



The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Charles D. Baker
GOVERNOR

Karyn E. Polito
LIEUTENANT GOVERNOR

Matthew A. Beaton
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1181
<http://www.mass.gov/envir>

January 6, 2017

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Lighthouse Inn Groin Improvements
PROJECT MUNICIPALITY : Dennis
PROJECT WATERSHED : Cape Cod
EEA NUMBER : 15623
PROJECT PROPONENT : Lighthouse Inn, Inc.
DATE NOTICED IN MONITOR : December 7, 2016

Pursuant to the Massachusetts Environmental Policy Act (MEPA) (M.G. L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **requires** the preparation of an Environmental Impact Report (EIR). The project does not exceed a Mandatory EIR threshold. However, based upon the content of the filing and the comments received from State Agencies, I am requiring a discretionary EIR pursuant to 301 CMR 11.06(7). This Certificate includes a Scope for the Draft EIR (DEIR). I expect that the Proponent can prepare a Draft EIR that will adequately address the Scope such that I may determine, pursuant to 301 CMR 11.08, that no substantive issues remain to be addressed and allow the DEIR to be reviewed as a Final EIR (FEIR) or as a Response to Comments on the DEIR.

Project Description

As described in the Environmental Notification Form (ENF), the project consists of shorefront improvements at the Lighthouse Inn including reconfiguring the existing groin system and beach nourishment. These improvements are proposed to improve natural tidal flow and flushing between two groins while maintaining shore protection and a sand beach. Under existing conditions, lack of tidal

flushing has led to the accumulation of seaweed and detritus on the beach and in the embayment, resulting in noxious odor and inability to enjoy the beach or navigate waters along the shoreline.

Project Site

The 1.8-acre project site contains the Lighthouse Inn and approximately 600 feet of ocean shorefront facing Nantucket Sound, immediately east of West Dennis Beach, which is owned and operated by the Town of Dennis. The shorefront includes three rock groins that extend between 130 and 240-feet in length. A breakwater parallel to the shore spans the two center groins with a 25-foot wide gap opening. The on-site groins comprise the westernmost groins within a broader field of ten groins located east of the shoreline in front of the Inn. An existing rock revetment and vertical concrete bulkhead separate the beach area landward of the parallel breakwater from the upland grassy lawn in front of the Inn's primary building.

Coastal wetland resource areas identified in the ENF include Land Under Ocean (LUO), Coastal Bank, and Land Subject to Coastal Storm Flowage (LSCSF). The project site is located in a Velocity Zone as identified on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) (Map No. 25001C0593J, dated July 16, 2014) for the project site. This FIRM identifies 100-year storm at elevation 13 North American Vertical Datum of 1988 (NAVD88) on-site. A portion of the project site is mapped as *Estimated and/or Priority Habitat* for rare-species in the Natural Heritage Atlas (13th edition) issued by the Division of Fisheries and Wildlife's Natural Heritage and Endangered Species Program (NHESP). The project site is not located in an Area of Critical Environmental Concern (ACEC) and is not a designated Outstanding Resource Water (ORW). Surveys concluded that there are eelgrass (*Zostera marina*) beds located within and adjacent to the proposed work areas. According to the Division of Marine Fisheries (DMF), the project site lies within mapped shellfish habitat for blue mussel (*Mytilus edulis*).

Jurisdiction and Permitting

The project is undergoing MEPA review pursuant to 301 CMR 11.03(3)(b)(1)(a) because it requires a State Agency Action and includes alteration of a Coastal Bank. The project will require a Chapter 91 (c. 91) Waterways License and may require a Section 401 Water Quality Certification (401 WQC) from the Massachusetts Department of Environmental Protection (MassDEP).

The project will be subject to Federal Consistency Review by Coastal Zone Management (CZM). The project will require review by the U.S. Army Corps of Engineers (ACOE). The project will require an Order of Conditions from the Dennis Conservation Commission, or in the case of an appeal, a Superseding Order of Conditions from MassDEP. The project is subject to MEPA's Greenhouse Gas (GHG) Emissions Policy and Protocol (GHG Policy).

MEPA jurisdiction extends to those aspects of the project that are within the subject matter of required or potentially required State Agency Actions and that may cause Damage to the Environment, as defined in the MEPA regulations. Because the project requires a c. 91 License, subject matter jurisdiction is functionally equivalent to full scope jurisdiction in accordance with 301 CMR 11.01(2)(a)(3), and therefore extends to all aspects of the project that may cause Damage to the Environment.

Environmental Impacts and Mitigation

According to the ENF the project will permanently impact 4,225 square feet (sf) of Land Under Ocean (LUO) and 60,600 sf of Coastal Bank. The ENF did not identify any impact to Coastal Beach or Land Subject to Coastal Storm Flowage (LSCSF). The project is proposed to improve shoreline protection and increase tidal flow and flushing between the groin structures. The ENF indicated that erosion and sedimentation controls will be placed along the shoreline to reduce stormwater runoff. The ENF did not identify sufficient measures to avoid, minimize and mitigate environmental impacts associated with the project.

