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

February 2019
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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 20, 2018

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 20, 2018, 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 Greenbriar Sand Company (Greenbriar Sand) the use of Wallace Dam Hydroelectric Project lands and waters for year-round hydraulic sand mining and discharge of water. Only the sand dredge and intake pipe will be located inside the project boundary as the sorting plant site is located outside of the project boundary. 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.
Figure 1. Proposed sand mining site location (source: Georgia Power Company’s August 20, 2018 filing with the Commission).
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 20, 2018, 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 Greenbriar Sand’s request. By letter dated May 1, 2018, the Georgia DNR indicated that Greenbriar Sand’s facility would be covered by the National Pollutant Discharge Elimination System General Permit (NPDES) for Sediment Pond Dischargers, Permit No. GAG100031.

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 permit for the proposed action on May 23, 2018 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. Seven federally-listed species may occur in the Wallace Dam project area. These species include the endangered red-cockaded woodpecker (Lueconotopicus Borealis), harperella (Ptilimnium nodosum), black-spored quillwort (Isoetes melanospora), Michaux’s sumac (Rhus michauxii), and mat-forming quillwort (Isoetes tegetiformans), and the threatened wood stork (Mycteria americana) and little amphianthus (Amphianthus pusillus). No proposed or candidate species are known to

1 The Georgia DNR’s letter is included in the licensee’s August 20, 2018 filing.
occur within the project boundary or be affected by the project. No designated critical habitat is located within the project boundary. The listed species are not known to occur in the immediate area of the proposed sand mine. By letter dated February 21, 2018, the U.S. Fish and Wildlife Service (FWS) concurred with Greenbriar Sand that the proposed action would not adversely impact any federally-listed species.

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 allowing the proposed action on May 2, 2018.

National Historic Preservation Act

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

By letter dated March 5, 2018, the Georgia DNR Historic Preservation Division indicated that no known historic or cultural resources would be affected by the proposed action.

2.0 PROJECT DESCRIPTION

2.1 Wallace Dam Hydroelectric Project Description

The Commission issued a license for the Wallace Dam Hydroelectric Project to Georgia Power Company on August 6, 1969. The licensee filed for relicensing on May 31, 2018. The following description of the Wallace Dam Project is from the relicensing application.

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2 The FWS’ letter was filed on February 15, 2019.
3 The Georgia State Historic Preservation Office’ letter is included in licensee’s August 20, 2018 filing.
4 Order Issuing New License (1969 WL 11295 (F.P.C.))
The Wallace Dam Hydroelectric Project lies on the Oconee River at mile 173. It was built and the reservoir reached the full pool elevation of 435 feet (ft) plant datum (PD) by May 1980. Commercial operation began in December 1979. The Project consists of a reservoir (Lake Oconee), 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, P-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 Greenbriar Sand to conduct hydraulic sand mining in Lake Oconee. The sand mining operation would entail hydraulic dredging in approximately 334 acres of Lake Oconee to an average depth of 4 feet. Dredging would occur within the upper reaches of the reservoir where the Oconee River enters Lake Oconee. Greenbriar Sand anticipates removing 1,336 acre feet of sand over the life of the operation. The dredge would pump sand to a 14 acre processing area outside of the project area. 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. The dredging and plant operations will be limited to Monday through Friday 8am to 5pm. Excess water would be processed through settling ponds to remove sediment, eliminate turbidity, and then returned to Oconee Lake via a pipeline near the same site as the withdrawal. The settling ponds would be located near the processing area, outside of the Wallace Dam project boundary.
B. Proposed Environmental Protection Measures

The licensee’s application indicates that Greenbriar Sand will comply with the consulted agencies’ recommendations and conditions attached to any pertinent permits or approvals. The Georgia DNR Wildlife Resources Division states that the licensee will use 4 settling ponds and a turbidity barrier to prevent the return of fines to the river. Greenbriar Sand is committed to containing slurry within the pipe and limiting disturbance by only dredging in open water with no stream bank disturbance, by not dredging established wetlands, and by not using chemicals or additives. The Georgia DNR’s approval included 12 conditions in the May 16, 2018 letter. The work cannot violate clean water standards and 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 cannot restrict boaters from any areas, and dredging operation and pipe must be clearly marked by buoys. Additionally, Greenbriar Sand must coordinate with the Forest Service given the proximity of the project, and Greenbriar Sand 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, 2018 and assigned the NPDES Permit Number GAG100031. This permit requires them to comply with effluent limitations under the terms and conditions of the permit.

