ENVIRONMENTAL ASSESSMENT

Application for Non-Capacity License Amendment

Georgia Power Company

Wallace Dam Hydroelectric Project

FERC Project No. 2413

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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FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF HYDROPOWER ADMINISTRATION AND COMPLIANCE

1.0 INTRODUCTION

Project Name: Wallace Dam Hydroelectric Project

FERC Project No.: 2413

1.1 Application

Application Type:	Non-Project Use of Project Lands and Waters; sediment removal and discharge associated with hydraulic sand mining operation
Date filed:	August 30, 2019, supplemented on April 22, 2021, and April 26, 2021
Licensee:	Georgia Power Company
Water Body:	Lake Oconee
Nearest Town:	Madison, Georgia
County & States:	Greene County, Georgia

1.2 Purpose and Need for Action

On August 30, 2019, supplemented on April 22, 2021, and April 26, 2021, Georgia Power Company (licensee), licensee for the Wallace Dam Hydroelectric Project, FERC Project No. 2413, filed an application requesting Federal Energy Regulatory Commission (Commission) authorization to allow River Sand Inc. (RSI) the use of Wallace Dam Hydroelectric Project lands and waters for year-round hydraulic sand mining and discharge of water. The sand sorting facility and stockpiles will be located inside the project boundary on private land that the licensee has flowage right over and the sand dredge and intake pipe will be located inside the project boundary in the reservoir on project owned lands. Mined sand is used in asphalt for road construction, snow and ice control, in concrete, as backfill for construction, and in landscaping. The location of the proposed action is in the project reservoir, and not located in the nearby Oconee National Forest. The dredging area partially overlaps with the area previously approved on February 28, 2019, for Greenbriar Sand Company to operate a hydraulic dredge for commercial sediment removal purposes.

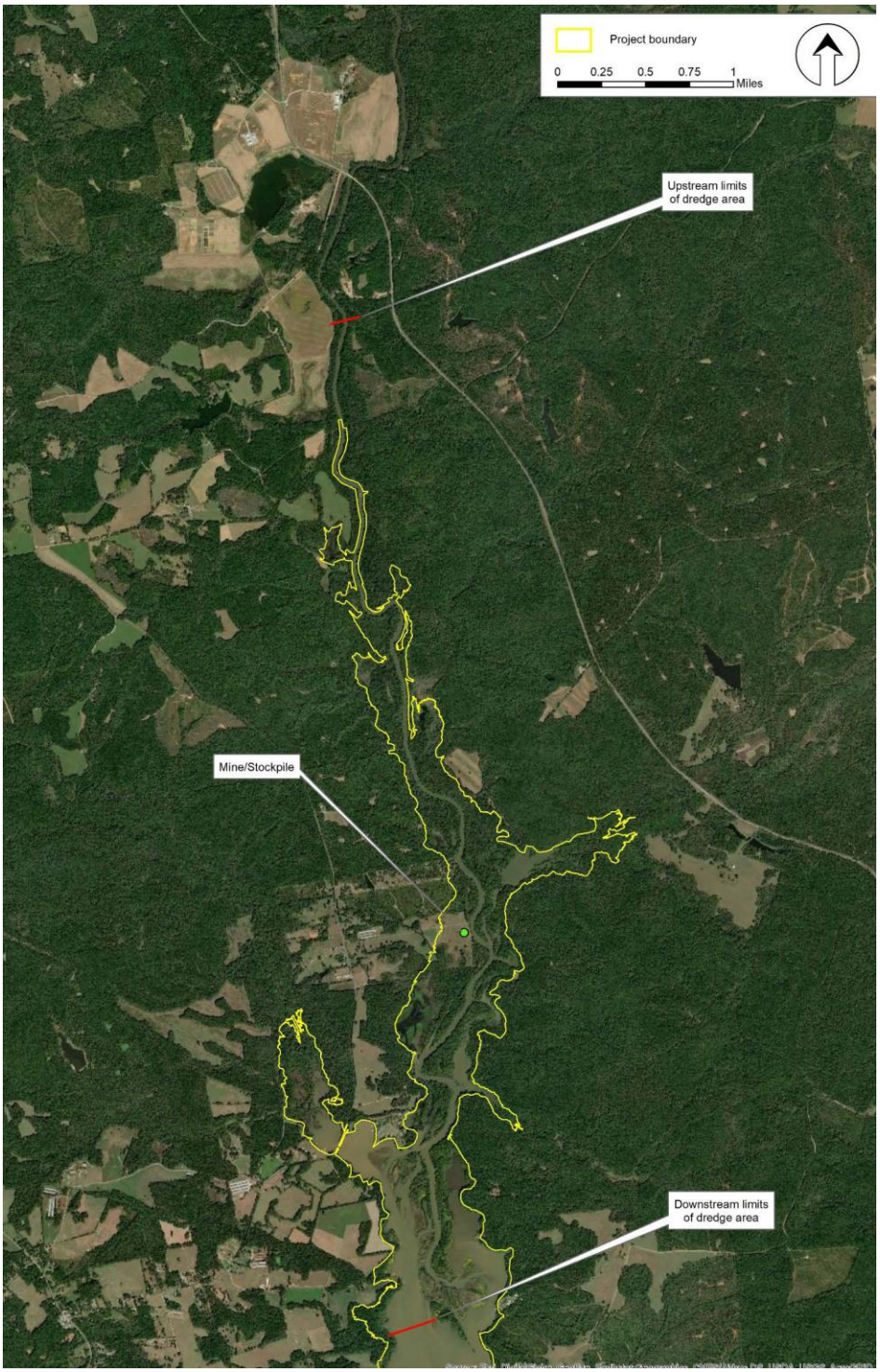

Figure 1. Proposed sand mining site location. Sorting facility is located at 2361 CM Copeland Rd. Madison, GA. (source: Georgia Power Company's August 30, 2019 filing with the Commission). The yellow line represents the project boundary.

