

**ENVIRONMENTAL ASSESSMENT
FOR SURRENDER OF PROJECT LICENSE**

Jackson Bluff Hydroelectric Project—FERC Project No. 2891-017

Florida



Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Administration and Compliance
888 First Street, NE
Washington, D.C. 20426

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Jackson Bluff Hydroelectric Project FERC Project No. 2891-017 — Florida

1.0 INTRODUCTION

1.1 APPLICATION

Application Type: Application for Surrender of License
Date Filed: June 5, 2017, August 8, 2017, and June 7, 2018
Applicant's Name: City of Tallahassee
Waterbody: Ochlockonee River
County and State: Leon, Liberty, and Gadsden counties, Florida
Federal Lands: None

1.2 PURPOSE OF ACTION

The City of Tallahassee (City or licensee), licensee for the 10,900 kilowatt (kW) Jackson Bluff Hydroelectric Project No. 2891, filed on June 5, 2017, and supplemented on August 8, 2017¹ and June 7, 2018, an application to surrender the project license. The licensee has determined that lower costs of competing renewable resources, as well as the cost of obtaining a new license, make it uneconomical to continue to operate the project.

¹ This supplement was filed in response to Commission staff's request for additional information by letter dated June 26, 2017.

The Commission issued a 40-year license for the project on July 14, 1982,² which was amended on September 22, 1983.³ The current license expires on June 30, 2022. As required by 18 CFR § 5.5 of the Commission's regulations, a licensee must file a Notice of Intent (NOI) to relicense a project between 5 and 5.5 years before the license expiration date. The deadline for filing the NOI for the Jackson Bluff Project was June 30, 2017. Due to economic considerations, the licensee did not file an NOI as required by the Commission's regulations, but filed a surrender application.

This environmental assessment (EA) is being prepared to satisfy responsibilities under the National Environmental Policy Act (NEPA). In this EA, staff examine the environmental effects associated with the licensee's proposed surrender (proposed action), any identified action alternatives, and the no-action alternative.

1.3 STATUTORY AND REGULATORY REQUIREMENTS

A license surrender for the Jackson Bluff Hydroelectric Project is subject to numerous requirements under the Federal Power Act (FPA) and other applicable statutes as described below.

1.3.1 Clean Water Act

Under section 401 of the federal Clean Water Act (CWA), an applicant for a federal license or permit to conduct any activity which may result in any discharge into navigable waters must obtain a water quality certification from the appropriate state pollution control agency verifying that the activity would not violate water quality standards.⁴ The licensee's proposed surrender of the project will not result in a significant change in discharge into navigable waters. Therefore water quality certification is not required.

1.3.2 Endangered Species Act

Section 7 of the Endangered Species Act (ESA) requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally-listed threatened or endangered species or result in the destruction or adverse modification of their critical habitat.⁵

² *City of Tallahassee, Florida*, 20 FERC ¶ 62,053 (1982).

³ *City of Tallahassee, Florida*, 24 FERC ¶ 62,342 (1983).

⁴ 33 U.S.C. § 1341(a)(1) (2012).

⁵ 16 U.S.C. § 1536 (2012).

In comments filed on July 27, 2017, in response to the Commission’s public notice of the application, the Department of Interior (Interior) states that the following listed aquatic species and their critical habitat may be directly affected by project operation: the threatened Gulf Sturgeon (*Acipenser oxyrinchus desotoi*), and four freshwater mussels, threatened purple bankclimber (*Elliptoideus sloatianus*), endangered shinyrayed pocketbook (*Lampsilis subangulata*), endangered Ochlockonee moccasin shell (*Medionidus simpsonianus*), and endangered oval pigtoe (*Pleurobema pyriforme*). Of particular concern is the only remaining documented population of the Ochlockonee moccasinshell, found downstream of the dam. In supplemental comments, filed June 7, 2018, the FWS indicates their concerns regarding this project surrender have been addressed.

NMFS in comments included with the application, dated April 28, 2017, also identified the threatened Gulf Sturgeon (*Acipenser oxyrinchus desotoi*), as a species occurring in the Ochlocknee River below Lake Talquin.

Based on our analysis in section 3.2.4-Threatened and Endangered Species, we conclude that the proposed action would have no effect on these federally-listed species or their critical habitat.

1.3.3 National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) requires that every federal agency “take into account” how each of its undertakings could affect historic properties.⁶ Historic properties are districts, sites, buildings, structures, traditional cultural properties, and objects significant in American history, architecture, engineering, and culture that are eligible for inclusion in the National Register of Historic Places (National Register).

In a letter dated May 16, 2017, and included with the licensee’s surrender application, the Florida State Historic Preservation Officer (Florida SHPO) determined there would be no effect on historic properties resulting from surrender of the project. As discussed in section 3.2.7, we agree and find the proposed surrender would have no effect on cultural or historic resources.

1.4 PRE-FILING CONSULTATION AND PUBLIC NOTICE

The Commission’s regulations require that licensees consult with appropriate resource agencies, tribes, and other entities before filing an application for surrender of

⁶ 54 U.S.C. § 306108 (2012); 36 C.F.R. Part 800 (2017).

license. Pre-filing consultation must be complete and documented according to the Commission's regulations.

