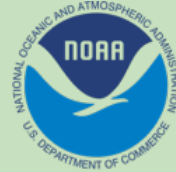




US Army Corps
of Engineers



U.S. Army Corps of Engineers SMART Planning Feasibility Studies

A Guide to Coordination and Engagement with the Services

September 2015



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Preface

ON 8 February 2012, the Deputy Commanding General for Civil and Emergency Operations for the U.S. Army Corps of Engineers (Corps) directed implementation of a new process – SMART (Specific, Measurable, Attainable, Risk Informed, Timely) Planning – for conducting civil works feasibility studies for water resources development projects.

The SMART Planning process is intended to improve and streamline feasibility studies, reduce their cost, and expedite their completion. The goal of this process is to complete feasibility studies within three years, at a cost of no more than \$3 million, and with three levels of the Corps engaged throughout (i.e., 3x3x3 Rule). The improved process is intended to make better use of appropriate Corps staff and resources by focusing on the projects that demonstrate the greatest value to the nation in order to more efficiently advance recommendations of projects to Congress for authorization.

The Guide to SMART Planning (Guide) was developed by the Corps through a collaboration between the Headquarters offices of the Corps, U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS). This Guide provides information and guidance on the SMART Planning process, and has been developed primarily for use by the Corps, FWS and NMFS biologists and planners working together on Corps water resources development feasibility studies.

Established roles of the FWS and NMFS under a variety of statutes in water resource development processes are retained and re-emphasized in the SMART Planning feasibility study process, with a greater focus on early coordination. Substantive, early engagement is needed to successfully deliver projects that could potentially be delayed by lingering conflicts. Ensuring FWS and NMFS are fully informed, engaged, and able to review and shape project proposals is critical given reduced timeframes and budget constraints.

This Guide is not a replacement of current environmental regulations, policies or consultation handbooks; it was developed as a tool for staff across agencies to become familiar with the SMART Planning feasibility study process and to highlight opportunities for engagement and coordination at all stages of the planning study.

This Guide addresses only coordination with the FWS and NMFS; it is not inclusive of all coordination responsibilities during the feasibility study process. Other Federal statutes such as the National Historic Preservation Act and Clean Water Act require coordination with state agencies during the planning process. Treaties with Native American tribes also create a consultation obligation. Coordination with state agencies and Native American tribes can be lengthy and sometimes challenging; integrating this coordination into the planning schedule is essential.

Corps Division offices are encouraged to work with their Districts and the appropriate FWS and NMFS field and regional offices office to ensure a common understanding of regional and agency priorities, resource constraints, and expectations.

This Guide will be updated periodically as new regulations and policies are developed affecting the Corps feasibility study process or consultation requirements related to the environmental laws discussed in the Guide.

Information and guidance about the Corps feasibility study/SMART Planning process is available on the Corps Planning Community Toolbox website. This website contains additional information beyond what is presented in this Guide. The Toolbox includes a wealth of information including the policy, guidance, processes and tools that are used by Corps planners. **The link to the Corps Planning Community Toolbox is <http://planning.usace.army.mil/toolbox/index.cfm>.**



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Introduction

THE U.S. Army Corps of Engineers (Corps) has transformed the process for conducting civil works feasibility studies. The process, referred to as SMART (Specific, Measurable, Attainable, Risk Informed, Timely) Planning, is intended to improve feasibility studies, reduce their cost, and expedite completion. While feasibility studies will continue to follow the traditional six-step planning process, required by the 1983 Principles and Guidelines and 2015 Principles and Requirements, these studies will now utilize risk-informed and decision-focused methodologies, and work through a modified series of decision points or milestones.

The basic purpose of this Guide is to provide an overview of the SMART Planning process, and demonstrate how key environmental compliance activities fit into that process. The Guide is intended to be a resource for the Corps, U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS) and to provide a foundation for field and regional staff working together

on Corps feasibility studies. Improving the understanding of the SMART Planning process among agencies is vital for the successful implementation of SMART Planning studies across the nation. The SMART Planning methodology and framework were developed to facilitate more efficient, effective and consistent delivery of planning decision documents, including early evaluation of the likelihood of Federal interest to determine if a study should continue or be terminated. Through Planning Modernization efforts, the Corps has reduced its planning portfolio of studies to focus available funding on the most credible and viable projects for Congressional authorization. In an era of reduced budgets, this approach allows agencies to optimize available resources and address the nation's critical water resources needs.

The Corps' feasibility study process and development of water resources projects is governed by many Federal laws and regulations. Since the advent of key environmental legislation such as the Endangered Species

WHAT IS SMART PLANNING?

SMART Planning is:

- S:** Specific
- M:** Measurable
- A:** Attainable
- R:** Risk Informed
- T:** Timely

Act (ESA), Fish and Wildlife Coordination Act (FWCA), Magnuson-Stevens Fishery Conservation and Management Act (MSA), Coastal Zone Management Act (CZMA), Marine Mammal Protection Act (MMPA), and National Environmental Policy Act (NEPA), the Corps has worked closely with Federal agencies, including NMFS and FWS (collectively the Services) in developing the water resource infrastructure projects that the Corps studies, recommends, and constructs. This Guide focuses more on ESA, MSA and FWCA because these environmental laws tend to involve extensive coordination and consultation between the Corps and the

Services. The Federal statutes discussed in this Guide do not constitute an exclusive list of the Corps' consultation obligations. Other Federal laws and treaties not discussed in this Guide also give rise to consultation and coordination obligations with state agencies and Native American tribes that must be addressed in the feasibility study process.

The Guide begins with a basic background on the purpose and intent of a feasibility study, explains how and why SMART Planning was developed, discusses the framework (phases and milestones), and highlights key differences in execution of a feasibility study under the SMART Planning process. This sets the stage for the interagency coordination and engagement section that provides details on communication opportunities, and where/when the key environmental compliance and coordination activities occur within the SMART Planning process. Graphics of the SMART Planning feasibility study process overlaid with ESA, MSA and FWCA compliance activities are also included for illustrative purposes.

The Road to Water Resources Projects Begins with a Feasibility Study

THE feasibility study is the first stage of development for a potential Federal water resources development project, and where the SMART Planning process is applied.

The purpose of the feasibility study is to identify, evaluate and recommend to decision makers an appropriate, coordinated and workable solution to identified water resources problems and opportunities. In the Corps, this process is called “plan formulation.”

The Corps’ feasibility planning is guided by the Principles and Guidelines for Water and Land Related Resources Implementation Studies (Principles & Guidelines). The 1983 Principles & Guidelines define the Federal objective of Corps project planning, which is to contribute to national economic development consistent with protecting the Nation’s environment, pursuant to national environmental statutes, applicable executive orders, and other Federal planning requirements. A wide

range of alternatives will be investigated and the alternative with the greatest net economic benefit must be identified (the National Economic Development (NED) Plan). In the case of ecosystem restoration projects, the alternative that maximizes ecosystem restoration benefits compared to costs, and is consistent with the Federal objective (called the National Ecosystem Restoration (NER) Plan), must be identified. The rationale for the selection of an alternative other than the NED or NER plan (e.g., a locally preferred plan) must be fully documented.

It is also during the feasibility stage that NEPA compliance takes place and environmental documentation is prepared. The Corps uses the NEPA process and documentation to tie the impact analysis together and discuss effects and compliance with other environmental laws that are applicable to the study, such as the ESA, FWCA, MSA, MMPA, Migratory Bird Act, Clean Air Act, Clean Water Act, and many others. It is crucial that involved agencies coordinate early in

the study process to collect and analyze the data needed to inform environmental evaluations and consultations. Early coordination also leads to early problem solving when project designs are the most flexible.

A feasibility report documents the study results and findings, including the formulation of alternatives, the selection process of the recommended alternative, and the costs and benefits of that recommended plan. The NEPA Report will also be integrated into the feasibility report. Compliance with other environmental laws may entail the production of additional documentation, but the Integrated Feasibility/NEPA Report should capture all of these requirements succinctly in summary.

The final feasibility report provides a sound and documented basis for decision makers and stakeholders regarding the recommended solution.

A feasibility study ends when the Chief of Engineers signs a “Chief’s Report” and transmits it

In 2015 the Council on Environmental Quality finalized updated Principles and Requirements for Federal Investments in Water Resources and Interagency Guidelines for implementing the Principles and Requirements. Federal agencies, including the Corps, are now tasked with developing “Agency Specific Procedures” reflecting the Principles, Requirements and Guidelines. The Procedures developed by the Corps may impact the feasibility study process and the way that potential projects are formulated and evaluated.

and the Integrated Feasibility/NEPA Report to the Assistant Secretary of the Army for Civil Works (ASA(CW)). The ASA(CW) then submits the report documentation to the Office of Management and Budget (OMB). The OMB reviews the report to make sure that it is consistent with Administration policies and priorities, and provides clearance to release the report to Congress. The ASA(CW) then submits the report to Congress for consideration of authorization to construct the recommended water resources project.

The Corps Feasibility Study Process

WHAT IS SMART PLANNING AND THE 3x3x3 RULE?

SMART Planning is the process applied to the Corps feasibility study development. In 2012, the Corps proposed a re-envisioned feasibility study process that became known as SMART Planning. With the same end-point in mind – a technically sound, policy compliant, cost-effective project recommendation to the Chief of Engineers – the process of developing and documenting that recommendation has been recast to focus on key decisions, to better evaluate and consider risk and uncertainty, to scale the level of detail in the analysis to the decision to be made, and to work more efficiently and effectively

SMART Planning studies must adhere to Civil Works policies, procedures and standards and applicable laws that are critical to developing a technically sound, policy compliant bases for making recommendations that support the national interest.

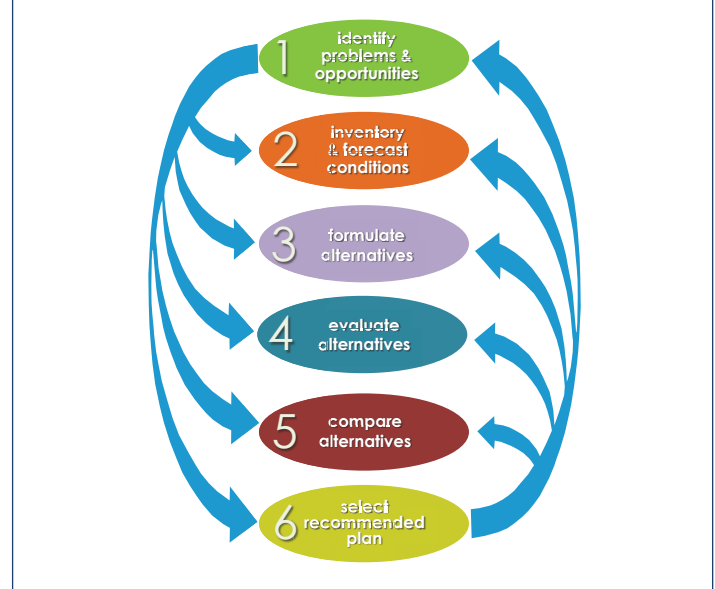
across Corps District, Division, and Headquarters boundaries.