This Environmental Assessment (EA) analyzes the environmental effects of the licensee's proposed action, to authorize a non-project sand mining operation, and provides a basis for the Commission to make an informed decision on the licensee's August 30, 2019, request.

1.3 Statutory and Regulatory Requirements

Clean Water Act

Under section 401 of the Clean Water Act, non-federal applicants seeking federal approval to use state waters or waterways must obtain either certification from the appropriate state water pollution control agency, verifying compliance with the Clean Water Act, or a waiver of certification by the appropriate agency. The proposed action is located in Georgia; therefore, the Georgia Department of Natural Resources (Georgia DNR) Environmental Protection Division is the appropriate state water pollution certifying agency to act on RSI's request. By letter dated May 1, 2019,[1] the Georgia DNR indicated that RSI's facility would be covered by the National Pollutant Discharge Elimination System General Permit (NPDES) for Sediment Pond Dischargers, Permit No. GAG100036.

Section 404 of the Clean Water Act establishes a program to regulate the discharge of dredged or fill material into waters of the United States. Activities in waters of the United States regulated under this program include fill for development, water resource projects, infrastructure development, and mining projects. The U.S. Army Corps of Engineers (Corps) issued a letter verifying coverage under the Nationwide Permit 16 (NWP 16) for the proposed action on March 19, 2019, that expires on March 18, 2022.

Endangered Species Act

Section 7(a)(2) of the Endangered Species Act requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or result in any adverse modification of the critical habitat of such species. On January 30, 2019, FWS issued a letter informing RSI that one federally-listed species, harperella (*Ptilimnium nodosum*), may occur in the proposed dredging area of the Wallace Dam project. No proposed or candidate species are known to occur within

[1] The Georgia DNR's letter is included in the licensee's August 20, 2018 filing.

the project boundary or be affected by the project. No designated critical habitat is located within the project boundary.

The licensing environmental assessment[2] issued October 10, 2019, and the licensing order issued June 18, 2020, both concluded that harperella is not known to occur within the project boundary and was not observed during Georgia Power's 2016 surveys (Georgia Power 2016d). No further information is available to indicate that the presence of harperella in the project has changed since that time. Therefore, the proposed sand mine would have no effect on harperella and no further action is required under the Endangered Species Act.

The Mining Act of 1971

Article 7 of the Mining Act of 1971 requires any entity seeking to extract minerals by mining to do so in such a way as to minimize its effects on the surrounding environment, and to conduct proper reclamation of mined land to prevent undesirable land and water conditions that would be detrimental to the general welfare, health, safety, beauty, and property rights of Georgia citizens. The Georgia DNR issued a Surface Mining Land Use permit 2026-19 allowing the proposed action on May 22, 2019.

National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA[3]) and its implementing regulations[4] requires that federal agencies "take into account" how each of its undertakings could affect historic properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking.[5] Historic properties are districts, sites, buildings, structures, traditional cultural properties, and

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[2] See page 6

[3] 54 U.S.C. §§ 306108 et seq. (2016). The National Historic Preservation Act was recodified in Title 54 in December 2014.

[4] 36 C.F.R. 800.5(a)(2)(vii).

[5] An undertaking means "a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including those carried out by or on behalf of a federal agency; those carried out with federal financial assistance; and those requiring a federal permit, license, or approval." 36 C.F.R. § 800.16(y). Here, the undertaking is the proposed amendment to the Wallace Dam Hydroelectric Project.

objects significant in American history, architecture, engineering, and culture that are eligible for inclusion in the National Register of Historic Places (National Register). In this document, we also use the term "cultural resources" for properties that have not been evaluated for eligibility for the National Register. Cultural resources represent items, structures, places, or archaeological sites that can be either prehistoric or historic in origin. In most cases, cultural resources less than 50 years old are not considered historic. Section 106 also requires that the Commission seek concurrence with the state historic preservation office on any finding involving effects or no effects on historic properties and consult with interested American Indian tribes or Native Hawaiian organizations that attach religious or cultural significance to historic properties that may be affected by an undertaking.

To meet the requirements of section 106, the Commission executed a Programmatic Agreement (PA) with the Georgia SHPO for the protection of historic properties and archaeological sites within the project's area of potential effect (APE) from the effects of continued operation and maintenance of the Wallace Dam Project. The terms of the PA would ensure that Georgia Power addresses and treats all historic properties identified within the project's APE through the implementation of the project's approved HPMP. On March 31, 2021, the Commission approved the final Historic Properties Management Plan for the Wallace Pumped Storage Project.[6]

2.0 PROJECT DESCRIPTION

2.1 Wallace Dam Hydroelectric Project Description

The Commission issued an original license for the Wallace Dam Hydroelectric Project to Georgia Power Company on August 6, 1969.[7] The Commission issued a new license on June 18, 2020, after the August 30, 2019, non-project use application was filed.

The Wallace Dam Hydroelectric Project is located on the Oconee River at river mile 173 and occupies federal land administered by the U.S. Forest Service (Forest Service). Following construction, the reservoir (Lake Oconee) reached the full pool elevation of 435 feet (ft) plant datum (PD) in May 1980 and commercial operation

[6] *Georgia Power Company*, 174 FERC ¶ 62,192 (2021). Both the PA and the HPMP were implemented after the application for non-project use was filed with the Commission for approval.

[7] Order Issuing New License (1969 WL 11295 (F.P.C.))

commenced in December 1979. The project consists of a reservoir, an earth and concrete gravity dam, a semi-outdoor type powerhouse integral with the dam, a five-gate spillway, a 20,200-ft-long excavated tailrace (into Lake Sinclair, the reservoir for Georgia Power's downstream Sinclair Project, FERC Project No. 1951), a 230-kilovolt (kV) substation, a 15.67-mile-long transmission line, and appurtenant facilities. The main dam has a crest elevation of 445 ft PD, a crest length of 2,395 ft, and height above streambed of 120 ft. The project has an installed capacity of 321.3 megawatts.