Review of the ENF

The ENF generally described existing and proposed conditions and included site plans and previously issued c. 91 Licenses. As described in the ENF, the project consists of the following elements:

- Decrease the length of the two existing groins from 237 feet to 147 feet and 187 feet to 140 feet, respectively;
- Remove approximately 77 feet of the existing breakwater between the two aforementioned groins;
- Lower portions of approximately 1,000 sf of the two groins to improve alongshore flow;
- Construct a T-head groin between the first and second groins using rock removed to decrease the length of the groins;
- Construct similar T-heads at the end of the first and second groins using repurposed rock from the reconfiguration of the groins; and
- Beach renourishment on approximately 60,600 sf of the beach in front of the Inn.

Reconfiguration of the groin field will create four pocket beaches in front of the Inn. The 65-foot to 95-foot wide gap-openings between the groins is anticipated to develop and maintain stable, predictable beach geometry within each pocket beach, while reducing the length of the groins along the shoreline. The reconfigured groins are expected to reduce detritus between the western groins while maintaining shoreline protection. Approximately 4,179 sf of rock structures will be removed and 4,225 sf of rock structures will be added, resulting in a net increase of 46 sf of rock within the groin field. Beach nourishment is designed to return the beach to conditions that existed prior to construction of the groin system (circa 1938).

Conclusion

The ENF did not provide sufficient information on existing and proposed conditions, proposed project impacts and mitigation, project alternatives, or project consistency with applicable State regulations. Comments from State Agencies request further analysis of alternatives and disclosure of potential environmental impacts in an EIR. Based on review of the ENF and consultation with State Agencies, I hereby require the Proponent to prepare a DEIR.

SCOPE

General

The DEIR should follow Section 11.07 of the MEPA regulations for outline and content, as modified by this Scope.

Project Description and Permitting

The DEIR should include a detailed description of the proposed project and describe any changes to the project since the filing of the ENF. The DEIR should include updated site plans for existing and post-construction conditions at a legible scale. These plans should clearly identify property boundaries, coastal wetland resource areas, elevations and water depths, limits of tidal inundation (e.g., mean low water, mean high water, etc.), areas of mapped eelgrass and shellfish resources, and construction staging and access areas. The DEIR should provide a brief description and analysis of applicable statutory and regulatory standards and requirements, and describe how the project will meet those standards. It should include a list of required State Permits, Financial Assistance, or other State approvals and provide an update on the status of each of these pending actions. I note that the project may require filing as a Development of Regional Impact under Cape Cod Commission (CCC) regulations. The Proponent should work with the CCC to determine whether filing a joint DRI/DEIR is appropriate for the project to satisfy CCC review.

Alternatives Analysis

The DEIR should include a discussion of the following project alternatives to ensure that environmental impacts are avoided, minimized, and mitigated to the maximum extent practicable.

- A No-Build Alternative that retains the existing layout of the groins;
- A Modified Groin Alternative that evaluates various layout and lengths of the groin system in front of the Inn. In particular, this should include a system that does not consist of “T-groins” for comparative purposes with the Preferred Alternative; and
- The Preferred Alternative.

I note MassDEP’s request that the Proponent present a Preferred Alternative that will not result in a net increase in permanent structures. The DEIR should also evaluate alternatives related to the placement and profile of beach nourishment areas on the project site. For each project alternative, the DEIR should include a schematic design with relevant jurisdictional and environmentally sensitive areas (e.g., mean high water, limits of coastal resource areas, eel grass beds, etc.) and a tabular summary of temporary and permanent impacts. The DEIR should describe the parameters of each alternative (e.g., amount of rock groin, amount of fill or dredging (if applicable), etc.). The DEIR should discuss the benefits and challenges associated with each alternative and explain why alternatives were not selected.

Furthermore, the DEIR should include data relevant to the use of “T-groins” in similarly dynamic coastal locations. The ENF noted the use, and relative success, of these structures outside of New England. To support the conclusion that these structures will avoid, minimize, and mitigate Damage to the Environment, the DEIR should summarize, and provide supporting documentation as

necessary, how these structures will not exacerbate erosion, hinder sediment transportation processes along the shoreline, or create additional hazards.

Wetlands and Waterways

The DEIR should clearly identify and characterize on-site coastal wetland resource areas. The DEIR should also characterize the project site with regard to marine fishery habitat, including shellfish, finfish, and benthic habitat. The DEIR should discuss the project's consistency with applicable Wetlands Protection Act performance standards, c. 91 Waterways regulations and CZM Federal Consistency requirements. MassDEP has concluded that the project will be classified as a water-dependent use pursuant to 310 CMR 9.12. The DEIR should confirm whether or not a Section 401 Water Quality Certificate (WQC) will be required for the project. If so, the DEIR should discuss project consistency with associated performance standards. Finally, the DEIR should summarize the Army Corps of Engineers (ACOE) review and permitting process for the project and how compliance with requirements may influence project design.

As requested by CZM, the DEIR should demonstrate that the proposed groins are the minimum height, width and length necessary to maintain the beach form and volume. Therefore, the DEIR should include existing bathymetric and beach profile data, sediment characterization data, and sediment transport data and analysis for existing and proposed conditions. The DEIR should address how the project has been designed to avoid direct and secondary impacts to eelgrass beds. The DEIR should clarify if the reconfiguration of the groins and beach nourishment will result in a conversion of coastal resource areas (e.g., LUO to Coastal Beach) in the post-construction static state. The DEIR should describe any temporary impacts to coastal wetland resource areas during the groin reconfiguration process. If material will be dredged to facilitate construction of the groins, the volume and type of material should be quantified in the DEIR, along with its proposed use or disposal (if applicable).