SMART Planning is decision-focused planning rather than task oriented planning. It reorients the planning process away from simply collecting data or completing tasks and refocuses it on doing the work required to reduce uncertainty to the point where the Project Delivery Team (PDT) can make an iterative sequence of planning decisions required to complete a quality study in full compliance with environmental laws and statutes.

To encourage accountability and efficiency in applying the SMART Planning feasibility process and new decision-based milestones, studies are to be scoped to completion in 3 years or less, at a cost of no more than \$3 million dollars, and developed with the engagement of all 3 tiers of the Corps vertical team (District, Division, and Headquarters). This became known as the “3x3x3 Rule.”

“The 3x3x3 Rule” – and the process for exemptions from the

FIGURE 1: THE CORPS’ ITERATIVE SIX STEP PLANNING PROCESS



Rule – originated as a policy directive from the Corps’ Deputy Commanding General for Civil and Emergency Operations, and was put into law as part of the Water Resources Reform and Development Act (WRRDA) of 2014.

PLANNING GUIDANCE

For the Corps, the Planning Guidance Notebook (Engineer Regulation 1105-2-100) provides the overall direction by which the Corps civil works projects are formulated, evaluated, and recommended for

implementation. The Planning Guidance Notebook is currently being revised to reflect the particular process changes under SMART Planning, such as different decision-based milestones. While the process has changed, a SMART Planning feasibility study will still go through the six-step planning process outlined in the Principles & Guidelines (Figure 1).

Until the Planning Guidance Notebook revisions are complete, the Planning Guidance Notebook has been supplemented by a series of Planning Bulletins that establish key decision-based

milestones for feasibility studies, elaborates on the role of team members throughout a study, and establishes additional planning and decision-making tools used during the development of feasibility study reports.

THE FEASIBILITY PROJECT DELIVERY TEAM

A study team is developed at the onset of a feasibility study. The study team is often referred to as the Project Delivery Team (PDT). The PDT is a multidisciplinary group assembled to develop the feasibility study. The group generally includes staff within a Corps District and other Corps offices, as well as the project sponsor's staff, and may include staff from the FWS and NMFS depending on the extent and degree of potential effects to

fish and wildlife resources. Every feasibility study is equally cost-shared between the Federal government and a local non-Federal sponsor. Because of this, the non-Federal sponsor is an important part of the PDT and has a critical role in the feasibility study process.

The PDT will engage other Federal, tribal, state and governmental agencies, stakeholder groups and the general public, and may also involve engineering firms or other contractors in the development of the project. In addition to the PDT, a "vertical team" within the Corps is established for each study – meeting the objectives of the third "3" in the 3x3x3 Rule. The exact makeup of the vertical team may vary from study to study depending on the complexity and scope of the study; however

it will include decision-makers and technical expertise from the District, Division and Headquarters. The vertical team is involved informally throughout the study process, and formally during SMART Planning milestones.

SMART PLANNING PROCESS - PHASES AND MAJOR MILESTONES

SMART Planning is a new process with new milestones. The feasibility study milestones of the past, such as the Feasibility Scoping Meeting and Alternatives Formulation Briefing, are no longer used.

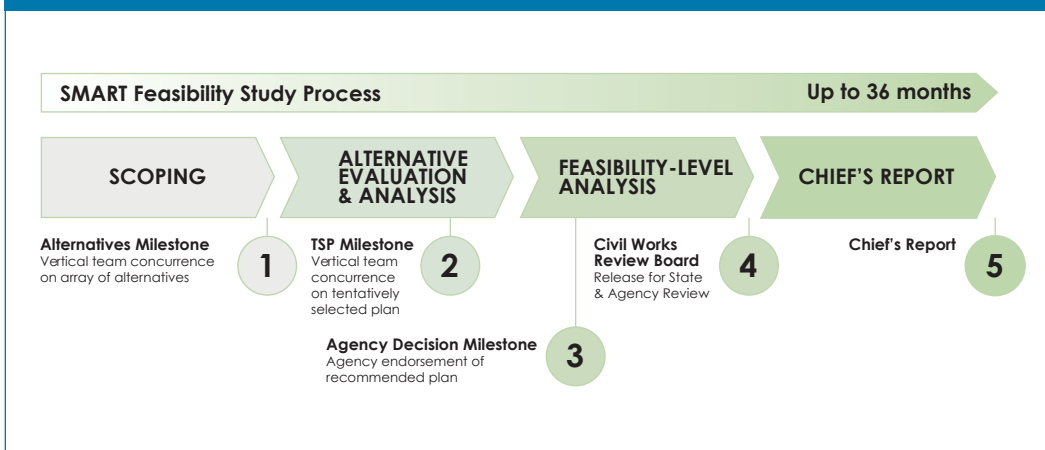
As depicted in Figure 2, the SMART Planning study process is broken out into four separate phases over the course of a study

The Services involvement in the feasibility study process as it relates to coordination and consultation under laws such as FWCA, ESA, and MSA is discussed in the next chapter.

period: Scoping; Alternative Evaluation and Analysis; Feasibility-Level Analysis; and Chief's Report development. There are five key decision points or milestones that mark significant decisions along the way: Alternatives Milestone; Tentatively Selected Plan Milestone, Agency Decision Milestone, Civil Works Review Board and Chief's Report Milestone.

The timelines provided in each phase are general for a 3-year study completion. However studies can be done in less time, and complex or large feasibility studies may be approved to go beyond 3 years. While some general guidelines have been provided, the exact duration of each phase will depend on the work required to make the next decision. However the end goal is to complete the study within 3 years. Although clear decisions are necessary to continue to move studies forward, planning is an iterative process and at any point it may be necessary to revisit a

FIGURE 2: THE SMART PLANNING FEASIBILITY STUDY PROCESS IDENTIFYING THE FOUR PHASES AND MAJOR MILESTONES



particular measure or alternative screened out during plan formulation if new information is available.

WHAT'S DIFFERENT IN A SMART PLANNING STUDY?

There are two key differences in execution of a feasibility study under the SMART Planning process.

1 | The Planning Process is More Risk Informed and Decision Focused — Prior to the SMART Planning process, the key engagement point for Corps senior leaders was toward the end of the study. If a policy issue arose at this stage of the feasibility study, it could set the project back by months or years. Now under SMART Planning, there are multiple points throughout the study (from the beginning) where project issues are raised and resolutions are agreed to by all the levels of the Corps. This allows the Corps to make a decision based on a common understanding of work done to date, and to ensure that technical, policy, and legal considerations have been taken into account before investing additional time and money in the next phase.

2 | Level of Detail Evolves Through the Duration of the Study to Support Decisions

— Throughout the feasibility study, the approach to level of detail, data collection, and models is based on what is necessary to support decisions to be made. At the beginning of a study, the PDT must first take a hard look at the existing information/data available to determine the sufficiency for screening alternatives. Additional data can be collected, but it must be justified rather than assumed. SMART Planning does not eliminate the detail necessary to do a proper environmental impact analysis or mitigation planning; it is about developing the appropriate data at the right time to make the next decision. Determining the level of detail will often require input from FWS, NMFS, and other agencies involved in a study. The identification, consideration, and analysis of alternatives are important to the NEPA process and goal of objective decision making.

Ultimately, keeping the level of detail appropriate to the decision at hand and keeping a focus on the decision reduces study costs and saves time. Key to SMART Planning is early coordination and

Throughout the feasibility study, the approach to level of detail, data collection, and models is based on what is necessary to support decisions to be made.

engagement with agencies to identify the significant resources at risk, to better understand the important questions to ask regarding those resources and risks, and to determine the information needed to answer those questions and reduce risk. SMART Planning promotes frequent team communication on acceptable versus unacceptable levels of risk. The risk of making decisions with available information will be considered while weighing the remaining uncertainties and the level of detail needed to support the next decision. **The level of design and environmental compliance detail on the Corps Recommended Plan for Federal Investment under SMART Planning is the same as it was prior to SMART Planning.**

The PDT will complete progressively more detailed analyses over a reasonable range of alternatives until finally identifying a recommended alternative. The team reduces

uncertainty with greater detail, but only when necessary to reduce unacceptable risk.

PDTs consider critical questions throughout each phase of the study.

- What is the decision we are going to make?
- How are we going to make the decision?
- What criteria will we use to make the decision?
- What are the key drivers (data, uncertainty, etc.) that will affect the decision?
- What data is immediately available? Will getting more data change the decision or outcome?
- What are the decision risks (probability and consequence of making an undesirable decision) of using the available data?

The PDT progressively and deliberately determines the level of detail they need to make the next planning decision. The PDT must balance its choice for additional detail with the funds and time available against the risk and uncertainty of decision outcome.

Interagency Coordination and Engagement on SMART Planning Feasibility Studies

FIGURE 3: SMART PLANNING FEASIBILITY STUDY PROCESS OVERLAID WITH MAJOR ENVIRONMENTAL COMPLIANCE LAWS AND PROCESSES

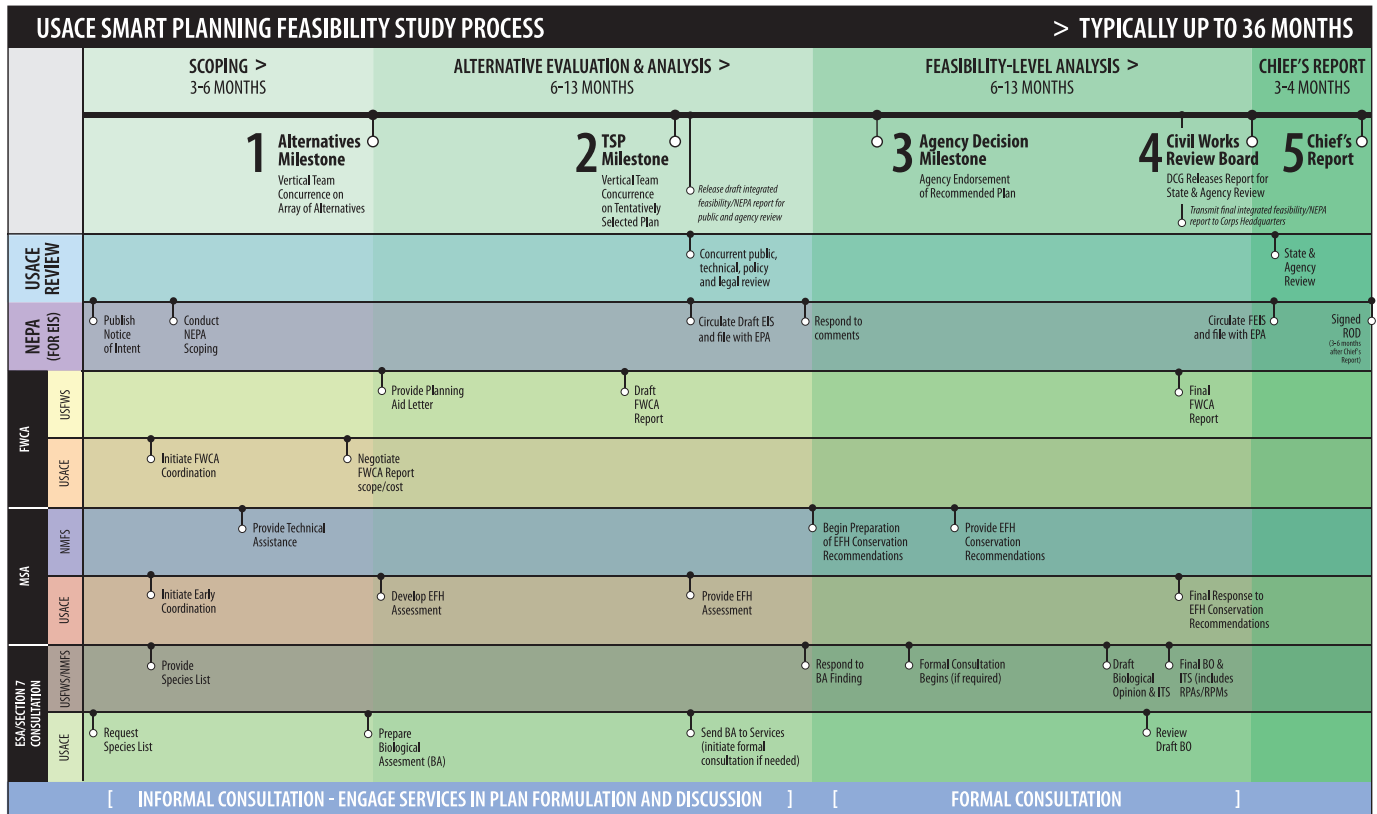


Photo by Chuck Hanlon, South Florida Water Management District (Some rights reserved)



