DEPARTMENT OF THE ARMY
US ARMY ENGINEER DIVISION, SOUTHWESTERN
1100 COMMERCE STREET, SUITE 831
DALLAS TX 75242-1317

CESWD-PDP

10 MAR 2015

MEMORANDUM FOR Commander, Galveston District

SUBJECT: Jefferson County Shoreline, Texas Feasibility Study Review Plan Approval

1. References:

a. EC 1165-2-214, Water Resources Policies and Authorities, Civil Works Review, 15 December 2012.

b. Memorandum, CEMVD-PD-N, 17-February 2015, subject: Jefferson County Shoreline, Texas Feasibility Study, Galveston District, Ecosystem Planning Center of Expertise Recommendation for Review Plan Approval.

2. The review plan for the subject study, enclosed, has been reviewed and recommended for approval by the Ecosystem Planning Center of Expertise (ECO-PCX). It has been prepared in accordance with the referenced guidance, and public comments received will be incorporated into the plan as the study progresses. Independent External Peer Review is required for this study.

3. In accordance with reference 1.a., I hereby approve this review plan for the subject project study.

4. Please post the approved review plan with a copy of this memorandum to the District's public internet website and provide the internet address to the ECO-PCX and Southwestern Division. Before posting to the District website, the names of USACE employees should be removed.

5. The SWD point of contact for this action is Ms. Margaret Johanning, CESWD-PDP, at 469-487-7045.

Encl

DAVID C. HILL
Brigadier General, USA
Commanding

CF:
CESWF-PEC-P (Laird)

REVIEW PLAN

Jefferson County Shoreline, Texas
Feasibility Study

U.S. Army Corps of Engineers
Galveston District

MSC Approval Date: Pending

Last Revision Date: None

US Army Corps
of Engineers ®

REVIEW PLAN

Jefferson County Shoreline Protection, Texas
Interim Feasibility Study

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1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan defines the scope and level of peer review for the single purpose Jefferson County Shoreline Protection, Texas, Interim Feasibility Study. This study is a spin-off from the overall Sabine Pass to Galveston study that initially evaluated a large, six county area for coastal storm risk management (CSRM) and ecosystem restoration (ER). Numerous measures were identified in August 2012 during a charette held for that study. A strategy to focus on smaller interim studies was identified and the team has started evaluation of CSRM measures in the Sabine and Brazoria areas in another on-going interim study. The purpose of this second interim study is to develop a feasibility study to evaluate ER opportunities in Jefferson County.

b. References

(1) Engineering Circular (EC) 1165-2-214, Civil Works Review, 15 Dec 2012
(2) EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011
(3) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006
(4) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
(5) Project Management Plan (under development)

c. Requirements. This review plan was developed in accordance with EC 1165-2-214, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products by providing a seamless process for review of all Civil Works projects from initial planning through design, construction, and operation, maintenance, repair, replacement and rehabilitation (OMRR&R). The EC outlines four general levels of review: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review. In addition to these levels of review, decision documents are subject to cost engineering review and certification (per EC 1165-2-214) and planning model certification/approval (per EC 1105-2-412).

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

The RMO is responsible for managing the overall peer review effort described in this Review Plan. The RMO for decision documents is typically either a Planning Center of Expertise (PCX) or the Risk Management Center (RMC), depending on the primary purpose of the decision document. The RMO for the peer review effort described in this Review Plan is the U.S Army Corps of Engineers Ecosystem Restoration PCX located in Mississippi Valley Division (MVD).

The RMO will coordinate with the Cost Engineering Directory of Expertise (DX) to ensure the appropriate expertise is included on the review teams to assess the adequacy of cost estimates, construction schedules, risk analysis, Total Project Cost Summary (TPCS), and contingencies.

3. STUDY INFORMATION

Authorization for the study is derived from a resolution from the Committee on Environmental and Public Works dated June 23, 2004 entitled "Coastal Texas Protection and Restoration Study".

