



DEPARTMENT OF THE ARMY
NORTH ATLANTIC DIVISION, CORPS OF ENGINEERS
FORT HAMILTON MILITARY COMMUNITY
BROOKLYN, NY 11252-6700

REPLY TO
ATTENTION OF

CEPCX-CSRSM

19 February 2014

MEMORANDUM FOR: Commander New Orleans District, U.S. Army Corps of Engineers,
ATTN: CEMVN-PM-OP, Patrick Erwin 7400 Leake Avenue, New Orleans, Louisiana 70118

SUBJECT: PCX-CSRSM Transmittal of Independent External Peer Review (IEPR) Report for the Decision and Implementation Documents for Environmental Mitigation for Lake Pontchartrain and Vicinity, Hurricane and Storm Damage Risk Reduction System, Louisiana, Project Description Document, Statement of Completion

1. Reference:

- a. EC 1165-2-214, Civil Works Review, 15 December 2012.
- b. CECW-NAD-RIT Memorandum, dated 28 January 2014, subject: PCX – CSRSM Transmittal of Independent External Peer Review (IEPR) Report for the Decision and Implementation Documents for Environmental Mitigation for Lake Pontchartrain and Vicinity, Hurricane and Storm Damage Risk Reduction System, Louisiana, Project Description Document

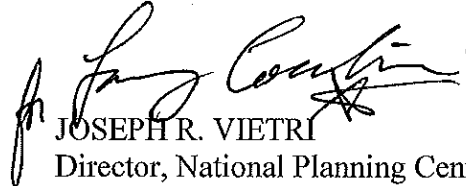
2. The review phase of the subject IEPR has been completed. The PCX-CSRSM coordinated the IEPR, which was conducted by the Battelle Memorial Institute (Battelle) through a contract with the U.S. Army Corps of Engineers Institute for Water Resources. Battelle selected and managed an IEPR panel of experts with technical expertise in plan formulation and biology/ecology.

3. The IEPR panel comments are documented in the Battelle report titled Final Independent External Peer Review (IEPR) Report for the Decision and Implementation Documents for Environmental Mitigation for Lake Pontchartrain and Vicinity, Hurricane and Storm Damage Risk Reduction System, Louisiana, Project Description Document, dated 24 January 2014. Overall, 4 IEPR final comments were developed by the panel, none of which were identified as having high significance. New Orleans District prepared responses to the panel comments and concurrence was reached with the panel on all 4 responses.

4. The New Orleans District should prepare a written proposed response to the final IEPR report detailing any actions undertaken or to be undertaken in response to the report and the reasons those actions are believed to satisfy the key concerns stated in the review report (if applicable). The response should also explain why specific recommendations of the panel were not adopted and the potential implications of not adopting those recommendations. The proposed response should be coordinated with the MSC District Support Team and HQUSACE, in accordance with EC 1165-2-214, to ensure consistency with law, policy, project guidance, ongoing policy and legal compliance review, and other USACE or National considerations.

SUBJECT: PCX-CSR Transmittal of Independent External Peer Review (IEPR) Report for the Decision and Implementation Documents for Environmental Mitigation for Lake Pontchartrain and Vicinity, Hurricane and Storm Damage Risk Reduction System, Louisiana, Project Description Document, Statement of Completion

5. For further information, please contact Mr. Larry Cocchieri, Deputy Director, PCX-CSR at (347) 370-4571, or Ms. Robin Armetta, PCX-CSR IEPR lead at (410) 962-6100.



JOSEPH R. VIETRI
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USACE Draft Evaluator Responses to the Final Panel Comments

Independent External Peer Review of the Decision and Implementation Documents for Environmental Mitigation for Lake Pontchartrain and Vicinity, Hurricane and Storm Damage Risk Reduction System, Louisiana, Project Description Document

Prepared by

Battelle
505 King Avenue
Columbus, Ohio 43201

January 24, 2014

LIST OF ACRONYMS

ER	Engineer Regulation
HSDRRS	Hurricane and Storm Damage Risk Reduction System
PDD	Project Description Document
PIER	Programmatic Individual Environmental Report
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
TSMPA	Tentatively Selected Mitigation Plan Alternative

Final Panel Comment 1

Regulatory flexibility in terms of the use of a 100-year planning horizon for complex projects has not been explored, and the reasons for selecting the 50-year planning horizon have not been fully explained.