Georgia Power operates the Wallace Dam Project in a pumped storage mode for the purpose of peaking power generation. Generation releases occur during peak power demand hours to meet the electrical system demand with renewable, low-emission power that generates no wastes for disposal. Some of this water subsequently passes downstream for hydropower generation at the Sinclair Project to meet both electrical system demand and river flow requirements in the Oconee River downstream of Sinclair Dam.

3.0 PROPOSED ACTION AND ALTERNATIVES

3.1 Description of Licensee's Proposal

A. Proposed Action

The licensee requests that the Commission approve a non-project use of project lands and water, to authorize RSI to conduct hydraulic sand mining in Lake Oconee. The August 30, 2019, submittal identifies the proposed upstream and downstream limits of dredging (see Figure 1). These boundaries were included in the limits as permitted by the Georgia Environmental Protection Division in the Surface Mining Permit. The licensee further identifies how they will stay within this area in the April 22, 2021 submittal by describing the installation of a high-sensitivity global positioning system (GPS) with DGPS/WAAS correction onboard the dredge that will allow the operator to stay within the predetermined boundaries. The dredge platform will also be equipped with sonar to identify the original channel and operations will be limited to that area. Furthermore, permits and permissions obtained and described in this project do not allow for dredging of the existing shoreline or banks. As noted previously, the operator's intention is to stay within the limits of the original river channel. Archaeological sites recorded prior to impoundment of the project reservoir are located in the adjacent floodplain and terraces rather than the river channel itself. Dredging would occur within the upper reaches of the reservoir where the Oconee River enters Lake Oconee. RSI anticipates removing 5,000 to 25,000 tons of sand per year. The dredge would pump sand to a 7-acre processing area inside of the project area on private land the licensee has flowage rights over. The dredge would suction sand and water from the bottom of the river to be transported via pipeline

to the processing area, where sand would be screened and sorted for removal and distribution. Excess water would be processed through a settling pond to remove sediment, eliminate turbidity, and then returned to Oconee Lake via a pipeline near the same site as the withdrawal. The settling pond would be located at the processing area.

B. Proposed Environmental Protection Measures

The licensee's application indicates that RSI will comply with the consulted agencies' recommendations and conditions included in any pertinent permits or approvals. The Corps NWP 16 states that the licensee will use a settling pond to prevent the return of fines to the river. The Georgia DNR NPDES Permit requires that the discharge of suspended solids not be more than a daily average of 55 milligrams per liter (mg/L) or a daily instantaneous maximum of 110 mg/L. RSI is committed to containing slurry within the pipe and limiting disturbance by only dredging in open water within the historical river channel with no stream bank disturbance, by not dredging established wetlands, and by not using chemicals or additives. The Georgia DNR Wildlife Resources Division's approval included 9 conditions in the September 24, 2015 letter. No oils, grease, or other pollutants will be discharged. Fallen trees will not be trimmed or cut, there will be no dredging within 5 feet of the shoreline, trees cannot be used as anchors, and removal of logs, stumps or woody debris will not be allowed. Riverbanks must be replanted with native vegetation in degraded areas, and rocks greater than one inch must be returned to the river. The dredging operation should not restrict anglers from the nearby public boat ramp. Additionally, RSI must coordinate with the Forest Service given the proximity of the project to federal land administered by the Forest Service. In addition to these conditions, RSI must mark their platform and slurry pipe with navigational buoys, and RSI must coordinate with Georgia Power regarding the placement of navigational buoys.

Georgia DNR Environmental Protection Division issued a notice of coverage under the General Permit for Sediment Pond Dischargers and Sand and Gravel Dredgers on May 1, 2019 and assigned NPDES Permit Number GAG100036. This permit requires RSI to comply with effluent limitations under the terms and conditions of the permit. In addition, the Georgia DNR Environmental Protection Division issued Surface Mining Permit 2026-19 on May 22, 2019, which authorizes the use of 7 acres for the plant site. The Corps issued an authorization under Nationwide Permit 3(a) (NNWP 3(a)) and NWP16 on March 19, 2019. The Corps authorization required RSI to obtain all appropriate federal, state, and local authorizations for the activity and abide by all requirements of the Georgia Erosion and Sedimentation Act of 1975. Based on consultation with the Muscogee (Creek) Nation and the Georgia SHPO, as discussed below in *Section 5.1 subsection F* of the EA, the licensee filed a plan with the Commission on April 22 and supplemented on April 26, 2021, to avoid and mitigate

adverse impacts to archaeological resources.

3.2 No-Action Alternative

Under the no-action alternative, the Commission would deny the licensee's application and the licensee would not authorize the sand mining proposal in Lake Oconee by RSI. Under this alternative, the area would not be developed for sand mining, and no potential impacts to the aquatic habitat or riparian zone would occur. Conversely, no removal of sediment from the upper reservoir would occur. Removal of sediment from the upper reservoir is seen as beneficial for project operations, water storage, navigation, recreation, and shoreline landowners.

3.3 Other Action Alternatives

The licensee's application does not consider other action alternatives. RSI may have considered other dredging locations, within Lake Oconee or in other area reservoirs, but this is unknown. The licensee has a private landowner who owns land adjacent to the project reservoir inside of the project boundary for the processing facility, so access in the desired area is likely a factor in the choice of this area. For these reasons, the use of an alternative location is not an action requiring further consideration.

4.0 AGENCY CONSULTATION AND PUBLIC INVOLVEMENT

4.1 Licensee's Pre-filing Consultation

Prior to filing its application with the Commission on August 30, 2019 and supplemented on April 22, 2021, and April 26, 2021, RSI consulted with the FWS, Corps, Greene County Board of Commissioners, Georgia Power, Georgia DNR Wildlife Resources Division, Georgia Historic Preservation Division, Georgia DNR Environmental Protection Division (collectively, resource agencies), and the Muskogee (Creek) Nation. RSI has received all applicable permits and associated approvals from the resource agencies and the Muskogee (Creek) Nation.