> *By resolution dated June 23, 2004 entitled "Coastal Texas Protection and Restoration Study", the Committee on Environment and Public Works, U.S. Senate has requested that in accordance with Section 110 of the Rivers and Harbors Act of 1962 the Secretary of the Army develop a comprehensive plan for severe erosion along coastal Texas for the purposes of shoreline erosion and coastal storm damages, providing for environmental restoration and protection, increasing natural sediment supply to coast, restoring and preserving marshes and wetlands, improving water quality, and other related purposes to the interrelated ecosystem along the coastal Texas area.*

a. Decision Document. The study fits into the overall concept of the authorization to conduct an integrated and coordinated approach to locating and implementing opportunities for ecosystem restoration (ER). The purpose of the interim study is to recommend for Congressional authorization a regional ER project that encompasses a portion of the six coastal counties of the Upper Texas Coast between Sabine Pass and Galveston Bay. Pursuant to the National Environmental Policy Act (NEPA), an Environmental Assessment (EA) will be integrated in the Interim Feasibility Report (IFR).The study effort will result in a Report of the Chief of Engineers.

b. Study/Project Description. McFaddin NWR covers about 58,861 acres in Jefferson and Chambers Counties (USFWS 2012 and 2013). Along with the J.D. Murphree WMA, it protects the largest expanse of remaining freshwater marsh on the Texas Coast and thousands of acres of intermediate marsh (Figure 1). The Refuge's southern boundary consists of over 15 miles of Gulf of Mexico shoreline. Remnant dune/beach systems exist along the coastline, although much has been lost through erosion and shoreline retreat, leaving only a low-lying washover terrace (TPWD, 2013).

J.D. Murphree WMA is 24,498 acres of fresh, intermediate and brackish marsh on the Chenier plain in Jefferson County (TPWD, 2013). Extending north and south of the GIWW west of the Sabine-Neches Waterway, the WMA is highly diverse in coastal wetland communities.

Texas Point NWR in Jefferson County encompasses 8,952 acres of fresh to saline marshes and some wooded uplands and prairie ridges (USFWS, 2012 and 2013). The Refuge's southern boundary

consists of over 6 miles of Gulf of Mexico shoreline. The Chenier plain is characterized by relict beach fronts that form ridges paralleling the Gulf shore. The term derives from the French name for live oak trees (***chenier***), which typically are found growing atop these ridges. The Chenier plain is an extension of this unique habitat of western Louisiana, and is the sole instance of this type of habitat in Texas.

