

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 Town of Clinton Department of Public Works e-mail cmcgown@clintonma.gov
Street/PO Box 242 Church Street City Clinton
State MA Zip Code 01510
Contact Person Christopher J. McGown Telephone Number 978-365-4110

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 Clinton Water Treatment Facility e-mail (optional) _____
Street/PO Box 55 West Boylston Street City Clinton
State MA Zip Code 01510
Contact Person Robert Sweatland Telephone Number 978-368-3030
Latitude 42 degrees 24'37" N Longitude 71 degrees 41'57" W

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

SIC Code(s) 4941
Description(s) Water Supply - Water Treatment Plant - Treats and supplies drinking water to municipality

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

1. Has a prior NPDES permit been granted for the discharge? Yes ☒ (Permit Number: MAG640047)
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 Coachlace Pond
2. Type of Receiving Waterbody (e.g. stream, lake, reservoir, estuary etc) Pond
3. State Water Quality Classification: B Freshwater: Yes 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):

Refer to attached.

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

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:

Along the riprap channel. Weekly samples will be collected on Tuesdays. Monthly samples will be collected on the first Tuesday of the month.

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): Potassium Permanganate,

Powdered Activated Carbon, AQ-100, AQ-194, Sodium Bicarbonate, Sodium Hydroxide, Sodium Hypochlorite, CalciQuest.

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

None known.

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)	<u>113,400</u>	<u>201,600</u>
TSS (mg/l)	<u>12.6 to 18.6</u>	<u>24</u>
pH (s.u.)	<u>(min) 7.26</u>	<u>(max) 7.63</u>
Total Recoverable Aluminum (ug/l)	<u>2,300 to 2,620</u>	<u>3,400</u>
Total Residual Chlorine (ug/l)	<u>150 to 360</u>	<u>500</u>

(continued on next page)

8. Continued

Characteristic (report if measured)

Whole Effluent Toxicity (%) LC50 Not Measured and/or C-NOEC Not Measured

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 10:1 _____ 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



Date

12-21-09

Printed Name and Title Christopher McGown, Superintendent, Department of Public Works, Town of Clinton, MA

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

ATTACHMENT TO NOTICE OF INTENT TO BE COVERED UNDER NPDES GENERAL PERMIT MAG640000
WATER TREATMENT FACILITY
TOWN OF CLINTON, MASSACHUSETTS

SUPPLEMENTAL INFORMATION – ITEM B4

The water treatment facility uses pressure filters which need to be periodically backwashed to remove the build-up of solids. Prior to the pressure filters, the following chemicals are added to the raw water: Potassium Permanganate, Powdered Activated Carbon, AQ-100 and AQ-194 and Sodium Bicarbonate. As the filters are backwashed (using chlorinated finished water), the backwash is collected in a 10,000 gal. Primary Backwash Holding Tank. The plant has 6 filters, one filter backwashes at a time, the maximum amount of backwash each day is 201,600 gallons (24 backwashes or 4 backwashes for each filter) and the average amount of backwash is 113,400 gallons per day (18 backwashes or 3 backwashes for each filter). The backwash flow ranges from 350 gpm (winter) to 700 gpm (summer) and occurs for a duration of 12 minutes each backwash. The filter backwash rate varies from 350 gpm to 700 gpm, depending upon the season and water temperature considerations. After the Primary Backwash Holding Tank, the backwash water follows one of the following two paths, as described below.

Option 1

If the finished water quality of the facility (potable water) will not be compromised, the backwash waste can be treated through a Secondary Filter System with a significant volume recycled back to the facility influent. This Secondary Filter System consists of 3 filters, each of which is backwashed periodically to remove the build-up of solids. The backwash waste from the Secondary Filter System discharges to a 10,000 gal. Secondary Backwash Holding Tank, from which the backwash waste is transferred to the on-site residuals treatment lagoons via two residuals pumps. Each residuals pump has a nominal capacity of 80 gpm. The water from the lagoons flows through a Parshall Flume to a riprap channel and then to Coachlace Pond. There are two lagoons; Lagoon No. 1 top surface area is 5,500 SF, bottom surface area is 2,180 SF, depth is 5 feet, Volume is 17,265 CF; Lagoon No. 2 top surface area is 5,212 SF, bottom surface area is 2,002 SF, depth is 5 feet, Volume is 15,990 CF. The lagoon entry pipe is 4" diameter pvc with an invert El. 366.50 ft. The travel time through the lagoons varies from approximately 449 minutes to 484 minutes, accounting for potential short circuiting through the use of a 0.3 mixing coefficient. The travel time from the exit of the lagoons to the entry of the channel is approximately 60 seconds. The travel time from the entry to the channel to the entry of the receiving body is at least 120 seconds, based upon the calculations noted for Option 2 which involves higher flows and therefore shorter detention times.

Option 2

If the finished water quality of the facility (potable water) would be compromised by the addition of the recycle water, then the Secondary Filter System is taken off-line and the backwash waste from the Primary Backwash Holding Tank overflows by gravity into the Secondary Backwash Holding Tank, which then overflows by gravity out to the entry of the channel. Based upon a maximum instantaneous flow of 700 gpm, the travel time from the entry to the channel to the entry of the receiving body is at least 120 seconds.