

APPENDIX 2

Endangered Species Act Guidance and Eligibility Criteria

A. 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 the hydroelectric generating facilities General Permit (HYDROGP) do not adversely affect endangered and threatened species or designated critical habitat. Facilities applying for permit coverage must assess the impacts of their discharges and discharge-related activities (i.e. intake of river water) on federally listed endangered and threatened species (“listed species”) and designated critical habitat (“critical habitat”) to ensure that those goals are met. For the purposes of this appendix, “discharge related activities” include: the discharge of miscellaneous wastewaters associated with operation of a hydroelectric generating facility, the use of an intake structure to withdraw water for equipment cooling purposes, and the measures taken as part of the facility’s Best Management Practices (BMP) plan implementation.

Prior to obtaining general permit coverage, applicants must meet the ESA eligibility provisions of this permit by following the steps in this appendix. EPA strongly encourages applicants to begin this process at the earliest possible stage to ensure the notification requirements for general permit coverage are complete upon Notice of Intent (NOI) submission. A facility that cannot meet any of the ESA eligibility criteria must apply for an individual permit.

Facilities seeking coverage also have an independent ESA obligation to ensure that their activities do not result in any prohibited “take” of listed species¹. The term “take” is used in the ESA to mean 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 described in the HYDROGP and this appendix 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

¹ Section 9 of the ESA prohibits any person from “taking” a listed species 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.

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 (Incidental Take 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)² office or the National Marine Fisheries Service (NMFS), jointly referred to as the Services.

The following are federally listed threatened and endangered species in Massachusetts and New Hampshire:

Massachusetts (16)

Dwarf wedgemussel (*Alasmidonta heterodon*)
 Northeastern bulrush (*Scirpus ancistrochaetus*)
 Sandplain gerardia (*Agalinis acuta*)
 Small whorled Pogonia (*Isotria medeoloides*)
 Northern long-eared bat (*Myotis septentrionalis*)
 Piping plover (*Charadrius melodus*)
 Red knot (*Calidris canutus rufa*)
 Roseate tern (*Sterna dougallii dougallii*)
 Plymouth redbelly turtle (*Pseudemys rubriventis bangsi*)
 Bog turtle (*Clemmys muhlenbergii*)
 American burying beetle (*Nicrophorus americanus*)
 Northeastern beach tiger beetle (*Cicindela dorsalis dorsalis*)
 Puritan tiger beetle (*Cicindela puritana*)
 Rusty patched bumble bee (*Bombus affinis*)
 Atlantic sturgeon (*Acipenser oxyrinchus*)*
 Shortnose sturgeon (*Acipenser brevirostrum*)*

New Hampshire (12)

Dwarf wedgemussel (*Alasmidonta heterodon*)
 Canada lynx (*Lynx Canadensis*)
 Northern long-eared bat (*Myotis septentrionalis*)
 Piping plover (*Charadrius melodus*)
 Red knot (*Calidris canutus rufa*)
 Roseate tern (*Sterna dougallii dougallii*)
 Karner blue butterfly (*Lycaeides Melissa samuelis*)
 Northeastern bulrush (*Scirpus ancistrochaetus*)
 Small whorled pogonia (*Isotria medeoloides*)
 Jesup’s milk-vetch (*Astragalus robbinsii var. jesupii*)
 Atlantic sturgeon (*Acipenser oxyrinchus*)*
 Shortnose sturgeon (*Acipenser brevirostrum*)*

*These species are listed under the jurisdiction of NMFS, all others are listed under the jurisdiction of USFWS.

In addition, the following are federally protected marine species that are present in the near coastal waters of Massachusetts and New Hampshire. These species are listed under the jurisdiction of NMFS:

Marine Reptiles (5)

Loggerhead Sea Turtle (*Caretta caretta*)
 Kemp’s Ridley Sea Turtle (*Lepidochelys kempii*)
 Leatherback Sea Turtle (*Dermochelys coriacea*)
 Green Sea Turtle (*Chelonia mydas*)
 Hawksbill Sea Turtle (*Eretmochelys imbricata*)**

Marine Mammals (2)

North Atlantic Right Whale (*Eubalaena glacialis*)
 Fin Whale (*Balaenoptera physalus*)

** Species rare in near shore Massachusetts and New Hampshire coastal waters

² Discharges to marine waters may require consultation with the National Marine Fisheries Service instead.

