

APPENDIX 2

Endangered Species Act Review and Requirements

A. Background

Section 7(a) of the Endangered Species Act of 1973, as amended (ESA), grants authority and imposes requirements on Federal agencies regarding endangered or threatened species of fish, wildlife, or plants (listed species) and habitat of such species that has been designated as critical (a “critical habitat”). Section 7(a)(2) of the ESA requires every Federal agency, in consultation with and with the assistance of the Secretary of Interior, to ensure that any action it authorizes, funds or carries out, in the United States or upon the high seas, is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. The United States Fish and Wildlife Service (USFWS) administers § 7 consultations for freshwater species. The National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) administers Section 7 consultations for marine and anadromous species.

In order to meet its obligations under the Clean Water Act and the ESA, and to promote the goals of those Acts, the Environmental Protection Agency (EPA) is seeking to ensure the activities regulated by the Non-Contact Cooling Water General Permit (NCCW GP) do not adversely affect endangered and threatened species or critical habitat. EPA has delineated the action areas of the 37 facilities that were covered under the 2014 GP, which expired on November 4, 2019, (the “expired” General Permit). These facilities are expected to seek coverage under this proposed GP. EPA conducted the appropriate analysis and completed ESA section 7 informal consultation with the USFWS and NOAA Fisheries, where appropriate, for these 37 facilities¹. Therefore, if a facility discharge was covered under the 2014 NCCW GP, no further action is needed regarding ESA requirements.

Facility operators applying for permit coverage that were not covered under the 2014 GP, deemed “New Applicants” have not undergone ESA analysis and must assess the impacts of their non-contact cooling water discharges and discharge-related activities on federally listed endangered and threatened species and designated critical habitat to ensure that ESA requirements are met. For the purposes of this appendix, “discharge related activities” include: activities which cause, contribute to, or result in point source non-contact cooling water discharges; and measures including the siting, construction and operational procedures to control, reduce or prevent water pollution. “Intake related activities” include: activities which result in cooling water intake from a surface water, including cooling water intake structures (CWISs) and operational controls and maintenance.

Prior to obtaining general permit coverage, New Applicants must meet the ESA eligibility provisions of this permit by following the steps in this appendix. EPA strongly encourages New Applicants to begin this process at the earliest possible stage to ensure

¹ See the NCCW GP’s supporting Fact Sheet, Section V.E. The list of the 37 Facilities is identified in Appendix 4, Table A.

the notification requirements for general permit coverage are complete upon Notice of Intent (NOI) submission.

New Applicants seeking coverage also have an independent obligation regarding ESA to ensure that their activities do not result in any prohibited “take” of listed species. 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 required in the NCCW GP and this appendix to protect species may also assist in ensuring that New Applicant’s discharges, as well as 2014 permit covered facilities’ activities, do not result in a prohibited take of species in violation of section 9 of the ESA. If the New Applicant has plans or activities in an area where endangered and threatened species are located, in certain cases they may wish to ensure that they are protected from potential take liability under ESA section 9² by obtaining an ESA section 10 permit or by requesting formal consultation under ESA section 7. New Applicants that are unsure whether to pursue a section 10 permit or a section 7 consultation for takings protection should contact the appropriate USFWS office or NOAA Fisheries, jointly referred to as the Services.

The federally protected ESA species found in Massachusetts and New Hampshire are listed in Table 1.

² 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.

Table 1. A list of the eighteen federally protected species in Massachusetts and twelve federally protected species in New Hampshire.