4.2. Commission's Public Notice

On October 21, 2019, the Commission issued a public notice of the licensee's August 30, 2019 non-project use application, establishing 30 days as the deadline for providing comments and interventions. On December 12, 2019, the Commission received a request from the Muskogee (Creek) Nation for Nation to Nation Consultation regarding the proposal. As a result, the Commission reissued the public notice on May 10, 2021, and referenced the April 22, 2021 and April 26, 2021 supplemental filings in

the notice. The Commission received one filing during the notice period from the Muskogee (Creek) Nation.

5.0 ENVIRONMENTAL ANALYSIS

In this section of the EA, the affected environment for each resource is presented based on the licensee's August 30, 2019 application, the supplements filed on April 22, and April 26, 2021, volume 2 of the licensee's relicensing application filed May 31, 2018, and the Commission's licensing EA issued October 10, 2019. Staff analysis of probable impacts from the proposed action is included for each resource under Environmental Effects.

5.1 General Area Description

The Wallace Dam Project is located on the Oconee River at river mile 172.7 in the upper Oconee River basin of the greater Altamaha River basin. The Altamaha River basin includes the Oconee, Ocmulgee, and Altamaha Rivers. The Middle Oconee and North Oconee Rivers originate in the Piedmont physiographic province (Edwards et al., 2013). These streams meet at the southern border of Athens-Clarke County to form the Oconee River about 20 river miles upstream of Lake Oconee. The Oconee River flows south for 220 miles and joins the Ocmulgee River in the Coastal Plain physiographic province to form the Altamaha River which flows 137 miles southeast to the Atlantic Ocean. The Altamaha River basin drains an area of 14,000 square miles (sq mi) located entirely within Georgia.

The Oconee River basin drains a total watershed area of 5,330 sq. mi in east-central Georgia. The watershed upstream of Wallace Dam covers an area of 1,830 sq mi, comprising about 34 percent of the Oconee River basin. From Wallace Dam, the river flows immediately into Lake Sinclair, a 15,330-acre reservoir formed by Sinclair Dam. From Sinclair Dam, the Oconee River flows 143 miles to its confluence with the Ocmulgee River. About 5 miles downstream of Sinclair Dam, the Oconee River enters the Fall Line Hills District, the hilly transition zone that descends from the Piedmont into the Coastal Plain (Edwards et al., 2013).

5.2 Resource Area Descriptions and Analysis

A. Geology and Soils

Affected Environment

The Wallace Dam Project is located in the Washington Slope District of the Piedmont physiographic province (Clark and Zisa, 1976). The Piedmont is a hilly upland province underlain by crystalline metamorphic and igneous rocks. The topography is gently rolling and descends from around 700-ft elevation near its northern limits to about 500-ft elevation at its southern margin. Streams in the Washington Slope District occupy broad, shallow valleys separated by broad, rounded divides, with local relief of 50 to 100 ft (Clark and Zisa, 1976).

The Project is located in the Southern Outer Piedmont ecoregion. This ecoregion has low hills, major forest types of loblolly-shortleaf pine, underlying rocks of gneiss, schist and granite, fine sandy loam soils, and a deep, red clayey subsoil (Griffith et al., 2001; Edwards et al., 2013). The Lake Oconee shoreline is characterized by gently sloping topography in most areas.

Environmental Effects

Because the issued permits require the licensee to use a settling pond, protect riparian vegetation, avoid dredging within 5 feet of the shoreline, and revegetate damaged areas, along with the requirements to prevent erosion, we have not identified substantive issues related to geology or soils regarding the proposed action. Sedimentation in the project reservoir is a concern at Wallace Dam Project as a result of the current geologic and land use conditions. As such, the removal of sediment from project reservoirs is generally considered beneficial because it improves navigation and prevents the loss of storage capacity by sediment fill.

The proposal overlaps with the dredging area of Greenbriar Sand Company; therefore, Commission staff considered the potential for the two projects to take an excessive amount of sand from the area. Commission staff find this to be unlikely because sedimentation in the project reservoir is a concern at Wallace Dam Project as a result of the current geologic and land use conditions which have resulted in a heavy sediment load in the upper Oconee River that will constantly replace the removed sediment. Therefore, no cumulative adverse effects are anticipated.

B. Water Quality

Affected Environment

Historically, quarterly water quality monitoring data collected by Georgia Power have indicated good overall water quality conditions in Lake Oconee (Georgia Power, 2015a). Georgia Power (2016b) conducted water quality monitoring of Lake Oconee from August 2015 through August 2016. Monitoring included monthly vertical profile measurements of water temperature, dissolved oxygen (DO), pH, specific conductivity, and turbidity at 1-meter intervals throughout the water column at nine stations. Surface grab samples were collected quarterly at six stations and analyzed for a range of water chemistry parameters. In addition, Georgia Power (2016b) conducted hourly measurements of vertical profiles in Lake Oconee over the course of two day-night sampling events in summer 2016 to represent normal summer generation and pumpback operations. Lake Oconee water quality monitoring, including vertical profiles and water chemistry, continued quarterly in a second season of study from fall 2016 through summer 2017 (Georgia Power, 2017b).

Quarterly water chemistry data indicated good overall water quality conditions in Lake Oconee for the duration of the two-year study (Georgia Power, 2016b, 2017b). As with historical data, total phosphorus concentrations, turbidity, and fecal coliform densities for the two-year period were usually higher at upstream or tributary stations, indicating likely influences from upstream urban runoff and other nonpoint sources. Trophic State Index scores continued to indicate mesotrophic conditions.

