

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND - REGION I  
ONE CONGRESS STREET, SUITE 1100  
BOSTON, MASSACHUSETTS 02114-2023**

**Request for General Permit Authorization to Discharge Wastewater  
(Notice of Intent to be covered by the General Permit (NOI))**

**Potable Water Treatment Facility (PWTF)  
NPDES General Permit No. MAG640000 and NHG640000**

**A. Facility Information**

1. Facility Owner:

Name \_\_\_\_\_ e-mail \_\_\_\_\_  
Street/PO Box \_\_\_\_\_ City \_\_\_\_\_  
State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Contact Person \_\_\_\_\_ Telephone Number \_\_\_\_\_

2. Facility Operator (if different from above):

Name \_\_\_\_\_ e-mail (optional) \_\_\_\_\_  
Street/PO Box \_\_\_\_\_ City \_\_\_\_\_  
State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Contact Person \_\_\_\_\_ Telephone Number \_\_\_\_\_

3. Facility Data (attach topographic map or other map showing facility/discharge location):

Name \_\_\_\_\_ e-mail (optional) \_\_\_\_\_  
Street/PO Box \_\_\_\_\_ City \_\_\_\_\_  
State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Contact Person \_\_\_\_\_ Telephone Number \_\_\_\_\_  
Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

4. Standard Industrial Classification (SIC Codes) and Descriptions of Processes:

SIC Code(s) \_\_\_\_\_  
Description(s) \_\_\_\_\_

5. Current Permitting Status (please check yes or no):

1. Has a prior NPDES permit been granted for the discharge? Yes \_\_\_\_ (Permit Number: \_\_\_\_\_)  
No \_\_\_\_
2. Is the discharge a "new discharge" as defined by 40 CFR Section 122.22? Yes \_\_\_\_ No \_\_\_\_
3. Is the facility covered by an individual NPDES permit? Yes \_\_\_\_ (Permit Number \_\_\_\_\_) No \_\_\_\_
4. Is there a pending application on file with EPA for this discharge? Yes \_\_\_\_ (Date of submittal: \_\_\_\_\_)  
No \_\_\_\_

**B. Discharge Information**

1. Name of Receiving Waterbody \_\_\_\_\_
2. Type of Receiving Waterbody (e.g. stream, lake, reservoir, estuary etc) \_\_\_\_\_
3. State Water Quality Classification: \_\_\_\_\_ Freshwater: \_\_\_\_\_ Marine Water: \_\_\_\_\_
4. 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 water; and the length of backwash cycle for any combination of number of filters. (attach extra sheets if necessary):

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5. Please provide a diagram depicting the treatment methods, outfalls, and receiving water.

6. Number of outfalls: \_\_\_\_\_

For each outfall:

7. What is the proposed sampling location(s) and proposed consistent times of the month for collecting samples:

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### C. Effluent Characteristics

1. List here and attach information on any water additives used at the facility (Including chemicals for pH adjustment, dechlorination, control of biological growth, and control of corrosion and scale in water pipes): \_\_\_\_\_

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2. Please report here any known remediation activities or water-quality issues in the vicinity of the discharge.

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3. Are aluminum-containing coagulants used at this facility? Yes \_\_\_ No \_\_\_

4. Does the discharge contain residual chlorine? Yes \_\_\_ No \_\_\_

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

6. Are phosphorus-containing chemicals added to the treated water at this facility? Yes \_\_\_ No \_\_\_

7. All applicants must attach a separate sheet listing all laboratory results (minimum of five) for total recoverable aluminum (in micrograms per liter) taken within the last six months. Do not include dilution when recording your results. See Section 4.4.5 of General Permit for more information.

