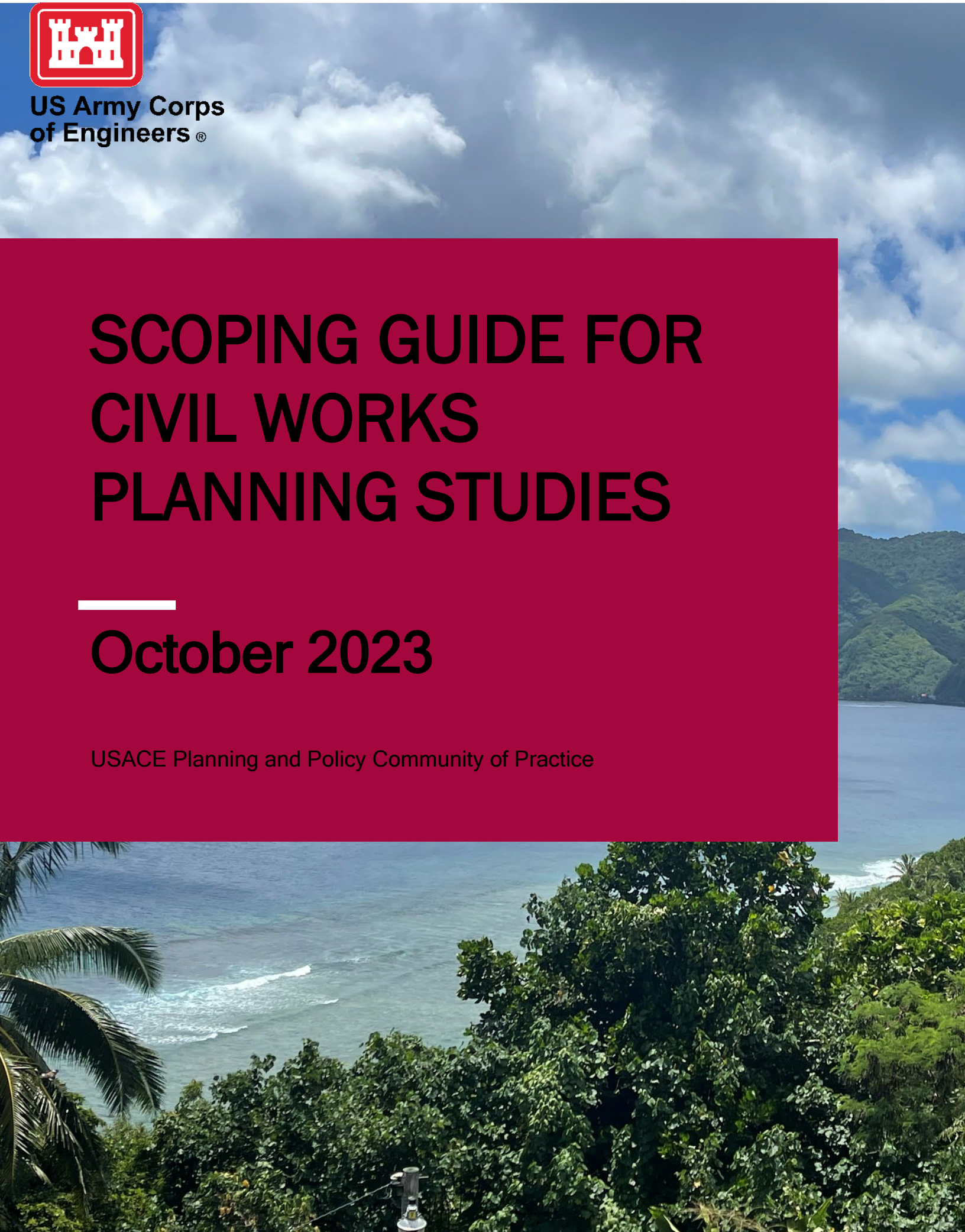
US Army Corps of Engineers ®

SCOPING GUIDE FOR CIVIL WORKS PLANNING STUDIES

October 2023

USACE Planning and Policy Community of Practice



Acknowledgements

This SCOPING GUIDE FOR CIVIL WORKS PLANNING STUDIES was developed by the Planning Workforce Development Committee (PWDC) at the request of the Deputy Chief, Planning Community of Practice (PCoP). The PWDC would like to acknowledge the following individuals for their contributions to this GUIDE: Rhiannon Kucharski (POH), Leigh Skaggs (MVP), Jeff Herzog (NAE), Kim Townsend (CEHQ), Nancy Brighton (CEHQ), Andy MacInnes (MVN), Stacey Roth (SAJ), Rachel Haug (SWD), Greg Miller (CEHQ), and Council Oak, as well as others from the PCoP who offered their comments and recommendations.

Scoping Guide for Civil Works Planning Studies

Intent

This guide is provided to ensure project delivery teams (PDTs) have the resources, tools, techniques, best practices, and other useful information for initial scoping of a feasibility or watershed study and for scope refinement throughout the planning phase. This guide is intended to help PDTs do thorough and timely initial scoping, initiate and maintain good communication and collaboration, as well as assist with scope of work refinement throughout the study. Each study is unique so the process and scope specifics will also be unique.

Overview

The USACE risk-informed planning process is iterative. Iterations of the planning process will be conducted multiple times throughout the study by the PDT, allowing for the team to adjust its path based on the increasing amount of information gathered, and therefore minimize potential study and project risks along the way. Plan formulation sets the foundation for future project delivery efforts throughout the entire Project Lifecycle (feasibility (planning), pre-construction, engineering and design, construction and operations, maintenance, repair, rehabilitation, and replacement) and as such, a sound understanding of the process is paramount.

INITIAL STUDY SCOPING

This guide highlights some of the key procedures, processes, and guidance that a PDT should use during the initial scoping phase of a study, which is generally the first 90 to 120 days from the execution of the Feasibility Cost Share Agreement (FCSA). This guide especially highlights best practices for collaboration during initial scoping, which is critical for a study's success during this fast-paced timeframe when the foundation of the study is being developed. It will also touch upon best practices for confirming, refining, and adjusting the scope throughout the study. The guide will not discuss the process required in law for National Environmental Policy Act (NEPA) scoping.

See Figure 1 below for a planning overview, excerpted from the Planning Manual Part II: Risk-Informed Planning.

USACE planning teams should be familiar with policies and best practices on the Planning Community Toolbox that inform study scoping, including:

- The Planning Manual (Ch. 5, 1996) and Planning Manual Part II: Risk-Informed Planning (Ch. 6, 2017)
- Planning Quick Takes 2.0
- The Policy for Conducting Civil Works Planning Studies (Engineer Regulation (ER) 1105-2-103) and the Planning Guidance Notebook (ER 1105-2-100), and Engineer Pamphlet (EP) 1105-2-61: Feasibility And Post-Authorization Study Procedures And Report Processing Requirements.

What is Scoping?

ER 5-1-11, USACE Business Process describes scope as the boundaries of a project. It is not a list of everything to be done; instead, it is the result(s) the project should produce. It should include defining the stakeholders' requirements and the acceptance criteria. In planning, it is the process at the beginning of the study to identify the most appropriate areas to emphasize in the study to achieve the study objectives and maximize the time and budget spent on technical analysis and design of the recommended plan. The result will be a summary of all the work and considerations required to deliver the desired outcome (e.g., the completed feasibility or watershed study), along with the time and cost associated with that work. All these elements are documented in a Project Management Plan (PMP). There is a template for PMPs and a cost workbook template that PDTs should use. See Figure 2 for the scoping task activities. The first iteration of scoping is complete when the initial PMP is fully approved. The PMP will be discussed in more detail later in this guide.

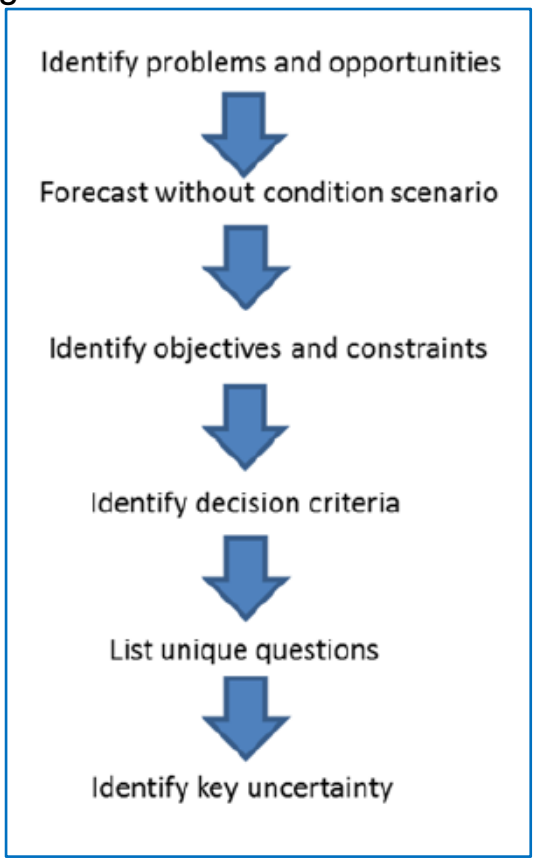


Figure 1. Scoping Task Activities

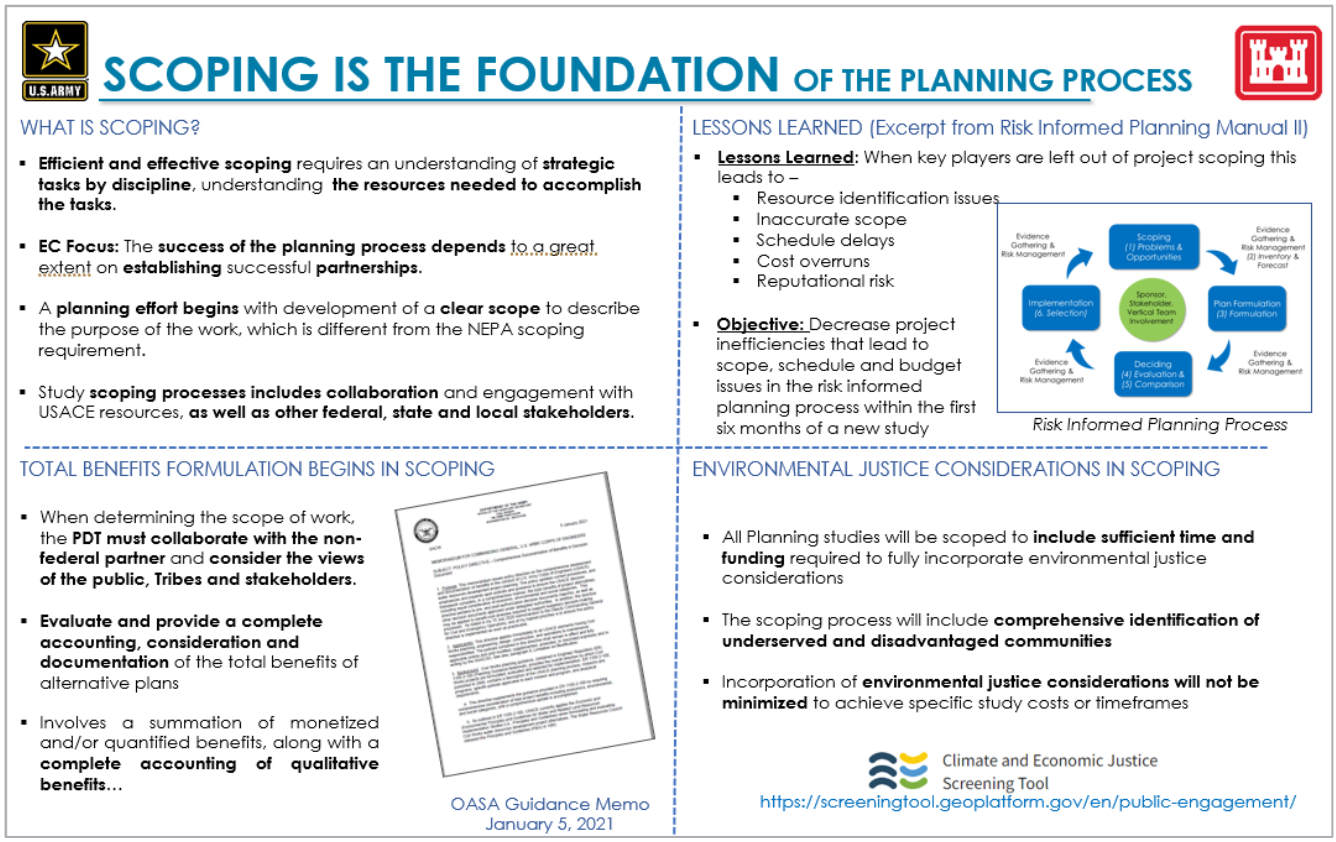


Figure 2. Scoping, the Foundation of the Planning Process

Efficient and effective scoping requires an understanding of strategic tasks by discipline and an understanding of the resources needed to accomplish the tasks. When needed, resources are identified through “planning without borders,” i.e., looking across the enterprise for the right labor resources for the team.

Scoping requires input and collaboration beyond USACE; it requires establishing successful partnerships with other federal and non-federal stakeholders. USACE encourages the active outreach to and participation of all interested groups and use of the full spectrum of technical disciplines in activities and decision making.

A planning study begins with development of a clear scope to describe the purpose and bounds of the study (e.g., what the study area is, what purposes the study authority allows, what resources and conditions will be considered, what problems and opportunities will be addressed, what the objectives to be achieved are, what the constraints to be avoided are, etc.). Note that the NEPA process also uses the term “scoping,” which requires that there be an early and

open process for determining the scope of the issues to be addressed by a study. Both study scoping and NEPA scoping processes require USACE collaborate with, engage with, and solicit input from relevant and affected non-federal sponsors (NFSs), federal and state agencies, Tribes, stakeholders, all surrounding and nearby communities (especially any disadvantaged communities), and non-governmental organizations in the accomplishment of planning studies. To be clear, this Scoping Guide does not cover all the environmental compliance requirements under NEPA and other environmental laws, but sufficient scoping of feasibility and watershed studies should include the necessary tasks, timeframes, and budget to meet NEPA and other environmental legal and regulatory requirements as detailed in ER 1105-2-100, Appendix C (and the forthcoming EP 1105-2-60, Environmental Evaluation and Compliance which will replace Appendix C) and ER 200-2-2, Procedures for Implementing NEPA. In short, although it is not addressed in depth in this particular document, study teams should be fully aware the integration of the USACE planning and NEPA processes (as well as the integration of feasibility and NEPA documents) means that study scoping should account for and include NEPA scoping activities, and that the two may often overlap.

All studies are required to do a comprehensive assessment and documentation of benefits as per memoranda from the Assistant Secretary of the Army for Civil Works (ASA(CW)) dated 3 April 2020 and 5 January 2021, and as laid out in USACE guidance issued 13 April 2020. Total benefits formulation begins in scoping. All USACE planning study PDTs must evaluate and provide a complete accounting, consideration, and documentation of the total benefits of alternative plans across all benefit categories (i.e., National Economic Development (NED), Regional Economic Development (RED), Environmental Quality (EQ), and Other Social Effects (OSE)). Total benefits involve a summation of monetized, non-monetized, and/or quantified benefits, along with a complete accounting of qualitative benefits, for project alternatives across national and regional economic, environmental, and social benefit categories.

The Comprehensive Benefit Evaluation Scoping Tool (C-BEST) is an evolving inventory of evaluation criteria and associated metrics, organized by business line and benefit category, that are commonly used in feasibility study alternatives evaluation and comparison. Study teams should use C-BEST early in the planning process. Generally, the tool should be utilized after the problems

and opportunities have been identified (planning process step 1). However, C-BEST can be used as early as during the project scoping meeting or planning charrette.

Environmental justice (EJ) considerations in scoping include, but are not limited to:

- All planning studies will be scoped to include sufficient time and funding required to fully incorporate EJ considerations into study development. The scoping process will include comprehensive identification of underserved and disadvantaged communities that may be affected by a proposed project.
- Study activities identified in the PMP Work Breakdown Structure must provide for meaningful participation and access for identified and underserved and disadvantaged communities.
- Incorporation of EJ considerations will not be minimized to achieve specific study costs or timeframes.

Did you know that a value engineering study is no longer required during the feasibility phase?

For more information, please see the Interim Environmental Justice Guidance for Civil Works Planning Studies and the Council on Environmental Quality Climate and Economic Justice Screening Tool.

Scoping Team Roles and Collaboration

See Figure 3 for the details and overview of the PDT scoping role. Although PDT members often work independently, their work is very much dependent upon the tasks of others as the team advances through engineering analyses, plan formulation, early design, and environmental coordination and compliance. The chart below (Figure 4) lists high-level tasks required to reach significant products leading up to the Alternatives Milestone and indicates the leads (L), co-leads (CL) and primary contributors (checkmark) for each task. In Figure 4, the USACE castle image indicates fully integrated timeframes where the entire team comes together. Although the sequence of tasks or contributors as displayed in the chart is not absolute, the completion of a task is necessary relative to reaching the Alternatives Milestone Meeting (AMM) (see Figure 4 for a small version and Attachment A for an 11 x 17 version of the chart).

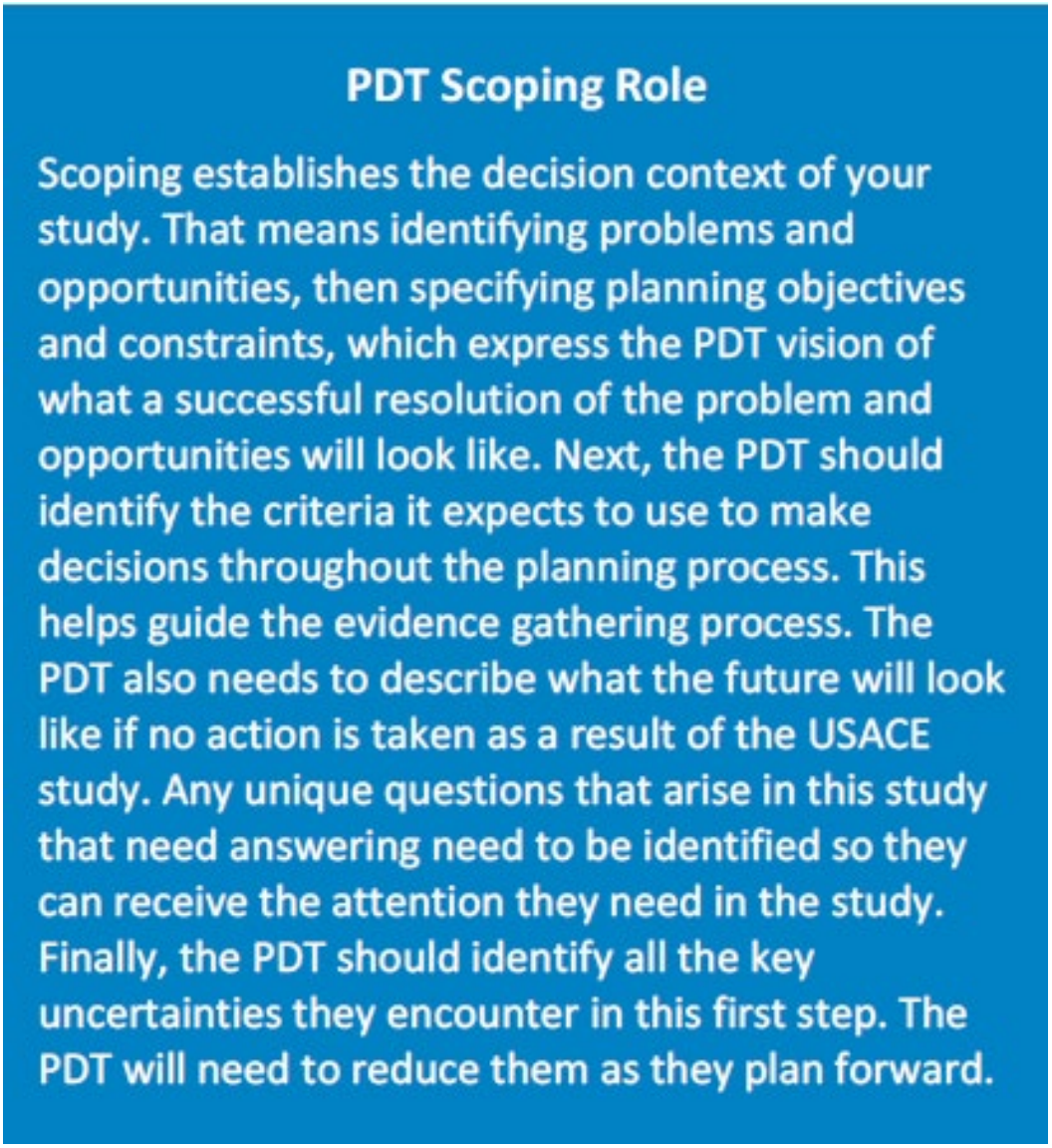
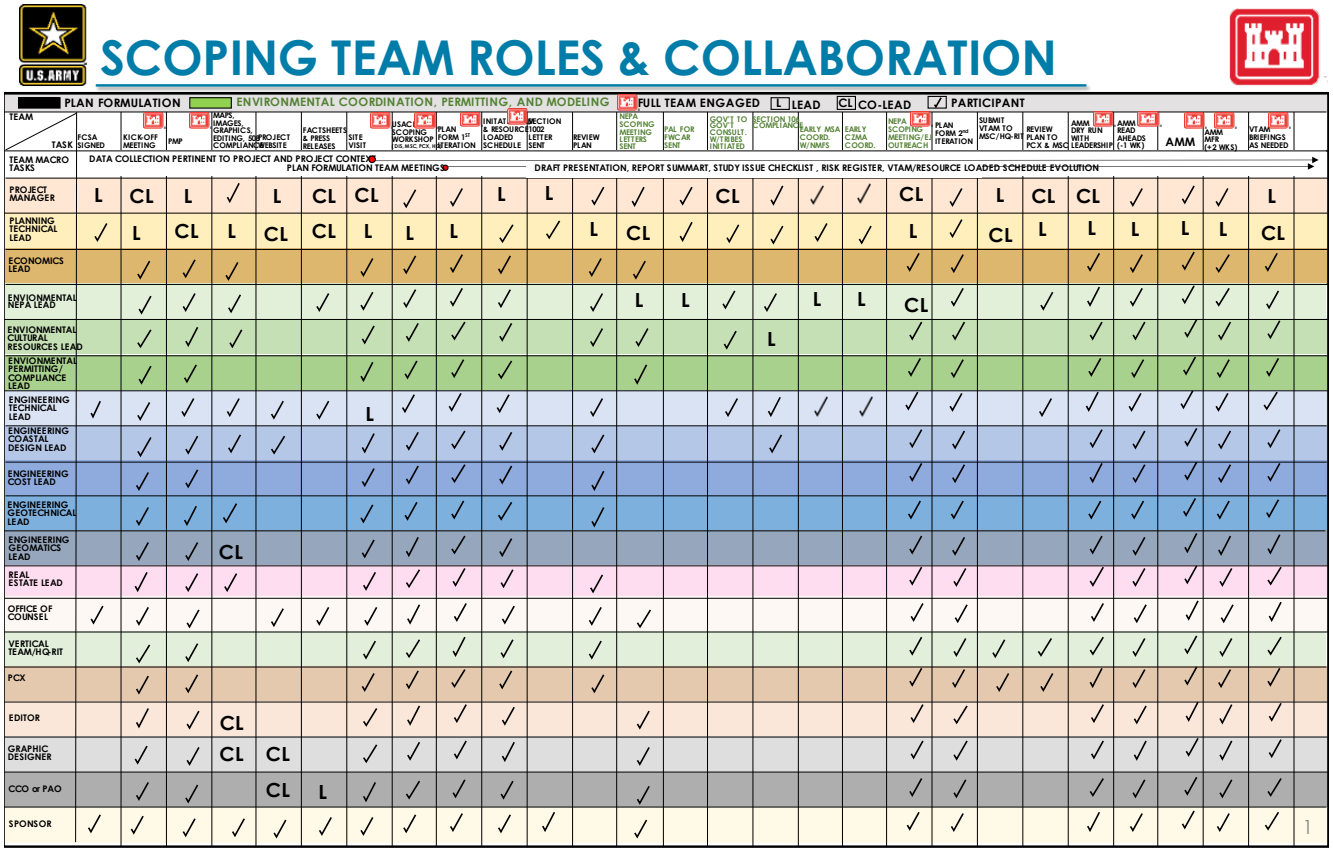


Figure 3. PDT Scoping Role*
(*Excerpt from Planning Manual II: Risk-Informed Planning)



Note: Cooperating and participating agencies are part of the PDT (per ASA(CW) guidance) and their roles as participants should be included for all applicable activities (columns), especially the Site Visit, USACE Scoping Workshop, and all environmental coordination, permitting, and modelling tasks (green column headings).

