

U.S. Army Corps of Engineers Southwestern Division



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Version – 1.1**

REVISIONS TO CAP PROGRAMMATIC REVIEW PLAN

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SWD CAP PROGRAMMATIC REVIEW PLAN

All Phases

Major Subordinate Command (MSC): Southwestern Division – SWD
SWD Contact: [REDACTED]

REVIEW PLAN PURPOSE AND REQUIREMENTS

This document serves as the Southwestern Division (SWD) Review Plan for all documentation required for Continuing Authorities Program (CAP) documentation as required by EC 1165-2-217 *Review Policy for Civil Works* dated 20 February 2018, and by CECW-P Memorandum #1 *Continuing Authority Program Planning Process* Improvements dated 19 Jan 2011. The purpose of this Review Plan is to define the requirements of how reviews will be conducted for CAP decision documents, plans, and specifications. Attachment 1: CAP Review Coordination Sheets will need to be completed and submitted with the PMP for each CAP project.

Applicability. The CAP focuses on water resource related projects of relatively smaller scope, cost and complexity. Traditional USACE civil works Investigations projects are of wider scope and complexity and are specifically authorized by Congress. The CAP is a collection of nine legislative authorities delegated to USACE to plan, design, and construct certain types of water resource and environmental restoration projects without specific Congressional authorization.

Section 14 of the Flood Control Act of 1946, as amended (33 USC 701r), authorizes the US Army Corps of Engineers (USACE) to study, design and construct emergency streambank and shoreline works (such as riprap or sheet pile) to protect public services including (but not limited to) streets, bridges, schools, water and sewer lines, National Register sites, and churches from damage or loss by natural erosion. Per ER 1105-2-100: “This program is designed to implement projects to protect public facilities and facilities owned by non-profit organizations that are used to provide public services that are open to all on equal terms. These facilities must have been properly maintained but be in imminent threat of damage or failure by natural erosion processes on stream banks and shorelines and are essential and important enough to merit Federal participation in their protection.”

Section 103 of the Rivers and Harbors Act of 1962, as amended (33 USC 426g), authorizes the USACE to study, adopt and construct continuing authority beach erosion control (coastal storm risk reduction) projects. Per ER 1105-2-100: “This authority may be used for protecting multiple public and private properties and facilities and single non-Federal public properties and facilities against damages caused by storm driven waves and currents.”

Section 107 of the River and Harbor Act of 1960, as amended (33 USC 577), authorizes the USACE to plan, design, construct and maintain projects for commercial navigation in accordance with current policies and procedures governing projects of the same type which are specifically authorized. Per ER 1105-2-100: Section 107 projects

are to be formulated for commercial navigation purposes in accordance with current policies and procedures governing projects of the same type which are specifically authorized by Congress.

Section 111 of the Rivers and Harbors Act of 1968, as amended (33 USC 426i), authorizes the USACE to investigate, study, plan and implement measures (structural or nonstructural) to prevent or mitigate damage to shorelines attributable to Federal navigation projects. Per ER 1105-2-100: “This authority authorizes the planning of a justified level of work for prevention or mitigation of damages to both non-Federal public and privately owned shores to the extent that such damages can be directly identified and attributed to Federal navigation works located along the coastal and Great Lakes shorelines of the United States, and shore damage attributable to the Atlantic Intracoastal Waterway and the Gulf Intracoastal Waterway.

Section 204 of the Water Resources Development Act of 1992, Public Law 102-580 (33 USC 2326), provides the authority to carry out projects to reduce storm damage to property, to protect, restore and create aquatic and ecologically related habitats, including wetlands, and to transport and place suitable sediment, in connection with dredging for construction, operation, or maintenance by the Secretary of an authorized Federal water resources project. Per ER 1105-2-100: “The purpose of this authority is to carry out projects for the protection, restoration, and creation of aquatic and ecologically related habitats, including wetlands, in connection with dredging for construction, operation, or maintenance by the Secretary of an authorized navigation project.”

Section 205 of the Flood Control Act of 1948, as amended (33 USC 701s), authorizes the USACE to study, design and construct flood risk management projects of relatively smaller scope, cost and complexity. Per ER 1105-2-100: “Projects implemented under this authority are formulated for structural or non-structural measures for flood damage reduction in accordance with current policies and procedures governing projects of the same type which are specifically authorized by Congress.”

Section 206 of the Water Resources Development Act of 1996, Public Law 104-305 (33 USC 2330), authorizes the Secretary of the Army to carry out a program of aquatic ecosystem restoration with the objective of restoring degraded ecosystem structure, function, and dynamic processes to a less degraded, more natural condition considering the ecosystem’s natural integrity, productivity, stability and biological diversity. This authority is primarily used for manipulation of the hydrology in and along bodies of water, including wetlands and riparian areas. This authority also allows for dam removal. Per ER 1105-2-100: “The purpose of this authority is to develop aquatic ecosystem restoration and protection projects that improve the quality of the environment, are in the public interest, and are cost effective in accordance with current policies and procedures governing projects of the same type which are specifically authorized by Congress.”

Section 208 of the Flood Control Act 1954, as amended (33 USC 701g), authorizes the USACE to study, adopt and construct in-stream clearing and snagging projects in the interest of flood risk management. Per ER 1105-2-100: “This authority provides for minimal measures to reduce nuisance flood damages caused by debris and minor

shoaling of rivers. This authority is treated as a flood damage reduction project for policy eligibility and cost sharing purposes.”