Throughout this section of the Guide, reference will be made to key environmental compliance laws, and how and where the activities pertinent to those laws interact with the SMART Planning process. This interaction is also illustrated in Figure 3, which shows how multiple processes – NEPA, ESA, MSA,

FWCA - overlay with the SMART Planning feasibility study process (Phases and Milestones). Figure 3 is intended as general guidance. As discussed below, the Corps, FWS and NMFS should agree on milestones early in the planning process and be willing to adjust the schedule if circumstances warrant.



BEFORE THE FEASIBILITY STUDY BEGINS

A feasibility study does not officially begin until the Corps and the non-Federal sponsor sign a cost sharing agreement committing to carrying out the study and sharing the expected costs. With the passage of Section 1002(a) of the WRRDA of 2014 that repealed section 905(b) of WRDA 1986, the Corps is no longer authorized to conduct a full Federal reconnaissance phase or initial assessment. Instead, a single phase cost-shared study process now applies to study efforts making it even more important for the Corps to coordinate early with the Services. If the Corps knows a new study is imminent – likely to be launched during the current

fiscal year because it was funded in the Corps’ annual appropriations – the PDT/District should reach out and share this information with the Services’ field or regional offices.

When the Corps District is considering engaging the Services to make them aware of potential new studies, they should consider:

- Are there potential significant impacts that would lead to an Environmental Impact Statement level NEPA document?
- Which Federal agencies may have jurisdiction by law or special expertise with respect to environmental issues?
- Which Federal agencies will have a direct role in contributing to the analysis within the report, and what

Typical Engagement Between the Corps and the Services Before a Feasibility Study Begins

Headquarters – Corps and Services	<ul style="list-style-type: none"> ■ Potential “new start” feasibility studies identified in President’s Budget ■ Discussion of Administration priorities with respect to agency mandates
Regional Offices – Corps Divisions and Services Regional Offices	<ul style="list-style-type: none"> ■ Quarterly / regular dialogue on ongoing and expected studies ■ Identify issues likely to be a priority for agencies
Local Offices – Corps Districts and Field or Regional Offices	<ul style="list-style-type: none"> ■ Share expectations of when studies will proceed and key decision points based on appropriations cycle ■ Discuss likelihood of significant resources in study area ■ Share and keep updated on timelines for study milestones

environmental laws will be applicable?

- What information can be assumed or brought forward from similar studies (by purpose or study area) to help

estimate the level of detail or new data/analysis required for this study? Were those studies recent?

WHAT IS A PLANNING CHARETTE?

A charette (pronounced [shuh-ret]) is a structured, collaborative session in which a group comes together to develop a solution to a problem.

In SMART feasibility studies, a planning charette usually brings together the PDT and vertical team, expert planners, the project sponsor, and resource agencies in an early structured workshop to address a specific topic and advance the study.

Although not a requirement, PDTs have found that this focused gathering of key team members can facilitate decisions in a timely and cost-effective manner.

SCOPING

3-6 months

- Identify Study Objectives
- Define Problems & Opportunities
- NEPA Scoping
- Inventory & Forecast
- Formulate Alternative Plans
- Evaluate Alternatives & Identify Reasonable Array

1

ALTERNATIVE MILESTONE

Vertical concurrence on array of Alternatives

SCOPING PHASE

SCOPING

ALTERNATIVE EVALUATION & ANALYSIS

FEASIBILITY LEVEL ANALYSIS

CHIEF'S REPORT

SCOPING PHASE

Scoping is an early planning activity that is required by both the Principles & Guidelines and the regulations implementing the NEPA. Scoping identifies the most important issues raised by the proposed action. Scoping is a key component of this early phase of the feasibility study and often includes engagement via public meetings and other venues, as well as engagement with the resource agencies. SMART Planning emphasizes the importance of early engagement. It is important for the Corps to reach out early and engage the Services in a feasibility study.

During the Scoping Phase, the FWS and/or NMFS will be invited to participate in study scoping, to identify fish and wildlife concerns, to identify available information, to obtain their views concerning significance of fish and wildlife resources and anticipated impacts, and to determine the resources that would be evaluated in the study. For example, the Services may be able to suggest

fish and wildlife opportunities and planning objectives, ways to avoid and minimize impacts to endangered or threatened species and critical habitat, ways to avoid and minimize other impacts to fish and wildlife habitats, potential considerations and opportunities for compensatory mitigation if necessary. Similarly, the Services can assist the Corps with identifying existing data needed to better scope the study.

During the Scoping Phase, the PDT develops the Project Management Plan that outlines the work tasks, the level of detail, and the timelines for the project. During the development of the Project Management Plan, the PDT will reach out to appropriate Federal and non-Federal agencies for input, especially if there are protected species or other resources of concern that are anticipated in the study area.

Corps Districts coordinate with the Services, as well as other Federal and state agencies at the outset of the Scoping Phase, inviting them to participate at charettes,

scoping meetings, or informal workshops. Early involvement provides opportunities to avoid impacts to valued resources and areas with high-conflict potential prior to the commitment of significant planning investments. In addition, such activities are consistent with the “informal consultation” activities as called for by the ESA and the early coordination that is consistent with the MSA essential fish habitat (EFH) regulations. Many times, issues related to adverse effects on ESA-listed species and their designated critical habitats, or issues related to adverse impacts on EFH, can be resolved through early planning and coordination efforts.

Early engagement will not only help minimize contentious projects or limit effects to protected species or EFH but the conservation interests of the Services and the development interests of water resource planners are more likely to be mutually accommodated, and at a lower cost, the sooner that substantive coordination

envisioned by environmental laws such as the FWCA can begin.

The Services can also make recommendations during the planning process regarding mitigation of adverse effects to important or significant fish and wildlife resources. Avoidance and minimization of any adverse effects is an initial focus of early planning assistance, through early consideration of all parts of the mitigation hierarchy, including compensation.

During the Scoping Phase, the Corps PDT will engage with the Services to confirm discussions about the study area and scope, and also to:

- Share views concerning the significance of fish and wildlife resources and anticipated impacts;
- Share potential mitigation strategies (avoidance, minimization and compensatory actions) to ensure mitigation considerations are incorporated early in the study process;
- Share potential measures as a basis for identifying possible impacts;
- Identify available information;
- Determine those resources that should be evaluated in

the study; and

- Identify anticipated data needs for future environmental assessment/consultation activities.

The Scoping Phase also triggers statutory requirements under the FWCA. Under the FWCA, the Corps will coordinate with the Services at the beginning of a study. The Services are invited to participate in study scoping, to identify fish and wildlife concerns, to identify available information, to share their views concerning the significance of fish and wildlife resources and anticipated impacts, and to determine those resources to be evaluated in the study. During the Scoping Phase, a Scope of Work should be developed between the agencies to determine the support to be provided, including what type of report (Fish and Wildlife Coordination Act Report (FWCAR)), Planning Aid Report or Letters, etc.), and to also establish a timeline for receiving reports or letters. The purpose of the FWCAR or Planning Aid Report or Letter is to identify problems and opportunities related to the conservation and enhancement of all potentially impacted fish and wildlife resources, including marine resources related to migratory, estuarine and marine fisheries and their habitats. The

Typical Engagement Between the Corps and the Services During the Scoping Phase	
Headquarters – Corps and Services	<ul style="list-style-type: none"> ■ Resolve conflicts in agency policies ■ Communicate policies clearly to regional and local offices
Regional Offices – Corps Divisions and Services Regional Offices	<ul style="list-style-type: none"> ■ Quarterly/regular dialogue on ongoing and expected studies ■ Address areas of concern not resolved during development of project-specific PMPs (e.g., expected level of detail of analysis or data collection)
Local Offices – Corps Districts and Field or Regional Offices	<ul style="list-style-type: none"> ■ Engagement in scoping ■ Federal agencies with jurisdiction or special expertise must be invited to be cooperating agencies (NEPA) ■ Initial engagement via FWCA - Develop Scope of Work for FWS and NMFS involvement

information gathered through the FWCA process should give the Corps an overall assessment of the fish and wildlife issues that will need to be addressed through project planning and design. Information provided by the Services is critical to the Corps for alternatives development. Specifically, during the Scoping Phase, the following actions should take place between the Corps PDT, FWS and NMFS:

GENERAL ACTIONS

- Corps invites Services to be Cooperating Agency in development of NEPA Report.
- Agencies work together to determine survey needs and gain input on recommended survey methodologies.

- Provide early identification of mitigation considerations – avoidance, minimization and potential compensatory mitigation strategies.
- Identify planning models to be used for mitigation and/or ecosystem restoration.

ESA

- Request a species list for defined study area (Corps).
- Provide species list and technical assistance – may be component of Planning Aid Report/Letter (appropriate Service).
- Initiate development of the Biological Evaluation/Assessment (Corps).

A WORD ABOUT FORMULATION OF ALTERNATIVE PLANS

Alternative plans are formulated to identify specific actions to achieve planning objectives within constraints, so as to solve the identified problems and realize the opportunities.

A management measure is a feature or an activity that can be implemented at a specific geographic site to address one or more planning objectives. Management measures are the building blocks of alternative plans and are categorized as structural and nonstructural.

An **alternative plan** is a set of one or more management measures functioning together to address one or more objectives.

A range of alternative plans shall be identified at the beginning of the planning process and screened and refined in subsequent iterations throughout the planning process. However, additional alternative plans may be identified at any time during the process. Plans should be in compliance with existing statutes, administrative regulations, and common law or include proposals for changes as appropriate.

— Based on ER 1105-2-100, Planning Guidance Notebook

FWCA

- Provide input to the Corps via Planning Aid Report/Letter.
- Negotiate the FWCAR scope of work.

MSA

- Technical assistance and early coordination between Corps/NMFS regarding EFH.

MMPA

- During preparation of the NEPA report, coordination with the NMFS and/or FWS will include the discussion of potential impact to any species covered by this Act.