Massachusetts (18)	New Hampshire (12)
Dwarf wedgemussel (<i>Alasmidonta heterodon</i>)	Dwarf wedgemussel (<i>Alasmidonta heterodon</i>)
Northeastern bulrush (<i>Scirpus ancistrochaetus</i>)	Northeastern bulrush (<i>Scirpus ancistrochaetus</i>)
American Chaffseed (<i>Schwalbea americana</i>)	Jesup's milk-vetch (<i>Astragalus robbinsii</i> var. <i>jesupii</i>)
Sandplain gerardia (<i>Agalinis acuta</i>)	Piping plover (<i>Charadrius melodus</i>)
Piping plover (<i>Charadrius melodus</i>)	Red Knot (<i>Calidris canutus rufa</i>)
Red Knot (<i>Calidris canutus rufa</i>)	Roseate tern (<i>Sterna dougallii dougallii</i>)
Roseate tern (<i>Sterna dougallii dougallii</i>)	Karner blue butterfly (<i>Lycaeides melissa samuelis</i>)
Northern red-bellied cooter (<i>Pseudemys rubriventis</i>)	Canada lynx (<i>Lynx canadensis</i>)
Bog turtle (<i>Glyptemys muhlenbergii</i>)	Small whorled pogonia (<i>Isotria medeoloides</i>)
Plymouth Redbelly Turtle (<i>Pseudemys rubriventis bangsi</i>)	Northern long-eared bat (<i>Myotis septentrionalis</i>)
Small whorled pogonia (<i>Isotria medeoloides</i>)	Atlantic sturgeon (<i>Acipenser oxyrinchus oxyrinchus</i>)*
Puritan tiger beetle (<i>Cicindela puritana</i>)	Shortnose sturgeon (<i>Acipenser brevirostrum</i>)*
American burying beetle (<i>Nicrophorus americanus</i>)	
Northeastern beach tiger beetle (<i>Cicindela dorsalis</i>)	
Rusty patched bumble bee (<i>Bombus affinis</i>)	
Northern long-eared bat (<i>Myotis septentrionalis</i>)	
Atlantic sturgeon (<i>Acipenser oxyrinchus oxyrinchus</i>)*	
Shortnose sturgeon (<i>Acipenser brevirostrum</i>)*	

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

In addition, Table 2 contains the 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 NOAA Fisheries:

Table 2. The list of the four federally protected marine reptile and two federally protected marine mammal species found in the near coastal waters of Massachusetts and New Hampshire.

Marine Reptiles (4)	Marine Mammals (2)
Leatherback sea turtle (<i>Dermochelys coriacea</i>) Loggerhead sea turtle (<i>Caretta caretta</i>) Kemp's ridley sea turtle (<i>Lepidochelys kempii</i>) Green sea turtle (<i>Chelonia mydas</i>)	North Atlantic right whale (<i>Eubalaena glacialis</i>) Fin whale (<i>Balaenoptera physalus</i>)

Of the species listed in Tables 1 and 2 above, the presence of a number of plants and animals, based on their terrestrial, semi-aquatic or near shore beach habitats, are not expected to overlap with the effluent discharges expected to be covered under the NCCW GP. Table 3 lists the species whose habitats do not overlap with the action areas of the expected discharges. EPA has

determined that there are no plausible routes of effects to the species in Table 3 from the discharge. Therefore, EPA has made the determination of “No Effect” for the 17 federally protected species listed in Table 3, as well as their prey. No ESA consultation with the Services is required for these species.

Table 3. The seventeen species whose habitats are not expected to overlap with the action areas of the intakes/outfalls covered under the NCCW GP.

Northeastern bulrush (<i>Scirpus ancistrochaetus</i>)
American Chaffseed (<i>Schwalbea americana</i>)
Sandplain gerardia (<i>Agalinis acuta</i>)
Jesup’s milk-vetch (<i>Astragalus robbinsii</i> var. <i>jesupii</i>)
Piping plover (<i>Charadrius melodus</i>)
Red Knot (<i>Calidris canutus rufa</i>)
Roseate tern (<i>Sterna dougallii dougallii</i>)
Northern red-bellied cooter (<i>Pseudemys rubriventis</i>)
Bog turtle (<i>Glyptemys muhlenbergii</i>)
Plymouth Redbelly Turtle (<i>Pseudemys rubriventis bangsi</i>)
Karner blue butterfly (<i>Lycaeides melissa samuelis</i>)
Canada lynx (<i>Lynx canadensis</i>)
Small whorled pogonia (<i>Isotria medeoloides</i>)
Puritan tiger beetle (<i>Cicindela puritana</i>)
American burying beetle (<i>Nicrophorus americanus</i>)
Northeastern beach tiger beetle (<i>Cicindela dorsalis</i>)
Rusty patched bumble bee (<i>Bombus affinis</i>)

Any New Applicant seeking coverage under the NCCW GP must consult with the Services. EPA may designate New Applicants as non-Federal representatives for the general permit for the purpose of carrying out formal or informal ESA consultation with the Services. By terms of this permit, EPA has automatically designated New Applicant operators as non- Federal representatives for the purpose of conducting formal or informal consultations. (See 50 CFR §402.08 and §402.13).

