

MEMORANDUM FOR CEMP-SPD (ATTN: Pauline Acosta)

SUBJECT: San Clemente Shoreline, Orange County, California, Feasibility Report and Environmental Impact Statement (February 2012) – Documentation of Review Findings.

1. This memorandum forwards the documentation of policy compliance review findings for the subject project proposal. In the opinion of the policy compliance review team, all policy review concerns have been adequately addressed for this phase of project formulation and development.
2. Office of Water Project Review consideration of the subject report and environmental impact statement is complete. Questions concerning the HQUSACE policy compliance review of this project proposal may be discussed with the review manager, Andrea Walker, at 202-761-0316.

Encl



Wesley E. Coleman Jr.  
Chief, Office of Water Project Review  
Planning and Policy Division  
Directorate of Civil Works

**CECW-PC**  
**DOCUMENTATION OF REVIEW FINDINGS**

**SAN CLEMENTE SHORELINE**  
**ORANGE COUNTY, CALIFORNIA**

**FEASIBILITY REPORT**  
**&**  
**ENVIRONMENTAL IMPACT STATEMENT**

**FEBRUARY 2012**

**ENCLOSURE**

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**SAN CLEMENTE SHORELINE  
ORANGE COUNTY, CALIFORNIA**

**FEASIBILITY REPORT  
&  
ENVIRONMENTAL IMPACT STATEMENT (EIS)  
February 2012**

**I. GENERAL.**

**A. Policy Compliance Review Findings.** The following summarizes the final HQUSACE policy compliance review findings for San Clemente Shoreline Project. This summary includes the concerns and the related resolutions of those concerns for the HQUSACE reviews of the Alternative Formulation Briefing Documentation dated January 2010, Draft Report and EIS dated July 2010, the Final Feasibility Report and EIS dated July 2011, and lastly the Feasibility Report Addendum dated February 2012.

**B. Project Location.** The study area is located along the Pacific Ocean coastline in the City of San Clemente, Orange County, California. San Clemente is the southernmost city in Orange County and is bounded by the Camp Pendleton Marine Base and San Onofre State Beach Park to the south; and to the north, by the communities of Capistrano Shores and Dana Point. The total study area encompasses the City of San Clemente and extends from San Mateo Point, located at the southern boundary of the City, to Dana Point Harbor for a total distance of approximately 7.5 miles.

**C. Authority.** The *San Clemente Shoreline Feasibility Report and Environmental Impact Statement* has been prepared as an interim response under Section 208 of the Flood Control Act of 1965 (Title II of Public Law 89-298), which reads:

*“The Secretary of the Army is hereby authorized and directed to cause surveys for flood control and allied purposes, including channel and major drainage improvements, and floods aggravated by or due to wind or tidal effects, to be made under the direction of the Chief of Engineers, in drainage areas of the United States and its territorial possessions, which include the localities specifically named in this section. ...*

*Coasts of Washington, Oregon, and California to determine advisability of protection work against storm and tidal waves.”*

The Study is authorized under the general authority of the U.S Army Corps of Engineers to assess proposed shoreline protection and storm damage reduction under the various coastal and shore protection missions of the Corps of Engineers and the Secretary of the Army. Funding was initially appropriated by the Energy and Water Development Appropriations Act of 2000, Public Law 106-60, for the reconnaissance study, as recommended in House Report 106-253, page 27:

*The Committee recommendation includes funds for the Corps of Engineers to conduct a reconnaissance study investigating shoreline protection alternatives for San Clemente, California.*

**D. Non-Federal Sponsors.** The City of San Clemente is the non-federal sponsor for this study and has taken an active role in support of the study.

**E. Problems, Needs and Opportunities.** The primary problem identified in the study area is shoreline erosion. The sediment budget for the San Clemente beaches indicates that the beaches are in a state of equilibrium; however they have historically suffered from beach erosion due to storm-induced wave attack, with greatest erosion occurring since the early 1990's. Average beach widths along the City's shoreline have been gradually reduced, at rates of up to 1.5 ft/yr during this timeframe. The purpose of this study is to identify the most technically feasible and economically beneficial "recommended plan" for reducing shoreline erosion and protecting coastal infrastructure from storm-induced wave attack. Therefore the goal of the study is to identify problems and opportunities to reduce storm damages, improve public safety, increase recreation opportunities, and protect the environment.

**F. Plan Formulation.** A broad set of project alternatives was initially considered including: No Action Alternative; Managed Retreat; Beach Nourishment; Revetment; Seawall; Groin; Visible Offshore Breakwater; and Submerged Reef. After reviewing the possible alternatives, only beach nourishment was identified as being suitable for the study area. All other alternatives were dropped from further consideration because of cost, ecosystem impacts, or lack of support from the local sponsor.

The alternatives analysis considered the storm damage reduction and recreational potential of various beach fill configurations and optimization. Beach widths ranging from 0 to 60 m (0 to 200 ft) were analyzed. All of the beach nourishment alternatives analyzed possess a benefit-cost ratio less than one based on coastal storm damage reduction benefits alone. Therefore, each alternative has a restricted recreational benefit equal to the amount of coastal storm damage reduction benefits for the alternative.

**G. Selected Plan.** The selected plan is the National Economic Development (NED) Plan - Alternative 2, the 15 meter (50 foot) beach fill. The selected plan will require approximately 192,000 m<sup>3</sup> (251,000 CY) of beach compatible sand, placed by hopper dredge, for initial placement. The total quantity of sediment required over the 50-year project lifetime, based on 8 renourishments, is 1,728,000 m<sup>3</sup> (2,260,000 cy).

The sand will be taken from a designated borrow site at Oceanside, CA (Borrow Area 2) and hauled approximately 20 miles to San Clemente. Roughly 1,040 m (3,411 ft) of shoreline will be nourished under this plan. The hopper dredge will require a monobuoy to discharge its sand onto the beach. The southern limit of the proposed beach fill is located immediately south of the T-Street overpass and the northern limit immediately north of the Marine Safety Headquarters. Tapers would continue an additional 100 m (330 feet) to the north and south to merge with the existing shoreline. Maintenance renourishment would be performed roughly every 6 years.

The design berm elevation for the study is +5.2 m MLLW (+17 ft), which matches the natural berm of adjacent healthy beaches established by numerous surveys over the years (based on historical surveys). The design foreshore slope is established at 8H:1V and the construction foreshore slope is 13H:1V.

Dredging would be performed 24 hours a day, 7 days a week. Shore equipment would work 12 hours a day, 6 days a week. The proposed Project duration is estimated at 46 working days over the course of 4 months during the off recreation season (September to May).

**H. Project Costs and Cost Sharing.** Based on October 2011 price levels, the estimated total nourishment cost of the plan is \$98,100,000, which includes the project first cost of initial construction of \$11,300,000 and a total of 8 periodic renourishments at a total cost of \$86,800,000. Periodic renourishments are planned at 6-year intervals. The Federal share of the project first cost would be \$7,350,000 and the non-Federal share would be \$3,960,000, which equates to 65 percent Federal and 35 percent non-Federal. The cost of lands, easements, rights-of-way, relocations, and dredged or excavated material disposal areas (LERRD) is estimated at \$11,000, all of which is eligible for LERRD credit. The Federal share of the total renourishment cost would be \$43,400,000 and the non-Federal share would be \$43,400,000, which equates to 50 percent Federal and 50 percent non-Federal. The total nourishment cost includes \$4,460,000 for environmental monitoring, and \$8,550,000 for physical monitoring over the life of the project.

**I. Operation, Maintenance, Repair, Rehabilitation, and Replacement (OMRR&R).** The City of San Clemente would be responsible for the operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) of the project after construction. The project is

not currently estimated to result in a significant incremental increase over the sponsor's existing beach maintenance activities and costs.

**J. Project Benefits.** The recommended plan would significantly reduce risk to the City of San Clemente from coastal storm damages. Therefore all project costs are allocated to the authorized purpose of coastal storm damage reduction. The selected plan would reduce average annual coastal storm damages by about 97 percent and would leave average annual damages estimated at \$36,900. The equivalent average annual benefits, which include recreational benefits, are estimated to be \$3,160,000, with net average annual benefits of \$978,000. The benefit-cost ratio is approximately 1.4 to 1.

**K. Environmental Compliance.** The San Clemente Shoreline Feasibility Report and Environmental Impact Statement has undergone all required review under the National Environmental Policy Act (NEPA). The Final report includes responses to all resource agencies and interested party comments on the Draft and Final reports. Extensive coordination was conducted with the regulatory resources agencies throughout the NEPA process with a focus to develop and refine the Monitoring and Mitigation Plan for the project.

Public review of the Draft EIS was held from August 19 to September 23, 2010. Roughly 100 comments were received and all addressed by the Federal government by March 2011. The primary concerns of stakeholders included the need of placing sand on the beach, impacts on water quality, impacts on environmental resources, and impacts on surfing characteristics. No objections to the project were expressed.

The California Coastal Commission conditionally approved the project under their jurisdiction of the Coastal Zone Management Act on 9 December 2011. The final U.S. Fish & Wildlife Service Coordination Act Report was received in July 2011 and is included as Appendix G of the EIS. The Findings of Compliance for Clean Water Act Section 404(b)(1) Evaluation was prepared and contained within the EIS (Appendix A). A Section 401 Water Quality Certification will be requested from the California (San Diego) Regional Water Quality Control Board during plans and specifications.

