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 City of Gloucester e-mail ldurkin@gloucester-ma.gov
   Street/PO Box City Hall, 9 Dale Ave City Gloucester
   State MA Zip Code 01930
   Contact Person Larry Durkin Telephone Number 978 281-9792

2. Facility Operator (if different from above):
   Name Veolia Water e-mail (optional) _____
   Street/PO Box 50 Essex Ave. City Gloucester
   State MA Zip Code 01930
   Contact Person Sean Brennan Telephone Number 978 281-3741

3. Facility Data (attach topographic map or other map showing facility and discharge location(s)):
   Name Babson Water Treatment Plant e-mail (optional) _____
   Street/PO Box 19 Russell Ave. City Gloucester
   State MA Zip Code 01930
   Contact Person Larry Durkin Telephone Number 978 281-9792
   Facility Latitude 42 deg. 37 min. 30 sec Facility Longitude 70 deg. 40 min. 00 sec

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: _____)
   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 ✓

JUN - 2 2010

B. Discharge Information

1. Name of Receiving Waterbody Alewife Brook

2. Type of Receiving Waterbody (e.g. stream, lake, reservoir, estuary etc) stream

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):

See Attachment A

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

6. Number of outfalls: 1 Latitude and Longitude for each outfall (attach additional pages if necessary)
   OUTFALL # Latitude 42 deg. 37 min. 30 sec Longitude 70 deg. 40 min. 00 sec
   OUTFALL # Latitude _____ Longitude _____

For each outfall:

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

Sampled at riser on lagoon discharge pipe prior to discharge to the stream. Four (4) samples are collected one day/week, at least one hour apart while backwash is operating.
See attached lagoon sampling protocol.

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 Attachment B

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

none

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:

Characteristic (report if measured)	Average Monthly	Maximum Daily
Discharge Flow (gpd)	not measured	750,000
TSS (mg/l)	3.4	6.0
pH (s.u.)	(min) 4.6	(max) 7.0
Total Recoverable Aluminum (ug/l)	420	670
Total Residual Chlorine (ug/l)	150	880

(continued on next page)

8. Continued

Characteristic (report if measured)

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

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).