CZMA

- If the study/project could have reasonably foreseeable effects on a State's coastal uses or resources, the Corps will consult with the state coastal management program early in the planning stages of a project to ensure early state-Federal coordination.

The identification of potentially significant issues generated during scoping is then used by the PDT as it develops study objectives, characterizes the problems and opportunities, begins developing the expected "future without project condition," identifies measures addressing

the water resources problem, and formulates alternative plans based on these measures.

During this early phase of the feasibility study, the PDT is primarily working with existing information, literature and data available from previous Corps studies, the local sponsor, other Federal agencies and other sources. This presents an opportunity for the Corps to exchange or communicate with the Services the list of existing data identified to ensure the latest and most recent is utilized.

During the Scoping Phase, collection of new data is limited to instances where it is essential to support a decision related to understanding the problem and developing a reasonable array of alternative plans to address the problem. However, at the same time, the PDT is looking forward to determine the additional data, analyses, and other information that may be necessary to make future decisions during the study.

Documentation of scoping and plan formulation will include initial NEPA documentation, including why and how the particular range of project alternatives was developed, what kind of public and agency input was utilized, why and how alternatives were formulated and

how alternatives were eliminated from consideration, leading to a final array of alternatives, i.e., "reasonable range" of alternatives in NEPA terms.

The first decisional milestone, the Alternatives Milestone, happens at the end of this phase, marking vertical team agreement that the PDT has identified a focused array of alternatives and has a reasonable proposed way forward for analyzing and comparing those alternatives.

Prior to the Alternatives Milestone, the PDT should be confident that significant legal, policy, or technical concerns about the array of alternatives or the criteria that will be used to evaluate and compare the alternatives have been identified, and to the extent possible, a path to resolve any significant issues has been discussed.

ALTERNATIVE EVALUATION & ANALYSIS PHASE

The second phase of a SMART Planning feasibility study is Alternative Evaluation and Analysis. This phase is the heart of the plan formulation and impact analysis, and may take a year to complete. The phase concludes when the PDT has identified a single alternative as the agency's "Tentatively Selected Plan," and releases a draft Integrated Feasibility/NEPA Report for public and agency review.

In this step, the focused array of alternative plans (including the "no action" plan) are compared against each other, with emphasis on the outputs and effects that will have the most influence in the decision-making process. A comparison of the outputs of the various plans must be made and the beneficial and adverse effects of each plan must be compared, including monetary and non-monetary benefits and costs.

Using the selection criteria (based on the study objectives) that were agreed to at the Alternatives Milestone, the PDT will identify a single alternative from among all those that have been considered – this is the Tentatively Selected

Plan – or preferred alternative in NEPA terms. The Tentatively Selected Plan must be shown to be preferable to taking no action (if no action is not recommended) or implementing any of the other alternatives considered during the planning process. The criteria for selecting the recommended plan differ, depending on the type of plan and whether desired project outputs are NED, NER, or a combination of both. If a "Locally Preferred Plan" is going to be recommended, the District must first get a policy waiver through the Headquarters office.

During this phase of analysis, the economic and environmental benefits, impacts and costs needed to distinguish between the various alternatives, will be developed. The duration of this phase will vary depending on the complexities of the study and the amount of modeling, data, analyses or other information that must be developed in order to evaluate alternatives and identify a Tentatively Selected Plan. The PDT must describe

the environmental impacts per alternative, and include the mitigation plan (whether it's at a conceptual level or it is model driven) per alternative, including the estimated range of preliminary costs, as the Tentatively Selected Plan will not yet have been optimized. For Ecosystem Restoration studies, the PDT will be required to select a model, collect the data, and conduct a Cost Effectiveness/ Incremental Cost Analysis

(CE/ICA) during this phase as the results will be used to identify the NER Plan. During this Alternative Evaluation and Analysis Phase, coordination and communication between the Corps, FWS and NMFS will likely focus on areas such as:

- High level analysis of impact on fish, wildlife and habitat of alternative plans.
- Identify ways to scale measures / alternatives to avoid or minimize impacts

ALTERNATIVE EVALUATION & ANALYSIS PHASE

SCOPING

ALTERNATIVE EVALUATION & ANALYSIS

FEASIBILITY LEVEL ANALYSIS

CHIEF'S REPORT

Typical Engagement Between the Corps and the Services During Alternative Evaluation & Analysis

Headquarters – Corps and Services	<ul style="list-style-type: none"> ■ Resolve conflicts in agency policies ■ Communicate policies clearly to regional and local offices
Regional Offices – Corps Divisions and Services Regional Offices	<ul style="list-style-type: none"> ■ Quarterly/regular dialogue on ongoing and expected studies ■ Address areas of concern not resolved during development of project-specific PMPs (e.g., expected level of detail of analysis or data collection)
Local Offices – Corps Districts and Field or Regional Offices	<ul style="list-style-type: none"> ■ Continued engagement via FWCA, including assessing impact on fish and wildlife species ■ Provide input on opportunities to scale measures / plans to minimize impacts on fish and wildlife ■ Communicate anticipated information needs for ESA - section 7 consultation and/or EFH consultation.

ALTERNATIVE EVALUATION & ANALYSIS

6-13 months

- Analyze, Evaluate and Compare Alternatives to Identify the Tentatively Selected Plan
- Develop the “Future without Project Condition”
- Prepare the Draft Integrated Feasibility Report and Environmental Documentation
- Secure a Waiver from the ASA(CW) if a Locally Preferred Plan is being Pursued

2

TSP MILESTONE

Vertical Team Concurrence on Tentatively Selected Plan

- Release Draft Integrated Feasibility/NEPA Report for Concurrent Review

3

AGENCY DECISION MILESTONE

Agency Endorsement of Recommended Plan

- or adverse effects, or provide environmental benefits.
- Develop initial design and quantify range of mitigation alternatives (including compensation).
- Collecting or planning for the information and data needs required for environmental

evaluation and consultation activities (such as developing the Biological Assessment or EFH Assessment).

During this phase, the PDT should work with the Services to identify the information necessary to facilitate developing the draft FWCAR. If anadromous/estuary/marine resources are affected, input from NMFS should be solicited to reduce environmental impacts to these species and their habitats. The FWCAR should address those alternatives that are to be evaluated in the draft Integrated Feasibility/NEPA Report. A draft FWCAR should be provided to the Corps early enough so that the views of the appropriate Services can be considered in the draft Integrated Feasibility/NEPA Report, and made available to the public during the public review period. To the extent that the Tentatively Selected Plan is modified as a result of public review, the draft FWCAR may be revised and a final report should be included as an attachment to final Integrated Feasibility/NEPA Report.

Specifically, during the Alternative Evaluation and Analysis Phase, the Corps and Services will engage on the following:

GENERAL ACTIONS

- The Corps and the Services will continue ongoing communication regarding criteria that will be used to evaluate and identify the Tentatively Selected Plan.
- The Corps will develop a conceptual mitigation plan for the Tentatively Selected Plan including identification of the period of time needed for monitoring to ensure success, criteria for determining ecological success, description of available lands for mitigation and basis of determination, conceptual adaptive management plan, identification of entity responsible for monitoring, and description of consultation process with Services and other appropriate agencies.

ESA

- Agencies should continue communication on the expectation of initiation of formal consultation (if determined), and the data, analysis or other information available to develop a Letter of Concurrence, or Biological Opinion, if required.
- Towards the end of this phase, the Corps will send their Biological Evaluation/

Assessment and conclusions to appropriate Services, advising them whether the potential impacts associated with the Tentatively Selected Plan are considered “may affect,” “likely to adversely affect” (i.e., take is anticipated and a Biological Opinion is required), or “may affect but not likely to adversely affect” (Letter of Concurrence will be prepared by the appropriate Services).

FWCA

- The FWCAR, Planning Aid Report/Letter is provided to the Corps. The FWCAR will include: 1) documentation of the recommended project’s impacts upon fish and wildlife; and 2) concise recommendations for measures that should be taken to conserve fish and wildlife resources in light of those impacts.
- Corps to include draft FWCAR, Planning Aid Letter/Report in draft Feasibility/NEPA Report.

MSA

- The Corps will develop the EFH Assessment to be provided to NMFS and included in the draft Integrated Feasibility/NEPA Report. The EFH Assessment should focus on the potential impacts associated with the Tentatively Selected Plan. The level of detail in an EFH Assessment should be commensurate with the complexity and magnitude of the potential adverse effects of the action. Mandatory contents are: a description of the proposed action; an analysis of the potential adverse effects of that action on EFH and the managed species; the Corps conclusions regarding the effects of the action on EFH; and proposed mitigation, if applicable.
- NMFS will begin preparation of EFH Conservation Recommendations and communicate the recommendations to the Corps. Note that the recommendations may not be communicated until the next phase of study; it is preferable that both the Corps and the NMFS establish a schedule for the recommendations, as it triggers a series of responses and response deadlines.

MMPA

- All practical efforts in the study planning will be made to avoid taking of a marine mammal. Although rare in Corps civil works activities or projects, if the taking of a marine mammal is unavoidable, then the NMFS and/or FWS will be contacted as early as practicable to begin process of obtaining an incidental take authorization (ITA). The process to obtain an ITA could take a year or more, so early coordination between agencies is critical. The Corps will request an ITA issued under either sections 101(a)(5)(A) or (D) of the MMPA (16 U.S.C. § 1371 (a) (5)). Those provisions direct the Secretaries (of Commerce or Interior, depending on the species in question) to allow, upon request, the incidental, but not intentional taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region, if certain findings are made and either regulations are issued or, if the taking is limited to "harassment," a notice of proposed authorization is provided to the public for review.

CZMA

- The Corps will determine if the activity will have reasonably foreseeable effects to the state's coastal uses or resources.

The steps that the PDT will take to develop additional design or analysis of the Tentatively Selected Plan to reduce risk and uncertainty with cost data, engineering effectiveness, environmental impacts, and economic benefits are presented to Corps Headquarters leadership at a Tentatively Selected Plan Milestone meeting. At this meeting, the Headquarters Chief of Planning and Policy confirms the plan identified as the Tentatively Selected Plan and approves release of the draft Integrated Feasibility/NEPA Report.

Once, the draft Integrated Feasibility/NEPA Report is released for concurrent public review and Corps technical, policy, and legal review, the Corps will also provide the draft report to the Services.

Receipt of an adequate EFH Assessment by NMFS triggers initiation of the EFH consultation. NMFS will review and comment on the Corps' EFH Assessment

within the time allotted for the NEPA review. NMFS comments will contain EFH Conservation Recommendations, as necessary, in addition to comments on the NEPA report. There may be situations where EFH is designated for a species that is also listed as threatened or endangered under ESA, necessitating consultation under both ESA and MSA. Because of this dual obligation, the Corps and NMFS can find efficiencies by integrating EFH and ESA consultations in order to streamline the environmental review process. In situations where EFH designations and ESA for listed species overlap, but involve listed or non-listed species, separate consultations may be the most efficient way to proceed.

