aluminum sulfate) as the primary coagulation agent in the water treatment process. The DEM has determined that limits for Total Aluminum are not necessary given the fact that the water quality criteria for Total Aluminum have not been established for salt waters. However, the DEM will continue to have the Town of Jamestown monitor the discharge for Total Aluminum at a frequency of twice per month.

#### *Total Residual Chlorine*

Total Residual Chlorine (TRC) limits have been assigned in this permit due to the fact that there is reasonable potential for the discharge to exceed water quality criteria limits for TRC. 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 limit is calculated using the following equation:

$$\text{Limit} = (\text{Criteria}) * (100\%)$$

Based on the above mentioned equation, limits for chlorine were calculated as: Monthly Average Limit (ug/l) = 7.5, and Maximum Daily Limit (ug/L) = 13. These limitations from the 2012 permit have been maintained for outfall 002A. However, since these limits are below the concentrations that can be accurately measured, 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.

#### *pH*

The effluent limitations for pH have been established in accordance with the Rhode Island Water Quality Regulations Table 2.8.D.(3) Class Specific Criteria –Class SA - Sea Waters. Table 2.8.D.(3) Class Specific Criteria – Class SA - Sea Waters specifies that the pH must be in the range of 6.5-8.5 s.u. but not more than 0.2 units outside of the normally occurring range. These limitations from the 2012 permit have been maintained for outfall 002A.

#### *Residuals Management Requirements*

Water treatment plant residuals form when suspended solids in the raw water react with chemicals such as coagulants added in the treatment process and from the addition of other process control chemicals such as alum. 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 existing Jamestown WTP are sludges (i.e., water that contains suspended solids from the source water and the reaction products of chemicals added in the treatment process). For a typical coagulation, flocculation, and filtration system such as the units in operation at the Jamestown WTP 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 a Residuals Management Plan to be

maintained by the facility. In an email to DEM dated May 24, 2018, the facility stated that its Residuals Management Plan dated June 5, 2007 did not need to be updated.

#### *Water Treatment Chemicals*

TRC, Total Aluminum monitoring, and pH limits have been assigned in the permit to regulate the concentrations of Aluminum-based treatment chemicals, Chlorine Dioxide, Sodium Hypochlorite, Potassium Hydroxide, Citric Acid, and Muriatic Acid present at outfall 002A. These limits will adequately control the usage of the above-mentioned treatment chemicals. The use of Muriatic Acid was noted by DEM during a March 23, 2018 permit reissuance inspection. In response to a request from DEM, the facility submitted information to DEM on July 24, 2018, supplementing the permit application by providing details on its use of muriatic acid. The facility uses muriatic acid once a quarter during the filter recovery clean, at a dose of 1 (one) gallon of muriatic acid to 5000 gallons of clean water at a concentration strength of 31.45%.

#### *Stormwater*

This permit does not authorize the discharge of stormwater from the facility. Based on the RIPDES Program's review it has been determined that facilities that fall under SIC code 4941 – Distribution of Potable Water are not required to obtain coverage under the RIPDES Storm Water Multi-Sector General Permit and therefore the facility is not required to apply.

#### *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.

Table No.1 Final Permit Limitations – outfall 001A

#### *Future Permit Limits*

Parameter	Monthly Average	Daily Maximum
Flow	--- MGD	--- MGD
TSS	6 lb/day	10 lb/day
TSS	30 mg/L	50 mg/L
Turbidity	--- NTU	--- NTU
pH	(6.5 S.U.)	(8.5 S.U.)
Total Residual Chlorine	7.5 ug/l	13 ug/l
Total Aluminum	--- ug/l	--- ug/l

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

**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.

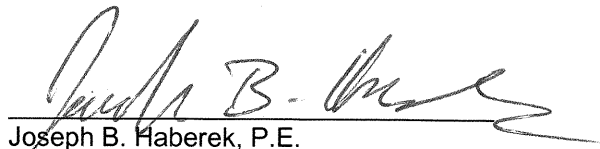
Following the close of the comment period, and after a public hearing, if such hearing is held, the Director will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within thirty (30) days following 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:

Samuel Kaplan, P.E.  
RIPDES Program  
Department of Environmental Management  
235 Promenade Street  
Providence, Rhode Island 02908  
Telephone: (401) 222-4700, ext. 7046  
Email: samuel.kaplan@dem.ri.gov

10/18/18  
Date

  
Joseph B. Haberek, P.E.  
Supervising Sanitary Engineer  
RIPDES Permitting Section  
Office of Water Resources  
Department of Environmental Management

**ATTACHMENT A**

**DESCRIPTION OF DISCHARGE:** Treated membrane filter backwash and cleaning discharge  
**DISCHARGE:** 002A

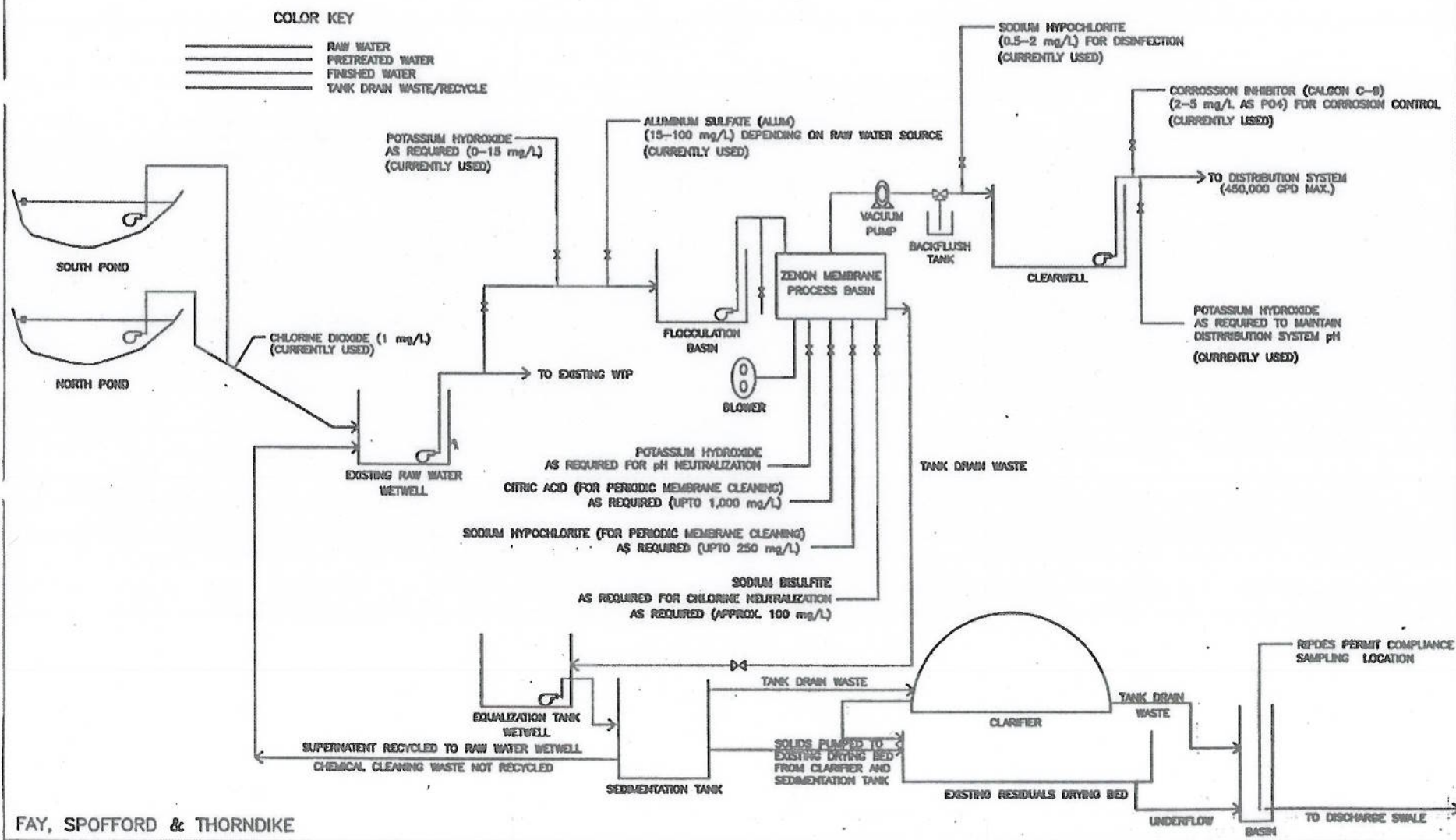
**AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE OF SELECTED  
POLLUTANTS:**