8. Please include the following effluent data for each outfall:

| <u>Characteristic (report if measured)</u> | <u>Average Monthly</u> | <u>Maximum Daily</u> |
|--|------------------------|----------------------|
| Discharge Flow (gpd)                       | _____                  | _____                |
| TSS (mg/l)                                 | _____                  | _____                |
| pH (s.u.)                                  | (min) _____            | (max) _____          |
| Total Recoverable Aluminum (ug/l)          | _____                  | _____                |
| Total Residual Chlorine (ug/l)             | _____                  | _____                |

(continued on next page)

8. Continued

Characteristic (report if measured)

Whole Effluent Toxicity (%) LC50 \_\_\_\_\_ and/or C-NOEC \_\_\_\_\_

9. If the discharge contains aluminum and/or residual chlorine, please provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water, the dilution factor, and attach any calculations used to support stream flow and dilution calculations (See Appendix VII for dilution calculations and additional information):

7Q10 \_\_\_\_\_ cfs Dilution Factor \_\_\_\_\_ cfs

**D. Endangered Species Act Eligibility**

1. Using the instructions in Appendix I of the PWTF GP, under which criterion listed in Part II are you eligible for coverage under this general permit?

A \_\_\_\_ B \_\_\_\_ C \_\_\_\_ D \_\_\_\_ E \_\_\_\_ F \_\_\_\_

2. If you selected criteria D or F, has consultation with the federal services been completed? Yes \_\_\_\_ No \_\_\_\_

3. If consultation with U.S. Fish and Wildlife Service and/or NOAA Fisheries 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 \_\_\_\_

4. Attach documentation of ESA eligibility as described below and required at Part 3.4.1 and Appendix I, Part III, Step 4, of the General Permit.

*Criterion A - No federally-listed threatened or endangered species or federally-designated critical habitat are present:* A copy of the most current county species list pages for the county(ies) where your site or facility and discharges are located. You must also include a statement on how you determined that no listed species or critical habitat are in proximity to your site or facility or discharge locations.

*Criterion B – Section 7 consultation completed with the Service(s) on a prior project:* A copy of the USFWS's and/or NMFS's, as appropriate, biological opinion or concurrence on a finding of “unlikely to adversely effect” regarding the ESA Section 7 consultation.

*Criterion C – Activities are covered by a Section 10 Permit:* A copy of the USFWS's and/or the NMFS's, as appropriate, letter transmitting the ESA Section 10 authorization.

*Criterion D - Concurrence from the Service(s) that the discharge is “not likely to adversely affect” federally-listed species or federally-designated critical habitat (not including the four species of concern identified in Section I of Appendix I):* A copy of the USFWS's and/or the NMFS's, as appropriate, letter or memorandum concluding that the discharge is consistent with the general permit's “not likely to adversely affect” determination.

*Criterion E – Activities are covered by certification of eligibility:* A copy of the documents originally used by the other operator of your site or facility (or area including your site) to satisfy the documentation requirement of Criteria A, B, C or D.

*Criterion F - Concurrence from the Service(s) that the discharge is “not likely to adversely affect” species of concern, as identified in Section I of Appendix I:* A copy of the USFWS and/or the NMFS, as appropriate, concurrence with the applicant's determination that the discharge is “not likely to adversely affect” listed species.

**E. National Historic Properties Act Eligibility**

1. Using the instructions in Appendix III of the PWTf GP, under which criterion listed in Part III are you eligible for coverage under this general permit?

1  2 \_\_\_ 3 \_\_\_

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).