The DEIR should identify those portions of the existing groins that will be lowered in elevation and provide cross-section details. The DEIR should discuss how public access along the shoreline will be provided pursuant to 310 CMR 9.35. Safe passage should be provided throughout the construction period and in the post-construction state.

The DEIR should clearly identify the profile, volumes, and areal extent of beach nourishment and confirm sediment source compatibility. Furthermore, the DEIR should demonstrate that beach nourishment will be provided in a manner that fills the groins to entrapment capacity to minimize impacts to adjacent beaches. The DEIR should address project impacts to the easternmost groin and the beach directly east of this groin with regard to erosion and the potential need for beach nourishment in this location.

The DEIR should outline a construction period and post-construction period monitoring plan to ensure successful installation and maintenance of the project. At a minimum, the post-construction monitoring plan should include beach profiles and bathymetry data to evaluate erosion and accretion of sediment along the shoreline and within proximity of the groins; location of eelgrass beds; and accumulation of detritus along the Inn's shoreline. The Proponent should work with State Agencies and the Town to determine the extent of monitoring on adjacent Town-owned and private properties. The DEIR

should discuss thresholds and contingencies for determining when additional beach nourishment or other mitigation measures may be required.

Rare Species

The DEIR should directly respond to comments submitted by the NHESP, both in its comment letter on the ENF and a separate letter issued to the Proponent on November 29, 2016. This information is critical to facilitate project review in accordance with the Massachusetts Endangered Species Act (MESA) and its regulations (321 CMR 10.00). Many of the items requested by NHESP for their review process overlap with those identified in this Scope. The DEIR should address specifically how the Preferred Alternative will be designed in a manner consistent with applicable MESA regulations and identify sufficient mitigation measures if rare species impacts cannot be avoided or minimized.

Greenhouse Gas Emissions

The project is subject to the MEPA Greenhouse Gas Policy and Protocol (GHG Policy). The GHG Policy includes a de minimus exemption for projects that will produce minimal amounts of GHG emissions. The DEIR should confirm that the project will produce nominal amounts of GHG emissions and formally request an exemption under the GHG Policy.

Construction Period

The DEIR should discuss proposed construction methodologies. Specifically, the DEIR should describe the types of equipment that will be used to relocate and reconstruct the groins and complete beach renourishment, identify access routes and staging locations on upland areas, and discuss how construction methods will avoid and minimize impacts to eelgrass beds. The DEIR should discuss potential time-of-year (TOY) restrictions on in-water and beach work and the estimated length of the construction period for both groin reconfiguration and beach nourishment.

The DEIR should describe construction period erosion and sediment control measures, including the types of best management practices (BMPs) (e.g., silt booms, cofferdams) that will be used to limit turbidity and other water quality impacts during the reconfiguration of the groins and beach nourishment. All activities should be managed in accordance with applicable MassDEP Solid Waste and Air Pollution Control regulations pursuant to M.G.L. c.40, §54. The DEIR should discuss if the Proponent will require contractors to use construction equipment with engines manufactured to Tier 4 federal emissions standards or, if a piece of equipment is not available in the Tier 4 configuration, then construction equipment should be used that has been retrofitted with the best available after-engine emissions control technology, such as oxidation catalysts or diesel particulate filters, to reduce exhaust emissions.

Mitigation/Draft Section 61 Findings

The DEIR should include a separate chapter summarizing proposed mitigation measures. This chapter should also include draft Section 61 Findings for each State Agency that will issue permits for the project. The DEIR should contain clear commitments to implement mitigation measures, estimate

the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation.

Responses to Comments

The DEIR should contain a copy of this Certificate and a copy of each comment letter received. In order to ensure that the issues raised by commenters are addressed, the DEIR should include direct responses to comments to the extent that they are within MEPA jurisdiction. This directive is not intended to, and shall not be construed to enlarge the scope of the DEIR beyond what has been expressly identified in this certificate.

Circulation

In accordance with Section 11.16 of the MEPA Regulations and as modified by this Certificate, the Proponent should circulate a hard copy of the DEIR to each State and Town Agency from which the Proponent will seek permits. A copy of the DEIR should be made available for review at the Dennis Public Library.

January 6, 2017

Date



Matthew A. Beaton

Comments Received:

12/13/2016	Board of Underwater Archaeological Resources
12/20/2016	Natural Heritage and Endangered Species Program
12/22/2016	Office of Coastal Zone Management
12/27/2016	Division of Marine Fisheries
12/27/2016	Massachusetts Department of Environmental Protection – Southeast Regional Office (MassDEP – SERO)

MAB/HSJ/hsj





The COMMONWEALTH OF MASSACHUSETTS
BOARD OF UNDERWATER ARCHAEOLOGICAL RESOURCES
EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS
251 Causeway Street, Suite 800, Boston, MA 02114-2136
Tel. (617) 626-1141 Fax (617) 626-1240 Web Site: www.mass.gov/eea/agencies/czm/buar/

December 13, 2016

RECEIVED

DEC 13 2016

MEPA

Secretary Matthew A. Beaton
Executive Office of Energy and Environmental Affairs
Attention: Holly Johnson, MEPA Unit
100 Cambridge St., Suite 900
Boston, MA 02114

RE: Lighthouse Inn Groin Improvements, Nantucket Sound, West Dennis (EEA#15623)

Dear Secretary Beaton:

The Massachusetts Board of Underwater Archaeological Resources (BUAR) has completed its review of the proposed project's ENF (EEA#15623) prepared by Environmental Partners Group on behalf of Lighthouse Inn, Inc. We offer the following comments.

