

FALL RIVER, MA

NPDES Potable Water Treatment Facility General Permit
MAG640000 and NH640000

Page 7 of 15

B. Filing with MassDEP – As previously noted, **only** facilities in Massachusetts that were previously unpermitted and discharge to an Outstanding Resource Water (ORW) and High Quality Waters must submit an NOI to MassDEP. In such cases, a completed copy of the NOI must also be sent to:

Massachusetts Department of Environmental Protection
Division of Watershed Management
8 New Bond Street
Worcester, MA 01606

C. Filing with NH DES – All applicants in New Hampshire must also provide a completed copy of their NOI to NH DES at the following address:

New Hampshire Department of Environmental Services
Water Division, Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302-0095

PRIOR PERMIT MAG640081

III. Suggested Notice of Intent (NOI) Format

A. Facility Information

1. *Indicate applicable General Permit for discharge* MAG640000
NHG640000

2. *Facility Data*

Facility Name Fall River Water Treatment Facility

Street/PO Box 1831 Bedford Street City Fall River

State Massachusetts Zip Code 02723

Latitude 41.698951 Longitude -71.119723

SIC Code(s) _____

Type of Business Municipal Drinking Water Filtration Facility

3. *Facility Mailing Address (if different from Location Address, above)*

Facility Name _____

Street/PO Box _____ City _____

State _____ Zip Code _____

4. Facility Owner:

Legal Name City of Fall River – Water Department

Email tsullivan@fallriverma.org

Street/PO Box One Government Center City Fall River

State Massachusetts Zip Code 02722

Contact Person Terrance Sullivan Tel # 508-324-2320

Owner is (check one): Federal State Tribal Private

Other (describe)

Municipality _____

5. Facility Operator (if different from above):

Legal Name City of Fall River - Water Department

Email gouillette@fallriverma.org

Street/PO Box 1831 Bedford Street City Fall River

State Massachusetts Zip Code 02723

Contact Person Gerald Ouillette Tel # 508-324-2723

6. Currently (Administratively) Covered Under the Expired PWTF General Permit? (Please check yes or no):

Yes No

a) Has a prior NPDES permit (either individual or general permit coverage) been granted for the discharge that is listed on the NOI? Yes No If Yes, Permit Number MAG640081

b) Is the discharge a "new discharger" as defined by 40 CFR Section 122.22? Yes No

c) Is the facility covered by an individual NPDES permit for other discharges? Yes No

If yes, Permit Number: _____

d) Is there a pending NPDES application (either individual or general permit) on file with EPA for this discharge? Yes No

If yes, date of submittal: _____ and Permit Number, if available _____

7. Attach a topographic map indicating the location of the facility and the outfall(s) to the receiving water. **Map attached? Yes**

B. Discharge Information (Attach additional sheets as needed):

1. Name of receiving water into which discharge will occur: North Watuppa Pond

Check Appropriate Box: Freshwater Marine Water

State Water Quality Classification Class A

Type of Receiving Water Body (e.g., stream, river, lake, reservoir, estuary, etc.) Reservoir

2. Indicate the frequency of the discharge:

Emergency Only Infrequent (Once/Twice a Year) Intermittent*** Continuous

Other***

***If Intermittent (i.e., occurs sometimes but not regularly as in batch discharge), provide # of days per year the discharge occurs _____

***If Other, explain _____

3. Describe the discharge activities for which the owner/applicant is seeking coverage, including process discharges not specifically authorized in the PWTF GP which need to be authorized for discharge (and which attain the effluent limits and other conditions of the general permit.)

(This description should include all treatment methods used on the wastewater prior to discharge including lagoons, baffles, filter presses, etc. If lagoons are used at the facility, please include the number and size of lagoons; the size and elevation of the entry pipe; the time of travel from the entry point of the discharge into the lagoon to the entry point to the receiving waters; and the length of backwash cycle for any combination of filters.)

