



*Environmental Monitoring
Pipeline Services
Remediation
Industrial Services
Operations & Maintenance*

US Environmental Protection Agency
Dewatering GP Processing
Municipal Assistance Unit (CMU),
1 Congress Street, Suite 1100
Boston, MA 02114-2023

December 6, 2010

Attention: Ms. Jessica Hing (Hing.Jessica@epamail.epa.gov)

Massachusetts Department of Environmental Protection
Division of Watershed Protection
627 Main Street, 2nd Floor
Worcester, MA 01608

Attention: Mr. Robert Kubit (robert.kubit@state.ma.us)

**RE: Discharge of Process Water from Bridge Repairs
Longfellow Bridge over the Charles River
Boston / Cambridge, MA
MassDOT Project No.: 604421**

Dear Sir/Madam:

Please find attached the EPA Notice of Intent (NOI) application, and associated attachments for discharge of construction water to the Charles River in accordance with the NPDES Dewatering General Permit (DGP) for the above referenced project location. Also provided with this submittal is a Massachusetts Department of Protection (MassDEP) transmittal form for permit application.

EST Associates, Inc. (EST) has prepared this permit application for SPS New England, Inc. (SPS) who is working on behalf of the Massachusetts Department of Transportation (MassDOT) on repairs and upgrades to the Longfellow Bridge located between Boston and Cambridge, MA. In accordance with the MassDOT project specification, the DGP is sought for the on-Site management of process water generated from bridge repairs.

The scheduled work includes cleaning and repointing of granite blocks that comprise the bridge abutments and piers. Cleaning and repointing of the piers and abutments includes work both above the water level, and also in the splash zone. In order to perform the splash zone work, an impermeable membrane containment system will be erected around the piers, and monitoring of the river water within the containment and directly downstream from the work zone will be performed.

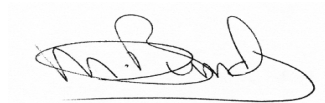
The water within the containment system shall not be allowed to leak into or otherwise come into contact with the river water outside the containment system. Water quality monitoring assessments that will be performed at the Site will include:

- Evaluation of water pH and turbidity within the containment structure;
- Measurement of river water pH down-current from each containment area; and
- Background measurement of river water pH up-current from the project area.

The work will begin on or about April 2011, and is scheduled to be completed in 3 months. To meet the pH requirements for discharge, batch adjustment of the contained water will be performed with carbon dioxide bubblers (as needed). After confirmation of acceptable pH (e.g. ± 0.5 S.U. of existing river pH) the containment will be removed, and the water will be reintroduced to the river.

If you have any questions or concerns with this application, please do not hesitate to contact the undersigned at (781) 455-0003, or mbundy@estassociates.com.

Best Regards,
EST Associates, Inc.



Michael L. Bundy, CHMM
Senior Scientist

cc: Rick Green, PE – Project Manager, SPS
Daniel Jolda – Asst. Project Manager, SPS
Roderick Connelly – Resident Engineer, MassDOT
Jessica Kenny – Acting Manager of Environmental Programs, MassDOT

Notice of Intent (NOI) Form
National Pollutant Discharge Elimination System
Dewatering General Permit (DGP)

Notice of Intent (NOI) Form
National Pollutant Discharge Elimination System
Dewatering General Permit (DGP)

