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.: 13492
MEPA Analyst: Bill Gage
Phone: 617-626- 1025

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 Project - Old East Sandwich State Game Farm**	
Street: **510 Route 6A**	
Municipality: **Sandwich**	Watershed: **Cape Cod**
Universal Transverse Mercator Coordinates: **(UTME) 380514 (UTMN) 4620874**	Latitude: **41.73 N** Longitude: **70.44 W**
Estimated commencement date: **1 June 2005**	Estimated completion date: **30 June 2005**
Approximate cost: **$150,000**	Status of project design: **100% Complete**
Proponent: **Thornton W. Burgess Society**	
Street: **6 Discovery Hill Road**	
Municipality: **Sandwich**	State: **MA** Zip Code: **02563**
Name of Contact Person From Whom Copies of this ENF May Be Obtained: **Michael Ball**	
Firm/Agency: **Horsley Witten Group, Inc.**	Street: **90 Route 6A**
Municipality: **Sandwich**	State: **MA** Zip Code: **02563**
Phone: **508-833-6600 ext. 105** Fax: **508-833-3150**	E-mail: **mball@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 $23,000.

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 issued by the Sandwich Conservation Commission, General Waterways Ch. 91 License (pending), Water Quality Certification (pending), Category II Department of the Army Programmatic General Permit (pending)**

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	133		
New acres of land altered		<1	
Acres of impervious area	<1	0	
Square feet of new bordering vegetated wetlands alteration			
Square feet of new other wetland alteration		Approx. 1,200	
Acres of new non-water dependent use of tidelands or waterways		0	
STRUCTURES			
Gross square footage	N/A		
Number of housing units	N/A		
Maximum height (in feet)	N/A		
TRANSPORTATION			
Vehicle trips per day	N/A		
Parking spaces	N/A		
WATER/WASTEWATER			
Gallons/day (GPD) of water use	N/A		
GPD water withdrawal	N/A		
GPD wastewater generation/ treatment	N/A		
Length of water/sewer mains (in miles)	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________________________________) ☒**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? **The salt marsh on the seaward side of the failed culvert is within the ACEC.**

☒**Yes** (Specify: **Sandy Neck / Barnstable Harbor ACEC**) ☐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 Mill Creek at the Old East Sandwich Game Farm. Mill Creek is a tidal waterway that connects Scorton Creek to Nye Pond. The property on which the project is proposed is a 133-acre parcel owned by the Massachusetts Division of Fisheries and Wildlife (DFW) and managed by Thornton Burgess under an agreement with the DFW. A tidal restriction caused by a failed culvert, which was 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 affects to wetland habitat functions including the provision of desirable fisheries habitat. By replacing the existing concrete culvert with a span bridge, the project aims to restore full tidal flows to a degraded salt marsh of approximately eight 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. The three alternatives considered here are: 1) the proposed plan to construct a span bridge over a new channel located several feet west of the existing culvert, 2) construct a span bridge over the location where the culvert currently exists (i.e. no change to location of tidal channel), 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 restorative aims. We believe that all project alternatives considered 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.

Alternative 1: Existing proposal to construct a span bridge over a new channel located several feet west of the existing culvert. This preferred alternative will install a span bridge in an adjacent location just to the west of the existing culvert to be removed.

Disadvantages of Alternative 2 (In-place Construction of Bridge Following Culvert Removal)
An alternative to the proposed plan to construct a span bridge across a channel to be relocated several feet to the west of the existing channel and weir is to first remove the existing weir and then construct the bridge in the present location of the weir. This alternative would require constructing a coffer dam and temporary channel as a means of dewatering the work area, while maintaining uninterrupted tidal ebb and flow through the area for the duration of the construction phase. We believe that the work required for this alternative would be significantly complicated, would result in significant adverse impacts to the aquatic ecosystem including salt marsh, and be unnecessary.

Advantages of Current Proposal to Replace Existing Culvert with Span Bridge over Relocated Tidal Waterway
By installing the structural components of the span bridge and creating the improved and reinforced tidal waterway prior to deconstructing the existing culvert, the need for and impacts associated with coffer dam construction, dewatering, and temporary tidal flow diversion are eliminated. Furthermore, we believe that the footprint of the relocated tidal channel will result in a less abrupt bend in and better alignment of the tidal waterway. We also believe that the planned channel location may be closer to the original location of the former channel in its unrestricted condition prior to the construction of the existing culvert. We anticipate that the reinforced banks of the new channel will experience less scour from daily tidal flows as a result of the new channel configuration. With the preferred alternative, appropriate and practical mitigation measures, including salt marsh habitat replacement, appropriate erosion and sedimentation control measures, and permanent bank stabilization measures, are proposed to minimize potential and expected adverse impacts to the resource areas at the project location. Installation of a span bridge as opposed to any other type of crossing structure is a significant measure in itself that mitigates resource area impacts.

No-Build Alternative
The no-build alternative would allow to existing tidal restriction to remain. While the no-build alternative would mean that there would be no resource area alteration associated with bridge construction, by allowing the degraded culvert to remain, the existing tidal restriction would not be alleviated and the impaired water quality and fisheries habitat that exists in the wetlands and waters upstream of the existing restriction would not improve and would further deteriorate. Habitat improvement is the primary goal of this proposed project.

(c) potential on-site and off-site mitigation measures for each alternative

The proposed area in which work will occur has been reduced in size to the maximum feasible extent in order to minimize salt marsh alteration and minimize alterations to other coastal resource areas present at the site, such as coastal bank, tidal flat, and land subject to coastal storm flowage. The construction staging area will be located in an existing open area to the west of the work area. Please refer to the project site plans, which depict locations and describe impact mitigation measures, such as the erosion control barrier and proposed slope stabilization techniques and materials. As required under the local wetland protection bylaw, guidance and instructions provided in the *Massachusetts Erosion Control Manual* will be applied.

In order to meet the performance standards for Salt Marsh, the approximately 1,250 square feet of proposed salt marsh alteration necessary in order to create the relocated tidal channel and construct the bridge will be replaced in and near the footprint of the abandoned weir and the created slopes adjacent to the span bridge footprint. Portions of salt marsh within the work limit that are currently supporting only *Phragmites australis* on the southern side of the existing landform will be removed and discarded using the most currently accepted disposal method. The amount of *Spartina alterniflora* marsh to be reestablished will total approximately 1,300 square feet. According to the Wetlands Restoration Program, transplanting plugs of vegetated peat to the replacement areas is a demonstrated successful means of marsh replacement that will be implemented for this project.