

ENVIRONMENTAL ASSESSMENT

Application for Non-Project Use of Project Lands and Waters

Dominion Energy South Carolina Inc.

Parr Shoals Hydroelectric Project

FERC Project No. 1894



**Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Administration and Compliance
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Washington, D.C. 20426**

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ENVIRONMENTAL ASSESSMENT

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

1.0 INTRODUCTION

Project Name: Parr Shoals Hydroelectric Project

FERC Project No.: 1894

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: October 26, 2018

Licensee: Dominion Energy South Carolina Inc.

Water Body: Parr Shoals Reservoir, Broad River

Nearest Town: Newberry, South Carolina

County & State: Fairfield and Newberry Counties, South Carolina

1.2 Purpose and Need for Action

Newberry Sand, Inc. (NSI) owns and operates the existing Blair Sand Mine (Mine) located on the Broad River in Fairfield County, South Carolina, within the Parr Shoals Hydroelectric Project No. 1894 project boundary (Figure 1), which is licensed to Dominion Energy South Carolina Inc. (licensee or Dominion).¹ Specifically, NSI operates a suction dredge, which is located within the project boundary, to extract sand that is screened and stockpiled on the shore outside of the project boundary. NSI has operated the Mine under a permit issued by the South Carolina Department of Health and Environmental Control (South Carolina DHEC) since May 19, 2008. The Commission was made aware of the existence of this Mine on July 25, 2017, by a filing from the licensee and later determined by letter dated November 8, 2017 that the since the mining operation utilizes project lands and waters for non-project purposes, that Commission approval is necessary in order for the licensee to allow NSI to continue operating the Mine under Article 15 and Article 62 of the project license.

¹ Order Issuing New License issued August 28, 1974.

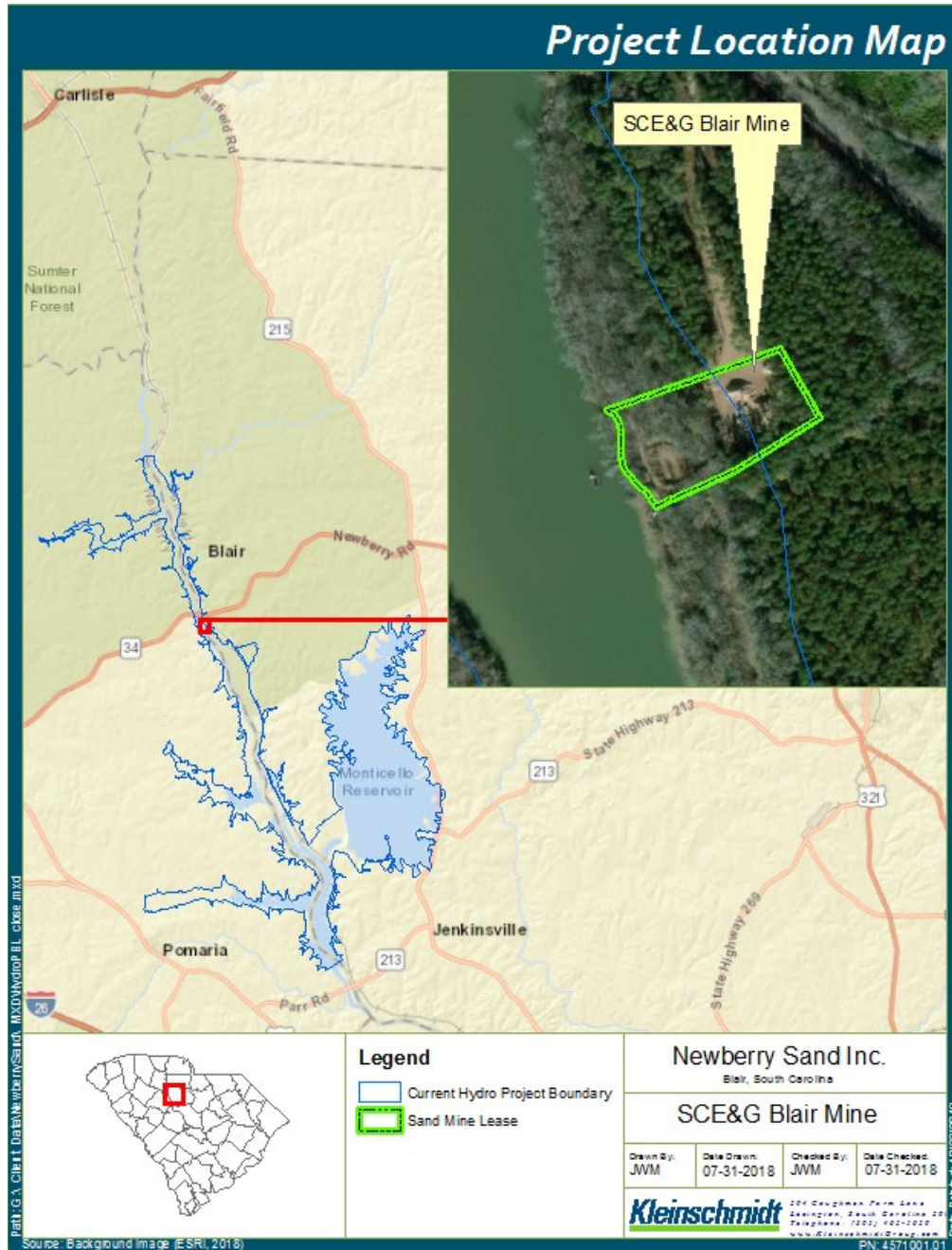


Figure 1. Location of existing Blair Sand Mine (Source: Dominion, 2018).