1. General facility information. Please provide the following information about the facility.

a) Name of facility: Longfellow Bridge, Boston-Cambridge, MA	Mailing Address for the Facility: Not Applicable	
b) Location Address of the Facility (if different): Longfellow Bridge (Route 3A) over the Charles River.	Facility Location: longitude: <u>71° 04' 31 W</u> latitude: <u>42° 21' 41 N</u>	Type of Business: Construction - Bridge Repairs Facility SIC codes:
c) Name of facility owner: <u>Massachusetts DOT</u> , Contact: <u>Rod Connelly, Resident Engineer</u> Owner's email: <u>Roderick.Connelly@state.ma.us</u> Owner's Tel #: <u>(617) 981-2564</u> Owner's Fax #: _____ Address of owner (if different from facility address): <u>10 Park Plaza, Suite 3170, Boston, MA 02116</u> Owner is (check one): 1. Federal ___ 2. State <u>X</u> 3. Tribal ___ 4. Private ___ 5. Other ___ Describe: <u>MassDOT</u>		
Legal name of Operator, if not owner: <u>SPS New England, Inc.</u> Operator Contact Name: <u>Rick Green</u> Operator Tel Number: <u>Office: (978) 462-6543; Fax: (978) 462-0345</u> Operator's email: <u>rgreen@spsnewengland.com</u> Operator Address (if different from owner): <u>98 Elm Street, Salisbury, MA 01950</u>		
d) Attach a topographic map indicating the location of the facility and the outfall(s) to the receiving water. Map attached? <u>X</u>		
e) Check Yes or No for the following: 1. Has a prior NPDES permit been granted for the discharge? Yes ___ No <u>X</u> If Yes, Permit No.: _____ 2. Is the discharge a "new discharge" as defined by 40 CFR Section 122.22? Yes <u>X</u> No ___ 3. Is the facility covered by an individual NPDES permit? Yes ___ No <u>X</u> If Yes, Permit No.: _____ 4. Is there a pending application on file with EPA for this discharge? Yes ___ No <u>X</u> If Yes, date of submittal: _____		

2. Discharge information. Please provide information about the discharge, (attaching additional sheets as needed)

a) Name of receiving water into which discharge will occur: <u>Charles River - Boston Inner Harbor</u> State Water Quality Classification: <u>Class B</u> Freshwater: _____ Marine Water: _____
b) Describe the discharge activities for which the owner/applicant is seeking coverage: <u>Item 3</u> 1. Construction dewatering of groundwater intrusion and/or storm water accumulation. 2. Short-term or long-term dewatering of foundation sumps. ③ <u>Other: Cleaning and repointing granite blocks (pier and abutments) at/or below the water line.</u>
c) Number of outfalls: <u>1</u> , For each outfall:
d) Estimate the maximum daily and average monthly flow of the discharge (in gallons per day - GPD). Max Daily Flow <u>1,250,000 GPD (based on volume on a single pier containment)</u> Average Monthly Flow: <u>2,500,000 GPM (based on discharge of two pier containments per month)</u>
e) What is the maximum and minimum monthly pH of the discharge (in s.u.)? Max pH: <u>8.5</u> Min pH: <u>6.5</u>
f) Identify the source of the discharge (i.e. potable water, surface water, or groundwater): <u>Surface Water</u> If groundwater, the facility shall submit effluent test results, as required in Section 4.4.5 of the General Permit.
g) What treatment does the wastewater receive prior to discharge? <u>Batch Containment and pH adjustment (if needed).</u>
h) Is the discharge continuous? Yes ___ No <u>X</u> If no, is the discharge periodic (P) (occurs regularly, i.e., monthly

or seasonally, but is not continuous all year) or intermittent (I) (occurs sometimes but not regularly) or both (B): P
If (P), number of days or months per year of the discharge 10 days and the specific months of discharge April 2010
through August 2011;

If (I), number of days/year there is a discharge _____

Is the discharge temporary? Yes X No _____ (One-time discharge per bridge pier location)

If yes, approximate start date of dewatering: April 2011; approximate end date of dewatering August 2011.

- i) Latitude and longitude of each discharge within 100 feet (See [http://www.epa.gov/tri/report/siting tool](http://www.epa.gov/tri/report/siting%20tool)):

Outfall 1: long. 71° 04' 31 W lat. 42° 21' 41 N (Charles River at Longfellow Bridge)

Outfall 2: long. _____ lat. _____; Outfall 3: long. _____ lat. _____.

