2015 Red Book

Synchronizing Environmental Reviews for Transportation and Other Infrastructure Projects

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16. Abstract

The purpose of the Red Book is to function as a “how to” for synchronizing NEPA and other regulatory reviews. This handbook will be useful to Federal agencies that review permit applications, and Federal, State, and local agencies that fund or develop major transportation and other infrastructure projects. This document discusses the requirements of many statutes and regulations to facilitate the reader’s understanding of how compliance with those requirements can be fulfilled while implementing the synchronization concept discussed in the Red Book. By increasing the use of review synchronization, more effective and efficient regulatory reviews are anticipated that could result in projects with reduced impacts to the environment as well as savings of time and money. This handbook will capture lessons learned from previous review synchronization efforts, and break down the concurrent review procedure into easy to understand components, affording agencies the opportunity to replicate the procedure or portions of the procedure more widely and without having to execute a formal agreement. The Red Book explores the appropriate considerations for conducting a synchronized review, including those topics and areas where challenges may occur. The handbook also includes best practices such as the use of transportation liaisons, innovative mitigation practices, and communication technology.

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Acronyms and Abbreviations

ACHP	Advisory Council on Historic Preservation
AGO	ArcGIS Online
BA	Biological Assessment
BGEPA	Bald and Golden Eagle Protection Act
CE	Categorical Exclusion
CZMA	Coastal Zone Management Act
CEQ	Council on Environmental Quality
CoP	Community of Practice
CWA	Clean Water Act
DEIS	Draft EIS
DOT	Department of Transportation
EA	Environmental Assessment
ECOS	Environmental Conservation Online Systems
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ETDM	Efficient Transportation Decision Making
FEIS	Final EIS
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FTE	Full-Time Equivalent
GIS	Geographic Information System

IEF	Integrated Ecological Framework
ILF	In-Lieu Fee
IP	Individual Permit
IPaC	Information for Planning and Conservation
IRT	Interagency Review Team
LEDPA	Least Environmentally Damaging Practicable Alternative
LOP	Letter of Permission
MAP-21	Moving Ahead for Progress in the 21st Century Act
MBTA	Migratory Bird Treaty Act
MMPA	Marine Mammal Protection Act of 1972
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NCDENR	North Carolina Department of Environment and Natural Resources
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act of 1966
NMFS	National Marine Fisheries Service
NOA	Notice of Availability
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NWP	Nationwide Permit
OA	Operating Administration
PCN	Preconstruction Notification
PGP	Programmatic General Permit
REF	Regional Ecosystem Framework

RGL	Regulatory Guidance Letter
RGP	Regional General Permit
RIBITS	Regulatory In-Lieu Fee and Bank Information Tracking System
ROD	Record of Decision
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SAMP	Special Area Management Plan
SHRP2	Second Strategic Highway Research Program
TEA-21	Section 1309 of the Transportation Equity Act for the 21st Century
TPO	Transportation Planning Organization
UPACS	User Profile and Access Control System
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USDOT	U.S. Department of Transportation
USDOT Act	Department of Transportation ACT of 1966
USFWS	U.S. Fish and Wildlife Service
WRDA	Water Resources Development Act
WRRDA	Water Resources Reform and Development Act of 2014

Introduction

Transportation and other infrastructure projects require multiple Federal permits and reviews, including reviews under the National Environmental Policy Act of 1969 (NEPA), to ensure that projects are built in a safe and responsible manner and that adverse impacts to the environment and communities are avoided, minimized, and mitigated. The NEPA review, which includes analysis and appropriate documentation, takes into account the potential impacts of the proposed action and investigates reasonable alternatives. It also provides a framework for meeting other environmental review requirements, such as those under the Endangered Species Act of 1973 (ESA), the National Historic Preservation Act of 1966 (NHPA), the Clean Water Act (CWA), the General Bridge Act of 1946 (General Bridge Act), the Magnuson-Stevens Fishery Conservation and Management Act (MSA), and the Marine Mammal Protection Act of 1972 (MMPA). Federal agencies involved in the review of transportation and other infrastructure projects, as well as the agencies proposing these projects, recognize the importance of early and continued coordination in facilitating an effective and efficient review process. However, effective coordination among the diverse sets of participants in these reviews, each with statutorily defined responsibilities, can be challenging due to a multitude of issues such as available time and resources, differing agency missions, and basic policy differences.

Red Book Key Messages:

- Communicate early with other agencies
- Have open communication with other agencies
- Be flexible within the constructs of existing laws and regulations

To help improve practices related to these issues, in September 1985 the principal Federal agencies involved in permit application reviews under Section 404 of the CWA for Federal-aid highway projects formed a workgroup. The result was the 1988 handbook *Applying the Section 404 Permit Process to Federal-Aid Highway Projects*, also known as the "Red Book." The Red Book provided a suite of tools to support effective and efficient interagency coordination and included joint agency meetings, communication technology, abbreviated permit reviews, and a means for concurrent reviews. The Red Book is still used as a reference to facilitate effective coordination of environmental reviews that have differing regulatory requirements. One of the major results of the original Red Book was the emphasis on synchronization of the NEPA and the Section 404 review processes, sometimes referred to as a merger agreement. Along with the emphasis on the synchronized, or concurrent, review process itself, there were additional tools and techniques within the original Red Book that are widely applied today.

Recent Initiatives

Conducting concurrent reviews instead of sequential reviews to the extent possible is, in theory, a simple, common-sense approach to meeting critical project needs, and is consistent with existing laws, regulations, and the 1988 Red Book.[1] In particular, the Council on Environmental Quality (CEQ) regulations state that Federal agencies should, to the extent practicable, integrate the requirements of NEPA with other planning and environmental review procedures required by law or by agency practice so

[1] 40 CFR §1500.2(c), 40 CFR §1502.25(a), 23 U.S.C. Section 139(d)(7).

that all such procedures run concurrently rather than consecutively[2]. This document and the case studies discussed throughout it can help agencies achieve integrated and concurrent reviews. However, given some of the challenges, there have been projects where concurrent reviews have not occurred, resulting in duplicative efforts and delays. Beginning in early 2012, the principal Federal agencies involved in writing the original Red Book, in addition to the U.S. Coast Guard (USCG) and the Federal Railroad Administration (FRA), formed a workgroup to gather specific information on the current state of the practice in the field. This included surveying field offices for use of synchronization through a formal agreement or other method, as well as other tools that would support review synchronization.

"Synchronize" means to cause things to agree in time or make things happen at the same time and speed.

- A **synchronized review process**, put simply, refers to performing the various environmental review and permitting procedures or consultation requirements necessary for a proposed project in a concurrent fashion, to the extent allowable and feasible. Ideally, this leads to one environmental analysis that satisfies the needs of all agencies that have a role to play in proposing, funding, or approving the project in some fashion. While the synchronization of environmental review procedures may benefit from merger agreements, whether formal or informal, such agreements are not strictly necessary in order to align those procedures concurrently.
- The terms "synchronization" and "concurrent reviews" are used interchangeably throughout the handbook and refer to the procedure of reviews occurring at the same time. This concept is also referred to as "alignment of reviews" or "integrating reviews."

Based on the survey, the workgroup found that approaches to and views on synchronization vary among regions and project sponsors. Survey responses indicated that: 1) review synchronization was being applied successfully for many projects; 2) some field offices were not fully aware of the benefits of synchronization; and 3) some field offices felt that there was a high cost of entry into synchronization due to the misconception that the only way to accomplish synchronization was through a formal agreement. Through the results of this survey the workgroup determined that it was an appropriate time to reinvigorate the Red Book with a focus on review synchronization to capture lessons learned from both successful and unsuccessful synchronization practices, provide information to those who are unfamiliar with synchronization, and seek to decrease the cost of entry and make synchronization more widely feasible. As part of the goal to provide better information on review synchronization, the workgroup recognized there were other tools and techniques from the original Red Book that could facilitate better review synchronization. Therefore, the workgroup decided to not limit the Red Book update to the concurrent review process itself, and also include concepts such as the use of programmatic approaches, dedicated liaisons, innovative technology,

[2] 40 CFR §1500.2(c), 40 CFR §1502.25(a).

and innovative mitigation concepts to support review synchronization by supporting the effective communication and coordination that are necessary for synchronization.[3]

Executive Order 13604, *Improving Performance of Federal Permitting and Review of Infrastructure Projects* (http://www.archives.gov/federal-register/executive-orders/2012.html), and the Presidential Memorandum, *Modernizing Federal Infrastructure Review and Permitting Regulations, Policies, and Procedures* (http://www.gpo.gov/fdsys/pkg/DCPD-201300346/content-detail.html), introduced several initiatives aimed at increasing the efficiency of infrastructure project review concurrently with the workgroup's research. The workgroup recognized that the basic principle of review synchronization is not unique to the transportation sector, and provided great potential for increasing the efficiency of the review process consistent with the Executive Order and Presidential Memorandum. Therefore, the workgroup determined that it was appropriate to align the Red Book update with these initiatives and consider key points in which a concurrent review process could be transferred into other sectors of infrastructure.

Early consultation and coordination among agencies with potential permitting or review responsibilities and other stakeholders can help develop milestones in the review process where issues of concern can be resolved earlier in the process, prior to a significant commitment of time and resources. Synchronizing separate Federal permit and review processes at the outset, rather than conducting them consecutively, can contribute to significant efficiencies for certain projects.

The workgroup recognized that multiple Federal reviews and requirements could greatly benefit from the early coordination and communication that are the key foundations of synchronization, including those under NEPA, Section 404 of the CWA, the Title 33 Bridge Acts, and compliance with the ESA, as amended. The Red Book update effort focused on these reviews and recognized that there are multiple other important Federal reviews that would benefit from synchronization including, but not limited to, Section 106 consultation under the NHPA, essential fish habitat (EFH) consultations under Section 305(b) of the MSA, MMPA consultation, and compliance with the Bald and Golden Eagle Protection Act (BGEPA). Similarly, it will be important to include floodplain considerations as part of the synchronized reviews of infrastructure projects to ensure compatible approaches are utilized. While specific procedures for synchronization of these other reviews were not included within the expanded scope of the Red Book update, these reviews should be synchronized to the extent practicable. Practitioners should contact the respective Federal agency responsible for the subject review for additional guidance on how to synchronize these reviews with NEPA and other environmental compliance requirements. For example, the Advisory Council on Historic Preservation (ACHP) and CEQ released the Handbook on Coordinating NEPA and Section 106 (http://www.achp.gov/nepa106.html) in 2013 to assist specifically with synchronization of Section 106 of the NHPA.