Figure 4. Scoping Team Roles and Collaboration Chart

Another valuable reference that covers all required scoping activities in greater detail is the table provided at Appendix G, “Study Activities: FCSA Signing through the Alternatives Milestone.” The table provides a guide to the activities of a USACE feasibility study team from the signing of an FCSA through the successful completion of an AMM and submittal of a Vertical Team Alignment Memorandum (VTAM). Most of the activities are based in law, guidance, or policy but some are best practices or standards of planning. The activities are presented in rough chronological order to assist teams in understanding the expectations and sequences of events early in a water resources planning study. The order of presentation is an example and teams have flexibility to pursue and complete the actions in their own order of priority unless otherwise required by law or guidance. The majority of the activities are set up over a 90-day period which is within the goal for reaching an AMM. Activities extending after the milestone are identified as well to help illustrate the formal milestone completion steps and achievement of vertical alignment. For simplicity, many

activities are displayed as single work day events but in reality, these tasks may take multiple days or weeks to complete and may require multiple sub-tasks.

Scoping Takes a Village

The PDT should call upon the available subject matter experts (SMEs) to help with scoping. This can include the District resource providers, the vertical team (which includes Division and Headquarters Civil Works team members), local or regional SMEs, the appropriate USACE technical and mandatory center(s) of expertise (TCXs and MCXs, respectively), the National Nonstructural Committee (NNC), the Institute for Water Resources (IWR), and/or the Engineering Research and Development Center (ERDC).

The USACE planning centers of expertise (PCXs) enhance the USACE planning capability for inland navigation, deep draft navigation (including small boat harbors), ecosystem restoration, coastal and storm damage reduction, flood risk management, and water management and reallocation studies, through their focus on the technical evaluations and reviews associated with plan formulation. The PCXs strengthen planner core competencies by assisting PDTs with technical expertise, peer reviews, model certifications, technology transfer, planner training, and providing lessons learned and best practices to the larger Planning Community of Practice (PCoP). At the inception of the study, the PDT should reach out to the appropriate planning center(s) based upon the purpose(s) of the study. The PCXs are:

- Coastal Storm Risk Management (CSRM)
- Deep Draft Navigation and Small Boat Harbors
- Ecosystem Restoration
- Flood Risk Management (FRM)
- Inland Navigation
- Water Management and Reallocation

Another resource is the Collaboration and Public Participation Center of Expertise (CPCX), which was established to improve the outcomes of USACE missions by supporting collaborative processes and ensuring that the interests of partners, stakeholders, and the public are addressed. The CPCX's specific goals are to: 1) Build collaborative capability; 2) Provide direct support; 3) Catalyze effective use of collaboration; and 4) Deliver innovative collaborative processes, tools, and techniques. It can be very beneficial to a PDT to engage with the CPCX on the scoping of the communication and strategic engagement

needed for the study to augment the support the local Public Affairs Office (PAO) can provide. The best place to start is with your District's Public Involvement Specialist (PIS).
Most studies require consultation with native peoples, and some are in partnership with a Native American Tribe, Alaska Natives, Alaska Native Corporations, or Native Hawaiian Organizations. As such, it is essential to engage with your District Tribal Liaison on the requirements for the study, *especially for initiating government-to-government consultation*. This discussion would also include the involvement of the Tribal Nations Technical Center of Expertise (TNTCX). The TNTCX was established to improve USACE's quality and effectiveness in delivering USACE missions and Federal Trust responsibilities to Federally recognized Tribes. In that role, the TNTCX can engage with each of the 574 Federally-recognized Native American Tribes, national and regional organizations representing Native American governments, Native American communities, and the USACE Commands serving those communities, and can be an important resource for your team, if needed.

Because a minimum of one primarily non-structural alternative should be formulated and considered for FRM and CSRM projects, the NNC should be coordinated with for FRM and CSRM studies. The NNC functions under the general direction of the Headquarters Directorate of Contingency Operations and Homeland Security, Office of Homeland Security. The objectives of the NNC are to:

- Provide leadership in formulation, evaluation, and implementation of nonstructural flood and coastal storm risk measures.
- Support Headquarters in the development and implementation of policies regarding nonstructural measures.
- Serve as an integral part of the Headquarters flood risk management team.
- Promote the use of nonstructural and flood proofing risk reduction measures, in accordance with law and policy.

Finally, ERDC has an incredible team of scientists and capabilities that also may be of assistance to your PDT and to scoping and/or conducting your study. You can find more information on ERDC's capabilities here. They also have an MS Teams channel that you can search for, join, and use to connect with ERDC's liaisons to investigate the possibilities, if desired. Their Teams channel is TDL-CEERD-ZBS-ERDC LIAISONS, which you can search for from your USACE MS Teams account.

Will Your Study be Fully Scoped by the AMM?

In a risk-informed study paradigm, it is anticipated that a PDT will fully scope the study and identify a federal interest at the AMM within the first 90 to 180 days after signing the FCSA (see EP 1105-2-61 for more details). The flexible range of timeframes to get to the AMM allows for differences in study complexity and the fact that complex studies may take more than three years to complete. The estimated cost to achieve the Alternatives Milestone is $100K for scoping, PMP development, Review Plan Development, a final array of alternatives, and identifying the federal interest to continue the study.

While EP 1105-2-61 directs what tasks must be complete prior to AMM, there are also published pre-milestone checklists for each feasibility milestone dated September 2022. These checklists assist PDTs in identifying requirements and tasks to accomplish prior to each milestone meeting. The AMM has an overall study issue checklist that is not business line specific, unlike the tentatively selected plan (TSP) checklists that are business line specific. These study issue checklists for the AMM and each business line TSP can be found on the Planning Community Toolbox. It is recognized that not all teams will be able to get to the AMM in the first 90 days, or at a cost of $100K, but that is the general goal.

While there is flexibility as to the timing of the AMM (up to 180 days from FCSA signing), certain deadlines related to scoping have less flexibility. For example, the Interagency Meeting required for all studies under Section 1001 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) should occur within 90 days of study start. The purpose of this meeting is not only to discuss significant resources and possible impacts to those resources with cooperating and participating agencies, but also to discuss and the scope, schedule, and budget for studies, surveys, and information required to complete environmental compliance by the cooperating and participating agencies during the feasibility phase, including the schedule for any applicable permitting timeline. The information from the Interagency Meeting is important for proper scoping of the entire feasibility study and should be included in the PMP. The Interagency Meeting is the beginning of possibly a number of additional meetings to discuss scope, schedule and budget with the resource agencies.

Every study is unique in some way. Teams should reach out to the appropriate business line PCX and their vertical team early in the scoping process to identify scoping challenges and unique study characteristics to determine the schedule and budget to get to the AMM and beyond. This step is the first step on the Pre-AMM checklist.

Some basic questions, which can be found on the checklist, and may impact your schedule and budget to get to the AMM are:

1) Do you have the matching contributed funds from the NFS necessary to expend federal funds? NFS budget cycles do not always align with the federal cycle. Depending on when the FCSA is executed, there could be a delay in receiving NFS funding due to budget cycle or processes. Contact the vertical team to discuss schedule.
2) Will your NEPA document be integrated? If a team plans to not integrate a document, vertical alignment and scoping may require additional time.
3) Are there Justice40 communities (as required by Executive Order 140008 and defined by the Environmental Protection Agency's EJ Screening Tool) within your study area that will require identification, outreach, and communication prior to completing the scope of your study? If your study area includes Justice40 communities that are impacted by a potential USACE project, you may require additional time and funding to get to AMM. Contact your vertical team and the business line PCX.
4) For economic analysis performed during the study, will the PDT be using a certified model? If the answer is no, is there an innovative model that requires a onetime use approval? Contact the business line PCX and vertical team. There are specific requirements that may impact the schedule and budget to AMM.
5) Are there existing tools (e.g., Levee Screening Tool, National Structure Inventory, previous studies, etc.) that can be used to assist in scoping the study? If the answer is no, it may impact the schedule and budget to get to AMM.
6) Is the study area in an area that is politically sensitive, or where historical tension exists between the local community and the Federal Government? If yes, the schedule and budget to AMM may require adjusting to account for increased communication, outreach, and engagement. Contact the CPCX and vertical team for support.
7) Does the team anticipate any challenges to environmental compliance and associated consultations? If yes, and a policy exception may be required, additional time and funding may be needed to appropriately scope and coordinate.

8) Has the team identified the potential for hazardous, toxic, and radioactive waste (HTRW), petroleum products, or other substances that may be hazardous, within the study area? If yes, additional time and money may be needed to identify scope, risk, and vertical alignment to deal with these issues. Contact vertical team.
9) Are there Tribes within your study area with an interest in the project, and how it may impact them? Has the team coordinated with the Tribal Liaison? Do the tribes ascribe a cultural significance to study area? Additional schedule and funding may be required to facilitate government to government meetings, or outreach during the scoping phase, prior to AMM.

These questions were developed from the Pre-AMM checklist found on the Planning Community Toolbox. The business line specific Pre-TSP checklists can also be used to help teams identify tasks and requirements (beyond the AMM) when scoping a study. PDTs should use these checklists when scoping their studies. The requirements for AMM and TSP for an aquatic ecosystem restoration (AER) study were used to create a scoping tool to serve as an example to help teams develop their scoping schedule and budget (see Attachment E).

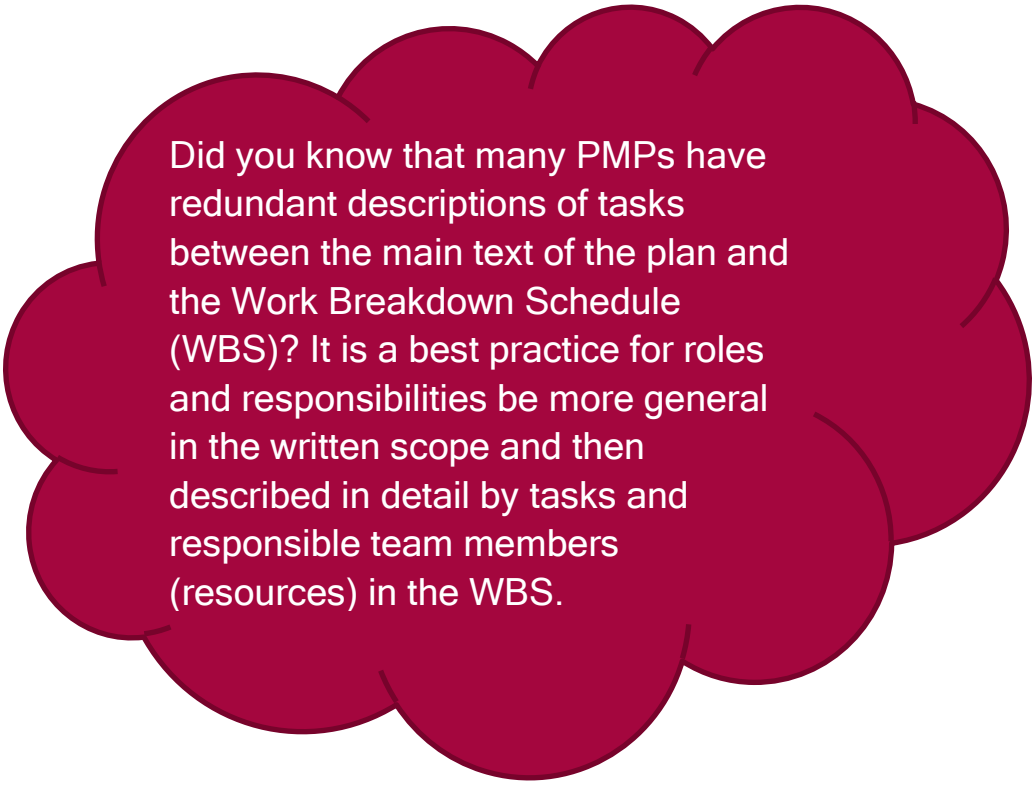
The Project Management Plan

To meet mission objectives, each project is managed under a PMP. A PMP is a roadmap for quality project delivery and should clearly define the scope of work, budget, and schedule. The project manager (PM) and the PDT work with the NFS early in the project planning process to determine the stakeholder's needs, and to refine those requirements in light of quality, safety, fiscal, schedule, legal, communications, change management, and other constraints. The PDT measures its success against the expectations documented in the PMP, which is an agreement between USACE and the stakeholder that defines project objectives and project-specific quality control procedures appropriate to the size, complexity, acquisition strategy, project delivery, and nature of each product. It should be signed by all PDT members, including the stakeholder, to document their commitment to project success.

The PM and PDT will develop and maintain the PMP at a level of detail commensurate with the scope of the project. PMPs should be concise and succinct but address all processes and areas necessary to ensure effective project execution. Minimum requirements for project management plans are

found in the Project Delivery Business Process (PDBP) Manual (Process PROC 2000 and Reference document REF 8005G). The team should brainstorm with and include likely stakeholders, cooperating and participating agencies, and interested public agencies and communities. A great way to do this is by holding a scoping charette (more details will be shared on this in a later section). The minimum information required in a USACE PMP can be found in Attachment D.

The PMP is a living document that should be updated on a regular basis, such as when new information comes to light, risks are avoided or realized, milestones are met, key decisions are made, etc. Good communication and collaboration also must continue throughout the process to build and keep trust and to keep everyone engaged. The team should seek to constantly solicit ideas and feedback, ensure they are listening to the feedback, and demonstrate to the public that they are understanding and incorporating that feedback in the study.



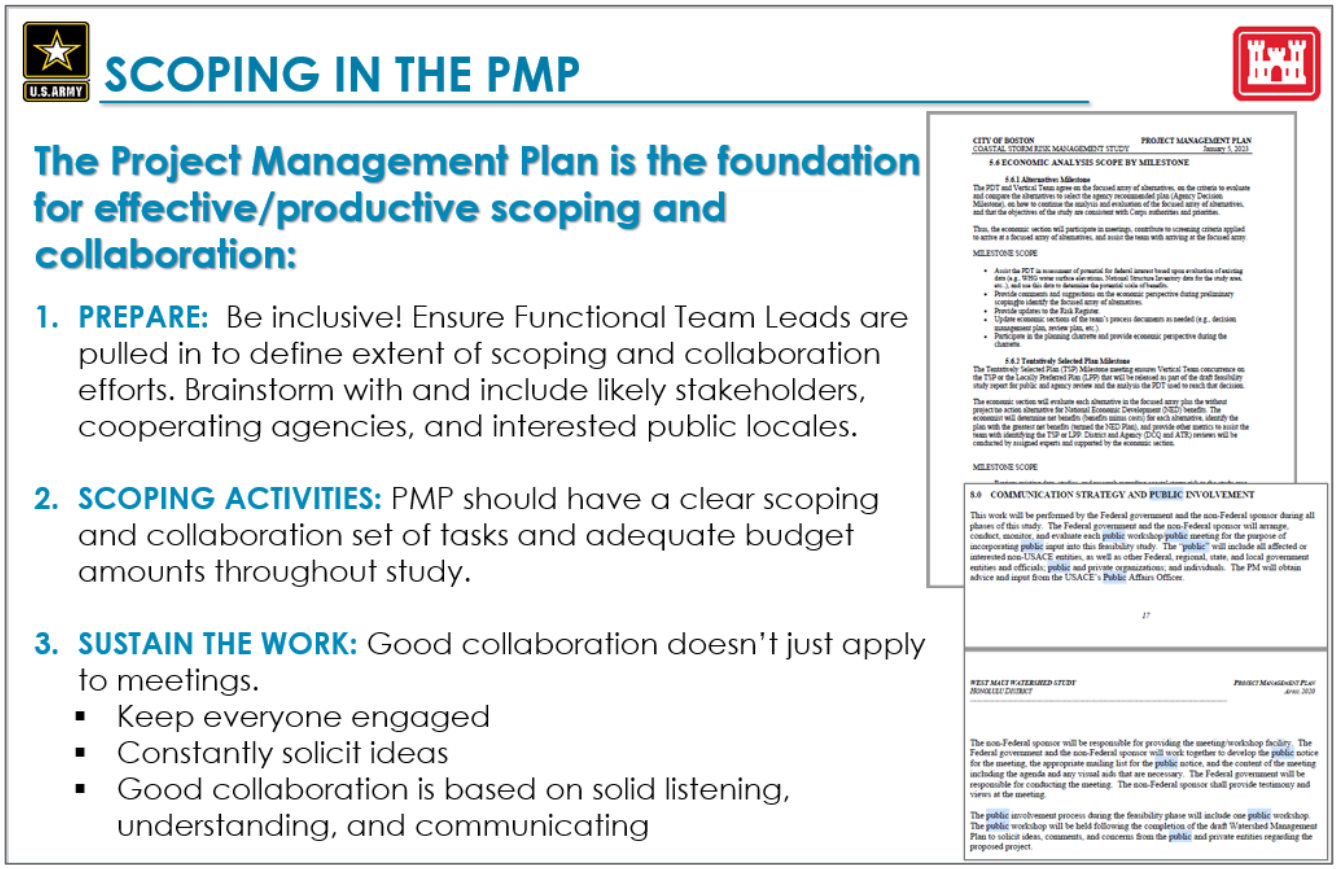


Figure 5. Scoping in the PMP

Scoping Charette and Best Practices

A charette is a structured, collaborative session in which a group comes together to develop a solution to a problem. It has been used in fields such as architecture, community planning, and engineering for years – bringing together a variety of different points of view to solve a difficult problem, often using the familiar six-step planning process as a key tool. The use of charettes was emphasized at the initiation of SMART Planning as a vehicle to convene the PDT and vertical team to make decisions critical to the study. Charettes are not required as part of risk-informed planning, but they can be a useful tool and may provide a format for planning iterations or review meetings. Charettes are formal meetings with best practices that include a structured agenda (identifying the outcome/decision), facilitator, participants that include key decision makers, and read-aheads to ensure preparation and common understanding. A scoping charette is generally held very early on at the start of a study. Guidance and tools for conducting a charette are available in the Planning Community Toolbox, including a Charette Handbook developed in 2013.There is also a discussion of charettes in Planning Quick Takes 2.0.

Before the scoping charette, make sure the team, including members from the NFS, does its homework. As much as possible, the team should complete one full iteration of the six (or seven, for watershed studies) pieces of paper (see Attachment B for the template of the pieces of paper and Planning Quick Takes 2.0) before the scoping charette is held. This includes developing: 1) initial problems and opportunities; 2) initial objectives, constraints, and considerations; 3) initial statements from each discipline about the assumed future without-project (FWOP) conditions (i.e., what would the future hold if no federal project is undertaken); 4) initial decision criteria to be used; 5) what questions decision makers would like to have answered as the investigation proceeds; 6) risks and uncertainties that are likely to be most significant to the study; and 7) an initial shared vision statement (for watershed studies only). It is also a best practice to brainstorm initial plan formulation strategies in advance that will be used to complete one iteration of the six-step planning process at the charette, in addition to any other strategies brainstormed by charette participants.

Logistics and charette planning are key to a charette's effectiveness and overall success. Some best practices include: coordination of the invitation list with key team members and the NFS(s) as soon as possible; engagement of a trained charette facilitator or two (depending on the size of the charette and expected attendees); use of a block style agenda concept instead of detailed time slots for each topic to allow for more give and take of discussion within each larger time slot; and incorporation of a site visit on the first day, if at all possible, to get everyone participating oriented to the study area and the on-the-ground existing conditions. Once the size of the group is estimated, you can find a venue to accommodate that size group near your study area with the set-up and equipment that is needed. It is also important to decide if the charette will be in-person, virtual, or hybrid and to plan accordingly for the logistical details.

SCOPING CHARETTE & BEST PRACTICES

BEFORE the Charette:

1. **PREPARE:** Do your homework. As much as possible, develop POOCs, FWOP, evaluation criteria, possible management measures and formulation strategies, and key uncertainties in advance of the charette. Give participants something to react to, rather than starting from a blank page.

2. **AGENDA:** For the agenda, use a "block agenda" concept (i.e., major topics over a larger block of time), instead of detailed time slots for each specific topic.

3. **SITE VISIT:** Planning a site visit on the first day is super helpful to get everyone oriented to the study area.

4. **INVITATIONS:** Start coordinating the invitation list with key team members and sponsors ASAP.

Figure 6a. Best Practices Before the Charette

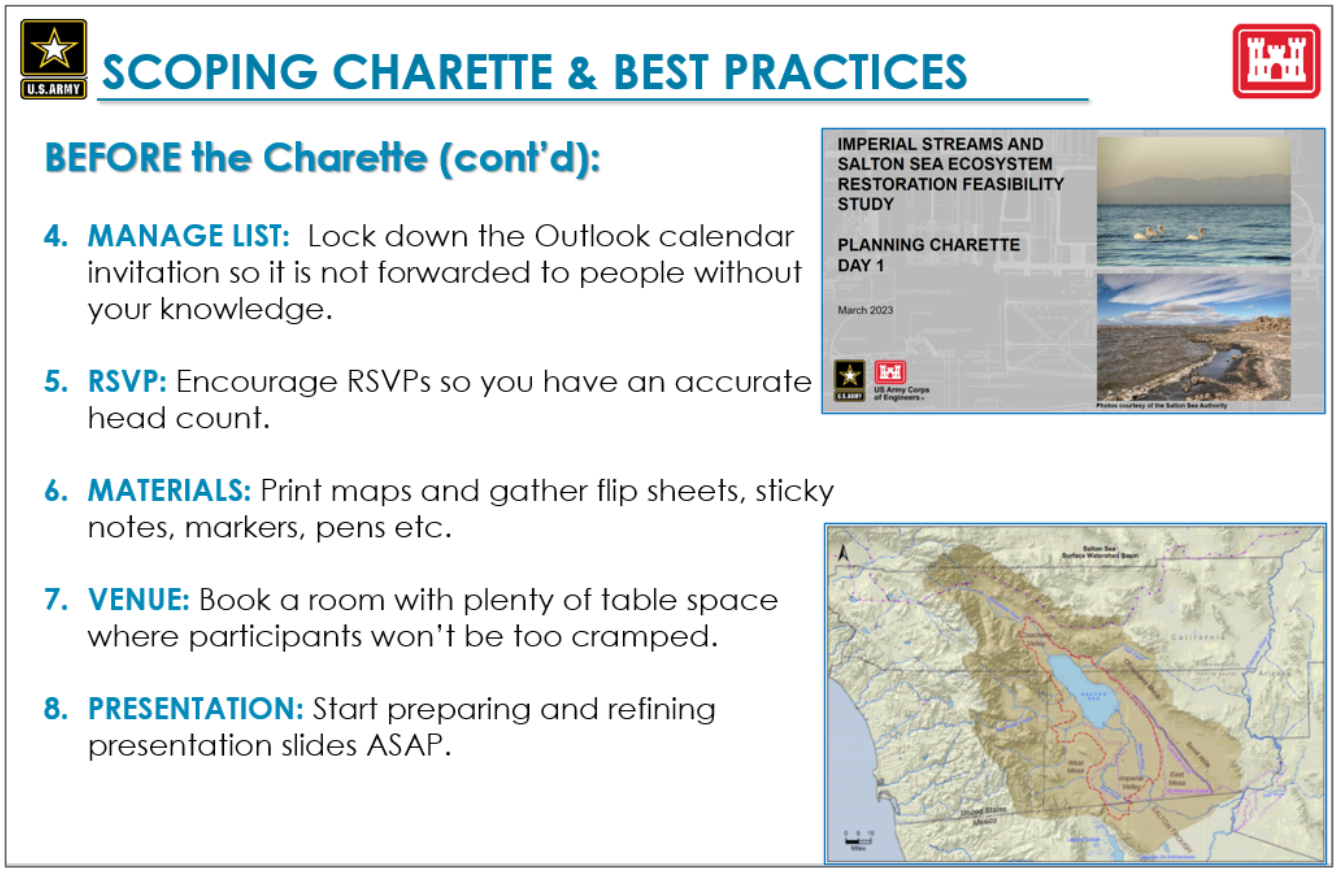


Figure 6b. Best Practices Before the Charette (Cont'd)

Additional best practices before the charette include managing the Outlook calendar invitation so that it is not forwarded to additional people without your knowledge. Encourage RSVPs so that you can get an accurate head count, and if the event is hybrid have participants tell you if they plan to attend in-person or virtually. Think about how you will set up the in-person and/or virtual meeting space. For example, when will you present to and discuss as a large group, versus when you will break out into smaller groups? How will the smaller groups record what the group comes up with (for example flip charts and markers for in-person and/or for virtual have a facilitator capture input onto a virtual white board)? It is also recommended that you think in advance about who from the team will facilitate each small group.

