# ENVIRONMENTAL ASSESSMENT

**Application for Non-Project Use of Project Lands and Waters**

**Duke Energy Carolinas, LLC**

**Ninety-Nine Islands Hydroelectric Project**

**FERC Project No. 2331**

**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: Ninety-Nine Islands Hydroelectric Project

FERC Project No.: 2331

### 1.1 Application

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| Application Type: | Non-Project Use of Project Lands and Waters; sediment removal and discharge associated with hydraulic sand mining operation |
| Date filed: | May 25, 2018 |
| Licensee: | Duke Energy Carolinas, LLC |
| Water Body: | Ninety-Nine Island Reservoir, Broad River |
| Nearest Town: | Blacksburg, South Carolina |
| County & States: | Cherokee County, South Carolina |

### 1.2 Purpose and Need for Action

Thomas Sand Company, Inc. owns and operates the Blacksburg Mine (Mine), located in Cherokee County, SC (Figure 1). The Mine has been in operation since 1987, but was never reviewed by the Federal Energy Regulatory Commission (Commission). The Mine is located on property owned by Thomas Sand Company, adjacent to an impoundment on the Broad River. Thomas Sand Company operates a suction dredge within the impoundment to mine sand that is screened and stockpiled at the Mine. The impoundment is part of the Ninety- Nine Islands Project (project), a hydroelectric project owned and operated by Duke Energy (Duke Energy) and operated under a license issued by the Federal Energy Regulatory Commission (FERC Project No. 2331) on June 17, 1996. On August 15, 2016,during an environmental inspection at the Ninety-Nine Islands Project (Project), Commission staff noted the presence of Thomas Sand Company's sand mining operation. After review, FERC determined that the mining operation requires approval under Article 21 of Form L-3 of the Project license through an application for Non-Project Use of Project Lands and Waters.