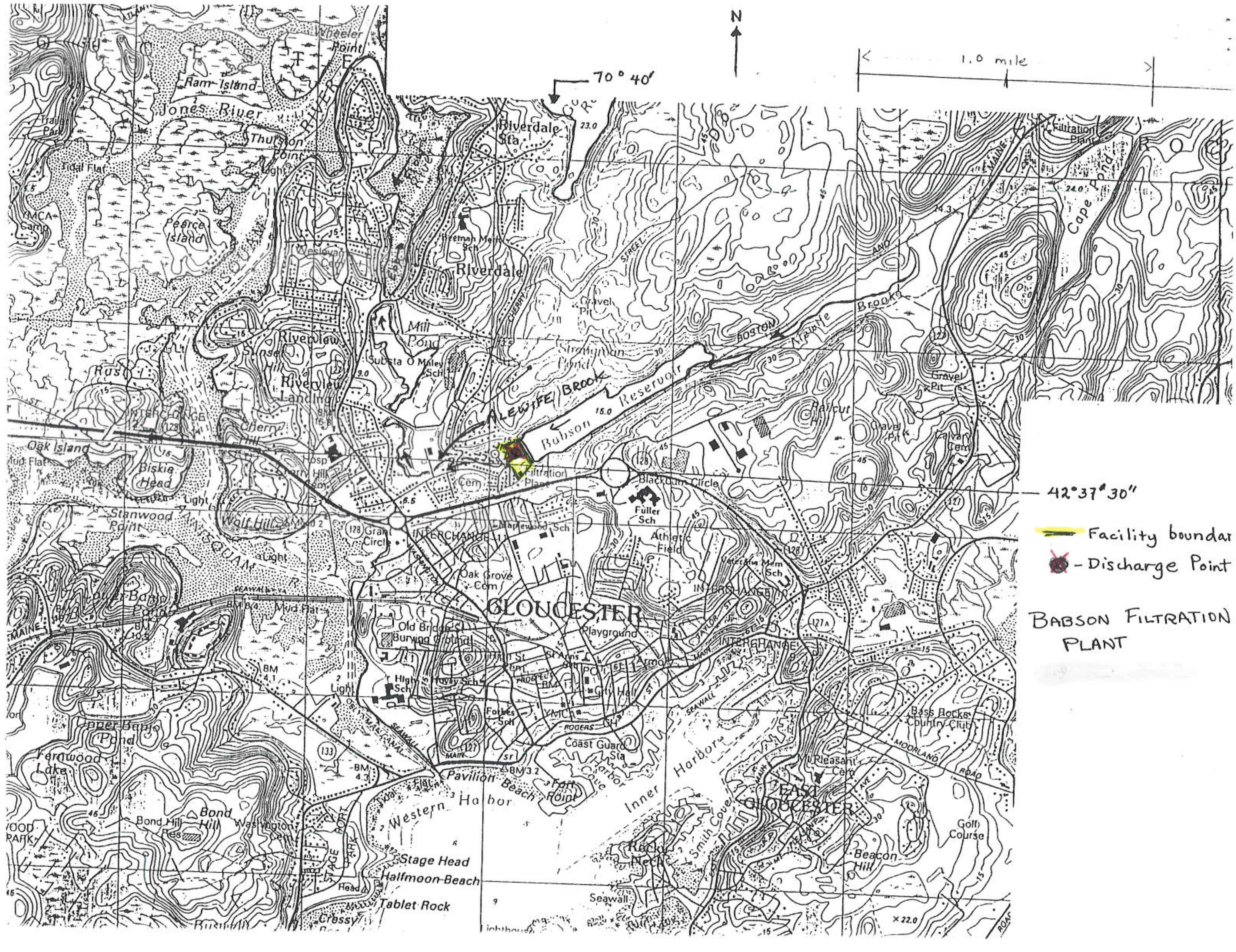
F. Certification

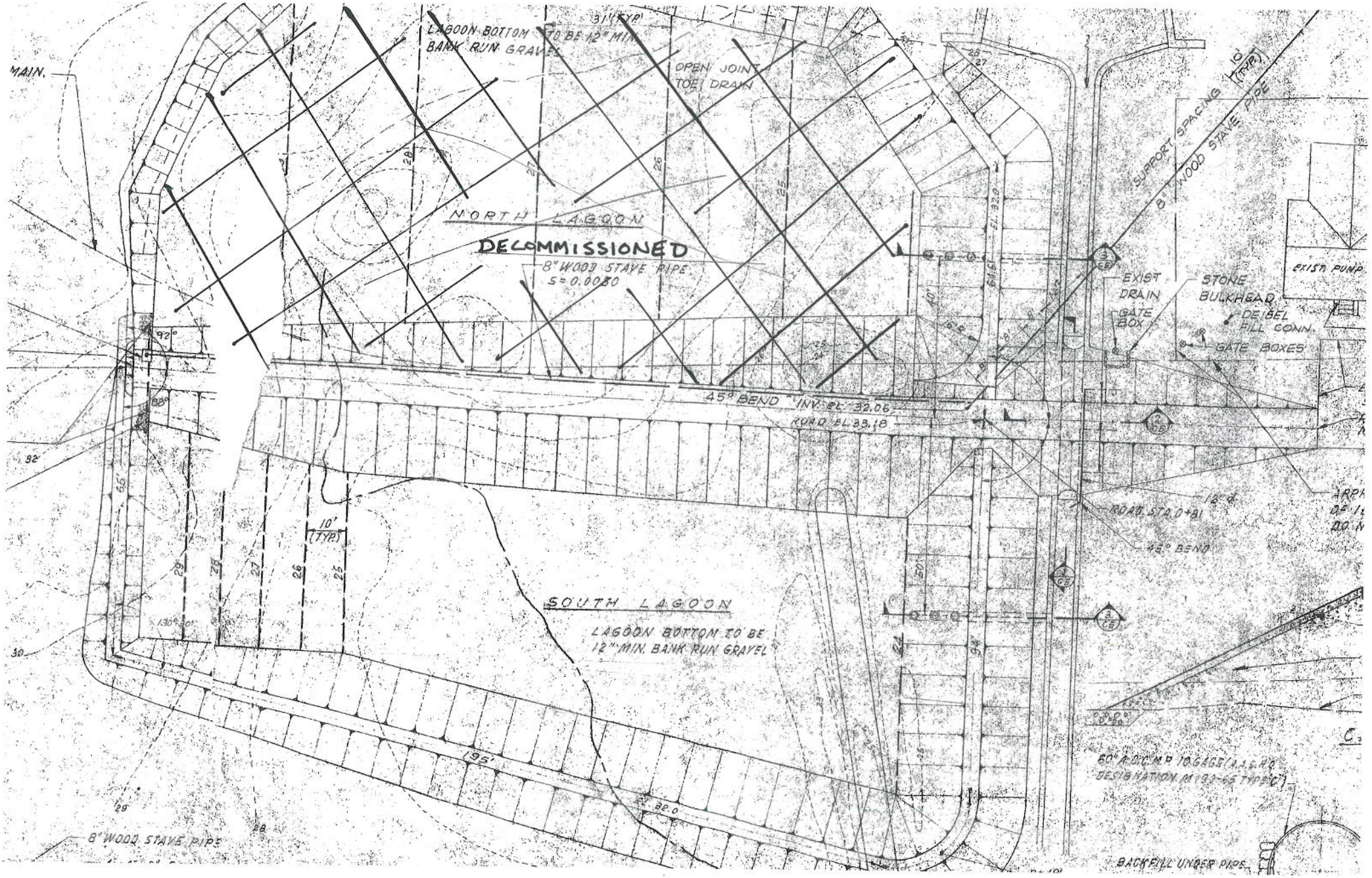
I certify that the discharge for which I am seeking coverage under the general permit consists solely of a surface water discharge from a potable water treatment facility. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance 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 Michael Hale Date 27 MAY 2010
Printed Name and Title Michael Hale, DPW 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