This Environmental Assessment (EA) analyzes the environmental effects of the licensee’s proposed action to authorize the continued use of a non-project sand mining

operation and provides a basis for the Commission to make an informed decision on the licensee's October 26, 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 DHEC is the appropriate state water pollution certifying agency in this case. By letter dated November 14, 2018,² the South Carolina DHEC issued a Water Quality Certification to NSI for the mine.

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. NSI received authorization from the U.S. Army Corps of Engineers (Corps) on August 30, 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 System³ indicated that only the endangered Carolina Heelsplitter (*Lasmigona decorata*) occurs in Fairfield County, South Carolina. This species is not known to occur within the project boundary; and no proposed or candidate species are known to occur within the project boundary or be affected by the proposed action. Further, no designated critical habitat is located within the project boundary. On June 21, 2018, the South Carolina Ecological Services Field Office of the FWS stated by email that they had no comments on the proposed action.

² The South Carolina DHEC's letter was filed by the licensee on November 28, 2018.

³ A search was performed on 7/24/2019.
<https://ecos.fws.gov/ipac/location/SKBLH4FPGNHEDHLXJNIGYU5GJY/resources>

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. NSI currently operates the Mine under South Carolina DHEC Mining Permit No.1-001801, issued May 19, 2008.

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 June 6, 2017,⁴ 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 Parr Shoals Hydroelectric Project Description

The Commission issued a license for the Parr Shoals Hydroelectric Project on August 28, 1974. The Parr Shoals Hydroelectric Project consists of the Parr Development and the Fairfield Pumped Storage Development. The mine is located in the upper part of the 4,400 acre-Parr Reservoir of the Parr Development. Parr Reservoir serves as the lower reservoir of the Fairfield Pumped Storage Development and extends 13 miles upstream of Parr Dam. It is 29,000 acre-feet in volume and fluctuates 10 feet between 266 feet mean sea level and 257 feet mean sea level as part of operation of the pumped storage operation.

3.0 PROPOSED ACTION AND ALTERNATIVES

3.1 Description of Licensee's Proposal

⁴ The South Carolina Department of Archives and History letter is included in licensee's October 26, 2018 filing.

A. Proposed Action

Under the Proposed Action, the Commission would approve the licensee's request to allow NSI to use project lands and water allow to continue operating the Mine. The Mine is located in Fairfield County, South Carolina and is owned and operated by NSI. NSI has produced washed river sand at this mine since 2008. The Mine is currently in operation, and has an active mining permit with the South Carolina DHEC, Permit No. 1-001801. 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 barge dredge, slurry pipe, settling basin processing plant, and stockpile area. The hydraulic cutter-head dredge operates within a 3,000-foot reach of the Parr Reservoir. 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. 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. Estimates indicate the mining operation has removed an annual average of 23,500 tons of sand from Parr Reservoir since NSI began operating the Mine in 2008.

B. Proposed Environmental Protection Measures

The licensee's application indicates that NSI will comply with the consulted agencies' recommendations and conditions attached to any pertinent permits or approvals. The South Carolina DHEC Permit I-001801 requires a 50-foot minimum 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 permit also restricts the cutter head from operating within 10 feet of the bank.

Under the Section 401 Clean Water Certification issued to NSI for the Mine, NSI is required to use 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 Historic Preservation Office determined by letter dated June 6, 2018, that no effect to historic properties or archaeological resources would occur from the operations of NSI Sand Mine, but the sand mine must stop all ground disturbing activities if archeological materials are encountered until they can be assessed.

The Corps confirmed authorization under Nationwide Permit 16 (NWP16) on August 30, 2018. The authorization requires NSI to obtain all appropriate federal, state, and local authorizations for the activity. The conditions of the 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.

3.2 No-Action Alternative

Under the No-Action Alternative, the Commission would deny Dominion's non-project use of project lands and waters application. This would affect the lease that Dominion has in place with NSI for the Mine, since the Mine would represent an unauthorized use of project lands and could ultimately lead to Dominion taking action to require NSI to cease mining operations.