Purpose of the Handbook

This handbook will be useful to Federal agencies that review permit applications, and Federal, State, and local agencies that fund or develop major transportation and other infrastructure projects. The document is not prescriptive and does not establish new policy or modify existing agency policies. This document

[3] These goals are supported by the March 6, 2012 Council on Environmental Quality (CEQ) memo titled "Improving the Process for Preparing Efficient and Timely Environmental Reviews under the NEPA," available at: http://www.whitehouse.gov/sites/default/files/microsites/ceq/improving_nepa_efficiencies_06mar2012.pdf.

discusses the requirements of many statutes and regulations to facilitate the reader's understanding of how compliance with those requirements can be fulfilled while implementing the synchronization concept discussed herein. The statutes and regulations discussed are subject to change and the requirements should be independently verified and their application to a given circumstances evaluated. Nothing in this document alters the requirements under these laws and regulations. It is meant to be applied flexibly—however, users of this handbook are strongly encouraged to adopt the basic concepts herein, and to modify them as appropriate to work more effectively with varying State, Tribal, and local requirements. Although this handbook can be applied broadly when practicable across different modes of transportation and sectors of infrastructure, these concepts have been most frequently practiced within the context of Federal-aid highway projects. Accordingly, much of the background and examples are highway-related although the reader should recognize that another infrastructure agency, such as the Department of Energy, Bureau of Land Management, or United States Forest Service (USFS), can be easily substituted for the transportation agency for most of the practices in the handbook. Similarly, the term "transportation agency" is a generic term frequently used within the handbook to represent the project proponent(s), sponsor(s), or applicant(s), but is meant to be equally inclusive of those entities pursuing infrastructure projects. For example, for highways the "transportation agency" may be the State Department of Transportation (State DOT) and Federal Highway Administration (FHWA) as co-lead agencies, or just the State DOT.[4]

The purpose of this handbook is to function as a "how to" for synchronizing NEPA and other reviews. For example, this handbook provides information on how reviews under Section 404 and under the Title 33 Bridge Acts can be synchronized with Section 7 ESA consultations. This handbook is also inclusive of those techniques that can facilitate better review synchronization to give the reader a set of tools in the toolbox that support more efficient and concurrent review processes. A common denominator among the synchronized process and other supporting tools is the use of early and open communication and coordination before and during the NEPA review process; this is a frequent theme throughout the handbook.

The ultimate goal of the handbook is to improve upon the practice of review synchronization by providing the information to facilitate more widespread adoption of the concurrent review practice. By increasing the use of review synchronization, more effective and efficient environmental reviews are anticipated that could result in projects with reduced impacts to the environment as well as savings of time and money. This handbook captures lessons learned from previous review synchronization efforts, and breaks down the concurrent review procedure into easy to understand components, affording agencies the opportunity to replicate the procedure or portions of the procedure more widely and without having to execute a formal agreement. This handbook explores the appropriate considerations for conducting a synchronized review, including those topics and areas where challenges may occur. The handbook also includes best practices such as the use of transportation liaisons, innovative mitigation practices, and communication technology.

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[4] This may also include a metropolitan planning organization (MPO) or other agencies that may have some responsibilities in certain phases of delivering a transportation project. For a non-transportation infrastructure project, the entity in this role might be a non-DOT Federal agency, such as the Department of Energy.

Recognizing that achieving an efficient review while minimizing impacts to protected resources may best be accomplished by a variety of means in specific situations, the handbook describes other tools, such as programmatic approaches that can be used to complement a synchronized review. Each of these tools or best practices is described, including the types of situations in which it is most appropriate for use, and which agency or review process it may be used with. Also provided are basic “getting started” instructions and example applications, to be consistent with the “how to” approach.

Chapter 1 – Synchronization

Concurrent review by the transportation agency and reviewing agencies can improve the efficiency of the environmental review process for transportation and other infrastructure projects. The foundation of this method rests upon agencies actively participating in the reviews and communicating with one another, as well as applicants and sponsors, in an effective and structured manner that starts early and continues throughout the review process. This active communication should provide the transportation agency and reviewing agencies with the opportunity to identify concerns and raise potential issues early in the review process and identify solutions. Ideally, this method allows all parties involved to reach agreement before proceeding to the next step in the review process. This technique would preclude redundant revisiting of decisions and will encourage substantive participation of agencies at the earliest practicable stages of planning and project development. A concurrent review combined with active participation and communication is the foundation for synchronization.

This chapter describes the concept of synchronization, including the procedure itself, and includes a series of frequently asked questions and answers to support the narrative.

1. **What types of infrastructure projects can this concept apply to?** While synchronization has been applied to proposed Federal-aid highway projects, the concept is equally applicable with all of the U.S. Department of Transportation (USDOT) Operating Administrations (OAs), including transit, rail, airport, port, or multimodal projects, as well as other infrastructure agencies. For example, FRA is synchronizing the NEPA process and Section 404 reviews for the development of multiple Environmental Impact Statements (EISs) for the California High Speed Rail System (http://www.hsr.ca.gov/), stretching from San Francisco to Los Angeles. Synchronization can also be conducted with other sectors of infrastructure, including transmission lines, pipelines, seaports, and intermodal facilities, as long as at least one Federal agency acts as lead for NEPA and the other Federal agencies with regulatory authority act as cooperating agencies during the NEPA reviews. This allows for those other Federal agencies with authority to approve, veto, or finance a proposed project to participate in the review for that project and thereby fulfill their obligations.

2. **What classes of NEPA actions are most suitable for synchronized reviews?** Conducting a synchronized review is most suitable when a project requires an EIS and other regulatory reviews. In the context of U.S. Army Corps of Engineers (USACE) performing its CWA regulatory function, this correlates to an Individual Permit (IP) level of review. Environmental Assessments (EAs) may also benefit from a synchronized review process, depending on the complexity of the proposed project and the magnitude of impacts to regulated resources.

3. **What environmental requirements can be synchronized?** Some of the common Federal reviews other than NEPA that are triggered by transportation and other infrastructure projects include reviews under Section 404 of the CWA, the Title 33 Bridge Acts, and consultations under Section 7 of the ESA. These requirements are addressed within the scope of this handbook. However, transportation and other infrastructure projects typically require a number of other mandatory reviews, many of which would greatly benefit from the early and open communication and coordination of synchronization. Readers should note that while many of these authorities are

not discussed, or discussed in depth, in this handbook, this is not an indicator of their importance or relevance to a project. These reviews may also be synchronized and should be to the extent practicable. The transportation agency should seek information to determine which of these reviews may apply to a project early in the process and coordinate with the responsible agency for further guidance on how to synchronize those reviews with NEPA compliance and any further guidance to do so. A non-exhaustive list of permit and review requirements that have the potential for synchronization is included in Table 1.

Examples of Federal Reviews		
33 U.S.C. Section 408 Authorization	BLM Geothermal Drilling Permit	Native American Graves Protection Act Compliance
Authorization to Harass, Injure, or Kill Marine Mammals	BLM Geothermal Exploration Bond	Operations Plan / Surface Use Plan for Drilling within National Forest System Lands
Bald and Golden Eagle Protection Permit	BLM Geothermal Lease	Presidential Permit for Crossing International Borders
BIA Business Resource Lease for use of Indian land	BLM Geothermal Project Utilization Plan, Facility Construction Permit, and Site License	FHWA Right-of-Way Acquisition and Incidentals
Consultation to Protect Essential Fish Habitat	Geothermal Sundry Notice	Service Line Agreement for Utility Facilities in Highway Right-of-Way
Consultation to Protect National Marine Sanctuaries	Lease of Power Privilege for Use of BOR Facility (Conduits)	BLM Geothermal Site License
Department of Defense Military Mission Impact Process	Lease of Power Privilege for Use of BOR Facility (Dams)	USFWS Special Use Permit for Activities within Refuges
FAA Aeronautic Study Determination	National Pollutant Discharge Elimination System Permit*	BIA Wind Energy Evaluation Lease – Indian Lands
Floodplain or Wetland Assessment Under EO 11988	FAA Notice of Proposed Construction near Airports	Coastal Zone Management Act Compliance*
Form 3200-9, Notice of Intent to Conduct Geothermal Resource Exploration Operations	National Park Service Special Use Permit for Activities within Parks	Wild and Scenic River – Section 7 Determination
Compliance with Section 106 of the National Historic Preservation Act	Consultation under Section 7 of the Endangered Species Act	Bridge Permits under Title 33 of the U.S. Code
Section 404 of the Clean Water Act Permit	Section 10 of the River and Harbors Act of 1899 Permit	Section 103 of the Marine Protection, Research, and Sanctuaries Act Permit

Table 1: Examples of Federal reviews.

(*administered by States)

4. **Is a formal agreement required to conduct a synchronized review process?** While the synchronization of environmental review procedures can be formalized in merger or other programmatic agreements, such agreements are not strictly necessary to align procedures concurrently. Synchronization procedures can be formalized in an agreement, like a Memorandum of Agreement (MOA) or Memorandum of Understanding (MOU), or the concept of the synchronized review processes can be applied ad-hoc. Formal agreements can be developed for individual projects or for a program of activities that meet certain criteria or thresholds, such as the one developed by Illinois DOT, located in Appendix D. Formal agreements can also be established for specific initiatives or projects (e.g., the California High Speed Rail agreement covers an entire statewide rail system made up of Project Sections). Ad-hoc synchronization occurs when the agencies generally agree to follow the steps of a synchronized review process in the absence of a formal agreement. For example, Federal Transit Administration (FTA) and USACE's St. Paul District are using ad-hoc synchronization consisting of four checkpoints for the 12-mile Gateway Corridor project in Ramsey and Washington Counties, Minnesota, and have successfully used ad-hoc synchronization procedures on other transit projects in the past.