- j) If the source of the discharge is potable water, please provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water and attach any calculation sheets used to support stream flow and dilution calculations. (See Appendix VII for equations and additional information)

MASSACHUSETTS FACILITIES: See Section 3.4 and Appendix 1 of the General Permit for more information on Areas of Critical Environmental Concern (ACEC):

- k) Does the discharge occur in an ACEC? Yes _____ No X

If yes, provide the name of the ACEC: _____.

3. Contaminant Information

- a) Are any pH neutralization and/or dechlorination chemicals used in the discharge? Yes X No _____

If so, include the chemical name and manufacturer; maximum and average daily quantity used as well as the maximum and average daily expected concentrations (mg/l) in the discharge, and the vendor's reported aquatic toxicity (NOAEL and/or LC₅₀) in percent for aquatic organism(s). pH Neutralization by Carbon Dioxide Bubbler

- b) Please report any known remediation activities or water-quality issues in the vicinity of the discharge. None.

4. Determination of Endangered Species Act Eligibility: Provide documentation of ESA eligibility as required at Part 3.4 and Appendices III and IV. In addition, respond to the following questions.

- a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge?
Yes _____ No X

- b) Has any consultation with the federal services been completed? Yes _____ No X

- c) Is consultation underway? Yes _____ No X

- d) What were the results of the consultation with the U.S. Fish and Wildlife Service and/or NOAA Fisheries Service (check one): a "no jeopardy" opinion _____ or written concurrence _____ on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat.

- e) Which of the five eligibility criteria listed in Appendix 2, Section B (A, B, C, D, or E) have you met? A

- f) Please attach a copy of the most current federal listing of endangered and threatened species, found at USF&W website.

5. Documentation of National Historic Preservation Act requirements: Please respond to the following questions:

- a) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility site or in proximity to the discharge? Yes _____ No X

- b) Have any State or Tribal historic preservation officers been consulted in this determination? Yes _____ No X
If yes, attach the results of the consultation(s).

- c) Which of the three National Historic Preservation Act requirements listed in Appendix 3, Section C (1, 2 or 3) have you met? 1

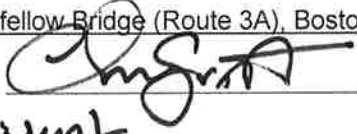
6. Supplemental Information: Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.

7. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22 (see below) including the following certification:

I certify under penalty of law that (1) no biocides or other chemical additives except for those used for pH adjustment and/or dechlorination are used in the dewatering system; (2) the discharge consists solely of dewatering and authorized pH adjustment and/or dechlorination chemicals; (3) the discharge does not come in contact with any raw materials, intermediate product, water product or finished product; (4) if the discharge of dewatering subsequently mixes with other permitted wastewater (i.e. stormwater) prior to discharging to the receiving water, any monitoring provided under this permit will be only for dewatering discharge; (5) where applicable, the facility has complied with the requirements of this permit specific to the Endangered Species Act and National Historic Preservation Act; and (6) 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 my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility Name: Longfellow Bridge (Route 3A), Boston-Cambridge, MA

Operator signature: 