1.4.1 Pre-Filing Consultation

On March 22, 2017, the licensee sent letters to various federal, state, and local agencies regarding its plans to surrender the license. The licensee received responses from the U.S. Fish and Wildlife Service (FWS), the National Marine Fisheries Service (NMFS), the Florida Fish and Wildlife Conservation Commission (Florida FWCC), Florida Public Service Commission (Florida PSC), Florida SHPO, Northwest Florida Water Management District, and Leon County. These letters were included with the licensee's application filed on June 5, 2017.

1.4.2 Comments, Public Notice, and Interventions

The Commission issued a public notice of the surrender application on June 27, 2017. The deadline to file protests, comments, and motions to intervene was July 27, 2017.

In response to the notice, timely motions to intervene were filed by the Department of Interior (Interior) and Enel Green Power of North America (Enel Green Power), on July 26 and 27, 2017, respectively. Comments were included with Enel Green Power's Motion to Intervene and separate comments were filed on July 27, 2017, by Interior. Interior's comments reiterated FWS's initial concerns on the surrender application. Additional comments were filed by the Seminole Tribe of Florida-Tribal Historic Preservation Officer (Seminole THPO) and Judi Corn Mahorner (private citizen), on July 3 and 25, 2017, respectively. On August 9, 2017, after the comment period ended, the licensee filed a response to comments made by Enel Green Power and Interior. In additional correspondence dated June 6, 2018,⁷ the FWS says their initial concerns have been adequately addressed regarding operation of the project post-surrender.

Unresolved comments included with the application or filed in response to the Commission's notice that relate to environmental resources are addressed under the appropriate resource headings in section 3.2 of this EA. Comments that are procedural in nature will be addressed in the Commission's order in this proceeding.

⁷ Filed with the Commission on June 7, 2018.

2.0 PROPOSED ACTION AND NO-ACTION ALTERNATIVES

2.1. PROPOSED ACTION

The licensee proposes to surrender the project and decommission its power generating capability at the project. First, the licensee proposes to disconnect the generators from the grid by disconnecting cables on the generator side of the circuit breakers. This would create a break in the circuit preventing any electricity from flowing to the local substation. Secondly, the licensee proposes to close the wicket gates and disable the controls for the wicket gates. Lastly, the licensee plans to install a steel collar around the hydraulic piston rod that controls the wicket gates position. The collar would consist of two half cylinders, welded together at a length that would render the hydraulic control system mechanically inoperable.

No modifications to the existing dam, buildings, or structures are planned as part of the surrender and no ground disturbance is proposed. All decommissioning work would occur within the powerhouse.

In the application, the licensee says its lease expires automatically when the dam ceases to be used as a hydroelectric generating facility, at which point the Florida Department of Environmental Protection (Florida DEP) takes over responsibility for operating the dam and reservoir.

2.2 OTHER ACTION ALTERNATIVES

No reasonable action alternatives have been identified by Commission staff.

2.3 NO-ACTION ALTERNATIVE

Under no-action, the project would remain under the Commission's jurisdiction and the licensee would be required to continue to operate and maintain the project, complying with the license requirements, until the license expires in 2022. Under no-action, environmental resources in the project area would remain the same as they are described in the Affected Environment in section 3.2 of this EA.

2.3.1 Existing Project Facilities⁸

The project is located on the Ochlockonee River, in Leon, Liberty and Gadsden counties, Florida (Figure 1).

⁸ As described in the application filed on June 5, 2017.

Project works consist of: (1) a reservoir (Lake Talquin) with a storage capacity of 150,000 acre-feet and a surface area of 10,200 acres at an elevation of 68.5 feet mean sea level (msl); (2) an earth embankment dam approximately 4,575 feet-long with a maximum height of approximately 60 feet; (3) a concrete ogee spillway approximately 825 feet-long; (4) a gated concrete spillway, approximately 196 feet-long, with seven motor-operated floodgates; (5) a 132-foot-long by 33-foot-long powerhouse which consists of a brick superstructure and a reinforced concrete substructure containing three units having a total installed capacity of 10,900 kW; (4) transmission facilities consisting of three 200-foot-long, 4.16-kV generator leads, and two three-phase 4.16/69 kV 7.5 MVA step-up transformers; and (5) appurtenant facilities.

