

APPENDIX C ENDANGERED SPECIES GUIDANCE

I. Background

In order to meet its obligations under the Clean Water Act and the Endangered Species Act (ESA), and to promote the goals of those Acts, the Environmental Protection Agency (EPA) is seeking to ensure the activities regulated by this General Permit do not adversely affect endangered and threatened species or critical habitat.

EPA expects to complete all ESA consultation with the United States Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration Marine Fisheries Service (NOAA Fisheries), collectively known as the Services, by the time the General Permit is finalized. However, as is sometimes the case with general permits, the Services may require that the permittee submit further analysis to ensure that actions covered by the permit meet the permittee's ESA consultation responsibilities for their specific action area. This additional step may be included as part of the Notice of Intent submission. Based on previous general permits, this Draft Appendix C is an example of potential additional requirements for the permittee. If specific requirements are submitted by the Services during the public comment period, EPA will incorporate the requirements in the Final MS4 General Permit.

As noted above, depending on the guidance from the Services during the ESA Section 7 informal consultation process, applicants seeking coverage under this General Permit **may be** required to assess the impacts of their stormwater discharges and discharge-related activities on federally listed endangered and threatened species ("listed species") and designated/proposed critical habitat ("critical habitat") to ensure that they do not adversely affect endangered and threatened species or critical habitat.¹

The following information is an example of what the requirements, if enacted, would likely be.

II. Example Appendix C

Prior to obtaining general permit coverage, applicants must meet the ESA eligibility provisions of this General Permit by following the steps in this Appendix. EPA strongly recommends that applicants begin this process as early as possible to ensure the notification requirements for permit coverage are complete upon Notice of Intent ("NOI") submission. A site that cannot meet any of the ESA eligibility criteria under this general permit must apply for an individual permit.

Applicants also have an independent ESA obligation to ensure that their activities do not result in any prohibited “take” of listed species.² The term “Take” is used in the ESA to include harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. “Harm” is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns including breeding, feeding, or sheltering. “Harass” is defined as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Many of the measures required in this general permit and in these instructions to protect species may also assist in ensuring that the applicant’s activities do not result in a prohibited take of species in violation of section 9 of the ESA. If the applicant has plans or activities in an area where endangered and threatened species are located, they may wish to ensure that they are protected from potential take liability under ESA section 9 by obtaining an ESA section 10 permit or by requesting formal consultation under ESA section 7. Applicants that are unsure whether to pursue a section 10 permit or a section 7 consultation for takings protection should confer with the appropriate United States Fish and Wildlife Service (USFWS) office or the National Marine Fisheries Service (NOAA Fisheries or NMFS), (jointly the Services).

ESA Species and Critical Habitat Under the Jurisdiction of USFWS

EPA accessed the USFWS Information for Planning and Consultation (IPaC) System to generate an ESA Official Species List³ of protected species under the jurisdiction of the USFWS that may be present in the MS4 action area. Fourteen protected species under the jurisdiction of USFWS were identified, including two mammal species, three bird species, one reptile species, one clam species, two insect species and five flowering plant species. See Table C-1. The monarch butterfly (*Danaus plexippus*) appeared on the list as a candidate species. USFWS does not require analysis of candidate species under ESA at this time. In addition, critical habitat designated by USFWS for the Plymouth redbelly turtle and proposed critical habitat for the rufa red knot overlap with the MS4 action area.

Table C-1. ESA listed species under the jurisdiction of the USFWS that overlap with the Massachusetts MS4 Action Area, their status, and corresponding effects determination based on the IPaC System standard evaluation.

USFWS Species Present	ESA Status
Dwarf wedgemussel	Endangered

² Section 9 of the ESA prohibits any person from “taking” a listed species (e.g. harassing or harming it) unless: (1) the taking is authorized through an “incidental take statement” as part of completion of formal consultation according to ESA section 7; (2) where an incidental take permit is obtained under ESA section 10 (which requires the development of a habitat conversion plan; or (3) where otherwise authorized or exempted under the ESA. This prohibition applies to all entities including private individuals, businesses, and governments.

³ USFWS Official Species List, Project Code: 2024-0142128; September 10, 2024.