The Georgia Historic Preservation Division required in its March 5, 2018 determination of no effect to historic properties or archaeological resources that Greenbriar Sand must stop all ground disturbing activities if archeological materials are encountered until they can be assessed by a qualified archeologist.

The Corps issued an authorization under Nationwide Permit 3(a) (NNWP 3(a)) and Nationwide Permit 16 (NWP16) on May 23, 2018. The authorization required Greenbriar Sand to obtain all appropriate federal, state, and local authorizations for the activity and abide by all of the requirements of the Georgia Erosion and Sedimentation Act of 1975.

The Georgia DNR Environmental Protection Division issued a Surface Mining Permit on May 2, 2018. It authorizes the use of 12 acres for the plant site outside of the Wallace Dam project boundary.
On February 21, 2018, FWS issued a letter stating that the proposed project is not likely to adversely affect any federally listed species. They stated as a recommendation, if sand dredging can be minimized during periods of high rainfall/high stream inflow, less turbidity and sediment movement would result; therefore, minimizing possible impacts to aquatic species. The FWS goes on to state that the impacts of the proposed action are minimal and any possible sediment movement should not have prolonged effects on the system.

3.2 No-Action Alternative

Under the no-action alternative, the Commission would deny the licensee’s application made on behalf of Greenbriar Sand. The licensee would not authorize sand mining in Lake Oconee. 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. Greenbriar Sand may have considered other dredging locations, within Lake Oconee or in other area reservoirs, but this is unknown. The licensee has a private landowner willing to rent their land outside 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 August 20, 2018 application with the Commission, Greenbriar Sand consulted with the FWS, Corps, Greene County Board of Commissioners, Georgia Power, Georgia DNR Wildlife Resources Division, Georgia Historic Preservation Division, and Georgia DNR Environmental Protection Division. Greenbriar Sand has received all applicable permits/approvals from the resource agencies.

4.2 Commission’s Public Notice

On October 1, 2018, the Commission issued a public notice of the licensee’s August 20, 2018 non-project use application, establishing November 1, 2018, as the
deadline for providing comments and interventions. No comments or motions to intervene were received.

5.0 ENVIRONMENTAL ANALYSIS

In this section of the EA, the affected environment in each resource section is presented based on the licensee’s August 20, 2018 non-project use application, and the licensee’s relicensing application volume 2, filed May 31, 2018. Staff analysis of probable impacts from the proposed action then follows in the second part of each resource section 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. The Altamaha River 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 permit from Georgia DNR Wildlife Resources Division requires the licensee to use settling ponds, protect riparian vegetation, avoid dredging within 5 feet of the shoreline, and revegetate damaged areas, along with the Corps’ 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.

**B. Water Quality**

**Affected Environment**

Historically, quarterly water 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, 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, Greenbriar Sand would remove sediment from the reservoir. The dredged water would not be chemically treated in any way before being returned to the reservoir at the site of the processing facility, though it would be retained in 4 settling ponds and a turbidity barrier for a minimum of 24 hours 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 Wallace Dam Project is located on the upper Oconee River in the Piedmont of the larger Altamaha River basin. 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 there. 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 are not known to spawn in the reservoir and hybrid bass should not be spawning either. White bass generally spawn over rocky shoals which are not present in the sand mine area. Catfish spawn in undercut banks and hollow logs both of which are not likely to be present in the proposed mining area. Some sunfish species or largemouth bass may attempt spawning in the area, but it is not likely that they are very successful due to the high sedimentation rates and shifting sands. Additionally, the proposed mining area is only 0.02 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 up stream of this lentic area because of their riverine
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 is mostly deposited silt and sand. Standing timber and fish plots (stands topped out below the surface) are distributed throughout Lake Oconee 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 as wildlife habitat. Fifty timber stands totaling about 235 acres were cut off 10 ft below the full-pool surface as 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 and 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 tournament fishing. Tournament fishing is popular and primarily targets largemouth bass. For the years 1996 through 2014, the average tournament bass weight on Lake Oconee (1.8 to 2.1 pounds [lbs]) ranked among the top five reservoirs in Georgia in 17 of the 19 years (Georgia Bass Chapter Federation, 1996-2014). The average largest bass reported in Lake Oconee tournaments during those years weighed from 3.5 to 4.6 lbs. 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 for hybrid bass (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,
Anglers now have the opportunity to catch trophy-size catfish, with some blue catfish and flathead catfish exceeding 40 lbs (GDNR, 2017a).