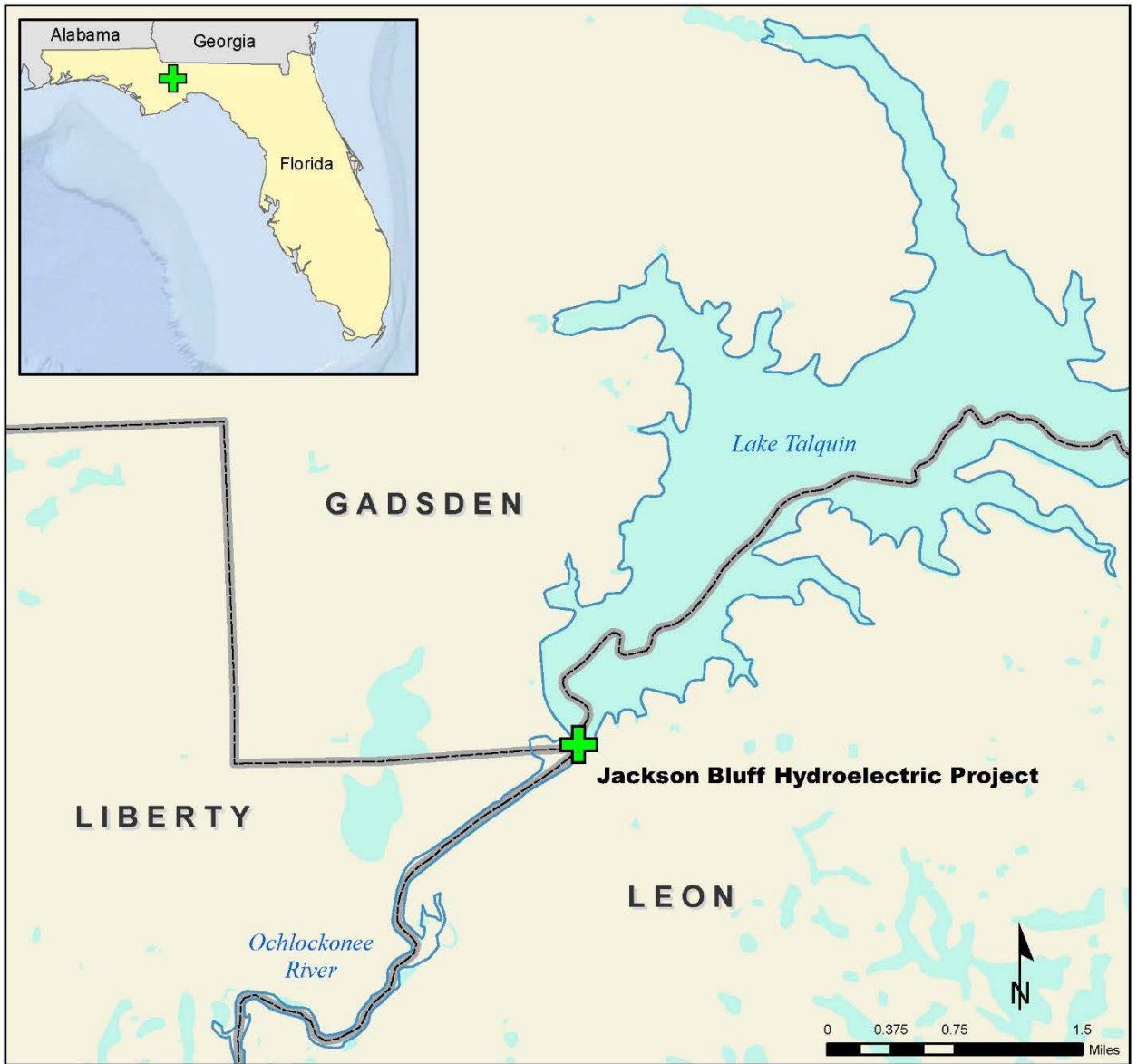


Figure 1. Location of the Jackson Bluff Hydroelectric Project (Source: Application).

2.3.2 Existing Project Operation

The project is operated run of river, as required by article 34 of the license.⁹ Under normal operations, the reservoir is maintained within one foot of the normal pool elevation of 68.5 feet mean sea level (msl). The project reservoir, Lake Talquin, is part of Lake Talquin State Park and is managed by Florida DEP for the primary purpose of public recreation.

This mode of operation is consistent with Condition 11 of the Sublease Agreement between the licensee and the Trust Fund. The original 1982 Sublease Agreement was with the Florida DNR. In 2012, the Florida DNR assigned the 1982 Sublease Agreement to the Trust Fund to eliminate the role of the Florida DNR as an intermediate party. This did not alter any of the operational provisions of the agreement. The Sublease Agreement was filed with the Commission on March 6, 2017, as documentation of compliance with Article 5 of the license.

2.3.3 Project Boundary

The project boundary encompasses project features including, but not limited to, the dam, spillway, powerhouse, and project reservoir. The State of Florida owns much of the land within the project boundary and a large portion of the property is managed for public recreation and conservation, within Lake Talquin State Forest and Lake Talquin State Park. The buffer zone of Lake Talquin was developed by the State of Florida prior to the issuance of the current license. This buffer zone extends from the normal reservoir elevation of 68.5 feet mean sea level msl to 70.0 feet msl, which also denotes the project boundary.

3.0 ENVIRONMENTAL ANALYSIS¹⁰

3.1 GENERAL SETTING

The project is located in northwest Florida on the Ochlockonee River in Leon, Liberty, and Gadsden counties approximately 22 miles west of Tallahassee, Florida.

Water Resources

The Ochlockonee River basin originates in southwest Georgia and northern Florida, and drains approximately 6,330 square miles. Approximately 1,460 square miles

⁹ *City of Tallahassee, Florida*, 24 FERC ¶ 62,342 (1983).

¹⁰ Unless otherwise specified, the information presented in this section was obtained from the licensee's application, filed on June 5, 2017 (City of Tallahassee, 2017a), and supplemented on August 8, 2017 (City of Tallahassee, 2017b).

of the basin are in Georgia. The basin lies within the Coastal Plain physiographic province, which extends throughout the southeastern United States.

The headwaters of the basin are in Worth County, Georgia, and the river flows in a southwesterly direction into Florida and empties into the Gulf of Mexico. Primary tributaries of the Ochlockonee River are the Little Ochlockonee River, Tired Creek, Little River, Telogia Creek and Crooked River (Georgia River Network 2018).