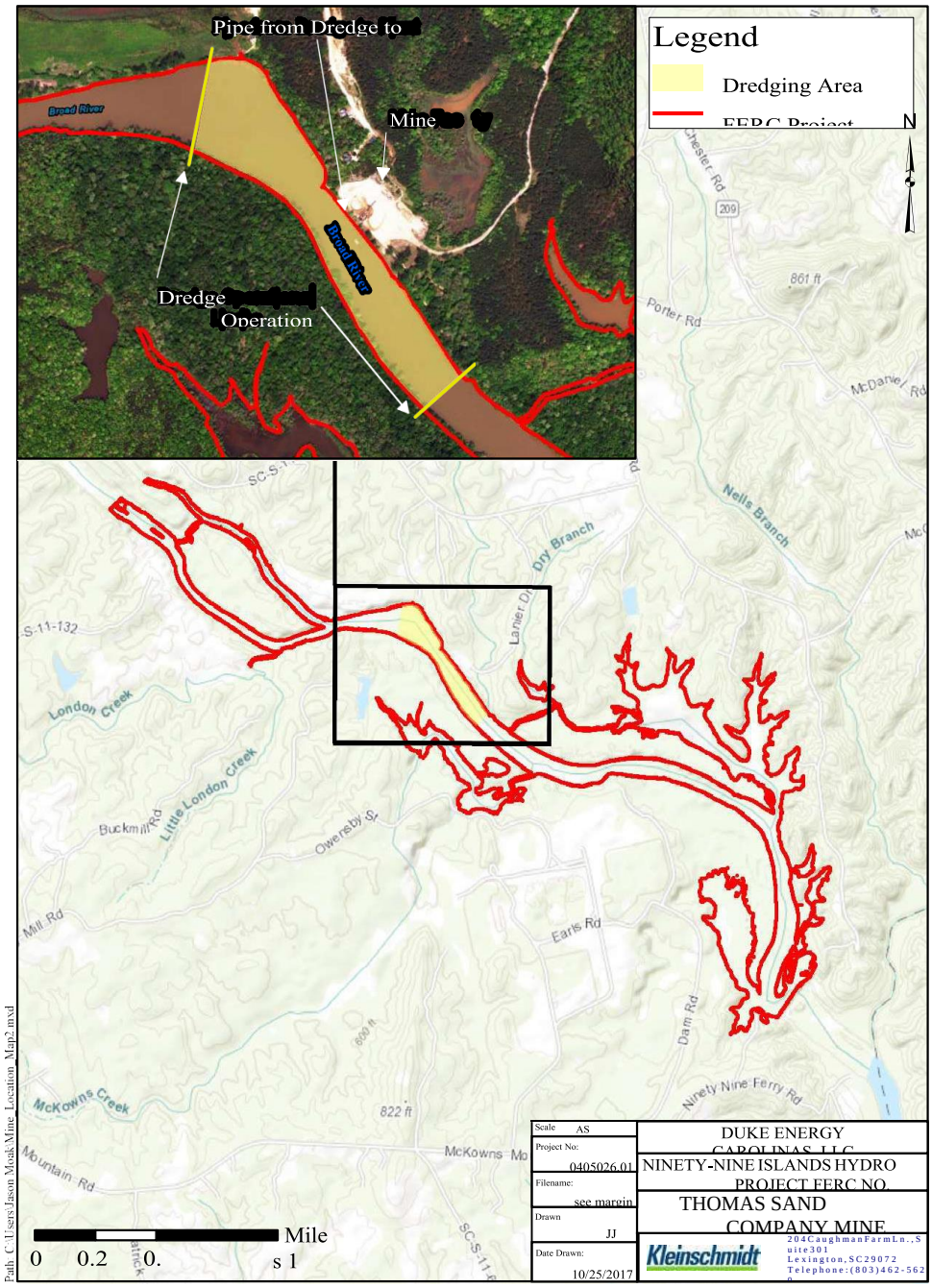


Figure 1. Proposed sand mining site location (source: Duke Energy Carolinas, LLC May 25, 2018 filing with the Commission).

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 May

25, 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 South Carolina; therefore, the South Carolina Department of Health and Environmental Control (South Carolina DHEC) is the appropriate state water pollution certifying agency to act on Thomas Sand's request. By letter dated May 21, 2018,[1] the South Carolina DHEC issued a Water Quality Certification for the facility.

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) authorized the activity on January 24, 2018 under the Nationwide Permit 16 Return Water from Upland Contained Disposal Areas.

### 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. A search of the U.S. Fish and Wildlife Service (FWS) Environmental Conservation Online System[2] indicated that only the threatened Dwarf-Flowered heartleaf (*Hexastylis naniflora*) occurs in Cherokee County, South Carolina. This species is not known to occur within the project boundary of the Ninety-Nine Islands Project; and no proposed or candidate species are known to occur within the project boundary or be affected by the proposed activity. No designated critical habitat is located within the project boundary. On October 23, 2018, the South Carolina Ecological Services Field Office of the FWS stated by email that they had no comments on the proposed activity.

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[1] The South Carolina DHEC's letter is included in the licensee's August 20, 2018 filing.

[2] A search was performed on 3/12/2019. https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=2458

**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 South Carolina citizens. The sand mine is currently operated under South Carolina DHEC Mining Permit No.0869 issued November 27, 1989, and National Pollution Discharge Elimination System General Permit No. SCG730000.

**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 July 26, 2017,[3] the South Carolina Department of Archives and History indicated that no known historic or cultural resources would be affected by the proposed action. However, they stated that if archaeological materials were encountered then procedures codified in 36 CFR 800.13(b) will apply.

## 2.0 PROJECT DESCRIPTION

### 2.1 Ninety-Nine Islands Hydroelectric Project Description

The Commission issued a license for the Ninety-Nine Islands Hydroelectric Project to Duke Energy Carolinas on June 17, 1996.[4] The following description of the Wallace Dam Project is from the license.

The Ninety-Nine Islands project consists of an 88-foot high, 1,567-foot -long concrete dam; a reservoir with a surface area of 433 acres at a normal water surface elevation of 511 feet mean sea level (msl); a 94-foot high, 197-foot-long concrete intake

[3] The South Carolina Department of Archives and History letter is included in licensee's May 25, 2018 filing.

[4] Order Issuing New License (75 FERC ¶ 61,307)

structure; a riprap covered earth fill diversion dike located upstream of the powerhouse intake structure; a powerhouse, a tailrace channel; and other appurtenant structures.