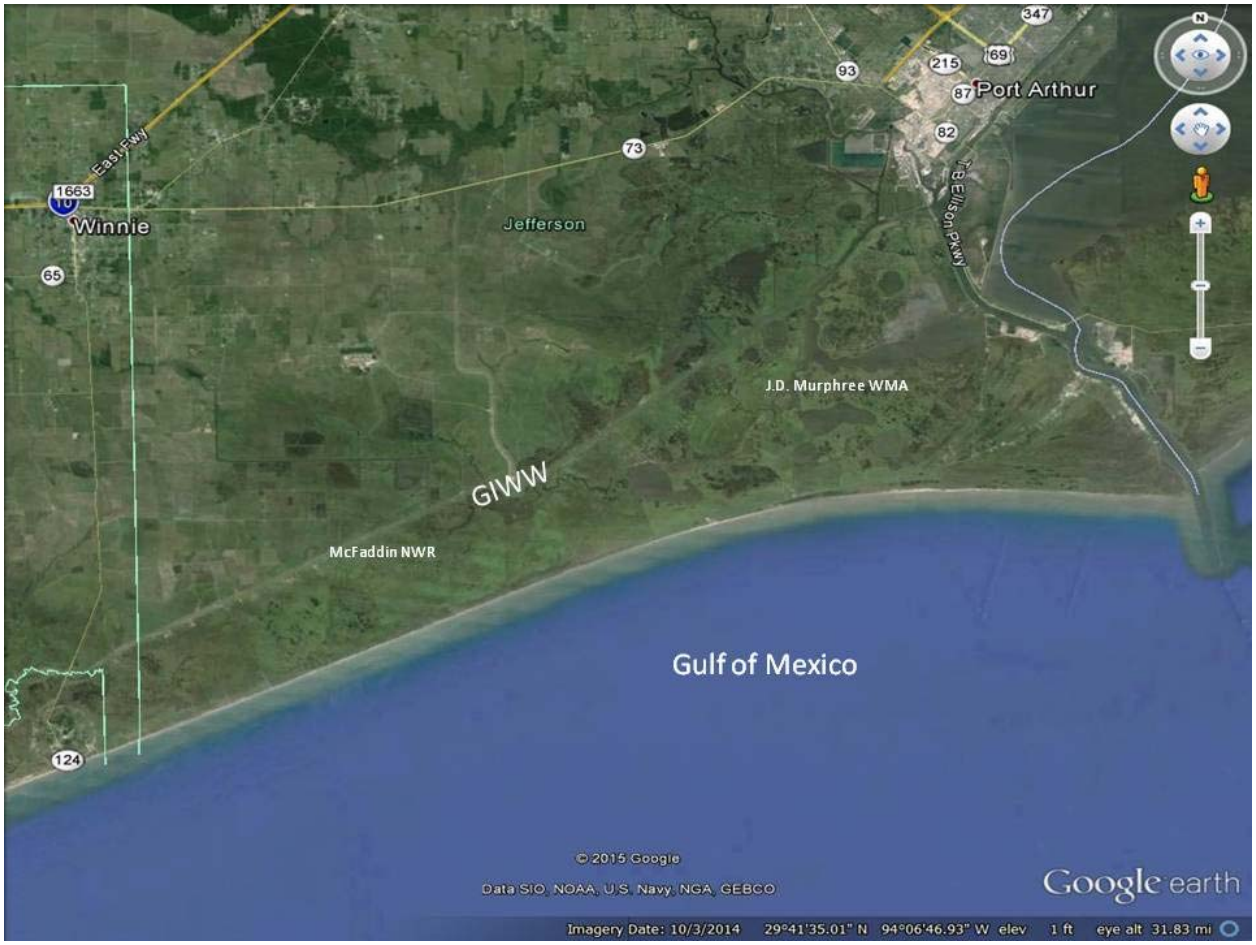

Figure 1. Study Area

Marshes along the Gulf shoreline are breaking and converting to open water as a result of subsidence and sea level rise. Hurricane Ike removed most of the natural beach berm on McFaddin NWR, creating a situation where salt water from the beach washes regularly into freshwater marshes. Restricting saltwater intrusion into the Upper Salt Bayou system is critical to maintaining the Chenier Plain's continuum of fresh, intermediate, and brackish saline marshes. These marshes serve as an important buffer for storm surge impacts, and the loss of them could increase hurricane impacts to the largest refinery in the United States (Motiva at Port Arthur) and other important petrochemical industrial facilities in that general area.

There is no designated Critical Habitat in this area, and no significant T&E species concerns. Wetland habitats in this area provide important wintering and migration stopover habitat for migratory birds including Central Flyway waterfowl, shorebirds, wading birds and marsh and waterbirds. The NWR and WMAs along the coast serve as critical staging areas for waterfowl migrating to and from Mexico (TPWD, 2013; USFWS, 2013). On average, 1.3 to 4.5 million ducks, or 30 to 71 percent of the total flyway population winter annually on the Texas Gulf coast (Stutzenbaker and Weller 1989). This area also winters 90 percent of the snow, Canada, and greater white-fronted geese in the Central Flyway (Buller 1964). On average, 180,000 pairs of colonial-nesting waterbirds nest annually in Texas coastal habitats.

