

December 1, 2009

US EPA, Region 1
PWTF GP Processing
Municipal Assistance Unit (CMU)
1 Congress Street, Suite 1100
Boston, MA 02114-2023

RE: Town of Weymouth - Great Pond Water Treatment Plant
Potable Water Treatment Facility General Permit
NPDES General Permit No. MAG6400031 Notice of Intent
Transmittal Number W068252

DEC - 8 2009

To Whom It May Concern:

On behalf of the Town of Weymouth, please find enclosed a complete Notice of Intent (NOI) for coverage of the Great Pond Water Treatment Plant (WTP) under the National Pollutant Discharge Elimination System (NPDES) General Permit for discharges from Potable Water Treatment Facilities (PWTF). The Great Pond WTP is located at 239 Pond Street in Weymouth, Massachusetts (refer to Figure 1 - Site Locus). This NOI details the re-application of the WTP's existing NPDES PWTF General Permit (MAG6400031), which was administratively continued in November 2005.

This complete NOI package consists of the following:

- Environmental Protection Agency (EPA) PWTF NPDES General Permit NOI form;
- Site figures including a site locus, site plan identifying WTP's discharge location, and the WTP's process flow diagram;
- A copy of the September 30, 2005 letter from the EPA acknowledging the administrative continuance of the WTP's existing NPDES General Permit;
- A copy of the February 11, 2005 request for a modification of the permit's pH limits;
- A copy of the December 7, 2005 letter from the Massachusetts Department of Environmental Protection (MA DEP) supporting the Town's request to lower the permit's minimum pH limit to 6.0 S.U.;
- A copy of the September 2, 2009 letter from the MA DEP notifying the Town of their cooperation with the U.S. Geological Survey with a future study to determine the dilution factors for aluminum for Great Pond;
- Copies of the laboratory analytical reports for the September 2009 and October 2009 NPDES discharge monitoring events;
- A summary of the NPDES discharge monitoring data from October 2005 until September 2009;
- A summary of Great Pond NPDES discharge data (TDS, Aluminum, and pH) from October 2005 until September 2009; and
- A summary of Great Pond raw water pH data from July 2005 until September 2009.

The NOI form provides an overview of the existing Great Pond WTP physical and chemical treatment processes. The Great Pond WTP currently has two registered NPDES discharges: the residuals lagoon discharge (001A); and the lagoon decommissioning discharge (002A). Discharge 002A has never been used by the Town, and we are also providing a Notice of Termination of discharge location 002A under separate cover.

The Town is currently constructing a new water treatment plant to replace the existing Great Pond WTP. The new WTP is located on the same site as the existing WTP and will re-use the same NPDES discharge location. The new Great Pond WTP has the same design capacity (8 MGD) and utilizes chemical treatment, pre-oxidation with potassium permanganate, pH adjustment with sodium hydroxide, coagulation with polyaluminum chloride, rapid mixing, flocculation, dissolved air flotation (DAF) for clarification, ozonation with ozone gas, granular activated carbon filtration, phosphoric acid for corrosion control, sodium bicarbonate for alkalinity adjustment, hydrofluorosilic acid for fluoridation, and chlorine gas for disinfection. The new Great Pond WTP is expected to be completed in the summer of 2010. The DAF sludge will flow by gravity to the existing residuals pump station, which will then be pumped to the existing lined residuals lagoons. Lagoon supernatant will discharge back into Great Pond as currently operated. In addition, treated filter backwash waste will also discharge to the existing NPDES outfall after being treated by a plate settler. The Town will notify the EPA and MA DEP in advance of the change over to the new Great Pond WTP.

Thank you for your cooperation and assistance. Please feel free to contact me at (617) 657-0255 (sco@envpartners.com) or the Water and Sewer Superintendent, Michael Chiasson at (781) 337-5100 (mchiasson@weymouth.ma.us) if you have any questions or require additional information.

Very Truly Yours,
Environmental Partners Group, Inc.



Stephen C. Olson, P.E.
Senior Project Manager

Encl: PWTF NPDES General Permit NOI
Figures
Historical NPDES correspondence
NPDES Discharge and Great Pond Raw Water monitoring data
Laboratory analytical reports

CC: MA DEP, Division of Watershed Management
Robert O'Connor, Director of Public Works
Michael Chiasson, Water and Sewer Superintendent
Alan Cowing, Treatment and Operations Manager

DEC - 8 2009

APPENDIX IV NOTICE OF INTENT INSTRUCTIONS AND SUGGESTED FORMS

I. Notice of Intent (NOI) Instructions

A. Required Information

In order to be covered by the Potable Water Treatment Facility General Permit (PWTF GP) applicants must submit a written NOI to EPA and the appropriate state agency. The NOI consists of either the suggested NOI form included in this Appendix or another form of official correspondence that contains all of the required information listed in the General Permit and the suggested NOI form.