See Attachment

4. Attach a line drawing or flow schematic showing water flow through the facility including sources of intake water, operations contributing to flow, treatment units, outfalls, and receiving water(s).

Line drawing or flow diagram attached? Yes (Attachment _____)

5. Identify the source of the water being discharged:

Surface water Groundwater Other (Attachment D)

6. Number of Outfalls 1 Latitude and Longitude to the nearest second for each Outfall. Attach additional pages if necessary.

Outfall # Latitude 41.700480 Longitude -71.119726
Outfall # Latitude _____ Longitude _____
Outfall # Latitude _____ Longitude _____

7. For each outfall, indicate the proposed sampling location(s) for both effluent and ambient water (when applicable) and proposed consistent times of the month for collecting samples:

Outfall #
Lagoon Overflow - Emergency Only

Outfall #

Outfall #

C. Effluent Characteristics

1. List here and attach additional information (on separate sheet) on any water additives used at the facility. This includes chemicals (including aluminum, iron, or phosphorus-containing chemicals) for pH adjustment, dechlorination, control of biological growth, and control of corrosion and scale in water pipes.

Please see attached.

2. Report any known remediation activities or water quality issues in the vicinity of the discharge

None known

3. Are aluminum compounds or polymers used as coagulants at this facility?*

(PAC) Polyaluminum Chloride Yes No

*If answer is "Yes" and the facility was *not* covered under the PWTF GP that expired on

10/2/14, additional monitoring data and information is required. **Please complete Item III.C.12.**

4. Does the facility use any alum-based products for algae control?*

Yes_ No

*If answer is "Yes" and the facility was *not* covered under the PWTF GP that expired on 10/2/14, additional monitoring data and information is required. **Please complete Item III.C.12.**

5. Are iron-containing coagulants used at this facility?

Yes No

(PAC may contain minimal iron.)

6. Does the facility's discharge contain residual chlorine?

Yes No

[If Yes, EPA will calculate a Total Residual Chlorine effluent limit for your facility]

7. Does the facility provide treatment to remove arsenic from the raw water source? Yes No

8. a. Are phosphorus-containing chemicals added to the treated water at this facility? Yes No

b. If answer to 8.a. is Yes, does the facility discharge to Phosphorus-Impaired waters? Yes No

c. If answer to 8.b. is Yes, provide name of P-Impaired waterbody: _____

9. Does the facility remove radium or other radioactive substances from raw water sources to comply with drinking water standards? Yes No

10. Provide the reported or calculated seven day- ten year low flow (7Q10) of the receiving water 7Q10: _____ cfs

NOTE: For facilities that discharge in New Hampshire, the state permitting authority **must** be contacted at the address listed in Appendix VI of the PWTF GP to determine and/or confirm the 7Q10 and/or dilution factor. For facilities that discharge in Massachusetts, it is highly recommended to contact the relevant state authority (MassDEP) to determine and/or confirm the 7Q10 and/or dilution factor. Attach any calculation sheets used to support the stream flow and dilution factors. See Appendix VII for equations and additional information.

11. For *each* outfall, provide the following discharge information:

Outfall # 1

a) *Design Flow of Facility (in million gallons per day, MGD):* 26 MGD
This value will determine the facility's daily maximum flow limit, up to a maximum of 1.0 MGD.

b) *Discharge Flow (in gallons per day, GPD):*

Maximum Daily Flow 144,714 GPD Average Monthly Flow 0 GPD

c) *TSS (mg/l):* Number of samples: _____ (Minimum of 10 samples)

Maximum Daily _____ mg/l Average Monthly _____ mg/l

d) pH (s.u.) : Number of samples: _____ (Minimum of 10 samples)
Minimum _____ s.u. Maximum _____ s.u.

e) Total Residual Chlorine (ug/l): Number of samples: _____ (Minimum of 10 samples)
Maximum Daily _____ ug/l

NOTE: TRC is only required for discharges which have been previously chlorinated or contain residual chlorine

12. The following section must be completed for any facility that answered "Yes" to Question III.C.3 or III.C.4 (e.g. adds an aluminum-containing chemical to the water being treated and/or discharged) AND was not covered under the previous PWTF GP (which expired on 10/2/14).