During the 2012 Sabine to Galveston charette several potential measures were developed for ER in Jefferson County, including dune and beach restoration, beach ridge restoration, nearshore and GIWW breakwaters, marsh restoration, salt water control structures, and use of inverted siphons to move freshwater to marshes south of the GIWW. Additional description and parametric level cost estimates for these alternatives are included in Table 1. Jefferson County has submitted a letter of intent to be the non-Federal sponsor for this ER project.

Measure Name	Measure Description	Measure Cost
Measure 5-3	Dune Restoration and Beach Nourishment, Sabine Pass to High Island, Jefferson and Chambers Counties	3,351,642,000
Measure 5-4	Restore Beach Ridge, Sabine Pass to High Island, Jefferson and Chambers Co.	33,027,000
Measure 5-5	Segmented Nearshore Breakwaters, Sabine Pass to High Island, Jefferson and Chambers Counties	226,676,000
Measure 6-2	GIWW Breakwaters, Neches River to High Island, Jefferson County	181,509,000
Measure 8-5.1	Marsh Restoration, South of Keith Lake, Jefferson County	65,631,000
Measure 8-5.2	Marsh Restoration, Texas Point NWR, Jefferson County	80,098,000
Measure 9-1	Salt Water Control Structure, Keith Lake Fish Pass, Jefferson County	7,254,000
Measure 9-2	Inverted Siphons Under GIWW, Jefferson County	11,711,000

Table 1. Jefferson County Measures Developed at 2012 Charette

c. Factors Affecting the Scope and Level of Review. It is anticipated that the draft feasibility report will recommend measures for ER that have no risks to life safety and can be engineered in sufficient detail in the report for the development of an accurate cost estimate. Failure of any of the proposed measures would only allow continued of erosion and loss of habitat already occurring in

the region. None of the proposed measures would act as a main line of defense to populations at risk in coastal storm surge events.

d. In-Kind Contributions. Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR. However, no in-kind products and analyses by the non-Federal sponsor are anticipated. The non-Federal sponsor (Sponsor) for the study is Jefferson County.

4. DISTRICT QUALITY CONTROL (DQC)

All decision documents (including supporting data, analyses, environmental compliance documents, etc.) shall undergo DQC. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP). The home district shall manage DQC. Documentation of DQC activities is required and should be in accordance with the Quality Manual of the District and the home MSC. DQC is the review of basic science and engineering work products focused on fulfilling the project quality requirements. It is managed by the Galveston District and may be conducted by staff in the home district as long as they are not doing the work involved in the study, including contracted work that is being reviewed. The PDT is responsible for a complete reading of the report to assure the overall integrity of the report, technical appendices and the recommendations before approval by the District Commander. For the Jefferson County IFR, non-PDT members and/or supervisory staff will conduct this review for major draft and final products. Planning, Economics and Environmental DQC reviewers will likely come from SWD Regional Planning and Environmental Center (RPEC). It is expected that the Major Subordinate Command (MSC)/District Quality Management Plan addresses the conduct and documentation of this fundamental level of review. DQC will be documented using the Dr. Checks review software/website.

a. Documentation of DQC. DrChecks will be utilized to document DQC reviews. The final DrChecks will be supplied to the ATR team prior to initiation of their review efforts.

5. AGENCY TECHNICAL REVIEW (ATR)

ATR is mandatory for all decision documents (including supporting data, analyses, environmental compliance documents, etc.). The objective of ATR is to ensure consistency with established criteria, guidance, procedures, and policy. The ATR will assess whether the analyses presented are technically correct and comply with published USACE guidance, and that the document explains the analyses and results in a reasonably clear manner for the public and decision makers. ATR is managed within USACE by the designated RMO and is conducted by a qualified team from outside the home district that is not involved in the day-to-day production of the project/product. The ATR for this RP will be managed by the Ecosystem Restoration Planning Center of Expertise. A qualified ATR team shall be selected by the RMO. ATR team members shall not be recommended by Galveston District or the MSC. The ATR team will be comprised of senior USACE personnel that may be supplemented by outside experts as

appropriate. The ATR team lead will be from outside the home MSC. The public, including scientific or professional societies, will not be asked to nominate potential peer reviewers

a. Products to Undergo ATR. Product to undergo ATR will be the Draft IFR, EA and Appendices. ATR will be performed immediately after a successful TSP Milestone Meeting and again after the ADM if there were substantial changes to the plan formulation of the project based on additional data collection. ATR is required for this study and will focus on the following:

(1) Review of the planning study process,
(2) Review of anticipated environmental impacts and proposed mitigation,
(3) Completeness of study and support documentation.