(<i>Alasmidonta heterodon</i>)	
Northeastern bulrush (<i>Scirpus ancistrochaetus</i>)	Endangered
Sandplain gerardia (<i>Agalinis acuta</i>)	Endangered
Small whorled pogonia (<i>Isotria medeoloides</i>)	Threatened
American chaffseed (<i>Schwalbea americana</i>)	Endangered
Seabeach amaranth (<i>Amaranthus pumilus</i>)	Threatened
Northern long-eared bat (<i>Myotis septentrionalis</i>)	Endangered
Tricolored bat (<i>Perimyotis subflavus</i>)	Proposed Endangered
Piping plover (<i>Charadrius melodus</i>)	Threatened
Rufa red knot (<i>Calidris canutus rufa</i>)	Threatened
Roseate tern (<i>Sterna dougallii dougallii</i>)	Endangered
Plymouth redbelly turtle (<i>Pseudemys rubriventris bangsi</i>)	Endangered
Puritan tiger beetle (<i>Cicindela puritana</i>)	Threatened
Rusty patched bumble bee (<i>Bombus affinis</i>)	Endangered

ESA Species and Critical Habitat Under the Jurisdiction of NOAA Fisheries

Federally-listed anadromous and marine species present in Massachusetts coastal waters and bays, along with the Merrimack River, the Taunton River, the Connecticut River fall under the jurisdiction of NOAA Fisheries. Various life stages of protected fish, sea turtles and whales have been documented in Massachusetts coastal and inland waters, both seasonally and year-round, including in receiving waters within the area of the proposed action. EPA used the NOAA Fisheries ESA Section 7 Mapper⁴ to identify the ESA protected species that overlap with the regulated area for the Draft MS4 Permit. See Table C-2.

Table C-2. ESA listed species under the jurisdiction of NOAA Fisheries that overlap with the Massachusetts MS4 Action Area, their status, lifestage and the time of year they are expected to be present in the action area.

⁴ <https://www.fisheries.noaa.gov/resource/map/greater-atlantic-region-esa-section-7-mapper>

NOAA Fisheries (NMFS) Species Present Within the MS4 Action Area	ESA Status	Lifestage(s)	Time of Year
Atlantic sturgeon (<i>Acipenser oxyrinchus oxyrinchus</i>)	Threatened and Endangered ¹	Adult and sub adult	Year-round
Atlantic sturgeon (<i>Acipenser oxyrinchus oxyrinchus</i>)	NY Bight DPS Endangered	Juvenile	Year round
Atlantic sturgeon (<i>Acipenser oxyrinchus oxyrinchus</i>)	NY Bight DPS Endangered	Young of year	Year round
Atlantic sturgeon (<i>Acipenser oxyrinchus oxyrinchus</i>)	NY Bight DPS Endangered	Post yolk-sac larvae	April 15 through October 31
Atlantic sturgeon (<i>Acipenser oxyrinchus oxyrinchus</i>)	NY Bight DPS Endangered	Eggs and yolk-sac larvae	April 15 through September 30
Shortnose sturgeon (<i>Acipenser brevirostrum</i>)	Endangered	Adult	April 1 through November 30
Shortnose sturgeon (<i>Acipenser brevirostrum</i>)	Endangered	Juvenile, young of year ²	Year-round
Shortnose sturgeon (<i>Acipenser brevirostrum</i>)	Endangered	Post yolk-sac larvae	April 1 through July 15 ³
Shortnose sturgeon (<i>Acipenser brevirostrum</i>)	Endangered	Young of year	Year-round
Loggerhead Sea Turtle (<i>Caretta caretta</i>)	Threatened	Adult and juvenile	May 1 or June 1 through November 30 ⁴
Kemp's Ridley Sea Turtle (<i>Lepidochelys kempii</i>)	Endangered	Adult and juvenile	May 1 or June 1 through November 30
Leatherback Sea Turtle (<i>Dermochelys coriacea</i>)	Endangered	Adult and juvenile	May 1 or June 1 through November 30
Green Sea Turtle (<i>Chelonia mydas</i>)	Threatened	Adult and juvenile	May 1 or June 1 through November 30
North Atlantic Right Whale (<i>Eubalaena glacialis</i>)		Adult and juvenile	Year-round
Fin Whale (<i>Balaenoptera physalus</i>)		Adult and juvenile	Year-round

¹ Expected to be from all distinct population segments.