3.3 Other Action Alternatives

The licensee's application does not consider other action alternatives. NSI may have considered other dredging locations, but this is unknown. NSI has operated in this location since 2008. 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 October 26, 2018 application with the Commission, NSI consulted with the FWS, Corps, South Carolina DNR, South Carolina Department of Archives and History, South Carolina Department of Parks, Recreation, and Tourism, South Carolina DHEC, and the Catawba Indian Nation Tribal Historic Preservation Office. NSI 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 June 21, 2018, FWS stated by email that they had no comments on the sand mine proposal. On June 29, 2017, the South Carolina DNR stated that they had no objections to the application. The South Carolina Department of Archives and History stated on June 6, 2018, that the proposal will not affect historic properties, but they should be notified if historic materials are discovered. The Corps stated on May 31, 2018, that the proposal was covered under Nation-Wide Permit 16.

The South Carolina Department of Natural Resources (South Carolina DNR) stated on June 29, 2018, that it had no objections to the 4 acre mining area in the reservoir so long as the conveyance provides that the mine is in compliance with existing permits.

The Catawba Indian Nation Tribal Historic Preservation Office 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 April 25, 2019, the Commission issued a public notice of the licensee's October 26, 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 area is presented based on the licensee's October 26, 2018 non-project use 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 lower Broad River Basin and receives drainage from approximately 4,731 square miles. The Project is on the mainstem of the Broad River and consists of Parr Development and the Fairfield Development.

Approximately 90 percent of the Project drainage area is located within the Piedmont physiographic province, with the remaining 10 percent located within the Blue Ridge physiographic province. According to the U.S. Census Bureau, the population estimate for Fairfield County, SC is 23,956 (2016). In addition to NSI's Mine located on the Parr Reservoir, there are 19 other sand dredging operations located within the Broad River Basin.

5.2 Resource Area Descriptions and Analysis

A. Geology and Soils

Affected Environment

The Parr Shoals Project is located in the Piedmont physiographic province and 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

The conditions of NSI's mining permit under the Mining Act of 1971 and Nationwide Permit under Section 404 of the Clean Water Act require NSI to implement various environmental protection measures that are intended to prevent, including the establishment of a buffer zone around the Mine, avoidance of dredging within 10 feet of the shoreline of Parr Reservoir, and erosion control structures (see *Section 3.1, Proposed Environmental Protection Measures*). If these measures are properly implemented, they would minimize any potential effects to geology or soils as a result of the proposed action.

B. Water Quality

Affected Environment

The mining operation is located in the upper portion of the Parr Reservoir, which is 13 miles long with a surface area of 4,400 acres at full pool. The reach of the Broad River where the Mine is located 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)

Downstream of the Mine, South Carolina DHEC sampled two sites in Parr Reservoir in 2016 and determined that the waters are impaired due to total phosphorus. South Carolina DHEC did not detect impairment due to turbidity during their sampling. The only source of turbidity is disturbed sediment from near the cutter head. The wash water is pumped to a settling pond to clear prior to discharge back to the river.

Environmental Effects

Under the proposed action, NSI would remove sediment from the reservoir during dredging activities. The licensee is required to use settling basins for discharge water prior to discharging to the river to remove suspended sediments.

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 at the Ninety-Nine Island Hydroelectric Project No. 2331, located nearby on the Broad River identified a fish community comprised of redear sunfish, redbreast sunfish, bluegill, largemouth 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.

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.

Environmental Effects

The proposed mining operations would directly impact 1.3 acres inside the project boundary. 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.

D. Terrestrial Resources

Affected Environment

The Mine's processing plant is located on approximately 2 acres of private property adjacent to the Project boundary. A vegetated buffer is maintained between the riverbank and the mine processing and stockpiling areas.

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 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 for Parr Reservoir include the boat ramp near Heller's Creek by County Route 28. Recreational activities include angling and use of kayaks, canoes, and small motorized boats.

Environmental Effects

In-water components of the mining operation include a dredge barge and underwater slurry pipe. 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 Dominion 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, operation of the Mine is unlikely to affect water quality or aquatic resources if NSI 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. NSI's proposed dredging operations should prevent impacts to public recreation by sinking parts of the pipeline and placing navigational buoys. NSI's processing site is outside of the project boundary, and the state and federal permits require NSI to maintain the integrity of the riparian corridor. As such, it is not likely that significant environmental impacts would occur as a result of the proposed action.

6.2 Staff Recommendations

NSI and Dominion engaged in extensive consultation prior to filing its July 25th application with the Commission. Its application Dominion includes numerous measures that NSI would implement in order to protect the riparian area, prevent erosion and sedimentation, and prevent impacts to the public. Dominion should ensure that NSI adheres to all permit conditions associated with the Mine. In the event that cultural or historic items are found during dredging operations, the licensee should require NSI 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 state and federal 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 non-project use request to allow NSI to conduct sand mining operations in Parr 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

Federal Energy Regulatory Commission (FERC). 1995. Multiple Project Environmental Assessment for Hydropower Licenses. Environmental Assessment.

South Carolina Department of Health and Environmental Control (SCDHEC). 2012. R.61-69, Classified Waters.

8.0 LIST OF PREPARERS

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