Required ATR Team Expertise.

ATR Team Members/Disciplines	**Expertise Required**
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works decision documents and conducting ATRs for ER studies. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. The ATR lead may also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc).
Planning	The Planning reviewer should be a senior water resources planner with experience related to ER.
Economics	N/A
Environmental Resources	The reviewer will have expertise in the preparation of NEPA documents and assessing benefits of coastal marsh habitat restoration projects using HEP and CE/ICA. The reviewer should also have experience related to Hazardous, Toxic and Radioactive Waste (HTRW).
Geotechnical Engineering	The reviewer should have an extensive knowledge of the design of ER features.
Cost Engineering/Estimating	Cost DX Staff or Cost DX Pre-Certified Professional with a strong knowledge of the cost estimating practices for ER.
Real Estate	The Real Estate reviewer should be experienced in real state requirements for ER projects. The Real Estate reviewer should be experienced in real estate requirements for ER projects and must be selected from the enterprise level RE CoP list of approved and qualified reviewers.
Hydrology & Hydraulic Engineering/or Coastal	The H&H or Coastal Engineer Reviewer should have experience with ER features.

Engineering	
Civil Engineering	The Civil Engineering Review should have experience with ER.
Construction/Operations	N/A.

b. Documentation of ATR. DrChecks review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments should be limited to those that are required to ensure adequacy of the product. The four key parts of a quality review comment will normally include:

(1) The review concern – identify the product's information deficiency or incorrect application of policy, guidance, or procedures;
(2) The basis for the concern – cite the appropriate law, policy, guidance, or procedure that has not be properly followed;
(3) The significance of the concern – indicate the importance of the concern with regard to its potential impact on the plan selection, recommended plan components, efficiency (cost), effectiveness (function/outputs), implementation responsibilities, safety, Federal interest, or public acceptability; and
(4) The probable specific action needed to resolve the concern – identify the action(s) that the reporting officers must take to resolve the concern.

In some situations, especially addressing incomplete or unclear information, comments may seek clarification in order to then assess whether further specific concerns may exist.

The ATR documentation in DrChecks will include the text of each ATR concern, the PDT response, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team includes the district, RMO, MSC, and HQUSACE), and the agreed upon resolution. If an ATR concern cannot be satisfactorily resolved between the ATR team and the PDT, it will be elevated to the vertical team for further resolution in accordance with the policy issue resolution process described in either ER 1110-1-12 or ER 1105-2-100, Appendix H, as appropriate. Unresolved concerns can be closed in DrChecks with a notation that the concern has been elevated to the vertical team for resolution.

At the conclusion of each ATR effort, the ATR Team Lead will prepare a Review Report summarizing the review. Review Reports will be considered an integral part of the ATR documentation and shall:

- Identify the document(s) reviewed and the purpose of the review;
- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions;

- Identify and summarize each unresolved issue (if any); and
- Include a verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

ATR may be certified when all ATR concerns are either resolved or referred to the vertical team for resolution and the ATR documentation is complete. The ATR Team Lead will prepare a Statement of Technical Review certifying that the issues raised by the ATR team have been resolved (or elevated to the vertical team). A Statement of Technical Review should be completed, based on work reviewed to date, for the AFB, draft report, and final report. A sample Statement of Technical Review is included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

IEPR may be required for decision documents under certain circumstances. IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted. A risk-informed decision, as described in EC 1165-2-214, is made as to whether IEPR is appropriate. IEPR panels will consist of independent, recognized experts from outside of the USACE in the appropriate disciplines, representing a balance of areas of expertise suitable for the review being conducted. There are two types of IEPR:

- Type I IEPR. Type I IEPR reviews are managed outside the USACE and are conducted on project studies. Type I IEPR panels assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic analysis, environmental analyses, engineering analyses, formulation of alternative plans, methods for integrating risk and uncertainty, models used in the evaluation of environmental impacts of proposed projects, and biological opinions of the project study. Type I IEPR will cover the entire decision document or action and will address all underlying engineering, economics, and environmental work, not just one aspect of the study. For decision documents where a Type II IEPR (Safety Assurance Review) is anticipated during project implementation, safety assurance shall also be addressed during the Type I IEPR per EC 1165-2-214.

- Type II IEPR. Type II IEPR, or Safety Assurance Review (SAR), are managed outside the USACE and are conducted on design and construction activities for hurricane, storm, and flood risk management projects or other projects where existing and potential hazards pose a significant threat to human life. This project is ecosystem restoration only and is not expected to require a Type II IEPR.

a. Decision on IEPR. Based on the criteria in EC 1165-2-214, the project is expected to meet mandatory triggers for Type I IEPR. Construction of ER features will have no threat to human life/safety assurance but it is likely that estimated costs wil be above $45 million based on measures identified. A Type II IEPR is not considered appropriate as the project does not involve hurricane and storm risk management and flood risk components.

b. Products to Undergo Type I IEPR. Type I IEPR will be performed on the decision document, including supporting documentation, which will be available after the Tentatively Selected Plan milestone.

c. Required Type I IEPR Panel Expertise. The panel should include the necessary expertise to assess the engineering and environmental adequacy of the de3cision document as required by EC 1165-2-209. The panel members should have the following expertise:

IEPR Panel Members/Disciplines	Expertise Required
Environmental	The panel member should be familiar with coastal, brackish and freshwater habitats within the Gulf of Mexico as well as strategies that are successful in restoring these types of habitat.
Engineering	The panel member should be familiar with engineering strategies useful in coastal environments specific to ecosystem restoration measures. Suggested measures will likely include soft, more environmentally acceptable strategies. Also, expertise in sediment migration in coastal/tidal areas is required.
Planning	The panel member should be familiar with the steps utilized to evaluate and select ecosystem restoration measures in a way that is consistent with current USACE Planning guidance.

d. Documentation of Type I IEPR. The IEPR panel will be selected and managed by an Outside Eligible Organization (OEO) per EC 1165-2-214, Appendix D. Panel comments will be compiled by the OEO and should address the adequacy and acceptability of the economic, engineering and environmental methods, models, and analyses used. IEPR comments should generally include the same four key parts as described for ATR comments in Section 4.d above. The OEO will prepare a final Review Report that will accompany the publication of the final decision document and shall:

- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions; and
- Include a verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

The final Review Report will be submitted by the OEO no later than 60 days following the close of the public comment period for the draft decision document. USACE shall consider all recommendations contained in the Review Report and prepare a written response for all recommendations adopted or not adopted. The final decision document will summarize the Review Report and USACE response. The Review Report and USACE response will be made available to the public, including through electronic means on the internet.

7. POLICY AND LEGAL COMPLIANCE REVIEW

All decision documents will be reviewed throughout the study process for their compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews culminate in determinations that the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval or further recommendation to higher authority by the home MSC Commander. DQC and ATR augment and complement the policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of findings in decision documents. Policy and legal compliance reviews of all documents related to this IFR shall be conducted by Galveston District officials.

8. COST ENGINEERING DIRECTORY OF EXPERTISE (DX) REVIEW AND CERTIFICATION

All decision documents shall be coordinated with the Cost Engineering Mandatory Center of Expertise (MDX), located in the Walla Walla District. The DX will assist in determining the expertise needed on the ATR team and Type I IEPR (if required) team and in the development of the review charge(s). The MDX will also provide the Cost Engineering certification. The Ecosystem Restoration PCX is responsible for coordination with the Cost Engineering MDX.

