

ENF Environmental Notification Form

For Office Use Only
 Executive Office of Environmental Affairs

EOEA No. **14132**
 MEPA Analyst **Holly Johnson**
 Phone: 617-626-**1023**

The information requested on this form must be completed to begin MEPA Review in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: Somerset Skating Marsh Restoration Project		
Street: Off Dublin Street		
Municipality: Somerset	Watershed: Taunton River	
Universal Transverse Mercator Coordinates:	Latitude: 71° 7' 57" W Longitude: 41° 46' 7"N	
Estimated commencement date: Spring 2008	Estimated completion date: Fall 2008	
Approximate cost: \$150,000	Status of project design: 100 %complete	
Proponent: Town of Somerset		
Street: 1263 Brayton Point Road		
Municipality: Somerset	State: MA	Zip Code: 02725
Name of Contact Person From Whom Copies of this ENF May Be Obtained: Amy Ball		
Firm/Agency: Horsley Witten Group, Inc.	Street: 90 Route 6A	
Municipality: Sandwich	State: MA	Zip Code: 02563
Phone: 508-833-6600	Fax: 508-833-3150	E-mail: aball@horsleywitten.com

- Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
 Yes No
- Has this project been filed with MEPA before?
 Yes (EOEA No. _____) No
- Has any project on this site been filed with MEPA before?
 Yes (EOEA No. _____) No
- Is this an Expanded ENF (see 301 CMR 11.05(7)) requesting:
- a Single EIR? (see 301 CMR 11.06(8)) Yes No
 - a Special Review Procedure? (see 301CMR 11.09) Yes No
 - a Waiver of mandatory EIR? (see 301 CMR 11.11) Yes No
 - a Phase I Waiver? (see 301 CMR 11.11) Yes No

Identify any financial assistance or land transfer from an agency of the Commonwealth, including the agency name and the amount of funding or land area (in acres): **Massachusetts Riverways Program: \$60,000; and Massachusetts Office of Coastal Zone Management: \$52,000.**

Are you requesting coordinated review with any other federal, state, regional, or local agency?
 Yes (Specify _____) No

List Local or Federal Permits and Approvals:
Order of Conditions (application submitted to the Somerset Conservation Commission)
General Waterways Ch. 91 License

Water Quality Certification
Category II Department of the Army Programmatic General Permit

Which ENF or EIR review threshold(s) does the project meet or exceed (see 301 CMR 11.03):

- | | | |
|---------------------------------|---------------------------------------|--|
| <input type="checkbox"/> Land | <input type="checkbox"/> Rare Species | <input checked="" type="checkbox"/> Wetlands, Waterways, & Tidelands |
| <input type="checkbox"/> Water | <input type="checkbox"/> Wastewater | <input type="checkbox"/> Transportation |
| <input type="checkbox"/> Energy | <input type="checkbox"/> Air | <input type="checkbox"/> Solid & Hazardous Waste |
| <input type="checkbox"/> ACEC | <input type="checkbox"/> Regulations | <input type="checkbox"/> Historical & Archaeological Resources |

Summary of Project Size & Environmental Impacts	Existing	Change	Total	State Permits & Approvals
LAND				<input checked="" type="checkbox"/> Order of Conditions <input type="checkbox"/> Superseding Order of Conditions <input checked="" type="checkbox"/> Chapter 91 License <input checked="" type="checkbox"/> 401 Water Quality Certification <input type="checkbox"/> MHD or MDC Access Permit <input type="checkbox"/> Water Management Act Permit <input type="checkbox"/> New Source Approval <input type="checkbox"/> DEP or MWRA Sewer Connection/ Extension Permit <input type="checkbox"/> Other Permits <i>(including Legislative Approvals) – Specify:</i>
Total site acreage				
New acres of land altered		0.12		
Acres of impervious area	0.74	- 0.1	0.64	
Square feet of new bordering vegetated wetlands alteration		0		
Square feet of new other wetland alteration		1,028 s.f.		
Acres of new non-water dependent use of tidelands or waterways		0		
STRUCTURES				
Gross square footage	N/A	N/A	N/A	
Number of housing units	N/A	N/A	N/A	
Maximum height (in feet)	N/A	N/A	N/A	
TRANSPORTATION				
Vehicle trips per day	N/A	N/A	N/A	
Parking spaces	N/A	N/A	N/A	
WATER/WASTEWATER				
Gallons/day (GPD) of water use	N/A	N/A	N/A	
GPD water withdrawal	N/A	N/A	N/A	
GPD wastewater generation/ treatment	N/A	N/A	N/A	
Length of water/sewer mains (in miles)	N/A	N/A	N/A	

CONSERVATION LAND: Will the project involve the conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97?