Any facility seeking coverage under the HYDROGP must consult with the Services, specifically the USFWS. 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 C.F.R. § 402.08 and § 402.13. By terms of this permit, EPA has automatically designated operators as non-Federal representatives for the purpose of conducting formal or informal consultations with the USFWS. See Section B of this appendix. However, as covered in Section C of this appendix, EPA will coordinate with the NMFS regarding the marine species under its jurisdiction to determine that the terms of the permit adequately prevent adverse effects or the take of listed species and adverse effects on critical habitat due to HYDRO discharges.

When listed species are present, permit coverage will only be available if EPA determines, or the applicant determines and EPA concurs, that the discharge and related activities will have “no affect” on the listed species or critical habitat, or are “not likely to adversely affect” listed species or critical habitat. If the discharges and related activities are “not likely to adversely affect” listed species or critical habitat, consultation with the Services must be completed and a written concurrence from the Services must be provided with the NOI.

Before submitting a notice of intent (NOI) for coverage under this permit, applicants must determine whether they meet the ESA eligibility criteria by following the steps in Sections B and C of this Appendix. Applicants that cannot meet the eligibility criteria in Sections B and/or C must apply for an individual permit.

B. ESA Eligibility Criteria for the U.S. Fish and Wildlife Service

The USFWS ESA eligibility requirements of this permit relating to the dwarf wedgemussel, northeastern bulrush, Jesup’s milk-vetch, sandplain gerardia, small whorled pogonia, Plymouth redbelly turtle, bog turtle, piping plover, roseate tern, red knot, Canada lynx, northern long-eared bat, puritan tiger beetle, northeastern beach tiger beetle, American burying beetle, Karner blue butterfly, and rusty patched bumble bee may be satisfied by documenting that one of the following criteria has been met:

USFWS Criterion A: No endangered or threatened species or critical habitat are in proximity to the discharges or related activities.

USFWS Criterion B: Formal or informal consultation with USFWS under section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by USFWS on a finding that the discharges and related activities are “not likely to adversely affect” listed species or critical habitat (informal consultation)³.

³ See USFWS Section 7 consultation handbook, available at http://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf for definitions and guidance

USFWS Criterion C: Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the applicant and affirmed by EPA, that the discharges and related activities will have “no affect” on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the USFWS.

Steps to Determine if the USFWS ESA Eligibility Criteria Can Be Met

To determine eligibility, you must assess the potential effects of your discharges and related activities on listed species or critical habitat, PRIOR to completing and submitting a Notice of Intent (NOI). You must follow the steps outlined below and document the results of your eligibility determination.

The USFWS Information, Planning, and Conservation (IPaC) online system can be used to develop a preliminary determination of the occurrence of federally listed species or designated critical habitats within the action area of your discharge and related activities. Further information on IPaC is available on the Fish and Wildlife Services’ website at <http://ecos.fws.gov/ipac/>. Instructions for using IPaC are available in an attachment to this Appendix (end of document).

Step 1 – Determine if you meet USFWS Criterion A:

You can certify eligibility, according to USFWS Criterion A, for coverage by this permit if, upon completing the IPaC online system process, you printed and saved the preliminary determination which indicated that federally listed species or designated critical habitats are not present in the action area.

If you have met USFWS Criterion A skip to Step # 4.

If you have not met USFWS Criterion A, go to Step # 2.