9. MODEL CERTIFICATION AND APPROVAL

EC 1105-2-412 mandates the use of certified or approved models for all planning activities to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. Planning models, for the purposes of the EC, are defined as any models and analytical tools that planners use to define water resources management problems and opportunities, to formulate potential alternatives to address the problems and take advantage of the opportunities, to evaluate potential effects of alternatives and to support decision making. The use of a certified/approved planning model does not constitute technical review of the planning product. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

EC 1105-2-412 does not cover engineering models used in planning. The responsible use of well-known and proven USACE developed and commercial engineering software will continue and the professional practice of documenting the application of the software and modeling results will be followed. As part of the USACE Scientific and Engineering Technology (SET) Initiative, many engineering models have been identified as preferred or acceptable for use on Corps studies and these models should be used whenever appropriate. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

a. Planning Models. The following planning models are anticipated to be used in the development of the decision document:

Model Name and Version	**Brief Description of the Model and How It Will Be Applied in the Study**	**Certification / Approval Status**
HEP-HSI, or WVA	The PDT anticipates use of Habitat Evaluation Procedure (HEP) Habitat Suitability Index (HSI) models and/or the Wetland Value Assessment (WVA) model to quantify, to the extent possible, potential impacts associated with the project or outputs of proposed ecosystem restoration. All U.S. Fish and Wildlife Service (USFWS) HSI models were approved by HQ for use (Policy Guidance on Certification of Ecosystem Output Models, 8/13/2008, Recommendation 3) and require no further approval or certification." The USFWS WVA model has been certified and is approved for use along the upper Texas Gulf shoreline. The selection and application of these models will require ATR review.	Certified HEP HSI and/or WVA models

b. Engineering Models. The following engineering models are anticipated to be used in the development of the decision document:

Model Name and Version	**Brief Description of the Model and How It Will Be Applied in the Study**	**Approval Status**
Mii - cost estimating models	Cost Engineering's model for developing cost.	Cost Engineering Approved Model
Crystal Ball Risk Based Analysis	Cost Engineering's model for determining risk in cost estimating.	Cost Engineering Approved Model
Coastal Modeling System (CMS)	Two dimensional model for simulation hydrodynamics, waves, and sediment transport	SET: COP Preferred
Adaptive Hydraulics (ADH)	Two and three dimensional model for simulating hydrodynamics and salinity.	SET: Not listed
GenCade	Model for simulating long term shoreline change	Replaces GENESIS – SET: COP Preferred
BeachFX	Model of physical and economic impact of shore	SET: Allowed for use

	protection projects	

10. REVIEW SCHEDULES AND COSTS

a. ATR Schedule and Cost.

Estimated schedule for ATR of the draft IFR and EA

ATR - Initiate Coordination with Eco Res PCX	April 2015
Alternatives Milestone	July 2015
TSP Milestone	January 2016
Initiate ATR of TSP Report	February 2016
ATR Certification of Alternative Milestone	April 2016
Public Review of Draft Reports	April 2016
Agency Decision Milestone	July 2016
Initiate ATR of ADM Report (if necessary)	August 2016
Civil Works Review Board	January 2017
Chief's Report	July 2017

- The estimated cost for ATR is $60,000 including the participation of the ATR Lead in milestone conferences and any meeting to address the ATR process and any significant and/or unresolved ATR concerns.

b. Type I IEPR Schedule and Cost.

TASK	Date
IEPR – Initiate Coordination	N/A
IEPR Review Period	N/A
IEPR Report/Comments in Dr. Checks	N/A
District Addresses Comments in Dr. Checks	N/A
IEPR Backcheck/Closeout Comments	N/A
IEPR Certification/Final Report	N/A

The estimated cost for IEPR is $100,000.

c. Model Certification/Approval Schedule and Cost.

As part of the feasibility study, the District will use existing, certified models. No spreadsheet models will be required for this purpose.