- a) Collect, analyze and submit **12 effluent samples and 10 ambient surface water samples** from a location upstream of and not affected by the discharge. For facilities in New Hampshire and Massachusetts, each sample should be analyzed for total recoverable Al in micrograms per liter. All laboratory results shall be submitted on a separate sheet.
- a. The samples shall be composite samples consisting of four grab samples taken at approximately equal intervals on a flow weighted basis during the time at which the discharge is entering the receiving water after the start of the backwash cycle.
 - b. For each sampling event, the effluent and surface water samples shall be collected on the same day and during a representative discharge event. The samples shall be no more frequent than weekly and, if time allows in completing the NOI, at monthly intervals and at different flow conditions. If taking the ambient water quality sample from lakes/reservoirs, the 10 samples should be composited vertically.
 - c. Discharge flow at the time of effluent sampling should be recorded. Flow conditions at the time of ambient water sampling should be recorded (or estimated from nearest gaging station).
 - d. Do not include dilution when recording the results.
 - e. See Section 2.1.2.3 and Footnote 12 of Section 2.1.1 for MA facilities (or Section 3.1.2.3 and Footnote 10 of 3.1.1 for NH facilities) for key information on minimum level for analysis and sufficiently sensitive test procedures.
 - f. Sampling data that was collected within one year of the effective date of this general permit AND that adheres to all of the requirements above may be submitted in lieu of new samples. This must be denoted with the submitted data.
- b) Provide a description of control measures, chemical substitutions, waste handling methods, and operational changes evaluated and/or used by the facility to minimize the discharge of aluminum to surface waters. (Include additional sheet(s), if necessary)

Attachment.

D. Endangered Species Act Eligibility Information

Using the instructions in Appendix III of the PWTF GP, which of the following criteria apply to your facility?

U.S. Fish and Wildlife Service (USFWS) Criteria: A B C

1. If you selected USFWS criteria B, has consultation with the U.S. Fish and Wildlife Service been completed?

Yes No

2. If consultation with US Fish & Wildlife Service was completed, was a written concurrence finding that the discharge is "not likely to adversely affect" listed species or critical habitat received?

Yes No

3. Attach documentation of ESA eligibility for USFWS as required at Part 1.4 and Appendix III of the General Permit. **Documentation attached?** _____

4. For facilities seeking coverage under the Potable Water Treatment Facility General Permit for the *first* time, respond to the following questions to assist in ESA eligibility for NMFS:

a) Indicate if the facility discharges into any of the stretches of the following rivers which can support or provide habitat to either Shortnose or Atlantic Sturgeon:

Merrimack River (from Essex Dam in Lawrence, Downstream (including Haverhill) to mouth of River) Yes No

Connecticut River (from Turner's Falls, downstream through Holyoke (including Holyoke Dam region) Yes No

Taunton River Yes No

Piscataqua River (in NH) Yes No

b) Has the facility had any previous formal or informal consultation with NMFS?

Yes No

If yes, attach the results of the consultation(s). **Documentation attached?** _____

E. National Historic Properties Act Eligibility

1. Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility site or in proximity to the discharge? Yes No

2. Have any State or Tribal Historic Preservation Officers been consulted in this determination?
Yes No

If yes, attach the results of the consultation(s). Documentation attached? _____

3. Which of the three National Historic Preservation Act scenarios listed in Appendix II, Section III have you met?

1 2 3

F. Supplemental Information

Please provide any supplemental information, including antidegradation review information applicable to new or increased discharges. Attach any analytical data used to support the application. Attach any certification(s) required by the General Permit.