Step 2 – Determine if you meet USFWS Criteria B

You can certify eligibility according to USFWS Criteria B for coverage by this permit if you answer “Yes” to **all** of the following questions:

- 1) Does your action area contain one or more of the following species: dwarf wedgemussel, northeastern bulrush, Jesup’s milk-vetch, sandplain gerardia, piping plover, Plymouth redbelly turtle, bog turtle, small whorled pogonia, roseate tern, Canada lynx, puritan tiger beetle, northeastern beach tiger beetle, American burying beetle, Karner blue butterfly, rusty patched bumble bee, red knot and northern long-eared Bat? (IPaC system may be used to answer this question)

- 2) Did your assessment of the discharge and related activities indicate that they may affect but are “not likely to adversely affect” listed species or critical habitat? ⁴
- 3) Did you contact the USFWS and did formal or informal consultation result in either a “no jeopardy” opinion by the USFWS (for formal consultation) or concurrence by the USFWS that your discharge and related activities would be “not likely to adversely affect” listed species or critical habitat (for informal consultation)?
- 4) Do you agree to implement all measures upon which the consultation was conditioned?

Use the guidance listed below Step 3 to understand effects determination and to answer these questions.

If you answered “Yes” to all four questions above, you have met eligibility USFWS Criteria B. Skip to Step 4.

If you answered “No” to any of the four questions above, go to Step 3.

Step 3 – Determine if you meet USFWS Criterion C

USFWS Criterion C: You can certify eligibility according to USFWS Criterion C for coverage by this permit if you answer “Yes” to **either** of the following questions:

- 1) Does your action area contain one or more of the following species: Canada lynx, sandplain gerardia, small whorled pogonia, Karner blue butterfly, American burying beetle, rusty patched bumble bee and/or northern long-eared Bat and **does not contain any of the following species**: dwarf wedgemussel, northeastern bulrush, Jesup’s milk-vetch, piping plover, Plymouth redbelly turtle, bog turtle, roseate tern, puritan tiger beetle, red knot, and northern beach tiger beetle? ⁵
- 2) Did the assessment of your discharge and related activities indicate that there would be “no affect” on listed species or critical habitat ⁶ ?

Use the guidance below to understand effects determination and to answer these questions.

*If you answered “Yes” to **either** question above, you have met eligibility USFWS Criterion C. Go to Step 4.*

If you answered “No” to both of the questions above, you are not eligible for coverage by this permit. You must submit an application for an individual permit for the discharges from your facility. (See 40 CFR 122.21).

⁴ See USFWS Section 7 consultation handbook, available at http://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf for definitions and guidance.

⁵ EPA has considered the effects of hydroelectric facility discharges and related activities on the Canada Lynx, Sandplain gerardia, Small whorled Pogonia, Karner Blue Butterfly, American burying beetle, rusty patched bumble bee, and Northern long-eared Bat and determined that discharges in compliance with the hydroelectric general permit will have no effect on these threatened or endangered species.

⁶ See USFWS Section 7 consultation handbook, available at http://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf for definitions and guidance.

Step 4 - Document results of the Eligibility Determination

Once the USFWS ESA eligibility requirements have been met, you shall include documentation of USFWS ESA eligibility in your NOI. Documentation for the various eligibility criteria are as follows:

- USFWS Criterion A: A copy of the IPaC generated preliminary determination letter indicating that no listed species or critical habitat is present within your action area. You shall also include a statement on how you determined that no listed species or critical habitat are in proximity to your discharges.
- USFWS Criterion B: A dated copy of the 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.
- USFWS Criterion C: A copy of the IPaC generated preliminary determination letter indicating that the only listed species in your action area are the Canada Lynx, sandplain gerardia, small whorled pogonia, Karner blue butterfly, American burying beetle, rusty patched bumble bee, and/or Northern long-eared Bat. OR a dated copy of the EPA concurrence with the operator’s determination that the discharges and related activities will have “no affect” on listed species or critical habitat.

USFWS Effects Determination Guidance:

If you are unable to certify eligibility under USFWS Criterion A, you must assess whether your discharges or related activities “may affect”, will have “no affect” or are “not likely to adversely affect” listed species or critical habitat. “Discharge-related activities” include: the discharge of miscellaneous wastewaters associated with operation of a hydroelectric generating facility, the use of an intake structure to withdraw water from the river mainly for the generation of electricity, but also to a lesser extent for equipment cooling purposes, and the measures taken as part of the facility’s Best Management Practices (BMP) plan implementation.

