



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SOUTHWESTERN DIVISION
1100 COMMERCE STREET, SUITE 831
DALLAS, TX 75242-1317

CESWD-PDP

MEMORANDUM FOR Commander, Fort Worth District

SUBJECT: SWF CAP Programmatic Review Plan – Review Plan Approval

1. References:

- a. EC 1165-2-214, Review Policy for Civil Works, 20 February 2018.
- b. Email, CESWF-PPMD, 13 May 2020, subject: SWF CAP Programmatic Review Plan.

2. In accordance with reference 1.a., I hereby approve the submitted SWF CAP Programmatic Review Plan (RP) for the SWF CAP Program.

3. The CAP Programmatic RP has been prepared in accordance with the referenced guidance and has been reviewed and cleared for approval by my staff. Please post the final approved Programmatic RP with a copy of this memorandum to the District's public internet website and provide the internet address to the Southwestern Division CAP Program Manager. Before posting to the District website, the names of USACE employees should be removed.

4. The SWD point of contact for this action is Ms. Adrienne Carter, Action Officer, CESWD-PDP, at 469-487-7057 and Brett Ulekowski, SWD CAP Manager, CESWD-PDC, at 469-487-7099.

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PETE G. PEREZ, P.E.
Director, Programs Directorate

CC: CESWD-PDC

REVIEW PLAN

Fort Worth District Continuing Authorities Program

Overview. This document serves as the Fort Worth District (SWF) Review Plan for all documentation required for Continuing Authorities Program (CAP) decision documents as required by EC 1165-2-217 (Civil Works Review) that became effective 20 February 2018, and by the Director of Civil Works Policy Memorandum #1 (CECWP memorandum, Subject: Continuing Authority Program Planning Process Improvements), 19 Jan 2011. The purpose of this Review Plan is to define the requirements of how reviews will be conducted for CAP decision documents. CAP Implementation Documents/Products are not addressed in this Review Plan. Attachments 1 and 2 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 projects are of wider scope and complexity and are specifically authorized by Congress. The CAP is a delegated authority to plan, design, and construct certain types of water resource and environmental restoration projects without specific Congressional authorization. This Review Plan applies to the review of all CAP decision documents within SWF for the following CAP authorities:

***Section 14** of the Flood Control Act of 1946, as amended, authorizes the US Army Corps of Engineers (USACE) to study, design and construct emergency streambank and shoreline works 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.*

***Section 206** of the Water Resources Development Act of 1996, Public Law 104-305, 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.*

***Section 208** of the Flood Control Act 1954, as amended, authorizes the US Army Corps of Engineers (USACE) to study, adopt and construct in-stream clearing and snagging projects in the interest of flood risk management.*

Section 1135 of the Water Resources Development Act of 1986, Public Law 99-662, provides the authority to modify existing Corps projects to restore the environment and construct new projects to restore areas degraded by Corps 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.

Section 205 of the Flood Control Act of 1948, as amended, authorizes USACE to study, design and construct flood risk management projects.

Additional Information on this program can be found in Engineer Regulation 1105-2-100, Planning Guidance Notebook, Appendix F. The review management organization (RMO) for all projects under this review plan will be the Southwestern Division. The RMO point of contact is the Continuing Authorities Program Manager, Civil Works Integration Division.

1. FACTORS AFFECTING THE LEVELS OF REVIEW

Scope of Review. The scope of each review will vary from one CAP type to another but the level of review should not change. Any CAP study that requires deviation from this plan will require an individual review plan. The questions, answers, and discussions to determine required levels of review should also be used to determine if deviation is required.