<b>PARAMETER</b>	<b>MONTHLY AVERAGE<sup>1</sup></b>	<b>DAILY MAX<sup>1</sup></b>
Aluminum, total (as Al) (mg/l)	0.9	1.1
Chlorine, total residual (ug/l)	7.5	10.33
pH (s.u.)	6.74 (min)	6.83 (max)
TSS (LB/DAY)	0.79	1.83
TSS (mg/l)	4.19	6.5
Flow (MGD)	0.023	0.035
Turbidity	2.12	2.35

<sup>1</sup> All data represents the average of the monthly average and daily maximum Discharge Monitoring Report data submitted by the permittee for January 2013 thru December 2017.

**ATTACHMENT B - Treatment System Schematic**

FIGURE 2: ULTRAFILTRATION MEMBRANE  
TREATMENT SYSTEM SCHEMATIC  
JAMESTOWN DEPARTMENT OF PUBLIC WORKS  
JAMESTOWN, RHODE ISLAND



**ATTACHMENT C – Water Quality Calculations and Limits Comparison**

# ***CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS*** ***FACILITY SPECIFIC DATA INPUT SHEET***

NOTE: LIMITS BASED ON RI WATER QUALITY CRITERIA DATED JULY 2006, AMMENDED MAY 2009

FACILITY NAME: **Jamestown Drinking Water Plant**

RIPDES PERMIT #: **RI0001619**

	DISSOLVED BACKGROUND DATA (ug/L)	ACUTE METAL TRANSLATOR	CHRONIC METAL TRANSLATOR
ALUMINUM	NA	NA	NA
ARSENIC	NA	1	1
CADMIUM	NA	0.994	0.994
CHROMIUM III	NA	NA	NA
CHROMIUM VI	NA	0.993	0.993
COPPER	NA	0.83	0.83
LEAD	NA	0.951	0.951
MERCURY	NA	0.85	NA
NICKEL	NA	0.99	0.99
SELENIUM	NA	0.998	0.998
SILVER	NA	0.85	0.85
ZINC	NA	0.946	0.946

**USE NA WHEN NO DATA IS AVAILABLE**

NOTE 1: METAL TRANSLATORS FROM RI WATER  
QUALITY REGS.

DILUTION FACTORS	
ACUTE =	1 x
CHRONIC =	1 x
HUMAN HEALTH =	1 x

NOTE: TEST WWTF'S DILUTION  
FACTORS OBTAINED FROM A  
DYE STUDY.

TOTAL AMMONIA CRITERIA (ug/L)		
WINTER	ACUTE =	6000
	CHRONIC =	900
SUMMER	ACUTE =	4600
	CHRONIC =	690

NOTE 1: LIMITS ARE FROM TABLE 3 IN  
THE RI WATER QUALITY REGS.  
USING:

SALINITY = 30 g/Kg  
WINTER (NOV-APRIL) pH=8.4 s.u.;  
SUMMER (MAY-OCT) pH=8.2 s.u.  
WINTER (NOV-APRIL) TEMP=10.0 C;  
SUMMER (MAY-OCT) TEMP=20.0 C.

**CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS**

FACILITY NAME: Jamestown Drinking Water Plant RIPDES PERMIT #: RI0001619

NOTE: METALS CRITERIA ARE DISSOLVED, METALS LIMITS ARE TOTAL; AMMONIA CRITERIA AND LIMITS HAVE BEEN CONVERTED TO ug/l N.

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
<b>PRIORITY POLLUTANTS:</b>							
<b>TOXIC METALS AND CYANIDE</b>							
ANTIMONY	7440360			No Criteria		640	512
ARSENIC (limits are total recoverable)	7440382	NA	69	55.2	36	1.4	1.12
ASBESTOS	1332214			No Criteria			No Criteria
BERYLLIUM	7440417			No Criteria			No Criteria
CADMIUM (limits are total recoverable)	7440439	NA	40	32.19315895	8.8		7.08249497
CHROMIUM III (limits are total recoverable)	16065831	NA		No Criteria			No Criteria
CHROMIUM VI (limits are total recoverable)	18540299	NA	1100	886.203424	50		40.28197382
COPPER (limits are total recoverable)	7440508	NA	4.8	4.626506024	3.1		2.987951807
CYANIDE	57125		1	0.80	1	140	0.8
LEAD (limits are total recoverable)	7439921	NA	210	176.6561514	8.1		6.813880126
MERCURY (limits are total recoverable)	7439976	NA	1.8	1.694117647	0.94	0.15	0.12
NICKEL (limits are total recoverable)	7440020	NA	74	59.7979798	8.2	4600	6.626262626
SELENIUM (limits are total recoverable)	7782492	NA	290	232.4649299	71	4200	56.91382766
SILVER (limits are total recoverable)	7440224	NA	1.9	1.788235294			No Criteria
THALLIUM	7440280			No Criteria		0.47	0.376
ZINC (limits are total recoverable)	7440666	NA	90	76.10993658	81	26000	68.49894292
<b>VOLATILE ORGANIC COMPOUNDS</b>							
ACROLEIN	107028			No Criteria		290	232
ACRYLONITRILE	107131			No Criteria		2.5	2
BENZENE	71432			No Criteria		510	408
BROMOFORM	75252			No Criteria		1400	1120
CARBON TETRACHLORIDE	56235			No Criteria		16	12.8
CHLOROBENZENE	108907			No Criteria		1600	1280
CHLORODIBROMOMETHANE	124481			No Criteria		130	104
CHLOROFORM	67663			No Criteria		4700	3760
DICHLOROBROMOMETHANE	75274			No Criteria		170	136
1,2DICHLOROETHANE	107062			No Criteria		370	296
1,1DICHLOROETHYLENE	75354			No Criteria		7100	5680
1,2DICHLOROPROPANE	78875			No Criteria		150	120
1,3DICHLOROPROPYLENE	542756			No Criteria		21	16.8
ETHYLBENZENE	100414			No Criteria		2100	1680
BROMOMETHANE (methyl bromide)	74839			No Criteria		1500	1200
CHLOROMETHANE (methyl chloride)	74873			No Criteria			No Criteria
METHYLENE CHLORIDE	75092			No Criteria		5900	4720

**CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS**

FACILITY NAME: Jamestown Drinking Water Plant RIPDES PERMIT #: RI0001619

NOTE: METALS CRITERIA ARE DISSOLVED, METALS LIMITS ARE TOTAL; AMMONIA CRITERIA AND LIMITS HAVE BEEN CONVERTED TO ug/l N.

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
1,1,2,2TETRACHLOROETHANE	79345			No Criteria		40	32
TETRACHLOROETHYLENE	127184			No Criteria		33	26.4
TOLUENE	108883			No Criteria		15000	12000
1,2TRANS-DICHLOROETHYLENE	156605			No Criteria		10000	8000
1,1,1-TRICHLOROETHANE	71556			No Criteria			No Criteria
1,1,2-TRICHLOROETHANE	79005			No Criteria		160	128
TRICHLOROETHYLENE	79016			No Criteria		300	240
VINYL CHLORIDE	75014			No Criteria		2.4	1.92
ACID ORGANIC COMPOUNDS							
2-CHLOROPHENOL	95578			No Criteria		150	120
2,4-DICHLOROPHENOL	120832			No Criteria		290	232
2,4-DIMETHYLPHENOL	105679			No Criteria		850	680
4,6-DINITRO-2-METHYL PHENOL	534521			No Criteria		280	224
2,4-DINITROPHENOL	51285			No Criteria		5300	4240
4-NITROPHENOL	88755			No Criteria			No Criteria
PENTACHLOROPHENOL	87865		13	10.4	7.9	30	6.32
PHENOL	108952			No Criteria		1700000	1360000
2,4,6-TRICHLOROPHENOL	88062			No Criteria		24	19.2
BASE NEUTRAL COMPOUNDS							
ACENAPHTHENE	83329			No Criteria		990	792
ANTHRACENE	120127			No Criteria		40000	32000
BENZIDINE	92875			No Criteria		0.002	0.0016
POLYCYCLIC AROMATIC HYDROCARBONS				No Criteria		0.18	0.144
BIS(2-CHLOROETHYL)ETHER	111444			No Criteria		5.3	4.24
BIS(2-CHLOROISOPROPYL)ETHER	108601			No Criteria		65000	52000
BIS(2-ETHYLHEXYL)PHTHALATE	117817			No Criteria		22	17.6
BUTYL BENZYL PHTHALATE	85687			No Criteria		1900	1520
2-CHLORONAPHTHALENE	91587			No Criteria		1600	1280
1,2-DICHLOROBENZENE	95501			No Criteria		1300	1040
1,3-DICHLOROBENZENE	541731			No Criteria		960	768
1,4-DICHLOROBENZENE	106467			No Criteria		190	152
3,3-DICHLOROBENZIDENE	91941			No Criteria		0.28	0.224
DIETHYL PHTHALATE	84662			No Criteria		44000	35200
DIMETHYL PHTHALATE	131113			No Criteria		1100000	880000
Di-n-BUTYL PHTHALATE	84742			No Criteria		4500	3600
2,4-DINITROTOLUENE	121142			No Criteria		34	27.2

**CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS**

FACILITY NAME: Jamestown Drinking Water Plant RIPDES PERMIT #: RI0001619

NOTE: METALS CRITERIA ARE DISSOLVED, METALS LIMITS ARE TOTAL; AMMONIA CRITERIA AND LIMITS HAVE BEEN CONVERTED TO ug/l N.

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
1,2DIPHENYLHYDRAZINE	122667			No Criteria		2	1.6
FLUORANTHENE	206440			No Criteria		140	112
FLUORENE	86737			No Criteria		5300	4240
HEXACHLOROBENZENE	118741			No Criteria		0.0029	0.00232
HEXACHLOROBUTADIENE	87683			No Criteria		180	144
HEXACHLOROCYCLOPENTADIENE	77474			No Criteria		1100	880
HEXACHLOROETHANE	67721			No Criteria		33	26.4
ISOPHORONE	78591			No Criteria		9600	7680
NAPHTHALENE	91203			No Criteria			No Criteria
NITROBENZENE	98953			No Criteria		690	552
NNITROSODIMETHYLAMINE	62759			No Criteria		30	24
NNITROSODINPROPYLAMINE	621647			No Criteria		5.1	4.08
NNITROSODIPHENYLAMINE	86306			No Criteria		60	48
PYRENE	129000			No Criteria		4000	3200
1,2,4trichlorobenzene	120821			No Criteria		70	56
PESTICIDES/PCBs							
ALDRIN	309002		1.3	1.04		0.0005	0.0004
Alpha BHC	319846			No Criteria		0.049	0.0392
Beta BHC	319857			No Criteria		0.17	0.136
Gamma BHC (Lindane)	58899		0.16	0.128		1.8	1.44
CHLORDANE	57749		0.09	0.072	0.004	0.0081	0.0032
4,4DDT	50293		0.13	0.104	0.001	0.0022	0.0008
4,4DDE	72559			No Criteria		0.0022	0.00176
4,4DDD	72548			No Criteria		0.0031	0.00248
DIELDRIN	60571		0.71	0.568	0.0019	0.00054	0.000432
ENDOSULFAN (alpha)	959988		0.034	0.0272	0.0087	89	0.00696
ENDOSULFAN (beta)	33213659		0.034	0.0272	0.0087	89	0.00696
ENDOSULFAN (sulfate)	1031078			No Criteria		89	71.2
ENDRIN	72208		0.037	0.0296	0.0023	0.06	0.00184
ENDRIN ALDEHYDE	7421934			No Criteria		0.3	0.24
HEPTACHLOR	76448		0.053	0.0424	0.0036	0.00079	0.000632
HEPTACHLOR EPOXIDE	1024573		0.053	0.0424	0.0036	0.00039	0.000312
POLYCHLORINATED BIPHENYLS3	1336363			No Criteria	0.03	0.00064	0.000512
2,3,7,8TCDD (Dioxin)	1746016			No Criteria		0.000000051	4.08E-08
TOXAPHENE	8001352		0.21	0.168	0.0002	0.0028	0.00016
TRIBUTYL TIN			0.42	0.336	0.0074		0.00592

**CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS**

FACILITY NAME: Jamestown Drinking Water Plant RIPDES PERMIT #: RI0001619

NOTE: METALS CRITERIA ARE DISSOLVED, METALS LIMITS ARE TOTAL; AMMONIA CRITERIA AND LIMITS HAVE BEEN CONVERTED TO ug/l N.

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
NON PRIORITY POLLUTANTS:							
OTHER SUBSTANCES							
ALUMINUM (limits are total recoverable)	7429905	NA		No Criteria			No Criteria
AMMONIA as N (winter/summer)	7664417		4932   3781	3945.6   3024.96	739.8   567.2		591.84   453.744
4BROMOPHENYL PHENYL ETHER				No Criteria			No Criteria
CHLORIDE	16887006			No Criteria			No Criteria
CHLORINE	7782505		13	13	7.5		7.5
4CHLORO2METHYLPHENOL				No Criteria			No Criteria
1CHLORONAPHTHALENE				No Criteria			No Criteria
4CHLOROPHENOL	106489			No Criteria			No Criteria
2,4DICHLORO6METHYLPHENOL				No Criteria			No Criteria
1,1DICHLOROPROPANE				No Criteria			No Criteria
1,3DICHLOROPROPANE	142289			No Criteria			No Criteria
2,3DINITROTOLUENE				No Criteria			No Criteria
2,4DINITRO6METHYL PHENOL				No Criteria			No Criteria
IRON	7439896			No Criteria			No Criteria
pentachlorobenzene	608935			No Criteria			No Criteria
PENTACHLOROETHANE				No Criteria			No Criteria
1,2,3,5tetrachlorobenzene				No Criteria			No Criteria
1,1,1,2TETRACHLOROETHANE	630206			No Criteria			No Criteria
2,3,4,6TETRACHLOROPHENOL	58902			No Criteria			No Criteria
2,3,5,6TETRACHLOROPHENOL				No Criteria			No Criteria
2,4,5TRICHLOROPHENOL	95954			No Criteria			No Criteria
2,4,6TRINITROPHENOL	88062			No Criteria			No Criteria
XYLENE	1330207			No Criteria			No Criteria

**CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS**

FACILITY NAME: Jamestown Drinking Water Plant

RIPDES PERMIT #: RI0001619

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
<b>PRIORITY POLLUTANTS:</b>			
<b>TOXIC METALS AND CYANIDE</b>			
ANTIMONY	7440360	No Criteria	512.00
ARSENIC, TOTAL	7440382	55.20	1.12
ASBESTOS	1332214	No Criteria	No Criteria
BERYLLIUM	7440417	No Criteria	No Criteria
CADMIUM, TOTAL	7440439	32.19	7.08
CHROMIUM III, TOTAL	16065831	No Criteria	No Criteria
CHROMIUM VI, TOTAL	18540299	886.20	40.28
COPPER, TOTAL	7440508	4.63	2.99
CYANIDE	57125	0.80	0.80
LEAD, TOTAL	7439921	176.66	6.81
MERCURY, TOTAL	7439976	1.69	0.12
NICKEL, TOTAL	7440020	59.80	6.63
SELENIUM, TOTAL	7782492	232.46	56.91
SILVER, TOTAL	7440224	1.79	No Criteria
THALLIUM	7440280	No Criteria	0.38
ZINC, TOTAL	7440666	76.11	68.50
<b>VOLATILE ORGANIC COMPOUNDS</b>			
ACROLEIN	107028	No Criteria	232.00
ACRYLONITRILE	107131	No Criteria	2.00
BENZENE	71432	No Criteria	408.00
BROMOFORM	75252	No Criteria	1120.00
CARBON TETRACHLORIDE	56235	No Criteria	12.80
CHLOROBENZENE	108907	No Criteria	1280.00
CHLORODIBROMOMETHANE	124481	No Criteria	104.00
CHLOROFORM	67663	No Criteria	3760.00
DICHLOROBROMOMETHANE	75274	No Criteria	136.00
1,2DICHLOROETHANE	107062	No Criteria	296.00
1,1DICHLOROETHYLENE	75354	No Criteria	5680.00
1,2DICHLOROPROPANE	78875	No Criteria	120.00
1,3DICHLOROPROPYLENE	542756	No Criteria	16.80
ETHYLBENZENE	100414	No Criteria	1680.00
BROMOMETHANE (methyl bromide)	74839	No Criteria	1200.00
CHLOROMETHANE (methyl chloride)	74873	No Criteria	No Criteria
METHYLENE CHLORIDE	75092	No Criteria	4720.00
1,1,2,2TETRACHLOROETHANE	79345	No Criteria	32.00

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
TETRACHLOROETHYLENE	127184	No Criteria	26.40
TOLUENE	108883	No Criteria	12000.00
1,2TRANS-DICHLOROETHYLENE	156605	No Criteria	8000.00
1,1,1TRICHLOROETHANE	71556	No Criteria	No Criteria
1,1,2TRICHLOROETHANE	79005	No Criteria	128.00
TRICHLOROETHYLENE	79016	No Criteria	240.00
VINYL CHLORIDE	75014	No Criteria	1.92
<b>ACID ORGANIC COMPOUNDS</b>			
2CHLOROPHENOL	95578	No Criteria	120.00
2,4DICHLOROPHENOL	120832	No Criteria	232.00
2,4DIMETHYLPHENOL	105679	No Criteria	680.00
4,6DINITRO-2METHYL PHENOL	534521	No Criteria	224.00
2,4DINITROPHENOL	51285	No Criteria	4240.00
4NITROPHENOL	88755	No Criteria	No Criteria
PENTACHLOROPHENOL	87865	10.40	6.32
PHENOL	108952	No Criteria	1360000.00
2,4,6TRICHLOROPHENOL	88062	No Criteria	19.20
<b>BASE NEUTRAL COMPOUNDS</b>			
ACENAPHTHENE	83329	No Criteria	792.00
ANTHRACENE	120127	No Criteria	32000.00
BENZIDINE	92875	No Criteria	0.00
PAHs		No Criteria	0.14
BIS(2CHLOROETHYL)ETHER	111444	No Criteria	4.24
BIS(2CHLOROISOPROPYL)ETHER	108601	No Criteria	52000.00
BIS(2ETHYLHEXYL)PHTHALATE	117817	No Criteria	17.60
BUTYL BENZYL PHTHALATE	85687	No Criteria	1520.00
2CHLORONAPHTHALENE	91587	No Criteria	1280.00
1,2DICHLOROBENZENE	95501	No Criteria	1040.00
1,3DICHLOROBENZENE	541731	No Criteria	768.00
1,4DICHLOROBENZENE	106467	No Criteria	152.00
3,3DICHLOROBENZIDENE	91941	No Criteria	0.22
DIETHYL PHTHALATE	84662	No Criteria	35200.00
DIMETHYL PHTHALATE	131113	No Criteria	880000.00
DI-n-BUTYL PHTHALATE	84742	No Criteria	3600.00
2,4DINITROTOLUENE	121142	No Criteria	27.20
1,2DIPHENYLHYDRAZINE	122667	No Criteria	1.60
FLUORANTHENE	206440	No Criteria	112.00

**CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS**

FACILITY NAME: Jamestown Drinking Water Plant

RIPDES PERMIT #: RI0001619

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
FLUORENE	86737	No Criteria	4240.00
HEXACHLOROBENZENE	118741	No Criteria	0.00
HEXACHLOROBUTADIENE	87683	No Criteria	144.00
HEXACHLOROCYCLOPENTADIENE	77474	No Criteria	880.00
HEXACHLOROETHANE	67721	No Criteria	26.40
ISOPHORONE	78591	No Criteria	7680.00
NAPHTHALENE	91203	No Criteria	No Criteria
NITROBENZENE	98953	No Criteria	552.00
N-NITROSODIMETHYLAMINE	62759	No Criteria	24.00
N-NITROSODI-N-PROPYLAMINE	621647	No Criteria	4.08
N-NITROSODIPHENYLAMINE	86306	No Criteria	48.00
PYRENE	129000	No Criteria	3200.00
1,2,4trichlorobenzene	120821	No Criteria	56.00
<b>PESTICIDES/PCBs</b>			
ALDRIN	309002	1.04	0.00
Alpha BHC	319846	No Criteria	0.04
Beta BHC	319857	No Criteria	0.14
Gamma BHC (Lindane)	58899	0.13	0.13
CHLORDANE	57749	0.07	0.00
4,4DDT	50293	0.10	0.00
4,4DDE	72559	No Criteria	0.00
4,4DDD	72548	No Criteria	0.00
DIELDRIN	60571	0.57	0.00
ENDOSULFAN (alpha)	959988	0.03	0.01
ENDOSULFAN (beta)	33213659	0.03	0.01
ENDOSULFAN (sulfate)	1031078	No Criteria	71.20
ENDRIN	72208	0.03	0.00
ENDRIN ALDEHYDE	7421934	No Criteria	0.24
HEPTACHLOR	76448	0.04	0.00
HEPTACHLOR EPOXIDE	1024573	0.04	0.00
POLYCHLORINATED BIPHENYLS3	1336363	No Criteria	0.00
2,3,7,8TCDD (Dioxin)	1746016	No Criteria	0.00
TOXAPHENE	8001352	0.17	0.00
TRIBUTYLTIN		0.34	0.01

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
<b>NON PRIORITY POLLUTANTS: OTHER SUBSTANCES</b>			
ALUMINUM, TOTAL	7429905	No Criteria	No Criteria
AMMONIA (as N), WINTER (NOV-APR)	7664417	3945.60	591.84
AMMONIA (as N), SUMMER (MAY-OC)	7664417	3024.96	453.74
4BROMOPHENYL PHENYL ETHER		No Criteria	No Criteria
CHLORIDE	16887006	No Criteria	No Criteria
CHLORINE	7782505	13.00	7.50
4CHLORO2METHYLPHENOL		No Criteria	No Criteria
1CHLORONAPHTHALENE		No Criteria	No Criteria
4CHLOROPHENOL	106489	No Criteria	No Criteria
2,4DICHLORO6METHYLPHENOL		No Criteria	No Criteria
1,1DICHLOROPROPANE		No Criteria	No Criteria
1,3DICHLOROPROPANE	142289	No Criteria	No Criteria
2,3DINITROTOLUENE		No Criteria	No Criteria
2,4DINITRO6METHYL PHENOL		No Criteria	No Criteria
IRON	7439896	No Criteria	No Criteria
pentachlorobenzene	608935	No Criteria	No Criteria
PENTACHLOROETHANE		No Criteria	No Criteria
1,2,3,5tetrachlorobenzene		No Criteria	No Criteria
1,1,1,2TETRACHLOROETHANE	630206	No Criteria	No Criteria
2,3,4,6TETRACHLOROPHENOL	58902	No Criteria	No Criteria
2,3,5,6TETRACHLOROPHENOL		No Criteria	No Criteria
2,4,5TRICHLOROPHENOL	95954	No Criteria	No Criteria
2,4,6TRINITROPHENOL	88062	No Criteria	No Criteria
XYLENE	1330207	No Criteria	No Criteria

