



## RANDOLPH-HOLBROOK JOINT WATER BOARD

50 North Franklin Street  
Holbrook, MA 02343



**Town of Holbrook**  
Office of Joint Superintendent  
(781) 767-1800  
Fax (781) 767-0705

**Town of Randolph**

December 28, 2009

United States Environmental Protection Agency, Region 1  
PWTF GP Processing  
Municipal Assistance Unit (CMU)  
1 Congress Street, Suite 1100  
Boston, MA 02114-2023

Subject: NPDES General Permit NOI  
Randolph-Holbrook Joint Water Board  
NPDES Permit No. MAG640032

To Whom it May Concern:

The Randolph-Holbrook Joint Water Board is requesting coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit (GP) for the discharge from their Potable Water Treatment Facility (PWTF). The Randolph-Holbrook Joint Water Board has submitted a renewal application and was administratively continued under the general permit that expired on November 15, 2005; their transmittal number from the 2005 application is: W067716. Please find enclosed the completed Notice of Intent (NOI) form and related documents for the NPDES GP.

We trust that this submittal meets all the requirements of the NOI. Please feel free to contact me with any comments or questions.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Thomas R. Cummings".

Thomas R. Cummings  
Randolph/Holbrook Joint Superintendent  
Randolph-Holbrook Joint Water Board

cc: Peter Lynch, CDM  
Anne Malenfant, CDM

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 Randolph-Holbrook Joint Water Board e-mail pwd2@holbrookmassachusetts.us  
Street/PO Box 50 North Franklin Street City Holbrook  
State Massachusetts Zip Code 02343  
Contact Person Inomas Cummings Telephone Number 781-767-1800

2. Facility Operator (if different from above):

Name N/A 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 Randolph-Holbrook Joint Water Board e-mail (optional) \_\_\_\_\_  
Street/PO Box 275 Pond Street City Randolph  
State Massachusetts Zip Code 02368  
Contact Person Thomas Cummings Telephone Number 781-767-1800  
Latitude 42.199342 Longitude -71.05058

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: MAG640032)  
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 Reservoir System
2. Type of Receiving Waterbody (e.g. stream, lake, reservoir, estuary etc) Pond
3. State Water Quality Classification: A \_\_\_\_\_ Freshwater: X \_\_\_\_\_ 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 WTP on average produces approximately 3.3 million gallons per day (MGD) but has a maximum capacity of approximately 6.2 MGD. WTP facilities consist of 2 intakes, 3 low lift pumps, 1 static mixer, 1 flocculation tank with static baffling, 1 sedimentation tank with tube settlers, 8 filters with granular activated carbon (GAC), 1 backwash water lagoon, 1 backwash tank, 1 clearwell, and 4 high lift pumps. The backwash water lagoon has a volume of approximately 150,000-200,000 gallons of storage, and an approximate detention time of 14-20 hours. Typically, 2 filters are backwashed per shift, for a 15-20 minute duration. Each filter runs for 32-hours prior to being backwashed. The elevation of the 14-inch inlet (entry) pipe to the lagoon is 121.1-feet, and the elevation of the 12-inch outlet pipe is 118.9-feet.

5. Please provide a diagram depicting the treatment methods, outfalls, and receiving water. Please see Figures 1,2 and 3

6. Number of outfalls: 1

For each outfall: OUTFALL # 1: Latitude 42.1975 Longitude -71.0397 

7. What is the proposed sampling location(s) and proposed consistent times of the month for collecting samples:  
 Samples are collected once a week, beginning on the first Monday 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): Please see Attachment 1

2. Please report here any known remediation activities or water-quality issues in the vicinity of the discharge.  
 There are no known remediation activities or water-quality issues within a 1/2 mile radius of the discharge. Please see Figure 4.

