

APPENDIX 2

Endangered Species Act Review and Requirements

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 NCCW General Permit do not adversely affect endangered and threatened species or critical habitat. Facilities applying for permit coverage must assess the impacts of their non-contact cooling water discharges and discharge-related activities 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: 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 and maintenance.

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.

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 required in the NCCW General Permit 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 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

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.

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 species of concern in Massachusetts and New Hampshire related to the Endangered Species Act:

Massachusetts (13)

Dwarf wedgemussel (*Alasmidonta heterodon*)
 Northeastern bulrush (*Scirpus ancistrochaetus*)
 Sandplain gerardia (*Agalinis acuta*)
 Piping Plover (*Charadrius melodus*)
 Roseate Tern (*Sterna dougallii*)
 Northern Red-bellied cooter (*Pseudemys rubriventis*)
 Bog Turtle (*Glyptemys muhlenbergii*)
 Small whorled Pogonia (*Isotria medeoloides*)
 Puritan tiger beetle (*Cicindela puritana*)
 American burying beetle (*Nicrophorus americanus*)
 Northeastern beach tiger beetle (*Cicindela dorsalis*)
 Atlantic Sturgeon (*Acipenser oxyrinchus*) *
 Shortnose Sturgeon (*Acipenser brevirostrum*)*

New Hampshire (10)

Dwarf wedgemussel (*Alasmidonta heterodon*)
 Northeastern bulrush (*Scirpus ancistrochaetus*)
 Jesup's milk-vetch (*Astragalus robbinsii* var. *jesupii*)
 Piping Plover (*Charadrius melodus*)
 Roseate Tern (*Sterna dougallii*)
 Karner Blue Butterfly (*Lycaeides melissa samuelis*)
 Canada Lynx (*Lynx Canadensis*)
 Small whorled Pogonia (*Isotria medeoloides*)
 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.

Any facility seeking coverage under the NCCW General Permit must consult with the Services. 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. By terms of this permit, EPA has automatically designated 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 applicant determines and EPA concurs, that the discharge and related activities will have “no affect” on the listed species or critical habitat, or the applicant determines that the discharge and related activities are “not likely to adversely affect” listed species or critical habitat and formal or informal consultation with the Services has been concluded and results in written concurrence by the Services that the non-contact cooling water discharge and related activities are “not likely to adversely affect” an endangered or threatened species or critical habitat.

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

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 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, Piping Plover, Northern Red-bellied cooter, Bog Turtle, Small whorled Pogonia, Roseate Tern, Canada Lynx, Puritan tiger beetle, Northeastern beach tiger beetle, American burying beetle, and Karner Blue Butterfly 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 NCCW intakes, 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 NCCW discharges/intakes and related activities are "not likely to adversely affect" listed species or critical habitat (informal consultation)³.

USFWS Criterion C: Using the best scientific and commercial data available, the effect of the NCCW discharge/intake 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 NCCW discharges/intakes and related activities will have "no affect" on any federally threatened or endangered listed species or designated critical habitat³ 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 NCCW discharges/intakes 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 federally listed species or designated critical habitats within the action area of your discharge and related activities. Further

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.

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, Piping Plover, Northern Red-bellied cooter, Bog Turtle, Roseate Tern, Puritan tiger beetle, and Northeastern beach tiger beetle? (IPaC system may be used to answer this question)
- 2) Did your assessment of the NCCW discharge/intake and related activities indicate that they “may affect” or 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)? ³
- 4) Do you agree to implement all measures upon which the 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

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.

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, and/or American burying beetle and **does not contain any of the following species:** Dwarf wedgemussel, Northeastern bulrush, Jesup’s milk-vetch, Piping Plover, Northern Red-bellied cooter, Bog Turtle, Roseate Tern, Puritan tiger beetle, and Northeastern beach tiger beetle?⁵
- 2) Did the assessment of your discharge/intake and related activities indicate that there would be “no affect” on listed species or critical habitat⁶ 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 **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 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 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 NCCW discharges or surface water intakes.
- 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 and/or American burying beetle. OR a dated copy of the EPA concurrence with the operator’s

⁵ EPA has considered the effects of non-contact cooling water discharges and related activities on the Canada Lynx, Sandplain gerardia, Small whorled Pogonia, Karner Blue Butterfly and American burying beetle and determined that discharges and intakes in compliance with the NCCW general permit will have no affect 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.

determination that the NCCW discharge/intake 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 NCCW discharges, intakes, 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: 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 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 NCCW discharges, intakes, 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 minimized 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.

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 toxic effects on listed species.

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 Fishery 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. For facilities previously covered under the NCCW general permit, EPA and NMFS have reviewed available data and determined that the terms of the permit adequately prevent adverse effects or the take of juvenile and adult listed species and adverse effects on critical habitat due to continued discharges of NCCW (and surface water intake for cooling). For facilities seeking coverage under the NCCW general permit for the first time, EPA will review the information provided in the NOI and determine whether there are likely to be adverse effects.

The facility must indicate in their NOI if they have cooling water intakes in the Merrimack River (downstream of Haverhill) or the Connecticut River (Montague to Holyoke), which contain known spawning grounds for the Shortnose sturgeon, or in the Taunton or Piscataqua Rivers, which are known habitats for adult and juvenile Atlantic Sturgeon, but are not considered spawning areas for this species, based on current information. Additional BTA requirements for cooling water intakes that may be required to protect larval sturgeon from entrainment can be found in the general permit at 4.2.2. EPA's supporting documentation of listed species and critical habitat in consultation with NMFS is available on the NCCW general permit website at: <http://www.epa.gov/region1/npdes/nccwgp.html>.

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 D), 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.

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 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.

F. 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: <http://endangered.fws.gov/consultation/index.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 Office

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

National Marine Fisheries Service

Northeast Region, Protected Resource Division

Attn: Endangered Species Coordinator

One Blackburn Drive

Gloucester, MA 01930

Natural Heritage Network

The Natural Heritage Network 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. Developers, businesses, and public agencies use natural heritage information to comply with environmental laws and to improve the environmental sensitivity of economic development projects. Local governments use the information to aid in land use planning.

The Natural Heritage Network is overseen by NatureServe, the Network's parent organization, and is accessible online at:

http://www.natureserve.org/nhp/us_programs.htm, which provides websites and other access to a large number of specific biodiversity centers.

New Hampshire Natural Heritage Inventory

Department of Resources & Economic Development

172 Pembroke Street, P.O. Box 30370

Concord, NH 03302

603.271.3623

APPENDIX 2 ATTACHMENT 1

U.S. Fish and Wildlife IPaC system instructions

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:

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

- a. Indicate the action area⁷ for the facility by either:
 - a. Drawing the boundary on the map.
 - b. uploading a shapefile.
 - c. Selecting the “State/county list” button and choosing your facility location.
 Select “Continue”.
- b. Select your project type from the dropdown menu on the Activities step. If you do not have a specific activity of concern, select “**Other**”. Select “Continue” to generate a preliminary species list.
- c. On the “Trusted Resources List” step, you will be provided a list of natural resources of concern, which will include an Endangered Species Act Species list. On this page, select the “Request an Official Species List” and follow the directions indicated. You will be provided with a preliminary species list in pdf format for your facility. Retain a copy of this letter 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 NCCW 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 path or immediate area through which or over which the discharge flows to the receiving water, including areas in the receiving water downstream from the point of discharge.
- Areas that may be impacted by construction, implementation, sampling, or repair activities of cooling water intake structures or discharge outfalls. 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 the outfall pipe, the nature and quantity of the discharges, and the type of receiving waters, among other factors.