UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

July 29, 2014

Lt. Colonel John T. Litz
District Engineer
Attn: Mr. Stephen Brumagin
U.S. Army Corps of Engineers
69A Hagood Avenue
Charleston, South Carolina 29403-5107

Subject: I-73 SAC 2008-1333-DIS

Dear Colonel Litz:

This letter is in response to your request for comments on the above referenced joint public notice (JPN). The South Carolina Department of Transportation (Applicant) seeks a permit to perform mechanized land clearing, excavation and the discharge of fill material, in waters of the U.S. to construct a new four lane limited access highway as part of the proposed I-73 interstate system, approximately 80 miles in length, and located in Marlboro, Dillon, Marion and Horry Counties, South Carolina. The project will permanently impact a total of 293.4 acres of wetlands and 4,643 linear feet (LF) of stream.

The U.S. Environmental Protection Agency Region 4 has reviewed the applicant's responses to our previous comment letters and we continue to have concerns about the proposed mitigation plan. As background, our concerns with the wetlands portion of the applicant's compensatory mitigation plan were previously documented in letters dated March 28, 2011, April 28, 2011 and January 7, 2013. Further, the EPA reviewed the applicant's stream mitigation plan dated July 24, 2013 and had concerns that were expressed in a letter dated September 11, 2013. The EPA received a package containing the applicant's proposed final wetland mitigation plan as well as their proposed final stream mitigation plan on July 14, 2014. After reviewing the submittals, the EPA continues to have concerns with both plans.

The applicant has indicated with the latest submittal that they are unable to provide additional mitigation opportunities to address current mitigation credit shortfall, identify long term stewards for the mitigation sites, nor provide long term financial assurance plans acknowledging the concerns the EPA has raised in the past. The plan as currently proposed has a 1,290 wetland credit shortfall. Therefore, with this information alone, the plan is inadequate and the project as current proposed should be denied. Further, long term stewards and long term financial assurances are among the 12 elements specified in the mitigation rule including: objectives, site selection, site protection instrument, baseline information, determination of credits, mitigation work plan, maintenance plan, performance standards, monitoring requirements, long-term management plan, adaptive management plan and financial assurances. Therefore, the mitigation package is incomplete.

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The EPA expressed many other concerns in our previous letters which have not been addressed with the applicant's submittal. These concerns are reiterated below.

The permittee-responsible wetland mitigation proposed by the applicant is referred to as the Joiner Bay Wetland Mitigation Site. The Joiner Bay Mitigation is not on site, but is within the same 8 digit HUC as a majority of the impacts. The applicant proposes an estimated 21.0 acres of wetland restoration through fill removal, 116.2 acres of effectively drained wetland restoration through ditch removal, 61.3 acres of partially drained wetland enhancement through ditch removal, 594.1 acres of hydrologic wetland enhancement through re-grading of silviculture bedding and vegetative restoration and 32.1 acres of wetland enhancement through prescribed burning which will generate 2,195.6 wetland credits based on the applicant's use of the U. S. Army Corps of Engineers (USACE), Charleston District Standard Operating Procedure (SOP) "Guidelines for Preparing a Compensatory Mitigation Plan" October 7, 2010.

The EPA has concerns with the credit calculations the applicant has made. The applicant states, "Hydrologic restoration provided by the Site are expected to replace those impacted as a result of the I-73 project within 10 to 20 years; therefore, a temporal loss factor of -0.3 was applied to these mitigation areas. Hydrologic and vegetative enhancement areas are expected to replace functions lost at the impact site within 5 to 10 years, therefore a temporal loss factor of -0.2 was applied to these areas. Finally, areas that are to undergo only a prescribed burn are expected to replace functions lost at the impact site within 0 to 5 years, therefore a temporal loss factor of -0.1 was applied to these areas. The EPA does not contest the temporal loss factor of -0.1 used in areas with a mature canopy where only prescribed burning is proposed. However, the other communities they are proposing to reestablish are forest communities which will not fully mature within that time frame. Accordingly, the EPA recommends that the maximum temporal loss factor of over 20 years be used. The applicant also considers all the restoration as "in kind" mitigation. However, the majority of the communities proposed to be reestablished are pine savannah and streamhead pocosin, while the majority of the impacts are to bottomland hardwoods and wooded swamp. The EPA recommends that the "out of kind" factor in the SOP be applied to all acreage which is not categorized as the same type as impact sites.