Also, 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 in Lake Oconee, followed in relative abundance 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 of the migratory fish species are known to occur in Lake Oconee, the striped bass and the American shad. Both of them are stocked non-migratory populations that are not expected to successfully reproduce in the project reservoir.

**Environmental Effects**

The proposed mining operations would impact 334 acres of the 19,050 acre Lake Oconee or approximately 0.02 percent. 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 because the area is of little value as spawning habitat to the species present. 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 habit, migratory fish, or mussel populations.

D. Terrestrial Resources

Affected Environment

The dominant terrestrial vegetative community types in the project area include mixed pinehardwood 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; mesic slope forest 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 two species of birds, listed under the Endangered Species Act, the red-cockaded woodpecker and the wood stork, may occur in the project area, but there is no record of them or any known habitat; therefore they concurred with Greenbriars’s determination that the proposal is unlikely to adversely affect either species.

Environmental Effects

Because the proposed action does not include any project lands other than the riparian streambank, which is protected from vegetation removal by the permit conditions from the Georgia DNR Wildlife Resources Division, it 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. Bird species including the listed wood stork and red-cockaded woodpecker in particular may make use of the riparian buffer that Greenbriar Sand would maintain. However, the listed species are not known to occur in the project area so any use would likely be transient. 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. None of the facilities are 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. Dredging operations may, however, interfere with recreational navigation.
To mitigate for this Greenbriar Sand intends to sink parts of the dredge line to allow boat
passage, and they will also mark the area with navigational buoys as required by the
Georgia DNR Wildlife Resources Division permit. The proposed mitigation should
prevent any impediments to navigability in the proposed action area. Furthermore, the
site will only operate Monday through Friday from 8am to 5pm which will reduce its
interaction with weekend recreationist.

5.3 Cumulative Impacts of Proposal

According to the Council on Environmental Quality’s regulations for
implementing the National Environmental Policy Act (NEPA), an action may cause
cumulative impacts on the environment if its impacts overlap in space and/or in time with
the impacts of other past, present, or reasonably foreseeable future actions, regardless of
what agency or person undertakes such other action. Cumulative impacts can result from
individually minor, but collectively significant actions. Throughout consultation on and
review of the licensee’s proposal, no existing resources were identified with the potential
to be adversely affected, and therefore no cumulative adverse effects are anticipated.

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. There are no known historic or cultural resources, or critical habitat for threatened or endangered species in the proposed area of impact. While transient use of the affected area may occur by bird species stopping to perch, there are no conditions that should result in harm to the species. 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. Greenbriar Sand’s proposed dredging operations should prevent impacts to public recreation by sinking parts of the pipeline and placing navigational buoys. The applicant’s processing site is outside of the project boundary, and the state and federal permits require Greenbriar 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 require of Greenbriar Sand, prior to requesting 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 Company should include, as conditions of any permit or authorization it issues under this application, provisions for Greenbriar Sand to monitor its compliance with turbidity, sedimentation, and erosion permit requirements. Georgia Power Company should inform Greenbriar Sand of any recreation events on Lake Oconee that may require additional sand mining operational modifications to avoid impacts to recreation. In the rare event that cultural or historic items are found during dredging operations, the licensee should require Greenbriar Sand to notify the licensee immediately, and the licensee should work with the Georgia Historic Preservation Division.

The request for non-project use of project lands and waters incorporates numerous prior recommendations by 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.

7.0 LITERATURE CITED


8.0 LIST OF PREPARERS

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