Aquatic Resources

According to the Florida FWCC, Lake Talquin is nationally recognized for its black crappie fishery (Florida FWCC 2017). Other fish species found in Lake Talquin include largemouth bass, bluegill, redear sunfish, white bass, and striped bass (Florida FWCC 2017).

In its surrender application, the licensee reports the following fish being present downstream of the dam: longnose gar, shad, shiners, catfishes, brook silverside, largemouth bass, redbreast sunfish, spotted sunfish, blackband darter, striped mullet, hogchoker, and American eel.

In their comments on the application, the NMFS and FWS, state a number of mussels are found downstream of the dam, as well as several turtle species, Alabama shad and Gulf sturgeon. Several of these aquatic species are listed for protection under ESA and are described elsewhere in this section.

Terrestrial and Wildlife Resources

Much of the land surrounding Lake Talquin comprises Lake Talquin State Forest. The forest totals 19,347 acres, and is primarily located along the upper-third of the lake but smaller segments are found in other areas along the shoreline. Lake Talquin State Park is located on the lake's southern shore in the upper reaches of the reservoir and near the dam, and is managed by the Florida DEP's, Division of Recreation and Parks (Florida DRP 2017). According to the Florida Department of Agriculture and Consumer Services (Florida DACS 2017), vegetation in the project area is dominated by upland pine and hardwood forests.

Wildlife typically found in the project area include red-shouldered hawk, bobcat, coyote, osprey, white-tailed deer, fox squirrel, turkey, and mourning dove. Bald eagles and gopher tortoise are also found throughout the state forest (Florida DACS 2017). Plant and animal species listed for protection under ESA are described below.

Threatened and Endangered Species

A review of the FWS’s Endangered Species Database¹¹ identified a number of species listed for protection under ESA in Leon, Liberty, and Gadsden counties (Table 1).

Table 1. Listed threatened, endangered, and other species of concern occurring or potentially occurring in the project vicinity (Source: Commission staff).

SPECIES	Scientific Name	County Found	FWS/NMFS ¹	State ²
BIRDS (3)				
Red cockaded woodpecker	<i>Picoides borealis</i>	Leon, Liberty, Gadsden	E	SGCN
Wood stork	<i>Mycteria americana</i>	Leon, Liberty, Gadsden	T	SGCN
Piping plover	<i>Charadrius melodus</i>	Leon, Liberty	T	SGCN
MAMMALS (2)				
West Indian manatee	<i>Trichechus manatus</i>	Leon	T	SGCN
Gray bat	<i>Myotis grisescens</i>	Leon	E	SGCN
CLAMS (12)				
Apalachicola floater	<i>Anodonta heardi</i>	Leon, Liberty ³	Not listed	SGCN
Inflated spike	<i>Elliptio purpurella</i>	Leon, Liberty ³	Under review	SGCN
Round pearlshell	<i>Glebulina rotundata</i>	Leon, Liberty ³	Not listed	SGCN
Florida sandshell	<i>Lampsilis floridensis</i>	Leon, Liberty ³	Not listed	SGCN
Sculptured pigtoe	<i>Quadrula infucata</i>	Leon, Liberty ³	Not listed	SGCN
Florida floater	<i>Utterbackia peggiae</i>	Leon, Liberty ³	Not listed	SGCN
Purple bankclimber	<i>Elliptoides sloatianus</i>	Leon, Liberty, Gadsden	T	SGCN
Oval pigtoe	<i>Pleurobema pyriforme</i>	Leon, Liberty, Gadsden	E	SGCN
Shinyrayed pocketbook	<i>Lampsilis subangulata</i>	Leon, Liberty, Gadsden	E	SGCN
Ochlockonee moccasinshell	<i>Medionidus simpsonianus</i>	Leon, Gadsden	E	SGCN
Fat threeridge	<i>Amblema neislerii</i>	Liberty, Gadsden	E	SGCN
Gulf moccasinshell	<i>Medionidus penicillatus</i>	Liberty, Gadsden	E	SGCN
PLANTS (10)				
Maui remya	<i>Remya mauiensis</i>	Leon, Gadsden	E	
American chaffseed	<i>Chwalbea americana</i>	Leon, Gadsden	E	
Florida torreyia	<i>Torreya taxifolia</i>	Liberty, Gadsden	E	
Apalachicola rosemary	<i>Conradina glabra</i>	Liberty	E	
Harper’s beauty	<i>Harperocallis flava</i>	Liberty	E	
White birds in a nest	<i>Macbridea alba</i>	Liberty	T	
Chapman rhododendron	<i>Rhododendron chapmanii</i>	Liberty, Gadsden	E	
Godfrey’s butterwort	<i>Pinguicula ionantha</i>	Liberty	T	
Florida skullcap	<i>Scutellaria floridana</i>	Liberty	T	
Fringed campion	<i>Silene polypetala</i>	Gadsden	E	
FISH (3)				
Atlantic sturgeon (Gulf)	<i>Acipenser oxyrinchus desotoi</i>	Leon, Liberty, Gadsden	T	SGCN
Alabama shad	<i>Alosa alabamiae</i>	Leon, Liberty ³	Not listed	SGCN
American eel	<i>Anguilla rostrata</i>	Leon, Liberty ³	Not listed	SGCN
REPTILES (4)				
Barbour’s map turtle	<i>Graptemys barbouri</i>	Leon, Liberty ³	Under review	SGCN
Alligator snapping turtle	<i>Macrolemys temmincki</i>	Leon ³	Under review	SGCN

¹¹ Found at <https://www.fws.gov/endangered/>. Accessed online on March 14, 2018.