- Will the study likely be challenging? No. Because of the reduced scope of CAP projects the studies under this review plan will not be challenging.
- Is the project likely to be justified by life safety or is the study or project likely to involve significant life safety issues? The only CAP projects under this review plan that could be justified by life safety or have significant life safety issues are those authorized under Section 205. This plan will address the additional reviews required for those Section 205 CAP projects. As part of the PMP submittal for Section 205 projects a discussion on life safety issues will need to be included. The discussion of life safety should include the assessment of the home District Chief of Engineering on whether there is a significant threat to human life associated with the project (per EC 1165-2-217).
- Has the Governor of an affected state requested a peer review by independent experts? No, CAP projects covered by this review plan have no Governor request for the peer review.
- Will it likely involve significant public dispute as to the project's size, nature, or effects? No, CAP projects covered by this review plan do not have significant public disputes as to the project's size, nature, or effect.

- Is the project/study likely to involve significant public dispute as to the economic or environmental cost or benefit of the project? No, CAP projects covered by this review plan do not have significant public disputes as to the project's economic or environmental costs/benefits.
- Is the information in the decision document or anticipated project design likely to be based on novel methods, involve innovative materials or techniques, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices? No, the studies covered under this review plan will not involve novel methods, material, or techniques.
- Does the project design require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design/construction schedule? No, the studies covered under this review plan will not require redundancy, resiliency, or robustness.
- Is the estimated total cost of the project greater than \$200 million? No, CAP projects at this time cannot legally total \$200 million.
- Will an Environmental Impact Statement be prepared as part of the study? No, the studies covered under this review plan will be Environmental Assessments.
- Is the project expected to have more than negligible adverse impacts on scarce or unique tribal, cultural, or historic resources? No, CAP projects covered by this review plan only have negligible or no adverse impacts on scarce or unique tribal, cultural, or historic resources.
- Is the project expected to have substantial adverse impacts on fish and wildlife species and their habitat prior to the implementation of mitigation measures? No, CAP projects covered by this review plan no significant adverse impacts on fish and wildlife species and their habitat prior to mitigation implementation.
- Is the project expected to have, before mitigation measures, more than a negligible adverse impact on an endangered or threatened species or their designated critical habitat? No, CAP projects covered by this review plan have no more than a negligible adverse impact on an endangered or threatened species.

2. REVIEW EXECUTION PLAN

This section describes each level of review to be conducted. Based upon the factors discussed in Section 1, this study will undergo the following types of reviews:

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

Agency Technical Review. 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. Type I 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 Type I IEPR is appropriate.

Cost Engineering Review. All decision documents shall be coordinated with the Cost Engineering Mandatory Center of Expertise (MCX). The MCX will assist in determining the expertise needed on the ATR and IEPR teams. The MCX will provide the Cost Engineering certification. The RMO is responsible for coordinating with the MCX for the reviews. These reviews typically occur as part of ATR.

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 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 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. These reviews are not further detailed in this section of the Review Plan.

a. DISTRICT QUALITY CONTROL

The home district shall manage DQC and will appoint a DQC Lead to manage the local review (see EC 1165-2-217, section 8.a.1). The DQC Lead should prepare a DQC Plan and provide it to the RMO and MSC prior to starting DQC reviews. Table 1 identifies the required expertise for all CAP study DQC teams.

Table 1: Required DQC Expertise

DQC Team Disciplines	Expertise Required
DQC Lead	A senior professional with extensive experience preparing Civil Works decision documents and conducting DQC. The lead should also have the necessary skills and experience to lead a virtual team through the DQC process. The lead may also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc.).
Planning	A senior water resources planner with experience in the CAP authority that is being studied.
Economics	A senior economist with experience in the CAP authority that is being studied. This should include average annual costs and benefits calculations.
Environmental Resources	A senior environmental resource specialist with experience in the CAP authority that is being studied. Further they should have experience in assessing impacts of structural and non-structural solutions to water resource problems.
Cultural Resources	A senior cultural resource specialist with experience in the CAP authority that is being studied. Further they should have experience in assessing impacts of structural and non-structural solutions to water resource problems.
Hydrology & Hydraulics	A senior hydrologist with experience in the CAP authority that is being studied. Further they should have experience with hydrologic and hydraulic modeling used by the CAP study, and their application.
Geotechnical Engineering	A senior geotechnical engineer with experience in the structural solutions typical to the CAP authority that is being studied.
Cost Engineering	A senior cost engineer with experience in the structural and non-structural solutions typical to the CAP authority that is being studied.
Real Estate	A real estate specialist with experience in the USACE land acquisition for Civil Works projects.