Section 1135 of the Water Resources Development Act of 1986, Public Law 99-662 (33 USC 2309a), provides the authority to modify existing USACE projects to restore the environment and construct new projects to restore areas degraded by USACE projects with the objective of restoring degraded ecosystem structure, function, and dynamic processes to a less degraded, more natural condition considering the ecosystem’s natural integrity, productivity, stability and biological diversity. This authority is primarily used for manipulation of the hydrology in and along bodies of water, including wetlands and riparian areas. Per ER 1105-2-100: “This authority provides for the review and modification of structures and operations of water resources projects constructed by the Corps for the purpose of improving the quality of the environment when it is determined that such modifications are feasible, consistent with the authorized project purposes, and will improve the quality of the environment in the public interest. In addition, if it is determined that a Corps water resources project has contributed to the degradation of the quality of the environment, restoration measures may be implemented at the project site or at other locations that have been affected by the construction or operation of the project, if such measures do not conflict with the authorized project purposes.”

This Review Plan (RP) applies to the review of all CAP documentation within SWD, This RP will be reviewed and revised with new review guidance or annually to ensure its applicability. The Review Management Organization will vary with phase and required reviews. The specifics on which organization is the Review Management Organization (RMO) is discussed at the end of this programmatic review plan.

REVIEW DESCRIPTIONS AND EXECUTION

District Quality Control (DQC). All decision documents (including data, analyses, environmental compliance documents, etc.) undergo DQC. This internal review process covers basic science and engineering work products. It fulfils the project quality requirements of the Project Management Plan.

Agency Technical Review (ATR). ATR is performed by a qualified team from outside the home district that is not involved in the day-to-day production of the project/product. These teams will be comprised of certified USACE personnel. The ATR team lead will be from outside the home MSC. If significant life safety issues are involved in a study or project a safety assurance review should be conducted during ATR.

Independent External Peer Review (IEPR). IEPR may be required for decision documents under certain circumstances. This is the most independent level of review and is applied in cases that meet criteria where the risk and magnitude of the project are such that a critical examination by a qualified team outside of USACE is warranted. A risk-informed decision is made as to whether IEPR is appropriate.

Cost Engineering Review. All decision documents will be coordinated with the Cost Engineering Mandatory of Expertise (MCX). The MCX will assist in determining the expertise needed on the ATR and IEPR teams but will not directly participate in the

review. The Review Management Organization (RMO) is responsible for coordinating with the MCX to select a cost reviewer for the reviews.

Model Review and Approval/Certification. EC 1105-2-412 mandates the use of certified or approved models for all planning work to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions.

Policy and Legal Compliance Review. All decision documents will be reviewed for compliance with law and policy. ER 1105-2-100, Appendix H provides guidance on Policy and Legal Compliance (P&LC) reviews. These reviews culminate in determinations that report recommendations 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.

PRODUCT REVIEWS

Table 1 – Product Reviews

Stage	Product	Review Level
Feasibility Phase	Draft FID	Chief, Plan Formulation
	Final FID	SWD / District (if delegated)
	Draft Feasibility Report and EA	DQC / ATR / Policy / Legal / Public
	Final Feasibility Report and EA	DQC / ATR / Legal / Policy
Design and Implementation Phase	Design Documentation Report (65% and 95%)	DQC / ATR
	Plans and Specs	DQC / ATR
	Operations and Maintenance Manual	DQC / ATR
IEPR (when applicable)	Draft Feasibility Report	
SAR (when Applicable)	Design and Implementation Documentation	

District Quality Control

The district will manage the DQC. The Plan Formulation Chief will appoint a DQC Lead to manage the review. The DQC Lead will prepare a DQC Plan and provide it to SWD prior to starting DQC reviews. DrChecks will be used to document DQC reviews and

DrChecks comments will be attached to the DQC Certification and report. Draft documentation review should review all portions of the decision documentation, while final documentation review should only focus on changes that have occurred since the draft report.

A specific certification of DQC completion is required at the DRAFT and FINAL decision document stages. Documentation of DQC should follow the District's Quality Manual and the SWD Quality Management Plan. An example DQC Certification statement is provided in EC 1165-2-217, on page 19, Figure F. The DQC certification will be signed by the lead author of the product, the product reviewer(s), the DQC Review Lead, the supervisor of the author, and the PM. A supervisor may grant exceptions from the DQC certification requirement based on a risk-informed decision for minor reports or for design or computations that do not involve life safety, operational adequacy, or large economic consequences. It is anticipated that the DQC team will include a reviewer for every discipline on the PDT. The review team roster in Attachment 1 needs to include the disciplines required for the DQC review team, and if possible, the reviewers who will be serving in each discipline. DQC team members can be assigned to review more than one discipline if they are sufficiently qualified.

Table 2 – DQC Team Expertise

DQC Team Disciplines	Expertise Required	Authorities
DQC Lead	A senior professional with extensive experience preparing CAP Civil Works decision documents and conducting DQC. The lead should also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc.).	ALL
Planning	A senior water resources planner with experience in reviewing Plan Formulation processes for civil works ecosystem restoration feasibility studies and be able to draw on “lessons learned” in advising the PDT of best practices. The reviewer should also have recent knowledge of accepted planning models.	ALL
Hydrology & Hydraulic Engineering	The reviewer should be a senior Engineer, carry a Professional Engineer's license, and have extensive knowledge of HEC-RAS modeling including the use of GIS (ARC-INFO) inputs to the model. The reviewer should also have a solid understanding of the geomorphology of alluvial rivers or coastal shorelines as indicated by the project setting. The reviewer should also have recent knowledge of accepted hydraulic models for both lakes, rivers, or coastal hydrology.	ALL