**Facility Name: Jamestown Drinking Water Plant**  
**RIPDES Permit #: RI0001619**  
**Outfall #: 002A**

NOTE: METALS LIMITS ARE TOTAL METALS

NOTE: METALS LIMITS ARE TOTAL METALS												Reason	Potential
Parameter	CAS #	Concentration Limits (ug/L) Based on WQ Criteria		Antideg. Limits (ug/L)	Ave Data (ug/L) 2016 permit ap		Ave. DMR Data (ug/L) 1/13-12/17		Potential Permit Limits (ug/L)				
		Daily Max	Monthly Ave		Monthly Ave	Max	Ave	Daily Max	Monthly Ave	Daily Max	Monthly Ave		
PRIORITY POLLUTANTS													
TOXIC METALS AND CYANIDE													
ANTIMONY	7440360	No Criteria	512.00	---	---	---	---	---	---	512			
ARSENIC (limits are total recoverable)	7440382	55.20	1.12	---	---	---	---	---	55.2	1.12			
ASBESTOS	1332214	No Criteria	No Criteria	---	---	---	---	---	---	---			
BERYLLIUM	7440417	No Criteria	No Criteria	---	---	---	---	---	---	---			
CADMIUM (limits are total recoverable)	7440439	32.19	7.08	---	---	---	---	---	32.19315895	7.08249497			
CHROMIUM III (limits are total recoverable)	16065831	No Criteria	No Criteria	---	---	---	---	---	---	---			
CHROMIUM VI (limits are total recoverable)	18540299	886.20	40.28	---	---	---	---	---	886.203424	40.28197382			
COPPER (limits are total recoverable)	7440508	4.63	2.99	---	---	---	---	---	4.626506024	2.987951807			
CYANIDE	57125	0.80	0.80	---	---	---	---	---	0.8	0.8			
LEAD (limits are total recoverable)	7439921	176.66	6.81	---	---	---	---	---	176.6561514	6.813880126			
MERCURY (limits are total recoverable)	7439976	1.69	0.12	---	---	---	---	---	1.694117647	0.12			
NICKEL (limits are total recoverable)	7440020	59.80	6.63	---	---	---	---	---	59.7979798	6.626262626			
SELENIUM (limits are total recoverable)	7782492	232.46	56.91	---	---	---	---	---	232.4649299	56.91382766			
SILVER (limits are total recoverable)	7440224	1.79	No Criteria	---	---	---	---	---	1.788235294	1.788235294			
THALLIUM	7440280	No Criteria	0.38	---	---	---	---	---	---	0.376			
ZINC (limits are total recoverable)	7440666	76.11	68.50	---	---	---	---	---	76.10993658	68.49894292			
VOLATILE ORGANIC COMPOUNDS													
ACROLEIN	107028	No Criteria	232.00	---	---	---	---	---	---	232			
ACRYLONITRILE	107131	No Criteria	2.00	---	---	---	---	---	---	2			
BENZENE	71432	No Criteria	408.00	---	---	---	---	---	---	408			
BROMOFORM	75252	No Criteria	1120.00	---	---	---	---	---	---	1120			
CARBON TETRACHLORIDE	56235	No Criteria	12.80	---	---	---	---	---	---	12.8			
CHLOROBENZENE	108907	No Criteria	1280.00	---	---	---	---	---	---	1280			
CHLORODIBROMOMETHANE	124481	No Criteria	104.00	---	---	---	---	---	---	104			
CHLOROFORM	67663	No Criteria	3760.00	---	---	---	---	---	---	3760			
DICHLOROBROMOMETHANE	75274	No Criteria	136.00	---	---	---	---	---	---	136			

RIDEM/RIPDES  
Samuel Kaplan, P.E.

1,2DICHLOROETHANE	107062	No Criteria	296.00	---	---	---	---	---	---	296		
1,1DICHLOROETHYLENE	75354	No Criteria	5680.00	---	---	---	---	---	---	5680		
1,2DICHLOROPROPANE	78875	No Criteria	120.00	---	---	---	---	---	---	120		
1,3DICHLOROPROPYLENE	542756	No Criteria	16.80	---	---	---	---	---	---	16.8		
ETHYLBENZENE	100414	No Criteria	1680.00	---	---	---	---	---	---	1680		
BROMOMETHANE (methyl bromide)	74839	No Criteria	1200.00	---	---	---	---	---	---	1200		
CHLOROMETHANE (methyl chloride)	74873	No Criteria	No Criteria	---	---	---	---	---	---	---		
METHYLENE CHLORIDE	75092	No Criteria	4720.00	---	---	---	---	---	---	4720		
1,1,2,2TETRACHLOROETHANE	79345	No Criteria	32.00	---	---	---	---	---	---	32		
TETRACHLOROETHYLENE	127184	No Criteria	26.40	---	---	---	---	---	---	26.4		
TOLUENE	108883	No Criteria	12000.00	---	---	---	---	---	---	12000		
1,2TRANSDICHLOROETHYLENE	156605	No Criteria	8000.00	---	---	---	---	---	---	8000		
1,1,1TRICHLOROETHANE	71556	No Criteria	No Criteria	---	---	---	---	---	---	---		
1,1,2TRICHLOROETHANE	79005	No Criteria	128.00	---	---	---	---	---	---	128		
TRICHLOROETHYLENE	79016	No Criteria	240.00	---	---	---	---	---	---	240		
VINYL CHLORIDE	75014	No Criteria	1.92	---	---	---	---	---	---	1.92		
ACID ORGANIC COMPOUNDS												
2CHLOROPHENOL	95578	No Criteria	120.00	---	---	---	---	---	---	120		
2,4DICHLOROPHENOL	120832	No Criteria	232.00	---	---	---	---	---	---	232		
2,4DIMETHYLPHENOL	105679	No Criteria	680.00	---	---	---	---	---	---	680		
4,6DINITRO2METHYL PHENOL	534521	No Criteria	224.00	---	---	---	---	---	---	224		
2,4DINITROPHENOL	51285	No Criteria	4240.00	---	---	---	---	---	---	4240		
4NITROPHENOL	88755	No Criteria	No Criteria	---	---	---	---	---	---	---		
PENTACHLOROPHENOL	87865	10.40	6.32	---	---	---	---	10.4	---	6.32		
PHENOL	108952	No Criteria	1360000.00	---	---	---	---	---	---	1360000		
2,4,6TRICHLOROPHENOL	88062	No Criteria	19.20	---	---	---	---	---	---	19.2		
BASE NEUTRAL COMPOUNDS												
ACENAPHTHENE	83329	No Criteria	792.00	---	---	---	---	---	---	792		
ANTHRACENE	120127	No Criteria	32000.00	---	---	---	---	---	---	32000		
BENZIDINE	92875	No Criteria	0.00	---	---	---	---	---	---	0.0016		
POLYCYCLIC AROMATIC HYDROCARBONS		No Criteria	0.14	---	---	---	---	---	---	0.144		
BIS(2CHLOROETHYL)ETHER	111444	No Criteria	4.24	---	---	---	---	---	---	4.24		
BIS(2CHLOROISOPROPYL)ETHER	108601	No Criteria	52000.00	---	---	---	---	---	---	52000		
BIS(2ETHYLHEXYL)PHTHALATE	117817	No Criteria	17.60	---	---	---	---	---	---	17.6		
BUTYL BENZYL PHTHALATE	85687	No Criteria	1520.00	---	---	---	---	---	---	1520		
2CHLORONAPHTHALENE	91587	No Criteria	1280.00	---	---	---	---	---	---	1280		
1,2DICHLORO BENZENE	95501	No Criteria	1040.00	---	---	---	---	---	---	1040		
1,3DICHLORO BENZENE	541731	No Criteria	768.00	---	---	---	---	---	---	768		
1,4DICHLORO BENZENE	106467	No Criteria	152.00	---	---	---	---	---	---	152		
3,3DICHLORO BENZIDENE	91941	No Criteria	0.22	---	---	---	---	---	---	0.224		