- Yes (Specify _____) No

Will it involve the release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction?

- Yes (Specify _____) No

RARE SPECIES: Does the project site include Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities?

Yes (Specify _____) No

HISTORICAL /ARCHAEOLOGICAL RESOURCES: Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

Yes (Specify _____) No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources?

Yes (Specify _____) No

AREAS OF CRITICAL ENVIRONMENTAL CONCERN: Is the project in or adjacent to an Area of Critical Environmental Concern?

Yes (Specify _____) No

PROJECT DESCRIPTION: The project description should include (a) a description of the project site, (b) a description of both on-site and off-site alternatives and the impacts associated with each alternative, and (c) potential on-site and off-site mitigation measures for each alternative (You may attach one additional page, if necess ary.)

SITE DESCRIPTION

The project site is located north of Dublin Street and west of High Street in the location of the Somerset Skating Marsh, located in Somerset, Massachusetts. Photographs of the site and associated resource areas are part of this application. The Somerset Skating Marsh is a tidally-influenced water feature connected to the Atlantic Ocean through Labor in Vain Brook, the Taunton River, Mount Hope Bay, Narragansett Bay, and Rhode Island Sound. The marsh receives freshwater input from a tributary that flows from Palmer Street as well as from groundwater seepage. The surrounding area to the immediate south and east is occupied largely by residential homes. The area to the immediate north and west consists of wetlands, agricultural areas, and wooded upland. Topography immediately around Labor in Vain Brook and the Somerset Skating Marsh slopes moderately and varies in elevation from near sea-level to greater than 30 feet.

PROJECT DESCRIPTION AND NATURE OF ACTIVITY

The Somerset Skating Marsh Restoration Project is anticipated to improve the health, ecology, habitat value, and hydrology of approximately 11 acres of coastal and freshwater wetlands by restoring seven acres of salt marsh to a more natural tidal regime. It will include replacement of the existing 24-inch CMP culvert in the gravel parking lot with a 26-foot long, four-foot wide, four-foot high (3-foot effective height), pre-cast concrete box culvert, concrete headwalls, and pre-cast concrete flared end section, to be installed in approximately the same location as the existing undersized culvert. The project will also involve the removal of approximately 135 cubic yards (c.y.) of fill placed within the tidelands for the parking lot and creation of an open, low-flow channel. In addition, to preserve the recreational use of the Somerset Skating Marsh, the existing level control structure in the marsh will be replaced with stop logs within a four-foot by six-foot open top concrete box culvert to facilitate seasonal flooding. Finally, to maintain the existing level of ponding within the three low-lying adjacent private properties along Dublin Street (house numbers 174, 130, and 104) and to protect them from potential changes to their existing ponding regime, the Town proposes to construct a 500-foot long earthen berm within the buffer zone.

Due to the proximity of existing wetland resource areas (salt marsh, land under waterways, bank, riverfront

area, and coastal floodzone), as well as adjacent buffer zone, some alteration to these resource areas is unavoidable. The proposed low-level earthen berm is designed to protect the adjacent properties subject to potential additional flooding due to the culvert replacement. Erosion control/siltation fencing will be installed to define the limit of work and protect adjacent resource areas from unnecessary disturbance. A discussion of the project alternatives is provided below.

ALTERNATIVES ANALYSIS

HW and Massachusetts Wetlands Restoration Program staff considered the advantages and disadvantages of the following four different project alternatives:

- 1) The proposed plan to replace the existing parking lot culvert with a larger 4 foot x 4 foot box culvert (4 foot x 3-foot effective height) and to build a 500-foot berm to protect Dublin Street residents from the project's potential increased ponding;
- 2) Replace both the parking lot and Dublin Street culverts with larger concrete box culverts (4 x 2 feet and 15 x 6 feet respectively);
- 3) Replace the three culverts at South and Dublin Streets and at the parking lot with two foot-span bridges and a larger culvert, respectively; and
- 4) The No-Build alternative.

We believe that there is no practical alternative to the project activities as currently proposed that will further minimize adverse impacts to the wetland resource areas while meeting the project's salt marsh restoration goals. We further believe that all project alternatives considered, including the No Build alternative, will result in impact to the resource areas. The project as currently proposed minimizes these impacts, incorporates a substantial restoration component, which will eliminate a cumulative loss of salt marsh area, and is financially feasible.