Following public/agency review and Corps technical, legal, and policy review of the draft Integrated Feasibility/NEPA Report, the Corps PDT will consider and address all comments received. The purpose of the public review of the draft Integrated Feasibility/NEPA Report before much more detailed engineering and modeling analyses is to ensure consideration of public comment and technical review on the

CAN THERE BE MORE THAN ONE ALTERNATIVE PLAN CARRIED FORWARD INTO FEASIBILITY LEVEL ANALYSIS?

When a Locally Preferred Plan (LPP) is carried forward, the alternative determined to be the NED (or NER) alternative will also be brought forward for more detailed design and cost estimating.

In some cases, based on a number of factors including authorities and study objectives, a team may recommend that more than one plan be carried forward for additional detailed analysis and design.

Tentatively Selected Plan, before moving that alternative forward.

Following public/agency and Corps reviews, and once the PDT has developed a path forward to develop sufficient cost and design information for the final Integrated Feasibility/NEPA report that is responsive to comments, the Agency Decision Milestone meeting is held. The purpose of this milestone meeting is to get senior leadership of the Corps to endorse the Tentatively Selected

Plan, taking into consideration the concurrent review results of the draft Integrated Feasibility/NEPA Report. At this point, the agency

has considered the public review and impacts of the Tentatively Selected Plan and endorses it as the agency's "Recommended

Plan." For NEPA purposes, the term "Recommended Plan" is the same as the "Preferred Alternative."



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FOCUS ON ESA - SECTION 7 COORDINATION/CONSULTATION

If the FWS/NMFS has identified listed or proposed species or designated or proposed critical habitat earlier in the study (Scoping Phase), then the Corps should have a prepared Biological Assessment at the beginning of the Feasibility-Level Analysis Phase (or sooner if practicable) with a determination as to whether the Tentatively Selected Plan (now the Corps' "Recommended Plan") may affect any such species and/or critical habitat.

If the Biological Assessment determines the Recommended Plan is not likely to adversely affect endangered or threatened species or critical habitat, then the Corps may request informal consultation with FWS/NMFS.

If the Biological Assessment indicates that the Recommended Plan is likely to adversely affect a listed endangered or threatened species or critical habitat, then the Corps will request formal consultation with FWS/NMFS. Formal consultation is "initiated" on the date the Corps' request is received by FWS/NMFS, if all relevant and required data are provided. If all required data are not initially submitted, then formal consultation is initiated

on the date on which all required information has been received.

It is critical at this juncture of the feasibility study and ESA consultation process that the Corps and FWS/NMFS communicate often and establish timeframes leading to a final Biological Opinion (timeframes for formal consultation are established by the ESA, and are referenced in the Final ESA Section 7 Consultation Handbook (March 1998)).

While the written acknowledgement process is optional, it is highly recommended that FWS/NMFS provide written acknowledgement so that the Corps has established timeframes for the Biological Opinion; or in the instance where FWS/NMFS request additional data/information, the Corps has a clear understanding of the request, leading to a quicker response time.

For further details on the ESA consultation process, reference the Final ESA Section 7 Consultation Handbook (link located in Appendix B).

FEASIBILITY-LEVEL ANALYSIS PHASE

At this phase, the Tentatively Selected Plan is now referred to as the “Recommended Plan.” This phase of the study can be expected to last several months to a year, as the PDT develops additional design of the recommended plan to reduce risk and uncertainty with cost data, engineering effectiveness, environmental impacts, and economic benefits, and documents the process and the recommendation in the updated Integrated Feasibility/NEPA Report.

During this phase, the PDT will scale measures or elements of the recommended plan to reasonably optimize technical and cost effectiveness of the project, including economic and environmental considerations. The Corps PDT should also seek input from the Services through the coordination and consultation processes underway. The result of this study phase will be a sufficiently detailed design on the Recommended Plan (and Locally Preferred Plan if appropriate) in order to improve the estimate of project costs, engineering effectiveness, and environmental or economic benefits. At the end of this phase, there will be



sufficient design and technical/cost information to make a recommendation to the Chief of Engineers.

The level of design detail on the recommended plan for Federal investment under SMART Planning has not changed. The level of design at the end of the feasibility study process is not intended to be either construction-ready or permit-ready; additional detail will be developed during the Preconstruction, Engineering and Design (PED) phase, after the project has been recommended for Congressional authorization for construction. Specifically, during the Feasibility-Level Analysis Phase:

ESA

- The Corps should provide the Biological Evaluation/Assessment to FWS and/or NMFS, if it was not provided during the previous phase of study. FWS and/or NMFS will review the Biological Evaluation/Assessment provided by the Corps. If

the Corps makes a formal consultation request, the FWS/NMFS will determine the completeness of the ESA initiation package submittal and make an assessment of the information needed to develop the Biological Opinion or determine whether any additional information is needed.

- Agencies conclude informal consultation, if applicable.
- For formal consultation, after receiving a complete initiation package, the

Services will develop the draft Biological Opinion and Incidental Take Statement, as appropriate. The FWS and/or NMFS will share the draft Biological Opinion with the Corps to ensure that they have correctly characterized the action and that any reasonable and prudent alternatives, reasonable and prudent measures, and terms and conditions are appropriate and within Corps authority. The final Biological Opinion must be provided

Typical Engagement Between the Corps and the Services During the Feasibility Level Analysis of the Recommended Plan

Headquarters – Corps and Services	<ul style="list-style-type: none"> ■ Resolve conflicts in agency policies ■ Communicate policies clearly to regional and local offices
Regional Offices – Corps Divisions and Services Regional Offices	<ul style="list-style-type: none"> ■ Quarterly/regular dialogue on ongoing and expected studies ■ Resolve study-specific issues when escalated from local offices
Local Offices – Corps Districts and Field or Regional Offices	<ul style="list-style-type: none"> ■ Informal and formal consultation activities ■ Share new information / data when it is available, especially when it impacts decisions/ consultation ■ Communicate clearly when decisions impact other agency's actions

FEASIBILITY LEVEL ANALYSIS

6-13 months

- Consider and Respond to Public Comment and Corps Technical, Legal and Policy Review Comments
- Consultation Activities (including ESA and MSA)
- Develop Sufficient Detail on Cost and Benefits of Proposed Project and Social, Environmental and Economic Impacts to Provide a Policy-Compliant Recommendation
- Incorporate Environmental Documentation in Integrated Feasibility Study Report
- Final Integrated Report Package Transmitted to Corps HQ

4

CIVIL WORKS REVIEW BOARD

Release Report for State & Agency Review

for inclusion in the final Integrated Feasibility/NEPA Report.

FWCA

- The Corps will give full consideration to the recommendations in the draft FWCAR. To the extent that the Tentatively Selected Plan is modified as a result of public review, the draft FWCAR is revised and finalized early enough to be made an integral part of the final



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Integrated Feasibility/NEPA Report.

- The FWCAR will be finalized and provided to the Corps.

MSA

- The Corps will provide a response to EFH Conservation Recommendations within 30 days of receipt from NMFS. The Corps may incorporate EFH Conservation Recommendations and provide an acknowledgement letter to NMFS. NMFS will then respond within 10 days acknowledging the Corps' acceptance of the EFH Conservation Recommendations and conclude the EFH consultation. Alternatively, the Corps may provide an interim response to the EFH Conservation Recommendations if a full response cannot be completed within 30 days of receipt of recommendations.

The final response to the EFH Conservation Recommendations must be provided to NMFS at least 10 days prior to agency final approval of the action. If the Corps is not adopting the EFH Conservation Recommendations, the Corps will provide a substantive response explaining the reasons for not adopting the EFH Conservation Recommendations. The Corps' final response to the EFH Conservation Recommendations will be included in the final Integrated Feasibility/NEPA Report.

MMPA

- If it has been determined that a marine mammal taking is unavoidable, the Corps, NMFS/FWS should coordinate closely throughout the process. A summary of MMPA

coordination/consultation should be provided in the final Integrated Feasibility/NEPA Report.

CZMA

- Corps documents conclusions of CZMA coordination and compliance in the final Integrated Feasibility/NEPA Report.

Incorporating ongoing technical review input, the PDT prepares the final Integrated Feasibility/NEPA Report identifying the agency recommendation and the rationale justifying that recommendation. The final report package, including the Integrated Feasibility/NEPA Report, the final Biological Opinion and the draft Record of Decision or draft Finding of No Significant Impact, is transmitted from the Corps District, through Division, to Headquarters.

CHIEF'S REPORT PHASE

SCOPING

ALTERNATIVE EVALUATION
& ANALYSIS

FEASIBILITY LEVEL ANALYSIS

CHIEF'S REPORT

CHIEF'S REPORT PHASE

Once received at Corps Headquarters, the final Integrated Feasibility/NEPA Report package undergoes final Headquarters policy review and the Chief's Report is developed. All environmental coordination and documentation associated with the feasibility study should be completed at this point.

A Civil Works Review Board meeting – the fourth decision milestone – is held at Corps Headquarters where the Corps' Deputy Commanding General for Civil and Emergency Operations, with input from other senior leaders, makes a determination concerning the release of the final Integrated Feasibility/NEPA Report for state and agency review and final public comment. The draft Report of the Chief of Engineers (Chief's Report) is also released concurrently with the final Integrated Feasibility/NEPA Report.

The fifth decision milestone, and when the feasibility study ends, is when the Chief of Engineers signs the Chief's Report and

transmits it and the Integrated Feasibility/NEPA Report (including a draft Record of Decision (ROD) or draft Finding of No Significant Impact (FONSI) to the ASA(CW)). The ASA(CW) then submits the report documentation to the OMB, which reviews the report to make sure that it is consistent with Administration policies and priorities, and provides clearance to release the report to Congress. The ASA(CW) then submits the Integrated Feasibility/NEPA Report (including a signed ROD/FONSI) to Congress for authorization to construct the recommended project.

Specifically, during the Chief's Report Phase:

- District/Division sends final Integrated Feasibility/NEPA Report to Headquarters for policy review.
- A Civil Works Review Board (CWRB) is held.
- The Corps releases the final Integrated Feasibility/NEPA Report and draft Chief's Report for State and Agency Review. If the NEPA Report is Environmental Impact Statement, a Notice of Availability is prepared for

the Environmental Protection Agency to publish in the Federal Register.

- The Chief of Engineers signs the Chief's Report.

CHIEF'S REPORT

3-4 months

- Corps HQ Develops the Chief's Report with the recommendation of a Specific Water Resources Development Project for Congressional Authorization

5

CHIEF'S REPORT

Chief's Report Signed



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Appendix A: Acronyms & Key Terms

ACRONYMS

ASA(CW)	Assistant Secretary of the Army for Civil Works
CE/ICA	Cost Effectiveness/Incremental Cost Analysis
CEQ	Council on Environmental Quality
CWRB	Civil Works Review Board
CZMA	Coastal Zone Management Act
EA	Environmental Assessment
EC	Engineer Circular
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
ER	Engineer Regulation
ESA	Endangered Species Act
FWCA	Fish and Wildlife Coordination Act
FWCAR	Fish and Wildlife Coordination Act Report
MMPA	Marine Mammal Protection Act
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MSC	Major Subordinate Command
NED	National Economic Development (usually in reference to the “NED plan”)
NEPA	National Environmental Policy Act
NER	National Ecosystem Restoration (usually in reference to the “NER plan”)
NMFS	National Marine Fisheries Service
OMB	Office of Management and Budget
P&G	1983 Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies (also called Principles & Guidelines)
PAL	Planning Aid Letter
PAR	Planning Aid Report
PB	Planning Bulletin
PED	Preconstruction Engineering and Design
PDT	Project Delivery Team
PMP	Project Management Plan

TSP	Tentatively Selected Plan
FWS	U.S. Fish and Wildlife Service
WRDA	Water Resources Development Act
WRRDA	Water Resources Reform and Development Act (of 2014)

KEY TERMS

Agency Decision Milestone – This is the third decision milestone in the SMART Planning process. A panel of senior leaders from Corps headquarters will determine whether the tentatively selected plan should be endorsed and move forward into feasibility-level design phase.

