



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701-5505
<http://sero.nmfs.noaa.gov>

#E1-26358

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Ms. Diana Wood
Office of Environmental Analysis
Surface Transportation Board
395 E Street Southwest
Washington, DC 20423

Ms. Elizabeth Williams
Charleston District Corps of Engineers
Department of the Army
69A Hagood Avenue
Charleston, South Carolina 29403-5107

Dear Ms. Wood and Ms. Williams:

This letter responds to your request for consultation with us, the National Marine Fisheries Service (NMFS), pursuant to Section 7 of the Endangered Species Act (ESA) for the following action.

Surface Transportation Board Docket Number	Applicant	SER Number	Project Type
36095	Mr. Jeff McWhorter, Palmetto Railways	SER-2018-19295	Railroad bridge crossing

Consultation History

We received your letter requesting consultation on May 7, 2018, in a letter dated April 23, 2018. We requested additional information on May 17, 2018. We received a final response on July 12, 2018, and initiated consultation that day.

Project Location

Address	Latitude/Longitude	Water body
Berkeley County, South Carolina	33.369535°N, 80.125706°W (North American Datum 1983)	Diversion Canal that connects Lake Marion and Lake Moultrie





Image of the project location and surrounding area (Provided by Surface Transportation Board)

Existing Site Conditions

The diversion canal is not an estuarine waterbody and the crossing location of the canal is approximately 40 miles (straight line distance) from the Atlantic Ocean. The diversion canal which connects Lake Marion and Lake Moultrie, is approximately 7.5 miles long, 450 feet (ft) wide, and 12 ft deep at the crossing. It was last dredged in 2014 and consists of sand and clay lacking vegetation. There are no existing structures at the proposed canal crossing site. The canal is classified as impaired by mercury, according to South Carolina's Department of Health and Environmental Control.

Project Description

The applicant proposes to construct a railway bridge crossing, 845 ft in length, over the diversion canal that would require the installation of 4 support structures within the canal. Each support structure consists of two 8.5-ft (102-inch in diameter) drilled shafts, for a total of 8 drilled shaft foundations. Each foundation is 56.7 square feet (ft²), covering a total area of 453.6 ft². Concrete will be poured into pre-drilled shafts, resulting the piles to cast and then augered into place. All in-water construction activities will be accomplished within 2 months, and performed during daylight hours only.

Construction Conditions

The applicant has agreed to adhere to NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions*,¹ and has agreed to implement measures to control and contain suspended sediments resulting from construction activities, i.e. turbidity curtains. The applicant has also proposed, and will implement, the following protective measures:

1. Contain stormwater runoff from bridge within a closed drainage system to minimize impacts to water quality in the Diversion Canal.
2. Develop a Stormwater Pollution Prevention Plan (SWPPP) and abide by the terms and conditions of the National Pollutant Discharge Elimination System (NPDES) permit for the protection of water quality during construction.
3. Ensure construction equipment does not obstruct or impede passage through more than 50% of the Diversion Canal.
4. Use pile driving mitigation measures, including soft starts, bubble curtains, and pile cushions, to reduce sound transmitted during pile driving.

Effects Determinations for Species the Action Agency or NMFS Believes May Be Affected by the Proposed Action

Species	ESA Listing Status	Action Agency Effect Determination	NMFS Effect Determination
Fish			
Shortnose sturgeon	E	NLAA	NLAA
Atlantic sturgeon (Carolina DPS)	E	NLAA	NLAA
E = endangered; NLAA = may affect, not likely to adversely affect			

Critical Habitat

The project is not located in designated critical habitat, and there is no potential routes of effect to any designated critical habitat.