N
1.0 mile
70° 40'
42° 37' 30"
Facility boundar
- Discharge Point
BABSON FILTRATION
PLANT
GLOUCESTER
EAST GLOUCESTER
ALEWIFE BROOK
Babson Reservoir
Filtration Plant
Blackburn Circle
Fuller Sch
Athletic Field
Riverdale
Riverdale Sta
Riverview
Mill Pond
Cape Pond
Jones River
Ram Island
Thurston Point
Pearce Island
Oak Island
Biskie Head
Stanwood Point
Wolf Hill
Grant Circle
INTERCHANGE
Oak Grove Cem
Old Bridge
Burying Ground
Playground
High Sch
Forbes Sch
Coast Guard Sta
Pavilion Beach
Fort Point
Western Harbor
Inner Harbor
Smith Cove
Rocky Neck
Stage Head
Halfmoon Beach
Tablet Rock
Cressy
Bond Hill
Fernwood Lake
Bass Rocks Country Club
Golf Course
Beacon Hill
Mt Pleasant Cem
Gravel Pit
Seawall
MOORLAND ROAD
BOSTON AND MAINE


MAIN.
LAGOON BOTTOM TO BE 12" MIN. BANK RUN GRAVEL
OPEN JOINT TOE DRAIN
NORTH LAGOON
DECOMMISSIONED
8" WOOD STAVE PIPE S=0.0080
SUPPORT SPACING 10' (TYP.)
8" WOOD STAVE PIPE
EXIST PUMP
EXIST DRAIN
GATE BOX
STONE BULKHEAD
DEIBEL FILL CONN.
GATE BOXES
45° BEND INV. EL. 32.06
ROAD EL. 33.18
ROAD STA. 0+81
45° BEND
SOUTH LAGOON
LAGOON BOTTOM TO BE 12" MIN. BANK RUN GRAVEL
195'
8" WOOD STAVE PIPE
BACKFILL UNDER PIPE

TOTAL ALUMINUM BABSON	CONCENTRATION
April	0.33 mg/l
May	0.30 mg/l
June	0.35 mg/l
July	0.41 mg/l
August	0.55 mg/l
September	0.67 mg/l
October	0.34 mg/l

average .42 mg/l

WEEKLY LAGOON PROCEDURE

Once a week, on any day collect 4 samples numbered 1,2,3, and 4.
With backwashes on collect from lagoon effluent.
Minimum 1 hour between collections
Before each pH test check meter against 6 pH buffer write results in spac
Fill 1000 ml container.
Record results and time of day for each test.
Aluminum test is a composite of samples 1-4. Instructions bottom of page.

