



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>

September 30, 2015

F/SER47: KH/pw

(Sent via Electronic Mail)

J. Shane Belcher
Environmental Coordinator
Federal Highway Administration
1835 Assembly Street, Suite 1270
Columbia, SC 29201

Chad Long
NEPA Coordinator
South Carolina Department of Transportation
Environmental Services
955 Park Street
Columbia, SC 29201

Attention: Nicole Riddle

Dear Mr. Belcher and Mr. Long:

NOAA's National Marine Fisheries Service (NMFS) reviewed the essential fish habitat (EFH) screening form (which constitutes an EFH assessment for small projects), dated March 17, 2015, the South Carolina Department of Transportation (SCDOT) prepared for proposed improvements to a four-mile segment of Clements Ferry Road (S-33) in Berkeley County. The SCDOT supplemented the EFH screening form with additional information March 23, March 31, and June 11, 2015. To accomplish the work, the SCDOT intends to request the USACE Charleston District authorize impact approximately 0.341 acres of freshwater wetlands and 0.421 acres of estuarine wetlands under General Permit SAC-2010-01346. The SCDOT, on behalf of the Federal Highway Administration (FHWA), concludes impacts to EFH are not likely to occur from the proposed project. As the nation's federal trustee for the conservation and management of marine, estuarine, and anadromous fishery resources, the following comments and recommendations are provided pursuant to authorities of the Fish and Wildlife Coordination Act and the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

Proposed Project Description

This four-mile segment of Clements Ferry Road occurs just south of the intersection of I-526 to the intersection of Bradbury Lane. Proposed improvements include widening the roadway from three to five lanes with various median widths and constructing a multi-use path (MUP) parallel to a segment of the roadway; no improvements are proposed for the bridge over Beresford Creek. The proposed MUP would be an elevated structure on the eastern side of the road from Marina Drive to Frontage Road for a total approximate distance of 2,016 feet. The MUP would have a total width of 12 feet and consist of 112 spans of 18 feet supported by 226, 12-inch timber piles. The deck of the MUP would be three to four feet above mean high water (MHW) and would be offset from the roadway by approximately 60 feet to avoid interfering with a utility easement. The MUP deck would be constructed of timber, concrete, or asphalt. Construction of the MUP would require use of timber mats, barges, and/or temporary work trestles within salt marsh.



Essential Fish Habitat in the Project Area

On March 17, 2015, the SCDOT submitted an EFH assessment on behalf of the FHWA for this project. On March 24, 2015, NMFS biologists visited the site. The area includes tidal salt marsh habitat, specifically estuarine emergent vegetation, intertidal non-vegetated flats, and tidal creeks. The South Atlantic Fishery Management Council (SAFMC) identifies these habitats as EFH for penaeid shrimp, including white shrimp (*Litopenaeus setiferus*) and brown shrimp (*Farfantepenaeus aztecus*) and for estuarine-dependent species of the snapper-grouper complex. The SAFMC identifies these areas as EFH because larvae and juveniles concentrate and feed extensively and shelter within these habitats. As a consequence, growth rates are high and predation rates are low, which makes these habitats effective nursery areas for shrimp and snapper. The SAFMC provides additional information on the EFH for federally managed species in Volume IV of the *Fishery Ecosystem Plan of the South Atlantic Region*¹.

The waters of the Beresford Creek, the tidal creeks connected to it, and the surrounding salt marsh also serve as nursery and forage habitat for other species, such as red drum (*Sciaenops ocellatus*), black drum (*Pogonias cromis*), Atlantic menhaden (*Brevoortia tyrannus*), and blue crab (*Callinectes sapidus*). Many of these species are prey for other fish managed under the Magnuson-Stevens Act, such as mackerels, snappers, groupers, billfish, and sharks. Red drum is an important state-managed fishery, and estuarine wetlands within the project area provide habitat necessary for development and survival of several life stages of red drum.

Impacts to Essential Fish Habitat

In total, 0.421 acres of salt marsh would be impacted by the proposed improvements to Clements Ferry Road. Widening the road would result in 0.104 acres of permanent fill impact and 0.051 acres of temporary clearing impact to estuarine emergent wetlands. Construction of the MUP would result in permanently filling 0.004 acres and permanently shading 0.262 acres of estuarine emergent wetlands. Filled salt marsh would not provide nursery or foraging habitat for fishery species and their prey. Additionally, because light energy drives the photosynthetic process, which in turn controls plant growth and survival, permanently shaded areas will have lower primary productivity and reduced vegetation compared to non-shaded areas. This reduction in vegetation can lead to sediment erosion and decreased diversity and densities of benthic prey species².

Approximately 0.341 acres of freshwater wetlands would also be impacted from the proposed project. These freshwater wetlands, which are directly adjacent to salt marsh and tidal creek habitat, provide water quality functions, such as removal of excess nutrients, sediments and contaminants, all which benefit and support these aquatic ecosystems. Through hydrological connections, these wetlands also contribute organic material and other usable nutrients into aquatic food webs that include ecologically and commercially important estuarine species.