Make sure to put thought and effort into the materials you will use at the charette, including maps, presentations, hand-outs, work sheets, etc. Also, how will you set up the room(s)? You will need to think about the technology set-up and what A/V support you will need in case things are not working the way they should.

It is good to have note takers designated for all agenda sessions, including break out groups, and to combine the notes into a compiled set at the end of each day and then a combined master set of notes after the completion of the charette.

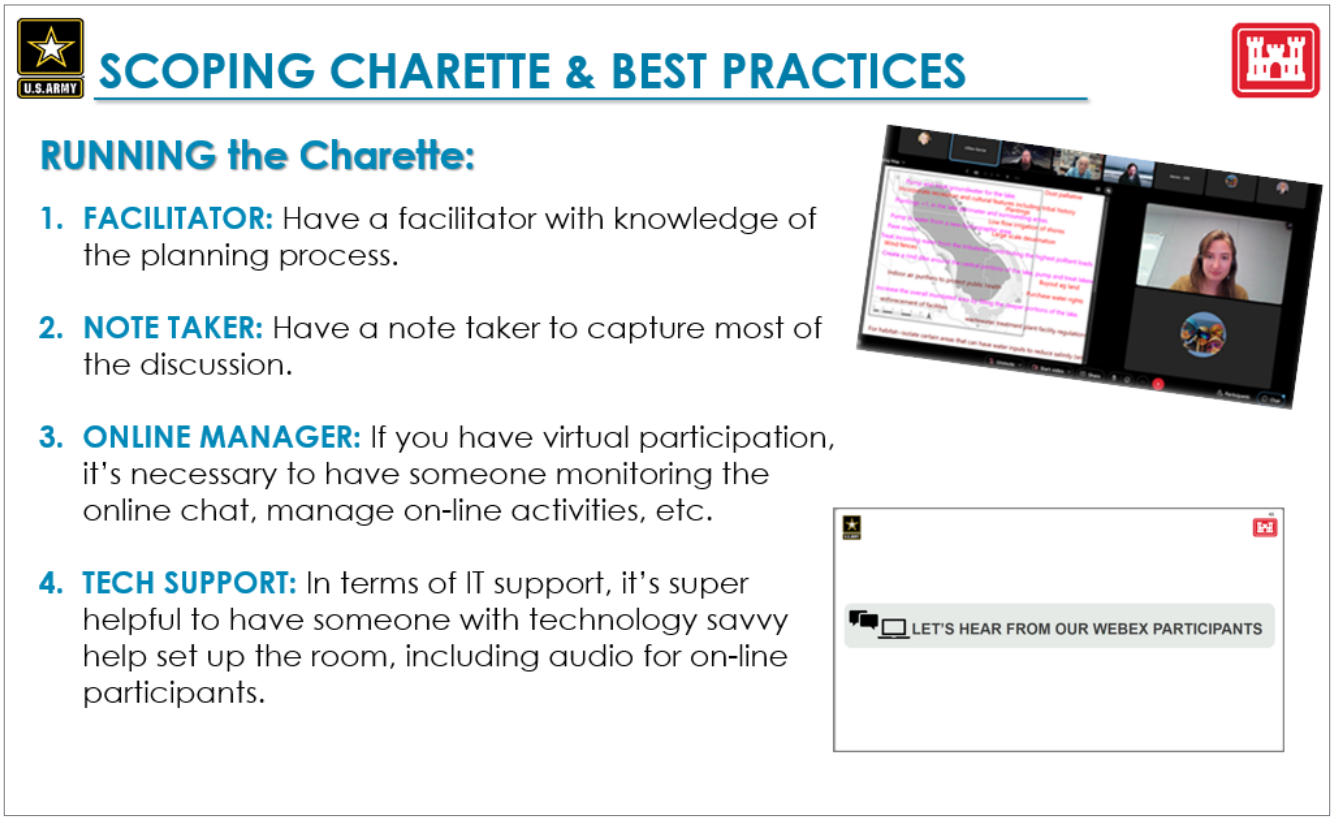


Figure 7. Best Practices for Running the Charette

It is good to begin the charette with opening remarks from USACE and NFS leadership that set the goals and tone for the charette. After opening remarks, it is customary to do introductions if the group is small enough. You can include an ice breaker question or exercise as part of this to help people get to know one-another. It is also helpful to have participants sign in on physical sign-in sheets when in-person and via chat when virtual.

Make sure to emphasize why this study is being done, why the charette is being held, what the team hopes to achieve, how the team will use the information, etc. Make sure the "so what?" of the study is a key take-away with which all participants will leave.

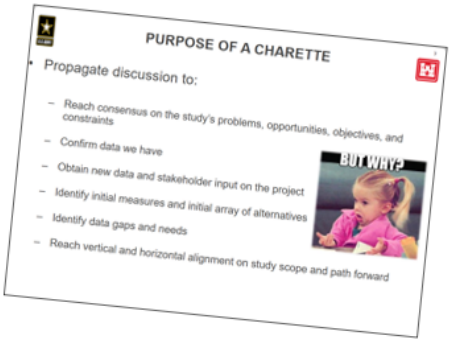
As you proceed through the agenda, it is a best practice to incorporate input from participants on the visuals you are using, such as the slides. Your facilitators should make sure everyone is heard, while managing time. You may want to set up a ground rule in the beginning that limits each speaker to a certain amount of time per comment to keep the discussion moving and make sure there is time for all participants to be heard. To keep people engaged and interested, it is good to have interactive exercises and breaks throughout the charette. There are tools that can be used such as virtual and physical white boards, butcher paper, maps with sketching paper or that can be drawn on, online polls apps, Crowdsource Reporter for marking problems, opportunities, and potential measure onto GIS maps, etc.

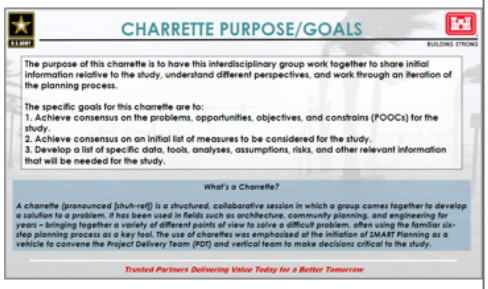
It is good practice to end each day with a summary and a preview of the next day, and to begin each day after the first day with a re-cap of the previous day's accomplishments. On the last day, it is a best practice to do a report out to senior leaders and decision makers if they were not able to participate for the entire charette and to do a next steps briefing explaining what the next steps are, and when the opportunities for future engagement and collaboration will occur. For more information on engagement techniques, see Planning Quick Takes 2.0). Finally, make sure to express your thanks for everyone's time, attention, and expertise and collect participant feedback. It is good to gather PDT feedback in a more detailed session after the other guests depart through an after-action review (AAR).

SCOPING CHARETTE & BEST PRACTICES

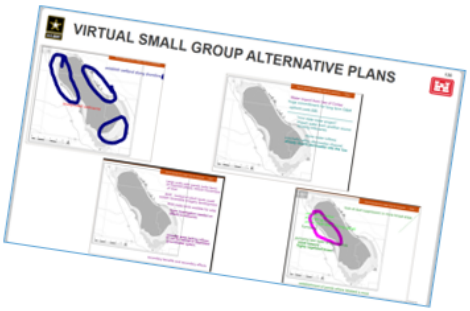
DURING the Charette:

1. **OPENING REMARKS:** Start with opening remarks from USACE and NFS leadership.
2. **BREAK THE ICE:** When doing introductions, break the ice, with questions such as, "If you had a superpower, what would it be?"
3. **SHARE PURPOSE:** Let participants know why we are doing this, what we hope to get out of it, how we will use info, etc.
4. **INTEGRATE INFORMATION:** As you gather the input from participants, integrate that info back into the charette slides.
5. **BE INTERACTIVE:** Have interactive exercises during the charette.





6. **COLLABORATION TOOLS:** During break-outs with on-line participants, use whiteboards in WebEx or JamBoard.
7. **RANKING TOOLS:** Tools like Poll Everywhere might be helpful when you are looking to prioritize/ rank lists of things.
8. **REVIEW:** Start each morning with a review from the day before.
9. **NEXT STEPS:** Before end of charette, tell participants what next steps are.
10. **EXPRESS THANKS:** At end of charette, thank everyone for their time and sharing their expertise, and any take-aways/ kudos/ lessons learned.



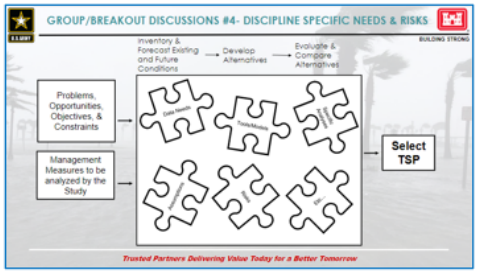
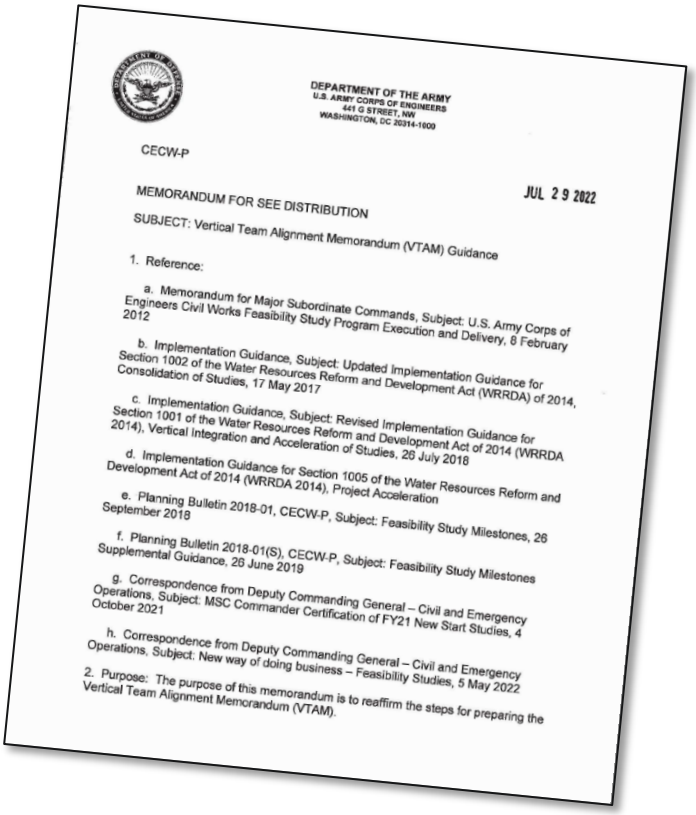


Figure 8. Best Practices During the Charette

Vertical Team Alignment Memorandum (VTAM)



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
WASHINGTON, DC 20314-1000

CECW-P

JUL 29 2022

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Vertical Team Alignment Memorandum (VTAM) Guidance

1. Reference:

a. Memorandum for Major Subordinate Commands, Subject: U.S. Army Corps of Engineers Civil Works Feasibility Study Program Execution and Delivery, 8 February 2012

b. Implementation Guidance, Subject: Updated Implementation Guidance for Section 1002 of the Water Resources Reform and Development Act (WRRDA) of 2014, Consolidation of Studies, 17 May 2017

c. Implementation Guidance, Subject: Revised Implementation Guidance for Section 1001 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014), Vertical Integration and Acceleration of Studies, 26 July 2018

d. Implementation Guidance for Section 1005 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014), Project Acceleration

e. Planning Bulletin 2018-01, CECW-P, Subject: Feasibility Study Milestones, 26 September 2018

f. Planning Bulletin 2018-01(S), CECW-P, Subject: Feasibility Study Milestones Supplemental Guidance, 26 June 2019

g. Correspondence from Deputy Commanding General – Civil and Emergency Operations, Subject: MSC Commander Certification of FY21 New Start Studies, 4 October 2021

h. Correspondence from Deputy Commanding General – Civil and Emergency Operations, Subject: New way of doing business – Feasibility Studies, 5 May 2022

2. Purpose: The purpose of this memorandum is to reaffirm the steps for preparing the Vertical Team Alignment Memorandum (VTAM).

The VTAM Guidance memorandum, dated 22 July 2022, establishes the requirement for each feasibility to produce a VTAM and specifies what information should be included in the VTAM (e.g., study purpose, background, scope, plan formulation, risk and uncertainty, modeling tools and software, the PMP, Environmental Justice considerations, schedule and funding stream, 3x3x3 compliance, and vertical team alignment). The guidance does not apply to Continuing Authorities Program (CAP) studies/projects. VTAMs are to be coordinated with the vertical team, signed by the Division Commander, and forwarded to the Regional Integration Team (RIT) at Headquarters. EP 1105-2-61 specifies that the Division Commander should target transmittal of the signed VTAM within 30 days of the AMM (EP 1105-2-61 recommends the AMM should be within 90-180 days of the start of the study)

Use the VTAM template to document important information about the study's scope of work (SOW), schedule and budget. Note:

- The SOW, schedule, and budget as discussed in the VTAM must be consistent with the PMP.
- The study's risk register must clearly document the key risks and uncertainties that are discussed in the VTAM (Section 6), especially those that affect the SOW, schedule, and/or budget for the study. Areas of high risk should drive areas where more effort and cost may be needed to buy down risk. Areas where risk is low should correlate to tasks that may require less effort and where assumptions and existing information may be able to be made to move forward more quickly and with less cost.

For studies requiring an exception to the 3x3x3 rule, the VTAM will be the primary document used in requesting the exception. In addition to completing a VTAM, studies requesting an exception to 3x3x3 will need to follow the process outlined in EP 1105-2-61.

Key Takeaway: It is critical to ensure that the VTAM is developed using the risk-informed scope, schedule, and budget as documented in the PMP and Risk Register.

VTAM Best Practices for Collaboration

OVERALL

Conducting scoping activities and outreach with the NFS, resource agencies, public, disadvantaged communities, and key stakeholders is critical for the development of a realistic study scope required to complete technical analyses, reach environmental compliance, and identify key risks and uncertainties that may affect the scope, schedule, and/or budget.

GATHER INFORMATION

Utilize all local knowledge and existing data to gain a better understanding of the problems, opportunities, objectives, constraints, and considerations and to identify as many risks and uncertainties as possible. This can be done by research and through engagement with the local experts.

EARLY COORDINATION WITH ALL PARTIES

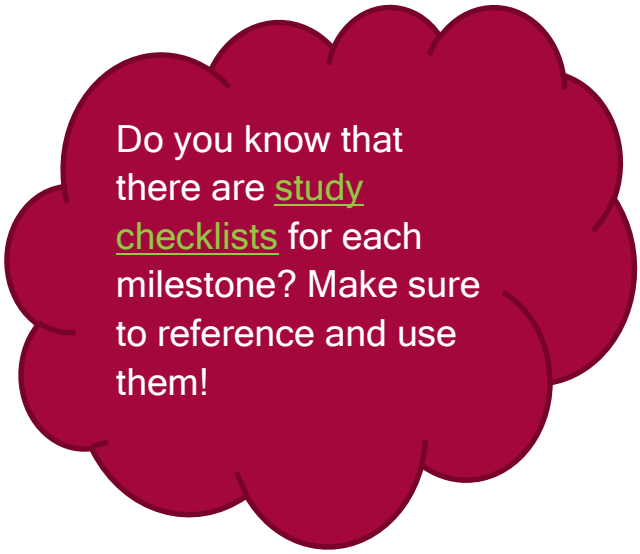
It is critical to do early coordination with all parties. Early coordination with resource agencies gives them the opportunity to weigh in on what the key environmental, cultural, and/or historic resource issues may be and identify any specific analyses or modeling that must be completed to achieve compliance. Providing opportunities for the public to learn about and participate in the study during the scoping phase allows the team to gather feedback and sets the groundwork for continued outreach. Early identification of EJ communities in the study area is needed so the team can start outreach early and provide disadvantaged communities with the opportunity to engage in scoping activities. Consultation with Tribes, Alaska Natives/Alaskan Native Organizations, and Native Hawaiian Organizations should be included in the study scope, scoping activities, schedule, and budget, as appropriate for the study area.

Key Takeaway: Scoping activities inform the study risks, scope, schedule, and budget. The VTAM documents that the EJ coordination, environmental compliance tasks, engineering tasks, and study risks are identified and considered in the PMP.

Study Schedule – Resource Loaded

Building a risk-informed planning study schedule is a collaborative effort between the Project Management, Programs, Planning, and Engineering disciplines. It should be coordinated with both the vertical and horizontal project team to ensure tasks are accurately captured and resources are identified. A recommended technique to building your study schedule can be found in the logic flow below. It is recommended that a project team begins with a strategic macro view of the three-year study template and drill down to a specific micro resource loaded study. This approach will help the PDT and Project Management and Programs teams identify the critical path of a study and its funding needs. It should reflect tasks, funding, and schedule (with durations) for the entire team, including reviews and any contracts that are anticipated for the study duration.

The logic below flows from phase to task to discipline and can transfer well to the PMP scope narrative and to the Work Breakdown Structure (WBS). Please note that the WBS should match the schedule breakdown.



STUDY SCHEDULE LOGIC

START WITH A VERY MACRO SCHEDULE AND DRILL DOWN TO YOUR STUDY SPECIFIC RESOURCE LOADED SCHEDULE:

- 3X3X3 PROJECT SCHEDULE WITH TEMPLATE TIME PERIODS FOR MILESTONES
  - BREAK SCHEDULE OUT BY STUDY PHASES
    - INPUT HQUSACE TRACKED MILESTONES WITHIN STUDY PHASES
      - INPUT INTERMEDIATE PHASES WITHIN LARGER STUDY PHASES
        - INPUT ACTIVITIES NEEDED TO COMPLETE INTERMEDIATE PHASES
          - IDENTIFY WHICH ACTIVITIES ARE SUCCESSIVE AND CONCURRENT
            - IDENTIFY YOUR CRITICAL PATH BASED ON SUCCESSIVE ACTIVITIES
              - IDENTIFY RESOURCES NECESSARY TO ACCOMPLISH CRITICAL PATH
                - FUND RESOURCES ACCORDING TO CRITICAL PATH

Strategic Study Lifecycle

Strategic Study Phases Including Those Listed Above

Study Initiation
Alternatives Milestone
Tentatively Selected Plan Milestone
Feasibility Level of Analysis (Public Review and Agency Decision Milestone fall within this Study Phase)
Chief's Report/Director's Report Milestone

HQUSACE Programs Tracked Feasibility Milestones (HQUSACE Civil Works RPM Dashboard)

Agreement Execution
Alternatives Milestone/ Shared Vision Milestone (CW261)
Tentatively Selected Plan/ Recommendations Milestone (CW262)
Public Review Period (CW250)
Final Report Submittal (CW160)
Director of Civil Works Report/Chief's Report (CW270)

Key Activities By Study Phase

Study Initiation Phase

Activity Name (P2 Activity ID)(CW Milestone)

- Agreement Execution*
- Identify Project Delivery Team (Engineering (confer with Technical Lead), Real Estate, Environmental, Cultural, Economics, Cost)
- Coordinate with Legal and Policy Compliance Review Team and Planning Center of Expertise
- Conduct First Iteration of Planning Process with PDT (or during Charette – or Second Iteration during Charette)
- Develop Report Summary (SCP1010)
- Develop Peer Review Plan (SCP1160)- Draft within 30-days of FCSA Execution
- Develop Project Management Plan (SCP1130)- Draft within 30-days of FCSA Execution (Comms Plan and Review Plan)
- Pre-Charette Data Collection (SCP1000)**
- Justice40 identification and Outreach (Include in Communication Plan and PMP)
- Identify Tribes for consultation (Coordinate to determine how consultation will be conducted and TEK will be considered)
- Conduct Planning Charette (SCP 1060)**
- Begin NEPA Scoping (SCP1185)
- Conduct Interagency Meeting with Cooperating/ Participating Agencies within 90-days of FCSA Execution
- PCX Review of the Peer Review Plan (SCP1187)- Letter of Endorsement prior to MSC submittal

*HQUSACE Tracked Milestone- Power BI Dashboard
**Optional if using Charette

Key Activities By Study Phase

Alternatives Milestone Phase

Activity Name (P2 Activity ID)(CW Milestone)

- Identify Problems, Opportunities, Objectives, Constraints
- Complete Preliminary Existing and FWOP Analysis (SCP1210)
  - Initial Engineering/Economic/Environmental Inventory and Forecast
- Identify Focused Array of Alternatives (SCP1250)
  - Identify/Screen Measures
  - Identify/Screen Initial Array of Alternatives
- Conduct Second (or Third, as Applicable) Iteration of Planning Process with PDT (USACE + NFS)
- Identify Model and Certification (if needed) (SCP1245)
- Complete Scope of Work for Fish and Wildlife Coordination Act (FWCA) compliance
- Data Gathering and Model setup/refinement (Engineering, Economic, Environmental, Cultural)
- Signed PMP with Draft Review Plan (SCP1186) (CW040)- Should be signed by PDT and NFS (ER 5-1-11) prior to AMM
- DQC Alternatives Documentation (SCP1270)
- Conduct Alternatives Milestone Meeting* (SCP1310) (CW261)
- Alternatives MFR and VTAM (SCP1320) (CW060)

*HQUSACE Tracked Milestone- Power BI Dashboard

Key Activities By Study Phase

Tentatively Selected Plan Milestone Phase (1of2)

Activity Name (P2 Activity ID)(CW Milestone)

- Update PMP and P2 Schedule
- Peer Review Plan Approved and Posted (SCP1190) (CW035)
- Detailed Evaluation of Alternatives (ALT1000)
  - Existing Condition
  - Future Without Project Condition (Engineering/Economic/Environmental)
  - Future With Project Condition (Engineering/Economic/Environmental/Real Estate)
    - Environmental Analysis and Draft ESA, Draft FWCA, Draft EFH, Draft 404 analysis, Conceptual Mitigation
    - Cultural- Document Section 106 compliance in accordance with 36 CFR 800.11; including actions to avoid, minimize, or mitigate adverse effects.
    - Real Estate- Draft Real Estate Plan with appropriate level of estimate
  - Abbreviated Cost Risk Analysis
- Community Outreach Plan and Implementation

*HQUSACE Tracked Milestone- Power BI Dashboard

Key Activities By Study Phase

Tentatively Selected Plan Milestone Phase (2of2)

Activity Name (P2 Activity ID)(CW Milestone)

- Identify-NED/ NER Plan (other required plans by mission: Locally Preferred Plan (LPP), nonstructural, Tolerable Risk Guidelines)
  - Maximizes Total Net Benefits Plan
  - Least Environmentally Damaging Practicable Alternative (LEDPA)
- Conduct Third (or Fourth, as applicable) Iteration of the Planning Process (to ID TSP)
- Identify Potential Policy Exceptions
- Identify TSP
- Prepare Notice of Intent for NEPA Document(SCP1180)
- NOI of Draft NEPA Document in Federal Register(SCP1180)
- IEPR Contract Negotiation/Award (ALT104/1090)
- Conduct TSP Milestone Meeting (ALT1120) (CW262)

*HQUSACE Tracked Milestone- Power BI Dashboard

Key Activities By Study Phase

Concurrent Review of Draft Document

Activity Name (P2 Activity ID)(CW Milestone)

DQC of Draft Report(ALT1070)

DQC Review/Evaluation/Backcheck/Closeout/Certification

Legal Sufficiency Review by District Office of Counsel

Kickoff/Review/Evaluation/Backcheck/Closeout/Certification

Submit Draft Report for ATR (ALT 1200) and Policy and Legal Compliance Review (ALT1170)

Review/Evaluation/Backcheck/Path to Closeout/Closeout/PGM (FEA1040)

Release Draft Feasibility Report (CW250)

Public Review Period/NEPA Comment Period* (ALT1210)(CW250)

Community Outreach Plan Implementation

Coordinate with Tribes on draft report/NEPA Document

IEPR Review Period (if needed) (ALT1230)

Review, Evaluate, Respond (develop path to resolution) to Concurrent Review Comments (IEPR, ATR,P&LC, and Public)

Update PMP and P2 Schedule

Agency Decision Milestone* (FEA1020)(CW263)

*HQUSACE Tracked Milestone- Power BI Dashboard

Key Activities By Study Phase

Feasibility Level of Analysis Phase *Activity Name (P2 Activity ID)(CW Milestone)*

- Additional Feasibility Level of Analysis (FEA1050)

  Engineering-

  Economics

  Real Estate- Final Real Estate Plan with appropriate level of Appraisal

  Environmental/Cultural- FWCA, ESA, EFH, 404, Water Quality, CZM, Sec. 106
- Policy Exception adjudications
- Conduct Fourth (or Fifth) Iteration of the Planning process on the Recommended Plan include
- Community Outreach Plan Implementation
- Tribal Consultation Implementation
- DQC of Final Report (FEA1090)
- Legal Sufficiency Review
- ATR of Final Report
- Policy and Legal Compliance Finalize Comments and Project Guidance Memo (FEA1040)
- Cost Certification from Cost DX (FEA1060)
- Complete Draft of Final FR/EA/EIS (FONSI/ROD) (FEA1070)

*HQUSACE Tracked Milestone- Power BI Dashboard

Key Activities By Study Phase

Chief's Report Milestone

Activity Name (P2 Activity ID)(CW Milestone)

- Submit Final Report* (Division Engineer's Notice) (FEA1110)(CW160)
- State and Agency Review (CHR1020)
- Respond to State and Agency Review (CHR1030)
- OWPR and RIT Coordination of Final Report Packet and Chief's Report (CHR1040)
- Chief Signs Report of the Chief of Engineers* (CHR1050) (CW270)
- ASA (CW) Signs the ROD (before going to Congress (CHR1070)
- Feasibility Report to Congress (CHR1090)

*HQUSACE Tracked Milestone- Power BI Dashboard

After all the Chief's Report activities are complete, the final approved report can be distributed to the public and posted to the project webpage at the same time Congress is notified and provided the report.