G. Signature Requirements

The NOI must be signed by the operator in accordance with the signatory requirements of 40 CFR § 122.22 (see below) including the following certification:

I certify under penalty of law that (1) the discharge for which I am seeking coverage under the general permit consists solely of a surface water discharge from a potable water treatment facility; (2) any chemicals used to treat the discharge have been identified in this NOI; and (3) where applicable, the facility has complied with the requirements of this permit specific to the Endangered Species Act and National Historic Preservation Act.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature _____

G. Ouislette

Date 06/02/17

Printed Name and Title _____

Gerald Ouislette Director of Treatment

Federal regulations require this application to be signed as follows:

1. For a corporation, by a responsible corporate party;
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively, or,
3. For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

Note: Permits No. MAG640000 and NHG640000 may be found at <http://www3.epa.gov/region1/npdes/pwtfgp.html>

H. "Opt-Out Request" from NetDMR Requirement

1. Check the box if you **are** applying for an "opt-out request."
2. Provide a detailed explanation of the technical or administrative factors that support your request to "opt-out" from the requirement to submit DMRs and reports electronically. (Add additional lines, if necessary.)

City of Fall River, Massachusetts

NPDES Potable Water Treatment Facility General Permit

Attached Narrative

In 2015 the City completed an \$800,000 project where we rebuilt our Residuals Pumping Station. Two processes here at the plant discharge into this pumping station.

Sedimentation Basin Sludge

The plant utilizes Polyaluminum Chloride (PAC) as the coagulant in its Flocculation/Sedimentation process. This process is pH sensitive so Sodium Hydroxide (NaOH) is added for pH adjustment. In the basins, floc particles are formed and settled to the bottom of the basin. The settled sludge is mechanically collected and pumped directly to the Residuals Pumping Station. This pumping occurs once per week for 24 hours at a flow rate of approximately 440 gallons per minute. The total weekly basin discharge is approximately 635,000 gallons.

Filter Backwash

After Flocculation/Sedimentation, the clarified water flows through one of four Rapid Sand Filters to remove any remaining particles. A total of six filter backwashes are performed daily. The filter backwash rate is approximately 200 gallons per minute each backwash lasts 45 minutes. Filter wash water flows directly to the Residuals Pumping Station. The total daily filter wash water is 54,000 gallons.

The newly rebuilt Residuals Pumping Station pumps approximately 1,013,000 gallons of effluent each week to our Waste Water Treatment Facility (via collections system).

The Residuals Pumping Station is equipped with two submersible 40 horsepower centrifugal pumps. Each pump pumps 700 gpm and they are configured redundantly. They do not run at the same time and they alternate every 24 hours. Further redundancy is an auxiliary pump connection on the forced main. In the event of failure of both pumps, a mobile auxiliary pump would be utilized to pump sludge into the forced main.

The Residuals Pumping Station has two 16 inch sluice gates that connect it to two large lagoons. Each lagoon holds approximately 700,000 gallons. The lagoons have a combined storage capacity of 1.4 million gallons or approximately 10 days of effluent storage. The North Lagoon has an overflow into the North Watuppa Reservoir.

The lagoons are only utilized during severe cold to avoid possible damage to the forced main due to freezing. During severe cold weather, effluent is stored in these lagoons so that when the pumps are run, they are run continually to avoid freezing in the forced main.

Only in the event of catastrophic failure of multiple redundant systems, would clarified water ever be discharged to the reservoir.

Fall River Water Treatment Standard Operating Procedure for Warm Weather Operation of Residuals Lift Station

Authors: GO
Modification:

Date: 01-12-16
Date:

Checked by: Date:
Checked by: Date:

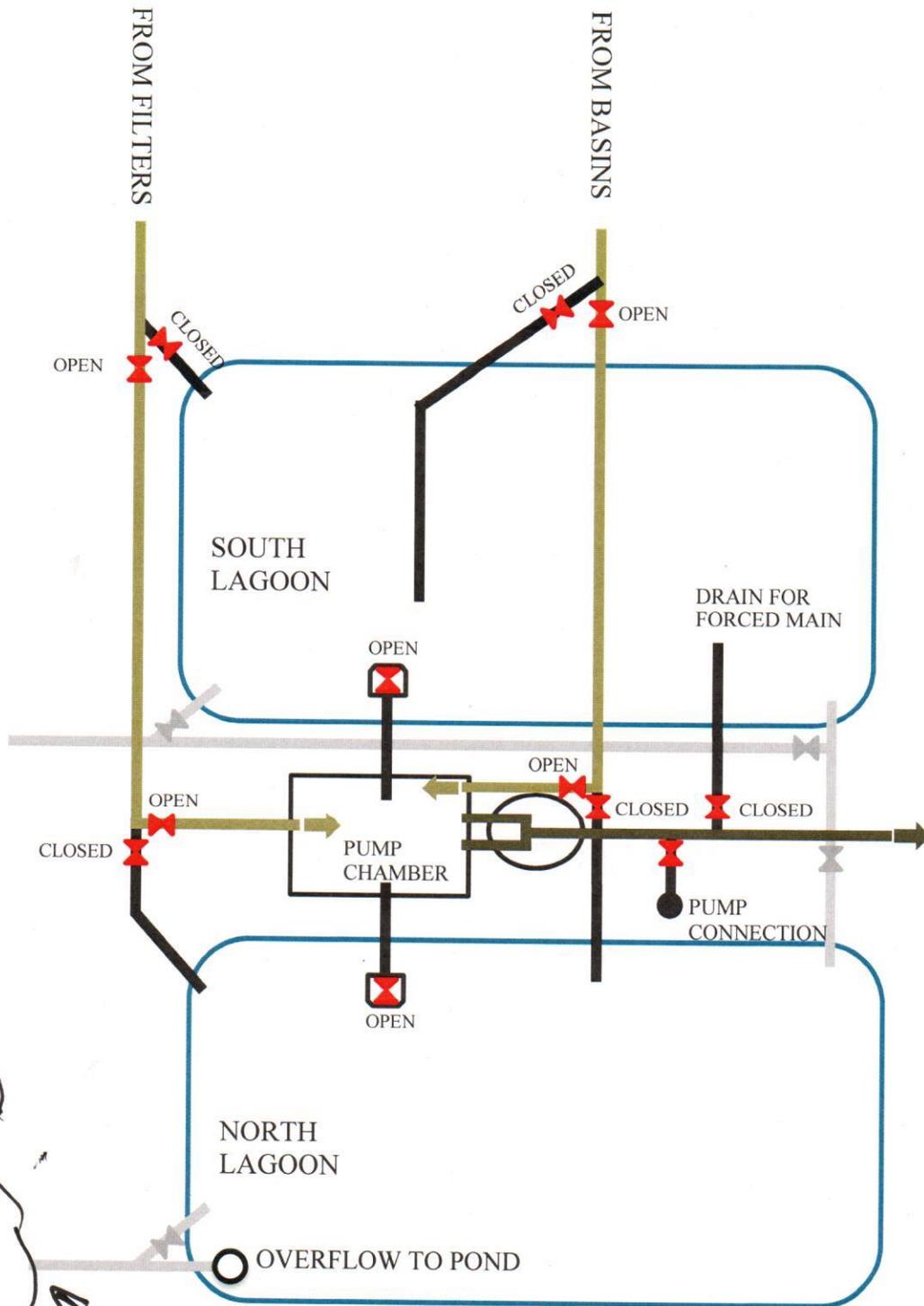
1. **Objective:** Effective management of the Residuals Lift Station during warm weather conditions.

2. **Equipment:** Residuals Lift Station, Gate Wrenches (8' and 10')

3. **Procedure:** During normal warm weather conditions, the Residuals Lift Station will operate fully in automatic with the level being maintained by the PLC. The floats act as a backup to the PLC. Only one pump is able to run at a time. Refer to the attached diagram for valve positions and directions of flow.