## 3.0 PROPOSED ACTION AND ALTERNATIVES

### 3.1 Description of Licensee's Proposal

#### A. Proposed Action

Under the Proposed Action, the Commission would approve the Non-Project Use of Project Lands and Waters for the mining operation, thereby allowing Duke Energy to grant a lease to Thomas Sand Company for continued operation of the Mine within the Project boundary. The Mine is located in Cherokee County, South Carolina and is owned and operated by Thomas Sand Company. Thomas Sand Company has produced washed river sand at this mine since 1987. The Mine is currently in operation, and has an active mining permit with the South Carolina DHEC, Permit No. 0869. The Proposed Action would be for the continued operation of the Mine, as currently permitted and described herein, through Commission-approved Non-Project Use and Occupancy of Project Lands and Waters.

The primary components of the mine include a hydraulic cutter-head dredge, slurry pipe, wash water pump, processing plant, and stockpile area (Figure 2-2). The hydraulic cutter-head dredge operates within a 2,500-foot reach of the Broad River. Mooring cables connected to trees on either bank are used to position the dredge laterally within the channel. In accordance with the South Carolina DHEC mining permit, no dredging is conducted within 10 feet of the riverbank. The dredge pumps sand through a 10-inch slurry pipe to the processing plant. The slurry pipe is equipped with large, highly visible flotation booms where it is in close proximity to the surface.

Once received by the plant, the sand is screened and sorted, a process which is aided by water supplied by a 50 horsepower wash water pump. The wash water pump has a maximum capacity of approximately 2,000 gallons per minute (gpm), with an average use of approximately 1,400 gpm during operation. The pump could deliver 2.3 million gallons per day in theory, but it is never operated more than a few hours per day so it never achieves this. Furthermore, the water is not consumed, but is rather discharged back to the river. The pump intake is situated within two polyethylene 55 gallon drums with 3/8-inch holes to screen out large debris and aquatic organisms. Because it is a custom on-site fabrication the approach velocities are unknown, but because of the cylindrical design which incorporates a large surface area and draws from a cylindrical water column it is unlikely that it would impinge fish.

The washed river sand is dewatered and stacked in the stockpile area by conveyor belt. The water drains to a pit beneath the processing plant and is returned to the Broad River via a 24-inch pipe, which is regulated under the South Carolina DHEC mining permit and an associated NPDES General Permit for Discharges Associated with Nonmetal Mineral Mining Facilities (Permit No. SCG730627). Estimates indicate the mining operation has removed an annual average of 42,000 tons of sand from the impoundment.

### B. Proposed Environmental Protection Measures

The licensee's application indicates that Thomas Sand will comply with the consulted agencies' recommendations and conditions attached to any pertinent permits or approvals. The South Carolina DHEC Permit 0869 requires a 50 foot setback of the processing facility from the river with a vegetated buffer in between the facility and the river. It also requires any manmade refuse that is extracted to be properly disposed of in a permitted solid waste facility.

The South Carolina DHEC General Permit for Discharges Associated with Nonmetal Mineral Mining Discharges (SCG730000)[5] (NPDES Permit) issued September 30, 2010 contains a number of conditions that require the mine to implement best management practices to prevent pollution by stormwater runoff, erosion, equipment wash water, and discharges from the sorting facility. Section IX E. 1-4 on page 57 and 58 of the permit requires the mine to implement best management practices and make sure that sediment basins are properly operated and maintained so that no more than 50 percent of the storage volume is reached. These activities must be documented. South Carolina DHEC also issued a Section 401 Clean Water Certification which is included in Appendix A of the May 25th application. It requires the use of best management practices to prevent erosion and migration of sediment as well as measures to prevent oil, tar, trash, debris, and other pollutants from reaching the water.

The South Carolina Department of Archives and History determined on July 26, 2017, that no effect to historic properties or archaeological resources would occur from the operations of Thomas Sand Mine, but the sand mine must stop all ground disturbing activities if archeological materials are encountered until they can be assessed.

The Corps issued an authorization under Nationwide Permit 16 (NWP16) on January 24, 2018. The authorization requires Thomas Sand Company to obtain all appropriate federal, state, and local authorizations for the activity. The conditions of the

[5] Filed with the Commission as part of the December 8, 2016, supplemental information filing.

authorization state that impacts to aquatic areas cannot exceed those specified in the pre-construction notification to the Corps, and it does not authorize the discharge of dredged material such as fine sediment or sand.

