FEDERAL ENERGY REGULATORY COMMISSION WASHINGTON, DC 20426 August 20, 2018

OFFICE OF ENERGY PROJECTS

Project No. 2336-094 – Georgia Lloyd Shoals Hydroelectric Project Georgia Power Company

Subject: Scoping Document 1 for the Lloyd Shoals Hydroelectric Project

To the Parties Addressed:

Federal Energy Regulatory Commission (Commission) staff are currently reviewing the Pre-Application Document (PAD) filed on July 3, 2018, by Georgia Power Company (Georgia Power) for relicensing the Lloyd Shoals Hydroelectric Project No. 2336 (Lloyd Shoals Project). The project is located on the Ocmulgee River in Butts, Henry, Jasper, and Newton Counties, Georgia. No federal lands have been identified within the project boundary.

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended, Commission staff intends to prepare an environmental assessment (EA), which will be used by the Commission to determine whether, and under what conditions, to issue a new license for the project. To support and assist our environmental review, we are beginning the public scoping process to ensure that all pertinent issues are identified and analyzed and that the EA is thorough and balanced.

We invite your participation in the scoping process and are circulating the attached Scoping Document 1 (SD1) to provide you with information on the Lloyd Shoals Project. We are soliciting your comments and suggestions on our preliminary list of issues and alternatives to be addressed in the EA. We are also requesting that you identify any studies that would help provide a framework for collecting pertinent information on the resource areas under consideration necessary for the Commission to prepare the EA for the project.

We will hold two scoping meetings for the Lloyd Shoals Project to receive input on the scope of the EA. The daytime meeting, focused on resource agencies, tribes, and non-governmental organizations' (NGOs) concerns, will begin at the time and location listed below. The evening meeting, also listed below, is primarily for the public, but the public, agencies, Indian tribes and NGOs may attend either the daytime or evening scoping meeting. We invite all interested agencies, Indian tribes, non-governmental

organizations, and individuals to attend one or both of these meetings. An environmental site review will be held on Friday, September 14, 2018, and consist of facility tours from 9:00 a.m. to 12:00 p.m., and boat tours from 1:00 p.m. to 4:00 p.m. in Jackson, Georgia. Further information on the scoping meeting and environmental site review, including details on how to register for the environmental site review, is available in the enclosed SD1.

Scoping Meeting Date	Time	Location
Thursday, September 13, 2018	9 a.m. to 12 p.m.	Pepper Sprout Barn
Thursday, September 13, 2018	6:30 p.m. to 9:30 p.m.	Pepper Sprout Barn

SD1 is being distributed to Georgia Power's distribution list and the Commission's official mailing list for the project (see section 10.0 of the attached SD1). If you wish to be added to, or removed from, the Commission's official mailing list, please send your request by email to FERCOnlineSupport@ferc.gov or by mail to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street, N.E., Room 1A, Washington, DC 20426. All written or emailed requests must specify your wish to be added to, or removed from, the mailing list, and must clearly identify the following on the first page: Lloyd Shoals Hydroelectric Project P-2336-094.

Please review the SD1 and, if you wish to provide comments, follow the instructions in section 6.0, *Request for Information and Studies*. If you have any questions about SD1, the scoping process, or how Commission staff will develop the EA for this project, please contact Navreet Deo at (202) 502-6304, or via email at:

Navreet.Deo@ferc.gov. Additional information about the Commission's licensing process and the Lloyd Shoals Project may be obtained from our website, www.ferc.gov, or Georgia Power's website, https://www.georgiapower.com/company/energy-industry/generating-plants/lloyd-shoals-dam-project.html. The deadline for filing comments is November 5, 2018. The Commission strongly encourages electronic filings.

Enclosure: Scoping Document 1

SCOPING DOCUMENT 1

LLOYD SHOALS HYDROELECTRIC PROJECT (FERC NO. 2336-094)

GEORGIA



Federal Energy Regulatory Commission Office of Energy Projects Division of Hydropower Licensing Washington, DC

August 2018

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SCOPING DOCUMENT 1

Lloyd Shoals Hydroelectric Project No. 2336-094

1.0 INTRODUCTION

The Federal Energy Regulatory Commission (Commission or FERC), under the authority of the Federal Power Act (FPA),¹ may issue new licenses for terms ranging from 30 to 50 years for the construction, operation, and maintenance of non-federal hydroelectric projects. On July 3, 2018, Georgia Power Company (Georgia Power), licensee for the existing Lloyd Shoals Hydroelectric Project No. 2336 (Lloyd Shoals Project or project),² filed a Pre-Application Document (PAD) and Notice of Intent (NOI) to file an application for new license with the Commission.

The Lloyd Shoals Project is located on the Ocmulgee River at river mile 250.2, just south of the confluence of the Alcovy, Yellow, and South Rivers. The project is located in Butts, Henry, Jasper, and Newton Counties, Georgia, and is 19 river miles upstream of the Juliette Dam.

The project facilities consist of an impoundment (Lake Jackson), a dam, an integral powerhouse containing six turbine-generator units, a spillway, a tailrace, a saddle dike, an auxiliary spillway, and voltage transformation facilities. The project has a total installed capacity of 18 megawatts (MW). The total average annual generation of the project from 1997 to 2016 was 63,139 megawatt-hours (MWh). A detailed description of the project is provided in section 3.0, *Proposed Action and Alternatives*. The location of the project is shown on Figure 1. The project does not occupy lands of the United States.

The National Environmental Policy Act (NEPA) of 1969,³ the Commission's regulations, and other applicable laws require that we independently evaluate the environmental effects of relicensing the Lloyd Shoals Project as proposed, and also consider reasonable alternatives to the licensee's proposed action. We intend to prepare an environmental assessment (EA) that describes and evaluates the probable effects, including an assessment of the site-specific and cumulative effects, if any, of the

¹ 16 U.S.C. § 791(a)-825(r).

² The current license for the Lloyd Shoals Project was issued with an effective date of January 1, 1994, and expires on December 31, 2023.

³ National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4370(f) (2012).

licensee's proposed action and alternatives. Preparation of the EA will be supported by this scoping process to ensure identification and analysis of all pertinent issues.