Monthly water quality vertical profiles recorded for Lake Oconee from June 2015 through August 2016 revealed the extent of mixing in Lake Oconee that occurs as a result of pumpback operations. Typically, southeastern reservoirs exhibit summertime thermal stratification with warmer temperatures near the surface, a sharp decrease in temperature at mid-depths, and cooler waters at the bottom. The monthly temperature profiles at Station OC1 in the Wallace Dam forebay show that the water column remained well mixed for most of the year with little variation from the surface to the bottom. Very limited thermal stratification was observed in the late spring and early summer (March-April 2016, June 2015, and June 2016). The monthly DO profiles at Station OC1 exhibited a similar pattern of relatively uniform values for most of the year, indicative of a well-mixed water column, but there was a more pronounced gradient of declining DO values with increasing depth observed in June 2015, June and July 2016, and to a lesser extent in March and April 2016. DO gradients near the surface in summer months were likely due to photosynthesis.

Seasonal water quality vertical profiles of Lake Oconee collected in 2003-2017 indicate that vertical stratification becomes most developed in the spring and early summer, as surface temperatures rise and cooler water is still available (Georgia Power, 2016b, 2017b). By August, the water column exhibits warmer temperatures and only narrow temperature variation from the surface to the bottom. The effects of mixing on reduced temperature variation were most evident in the forebay, at other mainstem reservoir stations, and the tributary embayments closest to Wallace Dam.

Environmental Effects

Under the proposed action, RSI Sand would remove sediment from the reservoir. The dredged water would not be chemically treated before being returned to the reservoir at the site of the processing facility, though it would be retained in a settling pond to allow an acceptable turbidity level to be achieved. While the targeted sand is not nutrient-rich, it may demonstrate minor improvements to nutrient loading. Otherwise, no measurable adverse impacts to water quality are anticipated.

C. Aquatic Resources

Affected Environment

The upper Oconee River basin principally supports warm-water fisheries. The impounded waters of Lake Oconee dominate aquatic habitats within the project boundary and the principal fisheries inhabiting project waters are reservoir fisheries. Wallace Dam discharges directly into Lake Sinclair, which also supports a reservoir fishery. Free-flowing streams in the project area are the Oconee River, Apalachee River, and other tributaries entering Lake Oconee. The Sinclair Project impounds 29.7 miles of river and separates Wallace Dam from the lower free-flowing reach of the Oconee River. The Oconee River flows 143 miles from Sinclair Dam through the Fall Line Hills District and into the Coastal Plain to join the Ocmulgee River and form the Altamaha River.

The upper Oconee River basin in the vicinity of the Wallace Dam Project supports about 57 species of fish. The families with the most species include minnows, catfishes, sunfishes, suckers, and perches. Standardized surveys conducted by Georgia DNR have documented the occurrence of at least 28 species of fish within Lake Oconee (GDNR, 2014a); several other non-game species not targeted by the surveys also likely reside in Lake Oconee. The principal sport fishes inhabiting Lake Oconee include largemouth bass, black crappie, striped bass, white bass-striped bass hybrids (hybrid bass), white bass, channel catfish, blue catfish, flathead catfish, and a variety of sunfishes. Nine fish

species believed to be introduced and non-native to the Oconee River basin occur in the project vicinity.

The area of the proposed sand mine is composed of sand that is shifting and has a high rate of deposition because it is a lentic area that is near the inflow from the lotic system. The shifting sand, high sediment rates, and lack of structure would render this area of little value for spawning habitat for the species present. Crappie spawn in cover which will not be present to a great extent in this area. Stripe bass and hybrid bass are not known to spawn in the reservoir. White bass generally spawn over rocky shoals which are not present in the proposed sand mine area. Catfish spawn in undercut banks and hollow logs, both of which are not likely to be present in the mining area. Some sunfish species or largemouth bass may attempt spawning in the area, but spawning success is unlikely due to the high sedimentation rates and shifting sands. Additionally, the proposed mining area is less than 0.1 percent of the reservoir surface area, and the bottom type habitat is common in the reservoir providing substantial habitat for spawning. The area will not be suitable spawning area for any of the lotic species that exist upstream of this lentic area because of their riverine requirements.

Lake Oconee covers 19,050 acres and has 374 miles of shoreline. The bottom is mostly clay with rocky outcroppings in some areas in the lower end of the reservoir, particularly around the confluence of the Oconee River and Richland Creek. In the upper reaches, it consists of mostly deposited silt and sand. Standing timber and fish plots (stands topped out below the surface) are distributed throughout the lake and provide cover for black crappie and other sunfishes and serve as nursery habitat for forage species, including gizzard shad and threadfin shad (Van den Avyle and Petering, 1988). When Lake Oconee was constructed, about 1,250 acres of timber were left standing in flooded channels and smaller inlets providing wildlife habitat. Fifty timber stands totaling about 235 acres were cut off 10 feet below the full-pool surface to provide submerged habitat for reservoir fish. Other important fish habitat structures in Lake Oconee include anchored fish attractors, artificial reefs, native aquatic vegetation, sunken trees, spawning gravel, and riprap.

Based on a shoreline reconnaissance survey of Lake Oconee and the Wallace Dam tailrace area conducted in June 2016 (Georgia Power, 2016a, 2016c), the most frequently observed sources of littoral-zone fish cover, in descending order, were overhanging vegetation, docks and piers, riprap, emergent vegetation, and large woody debris. On the basis of proportional length, riprap was the predominant source of shoreline fish cover, followed by overhanging vegetation, docks, and piers. Riprap was most prevalent in the lower reservoir, middle reservoir, and Richland Creek sections of Lake Oconee, where residential and resort development are widespread, and riprap is commonly used to

stabilize shorelines. Overhanging vegetation was the predominant cover type in the less developed upper reservoir section.