SPECIES	Scientific Name	County Found	FWS/NMFS ¹	State ²
Eastern indigo snake	<i>Drymarchon corais couperi</i>	Leon, Liberty, Gadsden	T	SGCN
Gopher tortoise	<i>Gopherus polyphemus</i>	Leon, Liberty, Gadsden	C	SGCN
AMPHIBIANS (2)				
Frosted flatwoods salamander	<i>Ambystoma cingulatum</i>	Liberty	T	SGCN
Striped newt	<i>Notophthalmus perstriatus</i>	Leon	C	SGCN

¹ E=Listed as Endangered, T=Listed as Threatened, C=Candidate for federal listing.

² Designated as a Florida Species of Greatest Conservation Need (Florida FWCC, 2018).

³ The FWS's letter dated April 18, 2017, identified these species as being in the Ochlockonee drainage downstream of the dam but did not identify a particular county. The Ochlockonee River downstream of the dam follows the borders of Leon and Liberty counties, therefore species occurring in either county are listed here.

Resource agency comments filed in response to the notice indicate that the threatened Gulf Sturgeon (*Acipenser oxyrinchus desotoi*), and four freshwater mussels, threatened purple bankclimber (*Elliptoideus sloatianus*), endangered shinyrayed pocketbook (*Lampsilis subangulata*), endangered Ochlockonee moccasin shell (*Medionidus simpsonianus*), and endangered oval pigtoe (*Pleurobema pyriforme*), are known to occur in the project area. Of particular concern is the only remaining documented population of the Ochlockonee moccasinshell, found downstream of the dam.

Recreational Resources

There are no license-required recreation facilities at the project. However, a large number of recreational facilities exist in Lake Talquin State Forest and Lake Talquin State Park. These facilities provide opportunities for camping and fishing, as well as numerous trails for hiking, horseback riding, and biking. A number of boat ramps exist around the lake, as well as a nature boardwalk in Lake Talquin State Park.

Land Use and Aesthetic Resources

As discussed in section 2.3.3 of this EA, the State of Florida owns much of the land within the project boundary. A large portion of the land surrounding the reservoir makes up Lake Talquin State Forest and is managed by the State of Florida for public recreation and conservation, as described above. There are a limited number of private parcels along the shoreline as well.

The Resource Management Plan for Lake Talquin State Forest (State Forest Management Plan) was last revised in 2011 (Florida DACS 2011). Principal management goals of the forest include habitat restoration and improvement; provide public access and recreational opportunities, hydrological preservation and restoration; sustainable forest management; invasive weed control, capital facilities and infrastructure; protect cultural and historical resources; and maintain, enhance, and restore imperiled species habitat (Florida DACS 2011).

The licensee allows for non-project uses within the buffer zone (identified as up to the contour of elevation 70) provided the uses do not endanger one's health and are compatible with the overall recreational use of the area. The non-project use of project land program is administered by the State of Florida for the licensee.

Cultural and Historic Resources

The original Jackson Bluff Project (then Project No. 682) was licensed to the West Florida Power Corporation on February 23, 1927, for a period of 50 years.¹² The dam was constructed in 1927 (Florida DEP 2017) and construction of the powerhouse followed in 1929 (City of Tallahassee 2015). By order issued December 27, 1935, the Commission authorized the transfer of the project to the Florida Power Corporation.¹³ On June 26, 1970, the original project license was surrendered.¹⁴ As part of the surrender of the project, the Florida Power Corporation donated approximately 20,000 acres of land, as well the dam and powerhouse, to the State of Florida for the purposes of providing recreation, and other public uses, at Lake Talquin.

The Commission then issued a new license for the project to the current licensee, on July 14, 1982 for the new Jackson Bluff Dam Project No. 2891.¹⁵ The existing units were installed in 1986 (City of Tallahassee 2015).

Because the dam and powerhouse are over 50 years old, they are eligible for listing on the National Register of Historic Places. No other cultural or historical resources have been identified by Commission staff.

3.2 PROPOSED ACTION

In this section, we discuss the effect of the proposed action on environmental resources. For each resource, we first describe the affected environment, which is the existing condition and baseline against which we measure effects. We then discuss and analyze the site-specific environmental issues and address any comments regarding the specific environmental resource.

¹² 7 FPC Annual Report 95 (1927).

¹³ See 1 FPC 390 (1937).

¹⁴ *Florida Power Corporation*, 43 FPC 949-950 (1970).

¹⁵ *City of Tallahassee, Florida*, 20 FERC ¶ 62,053 (1982).

3.2.1 Water Resources

3.2.1.1 Affected Environment

The U.S. Geological Survey (UGGS) Gage No. 02330000 (Ochlockonee River near Bloxham, Florida) is approximately 0.5 miles downstream of the project. The drainage area for the gage is 1,700 square miles. The annual mean flow at this gage is 1,660 cubic feet per second (cfs) for the period 1926-2016. The highest recorded annual mean flow was 4,516 cfs in 1948, and the lowest recorded annual mean flow was 314 cfs in 1955. In general, higher flows are observed from December through April, with lower flows from May through November (Table 2).