Climate Preparedness and Resilience	A member of the Climate Preparedness and Resiliency Community of Practice (CoP) with experience in the CAP authority.
Geospatial Information Specialist (optional)	A GIS expert to assist the team in determining impacts of the project footprint.
Subject Matter Expert (optional)	A district business line manager or operations and maintenance manager, with experience in similar aspects of Civil Works projects

Documentation of DQC. Quality Control should be performed continuously throughout the study. A specific certification of DQC completion is required at the draft and final report stages. Documentation of DQC should follow the District Quality Manual and the MSC Quality Management Plan. An example DQC Certification statement is provided in EC 1165-2-217, on page 19 (see Figure F).

Documentation of completed DQC should be provided to the MSC, RMO and ATR Team leader prior to initiating an ATR. The ATR team will examine DQC records and comment in the ATR report on the adequacy of the DQC effort. Missing or inadequate DQC documentation can result in delays to the start of other reviews (see EC 1165-2-217, section 9).

b. AGENCY TECHNICAL REVIEW

The ATR will assess whether the analyses are technically correct and comply with guidance, and that documents explain the analyses and results in a clear manner. An RMO manages ATR. The review is conducted by an ATR Team whose members are certified to perform reviews. Lists of certified reviewers are maintained by the various technical Communities of Practice (see EC 1165-2-217, section 9(h)(1)). Table 2 identifies the disciplines and required expertise for all CAP study ATR Teams.

Table 2: Required ATR Team Expertise

ATR Team Disciplines	Expertise Required
ATR Lead	A senior professional with extensive experience preparing Civil Works decision documents and conducting ATR. The lead should have the skills to manage a virtual team through an ATR. The lead may serve as a reviewer for a specific discipline (such as planning).
Planning	A senior water resources planner with experience in the CAP authority that is being studied.

Economics	A senior economist with experience in the CAP authority that is being studied. This should include average annual costs and benefits calculations, as well as least cost analysis.
Environmental Resources	A senior environmental resource specialist with experience in the CAP authority that is being studied. Further they should have experience in assessing impacts of structural and non-structural solutions to water resource problems.
Cultural Resources	A senior cultural resource specialist with experience in the CAP authority that is being studied. Further they should have experience in assessing impacts of structural and non-structural solutions to water resource problems.
Hydrology & Hydraulics	A senior hydrologist with experience in the CAP authority that is being studied. Further they should have experience with hydrologic and hydraulic modeling used by the CAP study, and their application.
Geotechnical Engineering	A senior geotechnical engineer with experience in the structural solutions typical to the CAP authority that is being studied.
Cost Engineering	A senior cost engineer with experience in the structural and non-structural solutions typical to the CAP authority that is being studied.
Real Estate	A real estate specialist with experience in the USACE land acquisition for Civil Works projects.
Climate Preparedness and Resilience CoP Reviewer	A member of the Climate Preparedness and Resiliency Community of Practice (CoP) with experience in the CAP authority will participate in the ATR review.
GIS, SME (optional)	An expert in GIS or purpose of proposed CAP study or project.

Documentation of ATR. DrChecks will be used to document all ATR comments, responses and resolutions. Comments should be limited to those needed to ensure product adequacy. If a concern cannot be resolved by the ATR team and PDT, it will be elevated to the vertical team for resolution using the EC 1165-2-217 issue resolution process. Concerns can be closed in DrChecks by noting the concern has been elevated for resolution. The ATR Lead will prepare a Statement of Technical Review (see EC 1165-2-217, Section 9), for the draft and final reports, certifying that review issues have been resolved or elevated. ATR may be certified when all concerns are resolved or referred to the vertical team and the ATR documentation is complete.

c. MODEL CERTIFICATION OR 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 are any models and analytical tools used 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 a planning product. The selection and application of the model and the input and output data is the responsibility of the users and is subject to DQC, ATR, and IEPR.