SAMPLE LOCATION:

COLLECTOR : ____________ DAT ______

SAMPLE # (1-4): _____ TIME COLLECTED: ________ ANALYS ______

pH: ______ TIME: ________ (pH within 15 minute ction)

TOTAL CL2 : ________ TIME: ________ 6 pH buffer results: ___

COLLECTOR : ____________ DATE ______

SAMPLE # (1-4): _____ TIME COLLECTED: ________ ANALYS ______

pH: ______ TIME: ________ (pH within 15 minute ction)

TOTAL CL2 : ______ TIME: ________ 6 pH buffer results: ___

COLLECTOR : ____________ DAT ______

SAMPLE # (1-4): _____ TIME COLLECTED: ________ ANALY ______

pH: ______ TIME: ________ (pH within 15 minu lection)

TOTAL CL2 : ______ TIME: ________ 6 pH buffer results: ___

COLLECTOR : ____________ DAT ______

SAMPLE # (1-4): _____ TIME COLLECTED: ________ ANALY ______

pH: ______ TIME: ________ (pH within 15 min ollection)

TOTAL CL2 : ______ TIME: ________ 6 pH buffer results: ___

Combine the four day samples into a gallon container. Date container. Shake container un e is mixed. Do aluminum test. Save gallon sample for TSS testing.

ANALYST: _______ **DATE:** _______ **TIME:** _______ **ALUMINU** ____

RELINQUISHED BY: ______________ **RECEIVED BY:** ____________ **DATE** _____ **TIME:** ________

RELINQUISHED BY: ______________ **RECEIVED BY:** ____________ **DATE** _____ **TIME:** ________

RAMWEEKLYLAGOON01122005

MASS ENDANGERED SPECIES LIST

Town	Taxonomic Group	Scientific Name	Common Name	MESA Status	Federal Status	Most Recent Observation
GLOUCESTER	Amphibian	Ambystoma laterale	Blue-spotted Salamander	SC		1997
GLOUCESTER	Beetle	Cicindela rufiventris hentzii	Hentz's Redbelly Tiger Beetle	T		Historic
GLOUCESTER	Bird	Charadrius melodus	Piping Plover	T	T	2002
GLOUCESTER	Bird	Sterna hirundo	Common Tern	SC		2007
GLOUCESTER	Bird	Sternula antillarum	Least Tern	SC		2007
GLOUCESTER	Dragonfly/Damselfly	Enallagma pictum	Scarlet Bluet	T		1972
GLOUCESTER	Reptile	Emydoidea blandingii	Blanding's Turtle	T		1992
GLOUCESTER	Vascular Plant	Carex lenticularis	Shore Sedge	T		1917
GLOUCESTER	Vascular Plant	Goodyera repens	Dwarf Rattlesnake-plantain	E		1966
GLOUCESTER	Vascular Plant	Leymus mollis ssp. mollis	Sea Lyme-grass	E		2007
GLOUCESTER	Vascular Plant	Liatris scariosa var. novae-angliae	New England Blazing Star	SC		1928
GLOUCESTER	Vascular Plant	Listera cordata	Heartleaf Twayblade	E		1905
GLOUCESTER	Vascular Plant	Magnolia virginiana	Sweetbay Magnolia	E		2003
GLOUCESTER	Vascular Plant	Malaxis bayardii	Bayard's Green Adder's-mouth	E		1877
GLOUCESTER	Vascular Plant	Ophioglossum pusillum	Adder's-tongue Fern	T		1880
GLOUCESTER	Vascular Plant	Rumex pallidus	Seabeach Dock	T		1993
GLOUCESTER	Vascular Plant	Suaeda calceoliformis	American Sea-blite	SC		1982
GLOUCESTER	Vascular Plant	Vaccinium vitis-idaea ssp. minus	Mountain Cranberry	E		1988

E = Endangered	T = Threatened	SC = Special Concern

Attachment A
NOI for General Permit Coverage
Babson Water Treatment Plant

The Babson WTP is currently off-line and is undergoing major renovations. Upon completion of the rehabilitation work when the plant is returned to operation during the summer of 2010, there will be one lagoon in operation. The other existing lagoon, located at the foot of Babson Dam, will be decommissioned.

The lagoon for which the City seeks coverage is an irregularly shaped basin with sloped banks, approximately 200' long x 50' wide at the top. The depth of water in the lagoon when in operation varies throughout the basin from 1- 7 ft. (Estimated volume is 250,000 gallons.)

Pipe invert elevation at lagoon inlet – 31.08
Lagoon bottom elevation, at inlet – 29.0
Lagoon bottom elevation, at discharge end - 24.0
Discharge pipe elevation – 31.0

In regards to the lagoon, the design intention is to provide treatment for approximately 250,000 gpd of sludge and backwash water generated in the treatment process. However, under normal operating conditions, sludge will be discharged to the City sewer and the lagoon will be used solely for treatment of backwash water. (The option also exists through appropriate valving to isolate the lagoon and discharge all residuals to the sewer.)

