

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: Springfield Water + Sewer Commission  
Name Sewer Commission e-mail \_\_\_\_\_  
Street/PO Box P.O. Box 995 City Springfield  
State MA Zip Code 01101-0995  
Contact Person Joseph J. Superneau Telephone Number 413 787-6256
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): See attached topo map.  
Name West Parish Filters e-mail (optional) \_\_\_\_\_  
Street/PO Box 1515 Granville Rd City Westfield  
State MA Zip Code 01085  
Contact Person Douglas Borcatti Telephone Number 413 562-4737  
Latitude N 42° 7.1' Longitude W 72° 49.8'
4. Standard Industrial Classification (SIC Codes) and Descriptions of Processes:  
SIC Code(s) 4941  
Description(s) Water Supply
5. Current Permitting Status (please check yes or no):  
1. Has a prior NPDES permit been granted for the discharge? Yes  (Permit Number: MAG640023)  
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 Cook's Brook
2. Type of Receiving Waterbody (e.g. stream, lake, reservoir, estuary etc) stream
3. State Water Quality Classification: B 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):

See attached description.

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

6. Number of outfalls: 1

For each outfall:

7. What is the proposed sampling location(s) and proposed consistent times of the month for collecting samples:  
Samples are collected at the discharge weir from Lagoon #2 to Cook's Brook. Samples are collected weekly on Tuesday's.

**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):  
See attached Table.

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

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 \_\_\_ \*Not in discharge.

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. See cover letter.

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)	<u>0.784</u>	<u>0.991</u>
TSS (mg/l)	<u>9</u>	<u>16</u>
pH (s.u.)	(min) <u>6.5</u>	(max) <u>7.0</u>
Total Recoverable Aluminum (ug/l)	<u>*</u>	<u>*</u>
Total Residual Chlorine (ug/l)	<u>410</u>	<u>410</u>

(continued on next page)

\* see cover letter

## **Notice of Intent to be covered by the General Permit (NOI)**

### Appendix IV – NPDES Potable Water Treatment Facility General Permit

#### **B. Discharge Information**

4. Description of discharge activities:

Generally, two rapid sand backwashes are conducted each day. During the summer months when water production increases, three backwashes per day are performed when necessary. Each backwash requires about one hour and forty-five minutes to complete and uses about 300,000 gallons of filtered water. Each of the ten slow sand filters is cleaned once per year during the period between November 1<sup>st</sup> and June 1<sup>st</sup>. Each filter takes 2 or 3 weeks (eight hour shift, five days per week) to clean and uses about 60,000 gallons of water per day for the washing process. Two man-made settling lagoons connected in series receive the residuals generated from the backwashing of the rapid sand filters as well as from the slow sand washing process. Settling lagoons #1 and #2 have surface areas of three acres and one acre, respectively, and are sloped to a maximum depth of 14 feet. The six foot wide residuals discharge (open) channel enters lagoon #1 at an elevation of 443 feet.

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):

NA - No aluminum or TRC in discharge

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

D. Endangered Species Act Eligibility

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

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

See attached most current species list.

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

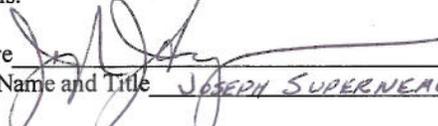
1. Using the instructions in Appendix III of the PWTf GP, under which criterion listed in Part III are you eligible for coverage under this general permit?

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).