The applicant proposes that hydrologic success criteria will be based upon target hydrological characteristics including saturation or inundation within the top 12 inches of soil for a minimum of 7 percent (i.e., 19 consecutive days) of the growing season during average climatic conditions. We recommend that instead the success criteria be within 25 percent of the hydrological regime of reference wetlands. The EPA appreciates that vegetation success criteria in the proposal are those recommended by us for the pine savannah habitat. The applicant proposes to use the methodology derived by the Alabama-Mississippi Mitigation Banking Review Team for Wet Pine Flats as derived from Rheinhardt, R.D.,Rheinhardt, M.C., and Brinson, M.M. (2002) "A Regional Guidebook for Applying the Hydrogeomorphic Approach to Assessing Wetland Functions of Wet Pine Flats on Mineral Soils in the Atlantic and Gulf Coastal Plains." While this method is acceptable for the pine savannah and mesic pine flatwood habitats, other vegetation success criteria should be specified for the bay forest, streamhead pocosin, and bald cypress-tupelo gum swamp habitats.

The EPA also has concerns with the long term management associated with maintaining a pine savannah community. We request a detailed adaptive management plan in case burning is not possible during some years. Further, we request details of long-term financial assurances that will provide moneys for burning and other maintenance in perpetuity.

The applicant's permittee-responsible stream mitigation plan is referred to as the Long Branch Mitigation Plan and is located approximately 6.2 miles from the applicant's preferred project site. The proposed mitigation site will restore approximately 2,543 LF of stream and enhance approximately 4,867 LF of stream along Long Branch, enhance approximately 5,565 LF of stream along Indian Pot Branch and restore approximately 1,632 LF along two unnamed tributaries (UT1 and UT2) that flow into Long Branch.

Using the USACE Charleston District 2010 Guidelines for Preparing a Compensatory Mitigation Plan SOP, the applicant calculates that 22,640 stream credits are required to compensate for the proposed stream impacts. The cumulative impact factor was calculated for each 11-digit HUC in which the impacts occur. The EPA appreciates that impacts are calculated for each watershed to more accurately capture mitigation needs. However, the SOP specifically states that the cumulative impact factor should be calculated for the total impacts of an entire project. Therefore, the EPA recommends these calculations be corrected by applying the appropriate factor.

While the EPA believes the proposed mitigation site has potential to generate stream mitigation credits, we have significant concerns with the plan as currently proposed. Our most significant concern is the lack of control the applicant will have on the stream reach. Over 4,000 LF of the project will only have protection and adequate riparian buffer on one bank of the stream due to current landowners being unwilling to participate in a conservation easement. This limits the ability of the applicant to ensure restoration and enhancement of the stream is successful. The applicant proposes to improve water quality and to enhance the riparian vegetation by planting desirable species and removing exotic, invasive species. All of these plans could be compromised by activities in the uncontrolled, riparian corridor.

The EPA also has concerns with water quality on the mitigation site and the lack of an adequate water quality monitoring plan. The proposed streams enter the site via highly impacted tributaries from agricultural fields. There are also multiple ditches from agricultural areas which drain into the streams. We recommend a robust monitoring plan including stations where the streams enter and exit the site, at all confluences on site and at the point of discharge of all drainage ditches into mitigation streams. We recommend collecting baseline data at these stations as well as collecting data throughout the monitoring period.

The proposed mitigation plan also lacks definitive performance standards tied to stated objectives. The applicant states that water quality improvement is an objective of the proposed mitigation. However, there are no performance standards to measure the success of meeting this objective. Exotic plant removal is a major component of the applicant's vegetation enhancement plan but it also lacks a performance standard to measure success. We recommend that exotic plant removal be considered successful if exotic vegetation remains below 1 percent of the total vegetation cover for the length of the monitoring period. While the applicant provides planting survival performance standards, there are no standards to measure the success of maintaining the species diversity of the planting plan. The applicant states that many factors will be visually monitored, including: bank stability, condition of in-stream structures, channel migration, headcuts, live stake mortality, impacts from invasive plant species or animal species and condition of pools and riffles. It is unclear if performance standards will be established for these factors, thus more details are needed.

Based on the above observations, the EPA has determined that the project, as currently proposed, does not have an adequate compensatory mitigation plan and therefore is inconsistent with the Section 404(b)(1) Guidelines and the 2008 Mitigation Rule and should be denied. Thank you for the opportunity

to review and comment on this JPN. If you have any questions regarding these comments, please contact Mr. Kelly Laycock, at laycock.kelly@epa.gov or (404) 562-9132 or myself at able.tony@epa.gov or (404) 562-9273.

Sincerely,

Tony Able
Chief
Wetlands Regulatory Section

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