



Cape Cod Bridges Program

Bourne, Massachusetts

Appendix 4.11 Threatened, Endangered, and Protected Species and Habitats Material

SUBMITTED TO:
Federal Highway Administration
Massachusetts Division
220 Binney Street, 9th Floor
Cambridge, MA 02142

PROPONENT:
Massachusetts Department of Transportation
Highway Division
10 Park Plaza
Boston, MA 02116

Submitted October 2025

massDOT
Massachusetts Department of Transportation

Table of Contents

1	Introduction	1
2	Biological Assessment for Terrestrial Species	1
3	Biological Assessment for Marine Species	2
4	Essential Fish Habitat Assessment and Fish and Wildlife Coordination Act Consultation Worksheet	3
5	Agency Coordination and Concurrence.....	4
5.1	Biological Assessment for Terrestrial Species	4
5.2	Biological Assessment for Marine Species	4
5.3	Essential Fish Habitat Assessment and Fish and Wildlife Coordination Act Consultation Worksheet	4
	Attachments	5

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
EFH	Essential Fish Habitat
ESA	Endangered Species Act
FHWA	Federal Highway Administration
FWCA	Fish and Wildlife Coordination Act
MassDOT	Massachusetts Department of Transportation
NOAA	National Oceanic and Atmospheric Administration
Program	Cape Cod Bridges Program
SAV	submerged aquatic vegetation
USFWS	U.S. Fish and Wildlife Service

1 Introduction

This Threatened, Endangered, and Protected Species and Habitats Material Appendix includes three reports that have been prepared in support of the Draft Environmental Impact Statement (DEIS) for the Cape Cod Bridges Program (Program), in accordance with the following federal and state statutes, regulations, and guidance:

- National Environmental Policy Act (NEPA) of 1969, as amended, 42 United States Code (USC) 4321 et seq.
- *Efficient Environmental Reviews for Project Decisionmaking and One Federal Decision*, 23 USC 139.
- Federal Highway Administration's (FHWA) regulations implementing NEPA, *Environmental Impact and Related Procedures* (23 CFR 771), and corresponding guidance, Technical Advisory (T 6640.8A): *Guidance for Preparing and Processing Environmental and Section 4(f) Documents* (October 30, 1987).

This Appendix also includes agency correspondence for each report.

2 Biological Assessment for Terrestrial Species

The Massachusetts Department of Transportation (MassDOT) prepared **Attachment 1, Biological Assessment for Terrestrial Species**, to address the potential effects of the Program on terrestrial species listed or proposed as endangered or threatened under the Endangered Species Act of 1973 (ESA), and to support the development of the Program Draft Environmental Impact Statement. Pursuant to Section 7 of the ESA, FHWA and MassDOT completed an informal consultation for effects to species under the jurisdiction of the U.S. Fish and Wildlife Service (USFWS) that could result from the Program. Section 7 of the ESA is intended to ensure that, through consultation with the USFWS, federal actions do not jeopardize the continued existence of any threatened, endangered, or proposed species, or result in the destruction or adverse modification of critical habitat. Attachment 1, Biological Assessment for Terrestrial Species, addresses the potential effects of the Program on the following ESA-listed and ESA-proposed terrestrial species under the jurisdiction of the USFWS:

- Mammals
 - Northern long-eared bat (*Myotis septentrionalis*)
 - Tricolored bat (*Perimyotis subflavus*)
- Reptiles
 - Northern red-bellied cooter (*Pseudemys rubriventris*) / Plymouth red-bellied turtle (*Pseudemys rubriventris bangsi*)
- Plants
 - Sandplain gerardia (*Agalinis acuta*)
- Insects
 - Monarch butterfly (*Danaus plexippus*)

Based on the analysis conducted for **Attachment 1, Biological Assessment for Terrestrial Species**, FHWA and MassDOT have determined that the Program would have **no effect** on sandplain gerardia and northern red-bellied cooter, and the Program is **not likely to adversely affect** the northern long-eared bat and tricolored bat. Program construction could cause direct and indirect impacts on monarch butterflies in the form of direct mortality of individuals and/or permanent and temporary removal or disturbance of breeding or migration habitat. However, FHWA and MassDOT have determined that, based upon MassDOT's conservation commitments, the Program is **not likely to jeopardize** the continued existence of the monarch butterfly.

3 Biological Assessment for Marine Species

MassDOT prepared **Attachment 2, Biological Assessment for Marine Species**, to address the potential effects of the Program on marine species listed as endangered or threatened under the ESA and designated critical habitat. Pursuant to Section 7 of the ESA, FHWA and MassDOT completed informal consultation for effects to species under the jurisdiction of the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) that could result from the Program. Section 7 of the ESA is intended to ensure that, through consultation with NOAA Fisheries, federal actions do not jeopardize the continued existence of any threatened, endangered, or proposed species, or result in the destruction or adverse modification of critical habitat. **Attachment 2, Biological Assessment for Marine Species**, addresses the potential effects of the Program on the following ESA-listed marine species and designated critical habitat under the jurisdiction of NOAA Fisheries:

- Fin whale (*Balaenoptera physalus*)
- North Atlantic right whale (*Eubalaena glacialis*) (Critical Habitat)
- Green turtle (*Chelonia mydas*)
- Kemp's ridley turtle (*Lepidochelys kempii*)
- Leatherback turtle (*Dermochelys coriacea*)
- Loggerhead turtle (*Caretta caretta*)
- Shortnose sturgeon (*Acipenser brevirostrum*)
- Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*)

Attachment 2, Biological Assessment for Marine Species, includes an acoustic analysis of the Program's in-water construction activities for assessing the Program's potential effects on species protected under the ESA as well as those protected under the Marine Mammal Protection Act of 1972.