Analysis of Potential Routes of Effects to Species

Sturgeon may be affected by the potential risk of physical injury from direct impact by construction machinery and associated in-water activities (e.g., barge, drilling shaft machinery). We believe this effect is highly unlikely and therefore, discountable due to the ability of the species to move away from the project site if disturbed. Sturgeon are mobile and are able to avoid construction noise, moving equipment, and placement or removal of materials during construction. Additionally, the applicant's implementation of NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions* will further reduce the risk by requiring all construction workers watch for sturgeon. Operation of any mechanical construction equipment will cease immediately if a sturgeon is seen within a 50-ft radius of the equipment. Activities will not resume until the protected species has departed the project area of its own volition.

¹ NMFS. 2006. Sea Turtle and Smalltooth Sawfish Construction Conditions revised March 23, 2006. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Regional Office, Protected Resources Division, Saint Petersburg, Florida.
http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/sea_turtle_and_smalltooth_sawfish_construction_conditions_3-23-06.pdf.

Use of turbidity curtains, the construction activities, and related construction noise may prevent or deter sturgeon from entering the project area and accessing foraging and/or refuge habitat. We believe the effect to sturgeon from temporary exclusion from the project area due to construction activities, including related noise and presence of turbidity curtains, will be insignificant. The size of the area from which animals will be excluded is relatively small in comparison to the available similar habitat nearby, which sturgeon will be able to use during construction. Disturbances and loss of habitat access will be temporary, limited to 2 months of in-water construction. After the project is completed, turbidity curtains will be removed and sturgeon will be able to return to the project area.

Sturgeon may be affected by the permanent loss of habitat due to the placement of pile-supported structures. The permanent installation of 8 concrete piles (each covering 56.7 ft²) will result in the loss of approximately 453.6 ft² of non-vegetated canal bottom (i.e., sand and clay) where sturgeon might forage for invertebrate prey. We believe the effects on sturgeon caused by the loss of canal bottom due to this project will be insignificant. Because sturgeon are opportunistic feeders and forage over large areas, they would be able to locate prey beyond the immediate area of the shafts.

Effects to sturgeon as a result of noise created by construction activities can physically injure animals in the affected areas or change animal behavior in the affected areas. Injurious effects can occur in 2 ways. First, immediate adverse effects can occur to sturgeon if a single noise event exceeds the threshold for direct physical injury. Second, effects can result from prolonged exposure to noise levels that exceed the daily cumulative exposure threshold for the animals, and these can constitute adverse effects if animals are exposed to the noise levels for sufficient periods. Behavioral effects can be adverse if such effects interfere with animals migrating, feeding, resting, or reproducing, for example. Our evaluation of effects to sturgeon as a result of noise created by construction activities is based on the analysis prepared in support of the Opinion for SAJ-82.² The noise analysis in this consultation evaluates effects to sturgeon identified by NMFS as potentially affected in the table above. Based on our noise calculations, the use of augered drilled shaft foundations will not result in injurious noise effects or behavioral noise effects.

Conclusion

Because all potential project effects to listed species were found to be discountable, insignificant, or beneficial, we conclude that the proposed action is not likely to adversely affect listed species under NMFS's purview. This concludes your consultation responsibilities under the ESA for species under NMFS's purview. Consultation must be reinitiated if a take occurs or new information reveals effects of the action not previously considered, or if the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat in a manner or to an extent not previously considered, or if a new species is listed or critical habitat designated that may be affected by the identified action. NMFS's findings on the project's potential effects are based on the project description in this response. Any changes to the proposed action may negate the findings of this consultation and may require reinitiation of consultation with NMFS.

² NMFS. Biological Opinion on Regional General Permit SAJ-82 (SAJ-2007-01590), Florida Keys, Monroe County, Florida. June 10, 2014.

We look forward to further cooperation with you on other projects to ensure the conservation of our threatened and endangered marine species and designated critical habitat. If you have any questions on this consultation, please contact Francesca Innocenti, Consultation Biologist, at (727) 209-5995, or by email at francesca.innocenti@noaa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read 'R. E. Crabtree'.

For Roy E. Crabtree, Ph.D.
Regional Administrator

File: 1514-22.F.2