Alternatives Milestone – This is the first decision milestone in the SMART Planning process. The vertical team concurs on the proposed way forward on continuing analysis and evaluation on a focused array of alternatives.

Charette – A structured, collaborative session in which a group comes together to develop a solution to a problem.

Chief’s Report – The favorable report of the Chief of Engineers, signifying that the Chief of Engineers approves the project recommendation. This is the final decision milestone in the SMART Planning Process.

Civil Works Review Board – This is the fourth decision milestone in the SMART Planning process. Division Commanders and District Commanders present the results of their water resources development studies and the recommendations for projects that require authorization by the United States Congress. The CWRB briefing serves as the corporate checkpoint that the final feasibility/NEPA report are ready for State and Agency Review.

Cost Effectiveness/Incremental Cost Analysis (CE/ICA) – Corps guidance requires a CE/ICA for recommended environmental



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restoration and mitigation plans. A cost effectiveness analysis is conducted to ensure that the least cost solution is identified for each possible level of environmental output. An incremental cost analysis is conducted to reveal changes in costs for increasing levels of environmental outputs.

Decision Documents – Documents that record decisions, such as a Record of Decision, which include the reasons for selecting a particular alternative.

Feasibility Level Design – This phase of the study includes development of the Final Integrated Feasibility/NEPA Report and additional design of the recommended plan to reduce risk of uncertainty with cost data, engineering effectiveness, environmental impacts, and economic benefits.

SMART – Specific, Measurable, Attainable, Risk Informed, Timely

SMART Planning – Corps planning process emphasizes risk-informed planning that leads to decisions.

Services – Collectively, the U.S. Fish and Wildlife Service and National Marine Fisheries Service.

Project Delivery Team (PDT) – A multidisciplinary group assembled to develop the feasibility study. The group generally includes staff

within a District and other Corps offices, as well as project sponsor’s staff. FWS and NMFS staff can also participate as members of a PDT.

Recommended Plan – In SMART Planning, once the Corps endorses the tentatively selected plan (after public review of the draft Integrated Feasibility/NEPA Report), it then becomes the Corps “recommended plan.”

Tentatively Selected Plan – This is the plan identified after plan formulation analysis that meets planning objectives of the study. The tentatively selected plan may, or may not, be the NED plan or NER plan.

Tentatively Selected Plan Milestone – This is the second decision milestone in the SMART Planning process. The milestone is met when the PDT has concurrence on the tentatively selected plan and the path forward from the vertical team representing District, Division, and Headquarters decision makers. This milestone is the trigger for public release of the draft Integrated Feasibility/NEPA Report for concurrent agency and public reviews.

Vertical Team – The exact makeup of the vertical team may vary from study to study depending on the complexity and scope of the study; however it will include decision-makers and technical expertise from the District, Division and Headquarters. The vertical team is involved informally throughout study process, and formally during decisional milestones.

Appendix B: Resources and More Information

SMART PLANNING AND ENVIRONMENTAL COMPLIANCE PROCESS OVERLAYS

FIGURE 4: SMART PLANNING FEASIBILITY STUDY PROCESS OVERLAID WITH FWCA AND NEPA COMPLIANCE ACTIVITIES

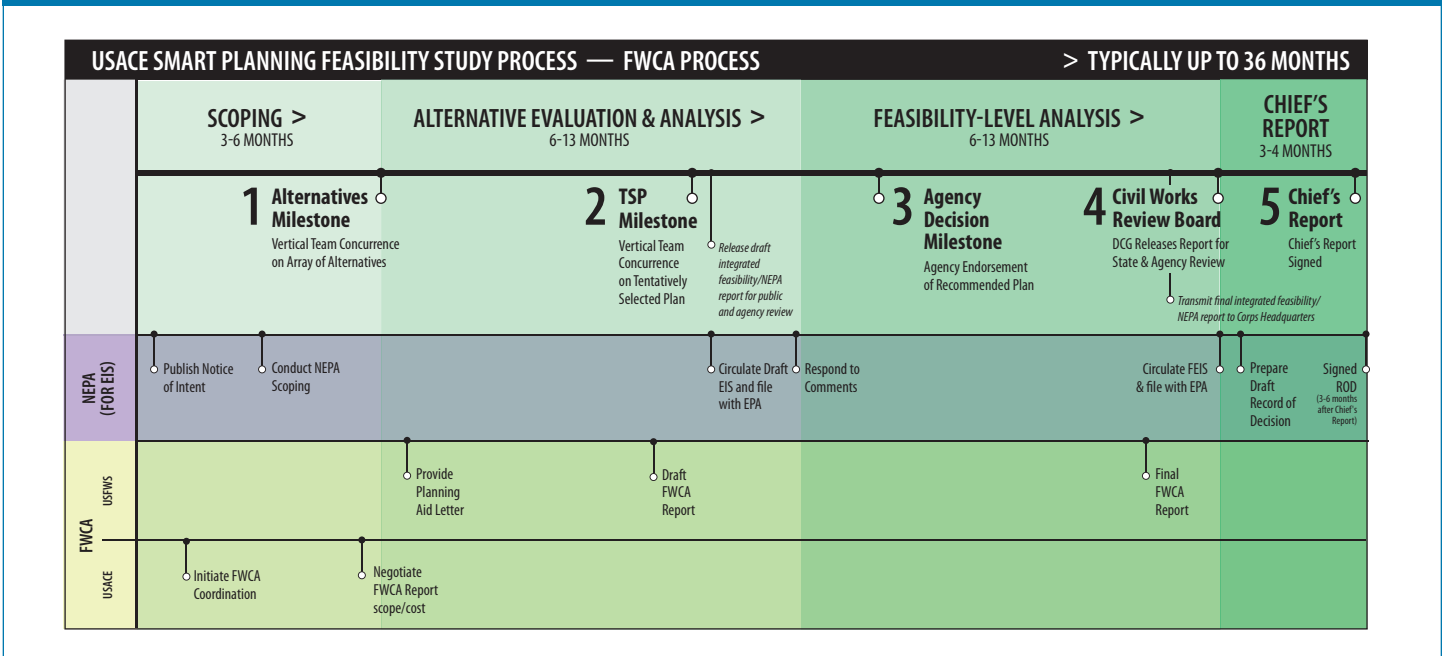


FIGURE 5: SMART PLANNING FEASIBILITY STUDY PROCESS OVERLAID WITH MSA AND NEPA COMPLIANCE ACTIVITIES

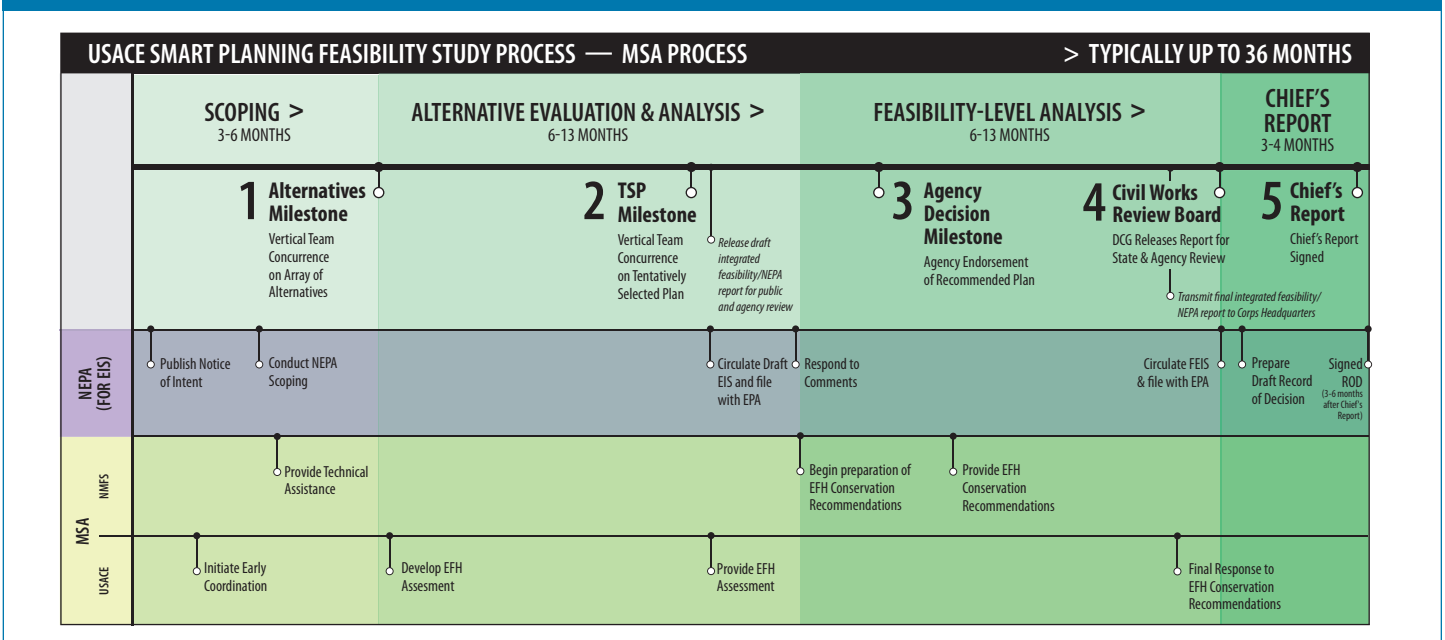
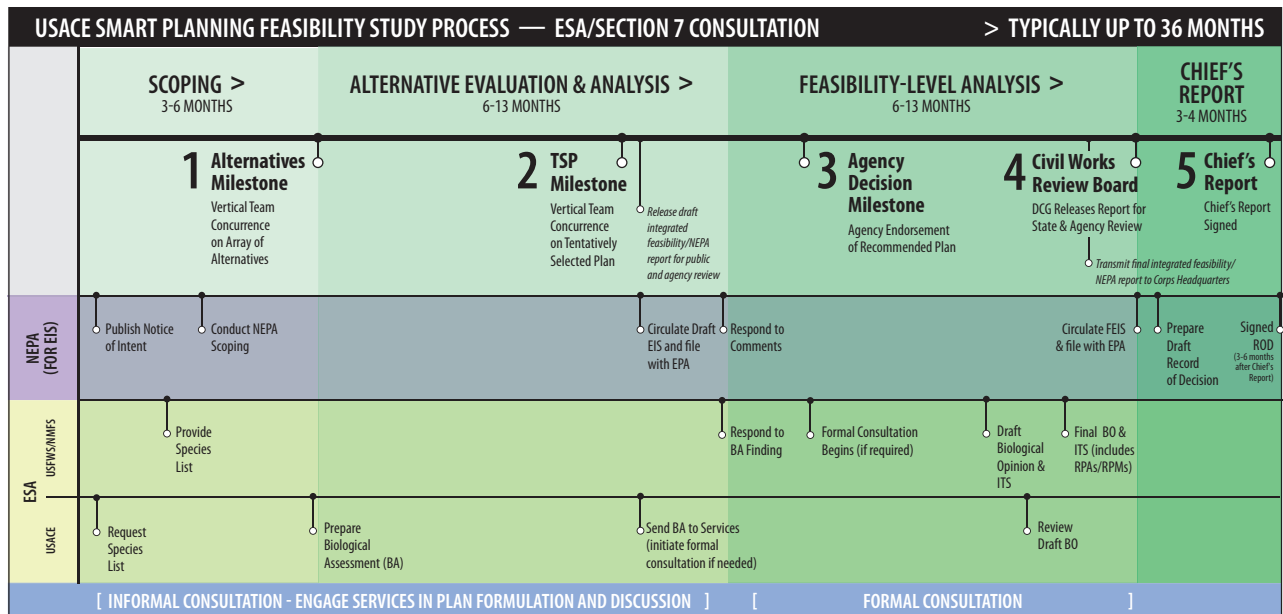