Warm Weather Normal Operation

Sludge is pumping to the lift station. Filter Backwash is flowing to the lift station. North and South lagoon slide gates have been adjusted to allow for simultaneous backwash and sludge run.



Sampling Point

**Fall River Water Treatment
Standard Operating Procedure
Cold Weather Operation of Residuals Lift Station**

Authors: GO
Modification: GO

Date: 01-12-16
Date: 12-19-16

Checked by: Date:
Checked by: Date:

1. **Objective:** Effective management of the Residuals Lift Station during severe cold weather conditions.

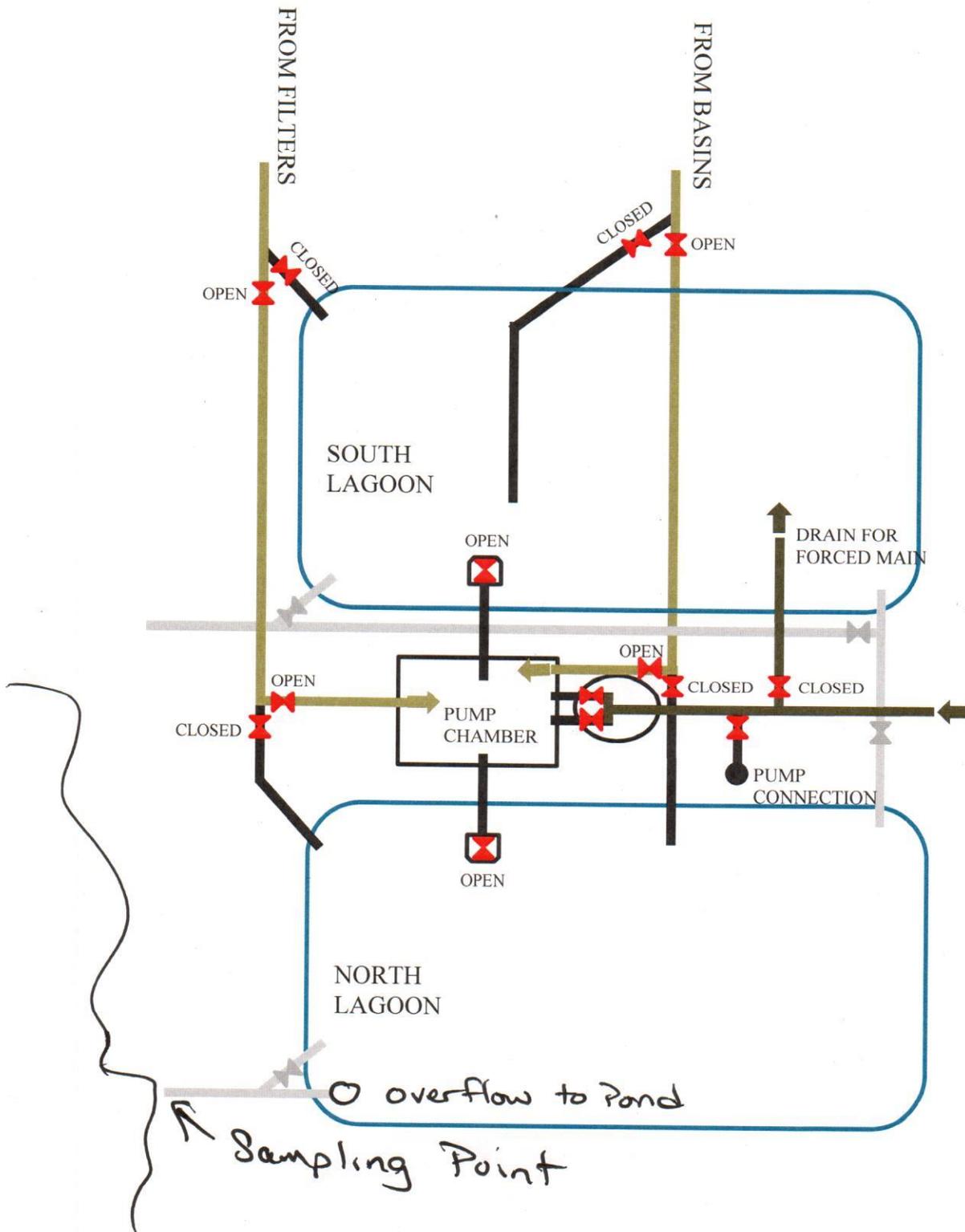
2. **Equipment:** Residuals Lift Station, Gate Wrenches (8' and 10')