**L. Policy Compliance Review History.** The *San Clemente Shoreline Feasibility Report and Environmental Impact Statement* has undergone policy compliance review by HQUSACE. Policy compliance reviews were conducted for the Feasibility Scoping Meeting (FSM), Alternative Formulation Briefing (AFB), Draft and Final Report milestones, and for the February 2012 Addendum.

The FSM equivalent (F-3) meeting was held on 1 December 2004; however there was no Headquarters involvement. A Memorandum for the Record (MFR) was issued on 8 March 2005 documenting the discussions that were conducted for the FSM.

In response to the FSM MFR and continued study efforts, CESPL prepared the Draft AFB Report and Environmental Impact Statement (EIS), dated January/February 2010, for the purpose of conducting an AFB. The HQUSACE staff conducted a policy review of the AFB submittal and provided comments on 22 March 2010. District Responses were provided on 24 March 2010 and the AFB was held on 26 March 2010. The AFB PGM was issued on 11 May 2010.

In response to the AFB PGM, CESPL prepared the Draft Feasibility Report and EIS, dated July 2010 for the purpose of conducting a Feasibility Review Conference. The HQUSACE staff conducted a policy review of the Draft Report submittal and provided comments on 30 September 2010. The FRC was held on 17 November 2010 and the PGM was issued on 30 November 2010.

In response to the Draft Report PGM, CESPL prepared the draft Final Feasibility Report and EIS, dated March 2011 for the purpose of conducting the Civil Works Review Board (CWRB). The HQUSACE staff conducted a policy review of the Final Report submittal and provided comments on 10 May 2011. The CWRB was held on 12 May 2011. The meeting concluded with a unanimous vote by the Board members to release the report for State & Agency review, subject to the minor revisions required by the latest HQ review of the final report package. District responses were provided on 2 June 2011 which resulted in a revised version of the Final Feasibility Report and EIS, dated July 2011.

State and Agency review of the proposed Chief of Engineers Report and Final Feasibility Report & EIS, dated July 2011 was conducted in September 2011. Letters were received from the Department of the Interior, US Environmental Protection Agency, and the National Oceanic and Atmospheric Administration. Responses have been prepared by HQ USACE and sent to the agencies.

Changes to the Final Feasibility Report were needed to reflect an increase in the physical monitoring costs resulting from continued coordination with the California Coastal Commission during S&A Review and to update the project cost estimate to the current fiscal Year (FY12). These changes were documented in an Addendum to the Final Feasibility Report. A Policy Compliance Review was conducted on the Addendum and no issues were raised.

## II. POLICY REVIEW COMMENTS GENERATED ON THE JANUARY 2010 ALTERNATIVE FORMULATION BRIEFING PACKAGE.

### A. Peer Review.

1. **Independent External Peer Review (IEPR).** The ATR documentation and the PMP on the district website do not show that an Independent External Peer Review (IEPR) has been, or is planned to be, conducted. EC 1165-2-209 Paragraph 11(3)(a) states that, “A project study may be excluded from Type I IEPR by the Chief of Engineers in cases where none of the above mandatory triggers are met and: (a) it does not include an EIS...” Since the project package includes an EIS, this project should undertake Type I IEPR.

District Response: The District has been in close coordination with PCX-CSDR, IWR and NAB since August 2009 regarding conducting a Type I IEPR. Currently, NAB has received the funds to conduct the IEPR and are finalizing the details with Battelle, the contractor that will be conducting the review. The Review Plan can be updated to reflect this if HQ feels it is necessary.

AFB Discussion: District response is adequate.

Action Required: District will update the review plan.

Action Taken: Updates were made to the following sections of the Review Plan: 1.4 (Why IEPR is Needed), 2.2 (Agency Technical Review), 2.3 (Independent External Peer Review), and 2.5 (Tasks, Timing, Sequence, and Costs) to reflect updates in the IEPR (dates and disciplines), names of the ATR reviewers and the project schedule.

***HOUSACE Assessment: Comment resolved by action taken. ATR and IEPR were appropriately undertaken for this study.***

2. **Review Plan, Section 2.3 Independent External Peer Review, page 9.** In addition to Type I (decision document) IEPR, the report will also have to undergo Type II (safety assurance review) IEPR unless specifically excluded. Guidance is provided in EC 1105-2-209. Type II IEPR should be incorporated into the Review Plan.

District Response: The Type I IEPR that is planned will include a basic safety assurance review, which complies with EC 1105-2-209. Before CWRB, SPL will prepare a review plan for safety assurance review for PED activities, which may include Type II IEPR.

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: District Response will be implemented during the preparation of the review plan for PED activities.

***HOUSACE Assessment: Comment resolved by action taken. ATR and IEPR were appropriately undertaken for this study. PED Peer Review Plan accounted for during CWRB.***

**B. Without Project Condition. Problem Identification.** The documentation states that the sediment budget for the San Clemente beaches are in a state of equilibrium, however they have historically suffered from beach erosion due to storm-induced wave attack, with greatest erosion occurring since the early 1990's. It is not clear that the magnitude of the storm damages warrant Federal involvement to address the problems. The document needs a clear and concise problem statement with supporting documentation to demonstrate the magnitude of the problem to be addressed by the project.

District Response: The existing paragraphs in Section 3.1 will be kept and the following statement will be highlighted to present a more concise statement. Sections 3.2, 3.3, and 3.4 are presented as supporting documentation for the problem statement.

“PROBLEM STATEMENT: Along the shoreline of San Clemente, storm waves impinge directly upon the protective revetment and railroad ballast, significantly threatening the operation of the LOSSAN railroad line. This railroad corridor is a vital link for passenger and freight service and has been designated as a Strategic Rail Corridor by the Department of Defense. The narrowing of the beaches along the shoreline also subjects the public facilities, seaward of the railroad corridor, to wave-induced damages, and further reduces recreational space on an already space-limited beach.”

AFB Discussion: The sediment system is starved both because of natural and human conditions. This area has never had a large source of sediment. The sediment budget is stable, but it is still sediment-starved. Lack of sediment in the system is the cause of historic damages. The Main Report needs to have a concise factual statement of the problems in the study area. The issue is the long-term erosion rate is finally leading to increases in damages occurring. The entire region has this long-term erosion, but the other reaches don't have the potential for sufficient NED damages. Residual damages to the other reaches needs to be addressed. Should the Corps also address the Federal interest (not necessarily from the Corps viewpoint) in protecting the other reaches because of the DoD interest in protecting the rail line? Reaches 2 and 4 are wider than Reach 6 and Reach 8 is narrower.

WRDA '96 Section 227 states the Corps should look at other benefit streams that are related to other Federal interests.

Action Required: HQ will aid SPL in looking at other benefit streams for the other Reaches. The District will explore ways to strengthen the problem identification

discussion. HQ OWPR has contacted the STRACNET office at Scott AFB to attempt to clarify their role in the rail corridor protection issue. HQ recommends the PDT keep attempting this contact. The phone number for the STRACNET command section at Scott AFB is (618) 220-5000. HQ also will provide guidance on the use of this benefit angle from other water resources projects which have used National defense benefits as a tool in project justification and will develop that story with the team as this project moves forward.

Action Taken: The explicit problem statement above has been inserted in Section 3.1 Main Report. Section 5.4 has been added to the report to discuss the issue of potential for damages to the other reaches within the study area that are not covered under the Tentatively Recommended Plan. The PDT will continue to try and contact STRACNET as recommended by HQ.

**HOUSACE Assessment:** *Comment resolved by action taken.*

### **C. Plan Formulation.**

1. **Screening of Alternatives, Main Report, Section 4.7.6, Table 4-5, page 89.**  
The report needs to further clarify the screening process and explain clearly why each management measure was either carried forward or eliminated from consideration. The explanations need to be consistent with Corps guidance on Plan Formulation and selection of the NED plan, as well as the Federal objective. In screening alternatives to determine the NED plan it is important to keep the definition of the NED plan in mind. It is defined in ER 1105-2-100, Chapter 1, which states:

“Various alternative plans are to be formulated in a systematic manner to ensure that all reasonable alternatives are evaluated.

(a) A plan that reasonably maximizes net national economic development benefits, consistent with the Federal objective, is to be formulated. This plan is to be identified as the NED plan.”

The Federal Objective is defined in Chapter 1 (the Principles Section) of ER 1105-2-100. The definition is as follows:

The Federal objective of water and related land resources project planning is to contribute to national economic development consistent with protecting the Nation’s environment, pursuant to national environmental statutes, applicable executive orders, and other Federal planning requirements.

Some of the rationale presented for screening alternatives does not appear to be consistent with the above guidance. For example, economic feasibility (based on NED benefits and costs) is a valid screening criterion. Environmental acceptability is also a valid criterion to the extent that it is based on national

environmental statutes, applicable executive orders, and other Federal planning requirements. Lack of public or sponsor support for a particular measure is not a valid reason for eliminating a plan from consideration. If non-Federal interests want a plan other than the NED plan, a locally preferred plan can be recommended, subject to approval of the ASA(CW).