5. **Can agreements be developed to address synchronizing reviews at a national scale?** National level agreements can be developed to support synchronized reviews. For example, in January 2014, three USDOT modes (FHWA, FRA, and FTA) developed a multimodal MOU (https://www.environment.fhwa.dot.gov/strmlng/MOU_multimodal_bridge_permits.asp) with the USCG to coordinate and improve bridge planning and permitting. This MOU provides oversight and guidance for FHWA, FTA, FRA, and USCG in implementing strategies for compliance with Executive Order 13604 and the Presidential Memorandum on modernizing the permitting process. In addition, FHWA also entered into an agency-specific MOA (https://www.environment.fhwa.dot.gov/strmlng/MOA_USCG_bridge_permits.asp) with the USCG to coordinate and improve bridge planning and permitting. This MOA is FHWA's specific document replacing the 1981 MOU on coordination and cooperation in improving project delivery through improved permit application information, evaluation, and approval processes. The purpose of both the MOU and MOA is to improve the efficiencies and reduce redundancies for projects requiring USCG Bridge Permits by: 1) determining bridge design concepts that unreasonably obstruct navigation as soon as practicable and prior to or concurrent with the NEPA scoping process in order to inform project alternatives to be evaluated; 2) preparing a coordinated environmental document that satisfies both the USCG and FHWA, FTA, or FRA NEPA implementing procedures, and results in a shared or joint environmental decision document; and 3) where practicable, concurrently conducting the environmental evaluation and processing of the Bridge Permit application.

Synchronization Process Points

The heart of synchronization is the concurrent procedure itself. For ad-hoc synchronization, the agencies involved can replicate all or part of the typical procedure described below in order to have concurrent reviews without a formal agreement. For formal agreements, this section should detail the procedure step-by-step and include any information needs and responsibilities of the agencies.

Many synchronized procedures rely on three to four checkpoints, consisting of major decisions made during the NEPA review process. A formal agreement should outline information needed to proceed with a checkpoint and describe a procedure for when this information is submitted to all of the agencies to give everyone sufficient time to review the materials, and request additional clarification if necessary, prior to the checkpoint. The actual checkpoint is typically an in-person meeting in which the agencies provide comments on the materials submitted relevant only to their area of authority or expertise. At the end of the checkpoint, the agencies record if there was "agreement" at the checkpoint.

Things to consider when developing the procedure include:

- How many checkpoints will be used?
- What will the checkpoints be?
- Are some checkpoints optional or for specific situations only?
- Should all agencies party to the agreement be included at each checkpoint or only certain checkpoints?
- Is there a set timeframe for agencies to review information prior to a checkpoint?
- Is there a procedure for granting time extensions for review?
- What information needs to be provided to inform each checkpoint and which agencies are responsible for providing it?
- Can the transportation agency continue to advance the process if there is a disagreement at a checkpoint?
- How locked in are decisions made at a checkpoint?
- Are there situations where revisiting a checkpoint is appropriate?
- Who has the authority to represent the agency at specific checkpoints?
- What process(es) will be used to resolve or mediate disagreements?

6. **What are checkpoints?** Checkpoints, sometimes referred to as concurrence points, are those specific milestones within the NEPA process where the lead NEPA agency requests acceptance or approval from the other agencies that have jurisdiction by law (i.e., authority to, in whole or in part, fund, veto, or approve) or are participating in a synchronized review to advance the project to the next milestone or step in the concurrent review process. Formal agreements typically outline a procedure for obtaining concurrence, which may include submittal of information to all parties and then a meeting at a prescribed timeframe afterwards. Common checkpoints include purpose and need, alternative screening criteria, alternatives to be carried forward, the preferred alternative, and mitigation. Concurrence at these points does not mean or imply that the project has been or will be approved (or disapproved in the case of non-concurrence) by an agency; nor does it imply that the agency has released its obligation to determine whether the fully developed project meets criteria for the approval of the project. Finally, by participating in checkpoints, agencies are not abrogating their authority to make certain determinations. For example, in the case of a transportation project, USDOT maintains its authority to determine the action's purpose and need for its NEPA reviews and the reasonable range of alternatives, and USACE maintains its authority to decide which alternative is the least environmentally damaging practicable alternative (LEDPA) for CWA Section 404 permitting.

7. **Is concurrence required?** Formal concurrence is not required, but having meetings at certain milestones within the synchronized review process is highly recommended. When seeking concurrence at certain checkpoints, each team member and the agency that he/she represents agrees to the decisions made at those defining points in the project development process unless there are substantial changes to the proposed action or significant new circumstances or information relevant to the environmental concerns. This gives the transportation agency a predictable expectation about moving forward with project planning. If concurrence is not required, facilitation is essential to draw out and identify concerns that may be regulatory/program requirements when the application process is initiated.

   To achieve a truly synchronized process a need exists to establish milestones in the project development process where agencies engage to coordinate on that piece of the project development process. These milestones can help transportation agencies and reviewing agencies determine if they have a common understanding of the project and if they have sufficient information to move forward in the review.

   Various terms have been used in existing synchronization agreements when agreement is being sought, including "concurrence points," "checkpoints," "decision points," or "coordination points." It is important to define the use of these terms in each agreement, as they can carry different messages and meanings specific to an agency. It is also important to recognize that not all agencies have a permit issuance authority, but may have an area of expertise in which their advice and input is desirable, and a role other than concurrence that is more appropriate. Checkpoints without concurrence may satisfy the process and keep the project moving forward. Agencies may want to consider using checkpoints leading up to the preferred alternative selection and seeking concurrence for the selection of the preferred alternative. See Table 2.

Agency	Purpose & Need	Alternatives	Preliminary LEDPA/Draft Mitigation Plan	USACE Section 408 Draft Response
USACE	Agree/Disagree	Agree/Disagree	Concur/ Non-concur	Recommend/ Not Recommend
EPA	Agree/Disagree	Agree/Disagree	Agree/Disagree	N/A

Table 2: Example of agency roles at checkpoints in the California High Speed Rail synchronization agreement.

Synchronization Process Steps

Step A - Introductory Meeting: The first step may include a kickoff meeting around the time of the Notice of Intent (NOI) or during scoping. This is an opportunity for the transportation agency to introduce the project and for other agencies to describe their areas of jurisdiction and/or expertise relative to the proposed project. Critical project issues based solely on anticipated project locations or expected level of impacts should also be noted at this time.

8. **What role does the scoping process play in a synchronized review process?** While a robust scoping process is vital to the adequacy of any significant environmental review, scoping can take on an even greater importance as part of a synchronized review. In order to achieve the efficiencies in time and effort that a synchronized environmental review process offers, the scoping period should be used to clearly and fully identify the full suite of environmental review, permitting, and consultation procedures that will be needed for the proposed project in question. The agencies and other parties that will need to be engaged, and the environmental resources relevant to those reviews and procedures, should be identified at this stage, or as early as possible.

   The transportation agency should provide a written notice to the relevant regulatory agencies and organizations to identify the lead Federal agency for coordination with USACE, when necessary, and in compliance with other environmental laws. The transportation agency will invite the USACE to become a cooperating and/or participating agency[5] in the environmental review process and USACE will promptly provide written acceptance of the appropriate status. Once these important basics have been established, it is beneficial for the agencies involved to come to a common understanding of the timing of the preparation of the various environmental analyses needed, including, where appropriate, general schedule setting. Furthermore, there should be a common understanding of who has the responsibility for the preparation of the analyses and documentation that will be necessary to complete the various environmental review procedures, using each agency's area of expertise to its maximum potential.

The transportation agency should coordinate with other agencies to determine whether joint public notices and meetings would be appropriate to promote. Use of joint public notices and meetings are encouraged among any of the agencies engaged in synchronization to achieve maximum efficiency. The lead should continue coordination throughout project development.

For example, specific scoping procedures have been established for coordinating among USCG and USDOT:

- Once the transportation agency has submitted a navigation impact report to USCG in accordance with the DOT MOU with the USCG to coordinate and improve bridge planning and permitting, the USCG will, during this stage, make a preliminary navigation determination that identifies which bridge designs unreasonably obstruct navigation. This does not preclude the transportation agency from conducting further analysis at its own risk on an alternative that the USCG has identified as unreasonably obstructing navigation.

- During scoping, the transportation agency should also review USCG environmental documentation requirements in order to prepare a consolidated and coordinated NEPA document that satisfies both agencies' NEPA requirements.

[5] As defined at 23 U.S.C. 139(d) for FHWA/FTA's environmental review process.

Step B - Purpose and Need: The most common checkpoint in synchronization is the purpose and need statement. This checkpoint typically occurs early in the NEPA review process, soon after the completion of scoping. The purpose and need statement is the foundation for the NEPA alternatives analysis and evaluations done under other laws (e.g., Section 404 of the CWA and Section 4(f) of the USDOT Act). Therefore, this makes this checkpoint one of the most critical. This checkpoint should include sufficient opportunities for collaboration among the agencies.

9. **How does the NEPA purpose and need statement relate to other environmental laws?** One of the most important elements in any NEPA review is the definition of the project's purpose and need. It explains the reason that the action being proposed is needed and serves as the basis for developing a reasonable range of alternatives. The CEQ regulations at 40 CFR 1502.13 require every EIS to briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action. In addition, the CEQ regulations at 40 CFR 1508.9(b) require an EA to include "a brief discussion of the need for the proposal." The purpose and need also is important in selecting the preferred alternative, especially in cases where the project is subject to other legal or regulatory requirements that implicate project purpose.

   - FHWA/FTA Environmental Review Process: FHWA and FTA have specific statutory requirements regarding purpose and need. 23 U.S.C. § 139(f) requires a purpose and need statement to include "a clear statement of the objectives that the proposed action is intended to achieve" and lists some specific objectives that can be included. The statute also requires the lead agency to provide an opportunity for involvement by participating agencies[6] and the public in defining the purpose and need for a project.