See Figure 9 below for an excerpt from a fully resource loaded schedule.

Option B - 3 years, >$3M
SCOPE 2 -Medium

				PLANNING	ENGINEERING	ECONOMICS				
TASK	START	END	Days	Key Surveys	PD-P/RSM	ECON	Cultural	ENV	EN-D	EN-G
TSP Phase	4/28/00	8/31/01	490							
Exception Process and Approval (for over $3M)	4/27/00	10/24/00	180		$ 15,000.00			$ 5,000.00	$ 5,000.00	
Ship Simulation Prep and Model (for passing lanes)	4/28/00	10/25/00	180							
Environmental Surveys Prep (both channel and placement)	4/28/00	10/25/00	180					$ 5,000.00		
Environmental limited Data Collection for channel	10/25/00	8/21/01	300	$ 500,000.00						
Environmental data collection for placement areas	10/25/00	8/21/01	300	$ 300,000.00						
Cultural resources survey or PA for channel footprint	10/25/00	8/21/01	100	$ 150,000.00			$ 10,000.00			
Cultural resources survey or PA for placement areas	10/25/00	8/21/01	100	$ 100,000.00			$ 10,000.00			
Geotechnical surveys	4/27/00	11/13/00	200	$ 100,000.00						
Material Placement Coordination (manage to lower risk during feasibility)	12/15/21	12/15/23	730		$ 20,000.00		$ 5,000.00	$ 5,000.00	$ 20,000.00	$ 10,000.00
FWOP Team Actions	4/28/00	11/24/00	400							
Design vessel formulation -- present initial array of vessels calling, get feedback, select vessel to provide to ERDC to begin ship simulation	2/1/22	2/15/22								
Prepare design drawings to reflect any channel file modifications	2/18/22	4/15/22								
Numerical model preparations	3/15/22	4/30/22								
Ship Simulation Recon Trip	4/1/22	4/30/22								
HarborSym Model prep (commodity/fleet; restrictions; assumptions, design vessel) and run FWOP	4/28/00	10/15/00	170			$ 100,000.00				
Run Ship Simulations with Pilots	5/1/22	6/15/22								
Engineering Input into FWOP and pre-work for FWP	4/28/00	10/15/00	170		$ 20,000.00				$ 20,000.00	$ 60,000.00
Plan Formulation Measures & Alts	10/25/00	11/24/00	30		$ 40,000.00	$ 5,000.00	$ 5,000.00	$ 8,000.00	$ 10,000.00	$ 5,000.00
PDT input into FWOP/FWP	10/25/00	11/24/00	30		$ 15,000.00	$ 10,000.00	$ 5,000.00	$ 5,000.00	$ 20,000.00	$ 5,000.00
FWP Team Actions	11/24/00	8/31/01	170							
BUDM analysis with volumes, sediment (match-making)	7/15/22	8/15/22								
Ship Simulation Results for input into HarborSym (Final Report Due)	6/1/22	9/1/22								
Costs for BUDM options	8/15/22	9/15/22								
HarborSym Model prep (commodity/fleet forecast; restrictions; assumptions, design vessel) and run FWP	11/24/00	4/3/01	130			$ 150,000.00				
Environmental assessment/mitigation/ NEPA/costs	11/24/00	4/3/01	130					$ 40,000.00		
EN channel design, volumes, costs of alts	11/24/00	4/3/01	130						$ 50,000.00	$ 25,000.00
PDT intitiate report/appendices/NEPA documentation/team coordination/comp benefits analysis	11/24/00	4/3/01	130		$ 70,000.00	$ 5,000.00	$ 5,000.00	$ 5,000.00	$ 10,000.00	$ 5,000.00
PDT actions to determine TSP and report documentation	4/3/01	8/1/01	120		$ 85,000.00	$ 40,000.00	$ 15,000.00	$ 30,000.00	$ 40,000.00	$ 10,000.00
Potential Additional Modeling to support env effects	4/3/01	8/1/01	120							
TSP Prep	8/1/01	8/31/01	30		$ 30,000.00	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 15,000.00	$ 5,000.00
TSP	8/31/01	8/31/01	1							

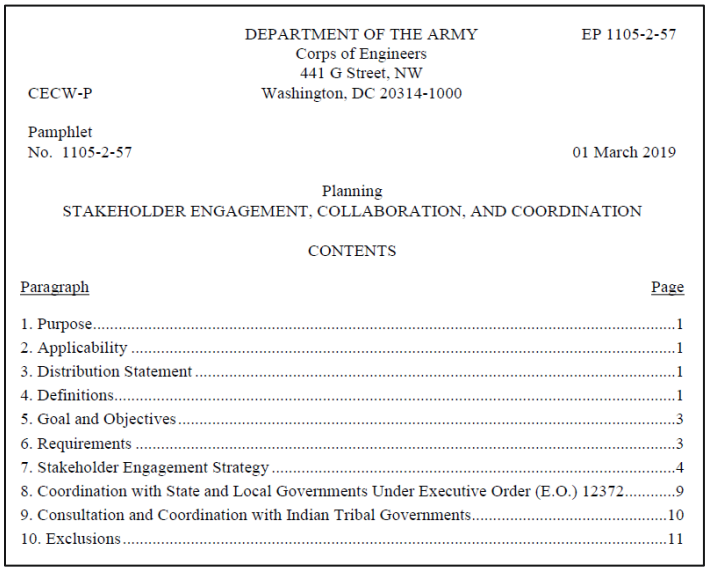
Figure 9. Sample Excerpt of Resource Loaded Schedule

Key Tips and Resources: Scoping and Good Collaboration

The intent of collaboration is to ensure that federal activities reasonably consider the needs, interests, and concerns of stakeholders. The scoping process ensures significant decision-making factors are addressed, unnecessary analyses are avoided, risks are identified, and meaningful and efficient analysis and selection of alternative plans can occur.

Key Tips

- Collaboration ≠ Coordination!
- Develop the Stakeholder Communication Plan
- Sharpen the Stakeholder Engagement Strategy (remember this is part of your feasibility report)
- The Stakeholder Engagement and Communication Plan is a required Appendix to the PMP and the SOW, schedule, and budget for the study should include all engagement and outreach activities that will be needed throughout the study



DEPARTMENT OF THE ARMY
Corps of Engineers
441 G Street, NW
Washington, DC 20314-1000

EP 1105-2-57

CECW-P

Pamphlet
No. 1105-2-57

01 March 2019

Planning
STAKEHOLDER ENGAGEMENT, COLLABORATION, AND COORDINATION

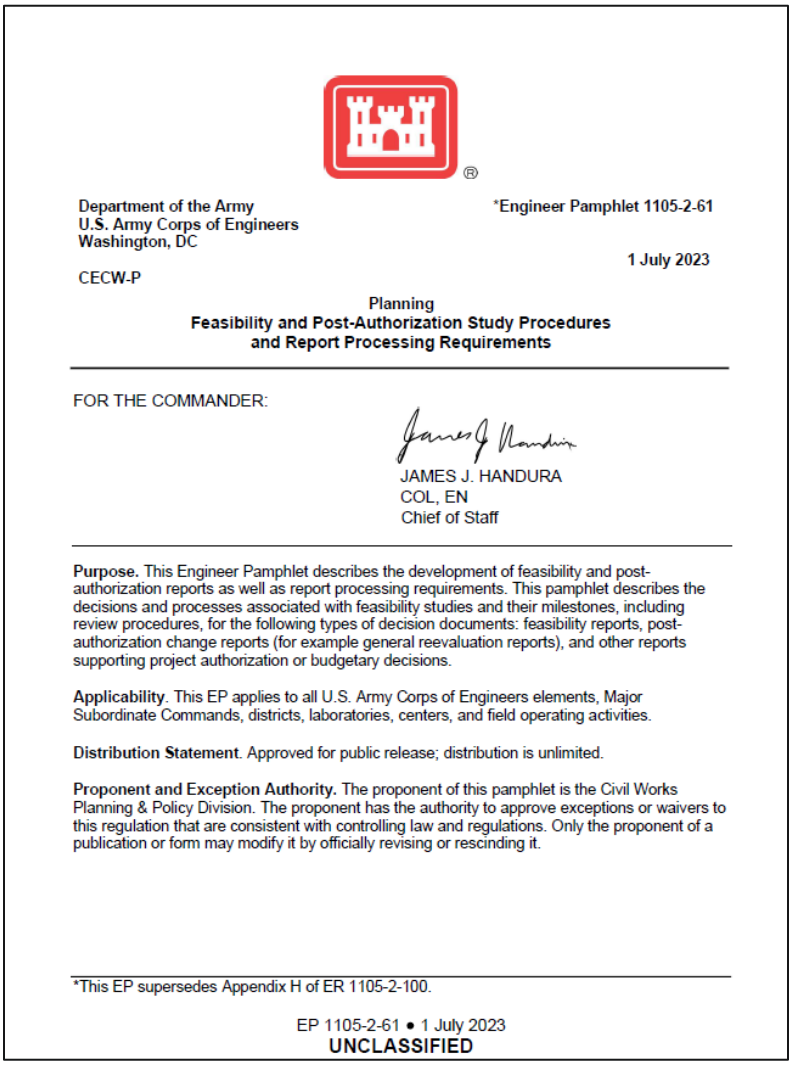
CONTENTS

Paragraph — Page

EP 1105-2-57: Stakeholder Engagement, Collaboration and Coordination

Determine How Best to Collaborate

- Stakeholders to Tribal Governments
- Consider the level of engagement: Inform? Consult? Involve? Collaborate?
- Conduct Interagency Meeting within 90 days of FCSA to help inform the scope, schedule, and budget for resource agency involvement, coordination, and permitting
- Determine the information exchange
- Identify communication methods



Department of the Army
U.S. Army Corps of Engineers
Washington, DC

CECW-P

*Engineer Pamphlet 1105-2-61

1 July 2023

Planning
Feasibility and Post-Authorization Study Procedures and Report Processing Requirements

FOR THE COMMANDER:

JAMES J. HANDURA
COL, EN
Chief of Staff

Purpose. This Engineer Pamphlet describes the development of feasibility and post-authorization reports as well as report processing requirements. This pamphlet describes the decisions and processes associated with feasibility studies and their milestones, including review procedures, for the following types of decision documents: feasibility reports, post-authorization change reports (for example general reevaluation reports), and other reports supporting project authorization or budgetary decisions.

Applicability. This EP applies to all U.S. Army Corps of Engineers elements, Major Subordinate Commands, districts, laboratories, centers, and field operating activities.

Distribution Statement. Approved for public release; distribution is unlimited.

Proponent and Exception Authority. The proponent of this pamphlet is the Civil Works Planning & Policy Division. The proponent has the authority to approve exceptions or waivers to this regulation that are consistent with controlling law and regulations. Only the proponent of a publication or form may modify it by officially revising or rescinding it.

*This EP supersedes Appendix H of ER 1105-2-100.

EP 1105-2-61 • 1 July 2023
UNCLASSIFIED

Engineer Pamphlet 1105-2-61: Feasibility and Post-Authorization Study Procedures and Report Processing Requirements

PRACTICAL EXAMPLES OF GOOD SCOPING AND COLLABORATION

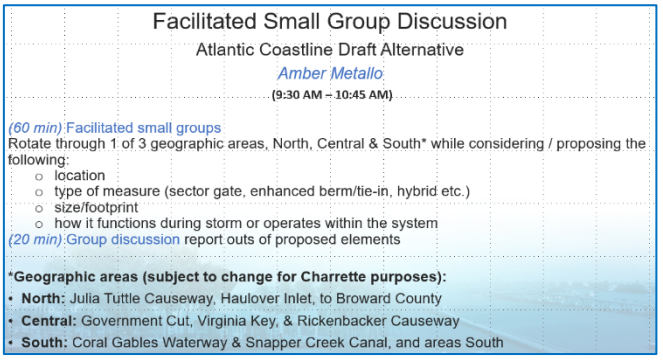
The following practical examples from USACE studies summarize key elements of good scoping and collaboration.

Miami-Dade County Backbay Coastal Storm Risk Management Study

COORDINATED PDT

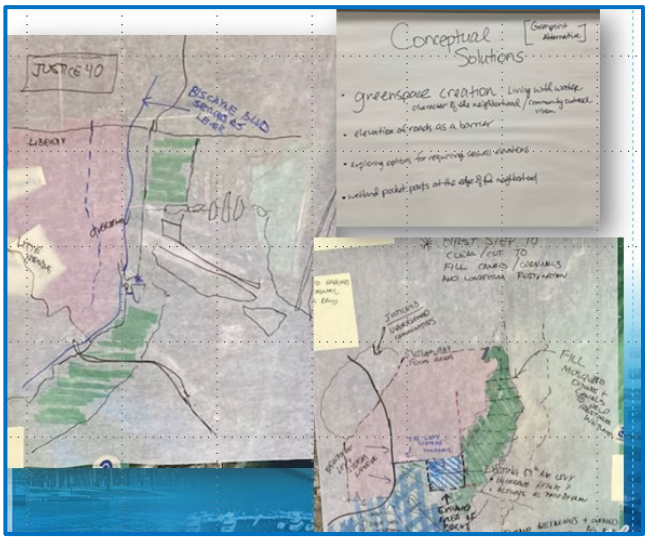
- Strong organization for all public meetings and pursued a higher level of engagement than required by law.
- Actively engaged with sponsor and municipalities to ensure good communication.
- Creative use of GIS and visual aids.

COLLABORATION WITH STAKEHOLDERS AND TRIBES



- Very active, engaged, and smart stakeholder groups. They provided great feedback/insights.
- Represented a broad array of educational, NGO, and community-level liaisons.
- Brought their expertise to cover a vast area of diverse cultures, habitats, and other projects, to address complex problem-solving.

CHARETTES DESIGNED FOR SUCCESS



- Multiple charettes have been held across the study area to best leverage expertise and build community trust in the process.
- Charettes have had great facilitation and lots of maps/graphics/markers.
- Charettes were designed to ensure diversity of experience at each table for better idea generation and cross-discipline interaction.
- Charettes had very detailed agendas, clear directions on intent and activities, and defined timelines for alternative development and reporting.
- Thoughtfully designed, well-rehearsed, tested, and had lots of staff support.

Virginia Beach Coastal Storm Risk Management Study

MULTIPLE OUTREACH PLATFORMS

Photo credit: Jacksonville District

- PDT completed both in person and virtual outreach with NFS, key stakeholders, Tribes, state/federal agencies, and the public.
- Planning workshop with NFS and key resource agencies (full day, in-person).
- One in-person public meeting (open house style with USACE PDT members and NFS staff stationed at posters around the room).
- Two virtual "office hours" style meetings for the public and any agencies or stakeholders interested in the study (held via Webex).
- One virtual agency coordination meeting with resource agencies to introduce them to the study and gather feedback on what they will require for environmental compliance (held via Webex).

ADVANCE NOTICE THROUGH MULTIPLE SOURCES

Photo credit: Jacksonville District

- Public meeting and office hours were advertised by USACE and through traditional media sources like newspaper ads.
- NFS advertised on their website and pushed out the information to civic leagues to ensure that all communities were aware of the upcoming opportunities to engage in scoping for the study.

St. Augustine Coastal Storm Risk Management Study

INTEGRATED TEAM FROM THE BEGINNING

Photo credit: Jacksonville District

- Weekly meetings with PDT.
- Monthly meetings with full team.
- 3-day in-person charette with excellent diversity of participation from District, vertical team, PCX, sponsor, and agencies with a stake in the outcome.

SCOPING FOR SUCCESS

- Planning Iterations - Multiple iterations of the planning process by integrated team to identify potential solutions and risk.
- Incorporation of the four accounts from the Principles and Guidelines (P&G) – Team developed scoping for the four P&G accounts, with integration of how models would help achieve those metrics, and with appropriate time and funding to achieve outcomes.
- Incorporation of public engagement and EJ – Team developed communication plan to incorporate additional time and funding to do extensive public engagement throughout the study.
- Risks – Team scoped to allow time and funding to work within culturally and environmentally sensitive areas.
- Tribal consultation.

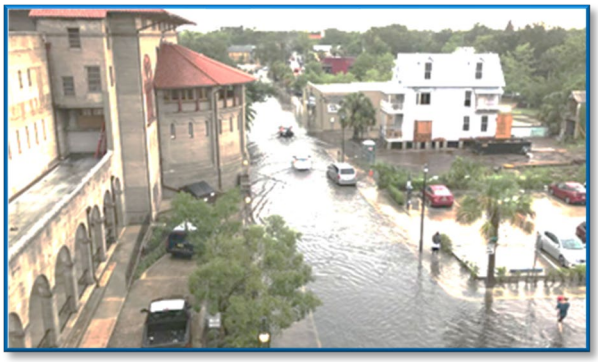


Photo credit: Jacksonville District

VERTICAL TEAM ALIGNMENT MEMO (VTAM) & RESOURCE LOADED SCHEDULE

- Excellent inclusion and communication during scoping to create a viable scope, with resource loaded schedule and VTAM which is supported by all parties.
- Recommending ~6 years and $7.3M, supported by USACE and sponsor.

Photo credit: Jacksonville District

Salton Sea Ecosystem Restoration Study

PDT COORDINATION

- Weekly PDT meetings with all disciplines, including both NFSs (State of California and Salton Sea Authority).
- Weekly "core" team member meetings.
- Planning mentor assigned and funded by PCoP.

Photo credit: Salton Sea Authority, 2023

TIMELY COLLABORATION & OUTREACH

- Three-day scoping charette (within 45 days).
- ~50 in-person and virtual participants, with in-person and virtual facilitators.
- With assistance from NFSs, identified charette participants from NFSs, federal and state agencies, local governments, local irrigation districts, non-governmental organizations (e.g., Audubon), Tribes, and community advocates (e.g., EJ focus).
- Interagency meeting within 90 days with resource agencies to introduce the study and to discuss significant resources, habitats, potential ecosystem models, and potential roles of respective agencies.
- Two public scoping meetings (day and evening) within 90 days.
- Public Scoping Notice translated into Spanish (electronic and hard copy flyers) and distributed via study website, email, and posted at local businesses and public locations.
- Salton Sea Study website created.

Photo credit: Salton Sea Authority, 2023

TEAM EXPERTISE

- Dedicated Public Involvement Specialist and Outreach Coordinator.
- Dedicated EJ Specialist and Tribal Liaison.

City of Boston Coastal Storm Risk Management Study

COLLABORATION THROUGH CHARETTES

- Scheduled and funded charette facilitator to support the effort.
- Included full USACE team in the charette – Legal & Policy Compliance Review Team, Climate Preparedness & Resilience CoP, PCX-CSRM, and Division.
- Included sponsor, key stakeholders, other local and state agencies, as well as federal resource agencies.
- Went through multiple discussions and initial planning iteration before charette. Developed understanding of intent, goals, and objectives of the charette.
- Used block agenda for the charette and the facilitator and planner adjusted accordingly to meet outcomes.
- Initial charette laid the foundation for multiple follow-on formulation workshops (one per neighborhood to identify focused array).

COMMUNITY OUTREACH

- Held outreach meetings open to the public; identified 63 stakeholder groups, ranging from civic organizations to neighborhood groups to attend the meetings.
- After initial outreach, held multiple virtual office hours for follow-up.
- Three Tribes with interest in the study area were identified. The Tribes were invited to participate in the charette, as well as formal correspondence for tribal consultation. These Tribes did not respond or participate, however, the team will continue to engage them throughout the study process.

VERTICAL TEAM ALIGNMENT

- Used the charette and workshops to develop scope, schedule, and budget as part of the PMP.
- Review Plan and PMP drafts completed within 30-days for vertical team concurrence/endorsement/approval.
- Simplified path to AMM due to extensive coordination with horizontal and vertical team throughout.

Pacific Territory Post-Disaster Watershed Assessments (American Samoa, Commonwealth of the Northern Mariana Islands, and Guam)

Team Expertise and Composition

- Pacific-based leadership and project management.
- Technical support from SPD (planners, economist, coastal engineers, H&H engineers).
- SPK Watershed Planning Technical Specialist provided leadership across three watershed assessment efforts.


Flooding in Pago Pago from 2018 Hurricane Gita (Source: 2020 American Samoa Hazard Mitigation Plan)

Stakeholder Coordination

- The study process for the Pacific Territories Post Disaster Watershed Assessments involved broad stakeholder engagement with representation from federal, Territorial/Commonwealth, and local agencies and organizations.
- Engagement from 45 agencies.
- Four scoping charrettes per study.
- Fifteen stakeholder meetings and handfuls of one-on-one calls with partners.
- Letters of support from local leadership and potential champion agencies.

Flooding after Typhoon Mangkhut (source: The Guam Daily Post)

Successful Engagement and Collaboration

- Partner involvement was a cornerstone for the development of the Watershed Assessments.
- A wide breadth of partners was invited and encouraged to participate throughout all stages of the planning process and report development.
- Most of the report development process coincided with the COVID-19 pandemic, which limited in-person meetings. As such, stakeholder engagement was conducted virtually, primarily over WebEx.
- Partners unable to join for plenary calls were invited to provide input through online forms and/or follow up discussions.


Aftermath of Super Typhoon Yutu on Saipan. (Source: The New York Times, 2018)

Conclusion

This Scoping Guide provides best practices, advice, tools, examples, and references to help PDTs scope feasibility and watershed studies. The Guide is envisioned to be a living document that will be revised on a regular basis and offer additional examples and tools as they become available. For example, Version 2.0 will include detailed scoping examples of study activities (i.e., tasks, durations, costs, associated predecessor and successor activities) particular to each of the Civil Works mission areas. Additional references are provided in the following attachments: A) Scoping Team Roles and Collaboration Chart; B) Six Pieces of Paper Template for Feasibility Studies; C) Seven Pieces of Paper Template for Watershed Studies; D) Minimum Requirements for USACE Project Management Plans (ER 5-1-11); E) Detailed Scoping Examples for a Small and Large Aquatic Ecosystem Restoration Study; F) Example Primavera Schedule for City of Boston Coastal Storm Risk Management, MA Feasibility Study; and G) Study Activities: FCSA Signing through the Alternatives Milestone.