The scope of effects to consider will vary with each facility. If you are having difficulty in determining whether your discharge is likely to cause adverse effects to a listed species or critical habitat, you should contact 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.

Upon completion of your assessment, document the results of your effects determination. If your results indicate that discharges and related activities will have “no affect” on threatened or endangered species or critical habitat and EPA concurs with your determination, you are eligible under USFWS Criterion C of this Appendix. Your determination may be based on measures that you implement to avoid, eliminate, or minimize adverse effects.

If the determination is “May affect” or “not likely to adversely affect” you must contact the USFWS to discuss your findings and measures you could implement to avoid,

eliminate, or minimize adverse effects. If you and the USFWS reach agreement on measures to avoid adverse effects, you are eligible under USFWS Criterion B. Any terms and/or conditions to protect listed species and critical habitat that you relied on in order to complete an adverse effects determination, must be attached to your NOI.

There is the potential for discharges of oil and grease, slightly elevated temperatures, or pH levels different from ambient associated with the wastewaters authorized by this permit. However, relative to the overall flow of water through this facility, the HYDROGP wastewater flows typically make up less than 1% of the total flow discharged. Therefore, there are not expected to be any adverse effects associated with the HYDROGP wastewaters. For those hydroelectric facilities that discharge to an area with Atlantic or shortnose sturgeon present, such projects have likely already undergone consultation between the FERC (Federal Energy Regulatory Commission) and the permittee, as the operation of dams that are present with the majority of these facilities falling under the jurisdiction of the FERC.

Effects from HYDROGP discharges which could pose an adverse effect include impacts associated with intake structures. The operation of intake structures can cause or contribute to a variety of adverse environmental effects, such as killing or injuring fish larvae and eggs entrained in the water withdrawn from a water body and sent through the facility's cooling system, or by killing or injuring fish and other organisms by impinging them against the intake structure's screens. Although FERC licensing may have already addressed these concerns or required mitigating measures to be implemented by these hydroelectric facilities, the draft HYDROGP requires the permittees which use some intake water for cooling purposes to implement measures to minimize any impacts from these intakes.

If endangered species issues cannot be resolved: If you cannot reach agreement with the USFWS on measures to avoid or eliminate adverse effects, you are not eligible for coverage under this permit. You must seek coverage under an individual permit.

C. The ESA Eligibility Criteria for the National Marine Fisheries Service

Listed species under the jurisdiction of NMFS are the Atlantic Sturgeon and the Shortnose Sturgeon, as well as three species of whales and four species of sea turtles in the marine environment. NMFS has also designated critical habitat for Atlantic sturgeon in Massachusetts and New Hampshire. For facilities previously covered under the HYDROGP, EPA has reviewed available data and determined that the terms of the permit adequately prevent adverse effects or the take of listed species and adverse effects on critical habitat due to HYDROGP discharges.

Concurrently with this Draft Permit, EPA has provided NMFS with EPA's assessment of potential impacts of the Draft Permit on shortnose sturgeon, Atlantic sturgeon, and designated critical habitat for Atlantic sturgeon for existing facilities covered under the 2009 HYDROGP. EPA's assessment of the potential impacts and preliminary finding that the Draft HYDROGP is not likely to adversely affect listed species or critical habitat

may be found at: <https://www.epa.gov/npdes-permits/hydroelectric-generating-facilities-general-permit-hydrogp-massachusetts-new-hampshire>. EPA is seeking concurrence from NMFS with its preliminary finding for these previously permitted, existing facilities.

For facilities seeking coverage under the HYDROGP for the first time, EPA will review the information provided in the NOI and work with NMFS to determine whether there are likely to be adverse effects on an individual basis. Information that must be included in the NOI related to endangered species under the jurisdiction of NMFS:

- Identify if the discharge is located in the:
 - Merrimack River (between Lawrence, MA and the Atlantic Ocean);
 - Connecticut River (between MA/CT state line and Montague, MA);
 - Taunton River; or
 - Piscataqua River (including the Salmon Falls and Cocheco Rivers).
- Identify if the facility discharges into marine water.
- Identify if there has been any previous formal or informal consultation with NMFS, and the result of the consultation.