When listed species are present, permit coverage will only be available if EPA determines, or the New Applicant determines and EPA concurs, that the discharge and related activities will have “no effect” on the listed species or critical habitat (no plausible routes of effects to the species), or the applicant determines that the discharge and related activities are “not likely to adversely affect” listed species or critical habitat. Informal ESA section 7 consultation with the Services has been concluded when the appropriate Service provides written concurrence that the non-contact cooling water intake, discharge and related activities from the New Applicant facility are “not likely to adversely affect” an endangered or threatened species or critical habitat that is expected to overlap with the action area of the facility.

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

B. ESA Eligibility Criteria

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

The USFWS ESA eligibility requirements of this permit relating to the dwarf wedgemussel (DWM) may be satisfied by documenting that one of the following criteria has been met:

USFWS Criterion A: The listed species (DWM) or critical habitat (if applicable) is not in proximity to the NCCW facility “action area” (intake(s)/discharge(s) and related activities). No ESA consultation with USFWS is required.

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 NCCW “action area” (intake(s)/discharge(s) and related activities) is “not likely to adversely affect” the DWM or critical habitat, if applicable (informal consultation).

USFWS Criterion C: Using the best scientific and commercial data available, the effect of the NCCW “action area” (intake(s)/discharge(s) and related activities) on the DWM or critical habitat (if applicable) have been evaluated. Based on those evaluations, a determination is made by EPA, or by the New Applicant and affirmed by EPA, that the NCCW “action area” (intake(s)/discharge(s) and related activities) presents no plausible routes of effect to the DWM and will have “no effect” on the DWM (or designated critical habitat, if applicable) under the jurisdiction of the USFWS.

2) ESA Eligibility Criteria for NOAA Fisheries

The NOAA Fisheries ESA eligibility requirements of this permit relating to the protected sturgeon, sea turtle and whale species (see Tables 1 and 2) may be satisfied by documenting that one of the following criteria has been met:

Criterion A: The NOAA Fisheries listed species or critical habitat is not in proximity to the NCCW facility “action area” (intake(s)/discharge(s) and related activities). No ESA consultation with NOAA Fisheries is required.

Criterion B: Formal or informal consultation with NOAA Fisheries under section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by NOAA Fisheries on a finding that the NCCW “action area” (intake(s)/discharge(s) and related activities) is “not likely to adversely affect” listed species or critical habitat (informal consultation).

Criterion C: Using the best scientific and commercial data available, the effect of the NCCW “action area” (intake(s)/discharge(s) 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 New Applicant and affirmed by EPA, that the NCCW “action area” (intake(s)/discharge(s) and related activities) presents no plausible routes of effect to the species and will have “no effect” on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of NOAA Fisheries.

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

To determine eligibility, the New Applicant must assess the potential effects of their NCCW intake(s)/discharge(s) and related activities on listed species or critical habitat under the jurisdiction of the USFWS, **prior to** completing and submitting a Notice of Intent (NOI). New Applicants must follow the steps outlined below and document the results of their eligibility determination.

The USFWS Information, Planning, and Conservation (IPaC) online system must be used to produce an official species list of federally listed species and designated critical habitats within the action area of the intake(s)/discharge(s) 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 on the website under “Helpful Videos”.

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 completion of the IPaC online system process, you printed and saved the official species list, which documents 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 overlap with the dwarf wedgemussel ? (IPaC system must be used to answer this question)
- 2) Did your assessment determine that the NCCW intake(s)/discharge(s) and related activities “may affect” (formal consultation) or “may affect, but are not likely to adversely affect” (informal consultation) the DWM (or critical habitat, if applicable)?
- 3) Did you contact the USFWS to complete a section 7 consultation, resulting 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” the DWM or critical habitat, if applicable (for informal consultation)?

- 4) Do you agree to implement all measures upon which the formal consultation was conditioned? Use the guidance 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 **both** of the following questions:

- 1) Does your action area overlap with the dwarf wedgemussel?
- 2) Did the assessment of your action area (intake(s)/discharge(s) and related activities) indicate that the Facility’s intake(s)/discharge(s) activities present no plausible routes of effects to the DWM, resulting in “no effect” on the DWM (or critical habitat, if applicable) and EPA provided concurrence with your determination?

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

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

If you answered Yes to Question 1 and “No” to Question 2 above, you are not eligible for coverage by this permit. You must submit an application for an individual permit for your NCCW discharges. (See 40 CFR 122.21).