DQC Team Disciplines	Expertise Required	Authorities
Coastal Engineer	The reviewer should be a senior Engineer, carry a Professional Engineer's license, and have extensive knowledge of USACE certified coastal engineering model use and review.	Sections 103, 111, 204 and 107 (as applicable)
Economics	The reviewer should be a senior economist versed in analysis of four benefit accounts (NED, RED, NER/EQ, and OSE). The reviewer should also have recent knowledge of accepted economics models. For CAP 204, 206, and 1135 projects, the reviewer will be familiar with ecosystem benefits assessment and cost effective / incremental cost analysis.	ALL
Environmental Resources	The reviewer should be an environmental subject matter expert or environmental supervisor with expertise in the habitat types and ecological processes found in the study area, as well as water quality. The reviewer should be familiar with preparing, processing, and reviewing NEPA and environmental law compliance documents and have working knowledge of accepted habitat models as well as cultural resource compliance.	ALL
Cultural Resources	The reviewer should be a senior Cultural Resource professional or environmental supervisor with demonstrated experience with Native American tribes and archeological and cultural resources. The reviewer should also be familiar with preparing, processing, and reviewing cultural resource law compliance documentation.	ALL
Real Estate	The reviewer should be a senior Real Estate professional with multiple years of experience in real estate issues that arise on CAP projects.	ALL

DQC Team Disciplines	Expertise Required	Authorities
Geotechnical Engineering	The reviewer should be a senior Engineer, carry a Professional Engineer's license, and have recent experience in the Corps' design requirements for levee work. This person should also have experience in investigating existing subsurface conditions and materials; determining their physical/mechanical and chemical properties that are relevant to the project considered, assessing risks posed by site conditions; and designing earthworks and structure foundations.	ALL
Civil Engineering	The reviewer should be a senior Engineer, carry a Professional Engineer's license, and have recent experience in the design and of plans and specifications of CAP projects.	ALL
Cost Engineering	The reviewer should be a senior Engineer and have extensive Corps' experience in the application of scientific principles and techniques to problems of cost estimating, cost control, business planning and management science, profitability analysis, project management, and planning and scheduling.	ALL
Climate	An engineer with experience in Climate Preparedness and Resiliency Analysis should participate in the DQC. This team member can serve in another discipline such as hydraulics/hydrology.	ALL
Operations	The reviewer should be a professional with extensive experience in Corps operation and maintenance of the type of project being modified.	111, 204, and 1135 (as applicable)

Agency Technical Review

Agency Technical Review is mandatory on all decision, design, and implementation documents. The RMO manages the ATR. The ATR Team lead must be certified to perform ATRs, and the other team members must be certified or mentored by a certified reviewer. Documentation of completed DQC should be provided to SWD, and the ATRT Lead prior to ATR start. The ATRT will examine DQC records and comment in the ATR report on the adequacy of the DQC. Missing or inadequate DQC documentation can result in delays to the start of subsequent reviews. DrChecks (ProjNet) will be used to document all ATR comments, responses, and resolutions. Comments will be limited to

technical and policy concerns that if not addressed would result in a project that would likely be not compliant with policy, not cost-effective, or otherwise un-implementable. Comments that are based on personal opinion, that repeat issues that are addressed in the DQC review, or are grammatical in nature are not appropriate and if transmitted to the project delivery team will be provided outside of the ATR report. Draft documentation review will include all portions of the decision documentation, while final documentation review will only focus on confirming that ATR comments on the draft report are addressed in the final report as well as other changes that have occurred since the draft report.

For DRAFT decision documents only, concerns can, but do not have to, be closed in DrChecks by noting the concern has been elevated for resolution or closed pending review of the final document. When a draft report comment is closed pending final review, the closing of that comment will be done in the draft report ProjNet ATR file.

In the instance when SWD personnel are assigned ATR and Policy and Legal Compliance review responsibilities, the individual's ATR comments will be documented in the PGM document. The draft and final ATR documentation report will include the names of the SWD reviewers conducting ATR and note that their technical comments are addressed in the PGM document.

For FINAL decision documents, ATRs comments may not be closed until all concerns have been addressed. The ATR Team Lead must complete a Statement of Technical review Report. ATRs may only be certified when all concerns are resolved or referred to the vertical team and the ATR documentation is complete. The ATRT Lead, PM, SWD POC, and the chief(s) of each function will certify that the issues raised by the ATR Team have been resolved or have been escalated for resolution.

For the CAP Section 208 projects which have a maximum federal limit of \$500,000, the number of reviewers on the ATR team will be minimized and review may be conducted largely by the P&LC review team. The ATR team for this authority will be limited to five or fewer reviewers: a dual hatted ATR Lead, and reviewers of economics, environmental, plan formulation, hydrology/hydraulics, cost, and real estate. The cost reviewer will be selected by the Cost Engineering Mandatory Center of Expertise at Walla Walla District.

For all remaining CAP authorities, except 204 with a representative from operations, the ATR team will generally be limited to no more than six reviewers. To achieve this team size, reviewers likely will have to cover more than one of the specialties listed in Table 3 below. The review team roster in Attachment 1 must include the disciplines required for the ATR review team, and if possible, the reviewers who will be serving in each discipline. The ATR Lead should be identified at the time of approval of the project specific Review Plan and the rest of the review team must be identified to SWD by the start of the draft report DQC review.

Table 3 – ATR Team Expertise

ATR Team Disciplines	Expertise Required	Authorities
ATR Lead	<p>The ATR lead should be a senior professional with extensive experience in preparing CAP Civil Works decision documents and certified for conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. The ATR lead should also serve as a reviewer for one or more specific disciplines (such as planning, economics, Ecological Resources, etc.). The ATR team leader may be from outside SWD. The ATR lead with the RMO will identify the ATR team.</p>	ALL
Planning	<p>A senior water resources planner with experience in Plan Formulation processes for ecosystem restoration, and / or multi-purpose studies, and be able to draw on “lessons learned” in advising the PDT of best practices. The reviewer should also have recent knowledge of accepted planning models. For Sections 206 and 204 projects involving ecosystem restoration, this person may also perform the environmental compliance review if certified in all three areas (plan formulation, ecosystem restoration, and environmental compliance). For Sections 205, 208, and 111 projects, this person could be a certified economist and plan formulator and also perform the economics review.</p>	ALL

