



**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>

March 30, 2015

F/SER47:JD/pw

(Sent via Electronic Mail)

Col. Thomas J. Tickner, Commander  
Savannah District Corps of Engineers  
100 W. Oglethorpe Avenue  
Savannah, Georgia 31402-0889

Attention: Sarah Wise

Dear Colonel Tickner:

NOAA's National Marine Fisheries Service (NMFS) reviewed public notice SAS-2007-00546, dated March 3, 2015. LEG/MEG 270 Dean Forrest, LLC, requests authorization from the Department of the Army to fill 3.24 acres of jurisdictional freshwater wetlands to construct an industrial warehouse and distribution complex in Chatham County. The wetlands to be filled are hydrologically connected to essential fish habitat (EFH) via a man-made canal. As compensatory mitigation, the applicant proposes to purchase 24.6 credits from an approved mitigation bank servicing the project area. The Savannah District did not provide a determination on the project's impacts to EFH, presumably because no direct impacts to EFH would occur from the project. However, projects that may adversely affect EFH indirectly are also subject to EFH consultation requirements (50 CFR Section 600.810). 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).

*Description of the Proposed Project*

The proposed project includes filling 3.24 acres of jurisdictional wetlands with 12,582 cubic yards of material on a 272-acre forested tract for the purpose of constructing an access road. Currently, the tract contains 185.58 acres of uplands and 86.71 acres of wetlands. The majority of road fill is aligned with previously cleared but slightly re-vegetated wetlands. Where the road would cross Horseshoe Canal, which drains to Salt Creek, a concrete arch bridge would be constructed. The applicant would construct five warehouses with associated storage areas and detention ponds in uplands. The remaining 83.47 acres of wetlands are not proposed for impact according to the Master Plan provided on sheet 4 of 10 in the public notice.

*Essential Fish Habitat in the Project Area*

The project site hydrologically connects to Salt Creek through Horseshoe Canal. Salt Creek includes estuarine emergent wetlands, subtidal and intertidal non-vegetated flats, and tidal creeks. The South Atlantic Fishery Management Council (SAFMC) identifies salt marsh and mud flats as EFH for penaeid shrimp, including white shrimp (*Litopenaeus setiferus*) and brown shrimp (*Farfantepenaeus aztecus*). Salt marshes are EFH because larvae and juveniles concentrate, feed, and shelter extensively within these habitats. As a result, growth rates are high and predation rates are low, which makes these habitats effective nursery areas. The SAFMC also identifies salt marsh and tidal creeks as EFH for estuarine-dependent species of the snapper-grouper complex. Further information on EFH for federally managed



species found in Georgia can be found in Volume IV of the SAFMC's *Fishery Ecosystem Plan of the South Atlantic Region*<sup>1</sup>.

The waters of Salt Creek, the tidal creeks connected to it, and the surrounding coastal 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 fish managed under the Magnuson-Stevens Act, such as mackerels, snappers, groupers, billfish, and sharks. Red drum are important as a recreationally caught species, and estuarine wetlands within the project area provide habitat necessary for development and survival throughout all life stages of red drum.

#### *Impacts to Essential Fish Habitat*

No direct impacts to EFH would occur from the proposed project; however, the proposed wetland fill may indirectly impact EFH by reducing water quality and increasing runoff from the site. Holland et al. (2004)<sup>2</sup> found measurable adverse changes in the physical and chemical environment when impervious land cover exceeded 10 to 20 percent in a watershed and the abundance of shrimp declined when impervious land cover exceeded 20 to 30 percent. The reasons for these biological, chemical, and physical impacts are due to the increased runoff, which alters salinity, temperature, and alkalinity regimes, and the quality of that runoff. Johnson et al. (2008)<sup>3</sup> and Volume IV of the SAFMC's *Fishery Ecosystem Plan of the South Atlantic Region* provide reviews of impacts to EFH and fish from commercial development in the coastal zone. Their key findings relevant to this public notice include:

- Fishery resources in brackish estuarine waters are especially sensitive to acidic effluents because of the lower buffering capacity of freshwater as compared to salt water.
- Radiant heating from impervious surfaces, such as concrete and asphalt, can increase the water temperature in streams and creeks, reducing dissolved oxygen concentrations.
- Runoff from coastal development can result in an unnatural influx of suspended particles from soil erosion decreasing respiration by fish and invertebrates, growth and survival of filter feeders, and foraging efficiency of sight-feeders.

NMFS recommends the applicant further minimize indirect impacts by incorporating low-impact design principles into the project plans. Examples include vegetated bioretention areas and pervious pavements to control hydrology through infiltration and/or evapotranspiration. These practices are consistent with recommendations the Georgia Department of Natural Resources, Environmental Protection Division, provides in the 2009 *Coastal Stormwater Supplement to the Georgia Stormwater Management Manual*. Finally, preserving the 83.47 acres of wetlands remaining on-site would ensure future development would not further impair downstream EFH.

#### **EFH Conservation Recommendations**

NMFS finds the proposed wetland fill would adversely affect EFH. Section 305(b)(4)(A) of the Magnuson-Stevens Act requires NMFS to provide EFH conservation recommendations when an activity is expected to adversely affect EFH. Based on this requirement, NMFS recommends:

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<sup>1</sup> Available at [safmc.net/EcosystemLibrary/FEPVolumeIV](http://safmc.net/EcosystemLibrary/FEPVolumeIV)

<sup>2</sup> Holland, A.F., Sanger, D.M., Gawle, C.P., Lerberg, S.B., Santiago, M.S., Riekerk, G.H.M., Zimmerman, L.E., and Scott, G.I. 2004. Linkages between tidal creek ecosystems and the landscape and demographic attributes of their watersheds. *Journal of Experimental Marine Biology and Ecology* 298:151-178.

<sup>3</sup> Johnson, M.R., Boelke, C., Chiarella, L.A., Colosi, P.D., Greene, K., Lellis-Dibble, K., Ludemann, H., Ludwig, M., McDermott, S., Ortiz, J., Rusanowsky, D., Scott, M., and Smith, J. 2008. *Impacts to Marine Fisheries Habitat from Nonfishing Activities in the Northeastern United States*. NOAA Technical Memorandum NMFS-NE-209, Northeast Regional Office, Gloucester, Massachusetts. 322 pages.

1. The project incorporate low-impact design principles to retain water on site to the maximum extent practicable, including use of bioswales, pervious pavements, and a 50-foot vegetated buffer between the canal and development.
2. The permit require placing the remaining wetlands on-site under protection.

Section 305(b)(4)(B) of the Magnuson-Stevens Act and implementing regulations at 50 CFR Section 600.920(k) require the Savannah District 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 NMFS. A detailed response then must be provided 10 days prior to final approval of the action. The detailed response must include a description of measures proposed by the Savannah District 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.

In accordance with section 7 of the Endangered Species Act of 1973, as amended, it is the responsibility of the Savannah District to review and identify any proposed activity that may affect endangered or threatened species and their designated critical habitat. Determinations involving species under NMFS jurisdiction should be reported to NMFS' Protected Resources Division at the letterhead address.

NMFS appreciates the opportunity to provide these comments. Please direct related correspondence to the attention of Ms. Jaclyn Daly-Fuchs at our Charleston Area Office. She may be reached at (843) 762-8610 or by e-mail at [Jaclyn.Daly@noaa.gov](mailto:Jaclyn.Daly@noaa.gov).

Sincerely,



/ for

Virginia M. Fay  
Assistant Regional Administrator  
Habitat Conservation Division

cc:

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