Table 1. Monthly average flows (in cfs) at USGS Gage No. 02330000 (Ochlockonee River near Bloxham, Florida) from 2007-2016 (source: Commission staff).

Year	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec
2007	1,571	2,032	892.5	232.6	137.8	89.1	79.2	76.3	72.7	272.5	94.1	383.4
2008	963.8	4,623	3,945	2,220	327.0	144.1	371.4	6,439	1,870	400.5	1,313	2,550
2009	941.3	1,217	1,691	11,150	1,073	1,137	481.4	904.5	717.7	582.5	582.1	3,293
2010	3,845	4,637	3,312	1,255	3,088	716.2	718.2	461.3	236.3	184.0	182.6	261.1
2011	568.3	1,211	883.7	1,088	177.1	67.7	78.8	221.4	97.0	79.2	72.3	128.7
2012	360.4	523.7	1,823	289.7	97.8	393.7	128.9	1,469	305.4	252.0	72.1	431.4
2013	562.6	4,377	6,224	2,708	865.3	675.0	3,924	4,117	1,610	429.5	439.8	1,021
2014	2,013	2,221	5,484	6,544	3,623	895.9	421.9	245.3	432.1	558.5	707.6	4,875
2015	4,830	3,121	2,883	2,883	785.1	441.0	620.8	526.0	198.6	152.5	652.1	736.3
2016	2,235	2,814	2,627	2,627	733.7	1,130	614.9	897.0	1,254	229.5	107.8	980.6
Avg.	1,790	2,680	2,980	2,980	1,090	569	744	1,540	679	314	422	1,470

Under normal operations, Lake Talquin is at an elevation of 68.5 feet msl and has a surface area of approximately 10,200 acres, a gross volume of about 150,000 acre-feet, and a length of about 14.5 miles. It is designated as an Outstanding Florida Water by the Florida DEP making it worthy of special protection because of its natural attributes. In general, water quality at the project is considered good. Although in recent listings of impaired lakes of Florida, Lake Talquin is identified as impaired for Dissolved Oxygen (DO) and nutrients (Florida DEP, 2016) as well as chlorophyll-a (Leon County, 2018).

Article 34 of the project license requires the licensee to operate the project in an instantaneous run-of-river mode and minimize fluctuations of the reservoir. At the normal maximum reservoir elevation of 68.5 msl, water released through the powerhouse is drawn from Lake Talquin at depths of up to 30 feet. Alternatively, water released from the spillway gates, with a spillway crest elevation of 52.0 msl, is released from the upper 16 feet of the reservoir.

3.2.1.2 Environmental Effects

Lake Talquin water levels and downstream flows would be managed by the Florida DEP upon project surrender. The current lease agreement between the licensee and the Trust Fund, discussed in section 2.3.2 of this EA, includes specific provisions for maintaining water levels consistent with the project license. Since the Florida DEP would continue to operate the project dam and spillway gates adhering to these provisions, we expect no effect on water levels in Lake Talquin or in the flow regime downstream of the dam.

NMFS and the Florida FWCC recommend a minimum flow of 150 cfs be released from the dam if the project is surrendered. Establishing such a minimum flow release would be a significant change from the existing run-of-river operation. Flows may fall below the recommended 150 cfs at times, particularly during the summer months, negatively impacting lake levels. In addition, the project would cease to be under the Commission's jurisdiction after surrender and Commission staff would have no means to enforce such a minimum flow requirement.

In its comments included with the application, Leon County expresses concern that surrender of the project may affect the Total Maximum Daily Load (TMDL) for nutrients and DO being developed for Lake Talquin by the Environmental Protection Agency and the Florida DEP. Under section 303(d) of the CWA, states are required to develop lists of impaired waters found in each state. These impaired waters are those where control methods are not enough to meet state water quality standards. The CWA requires that states establish priority rankings for these impaired waters and develop TMDLs for impaired water bodies. A TMDL is a calculation of the maximum amount of pollutant that can be present in a waterbody and still meet water quality standards. This calculation is based on the natural presence of any pollutant, as well as calculations of the load of a pollutant entering a waterbody, from point and non-point sources. Since we do not anticipate any changes to the flow regime or water levels in Lake Talquin, these calculations of TMDLs can be made whether the project is surrendered or not. Therefore, the proposed surrender would not affect the ongoing effort to establish TMDLs for nutrients and DO in Lake Talquin.

3.2.2 Aquatic Resources

3.2.2.1 Affected Environment

According to the Florida FWCC, Lake Talquin is nationally recognized for its black crappie fishery (Florida FWCC 2017). Other fish species found in Lake Talquin include largemouth bass, bluegill, redear sunfish, white bass, and striped bass (Florida FWCC 2017).

The NMFS and FWS indicate Gulf sturgeon (listed as endangered under the ESA), Alabama shad, striped bass, and American eel are found in the reach below the dam. The FWS also says that the Barbour's map turtle and the alligator snapping turtle, both currently under review for ESA listing and identified as a Florida Species of Greatest Conservation Need (Florida SGCN), are found downstream of the dam as well.