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. Please see Attachment 2

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

Characteristic (report if measured)	Average Monthly	Maximum Daily
Discharge Flow (gpd)	<u>245,559</u>	<u>316,839</u>
TSS (mg/l)	<u>0.58</u>	<u>8.5</u>
pH (s.u.)	(min) <u>5.5</u>	(max) <u>7.6</u>
Total Recoverable Aluminum (ug/l)	<u>0.10</u>	<u>2.43</u>
Total Residual Chlorine (ug/l)	<u>0.07</u>	<u>0.37</u>

(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 Please see Attachment 4 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. The Randolph-Holbrook WTP discharges into Great Pond, in Norfolk County, which is not listed on the most current county species list.

*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). Please see Attachment 3

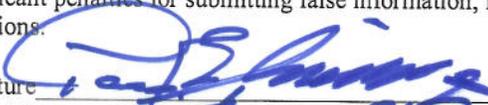
### F. Certification

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

Printed Name and Title

Date

 Date 11-28-09  
Thomas R. Cummings, Toilet Syst.

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)

Randolph-Holbrook Joint Water Board  
NPDES GP NOI  
Attachment 1

The WTP uses poly aluminum chloride (PAC) primarily for coagulation and secondarily as filter conditioning, chlorine gas for disinfection, lime to raise the pH for corrosion control, also orthophosphate for corrosion control. Sodium hypochlorite is used at the Water Street Booster Station to boost chlorine residual in the Holbrook water distribution system.

Randolph-Holbrook Joint Water Board  
NPDES GP NOI  
Attachment 2  
Total Recoverable Aluminum

Date	Aluminum (ug/L)
7/6/2009	70
7/13/2009	50
7/20/2009	80
7/27/2009	60
8/3/2009	130
8/10/2009	60
8/17/2009	70
8/24/2009	140
8/31/2009	70
9/9/2009	90
9/14/2009	50
9/21/2009	110



One Cambridge Place, 50 Hampshire Street  
Cambridge, Massachusetts 02139  
tel: 617 452-6000  
fax: 617 452-8000

December 17, 2009

Massachusetts Historical Commission  
220 Morrissey Boulevard  
Boston, Massachusetts 02125-3314

Subject: EPA NPDES Potable Water Treatment Facility General Permit (MAG640000)  
State Historic Preservation Office/MHC Consultation  
Randolph-Holbrook Joint Water Board

Dear Ms. Simon:

Camp Dresser & McKee Inc. (CDM) submits this consultation on behalf of our client the Randolph-Holbrook Joint Water Board (Randolph-Holbrook) pursuant to the requirements of Appendix III Historic Properties Requirement of the NPDES Potable Water Treatment Facility General Permit (PWTF GP). Facilities seeking coverage must determine whether their site's discharges or implementation of best management practices (BMPs) to control such discharges, has potential to affect a property that is either listed or eligible for listing on the National Register of Historic Places.

According to the Massachusetts Cultural Resource Information System (MACRIS) the pumping station, which currently operates as a portion of the water treatment plant facility, was constructed in 1888. The pumping station is registered as inventory number RAN.148 and has architecture, community planning, engineering, and politics government significance. There are currently no plans to implement BMPs/construction activities associated with water treatment plant discharges. At this time it is unknown whether the Massachusetts Department of Environmental Protection (MassDEP) will require any improvements/upgrades at the water treatment plant facility. The purpose of this letter is to inform the Massachusetts Historical Commission (MHC) that the Randolph-Holbrook Joint Water Board is filing a Notice of Intent (NOI) for the PWTF GP referenced above.





Massachusetts Historical Commission  
December 17, 2009  
Page 2

### *Background*

The Randolph-Holbrook Joint Water System Treatment Plant is located at Great Pond off Pond Street in North Randolph, Massachusetts, see Figure 1 for site location. The water treatment plant treats water supplied from the Great Pond reservoir system. The Towns of Randolph and Holbrook jointly manage and treat the water supply that each town utilizes for its drinking water. As we understand it, the above-referenced pumping station was constructed in 1888 to deliver water from Great Pond to the towns. The pumping station was converted to a water treatment plant in 1936. The initial capacity of the treatment plant was 2 million gallons per day (mgd). Various improvements and upgrades have been implemented at the site. Facility upgrades completed in 1963 included four new filters and expansion of the sedimentation basins and pipe gallery. Upgrades constructed in 1973 and 1991 resulted in an increase from 4 mgd up to 6.5 mgd and included the replacement of the type of filter media, addition of large raw and finished water pumps, and changes to suction and discharge piping. It appears that with the exception of the modifications in 1991, only minor repairs and replacements have been completed since.