Lake Oconee supports a popular fishery for largemouth bass, black crappie, striped bass, hybrid bass, channel catfish, blue catfish, and a variety of other species (GDNR, 2017a). The lake has numerous public access areas providing for a wide range of boat- and bank-fishing opportunities and largemouth bass fishing tournaments. For the years 1996 through 2014, the average tournament bass weight ranged from 1.8 to 2.1 pounds and ranked among the top five Georgia reservoirs in 17 of the 19 years (Georgia Bass Chapter Federation, 1996-2014). GDNR annually stocks striped bass and hybrid bass into Lake Oconee. Since 2011, stocking numbers have transitioned away from a predominance of striped bass to that of hybrid bass, based on angler preferences (GDNR, 2017a). Current stocking rates are about 15 hybrid bass and 5 striped bass per acre. Lake Oconee also provides a popular year-round catfish fishery. Blue catfish and flathead catfish were introduced in the mid-1990's and their populations expanded rapidly (Homer and Jennings, 2011).

The Altamaha River basin is inhabited by freshwater mussel fauna consisting of about 18 species, seven of which are endemic to the basin (Johnson et al., 2012; Wisniewski et al., 2005). Two freshwater mussel surveys were conducted in summer 2016, one in Lake Oconee and the other in the Wallace Dam tailrace area (Dinkins, 2016a, 2016b). The surveys documented the occurrence of four native freshwater mussel species within the project boundary, none of which are listed as federally threatened or endangered, or state protected. All four species were found in both Lake Oconee and the tailrace area and include the Altamaha slabshell (*Elliptio hopetonensis*), inflated floater (*Pyganodon gibbosa*), paper pondshell (*Utterbackia imbecillis*), and the variable spike (*Elliptio* sp. cf. *icterina*).

The Lake Oconee mussel survey yielded 355 live specimens. All four species were found in the main channel and tributary embayments. The vast majority of mussels (98.3 percent) were found downstream of Interstate-20. The most common species was Altamaha slabshell, which comprised 71 percent of the live native mussels found during the survey, followed by inflated floater, paper pondshell, and variable spike. The largest number of live mussels (168) was found at a main-channel site located 2 kilometers (1.2 miles) upstream of Wallace Dam, near the reservoir forebay. This was the only site where boulders were present and the only site where all four species were found together in Lake Oconee.

Of the eight species of migratory fish known to occur in the Altamaha River basin, only two are known to occur in Lake Oconee, the striped bass and American shad. Both

are stocked, non-migratory populations that are not expected to successfully reproduce in the project reservoir.

Environmental Effects

The proposed mining operations would impact a two mile stretch in the upstream reaches of Lake Oconee. The affected area is relatively small and does not include any essential fish habitat. Moreover, there are no fish species of special concern known to occur in the project reservoir, and the proposal is not expected to affect spawning habitats due to the poor value of available habitat in the vicinity of the mine. Regarding mussel populations, impacts to aquatic habitat should be localized, and any minor increases in turbidity should not impact the populations especially since most mussels have been found to occur downstream of the proposed area. The non-impacted habitat in Lake Oconee appears to be more complex and beneficial for both mussels and warm water fisheries. Accordingly, the proposed action should not have any significant impacts on fish habitat, migratory fish, or mussel populations.

D. Terrestrial Resources

Affected Environment

The dominant terrestrial vegetative community types in the project area include mixed pine-hardwood forest, pine plantation/pine forest, and floodplain and riparian forest (Georgia Power, 2016d). Collectively, these three community types cover about 65.3 percent of the project area. Developed land covers 19.5 percent of the project area, while agricultural land covers 11.5 percent. The remaining 3.7 percent of the project area includes the transmission line easement, which consists mostly of herbaceous habitat types that include mesic slope and dry oak/pine forest, scrubshrub and emergent wetlands, and granite outcrops. Although small in area of coverage, granite outcrops provide unique habitats that often harbor sensitive plant species.

FWS determined that one species, listed under the Endangered Species Act, Harperella (*Ptilimnium nodosum)*, may occur in the project area; however, there is no documented presence or known habitat for the species and therefore, RSI's proposal would have no affect to this species.

Environmental Effects

Because the proposed action only impacts land which is currently in agricultural use, and does not include any vegetated project lands other than the riparian streambank, which is protected from vegetation removal by the permit conditions from the Georgia

DNR Wildlife Resources Division, the proposal is not likely to adversely impact plant communities. Also, there is no critical habitat for any terrestrial special status species in the Wallace Dam project area. For these reasons, Commission staff does not anticipate that the proposed mining activities would cause any adverse impacts to terrestrial resources.

E. Recreation Resources

Affected Environment

Georgia Power owns and operates seven project recreation facilities that provide for a variety of recreational opportunities. Six of the facilities are located on Lake Oconee, and one is on the west shoreline of the tailrace area. All seven facilities include a day-use area; six provide boat ramps, picnic tables, and restrooms; and three provide full-service campgrounds and swimming beaches. The Dyar Pastures Day use Area is the only facility located in the vicinity of the proposed sand mine.

Environmental Effects

The licensee does not propose any modifications to reservoir levels, ramping rates, or other hydraulic specifications that have the potential to affect anglers, boaters, canoeists, or other recreationalists that are not in the immediate area of the sand mining operations. The Georgia DNR Wildlife Resources Divisions approval requires that sand mine activities do not interfere with recreational anglers and boaters. Dredging operations have the potential to interfere with recreational navigation if the slurry pipe and platform are not well marked. To mitigate for this, Commission staff recommend that RSI sink parts of the dredge line to allow boat passage and mark the area with navigational buoys as required. The proposed mitigation should prevent any impediments to navigability in the proposed action area.

F. Cultural and Historic Resources

Affected Environment

Historic properties are cultural resources listed or eligible for listing in the National Register. Historic properties can be buildings, structures, or objects, districts (term that includes historic and cultural landscapes), or sites (archaeological sites or locations of important events). Historic properties also may be resources of traditional religious and cultural importance to any living community; such as an Indian tribe or a local ethnic group, that meet the National Register criteria; these properties are known as

traditional cultural properties. Cultural resources must possess sufficient physical and contextual integrity to be considered historic properties. For example, dilapidated structures or heavily disturbed archaeological sites, although they may retain certain historical or cultural values, may not have enough integrity to be considered eligible.