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 official species list letter indicating that no listed species or critical habitat is present within your action area. You must also include a statement that supports the reasoning behind the dimensions of your action area, based on your facility’s intake(s)/discharge(s) to determine that no listed species or critical habitat are in proximity to your NCCW surface water intakes and discharges action area.
- USFWS Criterion B: A dated copy of the USFWS 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 official species list letter

indicating that the only listed species in your action area is the dwarf wedgemussel, along with a dated copy of the EPA concurrence with the operator's determination that the NCCW intake(s)/discharge(s) and related activities present no plausible routes of effects to the DWM and they will have "no effect" on listed species or critical habitat (if applicable).

D. Steps to Determine if the NOAA Fisheries Eligibility Criteria Can Be Met

To determine eligibility, the New Applicant must also assess the potential effects of their NCCW intake(s)/discharge(s) and related activities on listed species or critical habitat under the jurisdiction of NOAA Fisheries, **prior to** completing and submitting a Notice of Intent (NOI). New Applicants must follow the steps outlined below and document the results of their eligibility determination.

The NOAA Fisheries ESA Mapper online system must be used to produce documentation of the species of federally listed species or designated critical habitats within the action area of the intake(s)/discharge(s) and related activities. Further information on the NOAA Fisheries ESA Mapper is available on the NOAA Fisheries website at <https://www.fisheries.noaa.gov/resource/map/greater-atlantic-region-esa-section-7-mapper>. Instructions for using the ESA Mapper are found on the website's "User Guide".

Repeat Steps 1 – 4, above, to satisfy ESA consultation requirements for protected species under the jurisdiction of NOAA Fisheries. Follow Steps 1 - 4, substituting the NOAA Fisheries ESA Mapper tool for the IPaC system. The NOAA Fisheries protected species that must be evaluated are Atlantic sturgeon, Atlantic sturgeon critical habitat, shortnose sturgeon, leatherback, loggerhead, Kemps ridley and green sea turtles, fin whales, North Atlantic right whales and North Atlantic right whale critical habitat.

E. USFWS / NOAA Fisheries Effects Determination Guidance:

"Discharge-related activities" include: activities which cause, contribute to, or result in point source non-contact cooling water discharges; and measures including the siting, construction and operational procedures to control, reduce or prevent water pollution. "Intake-related activities" include: activities which result in cooling water intake from a surface water, including CWISs and operational controls. Please be aware that no protection from incidental take liability is provided under this criterion.

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 are advised to contact the USFWS for dwarf wedgemussel assistance and contact NOAA Fisheries for sturgeon, sea turtle and whale 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.

If the determination is "may adversely affect" or "not likely to adversely affect" you must contact the USFWS or NOAA Fisheries (depending on the species) to discuss your findings and consider measures you could implement to avoid, eliminate, or minimize adverse effects. If you and the USFWS and/or NOAA Fisheries 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.

Effects from NCCW discharges and/or intakes and related activities which could pose an adverse effect include:

- *Hydrological:* NCCW discharges may induce temperature or pH changes in receiving waters. These effects will vary with the volume of NCCW discharged and the volume and condition of the receiving water. Where a discharge constitutes a minute portion of the total volume of the receiving water, adverse hydrological effects are less likely.
- *Harm:* CWISs have the potential to impinge or entrain fish or aquatic invertebrates, including endangered species and their forage species.
- *Toxicity:* In some cases, chlorine or metals in the NCCW may have adverse effects on listed species.

If endangered species issues cannot be resolved: If you cannot reach agreement with the USFWS and/or NOAA Fisheries 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.

F. Submittal of Notice of Intent

Once the ESA eligibility requirements of Parts B and C of this Appendix have been met, 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 CFR 122.21.

G. 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 non-contact cooling water discharge/intake 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.

H. Services Information

United States Fish and Wildlife Service Office:

National websites for Endangered Species Information: Endangered

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

ESA Section 7 Consultations: <https://www.fws.gov/service/esa-section-7-consultation>

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 Service 70
Commercial Street, Suite 300
Concord, NH 03301
<https://www.fws.gov/office/new-england-ecological-services>

NOAA Fisheries Greater Atlantic Regional Fisheries Office:

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

NOAA Fisheries Greater Atlantic Regional Fisheries Office
Protected Resource Division Attn: Endangered Species Coordinator
55 Great Republic Dr,
Gloucester, MA 01930

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