The FWS also reports the following freshwater mussels are found in the Ochlockonee drainage below the dam: Apalachicola floater (*Anodonta heardi*), inflated spike (*Elliptio purpurella*), purple bankclimber (*Elliptoideus sloatianus*), round pearlshell (*Glebulina rotundata*), shinyrayed pocketbook (*Hamiota subangulata*), ochlockonee moccasinshell (*Medionidus simpsonianus*), oval pigtoe (*Pleurobema pyroforme*), sculptured pigtoe (*Quadrula infucata*), and Florida floater (*Utterbackia peggyae*). Of these mussels, the purple bankclimber is listed as threatened under ESA, and the Shinyrayed pocketbook, Ochlockonee moccasinshell, and the Oval pigtoe, are listed as endangered.¹⁶ The Apalachicola floater, inflated spike, round pearlshell, Florida sandshell, sculptured pigtoe, and the Florida floater, are all identified as a Florida SGCN.

3.2.2.2 Environmental Effects

Upon surrender, the dam would remain in place and the operating provisions of the existing lease would be maintained by the Florida DEP as discussed above. No significant changes in the water level of Lake Talquin or the flow regime downstream are expected. Therefore, no adverse impact to fish, mussels, or other aquatic resources are likely to occur in the project area upon surrender.

Approving the project surrender would result in flows no longer released via the project powerhouse. All flow would be released through the spillway gates at the dam. Since flows through the powerhouse are drawn from deeper within the reservoir, the elimination of powerhouse flows may result in slightly higher DO concentrations downstream of the dam, a potential beneficial effect to fish and other aquatic resources.

3.2.3 Terrestrial and Wildlife Resources

3.2.3.1 Affected Environment

Much of the land surrounding Lake Talquin comprises the Lake Talquin State Forest. The state forest totals 19,347 acres, and is primarily located along the upper-third of the lake but distinct segments are found in other areas along the shoreline as well. Lake Talquin State Park is located on the lake's southern shore in the upper reaches of the reservoir and near the dam, and is managed by the Florida DEP's, Division of Recreation and Parks (Florida DRP, 2017). According to the Florida Department of

¹⁶ Listed species are discussed in section 3.2.4 of this EA.

Agriculture and Consumer Services (Florida DACS, 2017), tree species found in the various communities include longleaf pine, slash pine, loblolly pine, American beech, southern magnolia, red maple, sweetgum, hickories, swamp tupelo, bald Cypress, dogwood and various oaks.

The project area supports a diverse assemblage of wildlife. Mammals include beaver, big brown bat, gray bat, coyote, otter, feral pig, raccoon, gray fox, bobcat, black bear, and white-tailed deer. Numerous bird species may be found including belted kingfisher, green heron, wood duck, osprey, red cockaded woodpecker, red-winged blackbird, red-tailed hawk, wild turkey, blue jay, bobolink, and red-headed woodpecker. Reptiles and amphibians include eastern king snake, American alligator, alligator snapping turtle, mole skink, cottonmouth, eastern coral snake, bullfrog, common snapping turtle, and southern toad.

3.2.3.2 Environmental Effects

The proposed surrender does not involve any ground disturbing activity and therefore would have no effect on terrestrial or wildlife resources in the project area. The dam would remain in place and no changes to the shoreline or upland habitat is expected from surrender of the project. Because conditions would remain the same, any wildlife inhabiting the project area would not be adversely affected.

3.2.4 Threatened and Endangered Species

3.2.4.1 Affected Environment

The species listed under ESA identified as occurring in Leon, Liberty, and Gadsden counties include those in Table 1. Comments received from the FWS and the NMFS, indicate that of those identified, the species most likely to be affected by surrender of the project include: the threatened Gulf Sturgeon (*Acipenser oxyrinchus desotoi*), and four freshwater mussels, threatened purple bankclimber (*Elliptoideus sloatianus*), endangered shinyrayed pocketbook (*Lampsilis subangulata*), endangered Ochlockonee moccasinshell (*Medionidus simpsonianus*), and endangered oval pigtoe (*Pleurobema pyriforme*).

3.2.4.2 Environmental Effects

No change in water levels in Lake Talquin or to the flow regime downstream is expected upon license surrender. The Florida DEP would operate the project in accordance with the lease agreement with the Trust Fund, the owners of the dam. Thus, conditions downstream of the project would remain similar to current conditions. We find that with no change in flows or water levels in Lake Talquin, approving the project surrender would have no effect on the listed Gulf Sturgeon, threatened purple

bankclimber, endangered shinyrayed pocketbook, Ochlockonee moccasinshell, or oval pigtoe.

Since there would be no ground disturbing activities and no construction related activities associated with license surrender, there would be no effect to listed plant and animal species identified in Table 1.

3.2.5 Recreational Resources

3.2.5.1 Affected Environment

While no formal recreation facilities are required as part of the project license, recreation facilities are found at Lake Talquin State Park at the upper end of the lake. Park facilities include: a fishing dock, a 650 foot boardwalk that borders the waters' edge, and a 1.2 mile nature trail, as well as a picnic pavilion that can accommodate up to 100 guests and restroom facilities. Two barbecue pits are found next to the pavilion (Florida DEP 2017). Fishing, canoeing, kayaking, and boating are popular on Lake Talquin. Recreation opportunities in Lake Talquin State Forest include hiking trails, equestrian trails, off-road bicycling trails, and camping (Florida DACS 2017).

3.2.5.2 Environmental Effects

Lake Talquin would continue to exist after surrender of the project and no changes are expected to occur within the state forest or the state park. Therefore, no adverse impacts on these non-project recreational facilities are expected.