FIGURE 6: SMART PLANNING FEASIBILITY STUDY PROCESS OVERLAID WITH ESA AND NEPA COMPLIANCE ACTIVITIES



HANDBOOKS AND GUIDES TO RESOURCE CONSULTATION AND COORDINATION

- **Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act.** U.S. Fish & Wildlife Service and National Marine Fisheries Service. March 1998.
http://sero.nmfs.noaa.gov/protected_resources/section_7/guidance_docs/documents/esa_section7_handbook.pdf
- **Essential Fish Habitat Consultation Guidance, Version 1.1.** National Marine Fisheries Service. April 2004
http://www.habitat.noaa.gov/pdf/efhconsultationguidancev1_1.pdf
- **Water Resources Development under the Fish and Wildlife Coordination Act.** U.S. Fish & Wildlife Service. November 2004.
<http://www.fws.gov/habitatconservation/fwca.pdf>
- **SMART Planning Feasibility Study Process Overlaid with Major Environmental Compliance Laws and Processes.** U.S. Army Corps of Engineers. June 2015.
<http://planning.usace.army.mil/toolbox/processes.cfm?id=231&Option=National%20Environmental%20Policy%20Act>

CORPS OF ENGINEERS REGULATIONS AND POLICIES

- **Engineer Regulation 1105-2-100: Planning Guidance Notebook.** 22 April 2000. Overarching regulation providing direction by which Corps of Engineers Civil Works projects are formulated, evaluated and selected for implementation.
<http://planning.usace.army.mil/toolbox/library/ERs/entire.pdf>
- **Engineer Regulation 200-2-2: Procedures for Implementing NEPA.** 4 March 1988. Provides guidance for implementation of the procedural provisions of the National Environmental Policy Act (NEPA) for the Civil Works Program of the U.S. Army Corps of Engineers.
http://planning.usace.army.mil/toolbox/library/ERs/ER200-2-2_4Mar1988.pdf
- **Corps Planning Bulletins:** The Corps uses planning bulletins to provide interim policy and implementation guidance to the field until more difficult-to-update policies, such as Engineer Regulations and Engineer Circulars, can be updated. Planning Bulletins cover the breadth of policies related to SMART Planning feasibility study implementation, the 3x3x3 Rule, and the exemption process for the 3x3x3 Rule.

<http://planning.usace.army.mil/toolbox/library.cfm?Option=Listing&Type=PB&Search=Policy&Sort=Default>

- The Planning Community Toolbox: The collection of guidance and information for the Corps Planning community and their stakeholders.

<http://planning.usace.army.mil/toolbox/index.cfm>

AGREEMENT BETWEEN THE CORPS AND U.S. FISH AND WILDLIFE SERVICE

- Agreement between the U.S. Fish and Wildlife Service and the U.S. Army Corps of Engineers for Conducting Fish and Wildlife Coordination Act Activities. January 2003.

http://www.usace.army.mil/Portals/2/docs/civilworks/mous/USFWS_MOU_Jan2003.pdf

NATURAL RESOURCE PROTECTION LEGISLATION DISCUSSED IN GUIDE

The Endangered Species Act (as amended) (ESA) (16 USC §§1531, et seq.). Section 7(a)(2) of the ESA, states that each Federal agency shall, in consultation with the Secretary, insure that any action an agency authorizes, funds, or carries out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Any discretionary Federal action that may affect a listed species must undergo Section 7 consultation. Section 7(a)(1) requires Federal agencies to use their authorities to further the conservation of ESA listed species and their designated critical habitats.

The Fish and Wildlife Coordination Act (as amended) (FWCA) (16 USC 661, et seq.). The FWCA provides that wildlife conservation shall receive equal consideration and be coordinated with other features of water resource development programs. A Federal action agency, such as the Corps, shall consult with FWS/NMFS with a view to the conservation of wildlife resources by preventing loss of and damage to such resources as well as providing for the development and improvement thereof in connection with such water resource

development. The FWS/NMFS may provide recommendations to the Federal action agency to which the action agency shall give full consideration.

The Magnuson-Stevens Fisheries Conservation and Management Act (as amended) (MSA) (16 USC §§1801, et seq.).

The 1996 amendments to the MSA set forth a number of mandates for NMFS, regional fishery management councils, and other Federal agencies to identify and protect important marine and diadromous fish habitats. Marine fisheries councils, with assistance from NMFS, are required to delineate essential fish habitat (EFH) for all managed species. Federal action agencies which fund, permit, or carry out activities that may adversely impact EFH are required to consult with NMFS regarding the potential effects of their actions on EFH, and to respond in writing to our recommendations. In addition, NMFS may comment on any state agency activities which would impact EFH.

Coastal Zone Management Act (as amended) (CZMA) (16 USC §§ 1451, et seq.). The Coastal Zone Management Act, administered by NOAA, was enacted in 1972 to encourage coastal states, including the Great Lake states and U.S. Territories and Commonwealths) to develop comprehensive programs to manage and balance competing uses of and impacts to coastal resources. This act provides for the management of the nation's coastal resources, including the Great Lakes. Section 307 of the CZMA, called the "federal consistency" provision, generally requires that federal actions, within and outside the coastal zone, which have reasonably foreseeable effects on any coastal use (land or water) or natural resource of the coastal zone be consistent with the enforceable policies of a state's federally approved coastal management program. Federal actions include federal agency activities, federal license or permit activities, and federal financial assistance activities. Federal agency activities must be consistent to the maximum extent practicable with the enforceable policies of a state coastal management program, and license and permit and financial assistance activities must be fully consistent.



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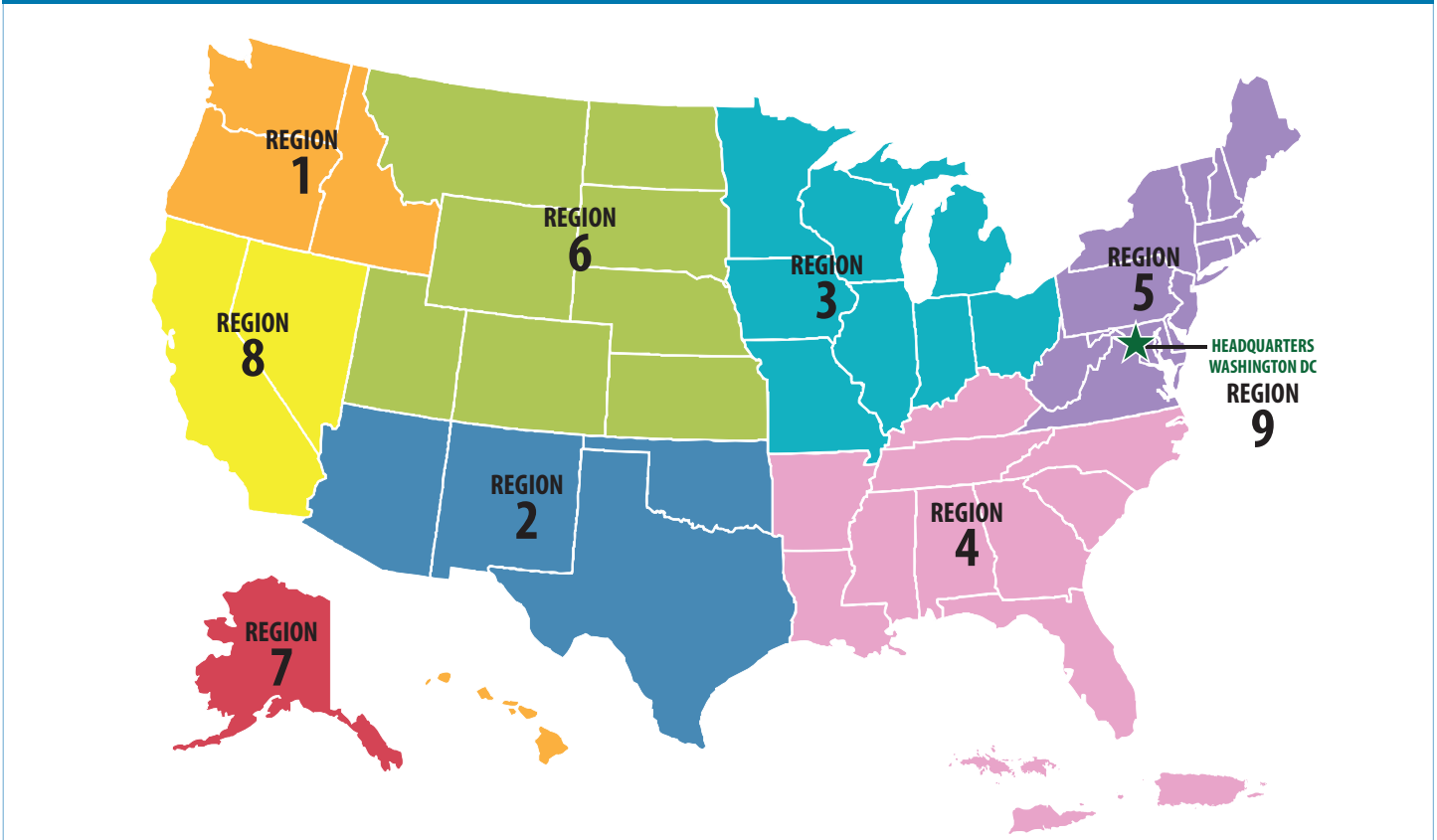
The Marine Mammal Protection Act (as amended) (MMPA) (16 U.S.C. § 1361 et seq.). Section 101(a) of the MMPA (16 U.S.C. § 1372) generally prohibits the “take” of marine mammals by U.S. citizens (including Federal agencies) or by any person or vessel in waters under U.S. jurisdiction, subject to certain exceptions. Among the enumerated exceptions to the take prohibition is take that is authorized under an incidental take authorization (ITA) issued under either sections 101(a) (5)(A) or (D) of the MMPA (16 U.S.C. § 1371 (a)(5)). Those provisions direct the Secretaries (of Commerce or Interior, depending on the species in question) to allow, upon request, the incidental, but not intentional taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing)

within a specified geographical region, if certain findings are made and either regulations or, if the taking is limited to “harassment,” an incidental harassment authorization is issued.

