



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Alabama Ecological Services Field Office  
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DAPHNE, AL 36526  
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Consultation Code: 04EA1000-2016-SLI-0106

February 01, 2016

Event Code: 04EA1000-2016-E-00921

Project Name: Browns Ferry Nuclear Plant - Proposed Extended Power Uprate

Subject: Updated 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. 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.*).

The Alabama Ecological Services Field Office will provide an official species list for projects within the State upon receipt of a project description and map location, received at the following mail address:

US Fish and Wildlife Service

1208 Main Street

Daphne, AL 36526

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

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. 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. Please 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. This verification can be completed formally or informally as desired. 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 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](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/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

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.

Attachment

Preliminary



United States Department of Interior  
Fish and Wildlife Service

Project name: Browns Ferry Nuclear Plant - Proposed Extended Power Uprate

## Preliminary Species list

### Provided by:

Alabama Ecological Services Field Office  
1208 B MAIN STREET  
DAPHNE, AL 36526  
(251) 441-5181

**Consultation Code:** 04EA1000-2016-SLI-0106

**Event Code:** 04EA1000-2016-E-00921

**Project Type:** POWER GENERATION

**Project Name:** Browns Ferry Nuclear Plant - Proposed Extended Power Uprate

**Project Description:** NRC is reviewing an application from Tennessee Valley Authority requesting issuance of amendments to the 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 14.3 percent above the current licensed thermal power level).

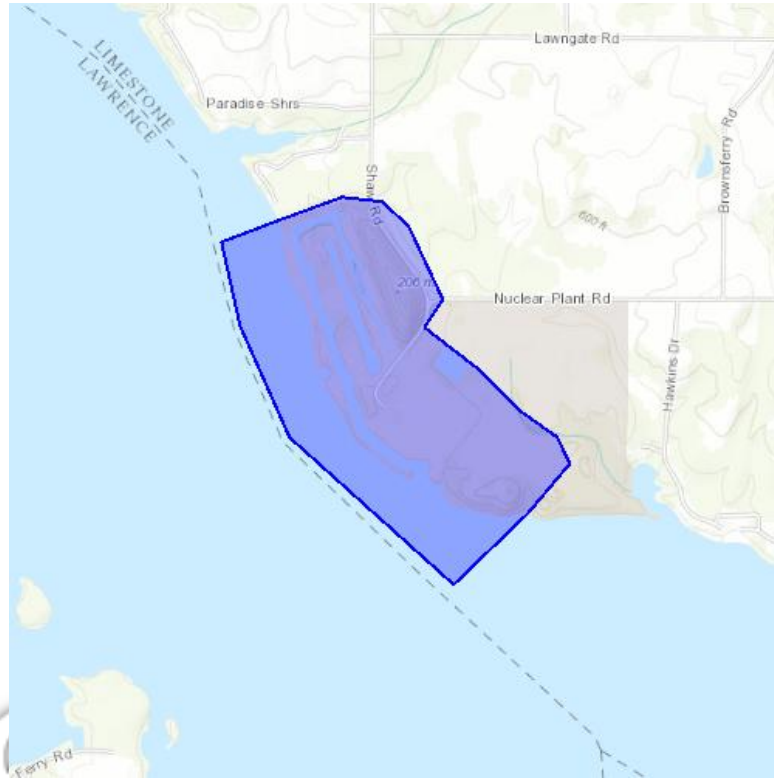
**Please Note:** The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



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### Project Location Map:



**Project Coordinates:** MULTIPOLYGON (((-87.12755498854676 34.71563762420765, -87.12322439969284 34.71698444781209, -87.12041559250792 34.71666379438044, -87.11862087249756 34.715349066354854, -87.11628026794642 34.7112438914227, -87.11752867646283 34.709640499464925, -87.11386113020126 34.70726728223421, -87.11101326858625 34.70495785452516, -87.10843834793195 34.70351451627673, -87.10761909547728 34.70200694200368, -87.11050600890303 34.69918435476035, -87.11553869216003 34.695239275029394, -87.12673573347274 34.70345030547559, -87.13013377273455 34.70974280732633, -87.13138218125096 34.71447950794253, -87.12755498854676 34.71563762420765)))