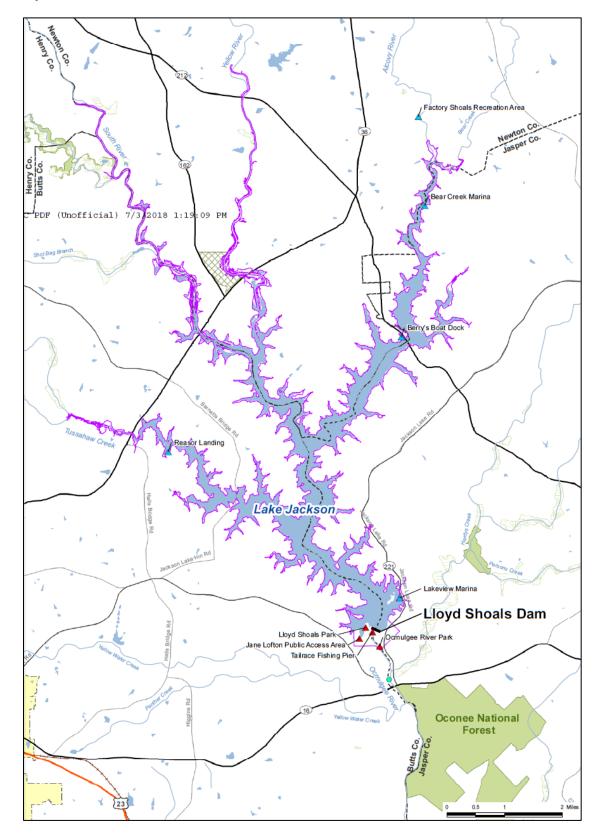


Figure 1. Project Location Map (Source: Georgia Power, Lloyd Shoals PAD)

2.0 SCOPING

This Scoping Document 1 (SD1) is intended to advise all participants as to the proposed scope of the EA and to seek additional information pertinent to this analysis. This document contains: (1) a description of the scoping process and schedule for the development of the EA; (2) a description of the proposed action and alternatives; (3) a preliminary identification of environmental issues and proposed studies; (4) a request for comments and information; (5) a proposed outline for the EA; and (6) a preliminary list of comprehensive plans that are applicable to the project.

2.1 PURPOSES OF SCOPING

Scoping is the process used to identify issues, concerns, and opportunities for enhancement or mitigation associated with a proposed action. In general, scoping should be conducted during the early planning stages of a project. The purposes of the scoping process are as follows:

- invite the participation of federal, state and local resource agencies, Indian tribes, non-governmental organizations (NGOs), and the public to identify significant environmental and socioeconomic issues related to the proposed project;
- determine the resource issues, depth of analysis, and significance of issues to be addressed in the EA;
- identify how the project would or would not contribute to cumulative effects;
- identify reasonable alternatives to the proposed action that should be evaluated in the EA;
- solicit, from participants, available information on the resources at issue, including existing information and study needs; and
- determine whether there are resource areas and/or potential issues that do not require a detailed analysis during review of the project.

2.2 COMMENTS, SCOPING MEETINGS, AND ENVIRONMENTAL SITE REVIEW

During preparation of the EA, there will be several opportunities for the resource agencies, Indian tribes, NGOs, and the public to provide input. These opportunities occur:

- during the public scoping process and study plan meetings, when we solicit
 oral and written comments regarding the scope of issues and analysis for the
 EA;
- in response to the Commission's notice that the project is ready for environmental analysis; and
- after issuance of the EA.

In addition to written comments solicited by this SD1, we will hold two public scoping meetings in the vicinity of the project. The daytime meeting will focus on concerns of the resource agencies, NGOs, and Indian tribes, and the evening meeting will focus on receiving input from the public. We invite all interested agencies, Indian tribes, NGOs, and individuals to attend one or both of the meetings to assist us in identifying the scope of environmental issues that should be analyzed in the environmental document. All interested parties are also invited to participate in the environmental site review. The times and locations of the meetings and environmental site review are as follows:

Daytime Scoping Meeting – Jackson, Georgia

Date & Time: Thursday, September 13, 2018, at 9 a.m.

Location: Pepper Sprout Barn

562 Old Bethel Road Jackson, Georgia 30233

(678) 752-1550

Evening Scoping Meeting – Jackson, Georgia

Date & Time: Thursday, September 13, 2018, at 6:30 p.m.

Location: Pepper Sprout Barn

562 Old Bethel Road Jackson, Georgia 30233

(678) 752-1550

For a map and directions to Pepper Sprout Barn, please visit: https://goo.gl/maps/nY3JrEbfVJu.

Environmental Site Review

Georgia Power and Commission staff will conduct an Environmental Site Review (site visit) of the project on Friday, September 14, 2018, consisting of facility tours from 9:00 a.m. to 12:00 p.m., and boat tours from 1:00 p.m. to 4:00 p.m. All participants should meet at the Jackson Land Management Office located at

180 Dam Road, Jackson, Georgia 30233. Participants must notify Courtenay R. O'Mara at <u>g2jacksonrel@southernco.com</u>, or (404) 506-7219, on or before August 29, 2018, if they plan to attend the environmental site review.

The scoping meetings will be recorded by a court reporter, and all statements (verbal and written) will become part of the Commission's public record for the project. Before each meeting, all individuals who attend, especially those who intend to make statements, will be asked to sign in and clearly identify themselves for the record. Interested parties who choose not to speak or who are unable to attend the scoping meetings may provide written comments and information to the Commission, as described in section 6.0. These meetings are posted on the Commission's calendar located on the internet at www.ferc.gov/EventCalendar/EventsList.aspx, along with other related information.

Meeting participants should come prepared to discuss their issues and/or concerns as they pertain to the relicensing of the Lloyd Shoals Project. It is advised that participants review the PAD in preparation for the scoping meetings. Copies of the PAD are available for review at the Commission in the Public Reference Room, or may be viewed on the Commission's website (www.ferc.gov) using the "eLibrary" link. Enter the docket number, P-2336, to access the documents. For assistance, contact FERC Online Support at FERCOnlineSupport@ferc.gov, or toll free at 1-866-208-3676, or for TTY, (202) 502-8659. A copy of the PAD is also available for inspection and reproduction at https://www.georgiapower.com/company/energy-industry/generating-plants/lloyd-shoals-dam-project.html, or at the following address: Courtenay R. O'Mara, Southern Company Generation, 241 Ralph McGill Boulevard NE, BIN 10193, Atlanta, Georgia 30308-3374.