Attachment A. Scoping Team Roles and Collaboration Chart

SCOPING TEAM ROLES & COLLABORATION

PLAN FORMULATION | ENVIRONMENTAL COORDINATION, PERMITTING, AND MODELING | FULL TEAM ENGAGED | L LEAD | CL CO-LEAD | ✓ PARTICIPANT

TEAM / TASK	FCSA SIGNED	KICK-OFF MEETING	PMP	MAPS, IMAGES, GRAPHICS, EDITING, 508 COMPLIANCE	PROJECT WEBSITE	FACTSHEETS & PRESS RELEASES	SITE VISIT	USACE SCOPING WORKSHOP	PLAN FORM 1ST ITERATION	INITIATE & RESOURCE LOADED SCHEDULE	SECTION 1002 LETTER SENT	REVIEW PLAN	NEPA SCOPING MEETING LETTERS SENT	PAL FOR FWCAR SENT	GOV'T TO GOV'T CONSULT. W/TRIBES INITIATED	SECTION 106 COMPLIANCE	EARLY MSA COORD. W/NMFS	EARLY CZMA COORD.	NEPA SCOPING MEETING/EJ OUTREACH	PLAN FORM 2nd ITERATION	SUBMIT VTAM TO MSC/HQ-RIT	REVIEW PLAN TO PCX & MSC	AMM DRY RUN WITH LEADERSHIP	AMM READ AHEADS (-1 WK)	AMM	AMM MFR (+2 WKS)	VTAM BRIEFINGS AS NEEDED	
TEAM MACRO TASKS: DATA COLLECTION PERTINENT TO PROJECT AND PROJECT CONTEXT; PLAN FORMULATION TEAM MEETINGS; DRAFT PRESENTATION, REPORT SUMMART, STUDY ISSUE CHECKLIST, RISK REGISTER, VTAM/RESOURCE LOADED SCHEDULE EVOLUTION																												
PROJECT MANAGER	L	CL	L	✓	L	CL	CL	✓	✓	L	L	✓	✓	✓	CL	✓	✓	✓	CL	✓	L	CL	CL	✓	✓	✓	L	
PLANNING TECHNICAL LEAD	✓	L	CL	L	CL	CL	L	L	L	✓	✓	L	CL	✓	✓	✓	✓	✓	L	✓	CL	L	L	L	L	L	CL	
ECONOMICS LEAD		✓	✓	✓			✓	✓	✓	✓		✓	✓						✓	✓			✓	✓	✓	✓	✓	
ENVIONMENTAL NEPA LEAD		✓	✓	✓		✓	✓	✓	✓	✓		✓	L	L	✓	✓	L	L	CL	✓		✓	✓	✓	✓	✓	✓	
ENVIRONMENTAL CULTURAL RESOURCES LEAD		✓	✓	✓			✓	✓	✓	✓		✓	✓		✓	L			✓	✓			✓	✓	✓	✓	✓	
ENVIRONMENTAL PERMITTING/ COMPLIANCE LEAD		✓	✓				✓	✓	✓	✓			✓						✓	✓			✓	✓	✓	✓	✓	
ENGINEERING TECHNICAL LEAD	✓	✓	✓	✓	✓	✓	L	✓	✓	✓		✓			✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	
ENGINEERING COASTAL DESIGN LEAD		✓	✓	✓	✓		✓	✓	✓	✓		✓				✓			✓	✓			✓	✓	✓	✓	✓	
ENGINEERING COST LEAD		✓	✓				✓	✓	✓	✓		✓							✓	✓			✓	✓	✓	✓	✓	
ENGINEERING GEOTECHNICAL LEAD		✓	✓	✓			✓	✓	✓	✓		✓							✓	✓			✓	✓	✓	✓	✓	
ENGINEERING GEOMATICS LEAD		✓	✓	CL			✓	✓	✓	✓									✓	✓			✓	✓	✓	✓	✓	
REAL ESTATE LEAD		✓	✓	✓			✓	✓	✓	✓		✓							✓	✓			✓	✓	✓	✓	✓	
OFFICE OF COUNSEL	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓						✓	✓			✓	✓	✓	✓	✓	
VERTICAL TEAM/HQ-RIT		✓	✓				✓	✓	✓	✓		✓							✓	✓	✓	✓	✓	✓	✓	✓	✓	
PCX		✓	✓				✓	✓	✓	✓		✓							✓	✓	✓	✓	✓	✓	✓	✓	✓	
EDITOR		✓	✓	CL			✓	✓	✓	✓			✓						✓	✓			✓	✓	✓	✓	✓	
GRAPHIC DESIGNER		✓	✓	CL	CL		✓	✓	✓	✓			✓						✓	✓			✓	✓	✓	✓	✓	
CCO or PAO		✓	✓		CL	L	✓	✓	✓	✓			✓						✓	✓			✓	✓	✓	✓	✓	
SPONSOR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓						✓	✓			✓	✓	✓	✓	✓	1

Attachment B. Six Pieces of Paper Template for Feasibility Studies

Adapt the following "six pieces of paper" to your feasibility study.

Paper 1.) Problem and Opportunity Statements

Problems: existing, negative conditions (think within categories such as: navigation, flood risk, ecosystem degradation, water quality, water supply, climate change, land use management, emergency preparedness, etc.)

Problem 1: INSERT SUMMARY STATEMENT

-BULLET LIST OF SUPPORTING DETAILS/STATEMENTS

Problem 2: INSERT SUMMARY STATEMENT

-BULLET LIST OF SUPPORTING DETAILS/STATEMENTS

Problem 3: INSERT SUMMARY STATEMENT

-BULLET LIST OF SUPPORTING DETAILS/STATEMENTS

Problem 4: INSERT SUMMARY STATEMENT

-BULLET LIST OF SUPPORTING DETAILS/STATEMENTS

Opportunities: desirable future conditions

Relate these back to the problem statements above

Opportunity 1: INSERT SUMMARY STATEMENT

-BULLET LIST OF SUPPORTING DETAILS/STATEMENTS

Opportunity 2: INSERT SUMMARY STATEMENT

-BULLET LIST OF SUPPORTING DETAILS/STATEMENTS

Opportunity 3: INSERT SUMMARY STATEMENT

-BULLET LIST OF SUPPORTING DETAILS/STATEMENTS

Opportunity 4: INSERT SUMMARY STATEMENT

-BULLET LIST OF SUPPORTING DETAILS/STATEMENTS

Paper 2.) Narrative of the future without-project condition (FWOP) scenario

Future without-project condition: most likely future condition without a project

Summarize existing conditions related to water resources, Tribal resources and climate. Then, project out over the next 50-years, and use the expertise among the participants to describe trends and conditions that can be expected if nothing is done to change the current condition and trends.

Think back to the problems described in Paper 1. Then for each problem, consider if the problems will continue or worsen. Insert brainstormed response from group – back up later with data/existing info, if possible. For example:

- Will safe, usable navigation increase over time given the current conditions?
- Will flood risk increase over time given the current conditions?
- Will ecosystem degradation worsen over time given the current conditions?
- Will there be a loss of a historic property, to include historic district, National Historic Landmark, and/or known Traditional Cultural Property without a project?
- Will water quality characteristics worsen over time without a project?
- Will water supply increase, decrease, become more or less reliable?
- Will the effects of climate change in the watershed have key impacts? How will the effects of climate change vary over time? (ex. Will precipitation timing, quantity, temperature, hydrology, hydraulics, etc. change over time?)
- What is current land use and what is expected with future land use in the watershed?
- How might other conditions at or around the watershed change in the future without the project?

Paper 3.) Objectives, Constraints and Considerations

Objectives: *What are the results you want to get by solving the problems or taking advantage of the opportunities listed in Paper 1? (Should be at least 1 objective per problem/opportunity statement)*

Ex. Objective: Reduce flood risk to life and property within the watershed by improving awareness of flood risk, creating/improving emergency preparedness and evacuation plans, and reducing the frequency of damaging flows, particularly in population centers and where there is critical infrastructure

Objective 1:

Objective 2:

Objective 3:

Objective 4:

Objective 5:

Objective 6:

Constraints: *What are the things you want to avoid doing or cannot do?*

Constraint (Universal): The recommended plan cannot violate applicable Federal and Tribal laws (if on Tribal land), regulations, and policies.

Constraint 1:

Constraint 2:

Constraint 3:

Considerations: *What are the issues that may inform, but not necessarily direct or constrain, plan formulation?*

Consideration 1:

Consideration 2:

Consideration 3:

Paper 4.) Decision Criteria

Scoping Criteria: *How will the PDT determine what will and will not be considered in the study? (May include policy, authorities, geography, and politics)*

INSERT NOTES FROM GROUP BRAINSTORM HERE

Screening criteria: *What criteria will the PDT use to select some planning strategies and measures from many candidates (multi-criteria decision making)?*

The five general categories of criteria that we use for measure screening and conceptual alternatives/strategies decisions in the Tribal Partnership Program include:

- Completeness (only for conceptual alternatives decisions)
- Effectiveness (meets objectives)
- Efficiency (amount of benefit vs. cost)
- Acceptability (feasible technically, environmentally, economically, socially, etc.)
- Tribal Acceptability/Support (culturally appropriate, in line with Tribal values, has support of Tribal Council and members)*

**This applies if it is a Tribal Partnership Program (TPP) project and does not apply for projects that are not on Tribal land.*

Evaluation, comparison, and selection criteria: *What criteria do we use to make decisions about alternative plans?*

Evaluation Criteria: What criteria can we use to screen all practicable alternatives down to those that will be recommended and prioritized?

Comparison Criteria: What criteria can we use to compare conceptual plans to one another within a final array? Examples may include:

- Benefits to the economy
- Benefits to human health and safety
- Amount of reduction in flood risk/coastal storm risk
- Amount of reconnected/ restored floodplain habitat
- Environmental effects (NEPA effects analysis)
- Leadership and public opinions
- Trade-offs
- Reduction in adverse impacts to navigation

Selection: What criteria will drive the selection of the recommended conceptual alternatives? Examples may include:

- Least cost for greatest anticipated improvement
- Potential Federal Interest
- Implementability – Availability of potential partner(s), programs, authorities, grants, etc. for implementation of the recommendations

Paper 5.) Questions decision makers would like to have answered as the investigation proceeds (what is unique about the study decision makers should know?)

INSERT BRAINSTORMED QUESTIONS HERE TO HELP DETERMINE THE STUDY SCOPE

Paper 6.) Risks and uncertainties that are likely to be most significant in the study

(Instrumental uncertainty – what might change the recommended conceptual alternatives or effect the ability to implement them?)

INSERT BRAINSTORMED RISKS AND UNCERTAINTIES HERE. USE THESE TO BUILD OUT THE FIRST DRAFT OF THE RISK REGISTER AFTER THE CHARETTE.

Attachment C. Seven Pieces of Paper Template for Watershed Studies

Adapt the following "seven pieces of paper" to your watershed study.

Paper 1.) Problem and Opportunity Statements

Problems: existing, negative conditions (think within categories such as: flood risk, ecosystem degradation, water quality, water supply, climate change, land use management, emergency preparedness, etc.) *Consider the following examples and develop problem statements appropriate for your study.*

Problem 1: Ex) Lack of comprehensive, long range watershed management plans for the _____ watershed.

Problem 2: Ex) XXX communities, roads, critical public facilities (e.g., schools, medical facilities, utility infrastructure, etc.), and cultural/natural resources are subject to significant flood-risk, flood related damages, and life, safety, and health impacts due to flooding.

Problem 3: Ex) Livestock grazing, changes in vegetation density and composition, and climate change are contributing to accelerated erosion of sediment throughout the watersheds. This results in headcutting, channel entrenchment, separation of the groundwater table from surface vegetation, excessive sediment loading of washes, and aggradation of sediment further downstream.

Problem 4: Ex) Watersheds have experienced a loss of floodplain functions such as temporary storage of floodwaters, attenuation of peak flows, resistance to erosion, maintenance of water quality, and groundwater recharge.

Problem 5: Ex) Traditional, archaeological, and culturally sensitive religious sites are threatened by erosion, lateral channel migration and sediment aggradation.

Problem 6: Ex) Degradation of vegetation has destabilized surface soils, resulting in Aeolian transport (active sand dunes) at numerous locations throughout the watersheds. Resulting transport of sediments further degrades vegetation, in addition to water quality and ecosystem function.

Problem 7: Ex) Invasive vegetation threatens the ecosystems within the study area. Tamarisk or salt cedar (Tamarix sp.), Russian thistle, Russian olive, and

other non-native species continue to displace native plants. These invasive species have reduced value for livestock and wildlife and can decrease the ability of watercourses to pass flood flows.

Problem 8: Ex) Lack of adequate water supply and distribution system exists throughout the watershed. This problem affects potable water supplies for human consumption, as well as water supplies for livestock and irrigation.

Problem 9: Ex) Degradation of both surface and groundwater quality throughout the watersheds causes public health/safety and environmental/ecosystem risks.

Problem 10: Ex) Wildlife habitat and ecosystem function have become impaired throughout the watersheds due to accelerated erosion, invasive species, and a decrease in both water availability and quality.

Opportunities: Desirable future conditions. *Consider the following examples and tailor to your study.*

Opportunity 1: Ex) The opportunity exists to develop comprehensive, long-range watershed management plans for the four washes in the study area.

-BULLET LIST OF SUPPORTING DETAILS/STATEMENTS

Opportunity 2: Ex) The opportunity exists to address flood risk to XXX communities, roads, critical public facilities, cultural/natural resources and life safety.

-BULLET LIST OF SUPPORTING DETAILS/STATEMENTS

Opportunity 3: Ex) The opportunity exists to modify land and range management to restore conditions that will increase cover of desirable vegetation species and reduce soil erodibility.

-BULLET LIST OF SUPPORTING DETAILS/STATEMENTS

Opportunity 4: Ex) There is an opportunity to restore floodplain functions across the watersheds.

-BULLET LIST OF SUPPORTING DETAILS/STATEMENTS

Opportunity 5: Ex) There is an opportunity to reduce threats to traditional, archaeological and culturally sensitive religious sites caused by erosion.

-BULLET LIST OF SUPPORTING DETAILS/STATEMENTS

Opportunity 6: Ex) There is an opportunity to stabilize surface soils and reduce the formation of sand dunes across the watersheds.

-BULLET LIST OF SUPPORTING DETAILS/STATEMENTS

Opportunity 7: Ex) There is an opportunity to restore native plant communities while reducing the abundance of undesirable invasive species.

-BULLET LIST OF SUPPORTING DETAILS/STATEMENTS

Opportunity 8: Ex) There is an opportunity to improve water supply and distribution systems that provide water for human consumption, livestock and irrigation.

-BULLET LIST OF SUPPORTING DETAILS/STATEMENTS

Opportunity 9: Ex) There is an opportunity to improve the quality of surface and groundwater throughout the watersheds.

-BULLET LIST OF SUPPORTING DETAILS/STATEMENTS

Opportunity 10: Ex) There is an opportunity to restore wildlife habitat and ecosystem function throughout the watersheds.

-BULLET LIST OF SUPPORTING DETAILS/STATEMENTS

Paper 2) Shared Vision Statement

A Shared Vision Statement should be broad enough to encompass various goals and objectives of individual partners and stakeholders and have a sufficiently detailed description to allow for subsequent development of specific planning objectives and associated metrics. The shared vision will be the basis for establishing the study framework, which will identify the roles and responsibilities of each partner in the watershed study, identifying which entity will perform certain tasks, and how those tasks will move the study toward achieving the shared vision.

Example Shared Vision Statement:

Federal and State governments share a vision for an integrated flood management system in the Central Valley to provide for safe, healthy, and thriving communities while protecting and restoring the environment. The problem is so overwhelming that achievement of this shared vision can only be through pursuit of mutual priorities. The State's flood risk management priorities of public safety, environmental stewardship, and economic stability match the Federal administration's priorities of protecting the American people, restoring, and protecting the environment, and improving the nation's economy.

Shared Vision Statement:
Day 1 thoughts:
INSERT TEAM INPUT

Study Goals:
These should relate back to the overall vision, and break out the goals more specifically by focus area (ex. Goal: Increase flood risk management within the watershed.) *Consider these examples and develop goals for your study:*

Study Goal 1: Ex) Monitor water resources and maintain a database

Study Goal 2: Ex) Meet water demands/needs for current and future population and development

Study Goal 3: Ex) Create a long-term watershed management plan

Study Goal 4: Ex) Integrated water resources management; adaptive management

Study Goal 5: Ex) Improving and protecting natural processes

Study Goal 6: Ex) List of prioritized recommendations with buy-in

Study Goal 7: Ex) Prepare for and be more resilient to drought

Study Goal 8: Ex) Map and delineate floodplains

Paper 3.) Narrative of the future without-project condition (FWOP) scenario

Future without-project condition: most likely future condition without a project
Summarize existing conditions related to water resources and climate. Then, need to project out over the next 50-years, and use the expertise among the participants to describe trends and conditions that can be expected if nothing is done to change the current condition and trends.

Think back to the problems described in Paper 1. Then for each problem, consider if the problems will continue or worsen. Insert brainstormed response from group – back up later with data/existing info, if possible. For example:

- Ex) Will flood risk increase over time given the current conditions?
- Ex) Will ecosystem degradation worsen over time given the current conditions?
- Ex) Will water quality characteristics worsen over time without a project?
- Ex) Will water supply increase, decrease, become more or less reliable?
- Ex) Will the effects of climate change in the watershed have key impacts? How will the effects of climate change vary over time? (ex. Will precipitation timing, quantity, temperature, hydrology, hydraulics, etc. change over time?)
- Ex) What is current land use and what is expected with future land use in the watershed?
- How might other conditions at or around the watershed change in the future without the project?

Paper 4) Objectives, Constraints and Considerations

Objectives: *What are the results you want to get by solving the problems or taking advantage of the opportunities listed in Paper 1? (Should be at least 1 objective per problem/opportunity statement)*

Ex. Objective: Reduce flood risk to life and property within the watershed by improving awareness of flood risk, creating/improving emergency preparedness and evacuation plans, and reducing the frequency of damaging flows, particularly in population centers and where there is critical infrastructure

Objective 1:

Objective 2:

Objective 3:

Objective 4:

Objective 5:

Objective 6:

Objective 7:

Constraints: *What are the things you want to avoid doing or cannot do?*

Constraint (Universal): The watershed management plan cannot violate applicable Federal and Tribal laws*, regulations, and policies.

**Applies only for TPP projects on Tribal land*

Constraint 1: Ex) Lack of knowledge of the issues

Constraint 2: Ex) Limited funding to implement, operate and maintain projects

Constraint 3: Ex) Limited precipitation/water supply

Constraint 4: Ex) Existing land use policies (BIA, Navajo Nation)

Constraint 6: Ex) Water Rights Litigation

Constraint 7: Ex) Uranium contamination of soil and water

Constraint 8: Ex) Limited availability of NRCS programs on Navajo lands

Constraint 9: Ex) Data sharing! (or lack thereof)

Considerations: *What are the issues that may inform, but not necessarily direct or constrain, plan formulation?*

Consideration 1: Ex) Cultural differences between agencies

Consideration 2: Ex) Knowing who to contact with respect to projects

Consideration 3: Ex) Knowing who has responsibility to maintain and operate existing and proposed development

Consideration 4: Ex) Local restrictions

Consideration 5: Ex) Local land disputes

Consideration 6: Ex) Detailed floodplain mapping is not available and would need to be developed

Consideration 7: Ex) Priority of extractive economy

Consideration 8: Ex) Unknown competing demands for water (e.g. Peabody Aquifer use)

Consideration 9: Ex) Grazing regulations – No permit system in place; cannot apply for funding under USDA, NRCS, EQUIP because of lack of grazing permits

Consideration 10: Ex) Cultural considerations – cultural, historical, environmental clearances for recommendations; culturally sensitive areas; fish and wildlife sensitive areas; difficult permitting processes

Consideration 11: Ex) Coordination and Collaboration with other agencies – Lack of MOUs with other agencies to implement projects and share information; need to have local communities involved; need consensus, buy-in from locals.

Consideration 12: Ex) Customary land use

Paper 5.) Decision Criteria

Scoping Criteria: *How do we determine what will and will not be considered in the study? (May include policy, authorities, geography, and politics)*

INSERT NOTES FROM GROUP BRAINSTORM HERE

Screening criteria: *What do we use to select some planning strategies and measures from many candidates (multi-criteria decision making)?*

The four general categories of criteria that we use for measure screening and conceptual alternatives/strategies decisions include:

- Completeness (only for conceptual alternatives decisions)
- Effectiveness (meets objectives)
- Efficiency (amount of benefit vs. cost)
- Acceptability (feasible technically, environmentally, economically, socially, etc.)

Evaluation, comparison, and selection criteria: *What criteria do we use to make decisions about conceptual alternatives?*

Evaluation Criteria: What criteria can we use to screen all conceptual alternatives down to those that will be recommended and prioritized?

- Ex) How well does the alternative meet the objectives?

Comparison Criteria: What criteria can we use to compare conceptual plans to one another within a final array?

- Ex) Amount of reduction in flood risk
- Ex) Amount of reconnected/ restored floodplain habitat
- Ex) Environmental Effects (NEPA effects analysis)
- Ex) Tribal leadership and Tribal public opinion*

**Only for a TPP project*

- Ex) Trade-offs

Selection: What criteria will drive the selection of the recommended conceptual alternatives?

- Ex) Least cost for greatest anticipated improvement
- Ex) Potential Federal Interest

- Ex) Implementability - Availability of potential partner(s), programs, authorities, grants, etc. for implementation of the recommendations

Paper 6.) Questions decision makers would like to have answered as the investigation proceeds

What is unique about the study decision makers should know?

1. Ex) How much water is available to the communities in this watershed study area? (i.e. What is the water budget)?
2. Ex) What is current and future water supply demand (need)?
3. Ex) Where will the water for the communities and ecosystems in the study area come from in the future?
    a. Future development: roads, structures restricted by availability of potable water and construction water

Paper 7.) Risks and uncertainties that are likely to be most significant in the study

(Instrumental uncertainty – what might change the recommended conceptual alternatives or effect the ability to implement them?)

INSERT BRAINSTORMED RISKS AND UNCERTAINTIES HERE. USE THESE TO BUILD OUT THE FIRST DRAFT OF THE RISK REGISTER AFTER THE CHARETTE

- Ex) Lack of vision/accountability/continuity of XXX leadership (i.e., elections)
- Etc.

Attachment D. Minimum Requirements for USACE Project Management Plans (ER 5-1-11)

A PMP is a roadmap for quality project or work delivery and should focus on the key deliverables that will drive the PDT to successfully meet its commitments. The PMP will include the following at a minimum: Scope, PDT roles, Assumptions and Constraints, WBS, Schedule, Funding, Change management, Value Management, Risk, Communications, Quality, Acquisition Strategy, Safety, Data Management, and close-out.

The PMP approval should be delegated to the lowest appropriate supervisory level in order to maintain a minimal level of management control. Processes such as Safety, Quality, Risk, Change Management, and Communications may be addressed in a programmatic plan or at the organizational level (Branch, Division, or District) for a program or a portfolio of similar projects.

The enterprise PMP Generator, or ePMP, (available on the PMBP portal) may be used to develop the PMP in order to effectively maintain consistency and comply with the Federal Records Management Act.

Figure E-1 – Minimum content of the Project Management Plan

The fifteen minimum required elements of a USACE PMP are:

1. Scope – The scope forms the boundary of the project. It is not a list of everything to be done; it is the end result(s) the project should produce. The scope should define the stakeholders' requirements and the acceptance criteria.

2. Team Identification – For each assignment or task the PM must identify the team members who will accomplish the work/deliverables. A critical step in effectively managing and delivering projects is to formally assign roles and responsibilities to PDT members.

3. Critical Assumptions and Constraints - Assumptions and constraints are considered to be true at the time the PMP is written and approved. The assumptions could cause major impact to the project; constraints are items that limit the PDT's options. It is a best practice to touch on this up front and early in the PMP and to ensure that true constraints are not confused with planning considerations. These should also be revisited and updated at least at each milestone.

4. Work Breakdown Structure (WBS) – The WBS is a deliverable-oriented hierarchical decomposition of the work to be executed by the PDT to accomplish the project objectives and create the required deliverables. It organizes and defines the total scope of the project. Each descending level represents an increasingly detailed definition of the project work. This should match and describe in more detail the overview of work included in the written scope portions of the PMP.

5. Schedule – The PM should prepare a schedule, with the assistance of the PDT, for even the smallest projects. The PDT should use their judgment to develop realistic activity durations. The schedule enables the PM/PDT to determine which activities are required to produce a deliverable, estimate how long the activities will take, calculate the resources required to deliver the project and assign activities and responsibilities.

6. Project Cost – After ensuring that each team member is clear on what they must produce, develop estimates of the number of hours required to produce

the deliverables. PDT members must be engaged in this process in order to secure their commitment.

7. Change Management (CM) – Change Management (CM) refers to any approach to transitioning individuals, teams, and organizations using methods intended to re-direct the use of resources, business process, budget allocations, or other modes of operation that significantly reshape a project or program. CM should be a deliberate process with approval by the PM, PDT, District/Division leadership and the stakeholder.

8. Value Engineering – Value Management (VM) is a process to facilitate and encourage the understanding, consideration, and integration of the needs of all customers, PDT members, partners, and stakeholders. Value Management seeks the highest value for a project by balancing resources and quality.

9. Communications and Reporting – The Communications Plan describes how the PDT will communicate with the stakeholder(s), each other and include a discussion of the stakeholder's requirements for status reporting.

10. Risk Management – Risk Management is a systematic process of identifying, analyzing, and responding to risk for the entire project life-cycle. This process should be performed at the initial stage and then monitored and controlled throughout the life of the project. The level of detail of the Risk Management Plan should be commensurate with the project's complexity.

11. Quality Management – The Quality Management Plan includes the degree to which a set of inherent characteristics fulfills requirements. Standard quality management procedures are usually defined at the program or organizational level; however, project specific quality objectives must be identified and the procedures for ensuring quality control and quality assurance referenced.

12. Acquisition Strategy – Acquisition planning is the strategy by which the procurement decisions are coordinated and integrated to ensure the delivery of the project's deliverables.