The Board has conducted a preliminary review of its files and secondary literature sources to identify known and potential submerged cultural resources in the proposed project area. No record of any underwater archaeological resources was found. Based on the results of this review and the nature of the proposed project activities, the Board expects that this project is unlikely to impact submerged cultural resources.

However, the Board notes the area may be generally archaeologically sensitive. Therefore, should heretofore-unknown submerged or terrestrial cultural resources be encountered during the course of the project, the Board expects that the project's sponsor will take steps to limit adverse affects and notify the Board and the Massachusetts Historical Commission, as well as other appropriate agencies, immediately in accordance with the Board's *Policy Guidance for the Discovery of Unanticipated Archaeological Resources*.

The Board appreciates the opportunity to provide these comments as part of the review process. Should you have any questions regarding this letter, please do not hesitate to contact me at the address above, by email at victor.mastone@state.ma.us, or by telephone at (617) 626-1141.

Sincerely,

A handwritten signature in blue ink, appearing to read "Victor T. Mastone".

Victor T. Mastone
Director

/vtm

Johnson, Holly (EEA)

From: Hoenig, Amy (FWE)
Sent: Tuesday, December 20, 2016 3:04 PM
To: Johnson, Holly (EEA)
Cc: Medeiros, Daisy M (FWE); mnw@envpartners.com; gstone@lighthouseinn.com
Subject: EEA No. 15623, Lighthouse inn Groin Improvements, West Dennis
Attachments: Dennis_16-36164_11292016.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Project Name: *Lighthouse Inn Groin Improvement Project*
Proponent: *Lighthouse Inn Inc.*
Location: *1 Lighthouse Road, West Dennis*
Project Description: *Groin Reconfiguration and Beach Nourishment Project*
Document Reviewed: *Environmental Notification Form*
EEA File Number: *15623*

Good afternoon, Holly –

The Division of Fisheries & Wildlife's Natural Heritage & Endangered Species Program received a copy of the Environmental Notification Form (ENF) for the proposed groin reconfiguration and beach nourishment project. As indicated within the ENF package, the proponent's representative has submitted information to our office for review pursuant to the Massachusetts Endangered Species Act. The Division would like to offer the following comments on the ENF.

According to the information provided a goal of the project is to increase tidal flushing to reduce detritus within the embayment. In order to achieve increased flushing, the existing groins will be reduced in length and partially lowered and an additional T groin will be installed in the center. As stated within the ENF, this would result in an overall decrease in the total footprint of groin onsite by 1,465 square feet (Project Description). However, according to the calculations accompanying the Concept Sketch (Appendix D), there will be a net increase of 46 square feet of new structure. There are additional elements of the project that the Division has required submission of either supplemental information or clarification.

As part of the Massachusetts Endangered Species Act review of this project, the Division issued the attached letter on 11/29/2016. The information contained within the ENF has been reviewed by our office and the Division has determined that the information necessary to continue our review is not contained within the ENF; therefore, the Division has no additional comments on the project at this time.

We appreciate the opportunity to comment on this project.

Sincerely,
Amy Hoenig
Endangered Species Review Biologist
Natural Heritage & Endangered Species Program
Massachusetts Division of Fisheries & Wildlife
1 Rabbit Hill Road, Westborough, MA 01581
p: (508) 389-6364 | e: Amy.Hoenig@state.ma.us
mass.gov/masswildlife | facebook.com/masswildlife



MASSWILDLIFE

DIVISION OF FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581
p: (508) 389-6300 | f: (508) 389-7890
MASS.GOV/MASSWILDLIFE

Jack Buckley, *Director*

November 29, 2016

Gregory Stone
Lighthouse Inn, Inc.
PO Box 128
West Dennis, MA 02670

Project Location: 1 Lighthouse Road
Town: West Dennis
Project Description: Reconfigure Groins
NHESP Tracking No.: 16-36164

RE: Notice that additional information is required to take further action on your application for MESA review under 321 CMR 10.18

Dear Applicant:

On November 2, 2016 you filed an application for review of the above referenced proposed project in Priority Habitat by the Natural Heritage and Endangered Species Program (NHESP) in the Division of Fisheries and Wildlife (the "Division") pursuant to 321 CMR 10.18 of the Massachusetts Endangered Species Act (MESA) regulations. The purpose of the review is for the Division to determine whether a Take of state-listed species will result from the proposed project. Under 321 CMR 10.18(1), the Division is required to notify the Record Owner of the property where the project is proposed within 30 days whether the submitted application contains the information required to be submitted to the Division pursuant to 321 CMR 10.20, including the applicable review fee. The Division also has the authority under 321 CMR 10.20 to require an applicant to provide additional information beyond the minimum information specified therein.