The report needs to do a more thorough job of explaining why each measure was either carried forward or screened out. Specific information should be provided. If “high cost” is the reason to screen out a measure some clear indication should be provided to explain why the measure is expected to be expensive. If “ecosystem impacts” are a reason, the report needs to clearly identify those impacts in terms of the Federal objective. Some alternatives appear to have been eliminated due to environmental impacts when these were not impacting the natural resources of the project area. The team should clarify the screening tools used in plan formulation to ensure plans were screened in an acceptable manner. The NED plan defines the level of Federal participation and must be identified correctly.

District Response: District will elaborate on the screening of alternatives to more fully explain factors such as:

- Potential to impact Essential Fish Habitat (thru the use of groins and offshore submerged structures)
- Lack of public support for any type of structures
- Impact to recreation both in terms of structures on the beach and access issues with seawalls and revetments.
- Safety concerns with structures on the beach.
- Prohibitive cost of structural alternatives based on closely related studies at Oceanside, Imperial Beach, and Solana-Encinitas.

AFB Discussion: Ensure that discussion of screening of alternatives is applicable to Federal objectives. Add rough order of magnitude of costs for those items that are deemed cost prohibitive. Add further discussion on environmental acceptability.

Action Required: Implement District response, including relating screening criteria to the Federal objective and fully explain environmental acceptability.

Action Taken: Reasons for screening alternatives in early plan formulation stages have been explained in Section 4.6.5 Main Report. Additional explanation given regarding exclusion based on federal objectives and cost.

HQUSACE Assessment: This concern is partially resolved. The DEIS is not consistent with the Draft Feasibility Report regarding the plan formulation methodology. Section 3.4.2 of the current DEIS mentions 2 scales of alternatives; the 10m and the 15m alternatives. Whereas Section 3.4.2.2 of the current DEIS specifies between the 15m and 35m alternatives. Additional

description is needed to explain that a variety of alternative beach fill profiles were considered at 5m increments between a 10m and 60m beach. Furthermore, the document should be revised to explain the logic of comparing and evaluating only the 15m and 35m plans throughout the remainder of the EIS document.

District Response: The Paragraph from Section 3.4.2 has been edited for clarification and reads as the following:

“The Beach Fill Alternative consists of dredging material from offshore Oceanside (Figure 3.4-1), then hauling and placing it at San Clemente Beach. The beach fill design parameters were determined by considering various combinations of beach-fill widths (i.e., between 10 m and 60 m at 5 m intervals) and different replenishment cycles. These combinations are scales (e.g., 10 m, 15 m, 20 m, etc. beach width) of the same alternative (i.e., beach fill). Two beach widths have been chosen that reasonably represent the scales that were modeled (i.e., 15 m and 35 m), but were expected to have apparent differences in environmental impacts based on preliminary screening. The 15 m beach width was chosen to represent the smallest scale beach width that met the project objectives. The 35 m beach width was chosen to represent the largest scale beach width that met project objectives. Although it is recognized that these two widths are scales of the same alternative, they are addressed in this document as two separate alternatives.”

IPR Discussion: The intent of this comment is ensure that there is consistency between the DEIS and the Draft Feasibility Report. District response is adequate.

Action Required: Implement District response.

Action Taken: The District response has been incorporated into Section 3.4.2 of the EIS.

**HQUSACE Assessment**: *Comment resolved by action taken.*

2. **Number of Beach Fills**. The report indicates that the recommended plan will have 9.2 beach fills, or an average of about one every 5-1/2 years. It is noted that the last fill should be sized so as not to extend the project beyond the 50 year period from initiation of construction. For analysis purposes this may require that the last fill be smaller, or it is sometimes more efficient to include additional sand at the second to last renourishment and forego a small amount of renourishment in the last year or two of the project. It is important to ensure that the estimated renourishment cost is determined correctly because it impacts the cost-sharing and the Section 902 renourishment cost cap. The renourishment cost must be clearly documented in the report.

District Response: Since the model is a life-cycle model, the model will show variable results in the number of fills and the costs for each fill for each of the 1,000 iterations. The amount of erosion that is expected to occur on the sacrificial beach is uncertain at initiation of each fill. So, it will be impossible to modify the model to size the last fill so that the amount of the fill does not last beyond the 50-year period from the initiation of the construction project. In addition the implementation of a fill that is larger than 15 meters is undesirable since it may cause environmental impacts on the surfgrass beds that are located nearshore.

AFB Discussion: Specific estimates for the nourishment costs must be presented in the cost estimate. There is an expenditure cap that an alternative cannot provide benefits past the 50 years post construction.

Action Required: Reduce the fill of last renourishment cycle, or alternatively, increase the fill of the next to last renourishment cycle and eliminate the last renourishment cycle (whichever is more efficient) so the project does not extend beyond year 50.

Action Taken: The quantity and cost of the last nourishment cycle has been augmented in the Cost Engineering Appendix to not extend beyond year 50. The first 8 nourishment cycles will each place 192,000 m<sup>3</sup> (251,000 cy) and the final nourishment cycle will place 64,000 m<sup>3</sup> (84,000 CY). This information has been added to Section 4.8.

HQUSACE Assessment: *Comment resolved by action taken.*

3. **Table 4-6, Analysis of Alternatives.** It appears that the report correctly identifies the NED plan as presented in table 4-6. However the table does not present average annual equivalent benefits for storm damage reductions and recreation separately. The identification of the NED plan should be based on maximizing net average annual equivalent benefits for storm damage reduction. As a minimum, this information should be displayed in this table.

District Response: Concur, the revised economic appendix and main report will show average annual equivalent benefits for storm damage reductions and recreation separately in tables that display the benefits for each of the alternatives (especially in Table 29 in economic appendix and Table 4-6 in main report).

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: Average Annual Equivalent Benefits are now presented in Section 4.7 “Final Alternatives Analysis”, Table 4-6 of the Main Report. Benefits

and damage reductions have been converted from NPV to Average Annual Value in the Economics Appendix (Table 30, previously Table 29, has been updated).

**HOUSACE Assessment:** *Comment resolved by action taken.*

#### **D. Economics.**

1. **Certification of the Economic Model, Review Plan, Section 2.4.** Section 2.4 of the Review Plan indicates that the economics and storm damage model was accepted in June 2006 and the AFB documentation includes a letter from the PCX confirming this. However the report does not provide the model documentation. Complete documentation of the model needs to be included in the AFB package.

District Response: District concurs, the revised economic appendix will include model documentation that includes additional information on the model inputs and outputs as well as the correlation between the economic and engineering elements of the model.

AFB Discussion: District response is adequate.

Action Required: PCX will send model documentation to HQ for their approval.

Action Taken: A Model Documentation Appendix has been prepared and sent to the PCX-CSDR.

**HOUSACE Assessment:** *Resolved 31 January 2011 per CECW-P memorandum which approved the annual storm event model for this study (single use).*

2. **Use of Average Annual Equivalent Terms.** The report switches between the use of Net Present Value and Average Annual Equivalent Value, and in some cases presents values without labeling them. This leaves the reader to infer how the values are defined; which can be confusing. In addition, the manner in which the values are used and displayed makes it difficult to track the numbers and compare them to values in other Corps studies. For example, all the values presented in Table 4-6 appear to be presented in net present value terms, however only a few rows of the table are clearly defined as such. The values contained in Table 4-8 appear to be presented in average annual equivalent terms, although they are not defined in the table, and the previous discussion leading up to this table appears to be stated in net present value terms. There is a similar problem with tables presented in the Economic Appendix. Corps guidance requires that economic values be stated in average annual equivalent terms; there is no requirement to display net present values. Guidance is provided in ER 1105-2-100, Appendix D, Section D-6.d. (note: for some reason

paragraphs b. and c. of this section of the guidance are missing). For clarity, the report should present economic information in average annual equivalent terms where ever possible to facilitate tracking and consistency with other Corps studies. In all cases the unit of measure should be included.

District Response: District concurs, the revised economic appendix and main report will clearly label economic information in average annual equivalent terms so the reader is able to distinguish data between net present terms and average annual equivalent terms.

AFB Discussion: Suggest using the average annual equivalent terms. District response is adequate.

Action Required: Implement District response.

Action Taken: Expression of benefits in NPV terms has been removed from the Main Report and Economics Appendix and benefits are now expressed in annual equivalent terms.

**HOUSACE Assessment:** *Comment resolved by action taken.*

3. **Parking: Section 4.1 General Recreation Amenities and Fees and Table 14 – Parking San Clemente Beach.** This section and table shows that there are 1,072 parking spaces for the reach and does a very good job explaining that fees are charged to all users equally (visitors and locals). However, this section does not demonstrate that the parking spaces available are enough to meet peak hour demand. ER 1165-2-130 Paragraph h. (2) requires that, “Parking should be sufficient to accommodate the lesser of the peak hour demand or the beach capacity.” The appendix should document parking as it pertains to satisfying peak demand. A summary of this should also be added to the main report.

District Response: The amount of parking for vehicles in the study area includes parking lots at Linda Lane Park, at Avenida Del Mar and at Pedestrian Overpass at T-Street. In addition to the parking lots, the surrounding streets at the access points provide a valuable source of parking for users. The revised economics appendix will document the parking capacity at access points as it pertains to satisfying peak demand. A summary will be added to the report.