D. Submittal of Notice of Intent

Once the ESA eligibility requirements of Part B and C of this Appendix have been met, and you have determined NHPA eligibility (see Appendix 3), you may submit the Notice of Intent. Signature and submittal of the NOI constitutes your certification, under penalty of law, of eligibility for permit coverage under 40 C.F.R. § 122.21.

E. 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 discharges and related activities do not pose adverse effects or jeopardy to listed species and/or critical habitat. 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.

F. Services Information

United States Fish and Wildlife Service:

National websites for Endangered Species Information:

Endangered Species home page: <https://www.fws.gov/endangered/?ref=topbar>

Section 7 Consultations:

<https://www.fws.gov/endangered/what-we-do/consultations-overview.html>

Information, Planning, and Conservation System (IPAC): <http://ecos.fws.gov/ipac/>

U.S. FWS – Region 5, Supervisor
New England Field Office
U.S. Fish and Wildlife Services
70 Commercial Street, Suite 300
Concord, NH 03301

National Marine Fisheries Service:

Website: <https://www.fisheries.noaa.gov/topic/endangered-species-conservation>

National Marine Fisheries Service
Northeast Region, Protected Resource Division
Attn: Endangered Species Coordinator
55 Great Republic Drive, Gloucester, MA 01930

Natural Heritage Network

The Natural Heritage Network (NHN) comprises 75 independent heritage program organizations located in all 50 states, 10 Canadian provinces, and 12 countries and territories located throughout Latin America and the Caribbean. These programs gather, manage, and distribute detailed information about the biological diversity found within their jurisdictions.

In New Hampshire, the Natural Heritage Bureau, within the Division of Forests and Lands, focuses on protection of rare plants and natural communities. The Bureau has locational information on rare plants, wildlife, and natural communities by town and can be accessed at: <https://www.nhdf.org/About-Us/Natural-Heritage-Bureau>

New Hampshire Fish and Game Department's Nongame and Endangered Wildlife Program also maintains information on rare wildlife, including Wildlife Action Plans accessible at <http://www.wildlife.state.nh.us/nongame/index.php>.

In Massachusetts, the Division of Fisheries and Wildlife's Natural Heritage and Endangered Species Program is responsible for conservation and protection of rare species and natural communities. The Program, accessible at <https://www.mass.gov/orgs/masswildlifes-natural-heritage-endangered-species-program>, maintains information about the presence and distribution of rare species in Massachusetts.

U.S. Fish and Wildlife IPaC system instructions
Appendix 2 – Attachment 1

Use the following protocol to determine if any federally listed species or designated critical habitats under USFWS jurisdiction exist in your action area:

Enter your project specific information into the “Initial Project Scoping” feature of the Information, Planning, and Conservation (IPaC) system mapping tool, which can be found at the following location:

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

1. Indicate the action area⁷ for the site by either:
 - a. Drawing the boundary on the map; or
 - b. Uploading a shapefile.
2. Select “continue”.
3. Click on the “SEE RESOURCE LIST” button and on the next screen you can export a trust resources list. This will provided a list of natural resources of concern, which will include an Endangered Species Act Species list. You may also request an official species list under “REGULATORY DOCUMENTS”. Save copies and retain for your records.

⁷ The action area is defined by regulation as all areas to be affected directly or indirectly by the action and not merely the immediate area involved in the action (50 CFR §402.02). This analysis 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 action 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 hydroelectric generating facility discharges or discharge related activities, the action area should encompass the following:

- The immediate vicinity of, or nearby, the point of discharge into receiving waters.
- The cooling water intake structure (CWIS), penstock, dam structure, or other equipment associated with the intake or discharge of water that is used to operate turbines and any other electricity generating equipment at the facility. This includes areas in the receiving water upstream of the CWIS and downstream from the point of discharge.
- Areas that may be impacted by construction or repair activities. This extends as far as effects related to noise (from construction equipment, power tools, etc.) and light (if work is performed at night) may reach.

The action area will vary with the size and location of structures listed above, the nature and quantity of the discharges, and the type of receiving waters, among other factors.