This letter is to inform you that the Division has reviewed the materials submitted with your application and has determined that additional information is required in order for the Division to complete its review pursuant to 321 CMR 10.18, as specified below:

- 1) Please provide an assessment of the coastal processes affecting this site and detail the effects the existing structure has on the shoreline. Said assessment should evaluate longshore and cross-shore sediment transport with wind and wave analysis for existing and proposed conditions.
- 2) Please provide an analysis of alternatives.
- 3) Engineered site plans showing existing and proposed conditions, elevations, profiles, etc.
- 4) The total project disturbance and impacts are undefined. Please clarify the footprint/size of the existing structures, proposed structure modifications, reductions and new structures.

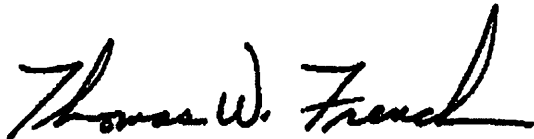
MASSWILDLIFE

Additionally, the description does not mention a nourishment component, however, the site figure references burying a rock revetment in sand with no details on amount or slope of the material to be placed.

No work or other activities related to your filing may be conducted anywhere on the project site while the Division completes its review. If you have decided to withdraw with your application for review under 321 CMR 10.18, please notify the Division of that decision in writing so that we can close out our review file for this project.

If you have any questions concerning this notice, please contact Amy Hoenig, Endangered Species Review Biologist, (508) 389-6364.

Sincerely,

A handwritten signature in black ink that reads "Thomas W. French". The signature is fluid and cursive, with the first name "Thomas" and last name "French" being clearly legible, and "W." as a small middle initial.

Thomas W. French, Ph.D.
Assistant Director

cc: Mark White, Environmental Partners Group, Inc.



THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS
OFFICE OF COASTAL ZONE MANAGEMENT
251 Causeway Street, Suite 800, Boston, MA 02114-2136
(617) 626-1200 FAX: (617) 626-1240

MEMORANDUM

TO: Matthew A. Beaton, Secretary, EEA
ATTN: Holly Johnson, MEPA Unit
FROM: Bruce Carlisle, Director, CZM
DATE: December 22, 2016
RE: EEA-15623 – Lighthouse Inn Groin Improvements, Dennis

The Massachusetts Office of Coastal Zone Management (CZM) has completed its review of the above-referenced Environmental Notification Form (ENF), noticed in the *Environmental Monitor* dated December 7, 2016, and recommends the development of an Environmental Impact Report (EIR).

Project Description

The project involves the proposed reconfiguration of existing groins along 600 feet of shoreline on Nantucket Sound. The shorefront includes three rock groins, and a shore parallel breakwater which spans between two of the groins, with a small gap opening. The proposed reconfiguration would decrease the length of the two existing groins from 237 feet to 147 feet and from 187 feet to 140 feet, respectively. Portions of the existing groins would be lowered to improve alongshore sediment flow. A new T-head groin is proposed to be constructed between the two existing groins. Beach nourishment is proposed to rebuild the beach along the entire site.

Project Comments

CZM staff have reviewed the ENF, attended the MEPA site visit, and also provided consultation to the project proponent at an agency pre-application meeting. CZM and the other agencies who participated in the meeting provided extensive feedback on the project concept and the types of information that should be included in the permit applications, including the filing with MEPA. Based on our review of the ENF, the information requested by the agencies has not been included in the ENF. CZM believes that the information contained in the ENF is insufficient to fully evaluate potential direct and indirect impacts from the proposed project, and recommends an EIR be developed to present necessary supporting information and a thorough alternatives analysis.

CZM is generally supportive of the concept that the applicant's consultants have presented and offers the following specific comments:

- CZM requested that the applicant demonstrate that the proposed groins are the minimum height, width and length necessary to maintain the beach form and volume. There is no information in the ENF regarding the basis for the size of the proposed structures, and no detail regarding the alternative configurations and sizes for the groins and proposed T heads.
- CZM requested that the ENF include a plan for adding sand to the beach to fill the groins to entrapment capacity to minimize impacts to adjacent beaches. Although the ENF states that beach fill with compatible sand will be placed after the reconfiguration of the rock structures, there is no calculations provided to indicate that the proposed fill will be sufficient to fill the groins to entrapment. In addition, there is no fill proposed to the east of the easternmost groin. CZM expressed concern about the potential impacts of the groins on



the beach directly east of the easternmost groin at the pre-application meeting and recommended that this be addressed in the filing.

- CZM also requested that the ENF include a plan for monitoring the proposed groins and beach fill, with provisions for mitigation of any adverse impacts. No information was included in the ENF to address this.
- Information was requested regarding the extent of the existing eelgrass beds relative to the proposed project elements. No information was included in the ENF regarding this resource area.