The South Carolina Department of Natural Resources (South Carolina DNR) stated on July 11, 2017 that it had no objections to the 33 acres mining area in the reservoir so long as the conveyance provides that the mine is in compliance with South Carolina DHEC Mining Permit No. 0869 and NPDES General Permit No. SGC730000.

### 3.2 No-Action Alternative

Under the No-Action Alternative, there would be no FERC approval for this non-project use of project lands and waters and therefore, no lease from Duke Energy. Duke Energy would take action to cease mining operations and Thomas Sand Company would remove components of the Mine from within the Project boundary.

### 3.3 Other Action Alternatives

The licensee's application does not consider other action alternatives. Thomas Sand may have considered other dredging locations, but this is unknown. Thomas Sand has operated in this location since 1987. Relocation would require clearing and disturbing other river shoreline habitat. For these reasons, the use of an alternative location is not practical, and 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 May 25, 2018 application with the Commission, Thomas Sand Company consulted with the FWS, Corps, Cherokee County Building Inspectors Department, Duke Energy Carolinas, South Carolina DNR, South Carolina Department of Archives and History, South Carolina Institute of Archaeology and Anthropology, South Carolina Department of Parks, Recreation, and Tourism, South Carolina DHEC, and the Catawba Indian Nation Tribal Historic Preservation Office. Thomas Sand Company has received all applicable permits/approvals from the resource agencies, and received no objections from any agencies or the Tribe.

The South Carolina DHEC, Corps, and the South Carolina Department of Archives and History provided permit conditions which are detailed above in Section 3.1 (B).

On October 23, 2018, FWS stated by email that they had no comments on the sand mine proposal. On July 11, 2017, the Cherokee County Board of Commissioners stated that they had no objections to the application. On July 11, 2017, the South Carolina DNR stated that they had no comments on the application.

The Catawba Indian Nation Tribal Historic Preservation Office, the South Carolina Institute of Archaeology and Anthropology, and the South Carolina Department of Parks, Recreation, and Tourism did not respond to the licensee's opportunity for comments.

### 4.2. Commission's Public Notice

On June 13, 2018, the Commission issued a public notice of the licensee's May 25, 2018 non-project use application. 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 May 25, 2018 non-project use application and the Environmental Assessment that was included in the application. 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 Project is located in the Upper Broad River Basin and receives drainage from approximately 1,560 square miles. The Project is on the mainstem of the Broad River between the upstream Cherokee Falls Project (FERC No. 2880) and downstream Lockhart Project (FERC No. 2620). The reservoir is approximately 4 miles long, with approximately 1 mile of transitional flowing habitat upstream of the impounded reach.

Approximately 72 percent of the Project drainage area is located within the Piedmont physiographic province, with the remaining 28 percent located within the Blue Ridge province. According to the U.S. Census Bureau, the population estimate for Cherokee County, SC is 56,646 (2016). In addition to the Thomas Sand Mine located on the ninety-Nine Islands Reservoir, there are 12 other sand dredging operations located upstream within the Upper Broad River Basin.

## 5.2 Resource Area Descriptions and Analysis

### A. Geology and Soils

#### Affected Environment

The Ninety-Nine Islands Project is located in the Piedmont physiographic province which is characterized by rolling hills and abundant tributaries. Most of the topsoil of the region has eroded and it is now characterized by extensive surface deposits of iron rich red clay. The region's forest was extensively modified over the past two centuries to create fields for cotton and tobacco agriculture which led to extensive erosion from poor farming practices. Many of the farms have been abandoned due to the loss of topsoil, and the area has regrown as a pine hardwood mixed forest. The eroded sediments persist to this day within the rivers and floodplains of the region.

#### Environmental Effects

Because the permit from South Carolina DHEC requires the licensee to have a 50 foot buffer zone and berm to prevent runoff and erosion, and to avoid dredging within 10 feet of the shoreline, 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 Ninety-Nine Islands 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

The mining operation is located in the upper portion of the Project impoundment. The Mine, operated by Thomas Sand Company, and the hydroelectric project, operated by Duke Energy, are the only known users of Project reservoir. Neither of these project uses have an impact on other water rights (FERC 1995).