Based upon the analysis conducted for **Attachment 2, Biological Assessment for Marine Species**, FHWA and MassDOT have determined that the Program **may affect, but is not likely to adversely affect** the identified marine species. Additionally, FHWA and MassDOT have determined that the Program is **not likely to adversely affect** physical and biological features associated with critical habitat for the North Atlantic right whale, and therefore would not adversely modify or destroy, designated critical habitat for the North Atlantic right whale.

4 Essential Fish Habitat Assessment and Fish and Wildlife Coordination Act Consultation Worksheet

MassDOT prepared **Attachment 3, Essential Fish Habitat (EFH) Assessment and Fish and Wildlife Coordination Act (FWCA) Consultation Worksheet**, for review by NOAA Fisheries Greater Atlantic Regional Fisheries Office to address the potential effects of the Program relative to the following:

- The Magnuson Stevens Fishery Conservation and Management Act, which requires federal agencies to consult with NOAA Fisheries on any action or proposed action authorized, funded, or undertaken by such agency that may adversely affect EFH identified under the Act, pursuant to 50 CFR 600.905.
- The FWCA, which requires federal agencies to consult with NOAA Fisheries when proposed actions might result in modifications to a natural stream or body of water. The FWCA also requires that federal agencies consider the effects of projects on fish and wildlife, including aquatic resources such as shellfish, diadromous species, and other commercially and recreationally important species that are not federally managed and do not have designated EFH.

There is designated EFH for 29 finfish and invertebrate species within Cape Cod Canal. Additionally, there are two types of Habitat Area of Particular Concern (HAPC): Inshore Juvenile Cod HAPC and Summer Flounder HAPC. In addition to EFH species, the FWCA recognizes 16 NOAA Trust Resources with the potential to be present in the area and therefore exposed to Program impacts. This includes two areas with eelgrass (*Zostera marina*) [submerged aquatic vegetation (SAV)], and areas of shellfish habitat at both bridge sites.

MassDOT has committed to measures for avoiding, minimizing, and mitigating effects to EFH. Based on the analysis and the proposed avoidance, minimization, and mitigation measures, and in coordination with the FHWA, MassDOT has determined that the **adverse effect on finfish and shellfish species would not be substantial**, meaning that the adverse effects would be no more than minimal, temporary, or can be alleviated with minor Program modifications or conservation recommendations.

The Program would affect SAV present at the Bourne Bridge site. In coordination with NOAA Fisheries, MassDOT has committed to monitor the SAV beds with photographic surveys before and after construction, provide the survey results to NOAA Fisheries, and provide compensatory mitigation for effects to eelgrass beds. MassDOT is developing an Eelgrass Survey and Mitigation Plan and is consulting with the USACE and NOAA Fisheries to pursue the most effective approach to mitigate for the loss of the SAV.

5 Agency Coordination and Concurrence

The following identifies agency coordination regarding the three technical support documents MassDOT submitted to federal agencies. Documentation of agency coordination is included with each technical report.

5.1 Biological Assessment for Terrestrial Species

Based upon its review of the Biological Assessment for Terrestrial Species (**Attachment 1**), on May 2, 2025, MassDOT received a letter of concurrence from Audrey Mayer, Supervisor, New England Field Office, U.S. Department of Interior, Fish and Wildlife Service. USFWS concurred that the Program **may affect, but is not likely to adversely affect**, the federally endangered northern long-eared bat (*Myotis septentrionalis*) (NLEB), and the tricolored bat (*Perimyotis subflavus*) (TCB), which is proposed to be listed as endangered. USFWS concurred that the Program is **not likely to jeopardize** the monarch butterfly (*Danaus plexippus*), which is proposed to be listed as threatened. USFWS acknowledged MassDOT's determination that the Program would have **no effect** on other federally listed species. Further, USFWS indicated it is **unaware of any substantial impacts** the Program would have on Fish and Wildlife Coordination Act wildlife resources.

5.2 Biological Assessment for Marine Species

Based upon its review of the Biological Assessment for Marine Species (**Attachment 2**), on April 7, 2025, MassDOT received a letter of concurrence from Jennifer Anderson, Assistant Regional Administrator for Protected Resources, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS), Greater Atlantic Regional Fisheries Office (NOAA Fisheries). NOAA Fisheries indicated that the proposed action is **not likely to adversely affect** any NMFS ESA-listed species or designated critical habitat.

5.3 Essential Fish Habitat Assessment and Fish and Wildlife Coordination Act Consultation Worksheet

Based upon its review of the draft Essential Fish Habitat Assessment and Fish and Wildlife Coordination Act Consultation Worksheet (**Attachment 3**), on February 12, 2025, MassDOT received correspondence from Louis A. Chiarella, Assistant Regional Administrator for Habitat and Ecosystem Services, NOAA Fisheries, that the best management practices provided in the EFH Assessment **may sufficiently minimize impacts** to finfish and shellfish species. NOAA Fisheries provided EFH Conservation Recommendations for anticipated Program effects to SAV.

MassDOT submitted a final Essential Fish Habitat Assessment and Wildlife Coordination Act Consultation Worksheet on March 6, 2025, incorporating NOAA Fisheries' EFH Conservation Recommendation and proposing an approach to compensatory mitigation of affected SAV. On March 12, 2025, MassDOT provided written concurrence with NOAA Fisheries' recommendation and

committed to measures to avoid, minimize, and mitigate impacts to EFH, consistent with NOAA Fisheries' recommendations.

Attachments

- Attachment 1. Biological Assessment for Terrestrial Species and Agency Coordination
- Attachment 2. Biological Assessment for Marine Species and Agency Coordination
- Attachment 3. Essential Fish Habitat Assessment and Fish and Wildlife Coordination Act Consultation Worksheet and Agency Coordination