   - Section 404 of the CWA: The NEPA purpose and need statement for USACE regulatory actions is defined in relation to USACE's NEPA scope of analysis, as outlined in 33 CFR Part 325, Appendix B, Section 9.b.(4). USACE's NEPA scope of analysis is typically focused on those areas over which USACE has sufficient control and responsibility to warrant its review. When USACE's scope of analysis only covers the proposed specific activity requiring a USACE permit, such as a single stream crossing for a proposed highway, then the underlying purpose and need for that specific activity is used. If, applying the analysis in Appendix B, USACE's scope of analysis is broad enough to include the full project, then the underlying purpose and need for the entire project should be used. USACE also needs to identify the basic project purpose to determine a project's water dependency, and overall project purpose to identify and evaluate practicable alternatives as part of the analysis done under the Section 404(b)(1) guidelines [40 CFR 230.10(a)(2)]. While not defined in regulation, in USACE practice, the basic project purpose is the fundamental, essential, or irreducible purpose of the project. Examples of a basic project purpose could include transportation, energy generation, or housing. The overall project purpose builds upon the basic project purpose to consider the applicant's specific project. An example of an overall project purpose is to relieve congestion

[6] "Participating agency" is defined in 23 CFR §771.107(h) as "a Federal, State, local, or federally-recognized Indian tribal governmental unit that may have an interest in the proposed project and has accepted an invitation to be a participating agency, or, in the case of a Federal agency, has not declined the invitation in accordance with 23 U.S.C. 139(d)(3)." This includes agencies with jurisdiction over the proposed project.

on Main Street between its intersection with 1st Avenue and 5th Avenue and improve safety at the intersection of Main Street and 1st Avenue. This type of example weaves the transportation purposes of relieving congestion and improving safety within two logical termini into a concise statement of the goals of the proposed project. A well-defined, concise NEPA purpose and need statement is critical for USACE to use in defining the overall project purpose, while sufficiently considering the transportation agency's needs. The purpose and need statement for NEPA and the purpose statement for the 404(b)(1) analysis may be different due to the different role each plays.

- Bridge laws under Title 33 of the U.S. Code: Similar to the USACE requirement, if the USCG has a narrow scope of analysis (for example, a proposed bridge across a navigable waterway that is part of a larger highway project), the NEPA purpose and need statement would reflect that narrow scope of the bridge. Rarely is the USCG's scope of analysis broad enough to include the full project. In those cases, the underlying purpose and need of that project can be used. The lead Federal agency should declare in the purpose and need statement how the bridge component of the project specifically contributes to the purpose and need of the overall project.

- ESA and Laws Protecting Species and Habitat: NEPA requires the identification and assessment of reasonable alternatives that will avoid and minimize adverse effects on the quality of the human environment, which includes species and habitats protected under the ESA, MMPA, MSA, the Migratory Bird Treaty Act of 1918 (MBTA), BGEPA, and other laws. In addition, to allow for compliance with the ESA, the statement of purpose and need should be drafted in a way that does not foreclose the formulation of alternatives that will avoid causing jeopardy to proposed or listed species or destruction or adverse modification of proposed or designated critical habitat.

- Section 4(f) of the Department of Transportation Act of 1966 (USDOT Act): Section 4(f) prohibits approval by a USDOT agency of a project that uses land from publicly owned parks, recreation facilities, wildlife or waterfowl refuges, and public or private historic sites unless there is no prudent and feasible avoidance alternative or the use is found to be *de minimis*. In order for a greater than *de minimis* use to be approved, the project must also incorporate all possible planning to minimize harm to the protected property. The factors for determining when an avoidance alternative is not prudent are listed in 23 CFR 774.17 (applicable to FHWA and FTA actions) and include, among other factors, whether it "compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need." In addition, when [23 CFR 774] analysis concludes that there are no feasible and prudent avoidance alternatives to the use of property protected by Section 4(f), the USDOT OA may approve only the alternative that causes the least overall harm (as determined by balancing several factors listed at 23 CFR 774.3(c)(1), including the "degree to which it meets the purpose and need for the project"), and includes all possible planning to minimize harm to the property (as defined in 23 CFR 774.17).

10. **How can NEPA purpose and need be better aligned with the agencies' various statutes and regulations?** The key to better alignment of purpose and need is communication. First, each agency should clearly articulate its area of jurisdiction and/or expertise, legal and regulatory requirements, and how those may affect the information that should be included in the purpose and need statement. This information should assist the transportation agency in use of its area of expertise in drafting a brief and concise purpose and need statement considering the requirements of other agencies. In-person meetings are the ideal venue to work on refining the purpose and need statement since clear communication is so critical.

    NEPA purpose and need can be aligned among the agencies; however, it is important to recognize that it may not be used verbatim for all agencies in some circumstances. When agencies have different jurisdictional responsibilities, those agencies' purpose and need will focus on their jurisdictional responsibilities. Consequently, in order to synchronize reviews, slight differences in the formulation of the project purpose by different agencies are acceptable when they relate to, and are to be synchronized with, the lead agency's purpose and need for the project as a whole.

    An example of when purpose and need statements will differ is in the case of a lengthy highway project with one bridge crossing over a navigable waterway, with some associated discharge of fill material (a FHWA-led project, with limited USACE and USCG jurisdiction). The NEPA purpose and need for the lead[7] transportation agency may focus on transportation factors to help define the purpose and need for the whole highway between its logical termini, such as improving safety, reducing congestion, or providing system linkage. Both USACE and USCG would then use those transportation factors to define a narrower purpose of crossing the navigable waterway, due to their narrow scope of analysis and lack of jurisdiction on the remainder of the highway. Even though the articulation of the project purpose may be slightly different in USACE and USCG's decision documents to reflect those agencies' limited scopes, the basic foundation of the purpose and need statement should relate back to the transportation factors and data that the lead agency determined to support the need for the highway.

11. **What deference should be given to lead agencies in defining purpose and need?** A May 2003 exchange of letters between CEQ and USDOT[8] affirmed that the lead NEPA agency has the authority for and responsibility to define the purpose and need for purposes of a NEPA review. In addition, in regard to a proposal intended to address transportation needs, CEQ clarified that joint lead or cooperating agencies should afford "substantial deference" to the USDOT's articulation of purpose and need due to its primary substantive expertise and program responsibility. CEQ also noted that in situations where two or more agencies have the responsibility to comply with NEPA or a similar statute and have a decision to make for the same proposed action, it is prudent to jointly develop a purpose and need statement that can be used by the agencies. The goal in these situations is to prepare a single environmental document that satisfies the NEPA responsibilities of all Federal agencies that must take action on the proposed project. Therefore, it is critical that the

[7] NEPA lead agency is defined at 40 C.F.R. 1508.16.
[8] CEQ Exchange of Letters with Secretary of Transportation, Part 1 (https://ceq.doe.gov/nepa/regs/CEQpurpose.pdf) and Part 2 (https://ceq.doe.gov/nepa/regs/CEQpurpose2.pdf), May 6 and 12, 2003.

lead transportation agency work with other Federal agencies to develop a purpose and need statement that will allow one NEPA document to serve the requirements of all agencies.

Step C - Alternatives Screening Criteria: Some agreements include screening criteria as a checkpoint or an intermediate milestone between purpose and need and range of alternatives.[9] Inclusion of this checkpoint in an agreement may be more helpful for those who are new to synchronization or where there is a previous history of disputes on alternative elimination. The purpose of this checkpoint is to clearly articulate those criteria and the weighting of those criteria that the alternatives will be compared to during the alternatives analysis. It is also important to establish measurable objectives when feasible, to ensure the action alternatives meet the purpose and need. The screening criteria can help define parameters of when an alternative may no longer be practicable or prudent. For example, does the percent grade of a bridge design need to be limited for safe operation of light rail? Is the corridor in close proximity to an historical district that may limit the ability to take properties or shift the alignment? Is there a point where the cost of construction makes the project no longer viable? Will the bridge design concepts likely unreasonably obstruct navigation on the waterway? To ensure a fair comparison of alternatives under these criteria the level of detail should be equivalent. Geographic information systems (GIS) and remote sensing tools should be used to the extent practicable, to estimate different natural and human impacts so that a reasonable range of alternatives can be developed.

Step D - Alternatives to be Carried Forward: In addition to the purpose and need checkpoint, a reasonable range of alternatives (also known as alternatives to be carried forward that meet the purpose and need for the project) is one of the most frequently used checkpoints. The purpose of this checkpoint is to reduce the number of alternatives that will be studied in the EIS to a reasonable range in accordance with NEPA requirements, without eliminating any alternatives that are needed to comply with other laws and regulations. Agencies should use the previously determined screening criteria to eliminate alternatives that are not practicable or prudent, or clearly do not meet the project purpose and need. The end result should be a reasonable range of alternatives that have the potential to be permittable under environmental laws.

Alternatives analysis should clearly indicate why and how the particular range of project alternatives was developed, including what kind of public and agency input was used. In addition, alternatives analysis should explain why and how alternatives were eliminated from consideration. It should be made clear what criteria were used to eliminate alternatives, at what point in the process the alternatives were removed, and the measures for assessing the alternatives' effectiveness. Alternatives should be evaluated based on each alternative’s impact on the natural and human environment.

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[9] CEQ guidance, Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations, addresses alternatives in Q&A 1 and 2a. (https://ceq.doe.gov/nepa/regs/40/1-10.HTM#1), March 16, 1981. (The phrase "range of alternatives" includes all reasonable alternatives, which must be rigorously explored and objectively evaluated, as well as those other alternatives, which are eliminated from detailed study with a brief discussion of the reasons for eliminating them. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.).

12. **How is a reasonable range of alternatives identified?** The identification, consideration, and analysis of alternatives are key to the NEPA review process and goal of objective decisionmaking. In 40 CFR 1502.14, CEQ refers to the alternatives analysis section as the "heart of the EIS," and requires agencies to:
    - Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.
    - Devote substantial treatment to each alternative considered in detail, including the proposed action so that reviewers may evaluate their comparative merits.
    - Include reasonable alternatives not within the jurisdiction of the lead agency.
    - Include the alternative of no action.
    - Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.
    - Include appropriate mitigation measures not already included in the proposed action or alternatives.

13. **How can evaluation of alternatives for these environmental laws be better aligned?** A good way for all agencies to coordinate determining which alternatives to evaluate is to clearly articulate the transportation agency's alternative screening criteria and weighting early in the NEPA review process. By having all agencies understand upfront the factors and thresholds the transportation agency must consider in development of alternatives, elimination of those alternatives that are not practicable or not prudent can be completed more efficiently. When deciding which alternatives to bring forward, it is important to consider how each alternative is likely to satisfy or not satisfy each of the applicable standards, such as LEDPA, reasonable alternatives, feasible, and prudent. The result may be a need to supplement a NEPA document to analyze those alternatives, leading to an additional cost and delay that otherwise would be avoidable.