AFB Discussion: District response is adequate. Add information on public access points and public transportation options.

Action Required: Implement District response and AFB discussion.

Action Taken: Additional information on parking has been added to Section 4.1 of the Economics Appendix.

**HQUSACE Assessment: Comment resolved by action taken.**

4. **Section 4.4 Recreation Value.** This section does not present the Unit Day Value analysis in a manner the reader can follow and come to the same conclusion. For example: 1/ Where is the documentation of expert elicitation that produced the point values in Table 22? 2/ Why are the point values in Table 22 based on sqft per person when the alternatives are in linear meters of sacrificial beach? 3/ If the excess demand would be served by another beach in the without project at a value of \$3.40 (according to footnote at the bottom of page 42), is the analysis only counting the incremental value above \$3.40 when evaluating the potential alternatives that accommodate that excess demand? 4/ Why does the UDV in Table 29 show a large increase between the without project and the 10M alternative and only small incremental additions in value with each additional 5M alternative? The appendix should be revised to transparently show the UDV analysis so the reader can reasonably come to the same conclusion as the report.

**District Response:**

- (1) Documentation of how the point values were developed will be added to the economics appendix. The analysis of the point values was conducted by Corps economists and contractors and the result presented is their consensus opinion.
- (2) The UDV points are estimated on a per user basis of allocated space for that user to reflect diminishing value as space allotment decreases, restricting beach activities and crowding, in addition to the basic attributes of the beach. In all cases the entire recreational beach (length x width) is first estimated, then the number of users is applied to determine user space. Space allocations per user vary throughout the year - yielding different values - although the recreational beach does not. In describing alternatives the linear meter approach clearly indicates their differences.
- (3) The assignment of a UDV score of zero and a value of \$3.40 to excess visitor demand was to provide a mechanism within the model to determine the lost potential recreation value from a capacity constraint. In general, recreation is measured at a total value within Corps studies under the UDV approach and no attempt is made to estimate the incremental value between what recreational activity and value would be taken in the absence of a project and that of the project.
- (4) The UDV under the without project condition is summertime weekend capacity constrained and is unconstrained by the 10M alternative. In addition to eliminating the capacity constraint the 10M alternative provides additional space for users at all other times throughout the year. In terms of incremental value increases with space allotments, value increases are much greater as you move away from the constraint and become marginally less important the further away from the constraint - standard diminishing return approach. This approach is why the initial alternative that removes the

capacity constraint (10M) shows a large value increase and the other alternatives show modest improvement from the 10M alternative.

AFB Discussion: Need to more fully explain the breakdown of recreation benefits and assumptions used in the model.

Action Required: Implement District response and AFB discussion.

Action Taken: UDV more fully explained in Section 4.4 of the Economics Appendix.

**HQUSACE Assessment:** *Comment resolved by action taken.*

5. **Economics Appendix, Section 8.3 NED Benefits.** This paragraph contains a brief explanation of how the NED plan is determined that is not entirely accurate. Section 4.9 of the Main Report provides a more complete description, citing ER 1105-2-100, Appendix E, Section E-24.c. There are two fundamental elements to identification of the NED plan, how the plan is formulated, and how it is justified. The first element is that the Corps participates only in those projects formulated exclusively for hurricane and storm damage reduction. The second is that these projects can be justified (BCR >1.0 ) based solely on damage reduction benefits, or a combination of damage reduction benefits plus (at most) a like amount of incidental recreation benefits. In other words, recreation benefits useable to establish Corps participation may not be more than fifty percent of the total benefits required for justification, which in turn means they may not exceed an amount equal to fifty percent of costs. If the criterion for participation is met, then all recreation benefits are included in the BCR. Costs incurred for other than the damage reduction purpose, i.e. to satisfy recreation demand, are a 100% non-Federal responsibility.

District Response: Current plan formulation is based on net annual NED benefits, which include both storm damage reduction (SDR) and recreation benefits in equal amounts. This analysis results in an NED plan that has a BCR of 1.54 and is the 15-m plan. If the net annual NED benefits only include SDR, then the result is still the 15-m plan. The BCR, however, is less than unity. SPL will revise the text in the report. The plan does not contain separable recreation benefits (i.e. the recreation benefits are incidental).

AFB Discussion: Plan formulation discussion in the Main Report more accurately describes the plan formulation requirement than the discussion presented in the Economics Appendix. The plans must be formulated exclusively for SDR, but justification may include recreation as long as at least half the benefits required for justification come from H&SDR.

Action Required: Implement District response and AFB discussion.

Action Taken: The NED formulation and justification process has been revised in both the Economics Appendix and Main Report. The NED plan has been identified based on SDR alone, producing the 15-m plan with the least negative net benefits. Justification was done including equal amounts of SDR and Recreation benefits (50% / 50%), producing the 15-m plan with BCR of 1.94. Section 8.3 of the Economics Appendix has been revised to explain plan formulation accurately.

HOUSACE Assessment: *Comment resolved by action taken.*

## **E. Engineering.**

1. **Section 5.2.3 Single Storm.** This section describes the model methodology for storm selection in the Monte Carlo model. The section describes a process where, “Each iteration of Monte Carlo simulation randomly selects a storm event where the significant wave height equal or exceeds the mean annual significant wave height.” What range of storms (storm set) is the model selecting from in the simulations? What does the model assume for a year that does not have a storm? The appendix should add more detail regarding the storm set and storm selection process.

District Response: The “storm set” population was derived from measured significant wave height data at San Clemente. These data were collected under the Coastal Data Information Program between 1983 and 1998 as described in Section 2.4 of the Coastal Engineering Appendix. The storm set used by the model is described in Section 3.2. The measured storm data set was best-fit with a log-normal probability distribution. Based on the measured data it was determined that 2.6 m (8.5 ft) represents the annual maximum threshold. The model selects from a truncated distribution, the portion of the best-fit log-normal probability distribution greater than 2.6 m. Essentially the model selects from the “tail” of the distribution. Therefore each iteration of the Monte Carlo simulation forces the selected wave height to be, at a minimum, an annual storm event. There is no provision for a year that does not have a storm; every year in the simulation has one storm. In reality every year has multiple storms and by definition every year will have at least an annual storm. However, not all storms are damaging and in fact very few storms are damaging. The model calibration process attempts to align calculated damages with actual observed damages.

AFB Discussion: It is not clear what is driving the storm damages in the model. Additional information on the dynamics of the system needs to be added. Need to tie damages to the functions (storm damage or long-term erosion).

Action Required: Implement District response and AFB discussion.

Action Taken: Last paragraph of Section 5.2.3 Coastal Engineering Appendix has been modified to include above District Response.

**HOUSACE Assessment:** *Comment resolved by action taken.*

2. **Post Construction Inspection and Monitoring.** Section 6.6 of the Coastal Appendix describes O&M Monitoring that will occur throughout the 50-year project life. It includes monthly beach measurements at 9 locations for 50 years (project life) and other items, which appear to be excessive. ER 1110-2-1100 (Part V) and ER 1110-2-1407 allow for annual condition surveys of completed beach fill projects, although more frequent surveys may be undertaken, if needed. Further justification is needed to support more frequent surveys throughout the life of the project.

District Response: The beach width measurements described are a simple linear measurement from a fixed point on the backshore to the foreshore berm crest. This method provides a systematic record of shoreline response and can be used to yield a good approximation of long term gains or losses of sediment from a given reach of shoreline. These measurements will yield a highly useful time series of shoreline change. We believe monthly measurements are the best frequency to demonstrate long-term shoreline change. This method requires a very low level effort by non-technical labor with an attendant low cost. Each monthly survey can be accomplished in 1-2 hours and the estimated yearly cost for monthly measurements at nine locations is only \$8k per year. This type of measurement system has been successfully employed by the Los Angeles District for several decades and has repeatedly demonstrated its value far beyond its cost.

AFB Discussion: Further discussion of monitoring plan needs to be addressed in the Appendix. Will include examples of other monitoring plans and that this is a low-cost method for monitoring of adaptive management needs.

Action Required: Implement District response and AFB discussion.

Action Taken: The District Response text above has been added to Section 6.6.1 Coastal Engineering Appendix.

**HOUSACE Assessment:** *Comment resolved by action taken.*

3. **Cost Appendix:**
  - a. **Total Project Cost:** The estimated Total Project Cost stated in the main report does not match the cost estimate. It describes costs based on a dredge volume of 511,000 cy, whereas the rest of the submittal describes the project as 251,000 cy. The documentation should be corrected and a current version of the cost estimate should be provided.

District Response: Estimates were prepared in 2008, at the time, the volume was 390,700 m<sup>3</sup> (511,000 cy). The unit price will be the same for both quantities. Cost estimate will be updated for the Draft Report.

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: Cost Engineering Appendix has been updated to provide costs of implementing the 15-m plan (placement of 192,000 m<sup>3</sup> (251,000 cy) for each nourishment) at FY10 price levels.

***HOUSACE Assessment: Comment resolved by action taken. Costs were further updated to current FY (FY12 @4%) to support Chief's Report.***

- b. **Fuel Adjustments.** The documentation indicates the use of a value for a specific piece of equipment which costs \$4.50 per gallon. It is unclear why a more industry standard unit of measure was not used. Sufficient justification and documentation should be provided for costs used outside of the standard MCACES units.