In addition to the treatment plant, the water system consists of four water storage tanks; two located in Randolph and two in Holbrook. There are approximately 150 miles of water mains, 100 miles in Randolph and 50 miles in Holbrook, ranging in size from 4 inches to 24 inches in diameter.

As noted previously, the purpose of this letter is to meet the consultation requirements of the PWTF GP associated with the Randolph-Holbrook Joint Water System Treatment Plant. Structural BMPs are not currently planned at the water treatment plant. Therefore, it is our opinion that the Randolph-Holbrook Joint Water System Treatment Plant meets the PWTF GP eligibility criteria for protection of historic properties, specifically Criteria No. 2 which states *"If historic properties are identified but it is determined that they will not be affected by the discharges or construction of Best Management Practices (BMPs) to control the discharge, the applicant has met the NHPA eligibility criteria for coverage under this permit"*



Massachusetts Historical Commission  
December 17, 2009  
Page 3

We respectfully request written concurrence from the MHC that the continued water treatment plant discharge is not likely to adversely affect historic properties. Please call me at (617) 452-6603 with any questions or comments regarding this correspondence. Thank you in advance for your time and consideration.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Isabel S. Tourkantonis'.

Isabel S. Tourkantonis, PWS  
Environmental Scientist  
Camp Dresser & McKee Inc.

cc: Thomas Cummings, Superintendent, Joint Water Board  
Peter Lynch, CDM  
Anne Malenfant, CDM