    Many synchronization agreements identify the selection of a reasonable range of alternatives as a checkpoint, such as alternative screening criteria, alternatives carried forward, or preferred alternative selection. This helps all agencies involved eliminate alternatives that are not permittable or do not meet the purpose and need, resulting in evaluation of a reasonable range of alternatives that is consistent with NEPA. This provides a good opportunity for the transportation agency to gain greater regulatory assurances that the alternatives carried forward include alternatives that may be permittable and that the level of detail to be included in the NEPA document on the alternatives is sufficient for adoption by other agencies.

    - For example, USACE may inquire why a transportation agency would eliminate an alternative that the transportation agency has determined meets the established purpose and need, has similar costs and number of relocations as other alternatives, but has notably fewer impacts to aquatic resources. An alternative like this would initially appear practicable and less environmentally damaging under the Section 404(b)(1) Guidelines. However, if the transportation agency is able to explain to USACE how the other screening criteria are defined and weighted, such as the presence of Section 4(f) resources or non-wetland critical habitat,

presence of federally listed species and designated critical habitat, system linkages, and safety, the USACE will be able to conduct a more thorough and informed analysis of which alternatives are practicable (and therefore permittable) under CWA 404.

- For projects requiring USCG authorization, the navigation impact report should be completed and available (including a ship simulation, if conducted by USACE as part of a Section 408 review) at the time of selection of a range of alternatives. With this information, the USCG can provide early feedback on which design concepts unreasonably obstruct navigation, helping the transportation agency eliminate alternatives that would not be permittable by USCG.

Alternatives analysis is used in the following ways in other environmental laws:

- Section 404 of the CWA: An analysis of alternatives also is the "heart" of a project's evaluation under the Section 404(b)(1) Guidelines. While NEPA requires the evaluation of a reasonable range of alternatives, the 404(b)(1) Guidelines require USACE to evaluate practicable alternatives. "An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." [40 CFR 230.10(a)(2)] The regulations also specifically address the crosswalk between NEPA alternatives and alternatives for the 404(b)(1) Guidelines at 230.10(a)(4). When USACE is the NEPA lead "the analysis of alternatives required for NEPA environmental documents, including supplemental Corps NEPA documents, will in most cases provide the information for the evaluation of alternatives under these [404(b)(1)] Guidelines." NEPA documents, whether USACE is lead or cooperating agency, can cover a broader range of alternatives than what is needed for the 404(b)(1) Guidelines; however, "it may be necessary to supplement these NEPA documents" if the alternatives analysis in the NEPA document is not "in sufficient detail to respond to the requirements of these Guidelines." Therefore, to achieve maximum efficiency in review, the reasonable range of NEPA alternatives should not eliminate practicable alternatives that meet the project purpose and need, and evaluate the alternatives in sufficient detail to support analysis under the Section 404(b)(1) Guidelines.

- Bridge Laws under Title 33 U.S. Code: The bridge statutes require bridges provide for the reasonable needs of navigation. The MOU (https://www.environment.fhwa.dot.gov/strmlng/MOU_multimodal_bridge_permits.asp) and MOA (https://www.environment.fhwa.dot.gov/strmlng/MOA_USCG_bridge_permits.asp) with the USCG focus on identifying bridge design concepts that unreasonably obstruct navigation as soon as practicable and prior to or concurrent with the NEPA scoping process in order to inform project alternatives to be evaluated.

- ESA: NEPA requires the identification and assessment of reasonable alternatives that will avoid and minimize adverse impacts to the quality of the human environment, which includes species and critical habitat protected under the ESA. Thus, the NEPA analysis should identify and assess alternatives that will avoid and minimize impacts to such proposed and protected species and habitat (as well as species proposed for listing or critical habitat proposed for designation under the ESA). Although the ESA does not require an analysis of alternatives, those that avoid and

minimize impacts to proposed and protected species and habitat make the ESA consultation process easier.

- EFH: As part of an EFH Assessment within an EA or EIS, an analysis of alternatives to the action can be developed. Measures such as careful alternatives analysis, design stipulations, and "best management practices" that could avoid or minimize adverse effects on EFH can narrow the scope of necessary EFH Conservation Recommendations.

- MMPA: Discussion of the appropriate range of alternatives relating to project design and construction techniques may help to reduce or eliminate the potential for effects to marine mammals, such that the need for incidental take authorization may be avoided. In addition, NEPA analyses relating to the authorization of incidental take under the MMPA requires analysis of a reasonable range of mitigation measures. Early coordination on alternatives development may help to ensure that a NEPA document is suitable for adoption, thereby offering significant efficiency in the environmental compliance process.

- Section 4(f) of USDOT Act: The use of land from a Section 4(f) protected property (such as a significant, publicly owned park, recreation area, or wildlife and waterfowl refuge, or any significant historic site) may not be approved unless a determination is made that there is no feasible and prudent alternative for such use. An alternative is not feasible when it cannot be built as a matter of sound engineering judgment. The factors for determining when an avoidance alternative is not prudent are listed in 23 CFR 774.17 (applicable to FHWA and FTA actions) and include, among other factors, whether it "compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need." In addition, when the analysis concludes that there are no feasible and prudent avoidance alternatives to the use of property protected by Section 4(f), the USDOT OA may approve only the alternative that causes the least overall harm (as determined by balancing several factors listed at 23 CFR 774.3(c)(1), including the "degree to which it meets the purpose and need for the project"), and includes all possible planning to minimize harm to the property (as defined in 774.17).

Step E - Draft EIS (DEIS) or EA: The next step in the NEPA review process is to publish the DEIS, or publish an EA for those agencies that do so, for public comment.

- If there is sufficient information regarding aquatic resource impacts for each of the alternatives in the DEIS, the agencies may choose to submit a USACE permit application prior to the DEIS. This action would allow for the USACE public notice comment period to run concurrently with the DEIS comment period and to allow for joint meetings. The transportation agency identifies a preferred alternative in the DEIS for this to occur. If aquatic resource information is insufficient at this time, the agencies may find it preferable to conduct Jurisdictional Determination(s) and submit a USACE permit application between publication of the draft and final EIS (FEIS).

- For ESA Section 7 consultation, the transportation agency will submit a Biological Assessment (BA) to National Marine Fisheries Service (NMFS) and/or U.S. Fish and Wildlife Service (USFWS) that coincides with the release of the DEIS. The BA will use the DEIS's preferred alternative as the action agency's proposed action. A draft BA may also be submitted after the

DEIS if the transportation agency does not identify a preferred alternative in the DEIS. A BA may use the preliminary LEDPA as the action agency's proposed action when such an alternative is identified.

The Moving Ahead for Progress in the 21st Century Act (MAP-21) (http://www.transportation.gov/map21) directs USDOT to issue a combined FEIS/Record of Decision (ROD) document unless specific criteria are met. When issuing a combined FEIS/ROD, early identification of the preferred alternative is encouraged, so it can be included in the DEIS. If the preferred alternative has been identified at the time of the DEIS, it must be included as provided in 40 CFR 1502.14(e). In instances where the combined FEIS/ROD is issued, it may be preferable to shift the USACE permit application and submittal of the draft BA earlier to allow naming of a preferred alternative in the DEIS and solicit public comment on that alternative.

Step F - Preferred Alternative/Preliminary LEDPA for Section 404: Another common checkpoint in a formal agreement is one for selection of the preferred alternative and/or a preliminary LEDPA determination. Once the agencies have collaborated on designing alternatives to avoid and minimize impacts to waters of the U.S. to the extent practicable, timing may be appropriate for identification of a preferred alternative and/or a preliminary LEDPA determination. As mentioned in the draft NEPA document step above, the timing of these actions is somewhat flexible, but should be timed closely prior to publication of the NEPA document (either draft or final) so that the USACE public notice and any NEPA comment period can run concurrently. Selection of a preferred alternative and a preliminary LEDPA determination may also be split into separate checkpoints.

If the preferred alternative is a separate checkpoint it may be combined with, or in close timing to, a conceptual or preliminary compensatory mitigation proposal checkpoint. Because communication among the agencies should be maintained throughout the synchronized process, transportation agencies should have some indication of which alternative is likely to address the requirements of the CWA when selecting a preferred alternative. This allows the transportation agency to identify a preferred alternative earlier during the NEPA review process, and advance ESA consultation and development of a compensatory mitigation proposal based on avoidance and minimization completed prior to identification of the preferred alternative. The preliminary LEDPA determination may then occur separately, informed by the compensatory mitigation proposal. For example, if the preferred alternative is combined with a preliminary LEDPA determination (typical in those agreements with fewer checkpoints), this checkpoint will occur later in the NEPA review process, likely prior to publication of a FEIS or an EA and after submission of the USACE permit application, as well as demonstration of avoidance and minimization.

Since the LEDPA is the permittable alternative under the Section 404(b)(1) guidelines, transportation agencies will want reasonable assurance that the preferred alternative is also the LEDPA for those projects requiring authorization under Section 404 of the CWA. This checkpoint acts as that assurance for transportation agencies. The formal determination that an alternative is the LEDPA is made as part of the USACE permit decision; consequently, this checkpoint must be considered and characterized as a non-binding preliminary determination. In some agreements, a preliminary LEDPA determination may ensure that the LEDPA will not be eliminated from review, or that a chosen alternative could potentially be the LEDPA. A preliminary LEDPA determination may be a strong indication that the preferred alternative is anticipated to satisfy the Section 404(b)(1) guidelines, but it is not final. This determination may need to

be revisited if conditions or circumstances have changed the foundations upon which the determination was made. This could include:

- New information that leads to a change in project design (e.g., an arterial road vs. a limited access facility);
- A change in project purpose (e.g., adding another purpose such as safety and congestion);
- A change in the alternative screening criteria (e.g., a new public-private partnership (P3) changes the cost limits); or
- A discovery of a new alternative (e.g., other development in the area makes previously unavailable alternatives available).

To minimize delays or duplication of efforts, it is advisable to proceed with this checkpoint when the transportation agency is fully prepared to complete NEPA and other environmental reviews without any further major project revisions (such as changes to meet State, Tribal, or local requirements) or potential outside delays (such as securing funding or gaining local support). The 404 permit process should begin as early as possible when there is sufficient information to do so.