² Merrimack River

³ Time of year presence differs depending on river (Connecticut or Merrimack) and location in river.

⁴ The four protected sea turtle species are expected to be present from May 1 through November 30 south of Cape Cod and from June 1 through November 30 north of Cape Cod. See NOAA Fisheries ESA Mapper.

Any applicant seeking coverage under this general permit, must certify eligibility with respect to ESA. EPA may designate the applicants as non-Federal representatives for the general permit for the purpose of carrying out formal or informal consultation with the Services. See 50 CFR §402.08 and §402.13. By terms of this permit, EPA has automatically designated applicants as non-Federal representatives for the purpose of conducting formal or informal consultation with the USFWS and NMFS.

Permit coverage is available if EPA determines, or the applicant determines and EPA concurs, that the stormwater discharge and discharge-related activities in the action area⁵ do not overlap with the presence of NMFS threatened or endangered species or critical habitat, according to the NMFS ESA Section 7 Mapper⁶ and also does not overlap with the presence of USFWS threatened or endangered species or critical habitat, according to the USFWS Information, Planning, and Conservation (IPaC) system mapping tool⁷, resulting in a “no effect” determination (Criterion A in Section II.A).

When listed species and/or critical habitat are present, permit coverage is available if EPA determines, or the applicant determines and EPA concurs, that the discharge or discharge-related activities in the action area are “not likely to adversely affect” listed species or critical habitat and will not cause adverse modification to critical habitat or result in take of listed species (Criterion B in Section II.A). Permit coverage is also available if EPA determines, or the applicant determines and EPA concurs, that listed species and/or critical habitat are present but a further site-specific habitat analysis documents that the action area is isolated from the expected presence of NMFS anadromous and marine species (by a man-made obstruction, for example) or is

⁵ By definition, the “action area” includes all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action” (See 50 CFR §402.02). For purposes of determining eligibility criteria, the action area includes terrestrial areas that may be impacted by the discharges or discharge-related activities and the underwater areas where any effects of the discharge may be experienced in the receiving water. The action area is not limited to the footprint of the action, nor is it limited by the Federal agency's authority. Rather, it is a biological determination of the reach of the proposed action on listed species. Subsequent analyses of the environmental baseline, effects of the action, and levels of incidental take are based upon the action area.

The documentation used by a Federal Agency to initiate consultation should contain a description of the action area as defined in the Services' regulations and explained in the Services' consultation handbook. If the Services determine that the action area as defined by the action agency is incorrect, the Services should discuss their rationale with the agency or applicant, as appropriate. Reaching agreement on the description of the action area is desirable but ultimately the Services can only consult when an action area is defined properly under the regulations.

For stormwater discharges or discharge related activities, the action area should encompass the immediate vicinity of, or nearby, the point of discharge into receiving waters and the path or immediate area through which or over which stormwater flows to the point of discharge into the receiving water. This includes areas in the receiving water downstream from the point of discharge. The action area will vary with the size and location of the outfall pipe, the nature and quantity of the stormwater discharges, and the type of receiving waters, among other factors.

⁶ <https://www.fisheries.noaa.gov/resource/map/greater-atlantic-region-esa-section-7-mapper>

⁷ <https://ecos.fws.gov/ipac/>

inconsistent with the documented habitat of the USFWS protected species listed on the IPaC species list. In this case, the action area ultimately does not overlap with the presence of NMFS/USFWS threatened or endangered species or critical habitat, resulting in a “no effect” determination (Criterion C in Section II.A).

Before submitting a NOI for coverage under this permit, the applicant must determine whether they meet the ESA eligibility criteria in Section II.A by following the steps in Section II.B of this appendix. Applicants that cannot meet one of the eligibility criteria in Section II.A may be required to apply for an individual permit.