Avoidance and Minimization

The SCDOT has taken several steps to avoid or minimize impacts to EFH from the proposed project, including arranging MUP spans to avoid piles in Beresford Creek; reducing the number of pilings by having a minimum of 18 feet for each span; and installing, inspecting, and maintaining appropriate erosion and sedimentation control Best Management Practices (BMPs) in accordance with local and state stormwater guidelines. Additionally, the SCDOT selected a widening alternative utilizing deep-depth guardrail posts along the roadway shoulder, which allows for steeper slopes and less fill, reducing the overall project footprint. These avoidance and minimization steps reduced project impacts to estuarine

¹ Available at safmc.net/EcosystemLibrary/FEPVolumeIV

² Whitcraft, C.R. and L.A. Levin. 2007. Regulation of benthic algal and animal communities by salt marsh plants: Impact of shading. *Ecology* 88:904-917.

wetlands from 1.3 acres to 0.421 acres. Lastly, the SCDOT would conduct the work affecting EFH during periods of low biological use (November 1 to February 28) to the extent practicable.

While the NMFS appreciates SCDOT's avoidance and minimization efforts, further minimization measures are practicable. The NMFS recommends the MUP deck consist of grated decking with maximal open space or planks (wooden or composite) with a minimum spacing of 0.50 inches between boards. The NMFS prefers asphalt or concrete not be used because light transmittance would be reduced considerably, resulting in the largest shading footprint compared to grated decking or planks. The NMFS recommends shading impacts be reduced further by raising the MUP or reducing its width. Lastly, the NMFS recommends SCDOT avoid construction practices that smother marsh vegetation. The NMFS has documented the impacts to salt marsh vegetation from barges and barge mats lasting longer than three years at Shem Creek Park and the Folly River Bridge. These and similar projects should be reviewed for adjusting BMPs to improve impact forecasts.

Compensatory Mitigation

The SCDOT's original EFH assessment identified all salt marsh in the project area as partially impaired, as defined in the Charleston District's compensatory mitigation Standard Operating Procedure. By email dated June 11, 2015, the SCDOT and the NMFS agreed all salt marsh impacted by the proposed project is fully functional. The SCDOT proposes compensatory mitigation for the unavoidable impacts to 0.421 acres of EFH through the SCDOT Huspa Creek Mitigation Bank. The NMFS does not support use of the Huspa Creek Mitigation Bank to offset impacts from this project because this bank (in HUC 03050208) is three watersheds away from the impact site (in HUC 03050201) and the bank and impact site have different salinity zones; salinity is a major driver of biological and geochemical processes. In this case, the NMFS supports permittee-responsible mitigation for the unavoidable impacts from the proposed project and recommends the SCDOT investigate such opportunities.

The SCDOT has not identified mitigation for unavoidable impacts to 0.341 acres of freshwater wetlands. The NMFS recommends use of an approved mitigation bank to compensate for these impacts. Any bank used to compensate for freshwater wetland impacts should be in close proximity to salt marsh, preferably within the same or adjacent watershed; the Congaree-Carton Mitigation Bank offers such credits.

EFH Conservation Recommendations

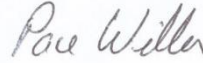
Section 305(b)(4)(A) of the Magnuson-Stevens Act requires NMFS to provide EFH Conservation Recommendations for any federal action or permit which may result in adverse impacts to EFH. Therefore, NMFS recommends the following to ensure the conservation of EFH and associated fishery resources:

- The SCDOT pursue permittee-responsible mitigation for the impacts to salt marsh habitat in lieu of using the Huspa Creek Mitigation Bank.
- The SCDOT reduce shading impacts from the MUP by reducing the width, increasing the height, and/or using grated decking or planks with a minimum spacing of 0.50 inches between deck boards.

Section 305(b)(4)(B) of the Magnuson-Stevens Act and implementing regulation at 50 CFR Section 600.920(k) require the FHWA and SCDOT to provide a written response to this letter within 30 days of its receipt. If it is not possible to provide a substantive response within 30 days, an interim response should be provided to the NMFS. A detailed response then must be provided ten days prior to final approval of the action. The detailed response must include a description of measures proposed by the FHWA and SCDOT to avoid, mitigate, or offset the adverse impacts of the activity. If the response is inconsistent with an EFH conservation recommendation, a substantive discussion justifying the reasons for not following the recommendation must be provided.

The NMFS appreciates the opportunity to provide these comments. Please direct related questions or comments to the attention of Keith M. Hanson at our Charleston Area Office, 219 Fort Johnson Road, Charleston, South Carolina 29412-9110, Keith.Hanson@noaa.gov or by phone at (843)762-8622.

Sincerely,



/ for

Virginia M. Fay
Assistant Regional Administrator
Habitat Conservation Division

cc: FHWA, Jeffrey.Belcher@dot.gov
SCDOT, LongCC@scdot.org
SCDOT, RiddleNL@scdot.org
COE, Elizabeth.G.Williams@usace.army.mil
DHEC, trumbumt@dhec.sc.gov
SCDNR, DavisS@dnr.sc.gov
EPA, Laycock.Kelly@epa.gov
FWS, Karen_Mcgee@fws.gov
F/SER4, David.Dale@noaa.gov
F/SER47, Jaclyn.Daly@noaa.gov, Keith.Hanson@noaa.gov