Basis for Comment

The planning horizon selected for the purpose and need for the TSMMPA is 50 years, which matches the planning horizon for the HSDRRS projects. Page 20 of the PDD states that this planning horizon complies with USACE ER 1105-2-100 (USACE, 2000). The ER indicates that a 100-year planning horizon may be used for large, complex projects with multiple elements, and that these may be considered on a case-by-case basis under the ER. HSDRRS projects and their attendant wetlands and habitat impacts can be considered both large and complex.

Based on the modeling and analysis, the TSMMPA will fulfill the mitigation requirement for the 50-year planning horizon. However, once monitoring and maintenance of the constructed mitigation projects cease, the habitat quality of the sites will begin to degrade even though the HSDRRS projects will persist. At that point, there will be a net loss of wetlands functions and values. Without review of the mitigation banking instruments (which were not provided to the Panel), it was not possible for the Panel to discern the long-term destiny of those sites.

The HSDRRS projects that are being compensated for by the TSMMPA will survive, in terms of their footprints, far longer than 50 years. The Panel believes that a case can be made that a 100-year planning horizon would comply with ER 1105-2-100 and would be appropriate for the TSMMPA, particularly in light of the “no net loss” criterion and a claim that the project will achieve that goal for the HSDRRS projects.

Significance – Medium/High

Given the allowance in ER 1105-2-100 of a 100-year horizon for multiple and complex projects, further analysis and explanation of the 50-year planning horizon would support the rationale for the TSMMPA.

Recommendation for Resolution

1. Analyze the requirements of ER 1105-2-100 (USACE, 2000) with respect to the assertion that the 50-year planning horizon must be selected for the TSMMPA for the HSDRRS projects in order to comply with the guidance.
2. Research the criteria that have led to the selection of a 100-year planning horizon for other complex USACE projects, and compare those criteria to the HSDRRS and the TSMMPA scenario.
3. Analyze and explain how the TSMMPA results in “no net loss” of wetlands once monitoring and maintenance are discontinued after 50 years, even though the HSDRRS projects will persist.

4. Compare the mitigation banking instruments and their requirements to the Adaptive Management Plan for the TSMMPA and expected ongoing maintenance of the constructed elements, and explain any differences.
5. If the 50-year planning horizon is retained, explain the decision for its retention and clarify how this decision relates to the professional judgment anticipated by ER 1105-2-100 (USACE, 2000) for complex projects.

PDT Draft Evaluator Response (FPC#1):

1. Please indicate below whether the PDT ‘concur’ or ‘non-concur’ with the comment statement in the first row above. A concur should be provided if the PDT will revise the document or conduct activities to address the issue presented in the Final Panel Comment (statement and Basis for Comment). Please note that agreeing with the statement does not constitute a “concur,” unless an action is provided. A non-concur should be provided if the PDT does not agree that the issue presented in the Final Panel Comment (statement and Basis for Comment) should be addressed and will not revise the document or conduct other activities in response to this issue.

Concur **Non-Concur**

Explanation: ER 1105-2-100 establishes the 50 year planning horizon as a 50 year period of analysis: Section ‘2-4 (j) Period of Analysis’ page 2-11 and Appendix D. Section D-6 Interest Rate and Period of Analysis. (3) Period of Analysis (a)(1) page D-31; which both describe a period of analysis as “a period not to exceed 50-years except for major multiple purpose reservoir projects”. The project this PDD considers is the compensatory mitigation required for the unavoidable impacts from the construction of the HSDRRS. This mitigation has one purpose; to meet statutory requirements from WRDA ‘86, ‘07, and the CWA which is the purpose for this mitigation. There is no multiple purpose reservoir in this project, nor is ecosystem restoration a purpose. By policy the PDD must be a 50 year planning horizon.

2. For each recommendation, please indicate whether the PDT will ‘adopt’ or ‘not adopt’ the recommendation and provide an explanation. If ‘adopt’, please provide information on how this recommendation will be adopted. If ‘not adopt’, please explain why.

Recommendation #1: Adopt Not adopt

Explanation: The period of analysis is important for the economic analysis that compares the benefits (in this case annualized habitat units) to the annualized investment cost. The 100 year period of analysis is only used in Corps of Engineers water resource planning per the above reference policy for multi-purposed reservoirs.

Recommendation #2: Adopt Not adopt

Explanation: This is an effort better suited for a general (re-)evaluation of ER 1105-2-100 rather than a specific project.