#### F. Certification

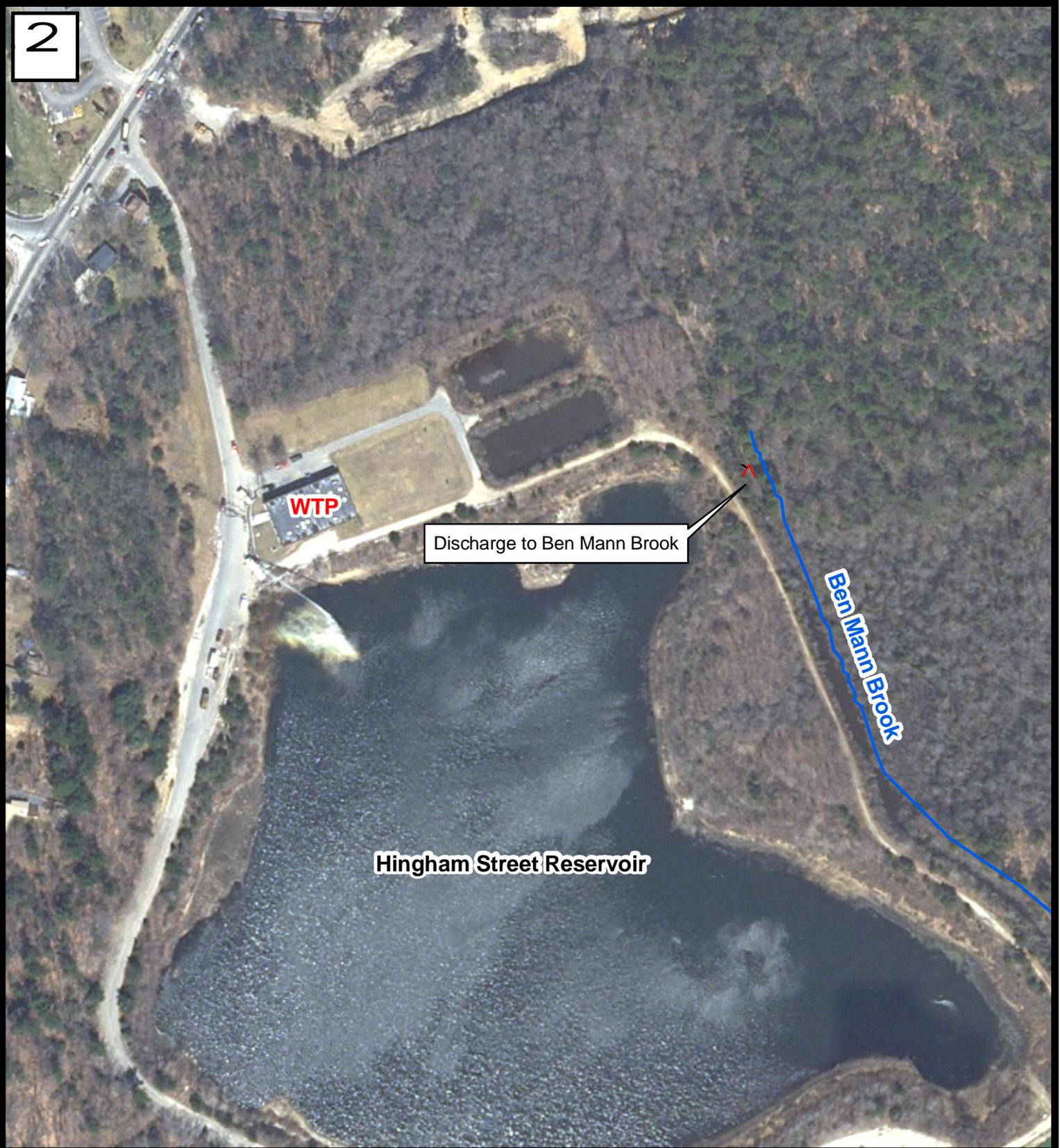
I certify that the discharge for which I am seeking coverage under the general permit consists solely of a surface water discharge from a potable water treatment facility. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on 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 am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature *Dan T. Callahan* Date December 30, 2009  
Printed Name and Title Dan Callahan, Superintendent

Federal regulations require this application to be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For 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 [www.epa.gov/region1/npdes/pwtfgp.html](http://www.epa.gov/region1/npdes/pwtfgp.html)