13. Safety – The Safety and Occupational Health Plan addresses how safety and health measures will be integrated into the project's phases. The plan includes

safety and health responsibilities, standards, requirements and criteria, and hazard analysis requirements and any safety and health testing/assessment requirements.

14. Data Management – Data Management (DM) is a process and standard for the collection and life cycle maintenance of data used by the PDT members, partners, and stakeholders. Data Management is also a key component to Value and Quality Management.

15. Closeout – Project close-out is an essential step for every project to ensure that the team documents Lessons Learned and transfers the property to the stakeholder.

Attachment E. Detailed Scoping Examples for a Small and Large Aquatic Ecosystem Restoration Study

Tasks to be Scoped:

1. Estimate ecological outputs for Existing, Future Without Project Condition (FWOP) and Future With Project (FWP) Conditions (i.e., Alternatives)

2. Estimate ecological benefits

3. Conduct cost effectiveness and incremental cost analyses (CE/ICA)

Note that the examples below are focused on the tasks associated with estimation of ecological outputs necessary to measure the effectiveness and benefits of AER projects, which are critical tasks in identifying the National Ecosystem Restoration (NER) plan and the study's Tentatively Selected Plan (TSP).

These tasks do not include the legally required environmental compliance and coordination activities that would be necessary for any type of project.

Similarly, other benefits besides restoration of habitat should be identified, as applicable, in comparing alternatives and selecting the TSP. These other benefits should be categorized using the four P&G accounts, and a determination made whether those benefits would be measured qualitatively versus quantitatively, and what metrics would be used to measure those benefits. These tasks and durations are not included in the examples below, but could be substantial, especially if the other benefit categories are quantitatively analyzed.

Study Context **Study A:** • **Smaller** study area (3-mile riverine reach) • **Two types of habitat** to be restored (riparian forest and shallow backwater)		
Relevant Assumptions	**Tasks**	**Duration – working days, not dates**
Similar studies in vicinity. **Similar planning objectives** to other studies in vicinity. Can use existing, **already approved/ certified models** (for example, Habitat Suitability Index (HSI) models). **Interagency coordination/buy-in** is critical to a smooth Fish and Wildlife Coordination Act (and sometimes Clean Water Act/compensatory mitigation) process, and **ECO-PCX** coordination is critical to the planning milestones.	**Select** appropriate indicator species **models** (2). Note: **Predecessor activities** to ecological model selection include identifying a reference condition and/or developing a conceptual ecological model.	2 days
	Coordinate with ECO-PCX on model selection for Review Plan (required by AMM) and **interagency coordination/buy-in** on model and variable selection.	5 days (may be concurrent with other tasks, but does require time and funding for coordination)
		Note: When ECO-PCX is serving as the RMO, need to allow time for account manager and operating director to review and endorse entire review plan and model user documentation questionnaire
		Note: model re-certification or **minor adaptations to existing models** may take 10-15 days and cost $10,000 – $20,000
	Collect field data or **check for best available data** – may not need to collect new data if sponsor or partners have data for use -- associated with model parameters for selected ecological models (e.g., HSI models) for **Existing and FWOP conditions.** [Note that the number of models will vary based on the habitat types specific to any given study.]	12 – 15 days
	Note: Allow time to gain **Rights of Entry** for access to lands/waters to conduct field investigations.	
	Note: Need to determine whether existing conditions are an accurate indicator of FWOP conditions, which may include **coordination with the CPR CoP**. In	

	complex systems, the change from existing to FWOP conditions may require **H&H modeling**.	
	Estimate with project changes to model parameters for each alternative using selected ecological models **(FWP conditions).**	5 days (could require **inputs from other disciplines**, such as H&H, to estimate habitat variable changes, such as depth or velocity)
	Calculate average annual habitat units (AAHUs) for FWOP and FWP alternatives (run ecological (e.g., HSI) models for FWOP & FWP). Select appropriate target years.	10 days
	Calculate benefits (difference between FWOP and FWP) = "ecological lift."	2 days
Each alternative will have a unique Monitoring and Adaptive Management Plan (MAMP), with unique costs and triggers associated with any uncertainties related to the alternative's performance. The costs of the MAMP are included in the total cost of each alternative, a necessary **predecessor** to running CE/ICA. For smaller scale projects (e.g., CAP-like), using a flat percentage of the alternative's cost may suffice to develop the MAMP costs.	**Develop MAMP for each alternative.**	2 days
Plan formulation activities (to develop management measures, alternatives, and a MAMP for each alternative) and cost estimating activities (to develop costs for alternatives, including **OMRR&R costs**) are **predecessor** activities to CE/ICA, although they may have been **concurrent** with estimating ecological outputs (e.g., AAHUs).	**Run CE/ICA** to identify cost effective and best buy plans.	5 days
Approximate Total Duration:		**46 days = 368 hours**
Estimated PDT Costs:	@$150/ hour	**$55,200**
Estimated ECO-PCX Costs:		**$20,000**
Total Estimated Costs:		**$75,200**

Study Context **Study B:** • **Larger** scale study area (800 square-mile terminal lake) • **Five types of habitat** to be restored (playa, tributary streams, mudflats, shallow water, deep water)		
Relevant Assumptions	**Tasks**	**Duration – working days, not dates**
No similar or analog studies in vicinity. **No existing, approved/certified models** (Habitat Suitability Index (HSI) or other models) for indicator species or region. **Interagency coordination/buy-in** is critical to a smooth Fish and Wildlife Coordination Act (and sometimes Clean Water Act/compensatory mitigation) process, and **ECO-PCX** coordination is critical to the planning milestones.	**Develop new ecological model** specific to unique conditions and resources in this study area. Will likely require consultation with outside resource experts (e.g., ERDC, academia, consultants) and coordination with ECO-PCX (see below). May include initial model development workshop (conceptual model, model metrics, model structure) and model refinement workshop for testing, review, and refining. Also requires putting together the model review documentation package. Note: **Predecessor activities** to ecological model development include identifying a reference condition and/or developing a conceptual ecological model.	45 days (up to 90 days) Note: Additional $110,000 (and approximately 3-6 months) required for labor for outside experts (e.g., ERDC) and ECO-PCX – this is in addition to PDT costs.
	Coordinate with ECO-PCX on models to be used or developed (required by AMM) and model approval/certification (required by TSP). Coordinate review plan with ECO-PCX account manager and ultimately endorsement by Operations Director; complete the module user documentation questionnaire.	8 – 20 days (may be concurrent with other tasks, but does require time and funding for coordination), including pulling together the model documentation package. Note: Additional $30,000 – $65,000 (and approximately 3-6 months, depending on the complexity of the model) required for ECO-PCX review – this is in addition to PDT costs.

	I**nteragency coordination/ buy-in** on model and variable selection (including model to be developed).	Note: When ECO-PCX is serving as the RMO, need to allow time for account manager and operating director to review and endorse entire review plan + model user documentation questionnaire
	Collect field data or **check for best available data** – may not need to collect new data if sponsor or partners have data for use – associated with study-specific habitat model (5 habitat types in this example) for **Existing and FWOP conditions**. [Note that the number of models will vary based on the habitat types specific to any given study.]	23 – 30 days
	Note: allow time to gain **Rights of Entry** for access to lands/ waters to conduct field investigations.	
	Note: Need to determine whether existing conditions are an accurate indicator of FWOP conditions, which may include **coordination with the CPR CoP**. In complex systems the change from existing to FWOP conditions may require **H&H modeling**.	
	Estimate with project changes to model parameters for each habitat type for each alternative using developed ecological model **(FWP conditions).**	30 days (will require **inputs from other disciplines**, such as H&H, to estimate habitat variable changes, such as frequency, depth, salinity). Note: since models are untested, additional time included to address any errors or make **model corrections.** If using a model that has not been approved/ certified, then document the risk in risk register.
	Calculate AAHUs for FWOP and FWP Alternatives (run habitat model for FWOP and FWP). Select appropriate target years.	15 days
	Calculate benefits (difference between FWOP and FWP) = "ecological lift."	2 days
Each alternative will have a unique MAMP, with unique costs and triggers associated with any uncertainties related to the alternative's performance. The costs of the	**Develop MAMP for each alternative.**	5 days

MAMP are included in the total cost of each alternative, a necessary **predecessor** to running CE/ICA. For most projects (including all larger or more complex projects), the triggers and requirements of the MAMP should be critically considered from the outset of alternative development.		
Plan formulation activities (to develop management measures, alternatives, and a MAMP for each alternative) and cost estimating activities (to develop costs for alternatives, including **OMRR&R costs**) are **predecessor** activities to CE/ICA, although they may have been **concurrent** with estimating ecological outputs (e.g., AAHUs).	**Run CE/ICA** to identify cost effective and best buy plans.	10 days
Approximate Total PDT Duration:		**202 days = 1,616 hours**
Estimated ECO-PCX Costs – model review/approval process:		**$65,000**
Estimated Model Development Costs:		**$110,000**
Estimated PDT Costs:	@$150/ hour	**$242,400**
Total Estimated Costs:		**$417,400**

Attachment F. Example Primavera Schedule for City of Boston Coastal Storm Risk Management, MA Feasibility Study[1]

[1] Note that this is only an example schedule and that each study schedule should include the appropriate tasks specific to that study.

	Activity Name	Start	Finish	Project Status	Milestone
City of Boston Coastal Storm Risk Management, MA					
	Project Management	8-29-2022 A	7/1/2026	Active	
	City of Boston NF$ (CS 586)	8-29-2022 A	8/19/2027	Active	
	City of Boston IN-KIND Contributions	12-5-2022 A	6/25/2027	Active	
	Execute FCSA		5-2-2022 A	Active	CW130
Scoping					
Study Initiation					
	Pre-Charrette Data Collection	8-29-2022 A	10-20-2022 A	Active	
	Develop Report Summary	8-29-2022 A	12-16-2022 A	Active	
	Develop Risk Register	8-29-2022 A	12-16-2022 A	Active	
	Prepare Charrette Read Ahead Material	10-3-2022 A	10-20-2022 A	Active	
	Conduct Planning Charrette (scalable)	10-18-2022 A	10-20-2022 A	Active	
	Prepare Initial Draft of PMP and Peer Review Plan	8-30-2022 A	9-27-2022 A	Active	
	PMP Review	9-23-2022 A	12-9-2022 A	Active	
	MSC Review of Peer Review Plan	12-21-2022 A	1-24-2023 A	Active	
	Conduct NEPA Scoping/Coordinate with Agencies	8-29-2022 A	1-11-2023 A	Active	
	Signed PMP		1-6-2023 A	Active	CW040
	Review the Peer Review Plan	9-28-2022 A	11-23-2022 A	Active	
	Peer Review Plan Approved and Posted		1-31-2023 A	Active	CW035
	Prepare Model Review Plan	8-29-2022 A	9-28-2022 A	Active	
	Model Certification (if needed)	8-28-2022 A	12-9-2022 A	Active	
Existing Conditions					
	Complete Preliminary Existing and Future w/o Conditions Analysis (Insert more detail based on project needs; 8 months)	8-29-2022 A	2-24-2023 A	Active	
	Identify Focused Array of Alternatives	8-29-2022 A	2-24-2023 A	Active	
Alternatives Milestone					
	DQC Alternatives Documentation	1-3-2023 A	1-17-2023 A	Active	

Prepare Read Ahead Material for Alternatives Milestone	11-17-2022 A	12-16-2022 A	Active	
Submit Read Ahead Material for Alternatives Milestone	1-18-2023 A	1-31-2023 A	Active	
Conduct Alternatives Milestone Meeting		2-23-2023 A	Active	CW261
Alternatives MFR and VTAM		3-31-2023 A	Active	CW060
Tentatively Selected Plan Milestone				
Detailed Evaluation of Alternatives				
Analysis of Final Array of Milestones (Insert more detail based on project needs; 6 months)	3-8-2023 A	9/30/2025	Active	
Prepare Notice of Intent (only for EIS)	5-1-2025*	8/22/2025	Active	
Model Refinement				
Coastal Hazard System (CHS)Model Develop and Refinement	3-1-2023 A	9/1/2023	Active	
CHS Model Runs for Validation	9/1/2023	9/29/2023	Active	
Existing Conditions				
Review of Existing Projects for Existing and FWOP inclusion	10-20-2022 A	9/30/2023	Active	
Environmental limited Data Collection to feed BA/BO/EFHA/etc.		11-30-2023*	Active	
Cultural resources survey work		11-30-2023*	Active	
Geotechnical Review	2-23-2023 A	11/30/2023	Active	
Run Existing Condition CHS Model/ 2 WSE Scenarios	9-30-2023*	11/30/2023	Active	
Economic Tasks Existing Conditions	3-1-2023 A	2/15/2024	Active	
Write Existing Conditions Report		2-15-2024*	Active	
Future Without Project (FWOP)				
Engineering Input into FWOP and pre-work for FWP	12-1-2023*	2/15/2024	Active	
Prepare design drawings to reflect any known or planned modifications to the project area	12-1-2023*	2/15/2024	Active	
Numerical model preparations	2-15-2024*	3/15/2024	Active	
CHS Without Project Modeling	3-15-2024*	6/15/2024	Active	
Targeted ATR of Without Project Coastal Modeling	6-15-2024*	7/15/2024	Active	

G2/Beach FX/LifeSim/RECONS/Economic Modeling	7-16-2024*	10/15/2024	Active	
Targeted ATR of Without Project Economic Modeling	10-15-2024*	11/15/2024	Active	
Environmental Analysis of FWOP based on Engineering outputs	7-15-2024*	11/15/2024	Active	
Real Estate Plan Inventory FWOP	7-15-2024*	11/15/2024	Active	
PDT input into FWOP/FWP	7-16-2024*	11/16/2024	Active	
FWOP IPR with Vertical and Horizontal Team		11-15-2024*	Active	
FWOP Community Outreach (EJ) IAW Phase II STRATCOM	11-15-2024*	12/15/2024	Active	
Future With Project (FWP)				
PDT Reviews Alts and Measures	12-16-2024*	12/20/2024	Active	
Iteration of the Planning Process	1-6-2025*	1/10/2025	Active	
Plan Formulation Measures & Alts	1-13-2025*	2/13/2025	Active	
Comprehensive Benefits Analysis - Identify metrics and alts for OSE/ NED/RED/EQ	1-13-2025*	2/13/2025	Active	
CHS with FWP Alternatives	1-13-2025*	3/15/2025	Active	
Identify Quantities, Elevations, Foundations	1-13-2025*	3/15/2025	Active	
Engineering develops initial designs and cross sections	1-13-2025*	3/15/2025	Active	
Cost developed for Alternatives	3-16-2025*	4/15/2025	Active	
Economic Modeling of the FWP and RED	3-16-2025*	7/31/2025	Active	
Environmental assessment/mitigation/ NEPA/costs	3-16-2025*	9/30/2025	Active	
Environmental data collection for Mitigation Plan	6-1-2025*	8/31/2025	Active	
ERDC Coastal Modeling Report		8/31/2025	Active	
Potential Additional Modeling to support env effects	8-1-2025*	9/30/2025	Active	
Public Scoping for EIS	5-1-2025*	11/16/2025	Active	
FWP Community Outreach (incl. EJ) IAW STRATCOM Phase III	5-1-2025*	11/16/2025	Active	
Tentative Selected Plan				
Update Report Summary, Risk Register	10-1-2025*	1/1/2026	Active	
Negotiate IEPR Contract	10-4-2025*	1/4/2026	Active	

Abbreviated Cost Risk Analysis	8-1-2025*	8/31/2025	Active	
DQC of Draft Report	2-4-2026*	3/5/2026	Active	
IEPR Contract Awarded	1-5-2026*	1/5/2026	Active	
Read Ahead Material for Tentatively Selected Plan	10-1-2025*	12/19/2025	Active	
Submit TSP Milestone	1/20/2026		Active	CW262
Conduct TSP Milestone Meeting		2/4/2026	Active	
TSP MFR and VTAM		3-5-2026*	Active	CW060
Prepare Draft Report for Concurrent Review	10-1-2025*	3/5/2026	Active	
Complete Supporting Docs for Policy Review	2/4/2026	4/7/2026	Active	
Submit Draft Report to HQ		4/7/2026	Active	
Prepare NOA	3-15-2026*	4/7/2026	Active	
NOA Filed in Federal Register		4/8/2026	Active	
Public Review Period Start	4/7/2026		Active	CW250
Public Review Period	4/7/2026	5/9/2026	Active	
ATR of Draft Report	4/7/2026	4/29/2026	Active	
Public Draft Report and NEPA Comment Period	4/7/2026	4/29/2026	Active	
Policy Review	4/7/2028	4/29/2026	Active	
IEPR Review	4/7/2026	7/9/2026	Active	
Receive IEPR Comments		7/9/2026	Active	
Respond to IEPR Comments	7/9/2026	9/1/2027	Active	
Receive Final IEPR Report		9/1/2027	Active	
Feasibility Level Analysis				
Prepare Read Ahead for Agency Decision Milestone	6-27-2026*	9/5/2026	Active	
Submit Read Ahead Material for Agency Decision Milestone		9/5/2026	Active	
Agency Decision Milestone		10/6/2026	Active	CW263
Agency Decision MFR		11/15/2026	Active	CW060
Feasibility Level of Design				

Additional Engineering, Economic, Real Estate and Environmental Analysis (if necessary)	10/7/2026	9/1/2027	Active	
Cost Certification from Cost DX		10/16/2027	Active	
Complete Draft of Final FR/EA/EIS (ROD)	10/7/2026	8/30/2027	Active	
DQC of Final Report	9/1/2027	9/30/2027	Active	
ATR of Final Report	10/1/2027	10/31/2027	Active	
District Final Report Submittal		11/1/2027	Active	CW160
HQ Finalize Comments and Project Guidance Memo	11/1/2027	11/30/2027	Active	
Submit Final Report (Division Engineer's Notice)		12/20/2027	Active	
Chief's Report Milestone				
State and Agency Review (Final FR/EA/EIS and Draft Chief's Report)	1-5-2028*	2/5/2028	Active	
Response Letters to S&A comments (If required)	2/12/2028	2/15/2028	Active	
OWPR & RIT Coordination of Final Report Packet & Chief's Report	2/16/2028	4/30/2028	Active	
Chief Signs Report of the Chief of Engineers		4/30/2028	Active	CW270
ASA(CW) Signs Record of Decision (ROD) (before goes to Congress)		5/29/2028	Active	CW230
Feasibility Report Transmittal to Congress	6/12/2028	6/12/2028	Active	
Feasibility Report to Congress		6-14-2028*	Active	CW180

Attachment G. Study Activities: FCSA Signing through the Alternatives Milestone

Study Activities: FCSA Signing through the Alternatives Milestone

This table provides an example guide to the activities of a USACE feasibility study team from the signing of a Feasibility Study Cost Share Agreement through the successful completion of an Alternatives Milestone and submittal of a Vertical Team Alignment Memo. Most of the activities are based in law, guidance, or policy but some are best practices or standards of planning. The activities are presented in rough chronological order to assist teams in understanding the expectations and sequences of events early in a water resources planning study. The order of presentation is an example and teams have flexibility to pursue and complete the actions in their own order of priority unless otherwise required by law or guidance. The majority of the activities are set up over a 90-day period which is within the goal for reaching an Alternatives Milestone. Activities extending after the milestone are identified as well to help illustrate the formal milestone completion steps and achievement of vertical alignment. For simplicity many activities are displayed as single work day events but in reality these tasks may take multiple days or weeks to complete and may require multiple sub-tasks.

Day	Action	Responsibility	References	Notes	Links
0	Sign a Feasibility Cost Share Agreement	District & Non-Federal Sponsor	10 August 2018 memo Bipartisan Budget Act of 2018 (BBA 2018) - Model Agreement for New Feasibility Studies 17 May 2017 memo Updated Implementation Guidance for Section 1002 of the Water Resources Reform and Development Act (WRRDA) of 2014, Consolidation of Studies	The FCSA signing marks the formal start of a feasibility study & the beginning of the 3 year clock to complete a feasibility study.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/FY%2018%20Supplemental%20-%20Transmittal%20of%20Model%20Agreement%20for%20New%20Feasibility.pdf https://planning.erdc.dren.mil/toolbox/library/WRDA/WRRDA2014IGSection1002.pdF https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==

1	Send a copy of the signed FCSA to the Major Subordinate Command	District (Project Manager)	Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 2018 Pre-Alternatives Milestone Meeting Checklist	See webinar slide 7 and slide 15. NOTE: The webinar focused on 2018 Supplemental funding but many of the details presented apply to studies starting today. NOTE: The PCOP training web page indicates the presentation title was "Feasibility Study Initiation in Light of Risk-Informed Planning" and that it was held on 13 August 2018. However, the slides are titled "2018 Supplemental Appropriations Study Initiation: Fundamental Steps and Documentation" and are dated 10 August 2018. Also a set of Q&A notes dated 23 August 2018 shows a title slide for a PCOP webinar titled "Feasibility Study Initiation in Light of Risk-Informed Planning" and dated 23 August 2018.	https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf https://gateway.erdc.dren.mil/plan/Library/Templates/1%20Pre-AMM%20Checklist%20Sep%202022b.docx
1	Request Federal funds from MSC	District (Programs & Project Management)	Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 2018	See webinar slide 15. Receipt of funds may take some time. Programs & Project Management offices may pre-coordinate requests to try to expedite the provision of study funding soon after the FCSA signing.	https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf

1	Request Non-Federal Sponsor's initial share of study funds	District (Programs & Project Management)	DPM CW 2019-02. Operationalizing RIDM in Project Management Planning Phase. 02 July 2019. Also see Updated Implementation Guidance for Section 1002 of the Water Resources Reform and Development Act (WRRDA) of 2014, Consolidation of Studies issued 17 May 2017.	See DPM Page 4 Paragraph 5.c.and guidance memo page 1 paragraph 3.	https://planning.erdc.dren.mil/toolbox/webinars/DPMCW201902.pdf
1	Notify MSC of need for Policy and Legal Compliance Review Team	District	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements Feasibility Study Vertical Team Coordination: Key HQ and MSC Tasks. July 2022.	In the EP see Chapter 9. This activity could be pre-coordinated before the FCSA signing - likewise for the next two tasks as well. Also see DPM CW 2018-05 memo page 3 item #9.	https://planning.erdc.dren.mil/toolbox/library/Guidance/DPM-2019-01.pdf https://planning.erdc.dren.mil/toolbox/Library/Template/FeasibilityStudyVerticalTeamCoordination_KeyTasks_July2022_Final.pdf https://planning.erdc.dren.mil/toolbox/Library/Template/FeasibilityStudyVerticalTeamCoordination_KeyTasks_July2022_Final.pdf
2	Identify a Project Delivery Team (this is the full team not the focused team)	District	DPM CW 2019-02. Operationalizing RIDM in Project Management Planning Phase. 02 July 2019.	See DPM Page 4 Paragraph 9.a.	https://planning.erdc.dren.mil/toolbox/webinars/DPMCW201902.pdf
3	Designate a Lead Planner	District	DPM CW 2018-05 (03 May 2018 Dalton memo)	See memo page 4 item #13c; the lead planner should be a Certified Water Resources Planner or equivalent in experience & experienced in the type of study.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/DPMCW201805_ImprovingDelivery.pdf
3	Designate a Technical Lead for Engineering and Construction Deliverables	District	ECB 2018-15 Technical Lead for Engineering and Construction Deliverables	See paragraph 3.b. Technical Lead responsibilities are assigned to one member of the PDT that serves as the proponent for the project's technical quality.	https://www.wbdg.org/FFC/ARMYCOE/COEECB/ecb_2018_15_rev_1.pdf

4	Hold an initial team meeting (full Project Delivery Team)	District	Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 2018	See webinar slide 15.	https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf
4	Confirm the study authority, mission area, and boundaries	District	Planning Manual Part II (IWR2017R03)	Teams should review the study's Congressional authority to confirm the study type, the mission area, and the study area boundaries. These key items form the basis for scoping a study and working with the sponsor. The PDT may need to confirm the authority with Office of Counsel in cases were authority is not straightforward.	https://planning.erdc.dren.mil/toolbox/library/Guidance/PlanningManualPartII_IWR2017R03.pdf
5	Identify a Focused Team	District Project Manager	DPM CW 2018-05 (03 May 2018 Dalton memo)	see memo page 4 item #13d for a definition of the Focused Team	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/DPMCW201805_ImprovingDelivery.pdf
5	Create & fund labor codes	District Project Manager	Webinar "Operationalizing Risk Informed Decision Making in Project Management) Planning Phase)" July 2019 Memo "Guidance: Capturing Time and Cost Impacts, Comprehensive Documentation of Benefits in Decision Documents" 09 April 2021	See slide 12 from webinar. See paragraph 4 in the guidance memo.	https://planning.erdc.dren.mil/toolbox/webinars/19Jul11-DPMCW201902.pdf https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/ComprehensiveBenefits_CapturingCostandTimeImpacts.pdf
Weekend					
8	Assemble the Focused Team to outline study work to reach AMM	Project manager/Lead Planner	DPM CW 2018-05 (03 May 2018 Dalton memo)	see paragraph 13.d on page 4	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/DPMCW%202018-05.pdf