The ENF states that “groins and beach nourishment are recommended shoreline management techniques included in the December 2015 Coastal Erosion Commission Report”. CZM notes that groins and beach nourishment were included in Table 11 in the Science and Technology Working Group Report in the Coastal Erosion Commission Report. This table was included by the Working Group to help advise the Commission regarding the range of shoreline management techniques that could be used to manage shorelines. The report states that the applicability of each option varies according to the nature of the risk, local conditions, and the resources that are available to apply the techniques. The report does not recommend the use of any one technique.

The proposed project is subject to CZM federal consistency review. For further information on this process, please contact, Robert Boeri, Project Review Coordinator, at 617-626-1050 or visit the CZM web site at www.state.ma.us/czm/fcr.htm.

BKC/sm/rh

cc: Stephen McKenna, CZM Cape & Islands Regional Coordinator
Mark White, Environmental Partners Group
1900 Crown Colony Drive, Suite 402, Quincy, MA 02169
Karen Johnson,, Director of Natural Resources
P.O. Box 2060, Dennis, MA 02660
Jim Mahalla, DEP
Southeast Regional Office



David E. Pierce, Ph.D.
Director

Commonwealth of Massachusetts

Division of Marine Fisheries

251 Causeway Street, Suite 400
Boston, Massachusetts 02114

(617) 626-1520
fax (617) 626-1509



Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor
Matthew A. Beaton
Secretary

George N. Peterson, Jr.
Commissioner
Mary-Lee King
Deputy Commissioner

December 27, 2016

Secretary Matthew A. Beaton
Executive Office of Energy and Environmental Affairs (EEA)
Attn: MEPA Office
Holly Johnson, EEA No. 15623
100 Cambridge Street, Suite 900
Boston, MA 02114

Dear Secretary Beaton:

The Division of Marine Fisheries (*Marine Fisheries*) has reviewed the Environmental Notification Form by Lighthouse Inn Inc. for the proposed Lighthouse Inn Groin Improvements project, 1 Lighthouse Road, on Nantucket Sound in the Town of Dennis. Proposed improvements include the reconfiguration of three existing rock groins to improve flushing and tidal flow. Two existing groins would be shortened and lowered, and an existing breakwater running parallel to the shoreline would be reconfigured. The existing design would be converted to a series of T-shaped groins to promote the maintenance of pocket beaches along the bordering shoreline. Beach nourishment is also proposed over a 60,600 square foot area to establish beach along the eroded shoreline. Proposed groin improvements would result in a net increase of 46 square feet of hardened structures. Existing marine fisheries resources and potential project impacts are outlined in the following paragraphs.

The project site lies within mapped shellfish habitat for blue mussel (*Mytilus edulis*). Waters within the project site have habitat characteristics suitable for this species. Land containing shellfish is deemed significant to the interest of the Wetlands Protection Act (310 CMR 10.34) and the protection of marine fisheries.

The shoreline bordering the proposed groin improvement project site has been mapped by the Department of Environmental Protection as an eelgrass (*Zostera marina*) meadow. Eelgrass provides one of the most productive habitats for numerous marine species [1,2]. Eelgrass has declined in Massachusetts by approximately 20% in the past decade [3], and every effort should be made to avoid impacts to remaining eelgrass habitat.

Marine Fisheries offers the following comments for your consideration:

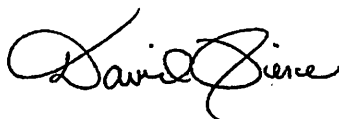
- Given that the project area closely borders mapped eelgrass habitat, the proponent should perform an eelgrass survey to delineate current eelgrass distribution in and adjacent to the project area.
- If eelgrass is confirmed to be present in or adjacent to the project site, construction activities could potentially impact these resources through direct displacement or indirect effects. Additional design and construction

modifications should be implemented if eelgrass is identified in or near the project to avoid such impacts.

- The proposed new groin footprint area should be located outside of any area identified in the survey as containing eelgrass.
- The proponent should provide more details on construction methodology with regards to eelgrass impacts. For example, if a work barge is used, it should be staged to avoid grounding at all times. Groin installation and removal can both potentially impact bordering eelgrass through turbidity and/or burial, and construction protocols should also include approaches to avoid such impacts.
- Depending on proposed construction protocols, post-construction monitoring of bordering eelgrass may also be warranted to assess potential project impacts.

Questions regarding this review may be directed to John Logan in our New Bedford office at (508) 990-2860 ext. 141.

Sincerely,

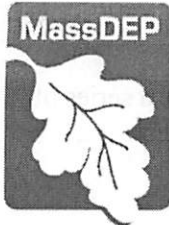


David E. Pierce, Ph.D.
Director

cc: Dennis Conservation Commission
Mark White, Environmental Partners Group
Chris Southwood, Dennis Shellfish Constable
Christopher Boelke & Alison Verkade, NMFS
Robert Boeri, CZM
Ed Reiner, EPA
Ken Chin, DEP
Richard Lehan, DFG
Terry O'Neil, Tom Shields, Kathryn Ford, Pooja Potti, DMF