Section 106 of the NHPA requires the Commission to evaluate potential effects on properties listed or eligible for listing the National Register prior to any undertaking. An undertaking means a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including, among other things, processes requiring a federal permit, license or approval. Advisory Council on Historic Preservation (Advisory Council) regulations implementing section 106 define effects on historic properties as those that change characteristics that qualify those properties for inclusion for the National Register.

Determination of effects on historic properties first requires identification of historic properties within the APE. The Advisory Council's regulations define the APE as "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist." For this undertaking, the APE includes lands within the project boundary as well as lands outside of the project boundary where project construction and/or operation may affect historic properties.

As discussed in section 3.36 of the final relicensing EA issued on October 10, 2019,[8] the prehistoric and historic background in Georgia is generally divided among several stages or periods. The primary periods are: Paleo-Indian (10,000 to 8,000 BC); Archaic (8,000 to 1,000 BC; Woodland (1,000 BC to AD 1,000); and Mississippian (1,000 to 1,600 AD). In 1988, Brockington and Associates (Brockington) performed a cultural resource inventory of a 770-acre recreational tract of land located within the Wallace Dam Project, in Greene County. The Brockington study found a total of 52 cultural resources representing seven major types of cultural property. Ten of the 52 newly located were recommended as eligible for the National Register. This group of properties included one prehistoric quarry, six Lamar[9] open properties, one Lamar overhang, and two historic structural ruins. In 1995, Brockington performed a cultural resources re-verification study in order to evaluate 33 previously recorded sites within the project boundary. The re-verification assessment resulted in 28 of 33 sites being re-verified; three of which were recommended for continued monitoring as they are eligible or recommended potentially eligible for the National Register. In addition, Southeastern

[8] 84 Fed. Reg. 73,54 (March 4, 2019).

[9] A phase in Late Mississippian Period (AD 1350-1540).

Archaeological Services, Inc. (SAS) performed an archaeological survey of the Reynolds Plantation. The survey of the 1,860-acre property documented 161 field sites and 41 low density artifact occurrences that depict an area that was intensively used over the period from 9000 BC to AD 1600. Most of the sites were determined ineligible for the National Register; however, two sites were recommended eligible and 29 sites were determined to be potentially eligible and warranting assessment. The eligible sites were primarily old sites and habitation sites, while many of the potentially eligible sites were old home sites, lithic or pottery scatters, and one old sawmill site. The survey resulted in the discovery of 25 archaeological sites, including 11 low density scatters. SAS recommended three of the five Reynolds Plantation sites as eligible for listing in the National Register.

Since 1996, Georgia Power has annually monitoring seven archaeological sites at the Wallace Dam Project. Current monitoring efforts include one site determined eligible for prehistoric artifact/shell scatter, and six recommended eligible sites consisting of prehistoric artifact/shell scatters, prehistoric Indian lithic scatters, and rock piles. Results from 2018 monitoring activities found no changes in status or indications of new disturbances for any of the Wallace Dam Project cultural resources.

Phase II testing was conducted by TRC Environmental Corporation (TRC) in 2016 at three sites (9GE751, 9GE952, and 9HK23) to assist in determining National Register eligibility, and to aid in evaluating the need for continued cultural resources monitoring. Sites 9GE751 and 9HK23 were previously recommended eligible for listing on the National Register, while the eligibility of 9GE952 was unknown. Based on the results of the Phase II testing, sites 9GE751 and 9HK23 were recommended as not being eligible for listing in the National Register (TRC, 2016a). Georgia Power believes that further monitoring of these two sites is not warranted under its new license. The investigation of site 9GE952 found that the site extends outside of the project boundary and may yet yield significant information. Accordingly, Georgia Power's archaeology firm, TRC, recommends that the National Register eligibility status of this site remain unassessed, monitoring continue, and stabilization measures be considered, because the greatest concentration of artifacts is close to the shoreline of the impoundment. In addition, based on the results of previous investigations, TRC recommended that site 9PM990 be added to the list of sites for monitoring under any new license.

Environmental Effects

In a December 4, 2019 letter, the Muscogee (Creek) Nation requested formal consultation with the Commission regarding the licensee's proposal to permit a non-project use of project lands for dredging. Pursuant to the Commission's Tribal Policy,[10]

[10] https://www.ferc.gov/industries/hydropower/indus-act/order-

on December 12, 2019, the Commission issued letters to all federally recognized Indian Tribes who may have interests in the project area, which included: Alabama-Quassarte Tribal Town, Coushatta Tribe of Louisiana, Eastern Band of Cherokee Indians, and the Muscogee (Creek) Nation. Commission staff requested the federally recognized tribes to provide any comments or concerns within 30 days of letter issuance. Only the Muscogee (Creek) Nation responded to the Commission's letter.

On January 21, 2020, Commission staff conducted a tribal consultation meeting with the Muscogee (Creek) Nation (Tribe) to learn more about historic properties in the proposed area. During the teleconference, the Tribe indicated that the licensee's proposal could adversely impact historic and cultural sites. On April 16, 2020, the Commission requested they file information about cultural sites of interest in the area that the licensee proposes to permit a non-project use of lands. In response, on May 18, 2020, they filed privileged information with the Commission regarding archaeological resources of interest that may be adversely affected by the proposal to permit a sand mining operation. In a June 24, 2020 letter, Commission staff requested the Muscogee (Creek) Nation to release the information contained in its May 2020 filing in order for the licensee to work with the them to develop measures to avoid, minimize, or mitigate any potential adverse effects to historic properties, as appropriate.