8	Define the study area	District Focused Team	ER 1105-2-100 Planning Guidance Notebook	See section 2-4(h). The PGN is expected to be replaced by a new ER 1105-2-103. This reference will be updated when that happens.	https://planning.erdc.dren.mil/toolbox/library/ERs/entire.pdf
8	Develop an initial Project Management Plan (PMP)	District Focused Team	DPM CW 2018-05 (03 May 2018 Dalton memo)	see memo page 4 item #14d	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/DPMCW201805_ImprovingDelivery.pdf
9	Focused Team reviews Pre-AMM study issue checklist	District Focused Team	Pre-AMM Study Issue Checklist	There are a total of 66 checklist items across five categories - General Issues, Economics, Real Estate, Environmental, and cultural Resources The checklist must be signed by the District Planning Chief and the DQC Lead.	https://gateway.erdc.dren.mil/plan/Library/Templates/1%20Pre-AMM%20Checklist%20Sep%202022b.docx
9	Focused Team meets with Non-Federal Sponsor	District Focused Team	Planning Manual Part II (IWR2017R03)	An early meeting with the sponsor offers an opportunity to gather project area information and to learn about the sponsor's views. This could include information sharing of relevant data, planning for needed coordination, discussion of site access and many other topics.	https://planning.erdc.dren.mil/toolbox/library/Guidance/PlanningManualPartII_IWR2017R03.pdf

9	Focused Team collects available information	District Focused Team	Planning Manual Part II (IWR2017R03)	see page 12 - "use readily available existing knowledge and data without generating any new information to complete this first iteration" NOTE: Although some pre-study coordination work has likely occurred, this is a good time to seek formal input from the Non-Federal Sponsor. It is especially important to ask for existing information that can help in the early scoping of the study.	https://planning.erdc.dren.mil/toolbox/library/Guidance/PlanningManualPartII_IWR2017R03.pdf
10	Hold initial coordination call with Planning Center of Expertise (PCX)	District & PCX	DPM CW 2018-05 (03 May 2018 Dalton memo); Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 2018 EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	See memo page 4 item #13c; the centers are the primary resource for technical & policy advice & can assist with identifying production resources. The PCX can also assist with scoping the study, help with Review Plan preparation & discuss planning model needs with the team. NOTE - in some cases other organizations may be the RMO such as the MSC or the Risk Management Center.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/DPMCW201805_ImprovingDelivery.pdf https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
10	Begin drafting a Review Plan for the study	District, MSC & PCX	ER 1165-2-217 Civil Works Review Policy	See Chapter 3 of the ER. A draft review plan should be developed within 30 days of signing an FCSA. A Review Plan template is available on the Planning Community Toolbox.	https://www.publications.usace.army.mil/Portals/76/Users/182/86/2486/ER%201165-2-217s.pdf?ver=NWMOw86W9QEK3DLpWyt3bQ== https://planning.erdc.dren.mil/toolbox/current.cfm?Title=Peer%20Review&ThisPage=Peer&Side=No

10	Hold initial coordination call with vertical team	District, MSC and HQ	DPM CW 2018-05 (03 May 2018 Dalton memo); Planning Manual Part II (IWR2017R03)	In the DPM see paragraph 7.h.1. regarding communications plans. This is a **Planning Best Practice** to bring key members of the District, MSC & Headquarters together early to begin vertical coordination.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/DPMCW201805_ImprovingDelivery.pdf
11	Identify a Planning Mentor or Risk Champion	PCX & MSC	Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 2018 Planning Quick Takes: Timely Topics for Risk-Informed Planning Studies (Formerly Planning Mentor Handbook), Version 2.0. July 2021.	See webinar slide 3 and the example charter in updated mentor handbook (Planning Quick Takes).	https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf https://planning.erdc.dren.mil/toolbox/library/misc/PlanningQuickTakesVer2.pdf
12	Discuss study, outline the planning approach & scope with Planning Mentor	Lead Planner, Planning Mentor	Planning Quick Takes: Timely Topics for Risk-Informed Planning Studies (Formerly Planning Mentor Handbook), Version 2.0. July 2021.	Page 3 discusses initial scoping of a study.	https://planning.erdc.dren.mil/toolbox/library/Misc/PlanningQuickTakesVer2.pdf
12	Make plans for a field visit	District Focused Team	Planning Manual Part II (IWR2017R03)	See page 12. A team field trip is optional (see page 12 of Planning Manual II). Invite key personal from the sponsor, resource agencies and vertical team. Also consider linking the field trip to other events such as iterations, charettes or vertical team coordination.	https://planning.erdc.dren.mil/toolbox/library/Guidance/PlanningManualPartII_IWR2017R03.pdf

12	Designate Policy and Legal Compliance Review Team	MSC Chief of Planning & Policy & OWPR Chief	DPM CW 2018-05 (03 May 2018 Dalton memo) EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	See DPM CW 2018-05 memo page 3 item #9.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/DPMCW201805_ImprovingDelivery.pdf https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
Weekend					
15	Prepare information for Initial Planning Iteration	Lead Planner	Planning Manual Part II (IWR2017R03)	The Lead Planner collects information from the focused team. The info should be organized for use at the initial Planning Iteration meeting. The products developed during this week are initial drafts. The documents should be reviewed by the full team as appropriate.	https://planning.erdc.dren.mil/toolbox/library/Guidance/PlanningManualPartII_IWR2017R03.pdf
16	Set up study in e-Risk Register Tool	District Focused Team, Planning Mentor & IWR	Webinar "Introduction to the new E-Risk Register" 15 December 2022	Use the tool to help house documents and track progress.	https://err.sec.usace.army.mil/login?returnUrl=%2Fprojects&c=0
17	Prepare a problem statement & draft goals, needs, objectives & constraints (include EJ objectives)	Lead Planner	Planning Manual Part II (IWR2017R03) Memo - Interim Environmental Justice Guidance for Civil Works Planning Studies 13 January 2023	see page 12	https://planning.erdc.dren.mil/toolbox/library/Guidance/PlanningManualPartII_IWR2017R03.pdf https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/InterimEJGuidanceforPlanningStudies_13JAN2023.pdf
17	Develop study-specific objectives and constraints to provide benefits and avoid disproportionate impacts to underserved and	District Focused Team	Memo - Interim Environmental Justice Guidance for Civil Works Planning Studies 13 January 2023	See paragraph 5.c.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/InterimEJGuidanceforPlanningStudies_13JAN2023.pdf

	disadvantaged communities				
17	For FRM & CSRM studies - develop an objective for life safety	Lead Planner	05 January 2021 - ASA(CW) memo - Comprehensive Documentation of Benefits in Decision Document	See paragraph 5.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/ComprehensiveDocumentationofBenefitsinDecisionDocument_5January2021.pdf
17	For FRM studies a non-structural alternative plan must be evaluated and carried into the final array	Lead Planner	05 January 2021 - ASA(CW) memo - Comprehensive Documentation of Benefits in Decision Document	See paragraph 5.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/ComprehensiveDocumentationofBenefitsinDecisionDocument_5January2021.pdf
17	For coastal studies check to see if any potential measures fall within units of the Coastal Barrier Resources System	Lead Planner	Pre-Alternatives Milestone Meeting Checklist		https://gateway.erdc.dren.mil/plan/Library/Templates/1%20Pre-AMM%20Checklist%20Sep%202022b.docx

17	Formulate potential natural and nature-based features	District Focused Team	WRDA 2018 Section 1149 12 April 2019 memo Implementation Guidance for Section 1149 of the Water Resources Development Act of 2018, Inclusion of Alternative Measures for Aquatic Ecosystem Restoration 16 November 2017 memo Implementation Guidance for Section 1184 of the Water Resources Development Act of 2016 (WRDA 2016) - Consideration of Measures	This guidance applies to FRM, CSRM (hurricane and storm damage), and Ecosystem Restoration studies.	https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll5/id/35402 https://planning.erdc.dren.mil/toolbox/library/Guidance/PlanningManualPartII_IWR2017R03.pdf
17	Identify decision criteria for formulation, evaluation & comparison	Lead Planner	Planning Manual Part II (IWR2017R03)	see page 12	https://planning.erdc.dren.mil/toolbox/library/Guidance/PlanningManualPartII_IWR2017R03.pdf
18	Develop a list of questions decision makers would like answered	Lead Planner	Planning Manual Part II (IWR2017R03)	see page 12	https://planning.erdc.dren.mil/toolbox/library/Guidance/PlanningManualPartII_IWR2017R03.pdf
18	Prepare a list of potential measures to address the problem	Lead Planner	Planning Manual Part II (IWR2017R03)	see page 13	https://planning.erdc.dren.mil/toolbox/library/Guidance/PlanningManualPartII_IWR2017R03.pdf

18	Prepare a plan for evaluating comprehensive benefits	District Focused Team	05 January 2021 - ASA(CW) memo - Comprehensive Documentation of Benefits in Decision Document	The ASA(CW) memo directs the inclusion of certain plans in the final array of alternatives. Therefore these alternatives should evolve from the earliest iterations in the study. The required alternatives for the final array are listed in paragraph 5(g)(1-5) of the memo. Tasks, costs and schedules for the evaluation should be included in the PMP.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/ComprehensiveDocumentationofBenefitsinDecisionDocument_5January2021.pdf
19	Initiate National Environmental Policy Act scoping	District Environmental	ER 1105-2-100 Appendix C - Environmental Evaluation and Compliance	See section C-3. Note: The appendix is being replaced by a new Engineer Pamphlet (EP 1105-2-61) planned for release later in 2023. This reference will be updated when the new EP is issued.	https://planning.erdc.dren.mil/toolbox/library/Ers/prepub-1105-2-100-c.pdf
19	Characterize Future Without Project conditions using available information	Lead Planner and Focused Team	Planning Manual Part II (IWR2017R03)	see page 12.	https://planning.erdc.dren.mil/toolbox/library/Guidance/PlanningManualPartII_IWR2017R03.pdf
Weekend					
22	Field Trip to Study Area	District Focused Team	Planning Manual Part II (IWR2017R03)	See page 12. Remember to take lots of photos & collect other observations. These materials may be useful in the iterations, public meetings & in telling the story at your first milestone. Field trip participation should include the team and the sponsor. Follow-on trips later in the study are likely for various team members.	https://planning.erdc.dren.mil/toolbox/library/Guidance/PlanningManualPartII_IWR2017R03.pdf

23	Initiate consultation under the National Historic Preservation Act.	District Environmental	Vertical Team Alignment Memorandum (VTAM) Guidance 29 July 2022	See paragraph 10.g.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/VerticalTeamAlignmentMemo_VTAMGuidance_29JULY2022.pdf
23	Conduct an Initial Planning Iteration	District Focused Team	DPM CW 2018-05 (03 May 2018 Dalton memo) Planning Manual Part II (IWR2017R03)	See Planning Manual II page 3 for a list of six products to be produced from the first iteration. It is helpful to use the six pieces of paper to formulate alternative plans and screen plans. A planning charette may be held to conduct the iteration and to create the six pieces of paper.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/DPMCW201805_ImprovingDelivery.pdf https://planning.erdc.dren.mil/toolbox/library/Guidance/PlanningManualPartII_IWR2017R03.pdf
23	Document Decisions & Risks from the Initial Planning Iteration	District Focused Team	Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 2018	**Planning Best Practice:** use a Decision Log & Risk Register. See slides 15, 22, 24 & 25.	https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf
24	Complete preliminary analysis of the federal interest, cost, benefits, and environmental impact	District Focused Team	Updated Implementation Guidance for Section 1002 of the Water Resources Reform and Development Act (WRRDA) of 2014, Consolidation of Studies issued 17 May 2017.	See memo page 1.	https://planning.erdc.dren.mil/toolbox/library/WRDA/WRRDA2014IGSection1002.pdf
24	Develop a Decision Management Plan	District Focused Team	Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 2018	See webinar slide 33.	https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf
25	Develop a P2 schedule	Project Manager with Team	Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 2018	See slides 22 & 27; add more detail to the schedule as the team progresses.	https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf
25	Develop a resource Plan with Program Analyst	Project Manager & Program Analyst	Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 2018	See webinar slide 27.	https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf
25	Perform Environmental Justice scoping	District Focused Team	Memo - Interim Environmental Justice Guidance for Civil Works Planning Studies 13 January 2023	See paragraph 5(a) - 5(e).	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/InterimEJGuidanceforPlanningStudies_13JAN2023.pdf

26	Identify all agencies with potential jurisdiction over the project	District	20 March 2018 memo Implementation Guidance for Section 1005 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) - Project Acceleration	See memo page 2 referencing "the project delivery team (PDT) will identify, as early as practicable, all federal, state, & local government agencies & Indian tribes that may have jurisdiction over the project; be required by law to conduct or issue a review, analysis, or opinion for the project; or be required to make a determination on issuing a permit, license, or approval for the project. If the project is within the boundaries of a state, the state, consistent with state law, may choose to participate in the process."	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/WRRDA2014IGSection1005_2018.pdf
26	Identify other groups with potential interest in the project or project area	District	20 March 2018 memo Implementation Guidance for Section 1005 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) - Project Acceleration	See memo page 2 referencing other groups that may have a significant interest - these may include community groups, businesses, research institutions & non-governmental organizations.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/WRRDA2014IGSection1005_2018.pdf

26	Prepare a Public Involvement Plan/Strategy (note recent EJ guidance)	District - Project Manager, Public Affairs, Focused Team, EJ Coordinator	20 March 2018 memo Implementation Guidance for Section 1005 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) - Project Acceleration. EP 1105-2-57 Stakeholder Engagement, Collaboration & Coordination. Memo: Interim Environmental Justice Guidance for Civil Works Planning Studies. 13 January 2023.	The 20 March 2018 memo transmits WRRDA 2014 Implementation Guidance for Section 1005. See memo page 1 item 4 referencing "Every project requires a detailed public involvement strategy that is keyed to maximizing public input at each stage of the planning process." See EP 1105-2-57, paragraph 6 on pages 3-4 for requirements. The January 2023 memo outlines specifics related to incorporating EJ considerations into communications plans. A plan preparation guide is available from the CPCX.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/WRRDA2014IGSection1005_2018.pdf https://www.publications.usace.army.mil/Portals/76/Users/182/86/2486/EP_%201105-2-57.pdf?ver=2019-04-03-150516-977 https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/InterimEJGuidanceforPlanningStudies_13JAN2023.pdf
26	Prepare a Communications Plan	District - Project Manager, Public Affairs, Focused Team, EJ Coordinator	Vertical Team Alignment Memorandum (VTAM) Guidance 29 July 2022 EP 1105-2-57 Stakeholder Engagement, Collaboration and Coordination. 01 March 2019	Develop a plan for communicating at multiple levels within USACE and outside of USACE across organizations, government entities, stakeholders and members of the public. It should include details for coordinating with cooperating and participating agencies involved in NEPA compliance. The communications plan is part of the PMP.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/VerticalTeamAlignmentMemo_VTAMGuidance_29JULY2022.pdf https://www.publications.usace.army.mil/Portals/76/Users/182/86/2486/EP_%201105-2-57.pdf?ver=fhjInV7UAcbp9Ydx8otvRA%3d%3d
26	Update PMP incorporating public involvement and communications plans	District - Project Manager, Public Affairs, Focused Team, EJ Coordinator	Vertical Team Alignment Memorandum (VTAM) Guidance 29 July 2022		https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/VerticalTeamAlignmentMemo_VTAMGuidance_29JULY2022.pdf
Weekend					

29	Determine if IEPR mandatory triggers are met or if discretionary IEPR may be pursued	District and PCX	ER 1165-2-217 Civil Works Review Policy	See Figure 6.1 flowchart.	https://www.publications.usace.army.mil/Portals/76/Users/182/86/2486/ER%201165-2-217s.pdf?ver=NWMOw86W9QEK3DLpWyt3bQ%3d%3d
29	Initiate environmental compliance coordination	District Environmental	Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 2018 19 July 2018 memo Implementation Guidance for Section 1001 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) - Vertical Integration and Acceleration of Studies (Revised) 20 March 2018 memo Implementation Guidance for Section 1005 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) - Project Acceleration	Policy/Guidance on environmental coordination timing is evolving. In "study initiation step by step - FY18 Work Plan "see slide 36; "conduct pre-Notice of Intent (NOI) scoping to ascertain appropriate NEPA class of action & determine what other environmental approvals are likely necessary"; In the memo see page 4 item #6 "Agency Review & Coordination".	https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf https://planning.erdc.dren.mil/toolbox/library/WRDA/WRDA14%20Section%201001%20IG.pdf https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/WRRDA2014IGSection1005_2018.pdf https://planning.erdc.dren.mil/toolbox/webinars/17Nov16-OperationalizingRisk.pdf
29	Request list of species from USFWS & NMFS (request from NMFS only if in your study contains marine resources)	District Environmental	Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 2018	See webinar slide 36.	https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf

29	Initial assessment of planning and engineering models to be used in the study	District & PCX	EC 1105-2-412 Assuring Quality of Planning Models PB 2013-02 Assessing Quality of Planning Models Vertical Team Alignment Memorandum (VTAM) Guidance 29 July 2022	This information is critical for developing a PMP, preparing a Review Plan, and developing a plan selection strategy. See VTAM memo paragraph 7.a.	https://planning.erdc.dren.mil/toolbox/library/ECs/EC_1105-2-412_2011Mar.pdf https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/DPMCW201812_ImplementationEO.pdf
30	Develop an evaluation strategy to support plan selection	District	Vertical Team Alignment Memorandum (VTAM) Guidance 29 July 2022	The VTAM guidance identifies this effort as key to scoping the PMP tasks, costs, and schedules.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/VerticalTeamAlignmentMemo_VTAMGuidance_29JULY2022.pdf
30	Prepare coordination letters for resource agencies	District	Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 201820 March 2018 memo Implementation Guidance for Section 1005 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) - Project Acceleration26 September 2018 memo Implementation Guidance for Feasibility Studies for Executive Order 13807 Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects (note EO 13807 has been rescinded but the IG remains)EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	Policy has evolved in terms of the timing of formally initiating NEPA - pay careful attention to the requirements in EP 1105-2-61. Early scoping is encouraged before a formally announced scoping period is launched with the publication of a Notice of Intent in the Federal Register. Most teams are timing the NOI around the TSP Milestone so that the two year clock to complete an EIS does not expire before the end of a 3-year SMART Planning Study.	https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/WRRDA2014IGSection1005_2018.pdf https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/DPMCW201812_ImplementationEO.pdf

31	Complete Draft Review Plan	District in coordination with PCX	ER 1165-2-217 Civil Works review Policy Review Plan template on Planning Community Toolbox	Teams should consult a PCX or other RMO	https://www.publications.usace.army.mil/Portals/76/Users/182/86/2486/ER%201165-2-217s.pdf?ver=NWMOw86W9QEK3DLpWyt3bQ== https://planning.erdc.dren.mil/toolbox/current.cfm?Title=Peer%20Review&ThisPage=Peer&Side=No
32	Hold an In-Progress Review	District, MSC, PCX, VT	DPM CW 2018-05 (03 May 2018 Dalton memo)	See memo item 13 - this encourages Vertical Team engagement (however an IPR at this stage is not identified). This action is based upon MVD Planning practice of holding an IPR at 30, 60 and 85 days after an FCSA is signed.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/DPMCW201805_ImprovingDelivery.pdf
33	Designate a District Quality Control Review Lead	District	ER 1165-2-217 Civil Works Review Policy	See page 20, Section 4.4.2.	https://www.publications.usace.army.mil/Portals/76/Users/182/86/2486/ER%201165-2-217s.pdf?ver=NWMOw86W9QEK3DLpWyt3bQ==
Weekend					
36	Send out resource agency coordination letters	District	20 March 2018 memo Implementation Guidance for Section 1005 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) - Project Acceleration	See March 2018 memo page 2 item #5 - the letter inviting agencies to the meeting will request that they serve as either a cooperating agency or a participating agency, if applicable. Also include the water quality certifying authority (state or tribal) with jurisdiction in the project area.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/WRRDA2014IGSection1005_2018.pdf

37	Discuss draft Review Plan with PCX	Project Manager, Lead Planner, & PCX	ER 1165-2-217 Civil Works Review Policy	See section 3.7.1. in the review policy ER. During the discussion teams should cover IEPR or IEPR exclusion, identify the planning models to be used, the technical make-up of review teams (ATR & IEPR), a review schedule & costs of reviews. If IEPR will be pursued the PCX will identify an IEPR manager.	https://planning.erdc.dren.mil/toolbox/library/Templates/ReviewPlanTemplatePackage_31Jul2018.pdf
38	Prepare agenda & materials for Interagency Coordination Meeting	District Environmental	WRRDA 2014 Section 1005 memo; 20 March 2018 memo Implementation Guidance for Section 1005 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) - Project Acceleration	See item #5 in the implementation guidance memo outlining the intent of the meeting.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/WRRDA2014IGSection1005_2018.pdf
39	Discuss potential Planning Models to use in the study with the PCX	District & PCX	EC 1105-2-412 Assuring Quality of Planning Models PB 2013-02 Assessing Quality of Planning Models	PB 2013-02 extends the expiration of the EC until an Engineer Regulation replaces the EC. NOTE: Planning model certification or approval is now delegated to the PCX Directors.	https://planning.erdc.dren.mil/toolbox/library/ECs/EC_1105-2-412_2011Mar.pdf https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/DPMCW201812_ImplementationEO.pdf
40	Submit Review Plan to PCX for review and endorsement	District	ER 1165-2-217 Civil Works Review Policy	See Sections 3.5.1.4. and 3.7.1. in ER 1165-2-217.	https://www.publications.usace.army.mil/Portals/76/Users/182/86/2486/ER%201165-2-217s.pdf?ver=NWMOw86W9QEK3DLpWyt3bQ==
Weekend					

43	Develop PMP details for tasks that happen between the Alternatives Milestone to TSP Milestone	District	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements Memo - Vertical Team Alignment Memorandum (VTAM) Guidance 29 July 2022.	See Table 4-2 in the EP and paragraph 4.b. in the VTAM guidance memo.	https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
44	Discuss study progress with the Planning Mentor	District Lead Planner	Planning Quick Takes: Timely Topics for Risk-Informed Planning Studies (Formerly Planning Mentor Handbook), Version 2.0. July 2021.	See example charter in updated mentor handbook (Planning Quick Takes).	https://planning.erdc.dren.mil/toolbox/library/misc/PlanningQuickTakesVer2.pdf
45	Identify an ATR Team Leader	PCX (or other RMO) and MSC	ER 1165-2-217 Civil Works Review Policy	See section 5.5.1.	https://www.publications.usace.army.mil/Portals/76/Publications/EngineerCirculars/EC_1165-2-217.pdf?ver=2018-05-01-105219-217

46	Finalize agenda and materials for Interagency Coordination Meeting	District Environmental	WRRDA 2014 Section 1001(e)(2) 19 July 2018 memo Implementation Guidance for Section 1001 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) - Vertical Integration and Acceleration of Studies (Revised) WRRDA 2014 Section 1005 20 March 2018 memo Implementation Guidance for Section 1005 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) - Project Acceleration	Information should be sufficient to introduce the agencies to the study and the USACE approach to planning. The PDT should create a list of all environmental laws and other approvals that may be needed to complete the study. The list should identify the lead agency responsible for administering the law or approvals. In addition the team should develop a plan for a coordinated public and agency review process to be conducted, to the maximum extent practicable, concurrently. The plan should be developed after consultation with and with the concurrence of each participating and cooperating agency and the project sponsor or joint lead agency, as applicable. This process and the schedule will be included in the PMP.	https://planning.erdc.dren.mil/toolbox/library/WRDA/WRDA14%20Section%201001%20IG.pdf https://planning.erdc.dren.mil/toolbox/library/WRDA/wrda2014.pdf https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/WRRDA2014IGSection1005_2018.pdf
47	Tentatively schedule a date/time for the Alternatives Milestone meeting	District, MSC, VT, Non-Federal Sponsor	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	The District must coordinate date with MSC Chief of Planning.	https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
Weekend					
50	Create a study-specific web page on the District's web site	District	Webinar "Integrated Communication Planning" held 02 April 2020	See slide 18. A study-specific web page is identified as a communication tactic.	https://planning.erdc.dren.mil/toolbox/webinars/20Apr2-IntegratedCommunication.pdf
51	Initiate records search for National Historic Preservation Act Section 106 to identify	District Environmental	Webinar - "Section 106 and Planning Bulletin 2018-01" held 02 May 2019	See slide 3. Also see Section 106 regulations.	https://planning.erdc.dren.mil/toolbox/webinars/19May2-Section106.pdf