Step G - Compensatory Mitigation: Many agreements mention the timing for preparing a proposal for compensatory mitigation for losses to aquatic resources, but few have specific designated checkpoints for it. Interviews with the field offices that successfully used formal agreements indicated that because there is no typical timing or placement for a compensatory mitigation, it would be useful to include a compensatory mitigation checkpoint. The 2008 Mitigation Rule (33 CFR Part 332) requires applicants to first avoid, then minimize impacts to the maximum extent practicable prior to determining if compensatory mitigation is appropriate. However, the transportation agency is not prohibited from planning for mitigation early in project development. Forward thinking and planning for compensatory mitigation early in the transportation project allows all agencies involved sufficient opportunity to help refine an initial idea into a compensatory mitigation plan by the time submittal of a compensatory mitigation plan is needed (after submittal of a permit application and prior to a permit decision). A transportation agency applicant can begin developing its compensatory mitigation plan as soon as it has sufficient information to do so. The required components of a compensatory mitigation plan are listed at 33 CFR 332.4(c)(2)-(c)(14). See Chapter 5 for more information on developing compensatory mitigation options in advance of submittal of a permit application. Like a LEDPA determination, USACE does not approve a final compensatory mitigation plan until its permit decision is made. Therefore, a compensatory mitigation checkpoint would be for review of a conceptual or draft compensatory mitigation plan. A final mitigation plan could be developed after completion of this checkpoint and prior to the USACE permit decision.

Step H - FEIS: For a synchronized review, the FEIS or publication of the EA represents the full body of information needed for each agency to document its decision under its respective authorities. For projects involving USDOT OAs, to the maximum extent practicable the FEIS will be combined with the ROD into one document (see question 14).

At this point, the following actions have been made:

- The transportation agency has selected a preferred alternative;
- If each authority is applicable, the Services have issued a concurrence letter or final Biological Opinion;
- USACE has made a preliminary LEDPA determination and reviewed a conceptual or draft compensatory mitigation plan;
- USCG has sufficient information to make a determination of completeness on the bridge application;
- Each of the agencies has considered the public comments received during the DEIS comment period and/or agency public notices in making its respective determinations;
- Through regular communication throughout the concurrent review, all agency concerns and other environmental reviews have been addressed; and
- If a USACE public notice has not been issued, it may be issued concurrently with the FEIS.

14. **How does the MAP-21 provision regarding combining FEIS and RODs affect the synchronized review process?** Section 1319(b) of MAP-21 directs USDOT lead agencies, to the maximum extent practicable, to expeditiously develop a single document that consists of an FEIS and ROD, unless:
    - The FEIS makes substantial changes to the proposed action that are relevant to environmental or safety concerns; or
    - There are significant new circumstances or information relevant to environmental concerns and that bear on the proposed action or the impacts of the proposed action.

    Prior to MAP-21, and in accordance with the CEQ Regulations (40 CFR 1506.10(b)(2)), USDOT agencies issued FEIS and ROD documents as separate documents with a minimum 30-day period between the FEIS and ROD.

    Whether combining the FEIS and ROD is practicable is a determination specific to the EIS process for a particular proposed project, as discussed in guidance or procedures for that particular transportation agency. In light of the statutory purposes of MAP-21 provisions on expediting project delivery, including the Section 1319 purpose of accelerating environmental reviews and decisionmaking, USDOT OAs/transportation agencies will consider the facts and circumstances relevant to the EIS process when deciding whether the use of a combined FEIS/ROD process for a particular project is practicable.[10]

    Through the interagency coordination process, the USDOT OA should notify agencies specified in the coordination plan (see Appendix C) as early as possible that they expect to combine the FEIS and ROD, thereby providing agencies the opportunity to express their views about the use of a combined FEIS and ROD for the specific proposed action. As project schedules are developed, agencies with permit actions should provide direction on how best to align the permit action with

[10] USDOT Final Guidance on MAP-21 Section 1319 Accelerated Decisionmaking in Environmental Reviews. https://www.transportation.gov/sites/dot.gov/files/docs/MAP-21_1319_Final_Guidance.pdf .

the issuance of a combined FEIS/ROD. This will assist the USDOT OA in making a determination whether combining the FEIS/ROD is practicable or whether it is appropriate to issue the documents separately.

A decision by a USDOT OA to issue a combined FEIS/ROD for a proposed project does not prevent a joint lead or cooperating agency from adopting the FEIS. Because this provision in MAP-21 only applies to USDOT OAs, other agencies must still comply with the 30-day waiting period between issuance of a FEIS and a ROD. It is recognized that even with a fully synchronized review, each agency may need to issue its own separate ROD and/or decision document for its respective review. Further, the other agency ROD and/or decision document may not be issued concurrently with the FEIS/ROD due to this difference in legal requirements.

Step I - ROD/Finding of No Significant Impact (FONSI): The transportation agency culminates the synchronized NEPA review by issuing a ROD or FONSI, depending on whether an EIS or EA, respectively, has been developed and is being relied upon for the determination of environmental consequences. This may occur as a combined FEIS/ROD for those projects involving USDOT OAs, or a separate ROD or FONSI. After the required 30-day waiting period following the FEIS, the other agencies may issue their decision documents (ROD or FONSI) and are able to fully adopt the transportation agency's NEPA document without re-circulating it (40 CFR 1506.3). Because most of the substantive evaluation has occurred throughout the concurrent NEPA review process, USACE and USCG are typically able to issue their RODs or FONSIs and permit decisions fairly quickly at this time. Reviews that may still be in progress include the review of a final compensatory mitigation plan or project drawings for USACE, receipt of the Water Quality Certification, State concurrence with the Coastal Zone Management Act (CZMA) Federal consistency certification, or a complete application before the USCG can issue a bridge permit.

The above steps represent the typical sequence of events in a concurrent NEPA review. This process can be replicated without a formal agreement, but should have a commitment among the agencies to communicate on the relevant issues. This typical procedure is shown visually in Figure 1 for EIS and in Figure 2 for EAs. Readers are reminded that the timing of checkpoints is flexible, particularly on timing of selection of a preferred alternative relative to the draft NEPA document. State NEPA-like laws and/or other State, Tribal, or local requirements may necessitate moving checkpoints earlier or later to achieve maximum efficiency. A more detailed Coordination and Implementation Table is available in Appendix C. The information needs in comparison to the level of design for the project may also play a role in the timing of checkpoints.

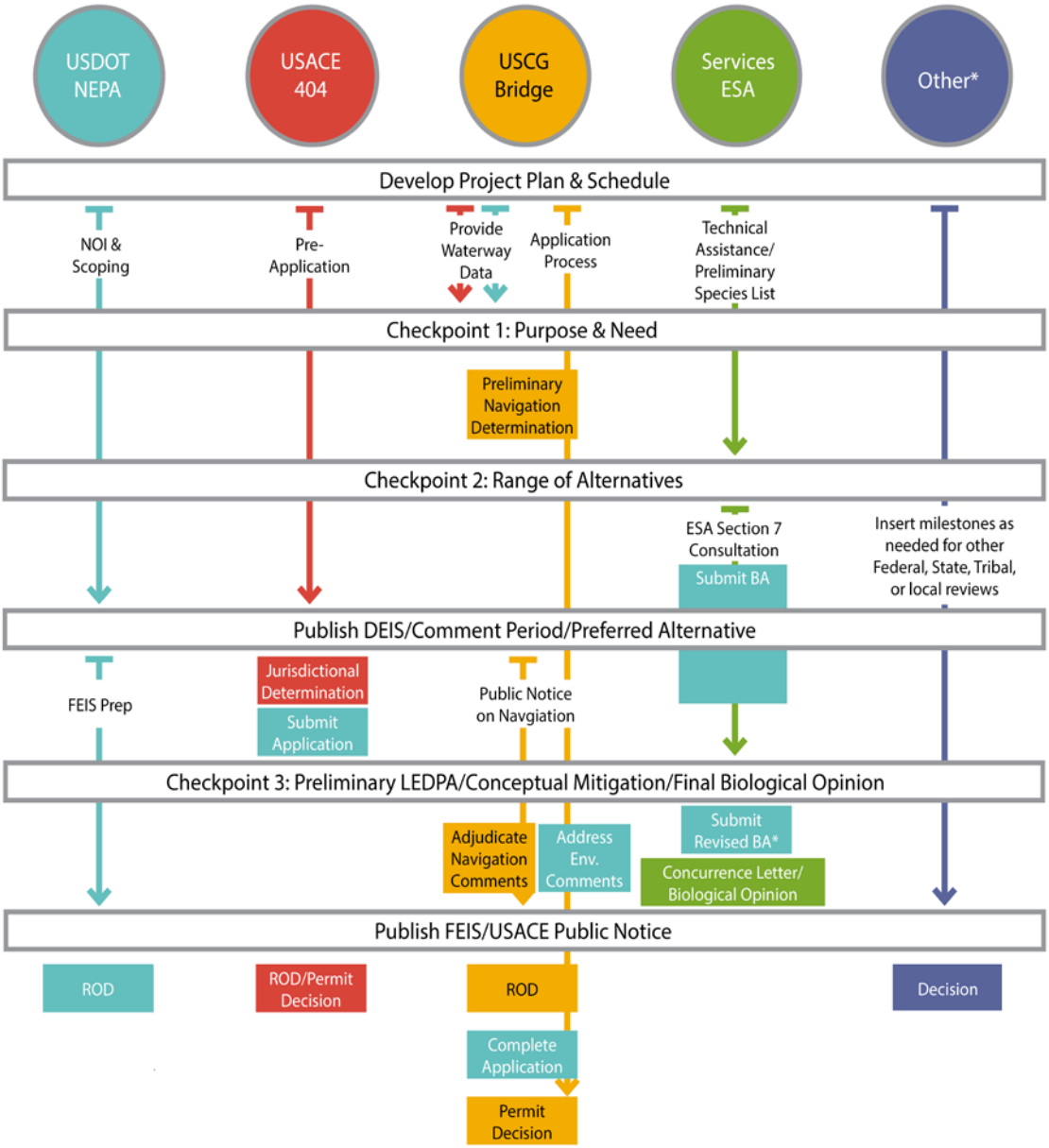


Figure 1: Major milestones in a synchronization review for Environmental Impact Statements.