A. ESA Eligibility Criteria for Protected NMFS and USFWS Species and Critical Habitat

The NMFS and USFWS ESA eligibility requirements of this permit relating to the protected species and/or critical habitat listed under the jurisdiction of NMFS or USFWS may be satisfied by documenting that one of the following criteria has been met:

- Criterion A: No endangered or threatened species or critical habitat are in proximity to the stormwater discharges or discharge related activities or come in contact with the action area according to the NMFS ESA Section 7 Mapper and the USFWS IPaC species list. This results in a “no effect” determination. No ESA Section 7 consultation is required.
- Criterion B: Endangered or threatened species and/or critical habitat overlap with the action area associated with stormwater discharges or discharge-related activities according to the NMFS ESA Section 7 Mapper and/or the USFWS IPaC species list. In this case, formal or informal consultation with the NMFS and/or USFWS under Section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by NMFS and/or USFWS on a finding that the discharges and related activities “may affect but are not likely to adversely affect” listed species or critical habitat (informal consultation)⁸.
- Criterion C: Endangered or threatened species and/or critical habitat overlap with the action area associated with stormwater discharges or discharge-related activities according to the NMFS ESA Section 7 Mapper and/or USFWS IPaC species list. Using the best scientific and commercial data available, a determination is made by EPA, or by the applicant and affirmed by EPA, that the federally listed species or designated critical habitat listed on the USFWS species list is not found in the site-specific

⁸ See USFWS Section 7 consultation handbook, available at http://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf for definitions and guidance.

habitat of the action area. This results in a “no effect” determination. No ESA Section 7 consultation is required.

If no protected species overlap with your project’s action area (Criterion A or C), the applicant may skip to Step 4 of the determination and verify that their activities will have “no effect”. The applicant must submit this information to EPA as specified in Section II.C of this appendix. The applicant must also provide a description of the basis for the criterion selected on their NOI form, including the species and critical habitat list(s), the report of species present from the ESA Section 7 Mapper, the IPaC Official Species List and any other documentation supporting their eligibility.

B. ESA Eligibility Determination

To determine eligibility, applicants must assess the potential effects of their stormwater discharges and discharge-related activities on listed species or critical habitat **prior to completing and submitting a NOI**. Applicants must follow the steps outlined below and document the results of the eligibility determination.

In order to evaluate anadromous and marine species under the jurisdiction of NMFS, the ESA Section 7 Mapper online system⁹ must be used to develop a preliminary determination of federally listed species or designated critical habitats within the action area of the applicant’s discharge and discharge-related activities. In order to evaluate all other listed species, the USFWS IPaC online system must be used to develop a preliminary determination of federally listed species or designated critical habitats within the action area of your discharge and related activities.¹⁰

Step 1 – Determine if Criterion A is met

The applicant can certify eligibility in accordance with Criterion A if the applicant provides documentation with the NOI (i.e., has printed and saved the determination (report/USFWS Official Species List/NOAA Fisheries/NMFS ESA Mapper species list) which indicated that federally listed species or designated critical habitats are not present in the action area. An applicant that has met Criterion A shall proceed to Step 4.

If the applicant has not met Criterion A, go to Step 2.

Step 2 – Determine if Criterion B is met

⁹ The ESA Section 7 Mapper is available on the NMFS website at <https://www.fisheries.noaa.gov/resource/map/greater-atlantic-region-esa-section-7-mapper>.

¹⁰ The USFWS website at <http://ecos.fws.gov/ipac/>.

The applicant can certify eligibility according to Criterion B for coverage by this permit if they answer “Yes” to **all** the following questions:

- 1) Does the action area overlap with one or more of the protected species under the jurisdiction of NMFS based on the ESA Section 7 Mapper species list and/or USFWS based on the IPaC system USFWS Official Species List?
- 2) Based on further site-specific investigation, are these species still expected to overlap with the aquatic/marine habitat in the action area?
- 3) Did the assessment of the discharge and discharge-related activities indicate that discharges “may affect, but are not likely to adversely affect” listed species or critical habitat?¹¹
- 4) Has an informal consultation resulted in NMFS and/or USFWS concurrence that the discharge and discharge-related activities “may affect, but are not likely to adversely affect” listed species or critical habitat or has a formal consultation resulted in NFMS and/or USFWS no jeopardy opinion?
- 5) Does the applicant agree to implement all measures upon which the consultation was conditioned?