District Response: Estimate was initially prepared with a quoted price of \$1.70/gal in 2006 (Yankovich Company, 800-836-5355). In 2008, the estimate was recomputed with a quoted fuel price of \$4.50/gal from the same supplier. Fuel prices are volatile and the hopper dredges are the most sensitive to fuel fluctuations. The District does not agree with the use of a standard fuel unit cost for any heavy piece of equipment.

AFB Discussion: District response is adequate. District should discuss issue with SPN.

Action Required: Implement District response.

Action Taken: The Cost Engineering Appendix has been updated to FY10 levels including fuel costs.

***HOUSACE Assessment: Comment resolved by action taken.***

- c. **Construction Method.** The documentation is unclear as to why the PDT chose the hopper dredge over the cutterhead method - especially when hopper cost is almost double in operation costs. Sufficient justification must be provided to agree to a higher cost of construction.

District Response: Will revise the cost engineering appendix to be consistent with statements made in the Main Report. The text from the Main Report reads:

"This project will be constructed with hopper dredging equipment with pump ashore capability and conventional earthmoving equipment. Typical Los Angeles District beach fill projects require large capacity open-ocean capable dredges. Operational requirements typically result in hydraulic cutter head and/or hopper style dredges. The borrow site for this project is 35 km (21 miles) from the receiver beach and it is anticipated that the borrow site haul/pumping distance will require hopper dredging equipment utilization. Although the Geotechnical Appendix recommends the use of cutterhead or mechanical dredging methods to ensure the blending of sediments and to reduce % fines, the Coastal Engineering Appendix has recommended hopper dredging be implemented due to the distance between the borrow and placement sites. The Geotechnical Appendix does state, however, that if hopper methods are used, cuts should be made as deep as possible to obtain the coarsest material possible."

AFB Discussion: Cutterhead option is not technically feasible and both the Cost Engineering Appendix and Geotechnical Appendix will present a consistent response.

Action Required: Draft report must include better justification and documentation on construction methods to be used for implementation.

Action Taken: Section 8 of the Geotechnical Appendix has been updated to recommend hopper dredge. All costs in Cost Engineering Appendix are based on use of a hopper dredge with pump ashore capability.

**HOUSACE Assessment:** *Comment resolved by action taken.*

4. **Value Engineering.** The Engineering Appendix does not indicate discussion about VE. The district should include discussion about sponsor coordination and value engineering activities during formulation.

District Response: District concurs.

AFB Discussion: Per ER 11-1-321, a VE study is required for this study because the Total Project Costs are greater than \$2M. Furthermore, HQ wants to ensure that the Sponsor's views in developing alternatives and engineering methodology have been considered during formulation. The Draft report should describe how the engineering analysis conducted during the study complies with the requirements of ER 11-1-321.

Action Required: Implement District response and AFB discussion. Include items that were looked at during plan formulation that address the issue of value engineering.

Action Taken: A discussion of value engineering activities covered during feasibility has been added as Section 4.10 of the Main Report.

**HQUSACE Assessment:** *Comment resolved by action taken.*

5. **Safety Assurance Review.** Per EC 1165-2-209, the report should include a discussion of Safety Assurance Review (SAR) factors considered during the study, and those that will be conducted in future project phases. Furthermore, the P&G states that planners shall characterize, to the extent possible, the different degrees of risk and uncertainty inherent in water resources planning and to describe them clearly so decisions can be based on the best available information. Have sources of uncertainty and risk been considered/described, and planned for? This should be done for each of the project components (HSDR, and Recreation). Since this study is focused on storm damage reduction, it will need to comply with WRDA 2007, Section 2035 and need to demonstrate consideration of Safety Assurance Factors as part of the plan formulation process.

District Response: The District will address potential consequences for life safety that would be associated with the construction of a Federal project in the Draft Report. This will be added to Chapter 5 Tentatively Recommended Plan.

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: Safety Assurance Review will be covered as a requirement under Type I IEPR. . Section 4.9.2 addresses potential safety issues that may result due to a change in the slope of the beach after sand placement.

**HQUSACE Assessment:** *Comment resolved by action taken.*

## **F. Environmental.**

1. **NEPA Documentation.** There appears to be missing documentation with this submittal that was submitted with the previous submittal. There is no environmental appendix outlining agency letters and coordination, a USFWS PAR or other document, a 404(b) 1 analysis for the project, EFH analysis, etc. In accordance with ER 1105-2-100, C-3, the team needs to clarify this. It is likely just an oversight due to the changing appendices between submittals. Also, the team should clarify the project's status relative to the ER 1105-2-100, Appendix C-6 on the 404 r process.

District Response: An environmental appendix is being prepared to include agency letters and coordination.

AFB Discussion: District response is adequate. USF&W is developing a CAR. Consultation regarding EFH has begun. Need to have a statement about seeking 404(b)1 compliance.

Action Required: Implement District response and AFB discussion.

Action Taken: CAR still in development. EIS is being prepared as stated above.

***HOUSACE Assessment: Comment resolved by action taken. Final CAR (July 2011) is included in the Final Report package.***

2. **Railroad Considerations:** There are several statements in the report and EIS about the fact that the RR authority is placing random riprap all along the rail corridor and also assertions that this placement covers the beach. Has there been a discussion with the Regulatory office here about a more programmatic way to address these on-going and accumulating impacts? This presumes that these placements need a permit from the USACE. This issue should also likely be discussed in the cumulative effects section of the EIS.

District Response: The railroad currently does not sit within Corps jurisdiction. The emergency riprap is placed during storm surge situations. Discussions with Corps Regulatory have not occurred, but Regulatory will be consulted regarding potential options to address on-going impacts.

AFB Discussion: District will verify if the railroad actions are permitted by Corps Regulatory. District response is adequate.

Action Required: Implement District response and AFB discussion.

Action Taken: The PDT has yet to discuss the issue of riprap placement with Corps Regulatory, but will prior to public review.

***HOUSACE Assessment: Comment resolved through action taken. The District Planning and Regulatory staff discussed consistencies between the planning of the project and Regulatory permitting. Recommended Plan is consistent with permitting approach, no further action was needed to the Feasibility Report***

3. **Kelp/Grass Beds:** The report asserts that the submerged grass beds will not be adversely impacted due to not being more than 2/3 smothered during the placement or the eventual spreading of the sand fill. The team should clarify if there has been an analysis conducted to ensure that successive O&M placements, since they are only 5 years apart for the TSP, would not result in a chronic impact to these beds or the kelp beds or other natural resources off of the shoreline.

District Response: The report states that submerged surfgrass beds will not be significantly impacted; the report does not say that they will not be adversely impacted. As stated in the EIS/EIR Section 5.4.2. Page 5-41, surfgrass and other sensitive biological resources will be monitored. If adverse impacts are observed, successive O&M placements will not occur. Mitigation Measure MM-Br- 50 -2.2 states:

MM-BR-50-2.2: Shallow subtidal surfgrass beds in the vicinity of San Clemente Beach shall be monitored to determine whether the proposed action adversely affects shallow subtidal reefs and surfgrass. Underwater transects shall be established offshore and downcoast from the proposed receiver beach. The transects shall be monitored by qualified biologists before and after the proposed action to determine whether the beach fill results in a long-term loss of surfgrass. If surfgrass cover offshore and immediately downcoast from San Clemente Beach declines significantly following Project implementation, compared to pre-Project conditions and controls, a mitigation strategy shall be implemented in consultation with NOAA Fisheries and CDFG. A successful method to transplant surfgrass has not been demonstrated, but appropriate mitigation may include the construction of a shallow subtidal mitigation reef habitat. Recent studies by researchers at the University of California, Santa Barbara, have demonstrated some success restoring surfgrass using sprigs (Bull et al 2004). If impacts to surfgrass are observed from the monitoring, then adaptive management would be employed for future renourishment cycles.

AFB Discussion: There is considerable concern from Resource Agencies on impacts to surfgrass beds and require extensive monitoring and “out-of-kind” mitigation if there are impacts. A mitigation plan needs to be included in the EIS. Also include the steps taken by the District to avoid and minimize potential impacts to surfgrass. Address future impacts with adaptive management strategy with the combination of monitoring and subsequent nourishment cycles.

Action Required: District will include a mitigation plan in the EIS.

Action Taken: The Resource Agencies requested that a surfgrass monitoring plan and mitigation triggers be added to Volume I of the EIS as Appendix 1. Negotiations between the Corps and NOAA Fisheries is on-going in terms of what mitigation, if any, would be required for impacts to surfgrass.

***HOUSACE Assessment: Resolved through revisions to the Mitigation Plan to address Resource Agency concerns and conditions imposed by the California Coastal Commission in order to secure the Coastal Zone Consistency Determination.***

4. **Mitigation:** An issue related to the comment above is that of acceptable and feasible mitigation for any adverse impacts. The report and EIS state that although there will be adverse impacts...the potential means for mitigation of

these impacts may not work due to technological constraints. The District should clarify what the plan is then for the needed mitigation. ER 1105-2-100 Appendix C-3.12. and the Implementing Guidance for Section 2036(a) of WRDA 2007 applies. This discuss should include any monitoring and adaptive management plans to track the success of this mitigation or this CW project.

District Response: See response to Environmental F.3. above.