Following the scoping meetings and comment period, all issues raised will be reviewed and decisions made as to the level of analysis needed. If preliminary analysis indicates that any issues presented in this scoping document have little potential for causing significant effects, the issue(s) will be identified and the reasons for not providing a more detailed analysis will be given in the EA.

If we receive no substantive comments on SD1, then we will not prepare a Scoping Document 2 (SD2). Otherwise, we will issue SD2 to address any substantive comments received. The SD2 will be issued for informational purposes only; no response will be required. The EA will address recommendations and input received during the scoping process.

3.0 PROPOSED ACTION AND ALTERNATIVES

In accordance with NEPA, the environmental analysis will consider the following alternatives, at a minimum: (1) the no-action alternative; (2) the applicant's proposed action; and (3) alternatives to the proposed action.

3.1 NO-ACTION ALTERNATIVE

Under the no-action alternative, the Lloyd Shoals Project would continue to operate as required by the current project license (i.e., there would be no change to the existing environment). No new environmental protection, mitigation, or enhancement measures would be implemented. This alternative is the baseline environmental condition for comparison with other alternatives.

3.1.1 Existing Project Facilities

The project consists of an impoundment, dam, intake section, powerhouse, tailrace, spillway, saddle dike, auxiliary spillway, substation, and appurtenant facilities.

The Lloyd Shoals dam creates a 4,750-acre impoundment, known as Lake Jackson, at a normal pool elevation of 530 feet Plant Datum (PD).⁴ Lake Jackson extends approximately 13 miles upstream from the dam into the South and Yellow Rivers, respectively, 11 miles into the Alcovy River, and 8 miles into Tussahaw Creek. The gross storage capacity of the reservoir is approximately 107,000 acre-feet.

The dam is a 1,600-foot-long, 105-foot-high concrete gravity structure. The dam, from west to east, consists of: (1) a 143-foot-long non-overflow section; (2) a 198-foot-long powerhouse intake section with six, 12-foot-high by 12-foot-wide octagonal water passages supplying the generating units; (3) a 728.5-foot-long spillway section consisting of a trash gate and an Obermeyer gate system; and (4) a 530-foot-long earth embankment tie-in.

 $^{^4}$ Plant Datum equals mean sea level elevation (North American Vertical Datum of 1988; NAVD88) + 0.45 feet.

⁵ Obermeyer spillway gates consist of a row of steel gate panels supported on their downstream side by inflatable air bladders. By controlling pressure in the air bladders (*i.e.* fully inflate or deflate), the reservoir elevation maintained by the gate system can be adjusted.

The powerhouse intake section is protected by a steel trashrack structure with 1.3-inch clear bar spacing. The six cast-in-place, concrete octagonal intake passages control flow to the attached powerhouse. The concrete and brick powerhouse contains six horizontal Francis turbine-generator units, each rated at 3.0-MW, for a total authorized installed capacity of 18-MW. Flows pass from the powerhouse into the tailrace, which empties into the Ocmulgee River.

The spillway section consists of: (1) a 30-foot-wide section containing a 19-foot-high by 12-foot-wide trash gate; (2) a 98.5-foot-wide section of 2-foot-high Obermeyer gates; (3) a 420-foot-wide section of 5-foot-high Obermeyer gates; and (3) a 180-foot-wide section of 2-foot-high Obermeyer gates. The Obermeyer gate system was installed in 2012 to replace the previous spillway flashboards and improve the control of reservoir elevations during high-flow conditions.

A 2,100-foot-long saddle dike is located approximately 3,000 feet upstream of the east end of the main dam. A 500-foot-long auxiliary spillway, topped with 10-foot-high flashboards, is located 900 feet southwest of the main dam, and includes a 560-foot-long, 6-foot-high sacrificial earth embankment.

The project's transmission facilities include two 2.3-kilovolt (kV) generator leads that connect the powerhouse to a substation located at the west dam abutment. Connection to existing 69-kV and 115-kV non-project transmission lines is made within the substation.

3.1.2 Existing Project Operation

Georgia Power states that the project is operated in a modified run-of-river mode to generate power during periods of peak demand. Reservoir elevations are maintained between 530 feet PD and 527 feet PD year-round, excluding planned drawdowns and drought. Inflows are stored for short periods of time during off-peak periods, generally no longer than 24 hours, and then released through the powerhouse during peak power demand hours. Daily fluctuations in reservoir elevation associated with the daily cycle of inflow storage and release were less than 1.5 feet 98-percent of the time for the period of record from 1997 to 2016.

The current license requires a continuous minimum flow release of 400 cubic feet per second (cfs), or inflow, whichever is less, into the Ocmulgee River downstream. The minimum flow is conveyed through the powerhouse turbines. During periods of low flow or extended drought, when calculated inflows drop below the 400-cfs minimum flow requirement, the project releases a 250-cfs minimum flow to ensure adequate stream flows for aquatic life and downstream uses of the Ocmulgee River. During high-flow conditions, flows exceeding the hydraulic capacity of the six turbine-generator units

(3,720 cfs) are passed through the Obermeyer spillway gates. The gates are opened incrementally to approximate inflow.

The project operates under an estimated average head of 96.8 feet. The average annual generation of the project is 63,139 MWh.

3.2 LICENSEE'S PROPOSALS

3.2.1 Proposed Project Facilities and Operation

Georgia Power proposes to continue to operate and maintain the project as required by its existing license. Georgia Power does not propose to construct any new project facilities or to modify any existing project facilities at this time.

3.2.2 Proposed Environmental Measures

Georgia Power proposes to continue operating the project with the environmental protection, mitigation, and enhancement (PM&E) measures described in the following section. The potential need for additional PM&E measures will be evaluated during the relicensing process.

Geological and Soil Resources

• Continue to implement the existing Shoreline Management Guidelines to control erosion and sedimentation within the project boundary.

Water Resources

- Continue to operate in a modified run-of-river mode.
- Continue to operate the project for fish and wildlife, recreation, maintenance of water supply, and hydroelectric power generation.
- Continue to operate and maintain existing gages and gaging stations in project-affected reaches to document and verify project operation.
- Continue to collect seasonal water quality data within Lake Jackson.

Fish and Aquatic Resources

• Continue to provide a minimum flow of 400 cfs, or inflow, whichever is less, to protect and enhance fish and wildlife resources in the Ocmulgee River.

- Continue to implement the Ocmulgee Candidate Conservation Agreement with Assurances (CCAA)⁶ for robust redhorse, which expires December 31, 2023.
- Continue to implement the Candidate Conservation Agreement (CCA) for Mollusks of the Altamaha River Basin, which expires in April 2047.