Use the guidance below to understand effects determination and to answer these questions. An applicant that has answered “yes” to all five questions has met Criterion B and shall proceed to Step 4.

If you answered “No” to the questions under Step 2, go to Step 3.

Step 3 – Determine if Criterion C is met

The applicant can certify eligibility according to Criterion C for coverage by this permit if they answer “Yes” to **both** of the following questions informed by the guidance and example below:

- 1) Does the action area contain one or more of the NMFS and/or USFWS species listed above based on the NMFS ESA Section 7 Mapper and IPaC system USFWS Official Species List?
- 2) Did the further assessment of the potential presence of all species within the action area of the stormwater discharges and discharge-related activities indicate that there would be no overlap between the species’ habitats and the action area? This will result in a “no effect” on listed species or critical habitat.

An applicant that has answered “yes” to both questions has met Criterion C and shall proceed to Step 4.

¹¹ See USFWS Section 7 consultation handbook, available at http://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf for definitions and guidance.

Criterion C example evaluation for Piping plover:

An applicant seeking coverage for an MS4 located along the coast completes an evaluation of the action area using the NMFS ESA Section 7 Mapper and IPaC system USFWS Official Species List and identifies that the **only** federally protected species in the action area is the piping plover. Available data indicates that the habitat of the piping plover and determines that the bird is found in **coastal habitats include sand spits, small islands, tidal flats, shoals, and sandbars with inlets. Primary foraging habitats include sandy mud flats, ephemeral pools and seasonally emergent seagrass beds with abundant invertebrates.**¹² In this case, the MS4 discharges and discharge -related activities do not occur within or near the sandbar-like habitat described above. The applicant determines that even though the piping plover may occur within the geographic area covered by the MS4, based on the IPaC USFWS Official Species List, the piping plover **does not** overlap with the applicant's action area (i.e., Yes to Question 2). The project has met eligibility Criterion C and the applicant documents its assessment using USFWS and/or NMFS resources.

Step 4 - Document results of the Eligibility Determination

Once the ESA eligibility determination is complete and the applicant identifies which of the criteria has been met, the applicant shall include appropriate documentation in the NOI submission. Documentation for the eligibility criteria are as follows:

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|--------------------|---|
| Criterion A | A copy of the NFMS ESA Section 7 Mapper species list and/or UFWWS IPaC-generated USFWS Official Species List (not the preliminary resource list) documenting that no listed species or critical habitat is present within the action area. The applicant shall also include a statement specifying how it determined that no listed species or critical habitat are in proximity to the discharges. |
| Criterion B | A dated copy of the NMFS and/or USFWS letter of concurrence on a finding of "no jeopardy" (for formal consultation) or "not likely to adversely affect" (for informal consultation) regarding the ESA section 7 consultation. |
| Criterion C | A copy of the NFMS ESA Section 7 Mapper species list and/or UFWWS IPaC-generated USFWS Official Species List documenting that listed species or critical habitat are present within the action area and documentation of available data indicating that the habitat for the |

¹² In this example, the applicant would use species-specific information from USFWS available at <https://www.fws.gov/species/piping-plover-charadrius-melodus>

species identified are not found in the site-specific action area for the stormwater discharges and discharge-relative activities.

C. Submittal of Notice of Intent

Once the ESA eligibility requirements of Part B of this Appendix have been met you may submit the Notice of Intent indicating which Criterion you have met to be eligible for permit coverage. Signature and submittal of the NOI constitutes your certification, under penalty of law, of eligibility for permit coverage under 40 CFR § 122.21.

D. Duty to Implement Terms and Conditions upon which Eligibility was Determined

You must comply with any terms and conditions imposed under the ESA eligibility requirements to ensure that your stormwater discharges and discharge related activities do not pose adverse effects or jeopardy to listed species and/or critical habitat. You must incorporate such terms and conditions into your Storm Water Management Program as required by this permit. If the ESA eligibility requirements of this permit cannot be met, then you may not receive coverage under this permit and must apply for an individual permit.