AFB Discussion: See discussion above.

Action Required: See action above.

Action Taken: See action above.

HQUSACE Assessment: This issue is partially resolved. The Monitoring Plan should be revised to cite the appropriate guidance governing the Monitoring Plan and the references used in the development of the Monitoring Plan. These were provided in the sample Monitoring Plan that HQUSACE provided to the PDT by e-mail on 16 July 2010.

District Response: Will add the following sentence to the first paragraph of Appendix B: “This plan has been prepared in accordance with ER 1105-2-100, C-3 (e) and the Implementing Guidance for WRDA 2007 Section 2036(a) dated August 31, 2009.”

IPR Discussion: HQUSACE expressed concern that higher levels of review may have an issue with the recommended Mitigation Plan that includes constructing either an in-kind surfgrass reef or an out-of-kind kelp reef. The District is currently having further discussions with NOAA Fisheries (NMFS) to discuss the feasibility of constructing a surfgrass reef and weighing the potential impacts associated with the reef construction. At this time, the District response is adequate, although HQ remains concerned that the mitigation planning is not being counted in accordance with the reference in our original comment. Also, after this IPR, SPD forwarded the NMFS draft policy which may be the basis for the discussions being held at the District level for mitigation planning. This draft policy also raised concerns similar to our original comment.

Action Required: Implement District response. HQ requests that the vertical environmental team members be engaged as this plan develops and that the District be prepared to clarify how the mitigation planning and monitoring and adaptive management plan for this project conforms with the cited planning guidance and WRDA 2007 IG. HQ stands ready to review interim products related to this issue as they are available.

Action Taken: Appendix B of the EIS/EIR contains the Biological Resources Monitoring Program that has been coordinated with HQ, ERDC and SPD.

HQUSACE Assessment: This issue is partially resolved. The current plan for monitoring of project ecological impacts and mitigation, should they occur, is lacking impact triggers, decision processes, performance standards and similar items required by the Implementing Guidance for WRDA 2007 Section 2036(a). Most critical in the current plan is the lack of a trigger or threshold for deploying compensatory mitigation, the lack of performance metrics for determining success or failure of the surfgrass mitigation and any process for decision making or shifting to other means of habitat mitigation. The implementing guidance to WRDA 2007 Section 2036(a) controls in this instance. It is understood that the team has been working diligently with the various resource agencies in the project area to make headway on these issues. It is also understood that at this time that the District does not believe that need compensatory mitigation will be employed due to their efforts to avoid and minimize project impacts and are recommending the environmentally preferred alternative.

District Response: The Monitoring and Mitigation Plan (Appendix B of the EIS) has been revised with input from the vertical team.

***HQUSACE Assessment: Resolved through revisions to the Mitigation Plan to address Resource Agency concerns and conditions imposed by the California Coastal Commission in order to secure the Coastal Zone Consistency Determination.***

5. **Air Quality.** The team needs to clarify if there was an analysis done of potential air quality issues when the railroad is operating and the beach fill and grooming is being conducted. Would there be any concentrated emissions issues which may affect the project area over the period of initial construction and each subsequent replenishment? ER 1105-2-100, C-7 and CEQ guidance on AQ and cumulative effects analysis applies. This may not be a significant issue but the document does not provide that detail. An acceptable statement may be that there has been some analysis on the emissions from the RR operations and the emissions from the dredging as well as the placement for this project and there will be no concentration of pollutants for a variety of reasons.

District Response: An analysis was not conducted specifically to include the railroad operations, however, it was considered in the analysis as not having any significant impacts with regard to concentrations of pollutants.

AFB Discussion: The only emissions that are considered are from the stopped trains in the area.

Action Required: Informally coordinate with the Regional Air Quality Board and briefly address in the EIS.

Action Taken: Coordination with the Regional Air Quality Board will occur prior public review.

**HQUSACE Assessment:** *District coordinated with the Regional Air Quality Board who found the rationale to be reasonable and thorough. The Board agreed with the analysis. Comment is resolved.*

## **G. Real Estate.**

1. **Real Estate Plan:** The Real Estate (RE) Plan should start by stating the purpose of the RE Plan (ER 405-1-12, Section 12-16). The information and facts in the Real Estate (RE) Plan should track with the Alternative Formulation Briefing Report and the Environmental Impact Statement. The RE Plan should tell the story of the real estate actions and associated costs necessary to support the project. The current plan as written is wordy about things that do not even need to be addressed in the plan. The plan should be revised to be more concise and factual in sections 1.0, 2.0, 3.0, 4.0., and 12.0.

District Response: The Real Estate Plan will be revised. The District asks to consult with the reviewer and obtain clarification and suggestions to help the re-write address the specific areas requiring revisions.

AFB Discussion: Mike Haskins is the HQ reviewer. There are also SPD reviewers that will assist.

Action Required: Implement District response with help from SPD.

Action Taken: RE Plan has been revised with assistance from SPD and the ATR team.

**HQUSACE Assessment:** *Comment resolved by action taken.*

2. **RE Plan Purpose:** Purpose of the Real Estate (RE) Plan should be clearly stated up-front. For example:

This Plan is prepared in accordance with ER 405-1-12, and is for planning purposes in support of the Feasibility Report for the San Clemente Shoreline Protection Project. This RE Plan is intended to identify the real estate requirements in support of this shoreline restoration project, estimate associated costs using baseline cost estimates, and provide a schedule for accomplishing real estate actions by the Local non-Federal Sponsor, the City of San Clemente.

District Response: The new purpose statement, above, will be stated up-front as indicated in the comment above.

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: The new purpose statement has been inserted as paragraph 1 in the RE Appendix.

**HOUSACE Assessment:** *Comment resolved by action taken.*

3. **RE Authority:** The study authority in the RE Plan does not match the authority cited in the AFB Report; namely Section 208 of the River and Harbor Act of 1965. Yes, the feasibility study was funded by the Energy and Water Appropriations Act of 2000, P.L. 106-60, 29 September 1999.

District Response: Will revise with the Section 208 of the River and Harbor Act of 1965 Authority that is presented in the Main Report.

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: The correct study authority (Section 208 River and Harbor Act of 1965) has been updated in the RE Appendix, Abstract Section.

**HOUSACE Assessment:** *Comment resolved by action taken.*

4. **REP Edits:** It is suggested the critical chapters 1, 2, 3, and 4 be re-written to more clearly and concisely meet the requirements of ER 405-1-12, Section 12-16. There is extraneous language pertaining to authorization and funding and project purposes. Clearly outline the purpose of the RE Plan, use concise language consistent with the Draft AFB Report and EIS when describing the project purpose, objectives, and actions. For example, remove the “Project Description” section from Chapter 2.0 and incorporate in Chapter 1.0.

District Response: District will rewrite the cited paragraphs and again ask to consult with reviewer to obtain understanding or what changes should be made to gain acceptance of report.

AFB Discussion: District response is adequate.

Action Required: Implement District response. PDT will work with SPD representative to improve the REP.

Action Taken: RE Appendix updated with changes.

**HOUSACE Assessment:** *Comment resolved by action taken.*

5. **RE Permits:** The real estate requirements section (Chapter 2.0) is confusing and poorly written. It appears the real estate requirements for this project are minimal. There is discussion of standard estates being acquired; however, an encroachment permit is not a USACE standard estate. A copy of the encroachment permit should be provided and approval will be necessary. Approval of non-standard estates must occur on a project specific basis.

District Response: District is seeking a copy of the California shoreline use permit from the sponsor or from California State Lands Commission. The District will note that prior HQ review did suggest in fact the sponsor's use of California State Lands leases and permits

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: Section 2.0 has been updated to explain that it is the Sponsor's responsibility to obtain the CA State Lands lease for the borrow site.

**HQUSACE Assessment:** *Comment resolved by action taken.*

6. **RE Estates:** The discussion about the offshore borrow areas is good; however, a lease is required. Does this involve a non-standard estate? More clarification is needed. It may be appropriate to reference quantities of borrow material vs. borrow site area.

District Response: See above- on the borrow sites the instrument is called a lease. Again the lease is issued by the State of California to the NFS to give them the right to extract and take material – sand from the offshore borrow sites.

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: The Sponsor will obtain the lease from the CA State Lands Commission for the borrow site as explained in the updated RE Appendix.

**HQUSACE Assessment:** *Comment resolved by action taken.*

7. **RE Costs:** Make sure cost totals on page 4 are accurate. Page 125 of the report shows \$12,000 Real Estate LERRD costs vs. \$12,100 in the RE Plan and also, the report shows Zero \$ Federal costs vs. \$1,250 in the RE Plan. The cost table rounds off some costs but not others. Cost data must be consistent. The temporary construction easement for 10 spaces on access road is \$1650 on one line item and \$1500 at the Pier Bowl Parking lot. There is no discussion or clear

explanation as to how these figures were arrived at. If they are based on similar projects, clearly state and reference.

District Response: As part of the RE Plan revision, cost totals will be reviewed for accuracy between the RE Plan and the Main Report. Value of TCE is not based on the number of spaces but on the square footage. It is noted that real estate costs are very insignificant part of the total project costs.

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: All values have been updated in Table 2 of the RE Appendix.

**HOUSACE Assessment:** *Comment resolved by action taken.*

8. **Terminology:** The term PCA is no longer used. PPA – Project Partnership Agreement replaced PCA's.