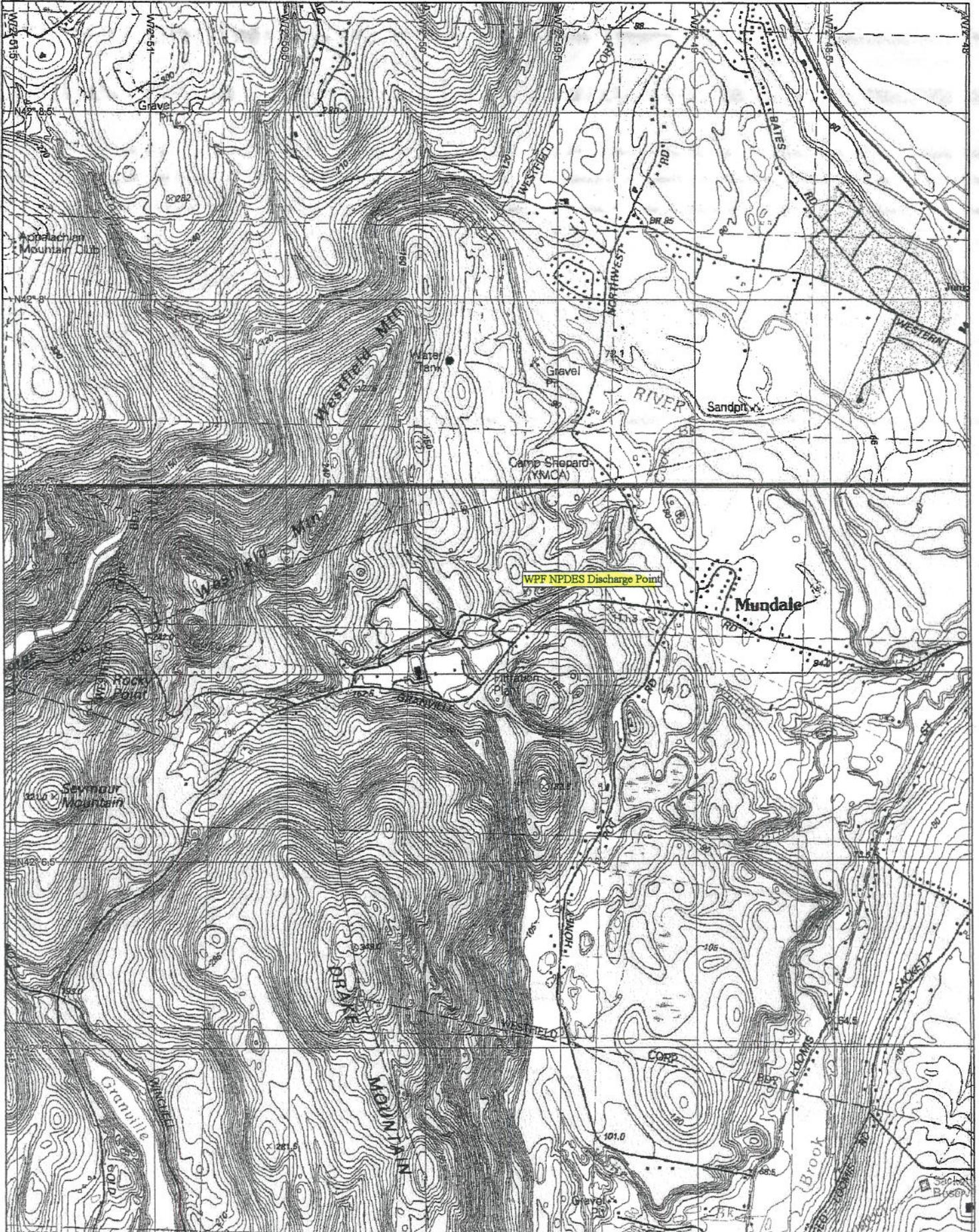
**F. Certification**

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.