Terrestrial Resources

- Continue to monitor the occurrence of, and periodically treat, invasive terrestrial and aquatic plants within the project boundary.
- Continue to implement the existing Shoreline Management Guidelines to preserve and protect terrestrial resources in the project area.

Threatened and Endangered Species

• There are no existing or proposed PM&E measures related to federally threatened and endangered species for the project.

Recreation and Land Use

• Continue to implement the Shoreline Management Guidelines, which include four key elements: policies and permitting; resources; land use; and communication.

⁶ CCAA refers to a Candidate Conservation Agreement with Assurances. The CCAA for robust redhorse is a 1992 agreement among Georgia Power, the U.S. Fish and Wildlife Service (FWS), and the Georgia Department of Natural Resources (Georgia DNR) to reintroduce robust redhorse into historic habitat in the Ocmulgee River between river miles 230.9 and 250.2, the reach bounded upstream by Lloyd Shoals Dam and downstream by Juliette Dam (the first dam on the Ocmulgee River).

⁷ CCA refers to a Candidate Conservation Agreement. The CCA for mollusks of the Altamaha River Basin is a 2017 agreement among Georgia Power, FWS, and Georgia DNR to ensure that five mollusk species in the Altamaha River Basin known to occur within Georgia Power project areas do not require future protection under the Endangered Species Act. Three of the five species (Altamaha arcmussel, inflated floater, and reverse pebblesnail) are known to occur within the Lloyd Shoals Project boundary or in the immediate vicinity.

• Continue to operate and maintain the four existing project recreation sites: Lloyd Shoals Park, the Tailrace Fishing Pier, Ocmulgee River Park, and the Jane Lofton Public Access Area.

Cultural Resources

• Develop and implement a historic properties management plan and a Programmatic Agreement for the project.

3.3 DAM SAFETY

It is important to note that dam safety constraints may exist and should be taken into consideration in the development of proposals and alternatives considered in the pending proceeding. For example, proposed modifications to the dam structure, such as the addition of flashboards or fish passage facilities, could impact the integrity of the dam structure. As the proposal and alternatives are developed, the applicant must evaluate the effects and ensure that the project would meet the Commission's dam safety criteria found in Part 12 of the Commission's regulations and the Engineering Guidelines (http://www.ferc.gov/industries/hydropower/safety/guidelines/eng-guide.asp).

3.4 ALTERNATIVES TO THE PROPOSED ACTION

Commission staff will consider and assess all alternative recommendations for operational or facility modifications, as well as PM&E measures identified by Commission staff, federal and state agencies, Indian tribes, NGOs, and the public.

3.5 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

At present, we propose to eliminate the following alternatives from detailed study in the EA.

3.5.1 Federal Government Takeover

In accordance with section 16.14 of the Commission's regulations, a federal department or agency may file a recommendation that the United States exercise its right to take over a hydroelectric power project with a license that is subject to sections 14 and 15 of the FPA.⁸ We do not consider federal takeover to be a reasonable alternative. Federal takeover of the project would require congressional approval. While that fact alone would not preclude further consideration of this alternative, there is currently no

⁸ 16 U.S.C. §§ 791(a)-825(r).

evidence showing that federal takeover should be recommended to Congress. No party has suggested that federal takeover would be appropriate, and no federal agency has expressed interest in operating the project.

3.5.2 Non-power License

A non-power license is a temporary license the Commission would terminate whenever it determines that another governmental agency is authorized and willing to assume regulatory authority and supervision over the lands and facilities covered by the non-power license. At this time, no governmental agency has suggested a willingness or ability to take over the project. No party has sought a non-power license, and we have no basis for concluding that the Lloyd Shoals Project should no longer be used to produce power. Thus, we do not consider a non-power license a reasonable alternative to relicensing the project.

3.5.3 Project Decommissioning

Decommissioning of the project could be accomplished with or without dam removal. Either alternative would require denying the relicense application and surrender or termination of the existing license with appropriate conditions. There would be significant costs involved with decommissioning the project and/or removing any project facilities. The project provides a viable, safe, and clean renewable source of power to the region. With decommissioning, the project would no longer be authorized to generate power.

No party has suggested project decommissioning would be appropriate in this case, and we have no basis for recommending it. Thus, we do not consider project decommissioning a reasonable alternative to relicensing the project with appropriate environmental measures.

4.0 SCOPE OF CUMULATIVE EFFECTS AND SITE-SPECIFIC RESOURCE ISSUES

4.1 CUMULATIVE EFFECTS

According to the Council on Environmental Quality's regulations for implementing NEPA (40 C.F.R. 1508.7), a cumulative effect is the effect on the environment that results from the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time, including hydropower and other land and water development activities.

4.1.1 Resources That Could be Cumulatively Affected

Based on information in the PAD for the Lloyd Shoals Project, and preliminary staff analysis, we have identified water quality and resident/diadromous fish⁹ as resources that could be cumulatively affected by the proposed continued operation and maintenance of the Lloyd Shoals Project, in combination with other hydroelectric projects and other activities in the Ocmulgee River Basin.

4.1.2 Geographic Scope

Our geographic scope of analysis for cumulatively affected resources is defined by the physical limits or boundaries of: (1) the proposed action's effect on the resources; and (2) contributing effects from other hydropower and non-hydropower activities within the Ocmulgee River Basin. Because the proposed actions would affect the resources differently, the geographic scope for each resource may vary.

We have tentatively identified the geographic scope for water quality to include the upper Ocmulgee River Basin, which extends from the headwaters of the Lloyd Shoals Project, ¹⁰ downstream to Juliette Dam at river mile 230.9 on the Ocmulgee River. We chose this geographic scope because the collective operation and maintenance of the project, in combination with other developmental and non-developmental uses of the upper Ocmulgee River Basin, may cumulatively affect water quality in the Ocmulgee River.

We have tentatively identified the geographic scope for resident and diadromous fish to include the Ocmulgee River from the headwaters of Lake Jackson (within the project boundary) downstream to the confluence of the Ocmulgee and Oconee Rivers. We chose this geographic scope because the presence and operation of the Lloyd Shoals Project, along with the downstream Juliette Dam, could affect the movements of fish and fish populations in the Ocmulgee River.