Table 3: Planning Models. The following models may be used to develop CAP decision documents. Those authorities not listed are not anticipated to need a planning model as part of the study process.

CAP Authority	Model Name and Version	Brief Model Description and How It Will Be Used in the Study	Certification / Approval
205	HEC-FDA 1.4 (Flood Damage Analysis)	The program integrates hydrologic engineering and economic analysis to formulate and evaluate plans using risk-based analysis methods. It will be used to evaluate/compare plans to aid in selecting a recommended plan.	Certified
206, 1135	IWR-Planning Suite	The program uses cost and environmental improvement to determine cost effective and best buy plans to aid in selecting a recommended plan.	Certified
206, 1135	Certified and Approved Environmental Models	The a certified, or approved by the Eco-PCX, environmental model must be used and coordinated with the Eco-PCX for appropriateness to be covered by this review plan. Include the model as part of the environmental discussion in the PMP.	Certified or Approved
All	RECONS	The model incorporates impact area data, as well as multipliers, direct ratios (jobs to sales, income to sales, etc.), and geographic capture rates. RECONS will be used to determine the RED benefits of the alternatives.	Certified

205	LifeSim 1.0.1	Model estimates life loss with the fundamental intent to simulate population redistribution during an evacuation. Life loss and economic damages are then determined by the hazard. May be used if alternatives affect life safety.	Enterprise Life Safety Model
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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. The professional practice of documenting the application of the software and modeling results will be followed. The USACE Scientific and Engineering Technology Initiative has identified many engineering models as preferred or acceptable for use in studies. These models should be used when 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.

Table 4: Engineering Models. These models may be used to develop the decision document:

CAP Authority	Model Name and Version	Brief Model Description and How It Will Be Used in the Study	Approval Status
All (not required but allowed)	HEC-RAS 5.0 (River Analysis System)	The software performs 1-D steady and unsteady flow river hydraulics calculations and has capability for 2-D (and combined 1-D/2-D) unsteady flow calculations. It will be used for steady flow analysis to evaluate the future without-project and future with-project conditions.	HH&C CoP Preferred Model
All	MCASES/Mii	Mii is the second generation of the Micro-Computer Aided Cost Estimating System (MCASES) which is a detailed cost estimating software application used to estimate cost of alternatives.	Enterprise Model

d. POLICY AND LEGAL REVIEW

Policy and legal compliance reviews for draft and final planning decision documents are delegated to the MSC (see Director’s Policy Memorandum 2018-05, paragraph 9).

(i) Policy Review.

The policy review team is identified through the collaboration of the MSC Chief of Planning and Policy and the HQUSACE Chief of the Office of Water Project Review. The team is identified in Attachment 1 of this Review Plan. The makeup of the Policy Review team will be drawn from Headquarters (HQUSACE), the MSC, the Planning Centers of Expertise, and other review resources as needed.

- The Policy Review Team will be invited to participate in key meetings during the development of decision documents as well as SMART Planning Milestone meetings. These engagements may include In-Progress Reviews, Issue Resolution Conferences or other vertical team meetings plus the milestone events.
- The input from the Policy Review team should be documented in a Memorandum for the Record (MFR) produced for each engagement with the team. The MFR should be distributed to all meeting participants.
- In addition, teams may choose to capture some of the policy review input in a risk register if appropriate. These items should be highlighted at future meetings until the issues are resolved. Any key decisions on how to address risk or other considerations should be documented in an MFR.

(ii) Legal Review.

Representatives from the Office of Counsel will be assigned to participate in reviews. Members may participate from the District, MSC and HQUSACE. The MSC Chief of Planning and Policy will coordinate membership and participation with the office chiefs.

- In some cases legal review input may be captured in the MFR for the particular meeting or milestone. In other cases, a separate legal memorandum may be used to document the input from the Office of Counsel.
- Each participating Office of Counsel will determine how to document legal review input.