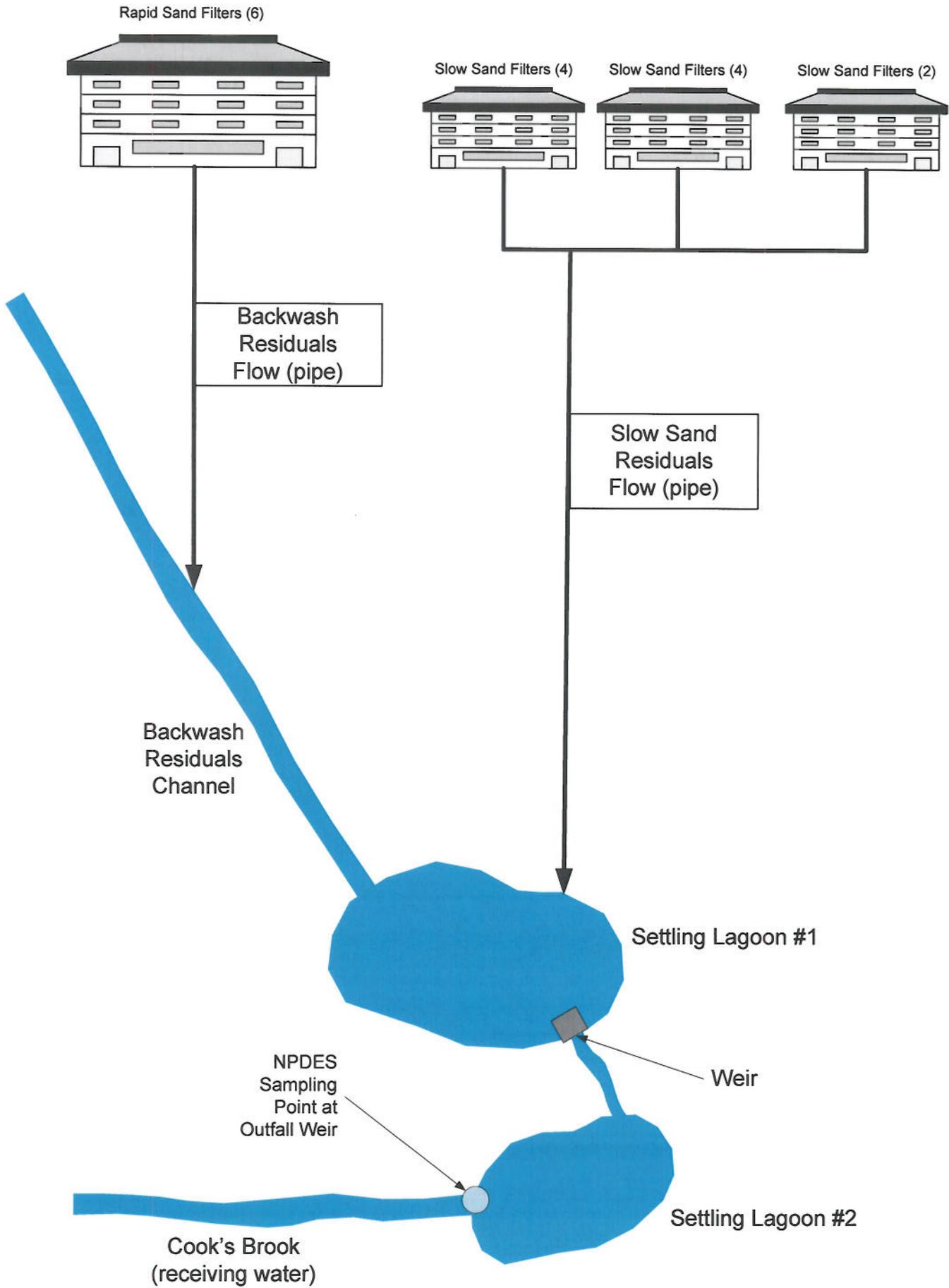
Signature  Date 12/22/09  
Printed Name and Title JOSEPH SUPERNEAU, EXECUTIVE DIRECTOR

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)



# WPFTP Backwash Residuals Handling Schematic



From: U.S. Fish + Wildlife website

**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 Mattapoissett
	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 Mattapoissett.
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

Chemicals used at West Parish Filters Treatment Plant

	Orthophosphoric acid	Sodium Hydroxide	Chlorine	Cationic polyamine (C-379)
Mol. Formula	H <sub>3</sub> PO <sub>4</sub>	NaOH	Cl <sub>2</sub> (liquid)	Unknown (epichlorohydrin)
Manufacturer	Innophos		Olin Chlor Alkali Prod.	Polydyne, Inc
Purpose	Corrosion inhibitor	Corrosion inhibitor, pH adjustment	Disinfection	Coagulation
CAS #	7664-38-2	7732-18-5	7782-50-5	
Frequency	Daily	Daily	Daily	Daily
Duration	Continuous	Continuous	Continuous	Continuous
Quantity	3 mg/L	6 - 8 mg/L (3-4 mg/L in backwash)	1.5 - 3 mg/L	1.5 - 3 mg/L
Method of Application	Fed neat with carrier water	Fed diluted with carrier water	Gas mixed with carrier water	Fed diluted 50%, mixed with carrier water