DIETHYL PHTHALATE	84662	No Criteria	35200.00	---	---	---	---	---	---	35200		
DIMETHYL PHTHALATE	131113	No Criteria	880000.00	---	---	---	---	---	---	880000		
DInBUTYL PHTHALATE	84742	No Criteria	3600.00	---	---	---	---	---	---	3600		
2,4DINITROTOLUENE	121142	No Criteria	27.20	---	---	---	---	---	---	27.2		
1,2DIPHENYLHYDRAZINE	122667	No Criteria	1.60	---	---	---	---	---	---	1.6		
FLUORANTHENE	206440	No Criteria	112.00	---	---	---	---	---	---	112		
FLUORENE	86737	No Criteria	4240.00	---	---	---	---	---	---	4240		
HEXACHLOROBENZENE	118741	No Criteria	0.00	---	---	---	---	---	---	0.00232		
HEXACHLOROBUTADIENE	87683	No Criteria	144.00	---	---	---	---	---	---	144		
HEXACHLOROCYCLOPENTADIENE	77474	No Criteria	880.00	---	---	---	---	---	---	880		
HEXACHLOROETHANE	67721	No Criteria	26.40	---	---	---	---	---	---	26.4		
ISOPHORONE	78591	No Criteria	7680.00	---	---	---	---	---	---	7680		
NAPHTHALENE	91203	No Criteria	No Criteria	---	---	---	---	---	---	---		
NITROBENZENE	98953	No Criteria	552.00	---	---	---	---	---	---	552		
NNITROSODIMETHYLAMINE	62759	No Criteria	24.00	---	---	---	---	---	---	24		
NNITROSODINPROPYLAMINE	621647	No Criteria	4.08	---	---	---	---	---	---	4.08		
NNITROSODIPHENYLAMINE	86306	No Criteria	48.00	---	---	---	---	---	---	48		
PYRENE	129000	No Criteria	3200.00	---	---	---	---	---	---	3200		
1,2,4trichlorobenzene	120821	No Criteria	56.00	---	---	---	---	---	---	56		
PESTICIDES/PCBs												
ALDRIN	309002	1.04	0.00	---	---	---	---	---	1.04	0.0004		
Alpha BHC	319846	No Criteria	0.04	---	---	---	---	---	---	0.0392		
Beta BHC	319857	No Criteria	0.14	---	---	---	---	---	---	0.136		
Gamma BHC (Lindane)	58899	0.13	0.13	---	---	---	---	---	0.128	0.128		
CHLORDANE	57749	0.07	0.00	---	---	---	---	---	0.072	0.0032		
4,4DDT	50293	0.10	0.00	---	---	---	---	---	0.104	0.0008		
4,4DDE	72559	No Criteria	0.00	---	---	---	---	---	---	0.00176		
4,4DDD	72548	No Criteria	0.00	---	---	---	---	---	---	0.00248		
DIELDRIN	60571	0.57	0.00	---	---	---	---	---	0.568	0.000432		
ENDOSULFAN (alpha)	959988	0.03	0.01	---	---	---	---	---	0.0272	0.00696		
ENDOSULFAN (beta)	33213659	0.03	0.01	---	---	---	---	---	0.0272	0.00696		
ENDOSULFAN (sulfate)	1031078	No Criteria	71.20	---	---	---	---	---	---	71.2		
ENDRIN	72208	0.03	0.00	---	---	---	---	---	0.0296	0.00184		
ENDRIN ALDEHYDE	7421934	No Criteria	0.24	---	---	---	---	---	---	0.24		
HEPTACHLOR	76448	0.04	0.00	---	---	---	---	---	0.0424	0.000632		
HEPTACHLOR EPOXIDE	1024573	0.04	0.00	---	---	---	---	---	0.0424	0.000312		
POLYCHLORINATED BIPHENYLS3	1336363	No Criteria	0.00	---	---	---	---	---	---	0.000512		
2,3,7,8TCDD (Dioxin)	1746016	No Criteria	0.00	---	---	---	---	---	---	4.08E-08		
TOXAPHENE	8001352	0.17	0.00	---	---	---	---	---	0.168	0.00016		
TRIBUTYL TIN		0.34	0.01	---	---	---	---	---	0.336	0.00592		

NON PRIORITY POLLUTANTS:											
OTHER SUBSTANCES											
ALUMINUM (limits are total recoverable)	7429905	No Criteria	No Criteria	---	1860	---	1115	901	---	---	NA NA
AMMONIA (winter)	7664417	3945.60	591.84	---	---	---	---	---	3945.6	591.84	
AMMONIA (summer)		3024.96	453.74	---	260	---	---	---	3024.96	453.744	N
4BROMOPHENYL PHENYL ETHER	16887006	No Criteria	No Criteria	---	---	---	---	---	---	---	
CHLORIDE	7782505	No Criteria	No Criteria	---	---	---	---	---	---	---	
CHLORINE		13.00	7.50	---	---	---	10.3	7.5	13	7.5	Y Y
4CHLORO2METHYLPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	---	
1CHLORONAPHTHALENE	106489	No Criteria	No Criteria	---	---	---	---	---	---	---	
4CHLOROPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	---	
2,4DICHLORO6METHYLPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	---	
1,1DICHLOROPROPANE	142289	No Criteria	No Criteria	---	---	---	---	---	---	---	
1,3DICHLOROPROPANE		No Criteria	No Criteria	---	---	---	---	---	---	---	
2,3DINITROTOLUENE		No Criteria	No Criteria	---	---	---	---	---	---	---	
2,4DINITRO6METHYL PHENOL	7439896	No Criteria	No Criteria	---	---	---	---	---	---	---	
IRON	608935	No Criteria	No Criteria	---	---	---	---	---	---	---	
pentachlorobenzene		No Criteria	No Criteria	---	---	---	---	---	---	---	
PENTACHLOROETHANE		No Criteria	No Criteria	---	---	---	---	---	---	---	
1,2,3,5tetrachlorobenzene	630206	No Criteria	No Criteria	---	---	---	---	---	---	---	
1,1,1,2TETRACHLOROETHANE	58902	No Criteria	No Criteria	---	---	---	---	---	---	---	
2,3,4,6TETRACHLOROPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	---	
2,3,5,6TETRACHLOROPHENOL	95954	No Criteria	No Criteria	---	---	---	---	---	---	---	
2,4,5TRICHLOROPHENOL	88062	No Criteria	No Criteria	---	---	---	---	---	---	---	
2,4,6TRINITROPHENOL	1330207	No Criteria	No Criteria	---	---	---	---	---	---	---	
XYLENE		No Criteria	No Criteria	---	---	---	---	---	---	---	

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### 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) 222-4700 or (401) 222-3070 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 (1)(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 public 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 <sup>3</sup> /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 <sub>3</sub> -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 <sub>3</sub> -N	nitrate nitrogen as nitrogen
NO <sub>2</sub> -N	nitrite nitrogen as nitrogen
NO <sub>3</sub> -NO <sub>2</sub>	combined nitrate and nitrite nitrogen as nitrogen
Cl <sub>2</sub>	total residual chlorine

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

PUBLIC NOTICE OF PROPOSED PERMIT ACTIONS UNDER THE RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM (RIPDES) PROGRAM WHICH REGULATES DISCHARGES INTO THE WATERS OF THE STATE UNDER CHAPTER 46-12 OF THE RHODE ISLAND GENERAL LAWS OF 1956, AS AMENDED.