	Area of Potential Effect				
52	Hold Interagency Coordination meeting	District Environmental	WRRDA 2014 Section 1001(e)(2); 19 July 2018 memo Implementation Guidance for Section 1001 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) - Vertical Integration and Acceleration of Studies (Revised) WRRDA 2014 Section 1005; 20 March 2018 memo Implementation Guidance for Section 1005 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) - Project Acceleration	In the 19 July 2018 memo see page item 11 (c); See March 2018 memo page 2 item #5.	https://planning.erdc.dren.mil/toolbox/library/WRDA/WRDA14%20Section%201001%20IG.pdf https://planning.erdc.dren.mil/toolbox/library/WRDA/wrda2014.pdf https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/WRRDA2014IGSection1005_2018.pdf
53	Prepare & Distribute MFR to document Interagency Coordination Meeting	District Environmental	Webinar "SAD Supplemental Studies First 90 Days/AMM After Action Review" 07 March 2019	**Planning Best Practice** - document any decisions in the Decision Log.	https://planning.erdc.dren.mil/toolbox/webinars/19Mar8-SAD-AMM-AAR.pdf
53	Continue early environmental coordination - perform ESA Coordination	District Environmental	Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 2018	See webinar slide 36. Slide indicates "MSA" It is likely they mean "ESA" - the Endangered Species Act.	https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf
54	Continue early environmental coordination - initiate FWCA Coordination	District Environmental	Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 2018	See webinar slide 36. FWCA = Fish and Wildlife Coordination Act	https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf

54	Develop scope of work for FWCA involvement of USFWS & NMFS (if applicable)	District Environmental	Vertical Team Alignment Memorandum (VTAM) Guidance 29 July 2022	See paragraph 10.d.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/VerticalTeamAlignmentMemo_VTAMGuidance_29JULY2022.pdf
54	PCX sends draft of Review Plan endorsement memo to District (cc MSC)	PCX	ER 1165-2-217 Civil Works Review Policy	This allows the district to assure that points of contact and other important details are correct in the endorsement.	https://www.publications.usace.army.mil/Portals/76/Publications/EngineerCirculars/EC_1165-2-217.pdf?ver=2018-05-01-105219-217
54	PCX provides comments on draft Review Plan	Review Management Organization (PCX, RMC or MSC)	ER 1165-2-217 Civil Works Review Policy	See section 3.5.1.4.	https://www.publications.usace.army.mil/Portals/76/Publications/EngineerCirculars/EC_1165-2-217.pdf?ver=2018-05-01-105219-217
Weekend					
57	Conduct a more informed planning iteration (Second Iteration)	District Focused Team	Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 2018; Planning Manual Part II (IWR2017R03)	See slide 36; use information from stakeholders, resource agencies and other existing sources. Also see Planning Manual II page 13 - "This iteration may also include some analysis of the available data that could not be completed within the first 30 days. It is characterized by a growing database and the first crude calculations and estimates of selected decision criteria." Although Planning Charettes are not required some of the techniques used in charettes may be valuable tools in a second iteration.	https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf https://planning.erdc.dren.mil/toolbox/library/Guidance/PlanningManualPartII_IWR2017R03.pdf

58	Confirm a focused array of alternatives	Lead Planner with District Focused Team	Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 2018 EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	See webinar slide 35 and Table 4-2. in the Engineer Pamphlet.	https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
59	Document Decisions & Risks Identified in second iteration	Lead Planner with District Focused Team	Planning Manual Part II (IWR2017R03)	See chapter 2.3.1 starting on page 7. **Planning Best Practice -** use a Decision Log & Risk Register	https://planning.erdc.dren.mil/toolbox/library/Guidance/PlanningManualPartII_IWR2017R03.pdf
59	Send out placeholder invite for Alternatives Milestone Meeting (include all participants)	MSC or District Project Manager	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	See paragraph 4-4(b) in the Engineer Pamphlet. Make sure to include - PCX, ATR lead, OWPR, & RIT	https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
60	Revise Review Plan addressing PCX comments	Lead Planner	ER 1165-2-217 Civil Works Review Policy	See section 3.5.1.1.	https://planning.erdc.dren.mil/toolbox/library/Templates/ReviewPlanTemplatePackage_31Jul2018.pdf
60	Update the PMP	Project Manager	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	See Table 4-2.	https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
60	Hold an In-Progress Review	District, MSC, PCX, VT	DPM CW 2018-05 (03 May 2018 Dalton memo)	See memo item 13 - this encourages Vertical Team engagement (however an IPR at this stage is not identified). This action is based upon MVD Planning practice of holding an IPR at 30, 60 and 85 days after an FCSA is signed. Teams should use the Pre-AMM Checklist to demonstrate progress	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/DPMCW201805_ImprovingDelivery.pdf

				towards meeting the AMM requirements.	
61	Submit revised Review Plan to PCX for endorsement	Lead Planner	ER 1165-2-217 Civil Works Review Policy	See section 3.5.1.1.	https://www.publications.usace.army.mil/Portals/76/Publications/EngineerCirculars/EC_1165-2-217.pdf?ver=2018-05-01-105219-217
61	Distribute updated PMP to start vertical alignment	Project Manager	Vertical Team Alignment Memorandum (VTAM) Guidance 29 July 2022	The VTAM Guidance memo and DPM 2019-02 require a vertically aligned PMP be developed before the Alternatives Milestone Meeting.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/VerticalTeamAlignmentMemo_VTAMGuidance_29JULY2022.pdf
Weekend					
64	Begin Preparing Report Summary	District Lead Planner	Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 2018	See webinar slide 36.	https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf
65	Begin Preparing PowerPoint Slides for Alternatives Milestone	District Lead Planner	Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 2018; Vertical Team Alignment Memorandum (VTAM) Guidance 22 July 2022	See webinar slide 36. See VTAM memo paragraph 5.a. Although the VTAM memo does not address the specifics of the AMM slides, it does state clearly what should be presented.	https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/VerticalTeamAlignmentMemo_VTAMGuidance_29JULY2022.pdf
66	Consider whether a 3x3 policy exemption will be needed	District, MSC, vertical team	DPM CW 2018-05 (03 May 2018 Dalton memo)	See memo page 4 item 14; additional steps are identified covering scope and VT alignment; also see VTAM Memo paragraph 4.d.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/DPMCW201805_ImprovingDelivery.pdf
67	PCX transmits endorsement memo and Review Plan to the District	PCX (or other RMO)	ER 1165-2-217 Civil Works Review Policy	See section 3.5.1.1.	https://www.publications.usace.army.mil/Portals/76/Publications/EngineerCirculars/EC_1165-2-217.pdf?ver=2018-05-01-105219-217

68	Prepare MFR to document the results of the In-Progress Review	District	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	See paragraph 4-4(d) in the Engineer Pamphlet. **Planning Best Practice** - document all decisions in the Decision Log. It is recommended to include the Pre-AMM Checklist in the documentation.	https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
68	Conduct District Quality Control on AMM readahead materials	District	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	See paragraph 4-6(b) in the Engineer Regulation	https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
68	Prepare Section 1002 Letter for Non-Federal Sponsor	District (Project Manager)	19 July 2018 memo Implementation Guidance for Section 1001 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) - Vertical Integration and Acceleration of Studies (Revised) Webinar "Feasibility Study Initiation in Light of Risk-Informed Planning" 13 Aug 2018 Also see Section 1002 of WRRDA 2014.	In the memo see page 3 item 11(a). Also post the letter on the District website & send a copy to the RIT at HQ USACE	https://planning.erdc.dren.mil/toolbox/library/WRDA/WRDA14%20Section%201001%20IG.pdf https://planning.erdc.dren.mil/toolbox/webinars/18Aug10-NewStartStudyInitiationOverview.pdf https://planning.erdc.dren.mil/toolbox/library/WRDA/wrda2014.pdf
Weekend					
71	Complete the Report Summary	Lead Planner	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	See paragraph 4-4(b).	https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==

72	Finalize Pre-AMM Study Issue Checklist	District Lead Planner & Focused Team	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	See paragraph 4-4(b).	https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
73	Complete the PowerPoint presentation for the Alternatives Milestone	District Lead Planner	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	See paragraph 4-4(b).	https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
74	Develop a script for the Alternatives Milestone presentation	District Lead Planner	Planning Quick Takes: Timely Topics for Risk-Informed Planning Studies (Formerly Planning Mentor Handbook), Version 2.0. July 2021.	The Planning Mentor can advise the planner on communication methods and telling the project story.	https://planning.erdc.dren.mil/toolbox/library/misc/PlanningQuickTakesVer2.pdf
74	Develop a script that specifically addresses environmental justice considerations and the team's evaluations	District Lead Planner	Memo - Interim Environmental Justice Guidance for Civil Works Planning Studies 13 January 2023	See paragraph 5.(e).(i-iv)	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/InterimEJGuidanceforPlanningStudies_13JAN2023.pdf
75	Pre-Brief the Study and Milestone Materials to District Leaders	District Lead Planner			
Weekend					

78	Send Section 1002 Letter to Non-Federal Sponsor	District	19 July 2018 memo Implementation Guidance for Section 1001 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) - Vertical Integration and Acceleration of Studies (Revised) Updated Implementation Guidance for Section 1002 of the Water Resources Reform and Development Act (WRRDA) of 2014, Consolidation of Studies issued 17 May 2017.	In the 2018 guidance memo see page 3 item 11(a).	https://planning.erdc.dren.mil/toolbox/library/WRDA/WRDA14%20Section%201001%20IG.pdf https://planning.erdc.dren.mil/toolbox/library/WRDA/WRRDA2014IGSection1002.pdF
78	Send the Section 1002 letter to the PDT, MSC and Reginal Integration Team (RIT) at Headquarters	District	Updated Implementation Guidance for Section 1002 of the Water Resources Reform and Development Act (WRRDA) of 2014, Consolidation of Studies issued 17 May 2017.	See memo page 2 paragraph 4.a. A copy of the signed letter will be provided concurrently to the PDT, MSC and through the respective Reginal Integration Team (RIT) to Headquarters.	https://planning.erdc.dren.mil/toolbox/library/WRDA/WRRDA2014IGSection1002.pdF
78	Post the Section 1002 letter on the district's web site	District	Updated Implementation Guidance for Section 1002 of the Water Resources Reform and Development Act (WRRDA) of 2014, Consolidation of Studies issued 17 May 2017.	See memo page 3.	http://cdm16021.contentdm.oclc.org/utils/getfile/collection/p16021coll5/id/603/filename/604.pdf
79	Update read ahead materials for milestone based upon District review & input	District Lead Planner	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	See paragraph 4-4(b).	https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==

80	Discuss the study & milestone materials with the Planning Mentor	District Lead Planner and Planning Mentor	Planning Quick Takes: Timely Topics for Risk-Informed Planning Studies (Formerly Planning Mentor Handbook), Version 2.0. July 2021.	See example charter in updated mentor handbook (Planning Quick Takes).	https://planning.erdc.dren.mil/toolbox/library/misc/PlanningQuickTakesVer2.pdf
81	Submit read ahead materials for Alternatives Milestone to MSC (also provide to other participants and update calendar invite)	District	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	See paragraph 4-4(b).	https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
82	District Dry Run for Alternatives Milestone presentation	District			
82	Confirm readiness for the AMM	District Planning Chief and MSC Planning Chief			
82	Prepare first draft of Vertical Team Alignment Memo	MSC	Memo - Vertical Team Alignment Memorandum (VTAM) Guidance 29 July 2022.	See paragraph 4.c. in the VTAM guidance memo. Also the draft VTAM should be shared with all of the parties that need to be aligned (i.e., the P&LCR team, PCXs, RITs, MSC).	https://planning.erdc.dren.mil/toolbox/library/PB/PB2018_01.pdf https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/VerticalTeamAlignmentMemo_VTAMGuidance_29JULY2022.pdf
Weekend					
85	District prepares draft letters to Congress regarding decision about conducting or not conducting IEPR	District	ER 1165-2-217 Civil Works Review Policy	See section 6.17.2.	https://www.publications.usace.army.mil/Portals/76/Users/182/86/2486/ER%201165-2-217s.pdf?ver=NWMOw86W9QEK3DLpWyt3bQ%3d%3d
86	District finalizes milestone presentation	District	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	See paragraph 6.b. - the draft presentation slides are a required read-ahead for the milestone meeting. If the slides are updated make sure to provide the updates to all of the AMM participants.	https://planning.erdc.dren.mil/toolbox/library/PB/PB2018_01.pdf

87	Update PMP incorporating input from vertical team, sponsor and agencies	District Project Manager	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	PMP should reflect sufficient details for team to progress to a TSP Milestone. Also should reflect confidence that the study can be completed within 3 years and <$3 million. Otherwise an exemption is required and approval must be sought. This update could be moved to occur after the milestone if changes to the scope occur or if other decisions impact the planning tasks.	https://planning.erdc.dren.mil/TOOLBOX/library/PB/PB2018_01S.pdf
88	Hold Alternatives Milestone meeting	District, MSC, vertical team, PCX, review team	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	For purposes of this guide - Day 88 was chosen as the day of the Alternatives Milestone. The milestone should be held in approximately the first 90-120 days after signing the FCSA.	https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
88	Approval - Completion of successful Alternatives Milestone	MSC Chief of Planning and Policy	DPM CW 2018-05 (03 May 2018 Dalton memo)	See memo page 2 Table 1.	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/DPMCW201805_ImprovingDelivery.pdf
88	Prepare draft Memorandum for the Record (MFR) for Alternatives Milestone	District	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	See paragraph 4-4(d).	https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
89	District internal review of draft Alternatives Milestone MFR	District	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	See paragraph 4-4(d).	https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
89	District transmits Review Plan and PCX endorsement memo to MSC for Approval	District	ER 1165-2-217 Civil Works Review Policy	See section 3.5.1.1. This should occur within two weeks after the Alternatives Milestone meeting.	https://www.publications.usace.army.mil/Portals/76/Publications/EngineerCirculars/EC_1165-2-217.pdf?ver=2018-05-01-105219-217

89	Inform Regional Integration Team that IEPR is likely to be conducted for the study (if applicable)	District/MSC	ER 1165-2-217 Civil Works Review Policy	This provides advance notice to the RIT that letters to Congressional Committees may be needed. The advance notice enables preparation to begin so that signed letters can be sent 7 days after approval of the Review Plan.	https://www.publications.usace.army.mil/Portals/76/Users/182/86/2486/ER%201165-2-217s.pdf?ver=NWMOw86W9QEK3DLpWyt3bQ%3d%3d
89	Inform Regional Integration Team that an IEPR exclusion will be sought for studies meeting or exceeding $200 million	District/MSC	ER 1165-2-217 Civil Works Review Policy	See section 6.17.3. Applies only to projects with an estimated cost meeting or exceeding $200 million. Early notice to the RIT allows for time to prepare letters to Congress if needed.	https://www.publications.usace.army.mil/Portals/76/Users/182/86/2486/ER%201165-2-217s.pdf?ver=NWMOw86W9QEK3DLpWyt3bQ%3d%3d
89	Transmit draft Alternatives Milestone MFR to Meeting Participants	District	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	See paragraph 4-4(d).	https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
Weekend					
92	Resolve any internal District comments on the draft MFR	District	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	See paragraph 4-4(d).	https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
93	After milestone follow-up actions	District/MSC	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	During the milestone meeting some commitments may be made that require follow-up coordination. Examples may include additional coordination with the sponsor or agencies or the addition of special technical skills to the PDT. These actions should be completed. Some may appear in the milestone MFR while others are simply due outs executed by the team.	https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==

94	PMP Approval	District	ER 5-1-11 USACE Business Process	The ER indicates the PMP should be approved at the lowest appropriate supervisory level.	
94	Resolve any comments on draft Alternatives Milestone MFR	District/MSC			
95	Finalize Alternatives Milestone MFR and transmit to all milestone participants	District	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements	See paragraph 4-4(d).	https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
Weekend					
98	Submit Communication Plan to Headquarters	District	Memo - Interim Environmental Justice Guidance for Civil Works Planning Studies 13 January 2023	See paragraph 5(a) - 5(e).	https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/InterimEJGuidanceforPlanningStudies_13JAN2023.pdf
99	Update project fact sheet to reflect any post-milestone changes (if necessary)	District			
100					
101	Transmit drafts of IEPR letters to Congress to Headquarters	District/MSC	ER 1165-2-217 Civil Works Review Policy	If needed, the IEPR notification letters should be sent to Congress 7 days after approval of the Review Plan.	https://www.publications.usace.army.mil/Portals/76/Users/182/86/2486/ER%201165-2-217s.pdf?ver=NWMOw86W9QEK3DLpWyt3bQ%3d%3d
102	Create & fund labor codes for AMM to TSP work	District Project Manager	Webinar "Operationalizing Risk Informed Decision Making in Project Management) Planning Phase)" July 2019 Memo "Guidance: Capturing Time and Cost Impacts, Comprehensive Documentation of Benefits in Decision Documents" 09 April 2021		https://planning.erdc.dren.mil/toolbox/webinars/19Jul11-DPMCW201902.pdf https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/ComprehensiveBenefits_CapturingCostandTimeImpacts.pdf

Weekend					
105	MSC provides comments on Review Plan	MSC	ER 1165-2-217 Civil Works Review Policy	this is an example action and time period - provision of comments from an MSC to a PDT has been taking longer than two weeks. See section 3.5.1.4.	
106	Revise/Update draft of Vertical Team Alignment Memo	MSC	Memo - Vertical Team Alignment Memorandum (VTAM) Guidance 29 July 2022.	See paragraph 4.c.	https://planning.erdc.dren.mil/toolbox/library/PB/PB2018_01.pdf https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/VerticalTeamAlignmentMemo_VTAMGuidance_29JULY2022.pdf
107	Route Vertical Team Alignment Memo for signature	MSC	Memo - Vertical Team Alignment Memorandum (VTAM) Guidance 29 July 2022.	See example memo.	https://planning.erdc.dren.mil/toolbox/library/PB/PB2018_01.pdf https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/VerticalTeamAlignmentMemo_VTAMGuidance_29JULY2022.pdf
108					
109					
Weekend					
112	District responds to any MSC comments on the Review Plan	District	ER 1165-2-217 Civil Works Review Policy	See section 3.5.1.1.	https://www.publications.usace.army.mil/Portals/76/Publications/EngineerCirculars/EC_1165-2-217.pdf?ver=2018-05-01-105219-217
113					
114	Comments on Review Plan are resolved	District/MSC	ER 1165-2-217 Civil Works Review Policy	See section 3.5.1.1.	https://www.publications.usace.army.mil/Portals/76/Publications/EngineerCirculars/EC_1165-2-217.pdf?ver=2018-05-01-105219-217

115	Prepare letters to Congress about intent to conduct IEPR OR if an IEPR exclusion is approved for projects meeting or exceeding $200 million	HQ USACE - Regional Integration Team (RIT)	WRDA 2007 Section 2034 ER 1165-2-217 Civil Works Review Policy	The responsible RIT will prepare and transmit a letter, signed by the HQUSACE Chief of Planning and Policy, to the Committee on Environment & Public Works of the Senate (EPW) & the Committee on Transportation & Infrastructure of the House of Representatives (T&I) with a copy to the ASA(CW).	https://www.publications.usace.army.mil/Portals/76/Publications/EngineerCirculars/EC_1165-2-217.pdf?ver=2018-05-01-105219-217
116	Discuss IEPR contract with PCX or other RMO (if an IEPR is planned)	District and PCX (or other RMO)	SOP for IEPR	Initial discussion to set up tasks for contracting an IEPR. See SOP Table 1.	https://planning.erdc.dren.mil/TOOLBOX/webinars/22Apr21-2022%20IEPR%20SOP%20Update_QA.pdf
Weekend					
119	MSC approves Review Plan or returns it with additional comments to be resolved	MSC	ER 1165-2-217 Civil Works Review Policy		https://www.publications.usace.army.mil/Portals/76/Publications/EngineerCirculars/EC_1165-2-217.pdf?ver=2018-05-01-105219-217
120	Submit signed Vertical Team Alignment Memo (VTAM) to Headquarters	MSC	Memo - Vertical Team Alignment Memorandum (VTAM) Guidance 29 July 2022.	See paragraph 4.c. in the VTAM guidance memo.	https://planning.erdc.dren.mil/toolbox/library/PB/PB2018_01.pdf https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/VerticalTeamAlignmentMemo_VTAMGuidance_29JULY2022.pdf
121	Transmit approved Review Plan & MSC approval memo to District	MSC	ER 1165-2-217 Civil Works Review Policy	See section 3.7.2.3.	https://www.publications.usace.army.mil/Portals/76/Publications/EngineerCirculars/EC_1165-2-217.pdf?ver=2018-05-01-105219-217
122	If an IEPR will be conducted, the MSC transmits the approved Review Plan to the Regional Integration Team at Headquarters	MSC	ER 1165-2-217 Civil Works Review Policy	See section 3.7.2.3.	https://www.publications.usace.army.mil/Portals/76/Publications/EngineerCirculars/EC_1165-2-217.pdf?ver=2018-05-01-105219-217

123	Post the approved Review Plan & MSC approval memo on District website	District Public Affairs Office	ER 1165-2-217 Civil Works Review Policy	See section 6.17.2. Also notify the MSC and PCOP and provide them with the web link to the Review Plan and approval memo.	https://www.publications.usace.army.mil/Portals/76/Publications/EngineerCirculars/EC_1165-2-217.pdf?ver=2018-05-01-105219-217
Weekend					
126	Send letters to Congress on decision to conduct IEPR or to exclude IEPR for a project meeting or exceeding $200 million	HQ USACE - Regional Integration Team (RIT)	ER 1165-2-217 Civil Works Review Policy	The will be transmitted within 7 calendar days of Review Plan approval.	https://www.publications.usace.army.mil/Portals/76/Publications/EngineerCirculars/EC_1165-2-217.pdf?ver=2018-05-01-105219-217

General Timing of Remaining Feasibility Study Milestones

Day	Action	Responsibility	References	Notes	Links
365	**Tentatively Selected Plan Milestone**	MSC Planning and Policy Chief (if delegated - otherwise Chief of OWPR)	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements		https://planning.erdc.dren.mil/toolbox/library/PB/PB2018_01.pdf
548	**Agency Decision Milestone**	MSC Programs Director (SES) (if delegated - otherwise HQ Chief of Planning and Policy)	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements		https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==

TBD	**State & Agency Review Brief**	Chief of Office of Water Project Review	Feasibility Study Vertical Team Coordination: Key HQ and MSC Tasks		https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==
1095	**Sign Chief's Report**	Chief of Engineers	EP 1105-2-61 Feasibility and Post-Authorization Study Procedures and Report Processing Requirements		https://www.publications.usace.army.mil/Portals/76/EP%201105-2-61_2023%2007%2001.pdf?ver=ug2obmZxgGHyppgvatGzPw==

KEY MESSAGES

Completing the first phase of a study is a large undertaking with numerous legal, policy, technical and practical activities.

Over 100 actions are required in USACE policy and guidance and practices for this phase of a feasibility study.

Nearly 40 policies and regulations currently govern the activities of a team in this phase of a study.

This table provides a thorough listing of all of the actions required in current USACE planning policy and other guidance.

A NOTE ABOUT TIMING AND DURATIONS

For purposes of 3x3x3 durations and schedule dates, the running clock in this document is kept by calendar days not work days. Weekends are displayed but no work is listed on those days. Federal Holiday dates are not listed but teams should account for these as potential non-work days when an actual study schedule is prepared. The FCSA signing marks Day 0. The Alternatives Milestone target is Day 90. Completing a study in 3 years means a Chief's Report is signed no later than 1,095 days after the FCSA is signed. Studies that may take longer are subject to the 3x3x3 exemption requirements (not discussed in this document).

COLOR CODES

The alternating shades of blue in the table are only used to help enhance the readability of the columns; likewise for the green rows in the headers. Light yellow rows represent weekend days. These days count as part of the 3-year study completion timeframe even though most study team members do not work on these days. Dark green cells highlight SMART Planning milestones or other significant activities.

FEEDBACK REQUESTED
This table is a living document and updates will be released as law, policy and practices change. The table was developed by Greg Miller, Senior Policy Advisor, HQUSACE, with contributions from Judy McCrea and Jeff Lin, both of the Office of Water Project Review, HQUSACE. If you have questions about this guide or wish to offer feedback, please contact Greg Miller.