ATR Team Disciplines	Expertise Required	Authorities
Hydrology & Hydraulic Engineering	<p>The reviewer should be a senior Engineer, carry a Professional Engineer's license, and have extensive knowledge of HEC-RAS modeling including the use of GIS (ARC-INFO) inputs to the model. The reviewer should have a solid understanding of the geomorphology of alluvial rivers. The reviewer should also have recent knowledge of accepted hydraulic models for both lakes and rivers. Ideally, the reviewer would have sufficient knowledge of Corps climate change policy to perform the climate change review. This reviewer can be a qualified MSC engineer who is assigned to perform Policy & Legal review as well as ATR review of CAP project reports.</p>	ALL except for projects in coastal zone.
Coastal Engineer	<p>In place of the Hydrology/Hydraulic reviewer, a Coastal Engineer would be assigned for coastal projects. The reviewer should be a senior Engineer, carry a Professional Engineer's license, and have extensive knowledge of USACE certified coastal engineering model use and review. Ideally, the reviewer would have sufficient knowledge of Corps climate change policy to perform the climate change review. This reviewer can be a qualified Division engineer who is assigned to perform Policy & Legal review as well as ATR review of CAP project reports.</p>	Sections 103, 111, 204 and 107 (as applicable)
Economics	<p>The reviewer should be a senior economist versed in analysis of four benefit accounts (NED, RED, EQ/NER, and OSE). The reviewer should also have recent knowledge of accepted economics models and software. For CAP 204, 206 and 1135 projects, the reviewer will be familiar with ecosystem benefits assessment and cost effective / incremental cost analysis.</p>	ALL

ATR Team Disciplines	Expertise Required	Authorities
Environmental Resources	<p>The reviewer should be an environmental subject matter expert in the habitat types and ecological processes found in the study area, as well as water quality. For CAP 206 and 1135 projects, the reviewer needs to have personal experience in ecosystem restoration. The reviewer should be familiar with preparing, processing, and reviewing NEPA and environmental law compliance documents and have working knowledge of accepted habitat models, including HEP and HSIs. This person should also perform the cultural resources review and plan formulation review. For Section 206 and 1135 projects, this person ideally could perform the plan formulation review also, if appropriately certified.</p>	ALL
Cultural Resources	<p>Generally, the person overseeing Environmental Resources technical review should also perform this activity unless the project involves significant chance of disturbing cultural resources. For projects with significant cultural resource impacts, this reviewer will be a senior cultural resources specialist.</p>	ALL
Real Estate	<p>The reviewer should be selected from the certified national list of Real Estate reviewers for the project type. This reviewer can be a qualified MSC real estate professional who is assigned to perform Policy & Legal review as well as ATR review of CAP project reports.</p>	ALL

ATR Team Disciplines	Expertise Required	Authorities
Geotechnical Engineering	<p>The reviewer should be a senior Engineer, carry a Professional Engineer's license, and have recent experience in the Corps' design requirements for ecosystem restoration work. This person should also have experience in investigating existing subsurface conditions and materials; determining physical / mechanical and chemical properties that are relevant to the project considered, assessing risks posed by site conditions (to include water quality and HTRW issues); and designing earthworks and structure foundations. Unless the project has complex geotechnical conditions, this review can be accomplished by a qualified civil engineering reviewer performing the civil, hydraulic, or coastal review. This reviewer can be a MSC engineer who is assigned to perform Policy & Legal review as well as ATR review of CAP project reports.</p>	ALL
Civil Engineering	<p>The reviewer should be a senior Engineer, carry a Professional Engineer's license, and have recent experience in the design and of plans and specifications for USACE CAP projects of all types. This reviewer can be a MSC engineer who is assigned to perform Policy & Legal review as well as ATR review of CAP project reports. For less complicated coastal projects, the coastal engineer reviewer may be able to cover civil engineering review.</p>	ALL except for 103, 107, 111, and 204, as appropriate.
Cost Engineering	<p>The reviewer should be a senior Engineer, carry a Professional Engineer's license, and have extensive Corps' experience in the application of scientific principles and techniques to problems of cost estimating, cost control, business planning and management science, profitability analysis, project management, and planning and scheduling. This assignment must be coordinated with the Cost-MCX by the senior cost engineer of the home district.</p>	ALL

ATR Team Disciplines	Expertise Required	Authorities
Climate	A member of the Climate Preparedness and Resiliency Community of Practice will participate in the ATR review. In place of a Climate CoP reviewer, the Division lead hydraulic engineer may serve as the reviewer.	ALL
Operations	The reviewer should be a professional with extensive experience in Corps operation and maintenance of the type of project being modified.	111, 204, and 1135 (as applicable)

Independent External Peer Review

IEPR is managed outside of the USACE and conducted on studies. 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. Draft documentation review should review all portions of the decision documentation, while final documentation review should only focus on changes that have occurred since the draft report.

Decision on IEPR. For CAP projects, IEPR is very unlikely to be triggered by project cost since the cost threshold for IEPR is \$200 million; however, IEPR may be requested by a State Governor or Federal/State agency, or otherwise specified by the MSC commander. The criteria for determining the need for IEPR is specified in sections 6.4 through 6.6 of ER 1165-2-217. Documentation of the IEPR determination, per ER 1165-2-217 criteria, will need to be included in the Project Management Plan documentation for all CAP projects.

Products to Undergo IEPR. The full draft report will undergo IEPR.

Potential IEPR Panel Expertise. Panels will consist of independent, recognized experts from outside of the USACE in disciplines representing a balance of areas of expertise suitable for the review being conducted. Table 4 lists the required panel expertise. The review team roster in Attachment 1 needs to include the disciplines required for the IEPR Panel, and if possible, the reviewers who will be serving in each discipline.