The reach of the Broad River, where the dredge operates, is classified as Freshwater (SCDHEC 2012). The classification listing states:

> *Freshwaters (FW) are freshwaters suitable for primary and secondary contact recreation and as a source for drinking water supply after conventional treatment in accordance with the requirements of the Department. Suitable for fishing and*

*the survival and propagation of a balanced indigenous aquatic community of fauna and flora. Suitable also for industrial and agricultural uses. (South Carolina DHEC 2014)*

Duke Energy conducted water quality studies in 1989 and 1990 as part of relicensing efforts for the Ninety-Nine Islands Project (i.e. two and three years after the Mine began operations). Those studies found that Project waters met state water quality standards (FERC 1995).

Water returned to the river as a result of the mining process is sampled monthly for total suspended solid (TSS) levels. Samples collected between July 2016 and August 2017 had TSS values that ranged from 100 to 832 milligrams per liter (mg/L), with an average value of 245 mg/L (full table included in May 25th application). In comparison, TSS values from samples collected upstream and downstream of the mining operation during Duke Energy's 1989 -1990 studies ranged from 9 to 243 mg/L. On average, TSS values at the downstream sampling site at the Project dam were 60 percent higher than at the sampling site upstream of the Mine (Thomas Sand Company 2017). The Project reservoir's surface area and volume has been reduced since its completion in 1910 due to heavy sedimentation (FERC 1995). The removal of sediment (i.e. sand) from the reservoir would increase the storage capacity within the reservoir.

**Environmental Effects**

Under the proposed action, Thomas Sand would remove sediment from the reservoir. This has the potential to benefit project operation by reducing the sediment load in the reservoir and preserving storage capacity and potentially increasing it incrementally. However, it is apparent that the sand mine is increasing turbidity in the reservoir on average by 60 percent as measured at the dam. It is likely even higher in the upstream reaches of the reservoir. Commission staff visually observed this increase in turbidity during the 2016 environmental inspection while travelling by boat. An image acquired from Google Maps on October 17, 2016 (Figure 2), shows the discharge of fine sediment from the wash facility. While this may not be the sole source of the measured turbidly increase in the reservoir; it is certainly a contributor. The increase in turbidity will cause sunlight attenuation thereby reducing photosynthesis possibly disrupting food chains or oxygen levels. Deposition of the fines can smother benthic aquatic organisms and increase water temperatures through heat adsorption. The application does not indicate that the sand mine is implementing any best management practices such as settling ponds or filters to remove the sediment load from the discharged wash water. Furthermore, aerial photos of the Mine show no indication of settling ponds at the site either. The picture contained in Figure 2-2 of the EA included in the May 25th application shows an accumulation of discharged sediments at the outlet of the wash water discharge

pipe. This same accumulation of sediments was observed by staff during the 2016 environmental inspection (Figure 3). The discharge of dredged material such as fine sediment or sand was not authorized by the Corps authorization. The increases in turbidity has the potential to adversely impact water quality, but it can be mitigated by installation of settling ponds, filters, or other methods.


**Figure 2.** Image of sand mine discharge acquired from google maps on October 17, 2016.

**Figure 3:** Deposition of sediment at Thomas Sand Company wash water discharge site observed by Commission staff during 2016 environmental inspection.

## C. Aquatic Resources

### Affected Environment

The fish community in this reach of the Broad River includes warmwater species typical of a piedmont riverine impoundment. The 1987 relicensing studies identified redear sunfish, redbreast sunfish, bluegill, largemoth bass, white crappie, warmouth, silver redhorse, brassy jumprock, suckermouth redhorse, white bass, white catfish, whitefin shiner, common carp, and gizzard shad. No federally listed aquatic species are known to occur in this area of the Broad River (USFWS 2017).

Substrates in this reach are dominated by medium to coarse sand, gravel, and cobble. Habitat type and availability within the reservoir has changed over time due to increased sediment loads, as sand and silt from upstream reaches settles out in the lentic portion of the lake (FERC 1995). Dredging operations associated with the Mine are primarily conducted on an inside bend in the river where accumulating sediments form a point bar.

Macroinvertebrate collections from the 1987 relicensing effort were detailed on page 94 to 99 in Volume 1 of the December 19, 1991, relicensing application. The information contained in the application does not document mussels in the reservoir of the project. However, it does document other taxa of macroinvertebrates in the project reservoir, but none of them were rare or endangered.