Title: Vice President

Date: 12/07/10

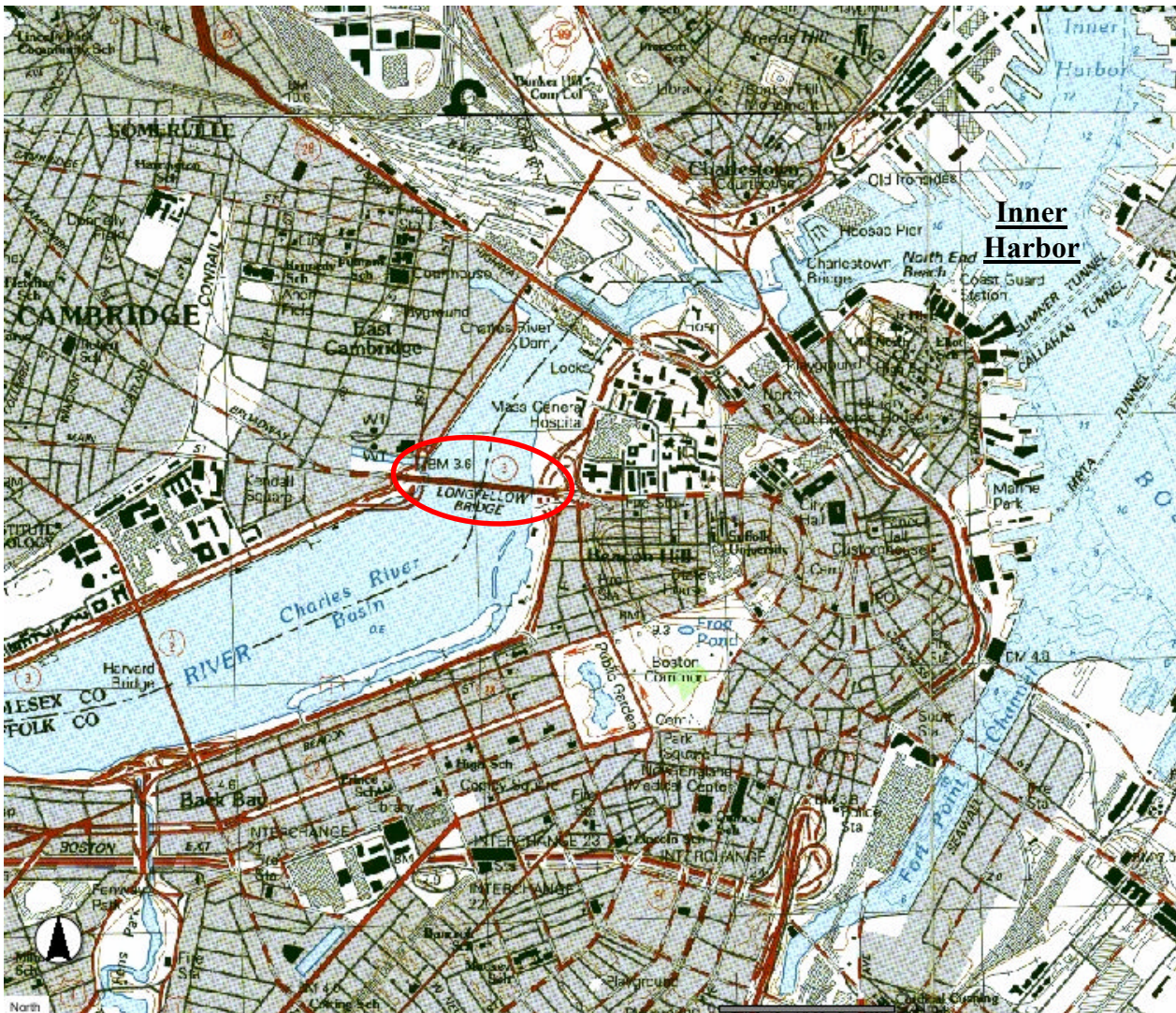
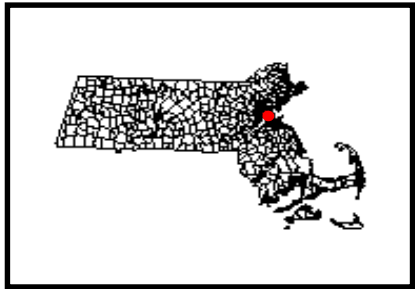
Federal regulations require this application to be signed as follows:

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.

**NPDES DGP Permit Application
Section 1(d)**

Site Locus

Site Locus:
Longfellow Bridge
Route 3A / Charles
River
Boston/Cambridge,
Massachusetts



CONTAMINANT INFORMATION

Section 3(a)

pH neutralization

Batch neutralization (if required) of the accumulated water will be performed with commercially available Carbon Dioxide. Batch neutralization will be performed by “bubbling” the carbon dioxide into the contained river water with continuous pH monitoring at multiple locations.