Table 4: Required IEPR Panel Expertise

IEPR Panel Member Disciplines	Expertise Required	Authorities
Hydrology and Hydraulic Engineering	The reviewer should be a senior professional and have extensive knowledge of hydrology and hydraulics of the studied basin or coastal system respectively. The reviewer should have extensive knowledge of the used H&H model including the use of GIS (ARC-INFO) inputs to the model. The reviewer should also have a solid understanding of the geomorphology of alluvial rivers. The reviewer should also have recent knowledge of accepted and certified hydrologic, hydraulic and sediment transport models. The reviewer should be familiar with application of detention/retention basins, application of flood walls, non-structural solutions involving flood warning systems and flood proofing, etc.	All
Risk Analysis	The risk analysis reviewer should be a senior professional and be experienced with performing and presenting risk analyses in accordance with ER 1105-2-101 and other related guidance, including familiarity with how information from the various disciplines involved in the analysis interact and affect the results.	ALL
Civil Works Plan Formulation / Economics	The reviewer should be a senior professional, be familiar with the processes used in evaluation of the type of projects for the CAP authority, and have recent experience with USACE plan formulation process, procedures, and standards as they relate to flood risk management. In addition, the reviewer should have experience related to economic evaluation of traditional National Economic Development (NED) plans and trade-off analysis.	ALL
Coastal Engineer	The reviewer should be a senior professional, carry a Professional Engineer's license, and have extensive knowledge of USACE certified coastal engineering model use and review.	Sections 103, 111, 204 and 107 (as applicable)

IEPR Panel Member Disciplines	Expertise Required	Authorities
Environmental Resources	The reviewer should be an environmental subject matter expert in the habitat types and ecological processes found in the study area, as well as water quality. The reviewer needs to have personal experience in ecosystem restoration. The reviewer should be familiar with preparing, processing, and reviewing NEPA and environmental law compliance documents and have working knowledge of accepted habitat models, including HEP and HSIs. Reviewer should also have recent experience using IWR Suite software.	ALL
Cultural Resources	The reviewer should be a senior professional with demonstrated experience with Native American tribes and archeological and cultural resources. The reviewer should also be familiar with preparing, processing, and reviewing cultural resource law compliance documentation.	ALL
Geotechnical Engineering	The reviewer should be a senior professional, carry a Professional Engineer's license, and have recent experience in the Corps' design requirements for ecosystem restoration work. This person should also have experience in investigating existing subsurface conditions and materials; determining physical / mechanical and chemical properties that are relevant to the project considered, assessing risks posed by site conditions (to include water quality and HTRW issues); and designing earthworks and structure foundations.	ALL
Civil Engineering	The reviewer should be a senior professional, carry a Professional Engineer's license, and have recent experience in the design and of plans and specifications for USACE ecosystem restoration projects, to include tie into natural features.	ALL

Documentation of IEPR. The OEO will submit a final Review Report no later than 60 days after the end of the draft report public comment period. USACE will consider all recommendations in the Review Report and prepare a written response for all recommendations. The final decision document will summarize the Review Report and USACE response and will be posted on the internet.

Recommended Best Planning Practice: Begin coordination with the RMO very early in the study to allow adequate time for scoping and contracting for the IEPR.

Safety Assurance Reviews (SAR)

Safety Assurance Reviews are managed outside of the USACE and are conducted prior to physical construction for coastal storm and flood risk management projects or other projects where potential hazards pose a significant threat to human life (public safety). Generally, Section 103 and 205 projects are most likely to require a SAR due to inherent life safety risks; however, other CAP projects may present these risks. The PDT must review Paragraph 7.4 of ER 1165-2-217 to assess whether a given project requires a SAR. If SAR is appropriate, a SAR Panel will be convened to review the design and construction activities before construction begins, and until construction activities are completed, and periodically thereafter on a regular schedule. Documentation of the SAR plan will need to be included as an addendum to this document.

Policy and Legal Compliance Reviews

The SWD Chief of Planning and Policy will identify the Policy Review Manager. The makeup of the review team, including an attorney, may be drawn from Headquarters (HQUSACE), SWD, Planning Centers of Expertise, or other review resources as needed. At the direction of the RMO, SWD P&LC reviewers can also be assigned as ATR reviewers. The District's Chief Counsel will identify district counsel to serve as the legal reviewer for all decision documents.

Policy and legal review (P&LR) comments will each be documented in a Memorandum for the Record (MFR) provided to both the PM and Lead Planner, and the review team, by the Policy Review Team Lead and by the district attorney. When SWD P&LC reviewers are also assigned to the ATR team, their technical concerns may be documented in the PGM. The PM will provide the MFRs to the PDT. The PM and Planner will work with the PDT on evaluations to each policy comment in the SWD MFR in such a way that PDT responses are easily understood. The MFR will be returned to SWD for back checks by the PM.

The PM and Planner will work with the PDT on evaluations to each legal comment in the District's MFR in such a way that PDT responses are easily understood. The MFR will be returned to the District's Office of Counsel for back checks.

If policy and/or legal concerns arise during ATR efforts between the PDT and ATR reviewers that are not readily and mutually resolved by the ATR Review Lead, the dispute resolution process outlined in EC 1165-2-217, Paragraphs 9.I.(3) and 9.I.(4) will be followed. The review team roster in Attachment 1 shall include the disciplines required for the P&LR team, and if possible, the reviewers who will be serving in each discipline. Draft Report review should review all portions of the decision documentation, while final report review should only focus on changes that have occurred since the draft report.

Planning and Engineering Model Certification or Approval

Provide a list of anticipated models in the Model table in Attachment 1. All models will need to be certified or approved for use.

Review Management Organization

The RMO will be determined (Figure 1) by which phase the project is in, as well as other factors that affect the level and scope of review. During the study phase if a project will not require an IEPR then the RMO will be the home district. If a study requires an IEPR, then SWD will serve as the RMO. If the IEPR on a Section 103 or 205 is for life safety reasons, then the ATR lead can come from within SWD but must be outside the home district.