⁹ The term diadromous refers to a life history strategy that includes movement between fresh- and saltwater where organisms exhibit two migrations to spend various life stages in different ecosystems.

¹⁰ Four tributaries converge at Lake Jackson to form the Ocmulgee River, including the South River, Yellow River, Alcovy River, and Tussahaw Creek.

4.1.3 Temporal Scope

The temporal scope of our cumulative effects analysis in the EA will include a discussion of past, present, and reasonably foreseeable future actions and their effects on each resource that could be cumulatively affected. Based on the potential term of a new license, the temporal scope will look 30 to 50 years into the future, concentrating on the effect on the resources from reasonably foreseeable future actions. The historical discussion will, by necessity, be limited to the amount of available information for each resource. The quality and quantity of information, however, diminishes as we analyze resources further away in time from the present.

4.2 RESOURCE ISSUES

In this section, we present a preliminary list of environmental issues to be addressed in the EA. We identified these issues, which are listed by resource area, by reviewing the PAD and the Commission's record for the Lloyd Shoals Project. This list is not intended to be exhaustive or final, but contains the issues raised to date. After the scoping process is complete, we will review the list and determine the appropriate level of analysis needed to address each issue in the EA. Those issues identified by an asterisk (*) will be analyzed for both cumulative and site-specific effects.

4.2.1 Geology and Soil Resources

• Effects of continued project operation and project-related recreation on reservoir and tailrace shoreline erosion and sedimentation.

4.2.2 Water Resources

 Effects of continued project operation on water quality, including dissolved oxygen concentrations and water temperature, in Lake Jackson and the Ocmulgee River downstream from the project.*

4.2.3 Fish and Aquatic Resources

- Effects of continued project operation and shoreline permitting (e.g., docks, seawalls, etc.) on fish habitat and aquatic resources in Lake Jackson.
- Effects of continued project operation on habitat for primary sport fish species in Lake Jackson, including largemouth bass and stocked striped bass.
- Effects of continued project operation on riverine fish and mussel habitat downstream in the Ocmulgee River.

- Effects of continued project operation on fish movement in the Ocmulgee River.*
- Effects of continued project operation on fish entrainment and turbine-induced mortality at the project.
- Aquatic non-native invasive species and their effects on native flora and fauna
 within the project boundary, and the effects of continued project operation and
 maintenance activities and project-related recreation on non-native invasive
 aquatic species.
- Effects of continued project operation on state species of concern in the vicinity of the project.

4.2.4 Terrestrial Resources

- Effects of continued project operation and maintenance, project-related recreation, and shoreline development on upland habitat, reservoir wetland, and littoral habitats, and associated wildlife.
- Effects of continued project operation and maintenance, as well as projectrelated recreation, on state species of concern in the vicinity of the project.
- Effects of continued project operation and maintenance activities, including shoreline management, and project-related recreation on non-native invasive botanical and wildlife species.

4.2.5 Threatened and Endangered Species¹¹

 Effects of continued project operation and maintenance, and project-related recreation, on federally listed endangered, threatened, and candidate species, and their habitat, in the vicinity of the project, including the endangered Gulf moccasinshell, oval pigtoe, shinyrayed pocketbook, black-spored quillwort, Michaux's sumac, relict trillium, and red-cockaded woodpecker; the threatened

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¹¹ Little amphianthus, Michaux's sumac, relict trillium, and black-spored quillwort were included in the official species list for the Lloyd Shoals Project generated on FWS's ECOS-IPaC website (https://ecos.fws.gov/ipac/) on August 3, 2018, and filed on August 6, 2018. Gulf moccasinshell, oval pigtoe, shinyrayed pocketbook, purple bankclimber, red-cockaded woodpecker, robust redhorse, Altamaha arcmussel, inflated floater, and reverse pebblesnail were identified by Georgia Power in its PAD.

purple bankclimber, and little amphianthus (also known as pool sprite); and the candidate species robust redhorse, Altamaha arcmussel, inflated floater, and reverse pebblesnail.

4.2.6 Recreation and Land Use

- Effects of the daily water level changes of up to 3 feet on recreational opportunities in Lake Jackson.
- Effects of continued project operation on downstream recreation in the Ocmulgee River.
- Adequacy of existing public access and recreational facilities in the project boundary to meet current and future recreation demand, including special events (e.g., fishing tournaments) at the project.
- Adequacy of the existing Shoreline Management Guidelines to address land use practices, including erosion, and to protect environmental resources within the project boundary.

4.2.7 Cultural Resources

- Effects of continued project operation and maintenance on properties that are included in, or eligible for inclusion in, the National Register of Historic Places.
- Effects of continued project operation and maintenance on archeological and historic resources at the project.

4.2.8 Developmental Resources

• Effects of the proposed project and alternatives, including any recommended PM&E measures, on project generation and economics.

5.0 PROPOSED STUDIES

Initial study proposals from Georgia Power are identified by resource area, below in Table 1, and in the PAD. Further studies may need to be added to this list based on comments provided to the Commission and Georgia Power from agencies, Indian tribes, and interested parties during the study planning process.

Table 1. Georgia Power's initial study proposals for the Lloyd Shoals Project. (Source: Georgia Power; Lloyd Shoals PAD)

Resource Area and Issue	Georgia Power's Proposed Study	
Geologic and Soil Resources	Conduct a shoreline field reconnaissance survey of the project reservoir and tailrace to inventory and characterize the distribution and sources of erosion and sedimentation within the project boundary. Conduct a literature review and an analysis of the effects of shoreline structural stabilization practices on littoral-zone aquatic habitats.	
2. Water Resources	Characterize water use, availability, and water quality in the project area; characterize the effects of project operation on water quality in the project reservoir and tailrace area immediately downstream from the dam; and characterize the effects of project operation during drought on water uses downstream in the Ocmulgee River. Seasonal water quality monitoring data collected through 2017 would be analyzed; tailrace water quality would be monitored in 2019; and a literature review and analysis would be conducted for water quantity and quality.	
3. Fish and Aquatic Resources	Characterize representative shoreline and littoral-zone aquatic habitats occurring throughout the reservoir. A shoreline habitat survey would be conducted, as part of the shoreline survey for erosion and sedimentation, to characterize physical aquatic habitat and available sources of littoral-zone cover for fish.	
4. Fish and Aquatic Resources	Evaluate the occurrence and distribution of native mussels within the project boundary by analyzing existing data on native mussel occurrence and habitat use within the project boundary and a 2018 mussel survey conducted as part of the Altamaha CCA for mollusks.	
5. Fish and Aquatic Resources	Evaluate the effects of continued project operation on summer reservoir water quality and habitat for representative sport fishes of interest (e.g., largemouth bass, spotted bass, and/or stocked striped bass) by analyzing existing Georgia DNR fisheries survey data for Lake Jackson.	
6. Fish and Aquatic Resources	Evaluate the effects of continued project operation on riverine aquatic habitat downstream of the Lloyd Shoals	