District Response: Will replace terminology with the correct terminology.

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: PCA has been replaced with PPA throughout the RE Appendix and Main Report.

**HOUSACE Assessment:** *Comment resolved by action taken.*

9. **Sponsor RE Capability:** Section 14.0 does not eliminate the need for inclusion of the Non-Federal Sponsor's Real Estate Acquisition Capability Assessment Checklist. The standard checklist should be prepared and coordinated with the Sponsor and included as part of the RE Plan.

District Response: The standard checklist will be prepared and coordinated with the Sponsor for the Draft Report. The checklist will be signed by the sponsor and Chief, Asset Management Division.

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: Checklist has been prepared and signed by the Sponsor (included as Figure 4).

**HQUSACE Assessment: Comment resolved by action taken.**

10. **RE Schedule:** The acquisition schedule needs to be revisited. It should not take 2 years to acquire the necessary permits and leases?

District Response: Acquisition may not take two years. Report will be clarified. The essential point intended is that there would be time following a WRDA authorization for the sponsor to get the permits and leases and TCE's before construction. This report was written in 2008 and that timeline has been borne out in fact. In the re-write the timelines may be reduced – but still contingent or the prerequisite milestones.

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: Acquisition Schedule updated to be complete by June/July 2011.

**HQUSACE Assessment: Comment resolved by action taken.**

11. **REP Signature Block:** There is no signature block of the preparer or for the Chief of Real Estate.

District Response: Will add signature block to the RE Plan.

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: Signature Block included on Checklist as part of RE Appendix.

**HQUSACE Assessment: Comment resolved by action taken.**

**H. Miscellaneous/Non-Critical Comments**

1. **Actions for Change.** It was noted during the 21 May 2009 Civil Works Review Board that references to the Actions for Change should cease, since they have been incorporated into the Campaign Plan. Suggest combining the AoC discussions with the text for the USACE Campaign Plan.

District Response: Comment is noted – the report does not reference the Actions for Change.

AFB Discussion: District response is adequate.

Action Required: The Draft Feasibility Report should include a section demonstrating compliance with the Campaign Plan.

Action Taken: While the Campaign Plan is not directly referenced within the report, the entire feasibility study process is designed to satisfy Campaign Plan Goal 2 to “Deliver enduring and essential water resource solutions through collaboration with partners and stakeholders.” Without the financial support of our non-federal sponsors and collaboration with interested stakeholders, this study would not be able to proceed towards construction.

**HQUSACE Assessment:** *Comment resolved through discussion above and presentation at the CWRB.*

2. **Economic Appendix, Attachment B.** Table B in attachment B does not correspond with Table 29 in the economic appendix. Table B identifies the 35M plan as the NED plan where Table 29 identifies the 15M as the NED plan. The appendix should be revised for consistency.

District Response: Table B provides a sensitivity analysis of a key assumption that the railroad will no longer construct a seawall if its decision criterion on minimum beach width is violated in the with project condition. The sensitivity analysis provides a scenario that reruns the model by holding the decision criterion on minimum beach width active throughout the with project condition. This change allows for the construction of a seawall even with a beach fill plan in place if the criterion on minimum beach width is violated. The results of the sensitivity analysis shows a shift in the plan with the highest net annual NED benefits from the 15-meter beach fill to the 35-meter beach fill plan. Yes, the Attachment B should show NED Plan as 35-meter instead of 15-meter.

AFB Discussion: Attachment B is a sensitivity analysis of the future with project conditions. The assumption is that the RR would not construct a seawall. Attachment B presents the alternatives analysis if the RR did construct a seawall with a Federal project in place.

Action Required: If Attachment B remains in the Appendix, then additional information is needed to describe the purpose.

Action Taken: Appendix B has been removed from the Economics Appendix.

**HQUSACE Assessment:** *Comment resolved by action taken.*

3. **Editorial Review.** The District should undertake an additional editorial review of the documentation. There are a several editorial errors throughout, and all numbers should be cross-walked among all the components of the submittal.

District Response: The District will perform an additional QA/QC of the report prior to the review of the Draft Report.

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: Additional QA/QC was completed on the revised reports.

HQUSACE Assessment: This concern is not resolved. Although significant progress was made addressing editorial problems in the documents, there continues to be problems with the submittal regarding its completeness and quality. Several required items were not included with the submittal, copies had missing appendices, out of date certifications, and inconsistencies between the Feasibility Report and EIS, etc. Future submittals must be reviewed to ensure they are of high quality and contain all required items in ER 1105-2-100, Appendix H.

District Response: Future submittals will go through a much more rigorous QA/QC process on both the documents themselves as well as the necessary items that are required in ER 1105-2-100, Appendix H.

IPR Discussion: HQUSACE is concerned with the incomplete submittals by the District in the past. These incomplete submittals can cause a delay in the review process. Six items were discussed for future submittals:

- Need to ensure that the cost estimate and all economics analyses used an October 2010 (FY11) price level and discount rate of 4 1/8 per the Economic Guidance Memo.
- Model Certification needs to be completed prior to CWRB. HQUSACE is currently reviewing the model and expect to complete this process at the end of November.
- The Review Plan for PED does not need to be approved by CWRB, but a draft version is recommended. This review, per EC 1165-2-209, should be summarized in terms of District's plan of action and methodology for review at the CWRB.
- Official USACE responses to the IEPR comments will need to be completed before a Chief's Report can be completed. The responses will outline the changes made to the report (if any), and any implications on plan development and/or selection, as a result of the IEPR process. These changes will be discussed during CWRB.
- The District should look at streamlining the duplicate Appendices presented for easier review and faster document reproduction.
- The units of measure are inconsistent between the DEIS and the Draft Feasibility Report.

Action Required: HQUSACE will discuss further editorial comments with the District. District concurrence with the above and all other submittal requirements per Exhibit H-7 should satisfy HQ concerns.

Action Taken: Editorial comments provided by HQUSACE have been incorporated into the document.

**HQUSACE Assessment: *Comment resolved by action taken. Final Report package is thoroughly complete.***

Other editorial comments include:

- a. **Section 4.6 The Four Accounts.** This section is out of place. It describes the evaluation procedures and describes the performance of the NED Plan before measures are even identified in section 4.7. Steps 3 and 4 of the 6 Step Planning Process are to Formulate Alternative Plans and then Evaluate Alternative Plans, respectively (ER 1105-2-100 Section E-3). The report, specifically this section, should be reordered to follow the 6 Step Planning Process.

District Response: A more appropriate place for the discussion of The Four Accounts would be either just prior to or a part of Section 4.8 Final Alternatives Analysis.

AFB Discussion: District response is adequate although HQ advised that the District should be cautious of text currently contained within Section 4.6. Some statements are premature.

Action Required: Implement District response and review thru QA/QC process.

Action Taken: The Four Accounts section has been moved to Section 4.9 following NED Plan description and prior to Value Engineering.

**HQUSACE Assessment: *Comment resolved by action taken.***

- b. **Graphics.** Figure 3-1 is a very useful view of the study area, but it is illegible. The figure should be made landscape on the page and increased in size.

District Response: Several figures, throughout the Main Report, that were meant to be printed in landscape were not. This will be corrected for the Draft Report.

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: Figure 3-1 and other large figures have been enlarged and changed to landscape for easier viewing.

**HOUSACE Assessment: *Comment resolved by action taken.***

- c. **Unit of Measure.** The report switches back and forth between the metric system and the US Customary System, which is confusing to the reader. The report should use a consistent measurement system, preferably ‘feet’.

District Response: This has been a comment of several of the ATR reviewers and will be a Lessons Learned for this feasibility study. We will maintain the metric system as the main measurement system, except in the EIS. The EIS process requires that the measurement system that is most easily understood by the public be used, and in this case it is the US Customary System. The Main Report and remaining appendices will be reviewed for consistency.

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: The Main Report and all Appendices have been updated to include metric units with English units in parentheses. The EIS remains in English units.

**HOUSACE Assessment: *Comment resolved by action taken.***

- d. **Erosion Rate, Section 4.8.2.** The long term beach fill erosion rate is defined as a triangular distribution (-50,-18.1, 30); this information is also presented in section 8.1 of the Economic Appendix. Each time this information is presented the associated unit of measure should be included.

District Response: The associated unit of measurement will be added.

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: Erosion rates have been updated with correct units.

**HOUSACE Assessment: *Comment resolved by action taken.***

- e. **Project Authority.** Documentation is inconsistent on authority. Different ones are quoted in different parts of the submittal.

District Response: District will ensure that the project authority, Section 208 of the River and Harbor Act of 1965, is consistent throughout all documentation.

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: Correct project authority (River and Harbor 1965) has been updated throughout reports through the QA/QC process.

HQUSACE Assessment: This issue is not resolved. The Draft Report cites the 1965 RHA authorization, while the EIS cites the 2000 EWDA. Suggest both documents reference both authorities, as used in the Background Section of this document (I.b). The report documents should be revised for consistency.

District Response: Both the Draft Report (Section 1.1) and the EIS (Section 2.3) will state the study authorities as cited in the Background Section of this document (I.b).

IPR Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: Draft Report (Section 1.1) and the EIS (Section 2.3) state the study authorities as cited in the Background Section of this document (I.b).