### Environmental Effects

The proposed mining operations would directly impact 33 acres of the 433 acre reservoir or approximately 7 percent. The directly affected area is relatively small, is of an abundant type in the reservoir, and does not include any essential fish habitat. Moreover, there are no fish or macroinvertebrate species of special concern known to occur in the project reservoir.

However, the increase in turbidity may affect downstream spawning habitats by increased siltation from discharged fines resulting in decreased spawning success. It can also alter feeding patterns and feeding success of fish. Additionally, siltation from the discharged fines can suffocate benthic macroinvertebrates resulting in the loss of species diversity and disruption of food chains in the reservoir. These secondary effects can be mitigated by utilization of best management practices such as settling ponds or filtration systems to remove the fines prior to discharge.

## D. Terrestrial Resources

### Affected Environment

The Mine's processing plant is located on approximately 2 acres of a 15.6-acre parcel of private property adjacent to the Project boundary. A vegetated buffer is maintained between the riverbank and the mine processing and stockpiling area. According to FWS' National Wetlands Inventory, the area in which the dredge operates is classified as lacustrine limnetic (deep-water) and lacustrine littoral (shallow water) habitat (FWS 2017).

### 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 South Carolina DHEC, and also protected from erosion by a 10 foot setback in the water for dredging, it is not likely to adversely impact plant communities. Also, there is no critical habitat for any terrestrial special status species in the Ninety-Nine Islands 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

Current recreation opportunities at the Project include the Pick Hill Access Area, Canoe Portage, Tailrace Access Area, South Carolina DNR Boat Ramp, and approximately 1 mile of trails located in the Project vicinity. Recreational activities on the Ninety-Nine Islands impoundment include angling and use of kayaks, canoes, and small motorized boats (Duke 2015).

### Environmental Effects

In-water components of the mining operation include a dredge barge and underwater slurry pipe. Additionally, mooring cables for the dredge are suspended 11 feet above the normal high-water level of the reservoir. The mooring cables are marked with warning signs and flagging tape. Navigability is not affected by the presence of the dredge barge or slurry pipe. Areas of the slurry pipe are below the water line, and these areas are marked to increase visibility and reduce safety risks. Angling and boating opportunities are unlikely to be hindered by the presence of the sand mining operation.

### 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 and Duke Energy Carolinas would not authorize sand mining in the reservoir. As such, potential impacts from mine operation to the aquatic habitat or riparian zone would not continue to occur. However, the site would need to be properly reclaimed in order to prevent impacts from the shutdown of mining operations. 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, excluding the impacts from increased turbidity which can be mitigated by using best management practices. There are no known historic or cultural resources, or 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 if the operator adheres to the permit requirements and implements efforts to reduce the turbidity of the discharged wash water. 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. Thomas 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 Thomas Sand Mine to maintain the integrity of the riparian corridor. As such, it is not likely that significant impacts would occur.

## 6.2 Staff Recommendations

The applicant engaged in extensive consultation prior to filing its May 25th application with the Commission. It includes numerous conditions to protect the riparian area, prevent erosion and sedimentation, and prevent impacts to the public. The applicant should adhere to all permit conditions. Additionally, permit conditions from South Carolina DHEC and Corps indicate the use of best management practices to reduce turbidity discharge such as settling ponds or filtration systems. Based on the data provided in the application regarding the observed increase in turbidity as well as observations on-site by Commission staff, and aerial photography obtained from public sources online, the licensee should require the mine operation to implement best management practices, such as settling ponds or filtrations systems, as a condition of their conveyance, to prevent the discharge of fines and subsequent turbidity increases observed in the reservoir. In the rare event that cultural or historic items are found during dredging operations, the licensee should require Thomas Sand to notify the licensee immediately, and the licensee should work with the South Carolina Division of Archives and History.

The request for non-project use of project lands and waters incorporates numerous prior recommendations by resource agencies. With the inclusion of conditions to mitigate for turbidity increases, 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 project reservoir, based on our independent analysis, the proposed action would not constitute a major federal action significantly affecting the quality of the human environment, if the staff recommendations are implemented.

## 7.0 LITERATURE CITED

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## 8.0 LIST OF PREPARERS

Michael Calloway, Project Coordinator (Fish Biologist. M.S. Biological Sciences; B.S., Biological Sciences)