11. PUBLIC PARTICIPATION

The Draft IFR and EA will be coordinated with the public for a 30-day period once ATR is complete. Public comments will be addressed and will be incorporated in the report.

12. REVIEW PLAN APPROVAL AND UPDATES

The Southwestern Division Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (involving district, MSC, RMO, and HQUSACE members) as to the appropriate scope and level of review for the decision document. Like the PMP, of which this document is a component, the Review Plan is a living document and may change as the study progresses. The home district is responsible for keeping the Review Plan up to date. Minor changes to the review plan since the last MSC Commander approval are documented in Attachment 3. Significant changes to the Review Plan (such as changes to the scope and/or level of review) should be re-approved by the MSC Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the Commanders' approval memorandum, will be posted on the Home District's webpage. The latest Review Plan should also be provided to the RMO and home MSC.

13. REVIEW PLAN POINTS OF CONTACT

Public questions and/or comments on this review plan can be directed to the following points of contact:

	RPEC, Chief, Plan Formulation Section	
	ATR Team Lead	
	Ecosystem Restoration PCX	309-794-5448 309-794-5447

ATTACHMENT 1: TEAM ROSTERS (Removed Prior to Posting on Webpage)

ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECSION DOCUMENTS

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the *<type of product>* for *<project name and location>*. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-214. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrChecks[sm].

SIGNATURE _____ _____

Name Date
ATR Team Leader
Office Symbol/Company

SIGNATURE _____ _____

Name Date
Project Manager
Office Symbol

SIGNATURE _____ _____

Name Date
Architect Engineer Project Manager[1]
Company, location

SIGNATURE _____ _____

Name Date
Review Management Office Representative
Office Symbol

CERTIFICATION OF AGENCY TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows: *Describe the major technical concerns and their resolution.*

As noted above, all concerns resulting from the ATR of the project have been fully resolved.

SIGNATURE _____ _____

Name Date
Chief, Engineering Division
Office Symbol

SIGNATURE _____ _____

Name Date
Chief, Planning Division
Office Symbol

[1] Only needed if some portion of the ATR was contracted

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

Term	Definition	Term	Definition
ADM	Agendy Decision Milestone	NED	National Economic Development
AFB	Alternative Formulation Briefing	NER	National Ecosystem Restoration
ASA(CW)	Assistant Secretary of the Army for Civil Works	NEPA	National Environmental Policy Act
ATR	Agency Technical Review	O&M	Operation and maintenance
CSDR	Coastal Storm Damage Reduction	OMB	Office and Management and Budget
CWRB	Civil Works Review Board	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DPR	Detailed Project Report	OEO	Outside Eligible Organization
DQC	District Quality Control/Quality Assurance	OSE	Other Social Effects
DX	Directory of Expertise	PCX	Planning Center of Expertise
EA	Environmental Assessment	PDT	Project Delivery Team
EC	Engineer Circular	PAC	Post Authorization Change
EIS	Environmental Impact Statement	PMP	Project Management Plan
EO	Executive Order	PL	Public Law
ER	Ecosystem Restoration	QMP	Quality Management Plan
FDR	Flood Damage Reduction	QA	Quality Assurance
FEMA	Federal Emergency Management Agency	QC	Quality Control
FRM	Flood Risk Management	RED	Regional Economic Development
FSM	Feasibility Scoping Meeting	RMC	Risk Management Center
GRR	General Reevaluation Report	RMO	Review Management Organization
Home District/MSC	The District or MSC responsible for the preparation of the decision document	RTS	Regional Technical Specialist
HQUSACE	Headquarters, U.S. Army Corps of Engineers	TSP	Tentatively Selected Plan
IEPR	Independent External Peer Review	SAR	Safety Assurance Review
ITR	Independent Technical Review	USACE	U.S. Army Corps of Engineers
LRR	Limited Reevaluation Report	WRDA	Water Resources Development Act
MSC	Major Subordinate Command		