Resource Area and Issue	Georgia Power's Proposed Study
	Project using (a) existing information on robust redhorse habitat use and recruitment downstream from Lloyd Shoals Dam, (b) the results of the previously conducted instream flow study for riverine species downstream from Lloyd Shoals Dam, and (c) the results of the ongoing monitoring efforts implemented as part of the Ocmulgee CCAA for robust redhorse.
7. Fish and Aquatic Resources	Evaluate the potential for fish entrainment and turbine- induced mortality by applying trends and data from entrainment studies completed at other hydroelectric projects to the physical, operational, and fisheries characteristics of the Lloyd Shoals Project.
8. Wildlife & Botanical Resources	Conduct a reconnaissance survey to: (a) observe and document wildlife and botanical species, representative terrestrial communities, and associated wildlife habitat; and (b) identify invasive species in the project area.
9. Wetlands, Riparian, & Littoral Habitat	Conduct a reconnaissance survey and review existing information to: (a) describe the floodplain, wetlands, riparian habitats, and littoral habitats occurring in the project area, including lists of representative plant and animal species; (b) identify invasive species; and (c) prepare a map delineating wetland, riparian, and littoral habitat.
10. RTE Species	Develop a list of species known to occur near the project. Conduct a field survey in the project boundary and adjacent lands to identify suitable habitats within the study area. Describe species distribution and habitat use based on habitat requirements, findings of field surveys, and consultation with resource agencies.
11. Recreation and Land Use	Review existing information to describe recreation, land use, and visual aesthetic qualities in the Lloyd Shoals Project area; characterize current types and levels of recreational use on Lake Jackson and in the tailrace area; and evaluate the need for additional recreational access or facilities at the project. Elements of the study would include: (a) review and analysis of the 2014 Licensed Hydropower Development Recreation Report (Form 80) data; (b) review and analysis of fish tournament data; (c) an assessment of the adequacy of existing facilities;

Resource Area and Issue	Georgia Power's Proposed Study	
	(d) determine access site pressure and user conflicts; and (e) estimate the number of recreation user days per year.	
12. Cultural Resources	Summarize known historic properties through literature site file review and review of existing studies and data. Conduct testing and/or recovery of selected sites currently being monitored by Georgia Power (e.g., Mile Site #9HS23) to assist in the development of future management plans. Evaluate potential effects upon historic resources by the continued operation of the project or by activities conducted along the Lake Jackson shoreline.	

6.0 REQUEST FOR INFORMATION AND STUDIES

We are asking federal, state, and local resource agencies; Indian tribes; NGOs; and the public to forward to the Commission any information that will assist us in conducting an accurate and thorough analysis of the project-specific and cumulative effects associated with relicensing the Lloyd Shoals Project. The types of information requested include, but are not limited to:

- information, quantitative data, or professional opinions that may help define the geographic and temporal scope of the analysis (both site-specific and cumulative effects), and that helps identify significant environmental issues;
- identification of, and information from, any other EA, EIS, or similar environmental study (previous, on-going, or planned) relevant to the proposed relicensing of the Lloyd Shoals Project;
- existing information and any data that would help to describe the past and present actions and effects of the project and other developmental activities on environmental and socioeconomic resources:
- information that would help characterize the existing environmental conditions and habitats;
- the identification of any federal, state, or local resource plans, and any future project proposals in the affected resource area (e.g., proposals to construct or operate water treatment facilities, recreation areas, water diversions, timber harvest activities, or fish management programs), along with any implementation schedules);

- documentation that the proposed project would or would not contribute to cumulative adverse or beneficial effects on any resources. Documentation can include, but need not be limited to, how the project would interact with other projects in the area and other developmental activities; study results; resource management policies; and reports from federal and state agencies, local agencies, Indian tribes, NGOs, and the public;
- documentation showing why any resources should be excluded from further study or consideration; and
- study requests by federal and state agencies, local agencies, Indian tribes, NGOs, and the public that would help provide a framework for collecting pertinent information on the resource areas under consideration necessary for the Commission to prepare the EA for the project.

All requests for studies filed with the Commission must meet the criteria found in Appendix A, *Study Plan Criteria*.

The requested information, comments, and study requests should be submitted to the Commission no later than **November 5**, **2018**. All filings must clearly identify the following on the first page: **Lloyd Shoals Hydroelectric Project (P-2336-094)**. Scoping comments may be filed electronically via the Internet. *See* 18 C.F.R. 385.2001(a)(1)(iii) and the instructions on the Commission's website http://www.ferc.gov/docs-filing/efiling.asp. Commenters can submit brief comments up to 6,000 characters, without prior registration, using the eComment system at http://www.ferc.gov/docs-filing/ecomment.asp. You must include your name and contact information at the end of your comments. For assistance, please contact FERC Online Support at FERCOnlineSupport@ferc.gov, or toll free at 1-866-208-3676, or for TTY, (202) 502-8659. Although the Commission strongly encourages electronic filing, documents may also be paper-filed. To paper-file, please send a paper copy to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street, NE, Washington, D.C. 20426.

Register online at http://www.ferc.gov/esubscription.asp to be notified via email of new filings and issuances related to this or other pending projects. For assistance, please contact FERC Online Support at FERCOnlineSupport@ferc.gov.

Any questions concerning the scoping meetings, site visit, or how to file written comments with the Commission should be directed to Navreet Deo at (202) 502-6304, or navreet.deo@ferc.gov. Additional information about the Commission's licensing process and the Lloyd Shoals Project may be obtained from the Commission's website, www.ferc.gov.

7.0 PREPARATION SCHEDULE

At this time, we anticipate the need to prepare a single EA. The EA will be sent to all persons and entities on the Commission's service and mailing lists for the Lloyd Shoals Project. The EA will include our recommendations for operating procedures, as well as PM&E measures that should be part of any license issued by the Commission. All recipients will then have 30 days to review the EA and file written comments with the Commission. All comments on the EA filed with the Commission will be considered in preparation of the licensing order.