Typically, during the design and implementation (D&I) phase SWD will serve as the RMO. The exception is if projects requiring a SAR, then the RMC will be the RMO for the D&I phase.

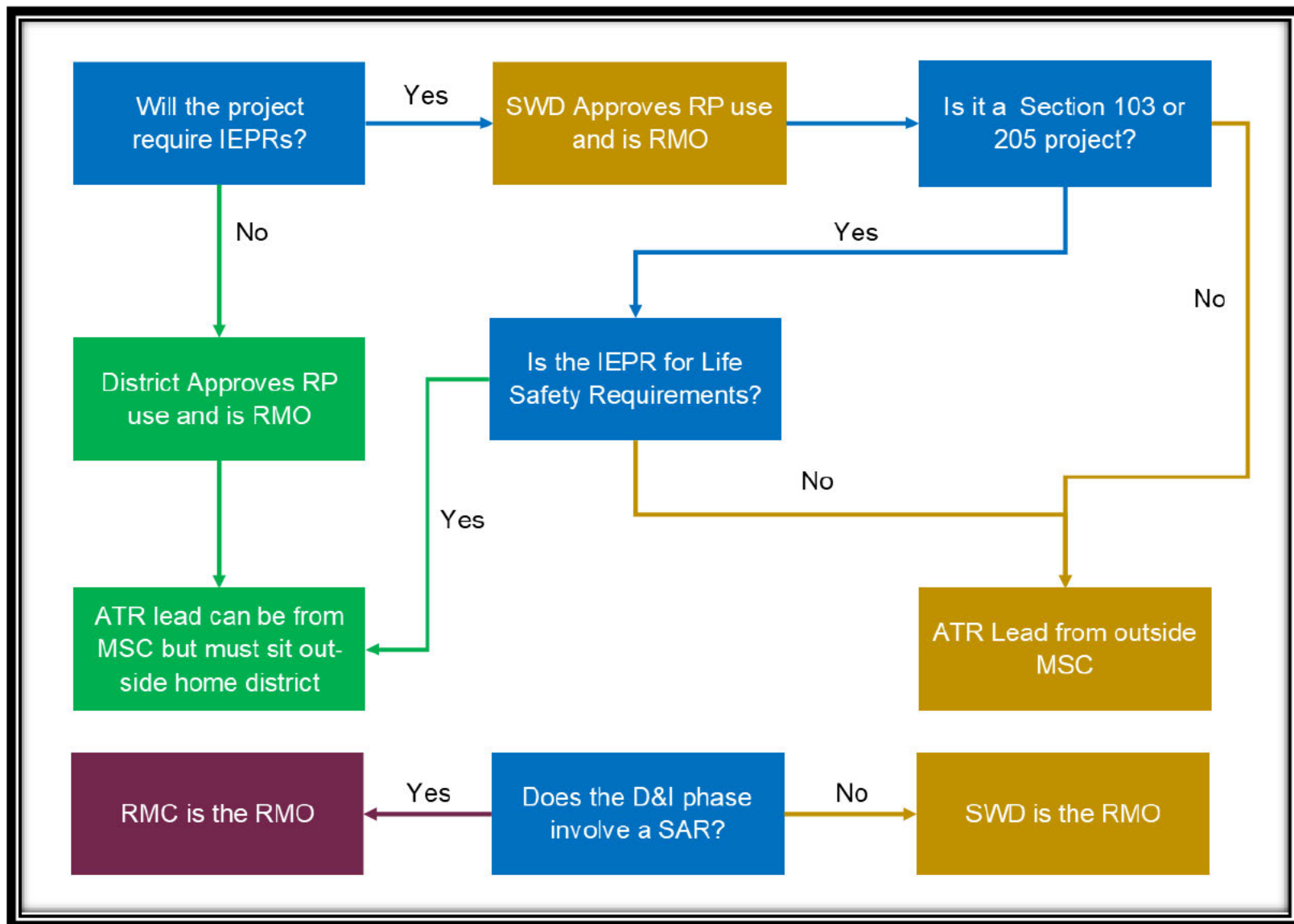


Figure 1: Review Plan Use Approval, RMO Determination, and ATR Lead Location

ATTACHMENT 1: ACRONYMS

ATR	Agency Technical Review
CAP	Continuing Authorities Program
D&I	Design and Implementation
DQC	District Quality Control
EC	Engineering Circular
ER	Engineering Regulation
FID	Federal Interest Determination
HEP	Habitat Evaluation Procedures
HQUSACE	U.S. Army Corps of Engineers - Headquarters
HSI	Habitat Suitability Index
HTRW	Hazardous, Toxic, and Radioactive Waste
IEPR	Independent External Peer Review
MCX	Mandatory Center of Expertise
MFR	Memorandum for Record
MSC	Major Subordinate Command
NEPA	National Environmental Policy Act
P&LR	Policy and Legal Review
PDT	Project Delivery Team
PgRP	Programmatic Review Plan
PM	Project Manager
RMC	Risk Management Center
RMO	Review Management Organization
RP	Review Plan
SAR	Safety Assurance Review
SWD	Southwestern Division
USACE	U.S. Army Corps of Engineers

ATTACHMENT 2: PROJECTS APPROVED UNDER PgRP

Date Approved Under PgRP			

ATTACHMENT 3: CAP REVIEW COORDINATION SHEETS

Project Information Sheet

December 2023

Project Name: City of League City; League City, Texas

CAP Authority: Section 205

P2 Number: 479841

District: Galveston (SWG)

District Contact: Project Manager, [REDACTED]

RMO: Southwestern Division

RMO Contact: SWD CAP Program Manager [REDACTED]

Location: League City, Galveston County, Texas

Authority: Section 205 of the 1948 Flood Control Act as amended

Sponsor: City of League City, TX

Project Area: The study area is in the lower Clear Creek watershed, specifically in the vicinity where FM 270 crosses Clear Creek.