Recommendation #3: Adopt Not adopt

Explanation: Although project features will persist, presumably, much longer than the 50 year period of analysis, that does not mean the impacted habitats necessarily would last 50 years. It is assumed that habitat lost due to implementation of an 'action alternative' and replaced through mitigation would persist in nature at least as long as it would under the 'no-action alternative' thus meeting a no-net loss of habitat.

Recommendation #4: Adopt Not adopt

Explanation: The most significant difference between a mitigation banking instrument and an adaptive management plan for a Corps constructed mitigation site is one is privately held and the other is maintained by the non-federal sponsor. Both require inter-agency coordination, operation, maintenance, and monitoring plans to ensure mitigation potential is reached and is maintained. Both require adjustments (or adaptive management in the instance of a Corps site) to an existing mitigation site if it is determined the mitigation potential of the site has not been reached. Steps required to improve or alter site conditions to meet the intended goal of a mitigation site is adaptive management.

Recommendation #5: Adopt Not adopt

Explanation: The following language will be inserted into the PDD on page 3 as a standalone paragraph at the end of section 2. Project Description, and reads as follows:

"With any Federal civil works project there may be risk associated with future operations and maintenance by a non-federal sponsor or other entity, once that project has been delivered via a notice of construction completion to the non-federal sponsor. The Corps considers this an acceptable risk that is managed through agreements and existing federal and state laws. Mitigation is an integral feature of the project per Corps policy."

Final Panel Comment 2

The potential impacts from oil and gas resource development in and around mitigation sites are not fully considered and may contravene the project's "no net loss" criterion for mitigation.

Basis for Comment

The development of access canals, drilling sites, and other appurtenances of the oil and gas industries may result in significant habitat loss, degradation, and fragmentation; land loss within and near the TSMPA; and a loss of wetland functions and values over time.

The Panel was unable to evaluate exclusions (activities that will not be permitted to occur) within the identified mitigation banks because the banking instruments were not provided for review. However, exclusions spelled out for activities within the constructed elements of the TSMPA did not include a prohibition on oil and gas resource development. Allowing oil and gas resource development within or adjacent to either the banks or the constructed elements of the TSMPA may adversely affect the project, including degradation of functions and values of the sites such that they no longer meet the "no net loss" criterion.

Significance – Medium

The analysis of the functions and values to be achieved by the TSMPA is not complete without considering the potential cumulative effects of allowing oil and gas resource development within or adjacent to the mitigation sites.

Recommendations for Resolution

1. Describe activities that are prohibited within the mitigation banks being considered for the TSMPA, and clarify whether oil and gas resource development is to be allowed.
2. Analyze the potential adverse environmental effects (direct and cumulative) of allowing oil and gas resource development in and around the mitigation sites comprising the TSMPA (both banks and constructed elements).
3. Analyze potential regulatory authorities that can be used by USACE to protect the project from the adverse effects of oil and gas resource development. For example, special conditions can be included in permits issued under Section 404 of the Clean Water Act requiring oil and gas resource developers to restore affected areas to their original conditions.
4. Evaluate any effects that oil and gas resource development within the TSMPA might have on operating and maintenance expenses within the projects.
5. Explain how the functions and values of the TSMPA sites would be assured if the sites were subject to the effects of oil and gas resource development.

PDT Draft Evaluator Response (FPC#2):

1. Please indicate below whether the PDT 'concur' or 'non-concur' with the comment statement in the first row above. A concur should be provided if the PDT will revise the document or conduct activities to address the issue presented in the Final Panel Comment (statement and Basis for Comment). Please note that agreeing with the statement does not constitute a "concur," unless an action is provided. A non-concur should be provided if the PDT does not agree that the issue presented in the Final Panel Comment (statement and Basis for Comment) should be addressed and will not revise the document or conduct other activities in response to this issue.

Concur **Non-Concur**

Explanation: There may be instances where oil and gas infrastructure is already in place near a mitigation bank or site being investigated for mitigation purposes. Proposed Corps constructed mitigation projects would be selected and/or designed to avoid existing or proposed (if known) oil and gas exploration or infrastructure. Surface and or sub-surface mineral rights on property that is used for mitigation is not typically relinquished.