The term “take”, as defined by the MMPA, means “to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal.” The MMPA further defines “harassment” as “any act of pursuit, torment, or annoyance which: (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].”

Appendix C: Overview of Agency Structures (FWS/NMFS/Corps)

FIGURE 7: FWS REGIONS

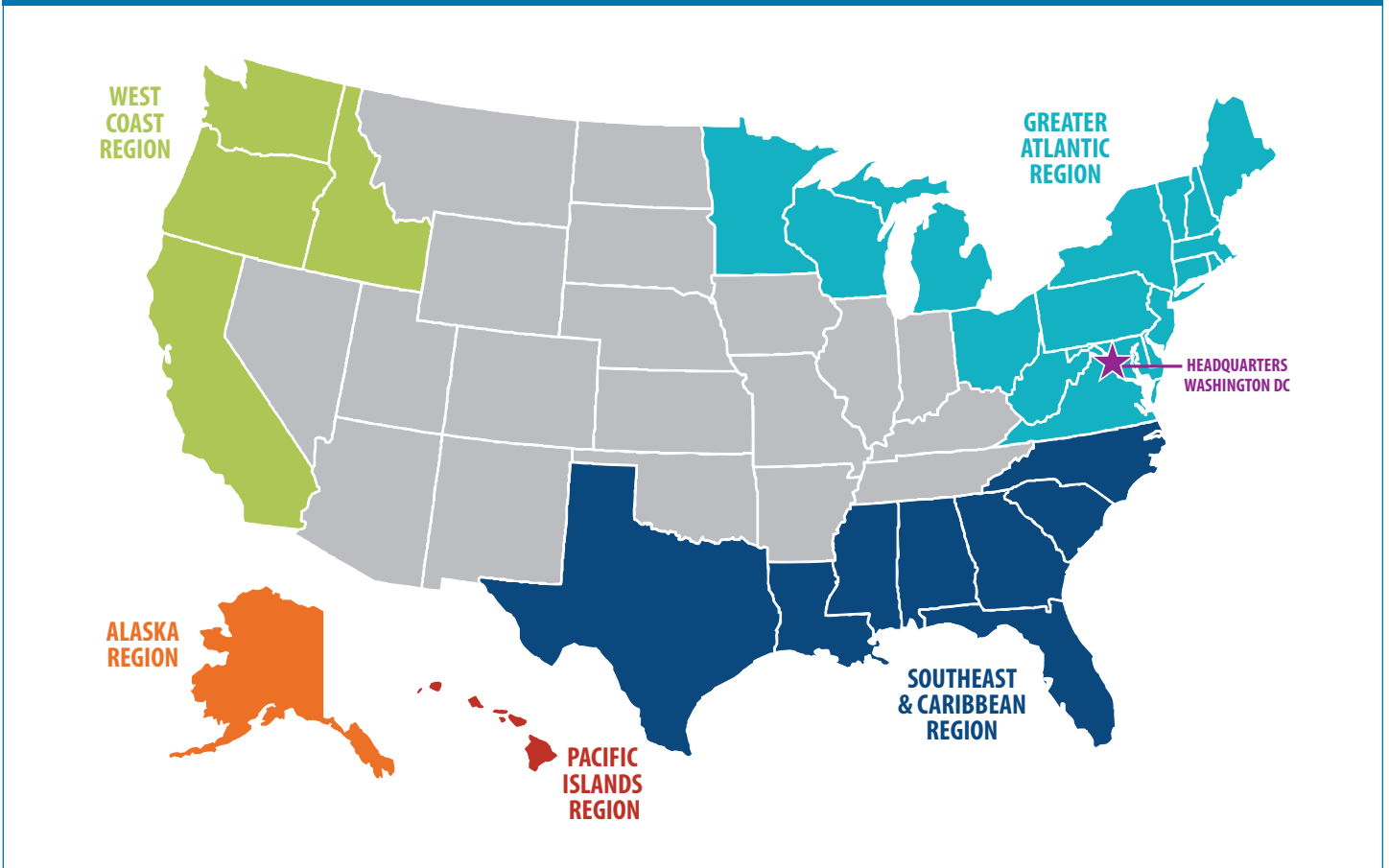


U.S. FISH AND WILDLIFE SERVICE

The FWS is the principal Federal agency responsible for conserving, protecting, and enhancing fish, wildlife and plants and their habitats for the continuing benefit of the Nation. The agency enforces Federal wildlife laws, administers the Endangered Species Act, manages migratory bird populations, restores nationally significant fisheries, and conserves and restores wildlife habitat such as wetlands. Natural resource protection legislation relevant to the Corps studies and projects that affect the FWS trust resource responsibilities include the

Endangered Species Act of 1973, as amended, the Fish and Wildlife Coordination Act, as amended, the Migratory Bird Treaty Act, the Estuary Protection Act, and the Coastal Zone Management Act of 1972. In addition, several Executive Orders have also established guidance to the FWS relative to fish and wildlife protection and conservation. For more information, please visit <http://www.fws.gov/>.

FIGURE 8: NMFS REGIONS



NATIONAL MARINE FISHERIES SERVICE

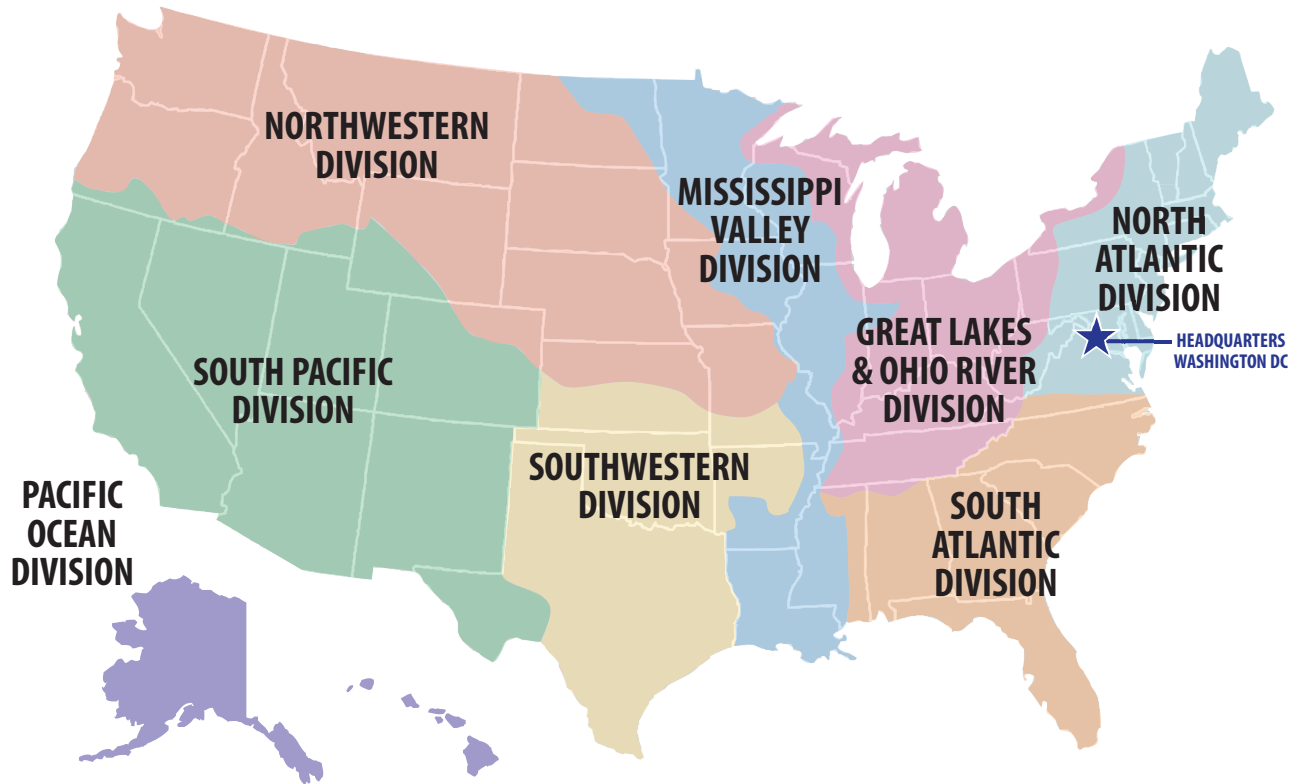
National Marine Fisheries Service (NMFS) is responsible for the stewardship of the nation's ocean resources and their habitat. The agency provides vital services for the nation: productive and sustainable fisheries, safe sources of seafood, the recovery and conservation of protected resources, and healthy ecosystems – all backed by sound science and an ecosystem approach to management. There are five NMFS Regions that are responsible for conducting consultations on Corps activities to be included in the SMART Planning process that may impact living marine resources within their Region. For more information, please visit <http://www.fisheries.noaa.gov>. Please note that limited resources and differing demands and priorities for NMFS may make upfront programmatic regional coordination unworkable. NMFS will fully participate in these activities where resources permit.

U.S. ARMY CORPS OF ENGINEERS

The Corps employs more than 33,000 employees, with the vast majority of whom are civilian personnel. The Corps is organized into one Headquarters at Washington, DC, with eight Divisions with civil works missions and 38 Districts organized geographically, generally defined by watershed boundaries, across the U.S. The Corps also supports a military mission within the U.S. and overseas.

The Corps' organization in Headquarters is led by a 3-star General that holds two distinct titles: the Chief of Engineers and Commanding General of the U.S. Army Corps of Engineers. The Chief of Engineers works under the civilian oversight of the Assistant Secretary of the Army for Civil Works. Three deputy commanding Generals report to the Chief of Engineers: the Deputy Commanding General, Deputy Commanding

FIGURE 9: USACE REGIONS



General for Civil and Emergency Operations, and Deputy Commanding General for Military and International Operations.

Each of the eight Division (or Major Subordinate Command – MSC) offices is led by a Division Commander, typically a Brigadier General. The Corps Divisions are responsible for program development, program execution, regional collaboration, strategic planning, congressional relationships, and implementing plans and policies of the Chief of Engineers. The Divisions also have oversight authority over District programs and operations, including review and/or approval of feasibility studies. In executing a feasibility study, Divisions provide both review and Quality Assurance functions. A feasibility study will not advance to the Headquarters level without the support of the Division. Approximately 80% of Corps civilian employees work at District offices, which have lead responsibility for carrying out the bulk of the

Corps' civil works mission areas. A District Commander (also referred to as a District Engineer), usually a Colonel, is responsible for overall management of a District. Districts employ a significant technical staff including engineers, planners, biologists, environmental scientists, archeologists, real estate specialists, contract specialists, project and program managers, and other disciplines. Districts are the primary planning and project implementation offices of the Corps, and are responsible for feasibility study execution. For each study, a Project Delivery Team (PDT), made up of a multidisciplinary group, is assembled to develop the study analysis and report. At the end of a study, the recommendation to the Chief of Engineers for Federal water resources investment is made by the District Commander in his/her role as the District Engineer. For more information, visit <http://www.usace.army.mil/>.