References

1. Jackson EL, Rowden AA, Attrill MJ, Bossey SJ, Jones MB. The importance of seagrass beds as a habitat for fishery species. *Oceanogr Mar Biol Annu Rev.* 2001;39: 269–303.
2. Heck KL Jr, Carruthers TJB, Duarte CM, Hughes AR, Kendrick G, Orth RJ, et al. Trophic transfers from seagrass meadows subsidize diverse marine and terrestrial consumers. *Ecosystems.* 2008;11: 1198–1210.
3. Costello CT, Kenworthy WJ. Twelve-year mapping and change analysis of eelgrass (*Zostera marina*) areal abundance in Massachusetts (USA) identifies statewide declines. *Estuaries Coasts.* 2011;34: 232–242. doi:10.1007/s12237-010-9371-5



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

December 27, 2016

Mathew A. Beaton,
Secretary of Environment and Energy
ATTN: MEPA Office
Executive Office of Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

RE: ENF Review EOEEA # 15623 -
DENNIS. Lighthouse Inn Groin
Improvements at 1 Lighthouse Road, West
Dennis

Dear Secretary Beaton,

The Southeast Regional Office of the Department of Environmental Protection (MassDEP) has reviewed the Environmental Notification Form (ENF) for the Lighthouse Inn Groin Improvements at 1 Lighthouse Road, West Dennis, Massachusetts for the proposed (EOEEA # 15623). The project proponent provides the following information for the project:

The proposed project area comprises approximately 600 feet of ocean shorefront along the Lighthouse Inn shoreline. The shorefront includes three rock groins which are the westernmost of a broader field of ten groins. The groins extend between 130 and 240-feet in length from the upland. A shore parallel breakwater spans between the two center groins with a gap opening of about 25-feet. The small size of this gap does not allow sufficient wave energy into the embayment, behind the breakwater, to maintain a natural sand beach and it acts to trap detritus within the embayment.

The proposed shorefront improvements, shown in the attached proposed improvements plan (Appendix D), would reconfigure the existing groins to a design that is more conducive to maintaining shore protection and a sand beach while improving natural tidal flow and flushing between the two western groins. These improvements would remove most of the breakwater and shorten the length of the two western groins. It would reconfigure the rock to a geometry that is more effective in stabilizing the beach, reducing detrital accumulation, and restoring more natural sand beach conditions along the shorefront. The proposed plan entails removal of about 200-ft of existing groin and breakwater structures and relocation to a more effective geometry as shown on the plans. The proposed plan likewise requires placement of beach compatible sand fill after reconfiguration of the rock structures, in order to establish and improve the sand beaches.

Wetlands and Waterways Comments:

The SERO Wetlands and Waterways Program has reviewed the Lighthouse Inn Inc.'s proposal to remove 125 feet of the existing breakwater and shorten two existing western groin structures currently armoring

the shoreline directly in front of the facility. The plan would reconfigure the structures to create a series of three T groins and three pocket beaches, within which the Proponent proposes beach nourishment.

Waterways

- This project involves work within flowed tidelands, therefore the Proponent will be required to submit a Chapter 91 License Application. Based on the information contained in the ENF, it is the opinion of the Waterways Program that the project would be classified as a water-dependent use pursuant to the Waterways Regulations at 310 CMR 9.12.
- The ENF states that the proposed reconfiguration will result in a net increase in 46 square feet of groin structures. Alternative project proposals should consider a proposed plan that would not result in a net increase in permanent structures.
- The ENF explains that “the proposed project will have temporary impacts to the coastal resources in the project area as the groin geometry is reconfigured”. The Chapter 91 application should include a detailed description of these impacts.
- The volume and type of the material that will be dredged to facilitate the construction of the groins should be quantified. The Chapter 91 application will need to include the details for the proposed use or disposal of this material.
- If the volume of material to be dredged exceeds 100 cubic yards or the footprint of the new structures below the high tide line exceeds 5000 square feet then a 401 WQC will be required.
- The ENF states that portions of the groins would be lowered, details of the proposed work should be included in the Chapter 91 application, including cross sections of the proposed structures.
- The Chapter 91 application should include details regarding how public access along the shoreline will be provided pursuant to the Waterways Regulations at 310 CMR 9.35.
- Details on the proposed beach nourishment should also be included in the Chapter 91 application. Including volume and source of material to be used, compatibility with existing substrate and long term nourishment plans including triggering mechanisms.

Wetlands

- As indicated in the ENF the Proponent will need to submit a Notice of Intent to the Department and the Dennis Conservation Commission for the project under the Wetlands Protection Act. A Final Order of Conditions must be obtained before any work within Areas Subject to Jurisdiction commences.
-
- Although the proposed reconfiguration of coastal structures may improve tidal flow and flushing between the groins, more information needs to be provided to demonstrate that the project will not increase erosion.
- The Proponent must demonstrate that the proposed groin reconfiguration is the minimum height, width, and length necessary to maintain a beach.
- The Proponent must demonstrate that the proposed groins are filled to the entrapment capacity with beach compatible sediment.

- The Proponent should characterize the project area in terms of marine fishery habitat, including shellfish, finfish and benthic habitat.
- The Proponent should delineate any existing eelgrass beds near the proposed project.
- Existing resource areas should be delineated and any resource areas that will be changed due to the project should be determined.
- The Department is generally supportive of the project, particularly with elements that improve tidal flow and sediment transport.
- The Department believes that the additional information, as noted above, should be provided in an Environmental Impact Report (EIR).