HQUSACE Assessment: This comment is partially resolved. It has been determined that the documentation incorrectly cites the 1965 study authority. Title II of the 1965 Act, in which Section 208 is located, is designated by the Act as the Flood Control Act of 1965, and only Title III is the River and Harbor Act.

Furthermore, additional editorial items were found throughout the documentation. Suggest a District representative work with the OWPR to conduct a clean-up of the documentation prior to State & Agency Review.

District Response: The study authority has been corrected in Section 1.1 of the Main Report and Section 2.3 of the EIS. District staff did work with OWPR to conduct a clean-up of the report (including all appendices) and these changes can be found throughout the documentation.

**HOUSACE Assessment: Comment resolved by action taken.**

- f. **Price Levels.** All cost values should include the price levels. It appears the price levels used in the submittal are FY09 levels. Submittals should use the current price level, currently FY10.

District Response: Price levels will be updated for the Draft Report.

AFB Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: Cost engineering appendix has been updated to FY10 levels and the rest of the reports have been updated accordingly.

**HOUSACE Assessment: Comment resolved by action taken. Cost further updated to current FY (FY12 @ 4%).**

#### **I. General Discussion Comments Added During the AFB:**

1. **HOUSACE Comment:** Need to add starting point for beach width measurements.

Action Taken: Starting point has been defined as seaward rail throughout Appendices/Report.

**HOUSACE Assessment: Comment resolved by action taken.**

2. **HOUSACE Comment:** Environmental preferred alternative plan should be used instead of LEDPA.

Action Taken: All references to “LEDPA” removed and “Environmentally Preferred Alternative” is now used.

**HOUSACE Assessment: Comment resolved by action taken.**

### III. POLICY REVIEW COMMENTS GENERATED FROM THE JULY 2010 DRAFT FEASIBILITY REPORT.

**A. Total Project Cost.** Table 6-5 of the Main Report shows the initial construction cost as \$7,308,000 and the total cost of periodic nourishments as \$56,182,000 (\$63,490,000 total). This does not correspond to the cost estimating appendix which shows \$8,181,000 for the initial construction and \$62,551,000 for the total cost of periodic nourishments (\$70,732,000 total). This discrepancy needs to be fixed as these will set up the two distinct 902 Limits (Project First Cost 902 Limit and Periodic nourishment 902 Limit) identified in ER 1105-2-100 Appendix G, Exhibit G-10.

District Response: The costs in Table 6-5 of the Main Report as well as those in the Economics Appendix will be updated with the revised cost estimate (discussed in the comment below).

IPR Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: Table 6-5 of the Main Report and Table 42 in the Economics Appendix have been updated to reflect the certified cost estimate.

**HOUSACE Assessment:** *Resolved by the changes noted above to the economic tables.*

#### **B. Cost Engineering.**

- a. **Cost Engineering Appendix.** The contingency factors of 16% applied to Features 30 and 31 are not supported in the risk analysis report. Please explain and provide documentation.

District Response: A risk-based cost analysis is currently being completed by the Walla Walla District and the Cost Engineering Appendix will be updated.

IPR Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: The Project Cost and Schedule Risk Analysis Report is included as an attachment to the Cost Engineering Appendix.

**HOUSACE Assessment:** *Resolved by the attachment to the Cost Appendix.*

- b. **Total Project Cost Summary.** It is not very explicit whether the costs for pre-construction and post construction monitoring, and mitigation are included in the calculation of the total project cost. Please clarify

District Response: The costs for pre-construction and post construction monitoring, and mitigation will be included in the updated cost estimate.

IPR Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: The TPCS in the Cost Engineering Appendix includes pre- and post-construction monitoring as outlined in Appendix B of the EIS/EIR. Potential mitigation costs are included in the Project Cost and Schedule Risk Analysis Report (an attachment to the Cost Engineering Appendix) in Risk Reference TL-5.

**HOUSACE Assessment: Resolved by the clarifications to the TPCS.**

- c. **Main Report.** The Total Project Cost stated in the report is based on October 2009 price level whereas the TPCS stated an October 2010 price level. The report should be corrected to reflect October 2010 price level.

District Response: The Main Report will be revised to include the update cost estimate that is at the October 2010 price level.

IPR Discussion: District response is adequate.

Action Required: Implement District response.

Action Taken: Prior to cost certification, prices were updated to reflect January 2011 price levels. All references to price levels have been updated in the Main Report (specifically in the Executive Summary and Tables 5-1 and 6-4).

**HOUSACE Assessment: Resolved by the cost update to October 2011 at 4%.**

- C. **Environmental, Compliance Table.** The DEIS is missing a table to present the status of compliance with key statutes and regulations that will have bearing on this project (ER 1105-2-100, Exhibit G-8). ER 200-2-2, paragraph 25.a, states that “A listing of environmental laws and orders is contained in table 3.4.3 of Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies. Reviews and consultation requirements, analyses, and status of coordination associated with applicable laws, executive orders and memoranda will be summarized in the draft document.” The information should include a table or matrix of all applicable environmental requirements and what has been accomplished to date and what will be done, and when, to fully comply with key environmental statutes and regulations. Exhibit G-8 should be referenced as it is a very comprehensive listing of all Federal laws and policies that may be applicable to Corps projects.

District Response: ER 1105-2-100, Appendix G, Amendment #1 only states, “*Exhibit G-8 lists the most commonly applicable laws and policies*”. It goes on to give an exhaustive list.

*25. Environmental Review and Consultation Requirements. See 40 CFR 1502.25.  
a. For Federal projects, NEPA documents shall be prepared concurrently with and utilize data from analyses required by other environmental laws and executive orders. A listing of environmental laws and orders is contained in table 3.4.3 of Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies. Reviews and consultation requirements, analyses, and status of coordination associated with applicable laws, executive orders and memoranda will be summarized in the draft document. The results of the coordination completed or underway pursuant to these authorities will be summarized in the final document. Where the results of the ongoing studies are not expected to materially affect the decision on the proposed action, the filing of the final EIS need not be delayed.*

The above is taken directly from ER 200-2-2, paragraph 25 (a) and it is clear that it is not mandatory that the environmental regulations be placed into a table. It states, “*will be summarized in the draft document*”, and (“*summarized in the final document*”), which is what is found in the DEIS, Vol 1, page 2-8 to 2-15. The environmental regulation used and cited in this DEIS are clearly and succinctly discussed and summarized per ER 200-2-2; no table is needed. We have discussed this concern with our Planning Division, Environmental Branch Chief and she concurs with our approach

IPR Discussion: The intent of this comment is to present the Environmental Compliance statutes and regulations in an easy to read format.

Action Required: District will add table similar to that presented in Exhibit G-8 in the Draft Feasibility Report and will refer to the DEIS for additional information.

Action Taken: Table 2-13 has been added to the Main Report.

HQUSACE Assessment: This issue is partially resolved. The intent of the table is not just to list the applicable statutes and regulations, but to also demonstrate compliance with them.

District Response: Table 5-2 has been added to Section 5.6 in the Main Report (p. 135) to show the status of compliance of the applicable statutes and regulations.

**HQUSACE Assessment: Resolved by the compliance status shown in Table 5-2.**

#### IV. POLICY REVIEW COMMENTS GENERATED FROM REVIEW OF THE JULY 2011 FINAL REPORT

- A. **Operation, Maintenance, Repair, Rehabilitation & Replacement (OMRR&R).** The feasibility report does not clearly characterize the sponsor's responsibilities for OMRR&R for the project, which are currently estimated as \$0. While the Sponsor already performs many of the items that would be required as OMRR&R for the project, the report needs to clearly describe the sponsor's responsibilities and that performing these duties will likely result in no incremental increase from their current expenses. An expanded discussion on OMRR&R for the project must be added to the Feasibility Report.

District Response: Section 5.4.3 in the Main Report (p. 134) has been added to discuss the current OMRR&R activities.

***HOUSACE Assessment: Resolved by the OMRR&R discussions in Section 5.4.3.***

- B. **Clean Water Act Compliance.** The report needs to document the rightful claim to a waiver to the regular Section 401 Water Quality Certification (WQC) process, afforded by Section 404(r) of the Clean Water Act, as well as following the routine path of seeking a WQC from the appropriate entity, in this case the Regional Water Quality Board in California. To enable the claiming of this waiver the District should place a statement about this process in the FEIS for the project as well as in a summary manner in the report.

District Response: Language regarding USACE's rightful claim to a waiver to the regular Section 401 process, afforded by Section 404(r), as well as the path of seeking a water quality certification has been added to Section 5.6 (p. 135-136) of the Main Report as well as to Sections 2.4.1.4, 4.3, 9.3.9 of the EIS.

***HOUSACE Assessment: Resolved by the text changes noted in the district response.***

## **V. POLICY REVIEW COMMENTS GENERATED FROM REVIEW OF THE FEBRUARY 2012 FINAL REPORT ADDENDUM**

Changes to the Final Feasibility Report were needed to reflect an increase in the physical monitoring costs resulting from continued coordination with the California Coastal Commission during S&A Review and to update the project cost estimate to the current fiscal Year (FY12). These changes were documented in an Addendum to the Final Feasibility Report. A Policy Compliance Review was conducted on the Addendum and no issues were raised.