Alternative 1 (Preferred): Current Proposal to Replace Existing Parking Lot Culvert with a 4-Foot by 4-Foot Box Culvert (4' x 3' effective height) and to Build a 500 Foot Berm

The existing 24-inch diameter, 113-foot long, corrugated metal pipe culvert restricting flow between Labor in Vain marsh and the Somerset Skating Marsh would be replaced by a 4-foot wide, 4-foot high, 30 foot long concrete culvert, with about one-foot of native sandy loam to be placed on the bottom of the box culvert for an effective height of three feet. The existing water level control structure in the Somerset Skating Marsh will be removed, and stop logs will be provided as part of the new culvert to facilitate seasonal flooding for use of the marsh for ice skating by Town residents for a period of two years after construction. Modeling results showed an increased flooding of about two acres of salt marsh, resulting in improvement in tidal flushing of seven acres of salt marsh, but also increased potential flooding to some low elevation homes bordering the marsh during high tide events. The preferred alternative therefore includes the construction of an earthen berm between these adjacent properties and the marsh to mitigate potential increased ponding resulting from the tidal restriction removal. The berm will prevent water from inundating the abutters' properties while continuing to drain the properties through the berm's one-way flap valve by gravity. The berm therefore does not require Town action in advance of storms.

With the preferred alternative, including appropriate and practical mitigation measures, appropriate erosion and sedimentation control measures, and permanent bank stabilization measures, potential adverse impacts to the resource areas at the project location will be minimized during construction. In the long term, the installation of a larger and shorter culvert with the earthen berm will result in improved tidal flow,

significant salt marsh restoration, and improved habitat and ecological functions for the project area without negatively impacting adjacent properties.

Alternative 2: Replace both the parking lot and Dublin Street culverts with larger concrete box culverts (4 x 2 feet and 15 x 6 feet respectively)

This alternative involves replacing the existing parking lot culvert with a four-foot wide, two-foot high, concrete box culvert, and the 102-inch diameter corrugated metal pipe culvert at Dublin Street with a 15-foot wide, six-foot high concrete boxed culvert. Similar to the preferred alternative, the existing water level control structure in the Somerset Skating Marsh would be removed, and stop logs would be provided as part of the new culvert to facilitate seasonal flooding. With these two tidal restriction removals, a modeling exercise showed that the Somerset Skating Marsh would increase in flood elevation by 0.5 feet, Labor In Vain would increase in flood elevation by 0.1 feet and the corresponding peak flood area would be increased by approximately 4.3 acres, or twice the area of the first alternative, but for over twice the cost. Implementation of additional flood mitigation measures beyond the 500-foot berm to protect abutters would be required.

Alternative 3: Replace the three culverts at South and Dublin Streets and at the parking lot with two foot-span bridges and a larger culvert, respectively

This alternative was developed to optimize tidal flushing without altering the layout and geometry of transportation infrastructure. Specifically, it involves replacing the parking lot culvert with a seven-foot wide, three-foot high box culvert and replacing the culverts at Dublin Street and South Street with 40-foot span bridges. Similar to the preferred alternative, the existing water level control structure in the Somerset Skating Marsh would be removed, and stop logs would be provided as part of the new culvert to facilitate seasonal flooding. With these three tidal restriction removals, a modeling exercise showed that the Somerset Skating Marsh flood elevation would increase by 1.1 feet and the Labor in Vain flood elevation would increase by 0.6 feet, bringing both flood elevations close to the Taunton River high tide elevation of 5.2 feet. This would translate into an increase in potential peak flood area in the Somerset Skating Marsh of over four acres and over six acres in Labor In Vain. The total potential increase in flood area is approximately 10.5 acres under peak conditions. This alternative would achieve the maximum amount of flushing/mixing between The Taunton River, Labor in Vain, and the Somerset Skating Marsh and would offer the most benefit in terms of salt marsh restoration and improved habitat, but it is also the highest cost of the alternatives considered, at almost seven times the cost of the preferred alternative, and would require the implementation of additional flood mitigation measures.

Alternative 4: No-Build alternative

The “No-Build” alternative would allow the existing tidal restriction to remain. While implementing the No-Build alternative would mean that there would be no alterations to the coastal resource areas associated with culvert replacement, it would not alleviate the tidal restriction and would not improve the impaired salt marsh habitat that exists upstream of the existing restriction. In fact, over time, it is likely that the native vegetation within the upstream salt marsh community will continue to become displaced by non-native invasive species. Salt marsh restoration is the primary goal of this proposed project; the No Build alternative would not serve the project purpose.

More detailed information is provided in the attached Project Narrative.