**Abington & Rockland Joint Water Works  
NPDES General Permit, December 2009  
Hannigan WTP  
Rockland, MA**

**Weston & Sampson**  
ENGINEERS, INC.



Data Source:  
Office of Geographic and Environmental Information (MassGIS),  
Commonwealth of Massachusetts Executive Office of  
Environmental Affairs

# HANNIGAN WATER TREATMENT PLANT

## Existing Residuals and Filter Backwash Practice

### Residuals from Sedimentation Basins

The existing sedimentation basins discharge 16,000 gallons per day of thickened residuals (1-2% solids) to one of the two existing onsite lagoons (Basin 810 and 820). The capacity of each lagoon is approximately 580,000 gallons. The residuals discharge flow thru a single lagoon to a decant pipe and then settle effluent flows to Ben Mann Brook via the existing outfall. As solids build up in the lagoons, the operators manually switch the discharge between the two lagoons to allow settling of thickened residuals. Thickened residuals are removed periodically by pumper truck, thickened off site and disposed of.

### Existing Backwash Waste Flows

The sand filters at the water plant are backwashed several times a day. Depending on the water quality from the sedimentation basin effluent and system water demands, the volume of backwash water varies between 27,000 gallons per day and 79,000 gallons per day. The backwash waste flows are either recycled to the head of the water treatment facility or are discharged to one of the one site lagoons. This flow is co-mingled with the residuals from the sedimentation basin. The settled effluent from the in service lagoon then flows to Ben Mann Brook via the existing outfall.

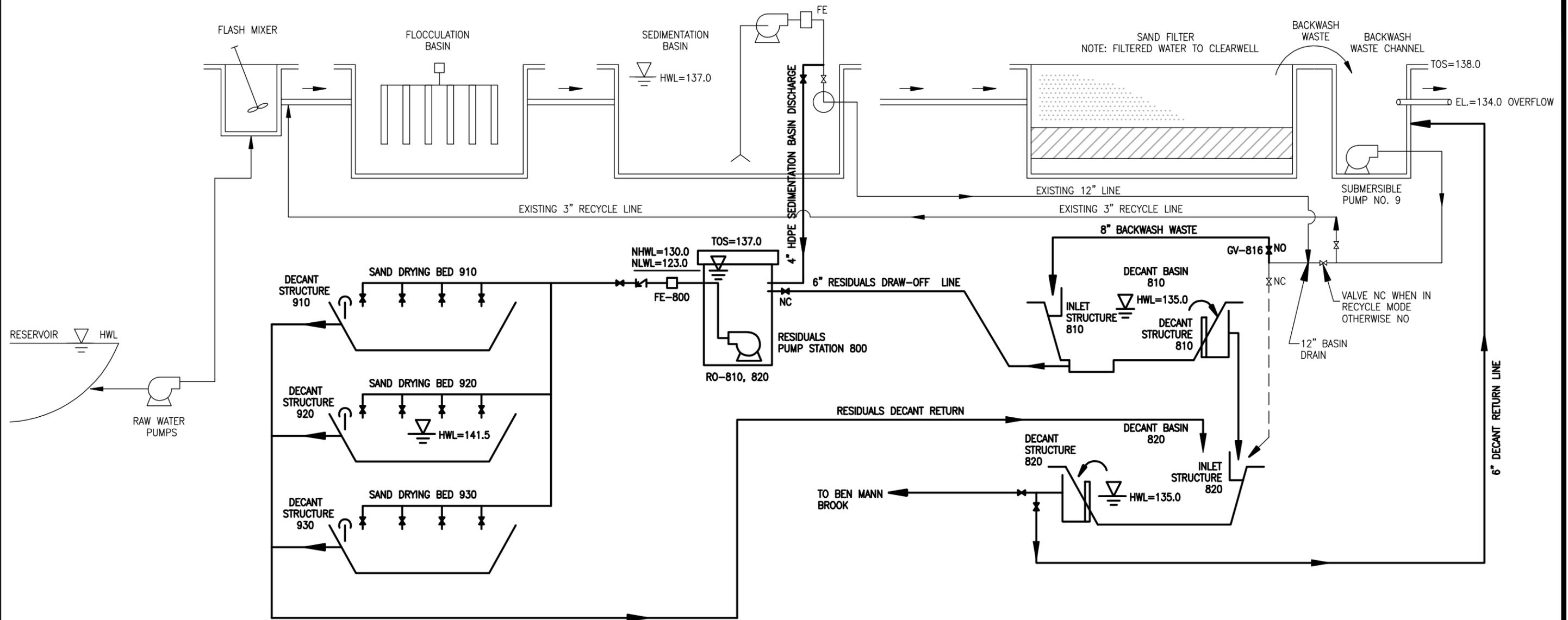
## Proposed Residuals and Filter Backwash Practice (beginning Spring 2010)