Also, on June 24, 2020, the Commission requested that the licensee develop a plan to avoid or mitigate potential adverse effects to cultural resources for Commission review and comment within 45 days of letter issuance. In addition, the licensee was required to include documentation of its consultation with the Tribe and Georgia SHPO when its plan was filed with the Commission. In a letter dated September 11, 2020,[11] the Georgia SHPO said they received additional information related to tribal consultation and concerns regarding archaeological sites for the proposed action. Therefore, the Georgia SHPO requested additional information to evaluate the proposal, as follows: (1) revised site plans an maps indicating the updated APE and include specific locations where dredging would occur within the original river channel as well as the 5-acre area where the sediment processing and staging area would be located; (2) information regarding the process for screening sediment dredged from the original river channel and any process for recording archaeological sites; (3) address measures to minimize impacts or avoidance of archaeological sites altogether; and (4) a copy of DePratter's 1976 and 1983 survey reports on the Wallace Reservoir.

2002/tribalpolicy.pdf

[11] On September 14, 2020, the licensee filed the letter on the record.

On April 22, 2021, and supplemented on April 26, 2021, the licensee filed its plan with the Commission to avoid and mitigate adverse impacts to archaeological resources. In the licensee's filings, they said they had completed a phase I archaeological survey in the area designated for sand processing and stock piling and provided the Tribe and the Georgia SHPO a report detailing the results of the investigation for review and comment on March 18, 2021. On April 9, 2021,[12] the Georgia SHPO issued a finding of no adverse effect under the condition that the excavation of the southernmost settlement pond be monitored by an archaeologist meeting the Secretary of Interior's Professional Qualifications and Standards for Archaeology, and a draft monitoring report be submitted to the Georgia SHPO for review and comment following the construction of the southernmost settling pond.

On May 10, 2021, the Commission issued a letter to the Muscogee (Creek) Nation asking them to notify us if the proposed mitigation measures developed by the licensee satisfied their concerns and requested that they file any comments or additional recommendations with the Commission within 30 days. In a letter filed with the Commission on June 2, 2021, they concurred with the Georgia SHPO's finding and recommended that a draft monitoring report be submitted for their review and comment following the construction of the southernmost settling pond to the depth of the intact cultural deposits. In addition, they requested to be informed and consulted in the event of inadvertent discoveries during the planned periodic daily inspections and/or during work at the site.

5.4 Impacts of No-Action Alternative

Under the no-action alternative, the Commission would deny the licensee's application. Georgia Power Company would not authorize sand mining in Lake Oconee. As such, no potential impacts to the aquatic habitat or riparian zone would occur. Conversely, no sediment would be removed and sediment loading of the reservoir could increase in the future.

6.0 CONCLUSIONS AND STAFF RECOMMENDATIONS

6.1 Conclusions

If implemented in compliance with the state and federal permits described above, the proposed action would not result in any significant environmental effects or significant cumulative impacts. The potential impacts to historic or cultural resources were avoided or mitigated by the measures provided in the licensee's April 22 and April

[12] The letter was filed with the Commission on April 26, 2021.

26, 2021 filings. There are no known critical habitat for threatened or endangered species in the proposed area of impact. Furthermore, the proposed sand mine is unlikely to affect water quality or aquatic resources because of the erosion prevention and settling pond measures required by the permits. Additionally, the area is unlikely to be of value for fish spawning habitat because of the high sedimentation rates, shifting sands, and lack of cover. RSI's proposed dredging operations should prevent impacts to public recreation by sinking parts of the pipeline and placing navigational buoys to avoid any impediments to navigation in the proposed action area. The applicant's processing site is inside of the project boundary on private land previously used for agricultural purposes, and the state and federal permits require RSI to maintain the integrity of the riparian corridor. As such, it is not likely that significant impacts would occur.

6.2 Staff Recommendations

Due to the extensive consultation and permit conditions required of RSI and Commission approval of the non-project use, the proposed action includes considerable environmental and recreation protection measures. To ensure that project waters are properly protected, Georgia Power should include, as conditions of any permit or authorization it issues under this application, provisions for RSI to monitor its compliance with turbidity, sedimentation, and erosion. Georgia Power should inform RSI of any recreation events on Lake Oconee that may require any additional sand mining operation modifications to avoid impacts to recreation and ensure that the submerged pipe and platform are appropriately marked with navigational buoys.

In accordance with section 106 of the NHPA, Georgia Power has consulted with the Georgia SHPO and Native American tribes to determine the effects to cultural resources due to the proposed action. Georgia Power's proposal for non-project use of lands and waters may adversely impact historic and cultural sites. Therefore, we recommend that the licensee's plan to avoid and mitigate adverse impacts to archaeological resources be incorporated into any amendment order to mitigate the adverse effects to cultural resources. In addition, we are requiring the licensee to file a copy of the monitoring report following the construction of the southernmost settling pond to the depth of the intact cultural deposits The licensee must include in its filing documentation of its consultation with the Georgia SHPO and the Muscogee (Creek) Nation. We also recommend provisions that the licensee to notify the Commission, Georgia SHPO, and the federally recognized tribes if there are any inadvertent discoveries of cultural resources.

If cultural or historical material are discovered, the operator will immediately stop work and contact Georgia Power. Georgia Power will consult with the Georgia SHPO and Tribes to determine any necessary next steps. If human remains are encountered,

Georgia Power will take steps to secure the area and notify local law enforcement with jurisdiction over the area per Georgia Code (OCG 31-21-6 [a]). If it is determined that the remains are historic and that no investigation of death is required, then Georgia Power will ensure that SHPO and Tribal Historic Preservation Officers(s) are notified (OCG 31-21-6 [b]). If the remains are determined to be Native American, Georgia Power will consult with federally recognized Tribes to determine an appropriate treatment plan.

The request for non-project use of project lands and waters incorporates numerous prior recommendations by the resource agencies. Approval and implementation of the proposed action would have no significant adverse impacts on any environmental resource analyzed in this EA. Also, the proposed action would not produce or significantly add to any existing cumulative environmental impacts. Based on our analysis, we recommend that the proposed action be approved.

6.3 Finding of No Significant Impact

If the Commission approves the licensee's request to conduct sand mining operations in Lake Oconee based on our independent analysis, the proposed action would not constitute a major federal action significantly affecting the quality of the human environment.

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