Problem Statement: Riverine flooding in League City, Texas, along the lower Clear Creek watershed is occurring, specifically in the area near FM 270. This flooding is causing damage to public and private properties, local infrastructure, and public utilities.

Federal Interest: Federal interest in water resources development is established by law and based upon a preliminary appraisal consistent with Army policies, costs, benefits, and environmental impacts of identified potential project alternatives (ER 1105-2-100 Planning Guidance Notebook, as amended). Inundation to structures in the study area begins at or before a 10% Annual Chance Exceedance (ACE) flood event. A flood mitigation plan that includes the study area indicated that there may be at least one cost-effective structural alternative that could be implemented to reduce flood risk upstream of FM 270. The study has a local Sponsor willing to cost share the feasibility costs.

Risk Identification: Possible life safety risks have been identified in the study area. Flood depths associated with riverine flooding on lower Clear Creek, both upstream and downstream of FM 270, exceed 5 feet during a 1% ACE flood event. While the transportation risks on the main roads in the area are low, there is one major road in the area, State Highway 3, where preliminary modeling shows overtopping. Additionally, transportation risks due to flooding may exist on smaller roads in the area.

IEPR Determination: The project is currently excluded from IEPR per ER 1165-2-217, because it is being conducted under the CAP authority and is not anticipated to require an EIS.

SAR Determination: A SAR is not expected to be required for this study. Per ER 1165-2-217, a SAR is applied where the risk and magnitude of proposed projects warrants a critical examination. The likely alternatives for this study are not anticipated to pose hazards that will have a significant threat to human life (public safety). Likely alternatives include detention pond(s), a bypass channel, or floodwall(s) surrounding affected structures.

Table 5. Milestone Schedule

Milestone	Scheduled	Actual	Complete
Federal Interest Determination	28 Jun 2023	29 Jun 2023	Yes
Tentatively Selected Plan	23 Aug 2024	TBD	No
Release Draft Report to Public	31 Oct 2024	TBD	No
Final Report Transmittal	11 Apr 2025	TBD	No