Florida FWCC says it maintains a fish stocking and broodfish collection program on Lake Talquin. Currently, fish escapement generally occurs only during extreme high water events. Florida FWCC expects that fish escapement from Lake Talquin may increase after surrender due to increased discharge through the spillway gates. We tend to agree. However, we believe the magnitude of this effect on recreational fishing would be difficult to quantify. The Florida FWCC recommends working cooperatively [with the Florida DEP] to effectively manage fish escapement downstream and protect Lake Talquin stocking efforts upon project surrender. We find that while the Commission's jurisdiction over the project would end with project surrender, nothing precludes cooperative efforts among these state agencies to minimize fish escapement post-surrender.

With the potential for increased spill upon surrender, the Florida FWCC also identified a potential concern with fisherman access below the dam. The Florida FWCC recommends that the buoy line distance be evaluated to determine if changes in the buoy line distance are necessary. We reiterate that the Commission would lack jurisdiction over the project upon surrender. If the buoy line needs to be relocated, the responsibility of moving the buoy line would fall to the Florida DEP.

3.2.6 Land Use and Aesthetic Resources

3.2.6.1 Affected Environment

The State of Florida owns most of the land within the project boundary, with a large portion managed for recreation and conservation.

As discussed previously in this section, management goals of the State Forest Management Plan include, but are not limited to, restoring habitat, providing public access and recreational opportunities, controlling invasive species, and protecting cultural and historical resources (Florida DACS 2011).

3.2.6.2 Environmental Effects

The proposed surrender of the project would result in cessation of generation and the disconnection of the generating equipment within the powerhouse to isolate the generation facilities from the grid. No change in land use or aesthetics is expected from the surrender of the project.

3.2.7 Cultural and Historic Resources

3.2.7.1 Affected Environment

As we mentioned previously in this EA, the dam and powerhouse are over 50 years old and are eligible for listing in the National Register of Historic Places.

3.2.7.2 Environmental Effects

No permanent modifications to the dam, powerhouse, or generating units are proposed as part of the surrender application. Therefore, approving the surrender would have no effect on these resources that are potentially eligible for listing. Upon license surrender, management of the dam and appurtenant facilities would fall to the Florida DEP. Implementation of the licensee's decommissioning plan does not result in permanent modifications to any of the generating equipment. If conditions change and a new operator is interested in the project, the equipment can be returned to service.

In a letter dated May 16, 2017, the Florida SHPO determined that there will be no effect on historic properties resulting from the surrender of the project.

3.2.8 Environmental Conclusions

Based upon our analysis of the various resources here, approving the surrender would have no effect on water resources and the establishment of TMDLs at Lake Talquin. We also find there would be no effect on fish, mussels, and other aquatic

species, wildlife, listed species, recreation, land use, aesthetics, or cultural and historic resources. Whether expected increases in fish escapement downstream results in negative effects on Lake Talquin's recreational fishing is unknown. Overall, our analysis indicates that since water levels in Lake Talquin and flows in the Ochlockonee River downstream of the project would not be affected by the proposed surrender, there would be no related impacts on any of these environmental resources in the project area.

Florida DEP would operate the dam and spillway gates abiding by the conditions of the current lease agreement upon project surrender. Since this operation is consistent with the existing license requirements of the project, we expect no effect on water levels in Lake Talquin or on the flow regime downstream of the dam post-surrender. Alternatively, providing a minimum flow of 150 cfs as recommended by NMFS and Florida FWCC would be a significant change from the way the project is currently operated, and may negatively affect lake levels. For these reasons, we do not adopt this recommendation.

3.3 NO-ACTION ALTERNATIVE

Under the no-action alternative, the project would remain under the Commission's jurisdiction and the licensee would be required to continue to operate the project, complying with the license requirements, until the license expires in 2022. Under the no-action alternative, environmental resources in the project area would remain the same as they are described in the Affected Environment sections of this EA.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 UNAVOIDABLE ADVERSE EFFECTS

Unavoidable adverse effects would be limited to the potential for fish escapement downstream via discharge through the spillway gates. The extent of this adverse impact hasn't been quantified and may be difficult if not impossible to detect. If however, adverse effects on recreational fishing are realized, the Florida DEP, along with other state agencies, may identify ways in which to minimize fish escapement from Lake Talquin post-surrender.

4.2 CONSISTENCY WITH COMPREHENSIVE PLANS

Section 10(a)(2)(a) of the FPA requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project. Under section 10(a)(2)(A), we have identified three comprehensive plans that address various

resources in Florida.¹⁷ Staff found that all three comprehensive plans are relevant to this project. No conflicts were found.

5.0 FINDING OF NO SIGNIFICANT IMPACT

If the surrender of the Jackson Bluff Hydroelectric Project is approved, hydroelectric power generation would cease, but no changes in Lake Talquin water levels or the flow regime downstream of the project are expected to occur. As identified above, no adverse impacts are expected to water, aquatic, terrestrial or wildlife resources, including any species listed for protection under the ESA. In addition, no impacts to land use, aesthetics or cultural resources are expected.

Based on our independent analysis, approval of the surrender application for the Jackson Bluff Hydroelectric Project No. 2891 would not constitute a major federal action significantly affecting the quality of the human environment.

6.0 LITERATURE CITED

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7.0 LIST OF PREPARERS

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