Estimated wastewater discharges (based on operating data from the newly rehabilitated West Gloucester WTP) are as follows:

Backwash only: Backwash rate = 220 gpm/filter
Max. flow rate (both filters in backwash cycle) = 440 gpm
Total Q (two filters backwashing six times/day for 30 minutes each cycle) = 80,000 gpd

Sludge and backwash*: Q max = 250,000 gpd

*SCADA logic being installed at the plant prevents simultaneous sludge blowdown and backwash

Detention times for wastewater discharged to the lagoon will vary depending on the flow rate and volume of the discharge and the available volume for treatment, as solids accumulation within the lagoon will impact transit times.

The City of Gloucester operates two main water treatment facilities on an alternate basis with each of the plants being operated continuously for approximately six months during a twelve-month period. While the W. Gloucester plant is in operation, there is no process wastewater discharge through the Babson lagoon. During this 'down time', excess solids can be removed from the lagoon for dewatering and disposal and/or agricultural land application as needed.

Attachment B
NOI for General Permit Coverage
Babson Water Treatment Plant

Treatment Chemicals

Polyaluminum chloride (PAC)
Caustic soda
Potassium permanganate
Sodium bicarbonate
Sodium fluoride
Chlorine + ammonium sulfate
orthophosphate

Enter your transmittal number → x233592 (Transmittal Number)

Your unique Transmittal Number can be accessed online: http://mass.gov/dep/service/online/trasmfrm.shtml

Massachusetts Department of Environmental Protection

Transmittal Form for Permit Application and Payment

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to: DEP, P.O. Box 4062, Boston, MA 02211.

3. Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application. **Copy 2** must accompany your fee payment. **Copy 3** should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to:

MassDEP
P.O. Box 4062
Boston, MA 02211

*** Note:** For BWSC Permits, enter the LSP.

A. Permit Information

BRPWM13 — 1. Permit Code: 7 or 8 character code from permit instructions
NPDES General Permit — 2. Name of Permit Category
Water Treatment Plant Lagoon discharge — 3. Type of Project or Activity

B. Applicant Information – Firm or Individual

City of Gloucester - Dept. of Public Works — 1. Name of Firm - Or, if party needing this approval is an individual enter name below:

2. **Last Name** of Individual | 3. **First Name** of Individual | 4. MI

c/o City Hall, 9 Dale Ave. — 5. Street Address

Gloucester — 6. City/Town | MA — 7. State | 01930 — 8. Zip Code | 978 281-9785 — 9. Telephone # | 10. Ext. #

Larry Durkin — 11. Contact Person
ldurkin@gloucester-ma.gov — 12. e-mail address (optional)

C. Facility, Site or Individual Requiring Approval

Babson Water Treartment Plant — 1. Name of Facility, Site Or Individual

19 Russell Ave — 2. Street Address

Gloucester — 3. City/Town | MA — 4. State | 01930 — 5. Zip Code | 978 281-2841 — 6. Telephone # | 7. Ext. #

MA 10229 — 8. DEP Facility Number (if Known) | 9. Federal I.D. Number (if Known) | 10. BWSC Tracking # (if Known)

D. Application Prepared by (if different from Section B)*

City of Gloucester - Water Compliance Office — 1. Name of Firm Or Individual

50 Essex Ave — 2. Address

Gloucester — 3. City/Town | MA — 4. State | 01930 — 5. Zip Code | 978 281-9792 — 6. Telephone # | 7. Ext. #

Larry Durkin — 8. Contact Person
9. LSP Number (BWSC Permits only)

E. Permit - Project Coordination

1. Is this project subject to MEPA review? ☐ yes ☒ no
   If yes, enter the project's EOEA file number - assigned when an Environmental Notification Form is submitted to the MEPA unit:

EOEA File Number

F. Amount Due

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

Special Provisions:

1. ☒ **Fee** Exempt (city, town or municipal housing authority)(state agency if fee is $100 or less).
   There are no fee exemptions for BWSC permits, regardless of applicant status.
2. ☐ Hardship Request - payment extensions according to 310 CMR 4.04(3)(c).
3. ☐ Alternative Schedule Project (according to 310 CMR 4.05 and 4.10).
4. ☐ Homeowner (according to 310 CMR 4.02).

Check Number | Dollar Amount | 5/27/10 — Date