Project Location

0 2000 4000  
Scale in Feet

Randolph/Holbrook Joint Water Board  
NPDES General Permit No. 1

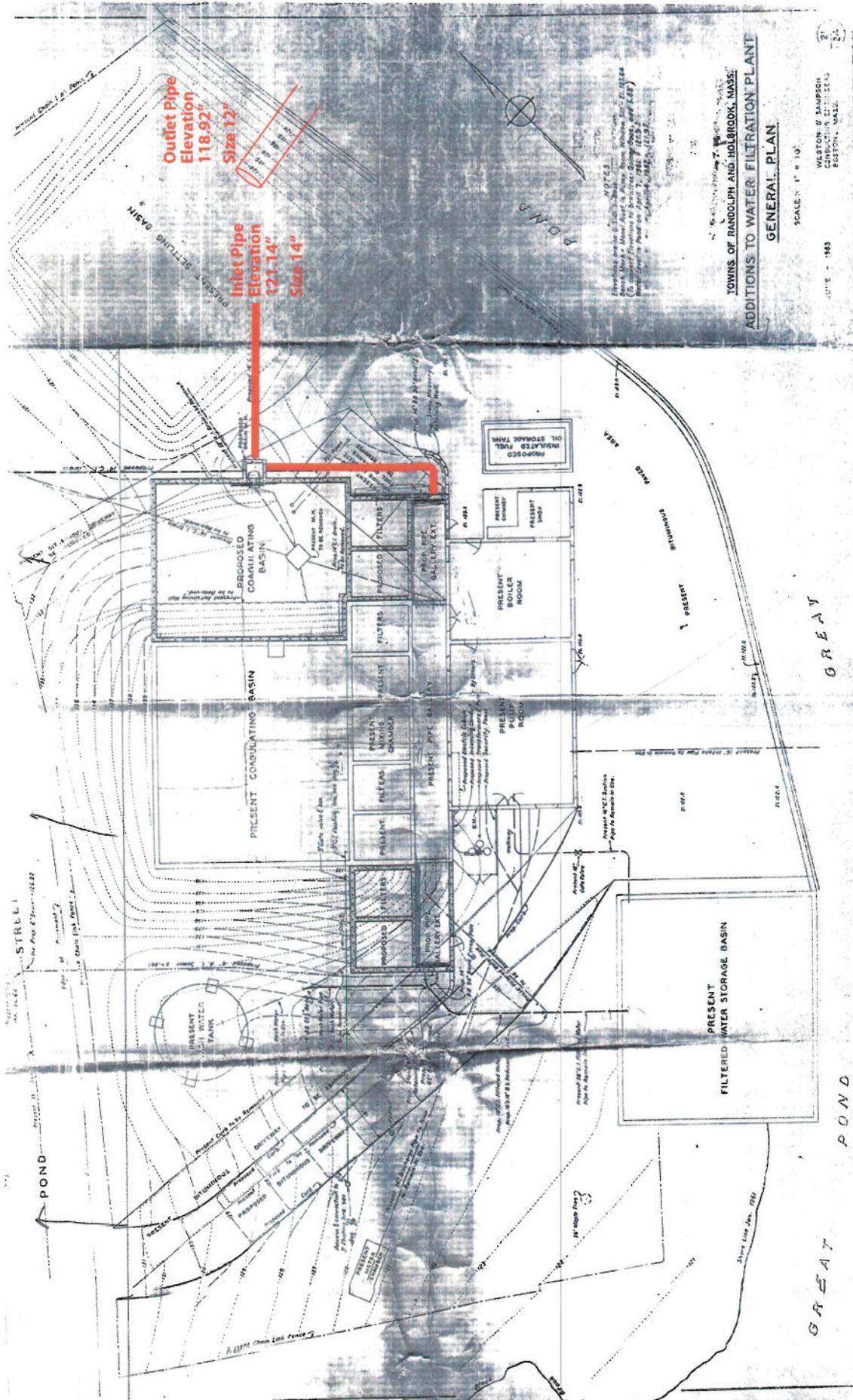


Figure 2  
 NPDES General Permit NOI  
 Towns of Randolph and Holbrook, MA  
 Additions to Water Filtration Plant General Plan