3. **Procedure:**
 - a. During severe cold weather conditions, the sludge pumps will be turned to off and the forced main drain must be opened. See diagram below for valve configurations.

Cold Weather Operation

In severe cold weather, the pumps are to be turned off and the drain for the forced main is to be opened. The backwash and sludge valves must be in this configuration. Inlet structure sluice gates must both be open 6".

Sludge and backwash are flowing to the chamber. Ice must be checked daily to avoid damage to sluice gates on inlet structures.



How to Find and Download Products

Use Map

Box/Point Current Extent Coordinates Located Point Polygon:

Users can find products in the following steps. [\(Tutorial Videos\)](#)

1 Degree 15 Minute 7.5 Minute All Zoom in to make 7.5 min indices visible

Using The National Map Download Client

Downloading Maps with The National Map Download Client

Search locations Using The National Map Download Manager

Go

A. [Find Products](#) Clear



Previously
Submitted

FALL RIVER WATER TREATMENT PLANT

PROCESS DESCRIPTION

The Fall River Water Treatment Facility @ 1831 Bedford Street is a rapid sand filtration plant designed to produce potable drinking water. This facility became operational and went on line in mid-1970s. The basic process is as follows: water is drawn from the resource, disinfected, pH adjusted and fluoridated. This water is then pumped into the municipal distribution system for use by the citizens of Fall River and three (3) surrounding communities.

The plant has a maximum capacity of 26 MGD, however due to low demand, it currently produces between 10 – 12 MGD. The reduced demand is primarily due the loss of industry over the past 35 +/- years. By way of example, in 1979, the average daily flow was 18 – 22 MGD, dropping to an average daily flow of 15 – 17 MGD in 2005 and is currently (as noted above) producing 10 – 12 MGD in 2013.

The basic processes employed are: flocculation/coagulation, sedimentation, filtration and disinfection.

The primary raw water source is the North Watuppa Pond, located directly east and south of the plant. Water is drawn into the plant, pH adjusted using sodium hydroxide, carbon dioxide is added for corrosion control and polyaluminum chloride is added as a coagulant. The water is then flowed through settling basins to remove colloidal solids. Subsequent to settling, the water is run through multi-media down flow filters, pH re-adjusted to approximately 8.2, fluoride is added and the finished water is again disinfected using chlorine gas to ensure that there are no levels of bacteria that would present problems to the public health, safety and welfare. This finished water product is then pumped into the distribution system for drinking/bathing by residential customers and for use in manufacturing processes by other industrial/commercial users.

The major raw materials are:

1. Water from the North Watuppa Pond.
2. Polyaluminum chloride.
3. Carbon dioxide gas.
4. Sodium hydroxide (25%).
5. Sodium fluorosilicate.
6. Sodium Hypochlorite 15%