The major milestones, including those for preparing the EA, 12 are as follows:

Major Milestone	Target Date
Scoping Meetings	September 2018
License Application Filed	December 2021
Ready for Environmental Analysis Notice Issued	March 2022
Deadline for Filing Comments, Recommendations, and	
Agency Terms and Conditions/Prescriptions	May 2022
Single EA Issued	October 2022
Comments on EA Due	November 2022
Deadline for Filing Modified Agency Recommendations	January 2023

If Commission staff determines that there is a need for additional information or additional studies, the issuance of the Ready for Environmental Analysis notice could be delayed. If this occurs, all subsequent milestones would be delayed by the time allowed for the licensee to respond to the Commission's request. A copy of the process plan, which has a complete list of the relicensing milestones for the Lloyd Shoals Project, including those for developing the license application, is attached as Appendix B to this SD1.

¹² This schedule assumes that a single EA would be prepared. If a draft and final EA, or EIS is prepared, the target dates for comments on the draft EA or EIS and deadline for filing modified agency recommendations may need to be revised.

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8.0 PROPOSED EA OUTLINE

The preliminary outline for the Lloyd Shoals Project's EA is as follows:

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9.0 COMPREHENSIVE PLANS

Section 10(a)(2) of the FPA, 16 U.S.C. section 803(a)(2)(A), requires the Commission to consider the extent to which a project is consistent with federal and state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by a project. Commission staff has initially identified the plans listed below that may be relevant to the project. Agencies are requested to review this list and inform the staff of any changes. If there are other comprehensive plans that should be considered for this list that are not on file with the Commission, or if there are more recent versions of the plans already listed, they can be filed for consideration with the Commission according to 18 CFR 2.19 of the Commission's regulations. Please follow the instructions for filing a plan at http://www.ferc.gov/industries/hydropower/gen-info/licensing/complan.pdf.

The following is a list of comprehensive plans currently on file with the Commission that may be relevant to the Lloyd Shoals Project.

- Atlantic States Marine Fisheries Commission. 1998. Amendment 1 to the Interstate Fishery Management Plan for Atlantic sturgeon (*Acipenser oxyrhynchus oxyrhynchus*). (Report No. 31). July 1998.
- Atlantic States Marine Fisheries Commission. 1998. Interstate fishery management plan for Atlantic striped bass. (Report No. 34). January 1998.
- Atlantic States Marine Fisheries Commission. 1999. Amendment 1 to the Interstate Fishery Management Plan for shad and river herring. (Report No. 35). April 1999.
- Atlantic States Marine Fisheries Commission. 2000. Interstate Fishery Management Plan for American eel (Anguilla rostrata). (Report No. 36). April 2000
- Atlantic States Marine Fisheries Commission. 2000. Technical Addendum 1 to Amendment 1 of the Interstate Fishery Management Plan for shad and river herring. February 9, 2000.
- Atlantic States Marine Fisheries Commission. 2008. Amendment 2 to the Interstate Fishery Management Plan for American eel. Arlington, Virginia. October 2008.
- Atlantic States Marine Fisheries Commission. 2009. Amendment 2 to the Interstate Fishery Management Plan for shad and river herring, Arlington, Virginia. May 2009.

- Atlantic States Marine Fisheries Commission. 2010. Amendment 3 to the Interstate Fishery Management Plan for shad and river herring, Arlington, Virginia. February 2010.
- Atlantic States Marine Fisheries Commission. 2013. Amendment 3 to the Interstate Fishery Management Plan for American eel. Arlington, Virginia. August 2013.
- Atlantic States Marine Fisheries Commission. 2014. Amendment 4 to the Interstate Fishery Management Plan for American eel. Arlington, Virginia. October 2014.
- Department of the Army, Corps of Engineers. Savannah District. 1985. South metropolitan Atlanta region: Georgia water resources management study. Savannah, Georgia. January 1985.
- Department of the Army, Corps of Engineers. Savannah District. 1985. Water resources development by the U.S. Army Corps of Engineers in Georgia. Savannah, Georgia. January 1985.
- Georgia Department of Natural Resources. 1985. Water availability and use-Ocmulgee River basin. Atlanta, Georgia.
- Georgia Department of Natural Resources. 1986. Water availability and use report Altamaha River basin. Atlanta, Georgia. March 1986.
- Georgia Department of Natural Resources. Georgia Statewide Comprehensive Outdoor Recreation Plan (SCORP): 2008-2013. Atlanta, Georgia.
- Metropolitan North Georgia Water Planning District. 2003. Water supply and water conservation management plan. Atlanta, Georgia. September 2003.
- Metropolitan North Georgia Water Planning District. 2003. Long-term wastewater management plan. Atlanta, Georgia. September 2003.
- Metropolitan North Georgia Water Planning District. 2003. District-wide watershed management plan. Atlanta, Georgia. September 2003.
- National Marine Fisheries Service. 1998. Final Recovery Plan for the shortnose sturgeon (Acipenser brevirostrum). Prepared by the Shortnose Sturgeon Recovery Team for the National Marine Fisheries Service, Silver Spring, Maryland. December 1998.
- National Park Service. The Nationwide Rivers Inventory. Department of the Interior, Washington, D.C. 1993.

- Project No 2336-094
- State of Georgia. Office of the Governor. 1987. Water resources management strategy-summary document. Atlanta, Georgia. January 12, 1987.
- U.S. Fish and Wildlife Service. National Marine Fisheries Service. Georgia Department of Natural Resources. 2013. Priority restoration and management actions for the American shad in the Altamaha River Basin, Georgia. Athens, Georgia. 2013.
- U.S. Fish and Wildlife Service. Canadian Wildlife Service. 1986. North American waterfowl management plan. May 1986.
- U.S. Fish and Wildlife Service. n.d. Fisheries USA: the recreational fisheries policy of the U.S. Fish and Wildlife Service. Washington, D.C.

10.0 MAILING LIST

The list below is the Commission's official mailing list for the Lloyd Shoals Project. If you want to receive future mailings for the Lloyd Shoals Project and are not included in the list below, please send your request by email to efiling@ferc.gov, or by mail to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street, N.E., Room 1A, Washington, DC 20426. All written and emailed requests to be added to the mailing list must clearly identify the following on the first page: Lloyd Shoals Hydroelectric Project No. 2336-094. You may use the same method if requesting removal from the mailing list below.