E. Services' Contact Information

United States Fish and Wildlife Service

Endangered Species home page: <http://endangered.fws.gov>

ESA Section 7 Consultations:

<https://www.fws.gov/midwest/endangered/section7/section7.html>

Information, Planning, and Conservation System (IPAC):

<http://ecos.fws.gov/ipac/>

United States Fish and Wildlife Service

New England Field Office

70 Commercial Street, Suite 300

Concord, NH 03301-5087

Phone: (603) 223-2541

NOAA Fisheries/National Marine Fisheries Service

Website: http://www.nmfs.noaa.gov/pr/species/esa_species.htm

ESA Species Map: <https://www.fisheries.noaa.gov/resource/map/greater-atlantic-region-esa-section-7-mapper>

NOAA Fisheries/National Marine Fisheries Service
Greater Atlantic Region Fisheries Office
Protected Resources Division
55 Great Republic Drive
Gloucester, MA 01930-2298
Phone: (978) 281-9300 ext. 6505

III. Guidance of Use of the USFWS IPaC System

The following guidance on the Information, Planning, and Conservation (IPaC) system mapping tool may be used to determine if any federally listed species or designated critical habitat under the jurisdiction of the USFWS exist in the action area of an applicant's stormwater discharges or discharge-related activities. This guidance directs applicants use of the "Initial Project Scoping" feature of the IPaC system available at <https://ecos.fws.gov/ipac/>.

1. Indicate the action area for the site by either: (i) drawing the boundary on the map using the embedded tools; or (ii) uploading an existing shapefile.
2. Select "Continue".
3. Select "SEE RESOURCE LIST". The next screen will display a resources list, which can be exported. This list indicates natural resources of concern, which will include a list of Endangered Species Act species.¹³
4. Request a USFWS Official Species List under "REGULATORY DOCUMENTS" and retain a copy of the Official Species List for record keeping purposes.

If the applicant is unable to certify eligibility under Criterion A, they must assess whether the discharges or related activities "may affect but will not likely adversely affect" listed species or critical habitat. "Discharge-related activities" include Best Management Practices (BMPs) to prevent or minimize the concentration of pollutants in the stormwater.

The scope of effects to consider will vary with each site. If the applicant is having difficulty in determining whether the discharge is likely to cause adverse effects to a listed species or critical habitat, they should contact EPA and/or the USFWS for assistance. In order to complete the determination of effects it may be necessary to follow the formal or informal consultation procedures in Section 7 of the ESA.

¹³ The northern long-eared bat, (*Myotis septentrionalis*), under the jurisdiction of the USFWS, is identified as occurring statewide in Massachusetts. The MA MS4 general permit issuance is consistent with the USFWS IPaC Northern Long-eared Bat Determination Key finding of "no effect" on the NLE bat. No further ESA consultation is needed for the northern long-eared bat.

Upon completion of the assessment, document the results of the effects determination. If the results indicate that discharges and discharge-related activities do not ultimately overlap with the action area, a “no effect” determination on threatened or endangered species or critical habitat can be made. If EPA concurs with the determination, the applicant is eligible under Criterion C of this Appendix.

If the determination is “may affect, but not likely to adversely affect” the applicant must contact EPA and the USFWS to discuss the findings and measures that may be required to avoid, eliminate, or minimize adverse effects. If the applicant and the USFWS reach agreement on measures to avoid adverse effects, the discharge is eligible under Criterion B. Any terms and/or conditions to protect listed species and critical habitat that are relied on in order to complete an adverse effects determination must be attached to the NOI.

Effects from stormwater discharges and/or related activities which could pose an adverse effect include, but are not limited to:

5. Water Quality/Prey Quality: Certain pollutants present in have the potential to cause toxicity in the receiving water. Toxic pollutants in the discharges may have toxic effects on listed species or their prey.
6. Habitat Structure and Disturbance: Solids have the potential to settle and cover bottom habitat areas, potentially causing benthic smothering and effluent flow can cause erosion or scouring.

If endangered species issues cannot be resolved: If the applicant cannot reach agreement with the NMFS and/or USFWS on measures to avoid or eliminate adverse effects, the discharge is not eligible for coverage under this general permit. The applicant must seek coverage under an individual permit.