The neutralization will be performed to a pH end-point of the existing river water $\text{pH} \pm 0.5$ S.U.

Chemical Information:

1. Chemical Name and Manufacturer: Air Gas Products, Inc., Carbon Dioxide
 2. Maximum Quantity Used: Unknown
 3. Maximum Expected Concentrations (mg/L) in the Discharge: None.
 4. Vendor's Reported Aquatic Toxicity: None listed
-

**NPDES DGP Permit Application
Section 4(f)**

**Current Federal Listing of Endangered and Threatened Species
Source: USF&W website (July 28, 2010)**

Summary of Animals listings

Animal species listed in this state and that occur in MA (17 species)

<u>Status</u>	<u>Species</u>
E	Beetle, American burying (<i>Nicrophorus americanus</i>)
T	Plover, piping except Great Lakes watershed (<i>Charadrius melodus</i>)
E	Plymouth Red-Bellied Turtle (<i>Pseudemys rubriventris bangsi</i>)
E	Sea turtle, hawksbill (<i>Eretmochelys imbricata</i>)
E	Sea turtle, Kemp's ridley (<i>Lepidochelys kempii</i>)
E	Sea turtle, leatherback (<i>Dermochelys coriacea</i>)
T	Sea turtle, loggerhead (<i>Caretta caretta</i>)
E	Sturgeon, shortnose (<i>Acipenser brevirostrum</i>)
E	Tern, roseate northeast U.S. nesting pop. (<i>Sterna dougallii dougallii</i>)
T	Tiger beetle, northeastern beach (<i>Cicindela dorsalis dorsalis</i>)
T	Turtle, bog (=Muhlenberg) northern (<i>Clemmys muhlenbergii</i>)
E	Wedgemussel, dwarf (<i>Alasmidonta heterodon</i>)
E	Whale, blue (<i>Balaenoptera musculus</i>)
E	Whale, finback (<i>Balaenoptera physalus</i>)
E	Whale, humpback (<i>Megaptera novaeangliae</i>)
E	Whale, right (<i>Balaena glacialis (incl. australis)</i>)
E	Whale, Sei (<i>Balaenoptera borealis</i>)

Summary of Plant listings

Plant species listed in this state and that occur in this state (3 species)

<u>Status</u>	<u>Species</u>
E	Bulrush, Northeastern (<i>Scirpus ancistrochaetus</i>)
E	Gerardia, sandplain (<i>Agalinis acuta</i>)
T	Pogonia, small whorled (<i>Isotria medeoloides</i>)

Last updated: July 28, 2010

**Massachusetts Department of Protection
Transmittal Form for Permit Application**



Enter your transmittal number

X235731

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

BRP WM 10

Surface Water Discharge (NPDES)

1. Permit Code: 7 or 8 character code from permit instructions

2. Name of Permit Category

MassDOT Bridge Repairs and Upgrades

3. Type of Project or Activity

B. Applicant Information – Firm or Individual

SPS New England, Inc.

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

98 Elm Street

5. Street Address

Salisbury

MA

01950

(978) 462-6543

6. City/Town

7. State

8. Zip Code

9. Telephone #

10. Ext. #

Rick Green

rgreen@spsnewengland.com

11. Contact Person

12. e-mail address (optional)

C. Facility, Site or Individual Requiring Approval

Longfellow Bridge

1. Name of Facility, Site Or Individual

Route 3A over the Charles River

2. Street Address

Boston - Cambridge

MA

02129

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

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)*

EST Associates, Inc.

1. Name of Firm Or Individual

51 Fremont Street

2. Address

Needham

MA

02494

781-455-0003

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

Mike Bundy

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

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).

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

Check Number

Dollar Amount

Date