Commonwealth of Massachusetts
Executive Office of Environmental Affairs ■ MEPA Office

ENF Environmental Notification Form

For Office Use Only *Executive Office of Environmental Affairs*
EOEA No.: 13982
MEPA Analyst: Nick Zavolas
Phone: 617-626-1030

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: **Tidal Restriction Removal and Wooden Walking Bridge Construction Project – Bass Creek, Yarmouth**		
Street: **Center Street**		
Municipality: **Yarmouth**	Watershed: **Cape Cod**	
Universal Tranverse Mercator Coordinates: **(UTME) 397133 (UTMN) 4619151**	Latitude: 41°42'58" N Longitude: 70°14'14" W	
Estimated commencement date: **Fall 2007**	Estimated completion date: **Spring 2008**	
Approximate cost: **$100,000**	Status of project design: **100** %complete	
Proponent: **Yarmouth Conservation Commission**		
Street: **1146 Route 28**		
Municipality: **South Yarmouth**	State: **MA**	Zip Code: **02664**
Name of Contact Person From Whom Copies of this ENF May Be Obtained: **Neal Price**		
Firm/Agency: **Horsley Witten Group, Inc.**	Street: **90 Route 6A**	
Municipality: **Sandwich**	State: **MA**	Zip Code: **02563**
Phone: **508-833-6600 ext. 117**	Fax: **508-833-3150**	E-mail: **nprice@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):
The Massachusetts Coastal Zone Management – Wetlands Restoration Program is providing financial assistance for this project in the amount of approximately $50,000.

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 to be submitted to the Yarmouth Conservation Commission),
General Waterways Ch. 91 License (application to be submitted),
Water Quality Certification (application to be submitted), and

Category II Department of the Army Programmatic General Permit (application to be submitted)

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

- ☐ Land
- ☐ Water
- ☐ Energy
- ☐ ACEC
- ☒ Rare Species
- ☐ Wastewater
- ☐ Air
- ☐ Regulations
- ☒ Wetlands, Waterways, & Tidelands
- ☐ Transportation
- ☐ Solid & Hazardous Waste
- ☐ Historical & Archaeological Resources

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	35 ac		
New acres of land altered		0.07 ac	
Acres of impervious area	0	0	0
Square feet of new bordering vegetated wetlands alteration		0	
Square feet of new other wetland alteration		3,240 sq. feet	
Acres of new non-water dependent use of tidelands or waterways		0	
STRUCTURES			
Gross square footage	N/A	N/A	
Number of housing units	N/A	N/A	
Maximum height (in feet)	N/A	N/A	
TRANSPORTATION			
Vehicle trips per day	N/A	N/A	
Parking spaces	N/A	N/A	
WATER/WASTEWATER			
Gallons/day (GPD) of water use	N/A	N/A	
GPD water withdrawal	N/A	N/A	
GPD wastewater generation/ treatment	N/A	N/A	
Length of water/sewer mains (in miles)	N/A	N/A	

State Permits & Approvals

- ☒ Order of Conditions
- ☐ Superseding Order of Conditions
- ☒ Chapter 91 License
- ☒ 401 Water Quality Certification
- ☐ MHD or MDC Access Permit
- ☐ Water Management Act Permit
- ☐ New Source Approval
- ☐ DEP or MWRA Sewer Connection/ Extension Permit
- ☐ Other Permits (*including Legislative Approvals*) – Specify:

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 **At this time, the project site has been mapped as Estimated Habitats of Rare Wildlife and Priority Habitats of Rare Species, but we do not know the actual species yet. A MESA Information Request has been filed)** ☐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 necessary.*)