Wastewater Management Comments

Based on information provided by the Proponent in response to a Request for Information by the Department, the Proponent confirmed the presence of an unpermitted wastewater discharge of 17,340 gpd (based on 94 bedrooms, 200 restaurant seats and 50 seats at a tavern (bar)). This volume of discharge of sanitary wastewater to groundwater is in violation of M.G.L. c. 21, §§ 26 through 53 and “The Groundwater Discharge Permit Regulations, at 314 CMR 5.03. It’s the Department’s belief that construction of a treatment plant may help mitigate the macrophyte algal blooms that deface its beachfront from its unpermitted septic discharge of untreated nitrogen.

Bureau of Waste Site Cleanup Comments

ENF #15623 – The Bureau of Waste Site Cleanup (BWSC) searched its databases for disposal sites and release notifications that have occurred at or might impact the proposed project area. A disposal site is a location where there has been a release to the environment of oil and/or hazardous material that is regulated under M.G.L. c. 21E, and the Massachusetts Contingency Plan [MCP – 310 CMR 40.0000].

There are no listed MCP disposal sites located at or in the vicinity of the site that might impact the proposed project. Interested parties may view a map showing the location of BWSC disposal sites using the MassGIS data viewer (Oliver)

at: http://maps.massgis.state.ma.us/map_ol/oliver.php Under “Available Data Layers” select “Regulated Areas”, and then “DEP Tier Classified 21E Sites”. The compliance status and report submittals for specific MCP disposal sites may be viewed using the BWSC Waste Sites/Reportable Release Lookup at: <http://public.dep.state.ma.us/SearchableSites2/Search.aspx>

The Project Proponent is advised that if oil and/or hazardous materials are identified during the implementation of this project, notification pursuant to the Massachusetts Contingency Plan (310 CMR 40.0000) must be made to MassDEP, if necessary. A Licensed Site Professional (LSP) should be retained to determine if notification is required and, if need be, to render appropriate opinions. The LSP may evaluate whether risk reduction measures are necessary if contamination is present. The BWSC may be contacted for guidance if questions arise regarding cleanup.

Dewatering Activities

Depending on the nature of the activities at the Project site, the proponent may have to obtain an EPA NPDES Dewatering General Permit <http://www.epa.gov/region1/npdes/dewatering.html> or a Remediation General Permit <http://www.epa.gov/region1/npdes/rgp.html>.

Air Quality Comments

Construction and operation activities shall not cause or contribute to a condition of air pollution due to dust, odor or noise. To determine the appropriate requirements please refer to:

- 310 CMR 7.09 Dust, Odor, Construction, and Demolition
- 310 CMR 7.10 Noise

Construction-Related Measures. MassDEP requests that the proponent use construction equipment with engines manufactured to Tier 4 federal emission standards, which are the most stringent emission standards currently available for off-road engines. If a piece of equipment is not available in the Tier 4 configuration, then the proponent should use construction equipment that has been retrofitted with the best available after-engine emission control technology, such as oxidation catalysts or diesel particulate filters, to reduce exhaust emissions. The proponent should maintain a list of the engines, their emission tiers, and, if applicable, the best available control technology installed on each piece of equipment on file for Departmental review.

Massachusetts Idling Regulation. MassDEP requests that the proponent state specifically in the subsequent environmental filing how it plans to prohibit the excessive idling during the construction period. Typical methods of reducing idling include driver training, periodic inspections by site supervisors, and posting signage. In addition, to ensure compliance with this regulation once the project is occupied, MassDEP requests that the proponent establish permanent signs limiting idling to five minutes or less at the completed project.

Solid Waste Dredging

The dredged material has been classified as appropriate for beach nourishment, however, any solid waste found in the dredged material must be disposed of at an appropriate facility.

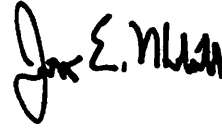
Proposed s.61 Findings

The “Certificate of the Secretary of Energy and Environmental Affairs on the Environmental Notification Form” may indicate that this project requires further MEPA review and the preparation of an Environmental Impact Report. Pursuant to MEPA Regulations 301 CMR 11.12(5)(d), the Proponent will prepare Proposed Section 61 Findings to be included in the EIR in a separate chapter updating and summarizing proposed mitigation measures. In accordance with 301 CMR 11.07(6)(k), this chapter should also include separate updated draft Section 61 Findings for each State agency that will issue permits for the project. The draft Section 61 Findings should contain clear commitments to implement mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation.

Recommendations:

The Department recommends that the Secretary’s Certificate requires the submission of an Environmental Impact Report that fully addresses the comments in this letter.

Very truly yours,

A handwritten signature in black ink, appearing to read "Jon E. Hobill".

Jonathan E. Hobill,
Regional Engineer,
Bureau of Water Resources

JH/GZ

Cc: DEP/SERO

ATTN: Millie Garcia-Serrano, Regional Director
David Johnston, Deputy Regional Director, BWR
Maria Pinaud, Deputy Regional Director, BAW
Gerard Martin, Deputy Regional Director, BWSC
Jennifer Viveiros, Deputy Regional Director, ADMIN
Allen Hemberger, Site Management
Jim Mahala, Chief, Wetlands and Waterways
David Hill, Wetlands and Waterways
Dahlia Medeiros, Wetlands and Waterways