**Project Counties:** Lawrence, AL | Limestone, AL



## Endangered Species Act Species List

There are a total of 31 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. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Amphibians	Status	Has Critical Habitat	Condition(s)
Black Warrior Waterdog ( <i>Necturus alabamensis</i> )	Candidate		
<b>Clams</b>			
Alabama moccasinshell ( <i>Medionidus acutissimus</i> )	Threatened	Final designated	
Cracking pearlymussel ( <i>Hemistena lata</i> ) Population: Wherever found; Except where listed as Experimental Populations	Endangered		
Dark pigtoe ( <i>Pleurobema furvum</i> )	Endangered	Final designated	
fanshell ( <i>Cyprogenia stegaria</i> )	Endangered		
Littlewing pearlymussel ( <i>Pegias fabula</i> ) Population: Entire	Endangered		
Orangenacre mucket ( <i>Lampsilis perovalis</i> )	Threatened	Final designated	
Ovate clubshell ( <i>Pleurobema perovatum</i> )	Endangered	Final designated	



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Pink mucket ( <i>Lampsilis abrupta</i> ) Population: Entire	Endangered		
Rough pigtoe ( <i>Pleurobema plenum</i> )	Endangered		
Sheepnose Mussel ( <i>Plethobasus cyphus</i> )	Endangered		
Snuffbox mussel ( <i>Epioblasma triquetra</i> )	Endangered		
Spectaclecase (mussel) ( <i>Cumberlandia monodonta</i> )	Endangered		
Triangular Kidneyshell ( <i>Ptychobranthus greenii</i> )	Endangered	Final designated	
<b>Ferns and Allies</b>			
Alabama streak-sorus fern ( <i>Thelypteris pilosa</i> var. <i>alabamensis</i> )	Threatened		
<b>Fishes</b>			
Boulder darter ( <i>Etheostoma wapiti</i> ) Population: Entire	Endangered		
Rush Darter ( <i>Etheostoma phytophilum</i> ) Population: Entire	Endangered	Final designated	
Slackwater darter ( <i>Etheostoma boschungii</i> ) Population: Entire	Threatened	Final designated	
Spring Pygmy sunfish ( <i>Elassoma alabamae</i> )	Threatened		
<b>Flowering Plants</b>			
Fleshy-fruit gladeceess	Endangered	Final designated	



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<i>(Leavenworthia crassa)</i>			
Kral's water-plantain ( <i>Sagittaria secundifolia</i> )	Threatened		
Leafy prairie-clover ( <i>Dalea foliosa</i> )	Endangered		
lyrate bladderpod ( <i>Lesquerella lyrata</i> )	Threatened		
Price's potato-bean ( <i>Apios priceana</i> )	Threatened		
<b>Mammals</b>			
Gray bat ( <i>Myotis grisescens</i> ) Population: Entire	Endangered		
Indiana bat ( <i>Myotis sodalis</i> ) Population: Entire	Endangered		
Northern long-eared Bat ( <i>Myotis septentrionalis</i> )	Threatened		
<b>Reptiles</b>			
Flattened Musk turtle ( <i>Sternotherus depressus</i> ) Population: Black Warrior R. system upstream from Bankhead Dam	Threatened		
<b>Snails</b>			
Anthony's riversnail ( <i>Athearnia anthonyi</i> ) Population: Wherever found; Except where listed as Experimental Populations	Endangered		
Armored snail ( <i>Pyrgulopsis (=marstonia) pachyta</i> ) Population: Entire	Endangered		
Slender campeloma ( <i>Campeloma</i>	Endangered		





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<i>decampi</i> Population: Entire			
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## **Critical habitats that lie within your project area**

There are no critical habitats within your project area.

Preliminary