EPA Comments
Island Road Marsh Creation and Nourishment (TE-117) 30% Design
November 14, 2019

1. EPA recognizes that this project is in an area of high need. EPA also recognizes that the TE-117 project has undergone a "revision to essentially the entire project concept initially proposed by PPL23" (page 23 Oct 9 30% Design report). Further design challenges and a high degree of uncertainty exist regarding constructibility. Are discussions under consideration regarding continuing to advance the design of a project with very serious challenges and constraints?

   Response:
   The project team feels that the materials presented and delivered represent a constructible design. A decision whether or not to advance the project will be addressed in accordance to the SOP by letter from NMFS to the Technical Committee and copy to the Planning and Evaluation Subcommittee detailing a revised estimate, description of the project revisions since authorization, agency comments and responses, concurrence from CPRA. Such will identify the need for authorization of a change in scope in order to continue.

2. It appears further relocation of marsh creation areas and containment dike alignments are planned if the design of this project is continued. Are further geotechnical explorations scheduled to support these changes?

   Response:
   Any future relocation of marsh creation and dike alignments are minor in nature and could include: changes in points of inflection, merging of marsh creation areas (MCA 2 and 4), and containment dike enhancement (e.g., consideration of dual interior and exterior borrow for reaches of MCA2 and 4 ECDs, and potential reconfiguration to eliminate the sheet pile closure for MCA3). All changes would be with the ultimate goal of optimizing cost savings during construction.

3. The cut-to-fill ratio used for mechanical dredging and construction of ECDs is 1.5:1. Can you explain why the GEO cut-to-fill ratio of 1.2:1 was used over the CHF recommended value of 2.0:1? (Page 57 Oct 9 30% Design report).

   Response:
   See the below table for a clarification on cut-to-fill ratios recommended by data collection service providers and associated professional engineers compared to what was utilized for design. Take note of the two rows in the table breaking out the envisioned construction activity corresponding to the varying values for cut-to-fill ratios.

Construction Activity	***GeoEngineers, Inc. Recommendation for C:F***	***C. H. Fenstermaker & Associates, LLC Recommendation for C:F***	***Utilized for Design by CPRA for C:F***

Mechanical Dredging and Sidecasting	*2.0*	*N/A*	*1.5*
Hydraulic Cutterhead Dredging and Disposal	*1.2*	*2.0*	*1.2*

Mechanical Dredging
Cut-to-fill ratios for mechanical dredging and sidecasting were assessed based on the understanding that containment dike construction is proposed to occur along strategic geotechnical locations throughout the site. The 1.5:1 cut-to-fill ratio utilized for design is less than the recommended value of 2.0:1. The 2.0:1 was understood to apply to the highly organic and thick pockets of clays found across the site, which have been configured as the interior portions of the marsh creation cells requiring no containment dike construction.

Hydraulic Dredging
A C:F ratio of 1.2:1 was utilized. While this is not consistent with the value recommended by C. H. Fenstermaker & Associates, LLC, it is in accord with that recommended by GeoEngineers, Inc.

As typical between 30% and 95% design, additional assessment of these values are anticipated.

4. Does the cost estimate reflect placement of the material in two lifts? Are unit cost and mobilization representative of two lifts?

   Response:
   At this time two lifts are not anticipated. The mobilization estimate is calculated to have all necessary equipment on site to construct the project under one mobilization.

5. Based upon the high level of design uncertainties and potential for significant changes, this project does not appear to be at a 30% design level. Future changes make it difficult to comment on the report/plans knowing there could be significant changes made to the project.

   Response:
   See responses to questions 1 and 2. Significant design changes are not planned between 30% and 95% design.

6. Will the access corridors and conveyance channels be backfilled using the spoil dredged to create these features?

   Response:
   Access corridors are designed and will be permitted to have temporary side cast disposal. Backfilling of this material is a typical permit condition, and will be adhered to. Temporary side cast disposal areas will be restored to not exceed pre-project

elevations so as not to be a hazard to navigation, but the access channels may not be restored to pre-project elevations due to losses of sediment with temporary disposal.

7. MCA sections on plan sheets 11 & 12 refer to the ECD borrow as MCA borrow.

   Response:
   This has been addressed and a revised version of the plan set will be included in the final 30% submittal.

8. Plan sheet 5: it is hard to see and determine location for some of the northing & easting points. Consider using insets showing enlarged portions of the plan where it is difficult to see; Points #30 & #29.

   Response:
   Insets will be used as necessary in the future.

9. Why is there a '?' after EXCAV on plan sheets 4, 5, 7 & 8?

   Response:
   This is a tabular column heading specifying whether or not access dredging (or excavation) is being proposed. Y means yes, and N means no.

10. What does the acronym SIG mean (plan sheets 4 & 5)? This acronym was not listed on plan sheet 2.

    Response:
    The SIG acronym contains a reference to number 3 in the footnote, where the acronym is defined. *"Pipeline verified based on signal only, too deep to be probed."*

11. There are no calculations for O&M on the cost estimate. Please provide.

    Response:
    That level of detail will be included in the draft 95% level cost estimate for Engineering Workgroup Review.

12. Plans do not show proposed locations of instrumented settlement plates. Will there be an O&M cost for marsh creation surveys?

    Response:
    This information will be included in the draft 95% design report, plans, and cost estimate.