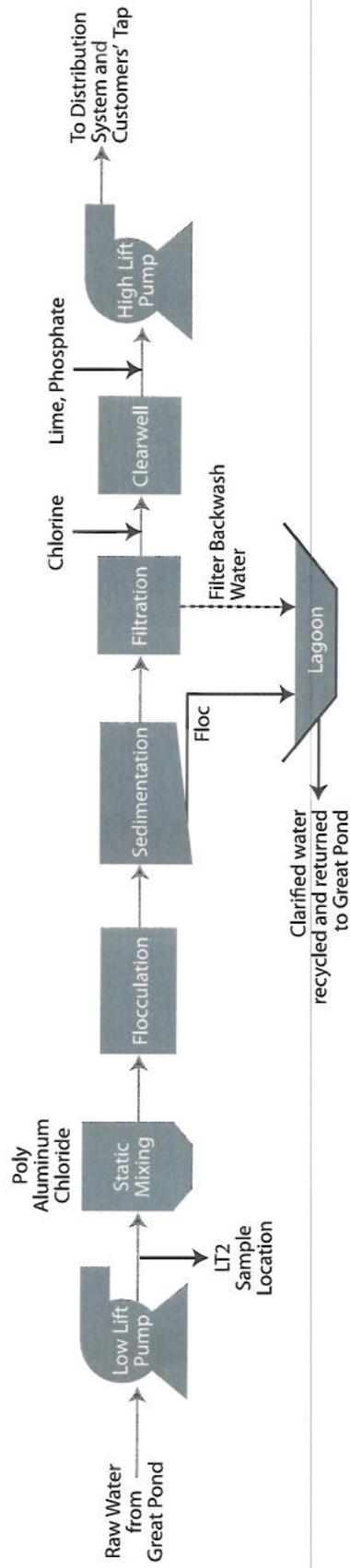
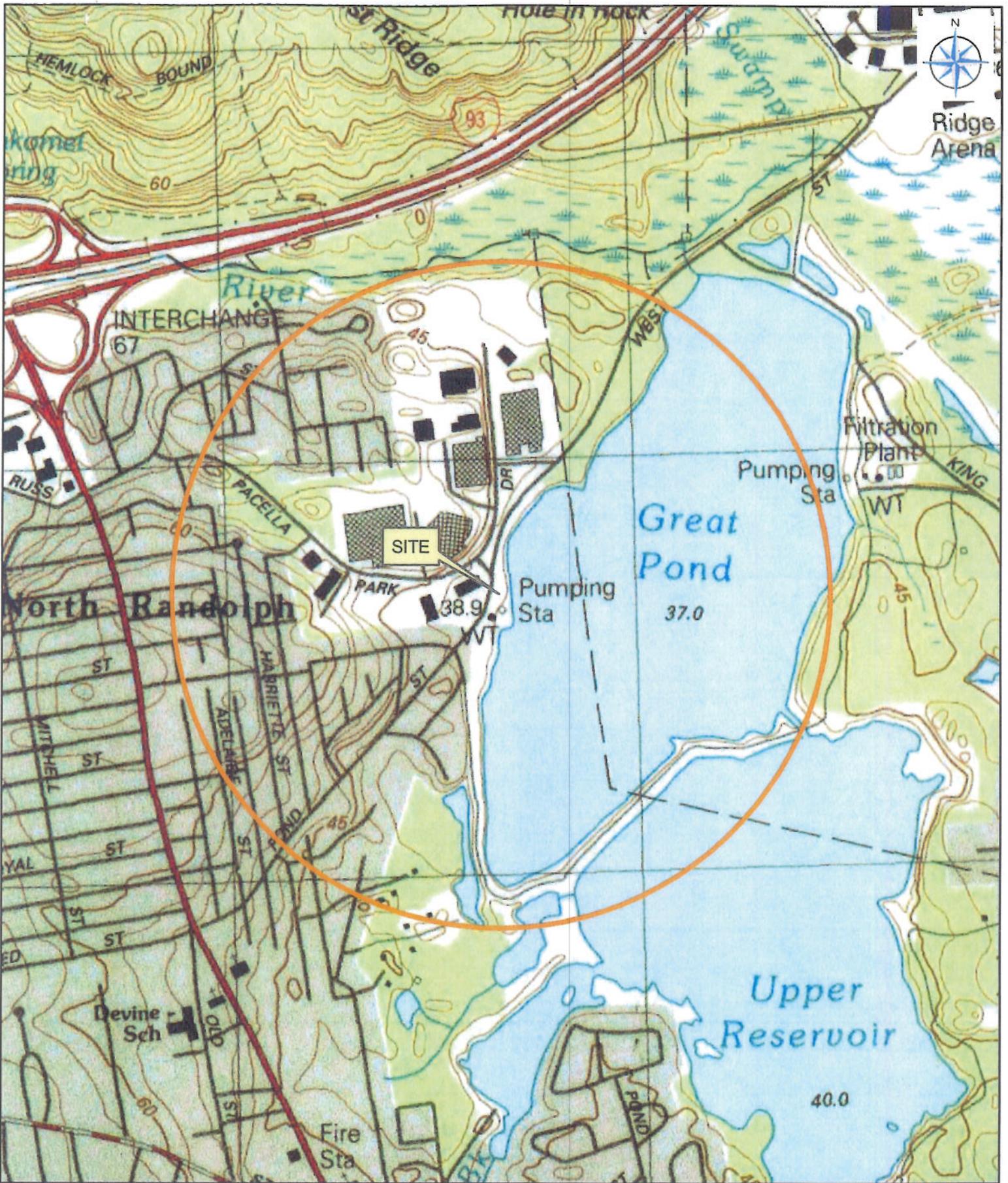


Figure 3  
 NPDES General Permit NOI  
 Source Water Supply and Treatment Schematic  
 Randolph-Holbrook Joint Water System



■ MassDEP Tier Classified Oil and/or Hazardous Material Sites (MGL c. 21E)

**275 Pond Street  
Randolph, Massachusetts**

**Figure 4  
MassDEP Chapter 21E Sites**

Basemap: 7.5-Minute USGS Topographic Quadrangle  
Source: Mass GIS  
Coordinate System: NAD83 Mass. State Plane Mainland  
Units: meters

0 500 1,000  
Feet

**CDM**