Regardless, all the Corps constructed mitigation sites and mitigation banks will be wetlands. If in the future an entity wants to access the site for mineral investigations or petro-chemical based construction, the normal Corps Clean Water Act Section 404 permit would be required. The permit application is reviewed to determine if the proposed activity would be encumbered with any environmental requirements. Encumbering the property to protect the mitigation functionality through a conservation easement instrument will be part of any Corps mitigation; and is already part of approved mitigation banks. It is not possible to forecast what might be required as a permit condition at a particular site, except that any future permit applicant would be required to avoid, minimize, and provide compensatory mitigation in the event their future activities impacted the functionality of the Corps constructed mitigation project.

In a similar manner, mitigation banks are screened and approved because they have met the rigorous, lengthy and involved process designed to allow credit purchasers certainty that the required mitigation is provided in perpetuity through a conservation servitude and monitoring program. That is how these banks are designed to work. This PDD does not need to restate the requirements of the Corps mitigation banking program. Those requirements may be found in 33 Code of Federal Regulations Part 332, and in particular Parts 332.4 for the necessary protections and performance standards, and 332.6 for the required monitoring.

2. For each recommendation, please indicate whether the PDT will 'adopt' or 'not adopt' the recommendation and provide an explanation. If 'adopt', please provide information on how this recommendation will be adopted. If 'not adopt', please explain why.

Recommendation #1: **Adopt** **Not adopt**

Explanation: The Corps contractual requirements would be for the selected mitigation bank(s) to be approved as mitigation bank(s) by the Corps Regulatory Program. For more detail on the mitigation bank program, please see the explanation above.

Oil and gas activities on a mitigation bank are allowable, but the requirements of the mitigation bank

program would have to be followed. If activities would otherwise require a Clean Water Act Section 404 permit, then such a permit would be necessary and the permit applicant would have to provide any subsequent compensatory mitigation. Regardless, the mitigation bank program would handle those future requirements.

No presentation of that separate program is required in the PDD.

Recommendation #2: Adopt Not adopt

Explanation: For more detail on the mitigation bank program, please see the explanation above.

Recommendation #3: Adopt Not adopt

Explanation: For more detail on the mitigation bank program, please see the explanation above.

The "...potential regulatory authorities that can be used by USACE to protect the project from the adverse effects of oil and gas resource development," cited in the recommendation #3 above has already been undertaken when a mitigation bank is approved. No further action is necessary in the PDD.

Recommendation #4: Adopt Not adopt

Explanation: For more detail on the mitigation bank program, please see the explanation above. See also the Water Resources Development Act of 2007 Section 2036 (c)(3) that states: "(A) IN GENERAL.—Purchase of credits from a mitigation bank for a water resources project relieves the Secretary and the non-Federal interest from responsibility for monitoring or demonstrating mitigation success." No further action is necessary in the PDD.

Recommendation #5: Adopt Not adopt

Explanation: The following language will be inserted into the PDD on page 4, paragraph 1 of section 6 after the third sentence, and reads as follows:

"The civil works process requirement for a 50-year period of analysis is used for the economic evaluation in decision making. The period that a non-federal sponsor must operate and maintain a federal civil works project is not the same as this economic analysis period. Mitigation is a feature of a federal civil works project and like other project features that must be maintained. Unless the project is abandoned or the project is de-authorized by Congress, the sponsor is responsible for all project features in perpetuity."

Final Panel Comment 3

A thorough cumulative effects analysis of the impacts of using borrow material from the Gulf Sturgeon critical habitat in Lake Borgne has not been conducted.

Basis for Comment

Neither the PDD nor the Programmatic Individual Environmental Report #36 (PIER) fully addresses the impacts of using borrow material from Lake Borgne. Therefore, the Panel was unable to discern potential cumulative effects on the critical habitat of the Gulf Sturgeon, a listed species, from multiple projects planned in the project area that may potentially use borrow material from the lake. The proposed TSMPA concludes that the constructed elements of the project would not adversely impact the Gulf Sturgeon. However, in its coordination report, the U.S. Fish and Wildlife Service (USFWS) indicated that such a conclusion is optimistic and that a more correct assessment would be that the Gulf Sturgeon may be, but is unlikely to be, affected by the constructed elements of the project.

In order to support a statement that the Gulf Sturgeon may be, but is unlikely to be, affected, as recommended by the USFWS, a more thorough cumulative effects analysis regarding the borrow area is required. If cumulative effects on this species resulting from this project, in conjunction with multiple other planned projects, are underestimated, there may indeed be an adverse effect on the Gulf Sturgeon and its critical habitat.