Key: Colors indicate which agency is responsible for each process/action (e.g., blue indicates USDOT or transportation agency actions), arrows indicate ongoing processes, and solid boxes indicate defined actions within an overall synchronization review. The asterisk indicates as needed.

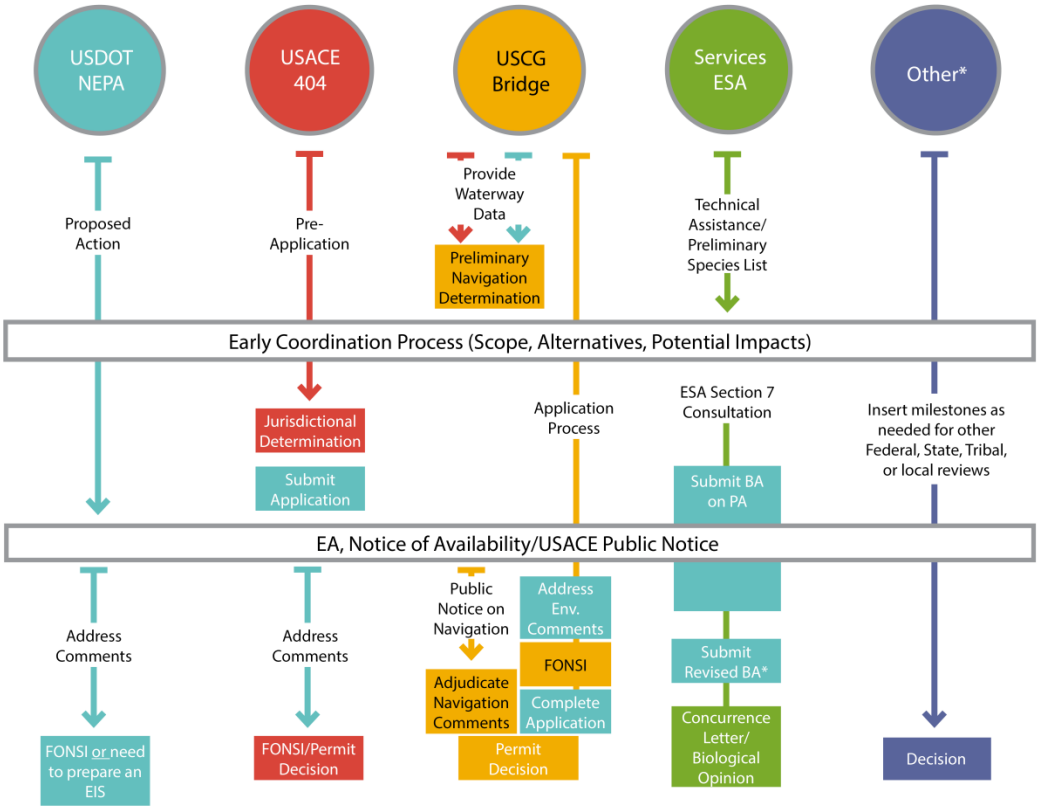


Figure 2: Major milestones in a synchronization review for EAs.

Key: Colors indicate which agency is responsible for each process/action (e.g., blue indicates USDOT or transportation agency actions), arrows indicate ongoing processes, and solid boxes indicate defined actions within an overall synchronization review. The asterisk indicates as needed.

The procedure described above lists the most frequent checkpoints used in a synchronized review. Depending on other Federal, State, Tribal, or local requirements, as well as the level of comfort among the agencies, there may be other factors to consider when selecting the checkpoints for a formal agreement. Below are some other potential checkpoints used in some agreements that may be of interest:

- Minimization of Impacts – A checkpoint for further minimization may occur after selection of a preferred alternative and prior to a USACE permit decision. The purpose of this checkpoint is to make revisions to the project design within the selected alignment that would further minimize impacts to waters of the U.S., such as the placement and sizing of culverts, or changes to shoulder widths. Similarly, a minimization checkpoint may occur after selection of the preferred alternative and prior to completion of ESA consultation with USFWS or NMFS.

- Bridging Decisions – Similar to minimization, decisions to bridge an aquatic resource in lieu of filling it can reduce the quantity of impacts for a given alignment. Since the decision to bridge

can notably change the cost of a given alignment, this type of minimization checkpoint would likely be conducted immediately prior to a checkpoint on alternatives carried forward.

- EFH - The MSA requires each Federal agency to consult with NMFS with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any EFH. If it is determined that an EFH consultation is needed, the information in a draft or final EA/EIS must include all the required components of the EFH Assessment as outlined in 50 CFR 600.920(g), including a description of the action, an analysis of the potential adverse effects of the action on EFH and the managed species, the Federal agency's conclusions regarding the effects of the action of EFH, and proposed mitigation, if applicable. Accurately describing the purpose and need statement is important because it provides an understanding of the proposed project and aids in the determination of EFH Conservation Recommendations. The level of detail should be commensurate with the complexity and magnitude of the potential adverse effects of the action.

- MMPA- Incidental take authorizations issued pursuant to section 101(a)(5) of the MMPA are Federal actions that require NEPA review. Therefore, early coordination, including development of statements of purpose and need that capture the need for incidental take authorization when potential effects to marine mammals have been identified, can offer significant efficiencies in the environmental compliance process. Appropriate coordination, when possible, may allow for the adoption of existing NEPA documents or incorporation by reference of existing NEPA analyses rather than development of new documents or analyses relating to the issuance of MMPA authorizations.

- Other Federal and State Approvals – Agencies may choose to include informational checkpoints for other Federal and State permits, licenses, and approvals that may affect the timing of other Federal agency actions, such as obtaining a BGEPA permit, migratory bird permit, Section 401 water quality certification, or a CZMA concurrence prior to a Federal permit decision.

- Section 408 Package Submittal – For those projects that require review by USACE under 33 U.S.C. Section 408, the agencies may choose to add checkpoints for the initial submittal of the Section 408 information package and the final submittal of the Section 408 information package. The purpose of these checkpoints is to align this other review process with the concurrent NEPA review to the extent practicable. See the special considerations section below for more information on timing of information submittals for Section 408 reviews.

Formal Agreements

A synchronized process memorialized in a formal agreement is helpful in many situations. For some agencies, this may be a new process and having the agency roles written down is helpful as a reference. Having a formal agreement also helps formalize synchronization as the "new normal" business practice. Whatever the reason for pursuing a formal agreement rather than an ad-hoc synchronization, it is helpful to know where to start when drafting the agreement. A formal agreement should incorporate the most common components of successful agreements. These components can be adapted to fit individual needs and circumstances in order to provide flexibility beyond a standard template.

An example of a formal synchronization agreement is included in Appendix D as a demonstration of what a complete agreement may look like. Most synchronization agreements do not look alike and review of several different synchronization agreements is recommended before deciding on a specific format. Snapshots of portions of agreements have been provided throughout this chapter, and copies of the full agreements can be obtained by contacting the local FHWA or USACE office for each agreement.

Other than a description of the synchronized procedure, the most common components of synchronization agreements are the appropriate thresholds for participation and dispute resolution, which are described further below.

Thresholds for Participation

The first part of the agreement should be an introduction that sets the purpose and the ground rules for the agreement. Things to consider include:

- Is this agreement for a single project, a suite of projects, or for a whole program?
- Who is a party to this agreement?
- Who is the lead agency?
- Are there specific thresholds that would require a project to go through or be excluded from the synchronized process?
- Can the agencies involved mutually decide to use the synchronized process on a specific project that does not meet the threshold?
- Can the agencies involved mutually decide to exclude a specific project from the synchronized process, even though it may meet the threshold?
- What are the appropriate roles and responsibilities for the agencies at different points in the process – are agencies submitting information, commenting, agreeing, and/or observing?
- Will the process have checkpoints? (see more in the Procedure section, below)
- Will there be training opportunities for agencies who participate in the agreement?
- Can parts of the synchronization process be used but not the entire model?

Many agreements are programmatic in nature, covering any project proposed by the transportation agency that would meet prescribed thresholds. The transportation agency is the lead agency and other agencies to the agreement typically include USACE and the Environmental Protection Agency (EPA). Bringing more agencies that typically have some form of review or approval over a transportation project into the agreement (such as USFWS, NMFS, USCG, or State agencies) can help facilitate greater synchronization of reviews.[11] As more agencies are added to an agreement, clearly defining the roles of those agencies becomes more critical to avoid disputes around roles and responsibilities while implementing the synchronized review. The Colorado DOT's NEPA/404 merger process and agreement (https://www.codot.gov/programs/environmental/2015-nepa-404-merger-agreement) (i.e., synchronization), for example, has two pages of discussion clearly defining the roles for Colorado DOT,

[11] State Historic Preservation Officers and State DOTs may substitute for Federal agencies under certain authorities and can be asked to participate in the development of agreements for a project, a suite of projects, or for a whole program.

FHWA, and USACE, as well as specific language for the role of other reviewing agencies and their respective responsibilities. See Figure 3 for a snapshot of these roles.

Roles and Responsibilities

USACE: USACE is the lead federal agency for section 404 permitting process. USACE will serve as a cooperating agency under this agreement. The USACE will participate in meetings and review draft chapters of the Draft EIS, Final EIS, and EA, as appropriate. USACE agrees to provide input to ensure that the information being presented may also be used for section 404 compliance. This may include providing substantive comments on the project Purpose and Need, assisting with the development of practicability criteria for evaluation of alternatives, providing comments relative to whether the Preferred Alternative is the apparent LEDPA, and providing input on proposed compensatory mitigation. USACE will confirm compliance with the CWA by providing written concurrence that the Purpose and Need statement may be used to define basic and overall project purpose, the Alternatives Selected for Detailed Evaluation comply with the Guidelines, the Preferred Alternative is the LEDPA, and the proposed Compensatory Mitigation adequately offsets impacts to aquatic resources.

FHWA: FHWA is the lead Federal agency under NEPA and is required to furnish guidance, participate in the preparation, independently evaluate, approve and adopt NEPA documents prepared for federally funded highway improvement projects. Under this agreement, FHWA will actively encourage adherence to NEPA and CWA requirements, assist in the determination to enter the merger process, encourage joint development of Purpose and Need, review and approve Purpose and Need, evaluation criteria, alternatives, and the preferred alternative. In the event that a project has modal components involving other bureaus of the Department of Transportation (e.g. FTA, FRA, FAA), FHWA may be a co-lead agency with that other bureau.