Official Mailing List for the Lloyd Shoals Project

Commander
United States Coast Guard
7th District
909 SE 1st Avenue
Miami, FL 33131-3050

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Glenn Shriver Dublin Industrial Service, Inc. Dublin, GA 31040 Georgia Wildlife Federation 11600 Hazelbrand Road, NE Covington, GA 30014

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APPENDIX A

STUDY PLAN CRITERIA 18 C.F.R. Section 5.9(b)

Any information or study request must contain the following:

- 1. Describe the goals and objectives of each study proposal and the information to be obtained:
- 2. If applicable, explain the relevant resource management goals of the agencies or Indian tribes with jurisdiction over the resource to be studied;
- 3. If the requester is not a resource agency, explain any relevant public interest considerations in regard to the proposed study;
- 4. Describe existing information concerning the subject of the study proposal, and the need for additional information;
- 5. Explain any nexus between project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements;
- 6. Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate filed season(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers relevant tribal values and knowledge; and
- 7. Describe considerations of level of effort and cost, as applicable, and why proposed alternative studies would not be sufficient to meet the stated information needs.

APPENDIX B

PROCESS PLAN AND SCHEDULE FOR THE ILP RELICENSING OF THE LLOYD SHOALS HYDROELECTRIC PROJECT

Shaded milestones are unnecessary if there are no study disputes. If the due date falls on a weekend or holiday, the due date is the following business day. Early filings or issuances will not result in changes to these deadlines. As appropriate, the process plan and schedule may be revised in the future.

18 C.F.R.	Lead	Activity	Timeframe	Deadline
§ 5.5(a)	Georgia Power	Filing of NOI and PAD	Actual filing date	7/3/2018
§ 5.7	FERC	Initial Tribal Consultation Meeting	Within 30 days of NOI and PAD notice (Waived)	8/15/2018
§5.8	FERC	FERC Issues Notice of Commencement of Proceeding and Scoping Document (SD1)	Within 60 days of NOI and PAD notice	8/20/2018
§5.8 (b)(3)(viii)	FERC/ Stakeholders	Public Scoping Meetings and Environmental Site Review	Within 30 days of NOI and PAD notice and issuance of SD1	9/13/2018 & 9/14/2018
§ 5.9	Stakeholders/ FERC	File Comments on PAD, SD1, and Study Requests	Within 60 days of NOI and PAD notice and issuance of SD1	11/5/2018
§5.10	FERC	FERC Issues Scoping Document 2 (SD2), if necessary	Within 45 days of deadline for filing comments on SD1	12/20/2018
§5.11(a)	Georgia Power	File Proposed Study Plans	Within 45 days of deadline for filing comments on SD1	12/20/2018
§5.11(e)	Georgia Power / Stakeholders	Study Plan Meetings	Within 30 days of deadline for filing proposed Study Plans	1/22/2019
§5.12	Stakeholders	File Comments on Proposed Study Plan	Within 90 days after proposed study plan is filed	3/20/2019
§5.13(a)	Georgia Power	File Revised Study Plan	Within 30 days following the deadline for filing comments on proposed Study Plan	4/19/2019
§5.13(b)	Stakeholders	File Comments on Revised Study Plan (if necessary)	Within 15 days following Revised Study Plan	5/6/2019
§5.13(c)	FERC	FERC Issues Study Plan Determination	Within 30 days following Revised Study Plan	5/20/2019

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18 C.F.R.	Lead	Activity	Timeframe	Deadline
§5.14(a)	Mandatory Conditioning Agencies	Notice of Formal Study Dispute (if necessary)	Within 20 days of Study Plan determination	6/10/2019
§5.14(l)	FERC	Study Dispute Determination	Within 70 days of notice of formal study dispute	8/19/2019
§5.15(a)	Georgia Power	Conduct First Season Field Studies	May 2019 – April 2020	
§5.15(c)(1)	Georgia Power	File Initial Study Reports	No later than one year from Study Plan approval	5/19/2020
§5.15(c)(2)	Georgia Power	Initial Study Results Meeting	Within 15 days of Initial Study Report	6/3/2020
§5.15(c)(3)	Georgia Power	File Study Results Meeting Summary	Within 15 days of Study Results Meeting	6/18/2020
§5.15(c)(4)	Stakeholders/ FERC	File Meeting Summary Disagreements/Modifications to Study/Requests for New Studies	Within 30 days of filing Meeting Summary	7/20/2020
§5.15(c)(5)	Georgia Power	File Responses to Disagreements/Modifications/ New Study Requests	Within 30 days of disputes	8/19/2020
§5.15(c)(6)	FERC	Resolution of Disagreements/ Study Plan Determination (if necessary)	Within 30 days of filing responses to disputes	9/18/2020
§5.15	Georgia Power	Conduct Second Season Field Studies	May 2020 – April 2021	
§5.15 (f)	Georgia Power	File Updated Study Reports	No later than two years from Study Plan approval	5/19/2021
§5.15(c)(2)	Georgia Power	Second Study Results Meeting	Within 15 days of Updated Study Report	6/3/2021
§5.15(c)(3)	Georgia Power	File Study Results Meeting Summary	With 15 days of Study Results Meeting	6/18/2021
§5.15(c)(4)	Stakeholders/ FERC	File Meeting Summary Disagreements/ Modifications to Study Requests/Requests for New Studies	Within 30 days of filing Meeting Summary	7/19/2021
§5.15(c)(5)	Georgia Power/ Stakeholders	File Responses to Disagreements/Modifications/ New Study Requests	Within 30 days of disputes	8/18/2021
§5.15(c)(6)	FERC	Resolution of Disagreements/ Study Plan Determination (if necessary)	Within 30 days of filing responses to disagreements	9/17/2021
§5.16(a)	Georgia Power	File Preliminary Licensing Proposal (or Draft License Application) with the FERC and distribute to Stakeholders	Not later than 150 days before final application is filed	8/3/2021

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18 C.F.R.	Lead	Activity	Timeframe	Deadline
§5.16 (e)	FERC / Stakeholders	Comments on Georgia Power Preliminary Licensing Proposal, Additional Information Request (if necessary)	Within 90 days of filing Preliminary Licensing Proposal (or Draft License Application)	11/1/2021
§5.17 (a)	Georgia Power	License Application Filed	Within 2 years of license expiration.	12/31/2021