Significance – Medium/Low

Without a thorough cumulative effects analysis regarding the Lake Borgne borrow location, the statement that the Gulf Sturgeon and its critical habitat will not be adversely affected is unsubstantiated in the project documentation.

Recommendations for Resolution

1. Research and include in the documentation a list of all projects that may use the Lake Borgne borrow location.
2. Describe the cumulative effects of multiple projects, if there are others, using Lake Borgne and the Gulf Sturgeon designated critical habitat as a borrow location.
3. Evaluate the USFWS recommendation to state that there may be, but is unlikely to be, an adverse effect on the Gulf Sturgeon or its critical habitat as a result of using the borrow location.
4. In the project documentation, using the cumulative effects analysis as a basis for discussion, elaborate on the conclusion that there is unlikely to be an adverse effect on the Gulf Sturgeon or its critical habitat from construction of the TSMPA.

PDT Draft Evaluator Response (FPC#3):

1. Please indicate below whether the PDT 'concur' or 'non-concur' with the comment statement in the first row above. A concur should be provided if the PDT will revise the document or conduct activities to address the issue presented in the Final Panel Comment (statement and Basis for Comment). Please note that agreeing with the statement does not constitute a "concur," unless an action is provided. A non-concur should be provided if the PDT does not agree that the issue presented in the Final Panel Comment (statement and Basis for Comment) should be addressed and will not revise the document or conduct other activities in response to this issue.

X **Concur** **Non-Concur**

Explanation: The point of this comment is focused the cumulative effects the HSDRRS system construction, and in particular on the Gulf Sturgeon. It states a thorough study of the cumulative effects has not been conducted. A Comprehensive Cumulative Effects Document (CED) is being prepared by the Corps in coordination with resource agencies, in phases, to deal with cumulative effects of construction of the HSDRRS. CED Phase 1 is available at <http://nolaenvironmental.gov/>. Supplemental CED preparation and coordination with appropriate resource agencies is ongoing.

Consultation requirements with USFWS and National Marine Fisheries Service (NMFS) on impacts to threatened and endangered species and their critical habitat has not been completed on the Corps constructed mitigation projects because these Corps constructed projects are not proposed constructible features in this PDD, which is a programmatic document. During completion of the Tiered Individual Environmental Reports (TIERs) covering the Corps constructed projects, Section 7 ESA consultation requirements will be completed and cumulative impacts assessed based on a final footprint for the proposed projects. At this time, all permanent impacts to T&E critical habitat have been avoided through project design and no direct impacts to any T&E species are anticipated due to proposed construction methods. Any construction implementation requirements from the NMFS, such as dredging windows to avoid critical temporal activity windows for the Gulf Sturgeon, will be incorporated in the TIERs as appropriate.

Because impacts to critical habitat are temporary in nature, small in comparison to the available habitat in Lake Borgne and Lake Pontchartrain, and anticipated to be largely reversed within one growing season in the borrow pits, an increase in cumulative impacts in these areas is not anticipated to result in an adverse effect to Gulf sturgeon or their critical habitat. Further analysis based on final project footprints and additional documentation to support this determination would be provided in the TIER.

2. For each recommendation, please indicate whether the PDT will 'adopt' or 'not adopt' the recommendation and provide an explanation. If 'adopt', please provide information on how this recommendation will be adopted. If 'not adopt', please explain why.

Recommendation #1: X **Adopt** **Not adopt**

Explanation: During completion of the TIERs covering Corps constructed projects ESA Section 7 consultation requirements would be completed and cumulative impacts assessed based on a final footprint for the proposed projects. **Recommendation #2:** X **Adopt** **Not adopt**

Explanation: Please see response to Recommendation #1.

Recommendation #3: Adopt Not adopt

Explanation: Coordination is ongoing. Revisions to impact status may or may not change as plans for Corps constructed elements are developed and coordinated with resource agencies.

Recommendation #4: Adopt Not adopt

Explanation: Please see response to Recommendation #1.

Final Panel Comment 4

Construction, dredging, and planting schedules as they relate to potential impacts on migratory birds and potentially affected anadromous fishes, including the Gulf sturgeon, have not been fully described.

Basis for Comment

The project documentation does not specify whether the timing of construction, dredging, and planting has been fully considered with respect to potential effects on anadromous fishes and migratory birds.