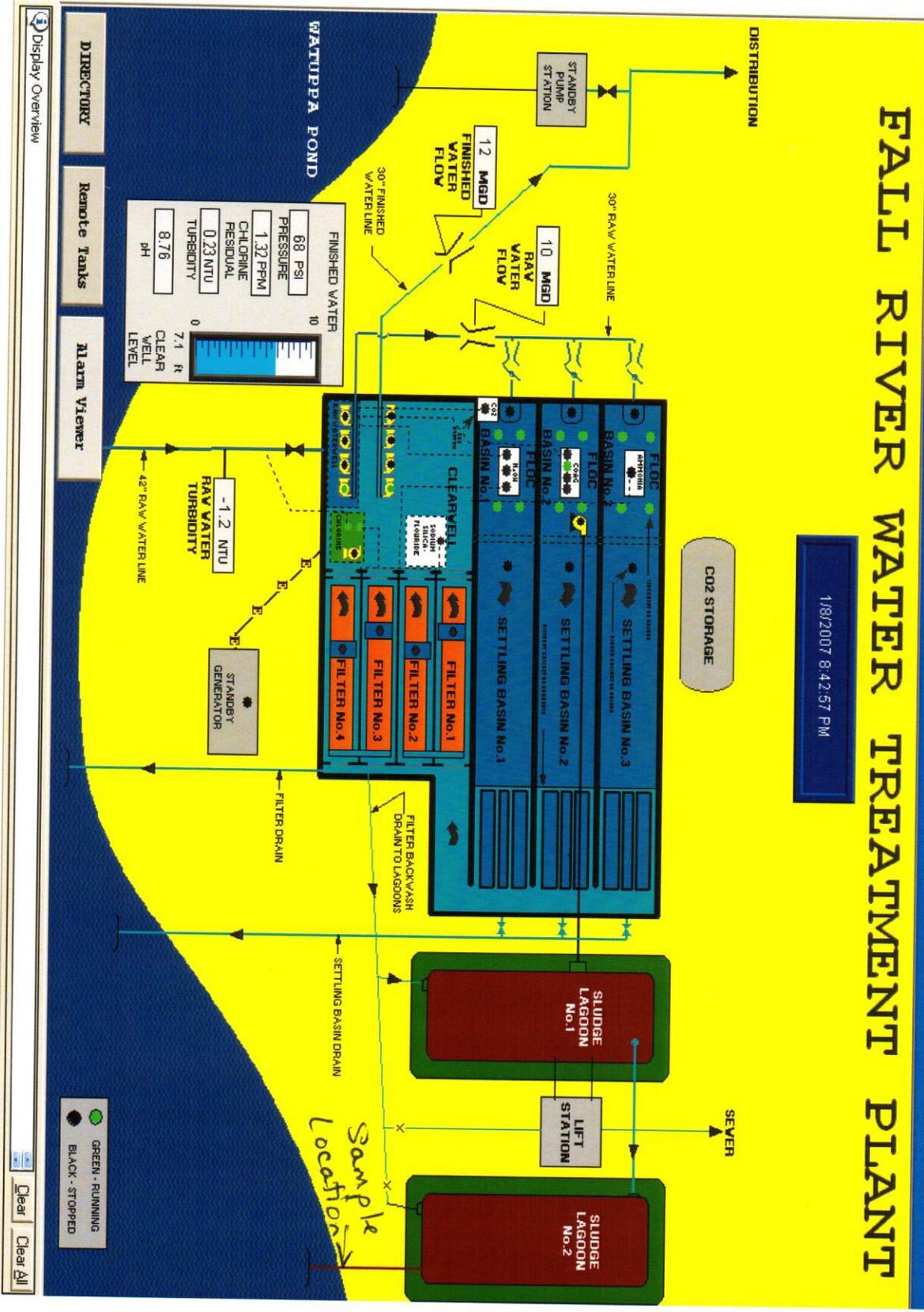
Additionally, 5000 gallons of #2 fuel oil are stored on-site in an AST with secondary containment. This #2 fuel is used solely for heating and to power the back-up emergency generator when needed.

Previously Submitted

FRWTPClient - RSView SE Client

FALL RIVER WATER TREATMENT PLANT

1/8/2007 8:42:57 PM



Display Overview

Remote Tanks

Alarm Viewer

GREEN - RUNNING
 BLACK - STOPPED

Clear Clear All

Plant overview.

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City of Fall River, Massachusetts Water Treatment Plant

2008

