



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Alabama Ecological Services Field Office
1208 B Main Street
Daphne, AL 36526-4419
Phone: (251) 441-5181 Fax: (251) 441-6222

In Reply Refer To:

March 30, 2017

Consultation Code: 04EA1000-2017-SLI-0530

Event Code: 04EA1000-2017-E-01836

Project Name: Browns Ferry Nuclear Plant, Units 1, 2, and 3, Extended Power Uprate

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. Please note that new information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

Note that due to the volume of emails received by our office, we cannot accept project consultation requests by email.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Also note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the process and consultation under the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/pdf/management/usfwscommunicationtowerguidance.pdf>

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

We can be reached at:

US Fish and Wildlife Service

1208 Main Street

Daphne, AL 36526

Attachment(s):

- Official Species List
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Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Alabama Ecological Services Field Office

1208 B Main Street

Daphne, AL 36526-4419

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Project Summary

Consultation Code: 04EA1000-2017-SLI-0530

Event Code: 04EA1000-2017-E-01836

Project Name: Browns Ferry Nuclear Plant, Units 1, 2, and 3, Extended Power Uprate

Project Type: POWER GENERATION

Project Description: The U.S. Nuclear Regulatory Commission (NRC) is reviewing an application from the Tennessee Valley Authority (TVA) requesting issuance of amendments to the existing Browns Ferry Nuclear Plant operating licenses that would increase the maximum licensed thermal power level for each of the three reactors to 3,952 MWt (an increase of approximately 15 percent above the current licensed thermal power level).

The uprate would require modifications and upgrades to existing balance-of-plant equipment, all of which would occur within industrial areas of the site. No changes to existing onsite land uses or disturbance of any natural areas or habitats are expected. Following the necessary equipment modifications and upgrades, operation of Browns Ferry at the uprate power level would increase the steam flow to the plant's steam turbines, which would in turn increase the amount of waste heat that must be dissipated. TVA would increase the use of its cooling towers to dissipate some of the additional heat. The remaining heat would be discharged to Wheeler Reservoir in accordance with the limitations set forth in TVA's National Pollutant Discharge Elimination System (NPDES) permit. For years with warm summers, TVA predicts that the temperature of water exiting the diffusers and entering Wheeler Reservoir (assuming all three Browns Ferry units are operating at the full uprate power level) would be 2.6 °F (1.4 °C) warmer on average than current operations. The river temperature at the National Pollutant Discharge Elimination System (NPDES) compliance depth at the downstream end of the mixing zone would be 0.6 °F (0.3 °C) warmer on average. TVA predicts that it would operate the cooling towers in helper mode an additional 22 days per year on average (88 days total) and that the most extreme years could result in an additional 39 days per year of cooling tower helper mode operation (121 days total).

The uprate would also require several upgrades to the transmission system and the Browns Ferry main generator excitation system to ensure transmission system stability at EPU power levels. However, TVA (NRC's applicant), as a federal entity, would be responsible for consulting with the U.S. Fish and Wildlife Service separately prior to implementing

those upgrades because the NRC has no authority over or permitting role related to power transmission systems.

The NRC issued a draft Environmental Assessment related to the proposed uprate on December 1, 2017, in the Federal Register (81 FR 86732).

Project Location:

Approximate location of the project can be viewed in Google Maps:

<https://www.google.com/maps/place/34.70304044306785N87.111589758369W>



Counties: Limestone, AL

Endangered Species Act Species

There is a total of 6 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
Gray Bat (<i>Myotis grisescens</i>) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Indiana Bat (<i>Myotis sodalis</i>) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat (<i>Myotis septentrionalis</i>) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Clams

NAME	STATUS
Pink Mucket (pearlymussel) (<i>Lampsilis abrupta</i>) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7829	Endangered
Rough Pigtoe (<i>Pleurobema plenum</i>) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6894	Endangered
Snuffbox Mussel (<i>Epioblasma triquetra</i>) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4135	Endangered

Critical habitats

There are no critical habitats within your project area.