B. Signature Requirements

The Notice of Intent must be signed and dated in accordance with the signatory requirements of 40 CFR Section 122.22, including the certification statement shown on the suggested NOI form.

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.

C. Submission of NOI to EPA

Signed and completed NOI forms and attachments must be submitted to EPA at the address included in Appendix VI. A copy of the NOI form and any additional state required forms must also be submitted to the appropriate state agency at the addresses included in Appendix VI. See Part 4.2 and Appendix VI of the PWTF GP for additional State requirements.

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 WEYMOUTH - DEPT. OF PUBLIC WORKS e-mail boconnor@weymouth.ma.us
Street/PO Box 120 WINTER STREET City WEYMOUTH
State MA Zip Code 02188
Contact Person ROBERT F. O'CONNOR, DIRECTOR Telephone Number (781) 337-5100

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 GREAT POND WTP e-mail (optional)
Street/PO Box 239 POND STREET City WEYMOUTH
State MA Zip Code 02189
Contact Person ALAN COWING, TREATMENT & OPERATIONS MGR. Telephone Number (781) 337-0064
Latitude 42° 9' 59.33" N Longitude 70° 58' 08.77" W

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

SIC Code(s) NOT APPLICABLE
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: MAG640031)
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 GREAT POND
2. Type of Receiving Waterbody (e.g. stream, lake, reservoir, estuary etc) RESERVOIR
3. State Water Quality Classification: CLASS A 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):

THE GREAT POND WTP (CAPACITY OF 8 MGD) TREATS SURFACE WATER FROM GREAT POND FOR THE PRODUCTION OF DRINKING WATER USING SEVERAL PHYSICAL AND CHEMICAL TREATMENT PROCESSES. CHEMICAL ADDITION AT THE FACILITY CONSISTS OF POLYALUMINUM CHLORIDE (PAC) FOR COAGULATION AND THE REMOVAL OF DISSOLVED NATURAL ORGANIC MATTER; CHLORINE GAS FOR PRIMARY AND SECONDARY DISINFECTION; SODIUM HYDROXIDE FOR pH ADJUSTMENT; SODIUM BICARBONATE FOR ALKALINITY ADJUSTMENT; HYDROFLUOROSILIC ACID FOR FLUORIDATION; AND PHOSPHORIC ACID FOR CORROSION CONTROL. THE PHYSICAL TREATMENT PROCESSES INCLUDE CHEMICAL MIXING USING A STATIC MIXER; MULTI-STAGE FLOCCULATION USING BAFFLING AND VARIABLE SPEED VERTICAL SHAFT MECHANICAL PADDLES; CONVENTIONAL SEDIMENTATION; AND MONO-MEDIA SAND FILTRATION. SEDIMENTATION RESIDUALS AND FILTER BACKWASH WASTE ARE SETTLED IN LINED RESIDUALS LAGOONS AND THE SUPERNATANT IS RECYCLED BACK INTO GREAT POND. REFER TO ATTACHED FACILITY DRAWINGS.

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:

THE PROPOSED SAMPLING LOCATION IS AT THE DISCHARGE OF THE LAGOON OUTFALL PIPE. SAMPLES FOR pH AND TSS ARE PROPOSED TO BE COLLECTED WEEKLY. SAMPLES FOR TOTAL ALUMINUM ARE PROPOSED TO BE COLLECTED THE 1ST WEEK OF EACH 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): POLYALUMINUM CHLORIDE, SODIUM HYDROXIDE, CHLORINE GAS, SODIUM BICARBONATE, PHOSPHORIC ACID, AND HYDROFLUOROSILIC ACID.

2. Please report here any known remediation activities or water-quality issues in the vicinity of the discharge.
NOT APPLICABLE

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>0.25</u>	<u>0.5</u>
TSS (mg/l)	<u>6.7</u>	<u>62</u>
pH (s.u.)	<u>(min) 5.88</u>	<u>(max) 7.06</u>
Total Recoverable Aluminum (ug/l)	<u>0.74</u>	<u>7.2</u>
Total Residual Chlorine (ug/l)	<u>N/A</u>	<u>N/A</u>

(continued on next page)

8. Continued

Characteristic (report if measured)

Whole Effluent Toxicity (%) LC50 N/A and/or C-NOEC N/A

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 TBD cfs Dilution Factor TBD 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

Robert F. O'Connor

Date

12-1-09

Printed Name and Title ROBERT F. O'CONNOR, DIRECTOR OF PUBLIC WORKS

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