Migratory bird use of the chenieres is mentioned in the documentation. However, construction and planting schedules are not described for constructed elements of the plan for this and other habitats, such as bottomland hardwoods. How construction and planting will comply with the Migratory Bird Act is not fully explained.

Construction, dredging, and planting of the constructed elements of the TSMAPA, as well as use of the borrow area in Lake Borgne, may affect anadromous fish species, including the Gulf sturgeon. The timing of dredging and construction may mitigate these effects to some extent. The documentation does not clearly state whether the timing of construction, dredging, and planting has been considered in this light. The documentation is also unclear as to whether construction timing would affect project costs, and, if so, whether it would impact the selection of alternatives.

Significance – Low

By taking into account the mitigating effects of judiciously scheduling construction, dredging, and planting activities with respect to migratory birds and anadromous fishes such as the Gulf sturgeon, the discussion of construction impacts associated with the proposed TSMAPA would be strengthened.

Recommendation for Resolution

1. Describe potential mitigating effects of judicious timing of construction, dredging, and planting on migratory birds and anadromous fishes.
2. Adopt recommendations of the USFWS, the National Marine Fisheries Service, and other resource agencies with respect to the timing of construction, dredging, and planting constructed elements of the TSMAPA.
3. Include a schedule for construction, dredging, and planting in the project documentation that considers mitigating effects of construction timing.
4. Describe impacts that construction timing may have on project costs, if any, and discuss whether those costs would affect the selection of specific alternatives.

PDT Draft Evaluator Response (FPC#4):

1. Please indicate below whether the PDT 'concur' or 'non-concur' with the comment statement in the first row above. A concur should be provided if the PDT will revise the document or conduct activities to address the issue presented in the Final Panel Comment (statement and Basis for Comment). Please note that agreeing with the statement does not constitute a "concur," unless an action is provided. A non-concur should be provided if the PDT does not agree that the issue presented in the Final Panel Comment (statement and Basis for Comment) should be addressed and will not revise the document or conduct other activities in response to this issue.

Concur **Non-Concur**

Explanation: The effects of construction activities, particularly impacts to particular species of migratory birds and anadromous fishes, will be considered. Windows of activities to avoid or minimize disturbance will be included. These considerations and plans for avoiding or minimizing the impact of natural resources will be in the development of details in the TIER(s) for Corps constructed mitigation projects. As stated in the response to Recommendation #3, these efforts will be in full coordination with the resource agencies, including state agencies and USFWS and NMFS.

During the Alternative Evaluation Procedure (AEP) process, comparison of the Corps constructed projects did include the possibility of required time windows. However, until the PDD is approved, advanced design completed for the Corps constructed projects, and T&E coordination completed, the definite need for time windows cannot be determined and actual schedules cannot be developed for projects in the TSMPA. The Corps will comply with requirements made by NMFS under Section 7 coordination completed during the TIERs to minimize impacts to Gulf sturgeon or their critical habitat. If necessary, prior to and during implementation of the Corps constructed projects, abatement measures will be employed to avoid potential impacts to migratory bird species, including scheduling the implementation to avoid impacts.

Regarding overall cumulative effects, please see the reference and web link to the CED provide in the Explanation to Recommendation #3.

2. For each recommendation, please indicate whether the PDT will 'adopt' or 'not adopt' the recommendation and provide an explanation. If 'adopt', please provide information on how this recommendation will be adopted. If 'not adopt', please explain why.

Recommendation #1: Adopt Not adopt

Explanation: For Corps constructed mitigation projects, additional coordination and supplemental documentation will be prepared disclosing the need for such, if required to avoid and minimize adverse impacts. All required consultation and coordination under Section 7 of the ESA, Migratory Bird Treaty Act, and Coordination Act would be conducted with the appropriate resource agencies during completion of the TIERs.

Recommendation #2: Adopt Not adopt

Explanation: Please see response to Recommendation #1.

Recommendation #3: Adopt Not adopt

Explanation: As Corps constructed mitigation alternatives are developed in greater detail, associated

schedules will be developed in greater detail and presented in subsequent documentation such as a TIER, plans and specifications, etc.

Recommendation #4: Adopt Not adopt

Explanation: Impacts to the schedules and costs for all projects considered during AEP included the possibility of time windows and bird abatement measures. No additional analysis is necessary.

REFERENCES

USACE (2000). Planning – Planning Guidance Notebook. Department of the Army, U.S. Army Corps of Engineers, Washington, D.C. Engineer Regulation (ER) 1105-2-100. April 22.