DATE OF NOTICE: Thursday, October 25, 2018

PUBLIC NOTICE NUMBER: PN-18-06

**DRAFT RIPDES PERMITS**

RIPDES PERMIT NUMBER: **RI0021601**

NAME AND MAILING ADDRESS OF APPLICANT:

**Providence Water**  
125 Dupont Drive  
Providence, RI 02907

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**P.J. Holton Water Treatment Plant**  
61 North Road, Route 116  
Scituate, RI 02831

RECEIVING WATER: unnamed tributary to the Pawtuxet River – North Branch

RECEIVING WATER CLASSIFICATION: B

The facility which is the source of the wastewater discharge is engaged in the production of potable water. The facility has reapplied to the Rhode Island Department of Environmental Management for reissuance of an individual RIPDES permit to discharge water from the treatment plant. The discharge is composed of treated filter backwash, treated sedimentation basin cleaning discharges, and treated water quality analyzer flows. The wastewater is treated using a settling lagoon system and is discharged to an unnamed tributary which discharges into the Pawtuxet River – North Branch through one of two outfalls 001B or 002A. The draft permit contains discharge limits that are protective of water quality.

RIPDES PERMIT NUMBER: **RI0021601**

NAME AND MAILING 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: Blackstone River

RECEIVING WATER CLASSIFICATION: B1

The facility which is the source of the wastewater discharge is engaged in the production of potable water. The facility has reapplied to the Rhode Island Department of Environmental Management for reissuance of an individual RIPDES permit to discharge water from the treatment plant. The discharge to the Blackstone River is composed of treated filter backwash via outfall 002B, and may include emergency overflows of potable water via outfall 003A. The wastewater from the filter backwash process is treated using a settling lagoon system. The draft permit contains discharge limits that are protective of water quality.

RIPDES PERMIT NUMBER: **RI0001619**

NAME AND MAILING ADDRESS OF APPLICANT:

**The Town of Jamestown**  
93 Narragansett Avenue  
Jamestown, RI 02835

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**Jamestown Water Treatment Plant**  
North Road  
Jamestown, RI 02835

RECEIVING WATER: Unnamed Tributary to West Passage

RECEIVING WATER CLASSIFICATION: SA

The facility which is the source of the wastewater discharge is engaged in the production of potable water. The facility has reapplied to the Rhode Island Department of Environmental Management for reissuance of an individual RIPDES permit to discharge water from the treatment plant. The discharge is composed of treated ultrafiltration filter backwash and solids drying underdrain effluent. The discharge is made to an unnamed tributary to the West

Passage via outfall 002A. The wastewater from the filter backwash process is treated using sedimentation tanks. The draft permit contains discharge limits that are protective of water quality.

The DEM has determined that the proposed activities for these three above three facilities comply with the Policy on the Implementation of the Antidegradation Provisions of the Rhode Island Water Quality Regulations and that existing uses will be maintained and protected. A detailed evaluation of the water quality impact from the proposed activities and any important benefits demonstrations, if required, may be found in the statement of basis which is available as noted below.

#### **FURTHER INFORMATION:**

A statement of basis (describing the type of facility and significant factual, legal and policy questions considered in these permit actions) may be obtained at no cost by writing or calling DEM as noted below:

Samuel Kaplan, P.E.  
Rhode Island Department of Environmental Management  
Office of Water Resources  
Permits Section  
235 Promenade Street  
Providence, Rhode Island 02908-5767  
(401) 222-4700 x7046

The administrative record containing all documents relating to these permit actions is on file and may be inspected, by appointment, at the DEM's Providence office mentioned above between 8:30 a.m. and 4:00 p.m., Monday through Friday, except holidays.

#### **PUBLIC COMMENT AND REQUEST FOR PUBLIC HEARING:**

Pursuant to Chapter 42-17.4 of the Rhode Island General Laws a public hearing has been scheduled to consider these permits if requested. Requests for a Public Hearing must be submitted in writing to the attention of Samuel Kaplan, P.E. at the address indicated above. Notice should be taken that if DEM receives a request from twenty-five (25) people, a governmental agency or subdivision, or an association having no less than twenty-five (25) members on or before Monday, November 26, 2018, a public hearing will be held at the following time and place:

Thursday, November 29, 2018 5:00 PM  
Room 280  
235 Promenade Street  
Providence, Rhode Island 02908

Interested persons should contact DEM to confirm if a hearing will be held at the time and location noted above.

235 Promenade Street is accessible to the handicapped. Individuals requesting communication assistance (assistive listening devices/readers/interpreters/captions) must notify the D.E.M. at the telephone number listed above or at 831-5508 (T.D.D.) 48 hours in advance of the hearing date.

Interested parties may submit comments on the permit actions and the administrative record to the address above no later than 4:00 PM on Friday, November 30, 2018.

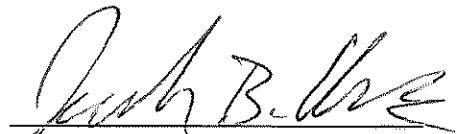
If, during the public comment period, significant new questions are raised concerning the permit, DEM may require a new draft permit or statement of basis or may reopen the public comment period. A public notice will be issued for any of these actions.

Any person, including the permittee/applicant, who believes these permit actions are inappropriate, must raise all reasonably ascertainable issues and submit all reasonably available arguments and factual grounds supporting their position, including all supporting material, by the close of the public comment period under Rule 41. The public comment period is from Thursday, October 25, 2018 to Friday, November 30, 2018. Commenters may request a longer comment period if necessary to provide a reasonable opportunity to comply with these requirements. Comments should be directed to DEM as noted above.

#### **FINAL DECISION AND APPEALS:**

Following the close of the comment period, and after a public hearing, if such hearing is held, the Director will issue a final decision and forward a copy of the final decision to the permittee and each person who has submitted written comments or requested notice. Within 30 days following the notice of the final decision, any interested person may submit a request for a formal hearing in accordance with the requirements of Rule 49.

10/18/18  
Date



Joseph B. Haberek, P.E.  
Supervising Sanitary Engineer  
Permits Section, Office of Water Resources  
Department of Environmental Management