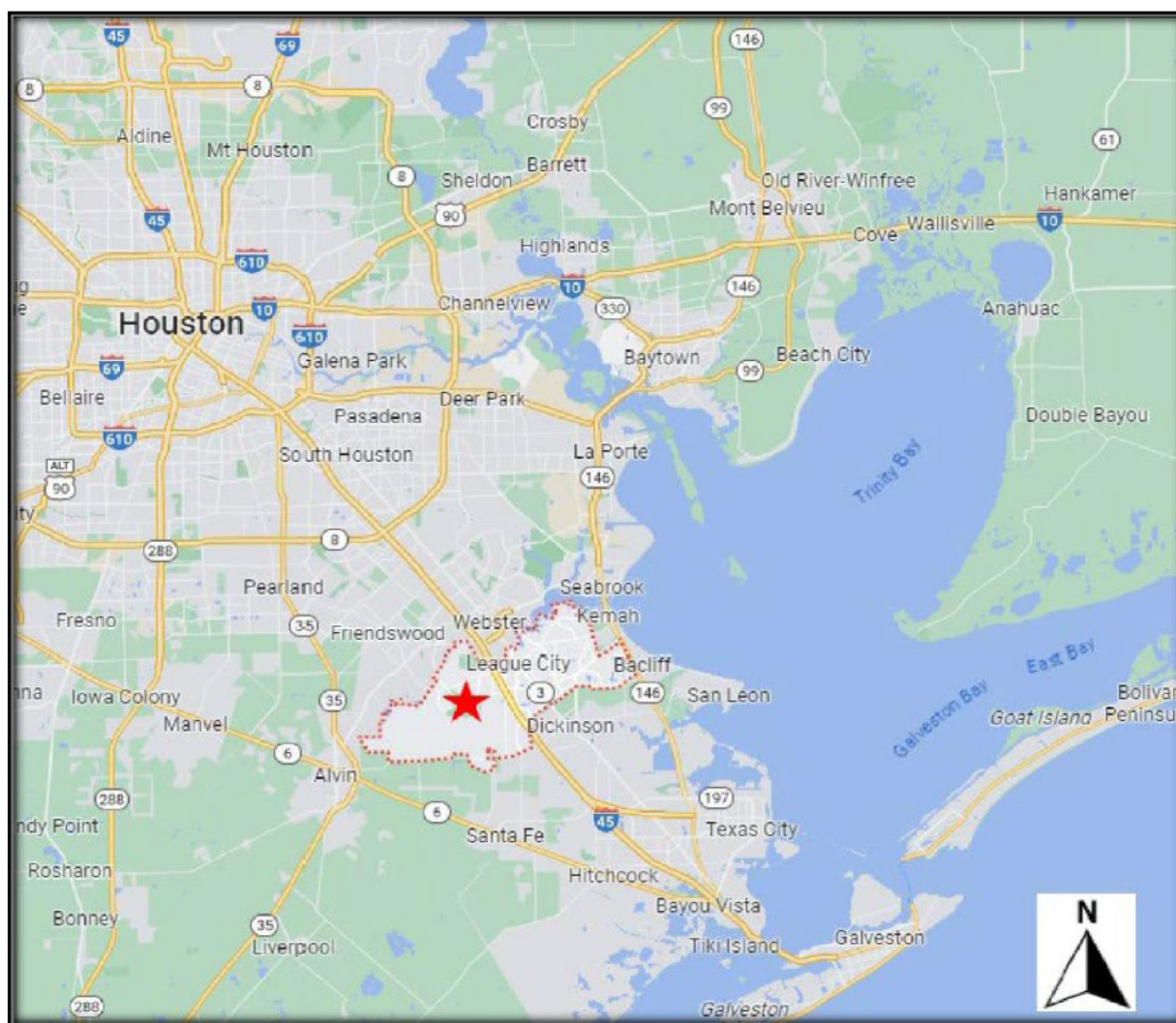


Table 1: Levels of Review

Product(s) to undergo Review	Review Level	Start Date	End Date	Cost
Draft Feasibility Report and NEPA	DQC and Legal Review	09/24/24	10/07/24	\$25,000
Draft Feasibility Report and NEPA	ATR, Policy, and Public Review	10/31/24	12/02/24	\$25,000
Final Feasibility Report and NEPA	DQC and Legal Review	01/15/25	02/26/25	\$25,000
Final Feasibility Report and NEPA	ATR	03/14/25	05/08/25	\$25,000
Final Feasibility Report and NEPA	Policy Review	03/28/25	04/10/25	n/a

REVIEW TEAM ROSTERS

PROJECT DELIVERY TEAM			
Name	Position	Office	Phone Number
	Project Manager	CE-SWG-PM	
	Planner	CESWF-PEP-E	
	Economist	CESWF-PEP-E	
	Environmental	CESWF-PEE-C	
	Cultural	CESWF-PEE	
	HTRW	CESWF-PEE-T	
	Lead Engineer	CESWG-ECH	
	Geotechnical Engineer	CESWG-ECE-S	
	Cost Engineer	CESWG-ECE-P	
	Civil Engineer	CESWG-EC	
	Civil Engineer	CESWG-ECE	
	General Engineer	CESWG-ECG	
	Structural Engineer	CESWG-ECE-S	
	Real Estate	CESWG-RE-S	
	Program Analyst	CESWG-PMG	
	Project Scheduler	CESWG-PMG	
	CAP Program Manager	CESWF-PEP-P	

DISTRICT QUALITY CONTROL TEAM			
Name	Discipline	Office	Phone Number
	DQC Lead / Planning	CESWF-PEP-P	
Chief,	Economics	CESWF-PEP-E	
Chief,	Environmental	CESWF-PEE-C	
Chief,	Cultural	CESWF-PEE	
Chief,	HTRW	CESWF-PEE-T	
Chief,	H&H Engineering & Climate	CESWG-ECH	
Chief,	Civil Engineering	CESWG-ECE	
Chief,	Geotechnical Engineering	CESWG-ECE-S	

Chief, [REDACTED]	Cost Engineering	CESWG-ECE-P	[REDACTED]
Chief, [REDACTED]	Structural Engineering	CESWG-ECE-S	[REDACTED]
[REDACTED]	Real Estate	CESWG-RE-S	[REDACTED]

AGENCY TECHNICAL REVIEW TEAM			
Name	Discipline	Office	Phone Number
[REDACTED]	Environmental Planning	RMO	[REDACTED]
	Economics		
	Environmental		
	Cultural		
	HTRW		
	H&H Engineering		
	Civil Engineering		
	Geotechnical Engineering		
	Cost Engineering		
	Structural Engineering		
	Real Estate		
	Climate		

VERTICAL TEAM			
Name	Discipline	Office	Phone Number
[REDACTED]	Planning & Policy	CESWD-PDP	[REDACTED]

POLICY REVIEW TEAM			
Name	Discipline	Office	Phone Number
[REDACTED]	Planning	CESWD-PDP	[REDACTED]
	Economics	CESWD-PDP	
	Environmental	CESWD-PDP	
	Civil/Geotechnical Engineering	CESWD-RBT	
[REDACTED]	H&H Engineering	CESWD-RBT	[REDACTED]

	Real Estate	CESWD-PDR	
	Counsel	CECC-SWD	
Programs		CESWD-PDC	

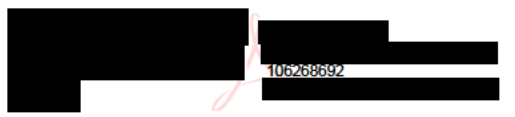
MODELS

Anticipated Planning Models			
Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Approval Status	Peer Review Anticipated
HEC-FDA 1.4.3	Flood damage reduction analysis model used to estimate equivalent annual flood damages over the period of analysis.	Certified	Yes
LifeSim 2.0.5	Life loss and direct damage from flooding model, which may be used to assist with informing existing and future conditions.	Approved for estimating life loss and single-event damages	Yes

Anticipated Engineering Models			
Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Approval Status	Peer Review Anticipated
HEC-RAS 6.4.1	Hydraulic analysis model that will be used to model future with- and without-project condition. Outputs support flood damage analysis model.	Certified	Yes
HEC-HMS 4.11	Hydrologic analysis model. Outputs support RAS model.	Certified	Yes
Micro-Computer Aided Cost Estimating System (MCACES, MII) 4.4.4	Cost estimating program that may be used to prepare cost estimates for project alternatives.	Approved	Yes

Abbreviated Risk Analysis	Cost risk analyses will be completed by the Cost Engineer and PDT to determine risks to the project cost and schedule.	Civil Works Cost Engineering and Agency Technical Review MCX mandatory	Yes
Total Project Cost Summary (TPCS)	Required cost estimate document that will be submitted for cost certification of selected plan.	Civil Works Cost Engineering and Agency Technical Review MCX mandatory	Yes
GeoStudio SLOPE/W 2021.4	Slope stability model which may be used to evaluate proposed alternatives geotechnically.	Approved	Yes
Ensoft LPILE and APILE 2019	Pile analysis models which may be used to evaluate proposed alternatives geotechnically.	Approved	Yes
Ensoft GROUP 2019/v11	Soil Structure Interaction (SSI) program for developing deep foundation preliminary design. May be used if required by a proposed structural alternative.	Approved	No

Signatures



Chief,
Engineering and Construction Division



Chief, Planning Branch
Regional Planning & Environmental Center