### Residuals from Sedimentation Basins

The existing sedimentation basins discharge 16,000 gallons per day of thickened residuals (1-2% solids) will be pumped to one of three new residual sand drying beds (capacity of 389,000 gallons each) constructed west of the existing lagoons. The drying beds will have the capability of infiltrating the filtered effluent into the ground or decanting liquid and returning it to a reconstructed decant lagoon 820. Decant water from decant lagoon 820 can either be returned to the backwash waste channel (recycled to the WTP influent) or flow to Ben Mann Brook via the existing outfall pipe.

### Backwash Waste Flows

The 27,000 gallons per day to 79,000 gallons per day backwash waste water can either be recycled to the head of the existing water plant or discharge into a reconstructed Basin 810. Settled water from Basin 810 will then flow to Basin 820 (same capacity) where the backwash waste flows are allowed to settle for a second time. The settled effluent from Basin 820 can then either be recycled to the head of the water treatment plant or flow to Ben Mann Brook via the existing outfall.



O: \Abington Rockland JWW\_2080402 Residuals Design\CAD\SCHEM FIGS.dwg

|   |                 |                     |
|---|-----------------|---------------------|
| ABINGTON & ROCKLAND JOINT WATER WORKS<br>HANNIGAN WTP |                 |                     |
| PROCESS SCHEMATIC                                     |                 |                     |
| DESIGNED BY: WJN                                      | CHECKED BY: BKC | DATE: DECEMBER 2009 |
| <b>Weston &amp; Sampson</b> <sup>®</sup>              |                 |                     |

**Hannigan WTP**

| <b>Date</b> | <b>Alum residual ug/L</b> |
|-------------|---------------------------|
| 12/23/2009  | 165                       |
| 12/14/2009  | 61                        |
| 12/1/2009   | 7                         |
| 11/24/2009  | 77                        |
| 11/16/2009  | 28                        |
| 11/9/2009   | 43                        |
| 11/3/2009   | 35                        |
| 10/20/2009  | 56                        |
| 10/14/2009  | 65                        |
| 10/9/2009   | 62                        |
| 9/29/2009   | 81                        |
| 9/9/2009    | 148                       |
| 8/23/1900   | 114                       |
| 8/7/2009    | 113                       |
| 8/2/2009    | 112                       |
| 7/22/2009   | 140                       |
| 7/14/2009   | 133                       |
| 7/7/2009    | 48                        |

**FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES  
IN MASSACHUSETTS**

| COUNTY     | SPECIES                         | FEDERAL STATUS | GENERAL LOCATION/HABITAT  | TOWNS   |
|------------|---------------------------------|----------------|---|---|
| Barnstable | Piping Plover                   | Threatened     | Coastal Beaches   | All Towns   |
|            | Roseate Tern                    | Endangered     | Coastal beaches and the Atlantic Ocean  | All Towns   |
|            | Northeastern beach tiger beetle | Threatened     | Coastal Beaches   | Chatham   |
|            | Sandplain gerardia              | Endangered     | Open areas with sandy soils.  | Sandwich and Falmouth.  |
|            | Northern Red-bellied Cooter     | Endangered     | Inland Ponds and Rivers   | Bourne (north of the Cape Cod Canal)  |
| Berkshire  | Bog Turtle                      | Threatened     | Wetlands  | Egremont and Sheffield  |
| Bristol    | Piping Plover                   | Threatened     | Coastal Beaches   | Fairhaven, Dartmouth, Westport  |
|            | Roseate Tern                    | Endangered     | Coastal beaches and the Atlantic Ocean  | Fairhaven, New Bedford, Dartmouth, Westport                                       |
|            | Northern Red-bellied Cooter     | Endangered     | Inland Ponds and Rivers   | Taunton   |
| Dukes      | Roseate Tern                    | Endangered     | Coastal beaches and the Atlantic Ocean  | All Towns   |
|            | Piping Plover                   | Threatened     | Coastal Beaches   | All Towns   |
|            | Northeastern beach tiger beetle | Threatened     | Coastal Beaches   | Aquinnah and Chilmark   |
|            | Sandplain gerardia              | Endangered     | Open areas with sandy soils.  | West Tisbury  |
| Essex      | Small whorled Pogonia           | Threatened     | Forests with somewhat poorly drained soils and/or a seasonally high water table | Gloucester, Essex and Manchester  |
|            | Piping Plover                   | Threatened     | Coastal Beaches   | Gloucester, Essex, Ipswich, Rowley, Revere, Newbury, Newburyport and Salisbury    |
| Franklin   | Northeastern bulrush            | Endangered     | Wetlands  | Montague  |
|            | Dwarf wedgemussel               | Endangered     | Mill River  | Whately   |
| Hampshire  | Small whorled Pogonia           | Threatened     | Forests with somewhat poorly drained soils and/or a seasonally high water table | Hadley  |
|            | Puritan tiger beetle            | Threatened     | Sandy beaches along the Connecticut River                                       | Northampton and Hadley  |
|            | Dwarf wedgemussel               | Endangered     | Rivers and Streams.   | Hadley, Hatfield, Amherst and Northampton   |
| Hampden    | Small whorled Pogonia           | Threatened     | Forests with somewhat poorly drained soils and/or a seasonally high water table | Southwick   |
| Middlesex  | Small whorled Pogonia           | Threatened     | Forests with somewhat poorly drained soils and/or a seasonally high water table | Groton  |
| Nantucket  | Piping Plover                   | Threatened     | Coastal Beaches   | Nantucket   |
|            | Roseate Tern                    | Endangered     | Coastal beaches and the Atlantic Ocean  | Nantucket   |
|            | American burying beetle         | Endangered     | Upland grassy meadows   | Nantucket   |
| Plymouth   | Piping Plover                   | Threatened     | Coastal Beaches   | Scituate, Marshfield, Duxbury, Plymouth, Wareham and Mattapoisett                 |
|            | Northern Red-bellied Cooter     | Endangered     | Inland Ponds and Rivers   | Kingston, Middleborough, Carver, Plymouth, Bourne, Wareham, Halifax, and Pembroke |
|            | Roseate Tern                    | Endangered     | Coastal beaches and the Atlantic Ocean  | Plymouth, Marion, Wareham, and Mattapoisett.                                      |
| Suffolk    | Piping Plover                   | Threatened     | Coastal Beaches   | Winthrop  |
| Worcester  | Small whorled Pogonia           | Threatened     | Forests with somewhat poorly drained soils and/or a seasonally high water table | Leominster  |

- Eastern cougar and gray wolf are considered extirpated in Massachusetts.
- Endangered gray wolves are not known to be present in Massachusetts, but dispersing individuals from source populations in Canada may occur statewide.
- Critical habitat for the Northern Red-bellied Cooter is present in Plymouth County.

**Revised 06/22/2009**