(a) a description of the project site:
The proposed project will alleviate an existing tidal restriction located along Bass Creek in Yarmouth, Massachusetts. Bass Creek is a tidal waterway that connects Cape Cod bay to the salt marsh. The property on which the project is proposed is a 35-acre parcel owned by the Town of Yarmouth and managed as part of the Callery-Darling Conservation Area. A tidal restriction caused by an undersized 4' diameter culvert, installed decades ago to regulate surface water flow, has altered the hydrologic characteristics of the marsh upstream of the culvert by reducing the tidal range and limiting saltwater inputs to the marsh. These changes over time have contributed to a proliferation of the invasive plant species, common reed (*Phragmites australis),* and a subsequent reduction of native salt-tolerant marsh vegetation (e.g., *Spartina alterniflora* and *S. patens*), and have resulted in adverse effects to wetland habitat functions including the provision of desirable fisheries habitat. By replacing the existing concrete culvert with a wooden walking bridge, the project aims to restore full tidal flows to a degraded salt marsh of approximately twenty seven acres. Increasing tidal flows will improve tidal flushing of nutrients and pollutants from the upstream marsh areas and will increase saltwater and ocean nutrient inputs.

(b) a description of both on-site and off-site alternatives and the impacts associated with each alternative
During the planning phase of this tidal restriction removal and habitat restoration project, HW and Massachusetts Wetlands Restoration Program staff considered the advantages and disadvantages of the different project alternatives. All Federal Clean Water Act Section 401 activities are subject to an alternatives analysis as part of the Departments review process for Water Quality Certification. Additionally, alterations to Riverfront Area require the presentation of an alternatives analysis under the Massachusetts Wetlands Protection Act Regulations. The three alternatives considered here are: 1) the proposed plan to construct a 35-foot wooden walking bridge over an expanded channel opening, 2) replace the existing culvert with a larger box culvert, and 3) 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 and incorporates a substantial restoration component, which will eliminate a cumulative loss of wetland area.

Advantages of Current Proposal to Replace Existing Culvert with a Wooden Walking Bridge (Preferred Alternative)
The proposed wooden walking bridge and the improved and reinforced tidal waterway can be largely installed prior to deconstructing the existing culvert, allowing tidal ebb and flow to continue unimpeded throughout the construction process. We anticipate that the new, wider channel and its reinforced banks will result in reduced tidal flow velocities and less resulting scour and erosion.

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 wooden walking bridge will result in improved tidal flow, significant salt marsh restoration, and improved habitat and ecological functions for the project area.

Disadvantages of Alternative 2 (Replacement Culvert)
An alternative to the proposed plan to construct a 35-foot wooden walking bridge across an enlarged channel opening is to replace the existing culvert with a box culvert of larger capacity than the existing corrugated metal culvert. This alternative would have similar construction-related impacts to resource areas to the proposed alternative but would result in a less effective salt marsh restoration, would be more costly to implement, and would be less aesthetically attractive - a reasonable consideration for a Town conservation area.

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 bridge construction, allowing the existing degraded culvert to remain in place would allow erosion and channel scour of the creek crossing to continue unabated, 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 would continue to become displaced by non-native invasive species. Salt marsh restoration is the primary goal of this proposed project.

(c) potential on-site and off-site mitigation measures for each alternative
The footprint in which the culvert removal and walking bridge construction activities will occur has been reduced in size to the extent feasible in order to minimize alterations to the coastal resource areas. The construction staging area will be located in an existing open area to the north of the work area, as shown on the enclosed project site plans. Details of the proposed mitigation measures, including erosion and sedimentation control barriers and proposed slope stabilization techniques and materials are also provided on the site plans (sheet 4 of 4). As required under the local wetland protection bylaw, guidance and instructions provided in the Massachusetts Erosion Control Manual will be applied.

This salt marsh restoration project will serve the wetland interests and values, as specified in the Massachusetts Wetlands Protection Act, as well as the Town of Yarmouth Wetland By-Law (Chapter 143, Section 2,D) and associated Wetland Protection Regulations by contributing at a minimum to the prevention of pollution, protection of land containing shellfish, protection of marine fisheries, the protection of wildlife habitat, recreation, and aesthetics. The project will also serve these interests and values by meeting the performance standards for the protected wetland resource areas in or near the project location. As described in detail below and as depicted on the site plan, appropriate impact mitigation measures will be implemented to protect wetland resource areas during the culvert removal and bridge construction.