CDOT: The highway improvement program in Colorado is programmed, developed and implemented by CDOT. CDOT is also the direct recipient of highway funds administered by FHWA and functions as a co-lead agency on NEPA project development for EIS projects. CDOT is the permit applicant for CWA Permits. CDOT, in conjunction with FHWA, will have the primary role for implementing this merger agreement.

Figure 3: Colorado DOT's NEPA/404 merger process and agreement.

Depending on the types of resources in a geographic area, a transportation agency may have multiple projects that involve the prospective agencies in the agreement. While formal agreements are often very beneficial for providing a structured review process, in certain circumstances an informal process can lead to a less cumbersome permit review for some agencies. Each agency could still participate in the concurrent review process, but formal concurrence correspondence may not be necessary. For instance, a proposed project may qualify for an abbreviated review under a programmatic approach due to minimal impacts and the issuing agency may not need to revisit the NEPA review process. Setting mutually agreeable thresholds helps filter out those more routine, less complex projects, for which a less formal procedure may be more efficient.

Typical thresholds listed in an agreement could include:

- Type of USACE permit review (excluding projects that qualify for a nationwide permit (NWP) or regional general permit (RGP);
- An acreage or linear footage of impact (excluding projects with less than X acres of wetland fill or habitat impact);
- By geographic area (only including projects that cross designated critical habitat or specific watersheds of concern); or
- Type of project (including all new alignment roads or conversions of drawbridges to fixed span bridges).

Agencies have the discretion to determine which thresholds are appropriate to identify those projects that would benefit most from synchronized review. North Carolina DOT, for example, uses a series of questions, below in Figure 4, to help guide the agencies on whether to use their synchronized review process for bridge projects. To view the full agreement visit: http://www.ncdot.gov/programs/environment/development/improvement/download/Merger_Document.pdf.

Bridge Projects

Question 1: Is the project a replace in-place (in existing right-of-way) only bridge project?

If the only alternative under consideration is replace in-place with off-site detour, then no merger should be needed.

If not proceed

Question 2: Is an individual Permit (IP) required from USACE?

If an IP is required, or is likely to be required due to potential project impacts; then the NCDOT Rep. will consult with USACE, NCDENR, and FHWA to determine if merger is recommended.

Question 3: Does the project involve potential impacts to or involvement with two or more of the following types of resources?

Wetlands
Buffer Rules
Water Supply Critical Areas
CAMA – Areas of Environmental Concern
T&E species present
Section 4(f)/Section 106
Environmental Justice
Unusually high level of public controversy
Unusually large number of relocations for project type
Compelling reason(s) to maintain traffic onsite

If so, NCDOT will consult with USACE, NCDENR, and FHWA to determine if merger is recommended.

Figure 4: Thresholds from North Carolina DOT's synchronization agreement.

Dispute Resolution and Legal Disclaimers

While frequent and open communication throughout a synchronized review process can resolve many of the disputes that occur among agencies, it cannot resolve them all. A formal synchronization agreement should include a section on dispute resolution to clarify the steps taken in the event that there is a disagreement on a specific project or in application of the agreement's procedures. Issues to consider in drafting dispute resolution for the agreement are:

- Will the agencies use established dispute resolution procedures, such as those in law, regulation, or other MOA or MOU?
- When will dispute resolution procedures be triggered?

- Who (what level of personnel) will participate in the dispute resolution process?
- Will there be procedures to elevate resolution within each agency's chain of command?
- How will each agency maintain their respective authorities during dispute resolution?
- Is exiting the synchronized procedure a possible recourse for these disputes?

Figure 5 shows New Mexico DOT's escalation procedures for dispute resolution.

All agencies agree to work cooperatively to avoid and resolve conflicts if at all possible. The agencies agree to explore issues thoroughly before seeking to use this dispute resolution mechanism by ensuring that adequate communication has occurred, that all agencies fully understand the issues, and the reasons why an agency is committed to a position.

If disagreements emerge which cannot be resolved, the impasse shall be escalated as follows:

USACE	NMDOT	FHWA
Project Manager	Project Coordinator	Area Engineer
Regulatory Branch Chief	Environmental Bureau Manager	Environmental Specialist
Regulatory Division Chief	Chief Engineer	Assistant Division Administrator
District Engineer	Cabinet Secretary	Division Administrator

When the parties at the lowest organizational level of the agencies have agreed to escalate, a meeting date will be established within 10 business days. At that time, the agencies from both levels will meet to discuss the issues and come up with a resolution. If an agreement cannot be reached, then the issue will be escalated to the next level and a meeting date established within 20 business days. At that time, the agencies from all three levels will meet to discuss the issues and come to a resolution. If an agreement cannot be reached, the issue will be escalated to the highest level and a meeting date established within 20 business days. At that time, all agencies will come to resolution, or, as a last resort, agree to exit the merger agreement.

Mediation and facilitation may be used at any level to help expedite resolution. Documentation of all disagreements and resolutions shall be furnished to all involved agencies and included in the project file.

If after going through the dispute resolution process, FHWA, NMDOT, and USACE cannot come to resolution, the project team can decide to exit the merger as a last resort. Any final decision must be in writing. In cases where the LEDPA and the Preferred Alternative are in conflict, the USACE must make a decision on the permit application and either issue or deny the permit.

Figure 5: Dispute resolution procedures from New Mexico DOT's synchronization agreement.

A final component of most formal agreements is the legal disclaimers and other administrative clarifications. Since many formal agreements take the form of a MOA or MOU, typically caveats and provisos govern the operation of the agreement. These could include provisions for:

- Terms including lengths of agreements and conditions;
- Process for modification, renewal, or termination of the agreement;
- Monitoring and evaluation of the agreement, such as performance metrics;
- Agency commitments, including verification that the agreement does not alter any agency's legal authorities or responsibilities to comply with applicable laws and regulations; or
- Definitions of terms used in the agreement.

Figure 6 provides a sample of the terms and conditions used in a Caltrans synchronization agreement. To view the full agreement visit:
http://www.dot.ca.gov/ser/downloads/MOUs/NEPA404/nepa404_2006_final_mou.pdf.

3. Regulatory and resource agency participation in this process does not imply endorsement of all aspects of a transportation plan or project. Nothing in this MOU is intended to diminish, modify, or otherwise affect the statutory or regulatory authorities of the Signatory Agencies.
4. A Signatory Agency's participation in the integration process is not equivalent to serving as a cooperating agency, which is a separate process established through a formal written agreement from a Signatory Agency to the lead federal agency.
5. This MOU is not a fiscal or funds obligation instrument. Nothing in this MOU will be construed as affecting the authorities of the participants to act as provided by statute or regulation or as binding beyond their respective authorities or to require the participants to obligate or expend funds in excess of available appropriations.
6. This MOU does not confer any right or benefit, substantive or procedural, enforceable at law or equity, by a party against the United States, its agencies, its officers, or any person.
7. Any Signatory Agency may terminate participation in this MOU upon written notice to all other Signatory Agencies. If all Signatory Agencies decide not to participate in this agreement any further, the FHWA will provide written documentation to all Signatory Agencies that the MOU is terminated.
8. On a project-specific basis, any Signatory Agency may opt out of applying this agreement upon written notice to all other Signatory Agencies.
9. This MOU will become effective on the date of the last signature.

Figure 6: Terms and conditions from the Caltrans synchronization agreement.

15. **How are disputes handled during a synchronized review? Should a review pause or be allowed to advance while disputes are being resolved?** A synchronization process should outline specific tools to resolve disputes between agencies that may arise stemming from different agencies' regulatory missions or statutory authorities regarding dispute resolution that may apply to a particular agency. The dispute resolution process is intended to be expeditious, practical, respectful, and accessible. In keeping with the spirit of the integration process, the tools created for this process should not preclude any other traditional or nontraditional approaches to dispute resolution.

    All the methods of dispute resolution, including elevation, should be made available at any point on a voluntary basis. However, elevation, as necessary, is encouraged. The elevation process is intended to resolve issues quickly, keep the project reviews on schedule, and to maintain constructive working relationships between all agencies participating in the synchronization process.

    For a routine project, synchronized review of the entire project should be halted to allow for dispute resolution to be carried out between the agencies that are in disagreement. This should be done quickly so as not to significantly delay the project. Stopping the review process allows agencies to focus on the issue. However, this is a risk-based approach in that holding up the project could lead to delays if not resolved in a timely manner. An example would be a particular bridge design that doesn't allow for appropriate ebb and flow of the tide to support a protected species or cuts off inundation to a wetland area with high functional value.

    An alternate approach is to work towards resolution of a specific issue under dispute through the elevation process, but keep other synchronization efforts for the project moving forward. Some projects are so complex that continued review of sections of the project that are not impacted in any way by the project area under dispute can be beneficial for the overall project schedule. An example of this would be long linear projects that have distinct project sections where the design for one section is not reliant on the outcome of the dispute resolution process.

Synchronization in Special Situations

NEPA reviews can vary in complexity depending on the situation. Similarly, synchronized reviews can adapt to special situations. Some frequently encountered special situations such as supplementing a NEPA document and tiered NEPA documents are addressed below. In addition, some transportation and other infrastructure projects require review under 33 U.S.C. Section 408 by USACE. Special considerations for this review are described below.

16. **Can synchronized reviews apply to re-evaluations and supplemental reviews?** Yes. Synchronized reviews can apply to re-evaluations and supplemental reviews if changes to the proposed action and\or new information or circumstances would result in significant environmental impacts which were not previously evaluated. If it is determined through the re-evaluation/consultation process that an EIS or supplemental EIS is required, the project schedule can be adjusted accordingly to align with permit and regulatory review actions.

17. **Can synchronized reviews apply to tiered NEPA reviews?** Yes. Synchronization can also be utilized when a tiered NEPA review process is used. Tiering[12] allows the lead agency to conduct the planning and NEPA activities for large transportation projects in two phases. Tier I addresses broad programmatic decisions and overall corridor issues, such as general location, mode choice, and land use impacts; Tier II focuses on site-specific design, impacts, costs, and mitigation measures. The first tier generally results in a NEPA review with the appropriate level of detail for corridor-level decisions. The second tier studies result in traditional project-level NEPA analyses and documents.

    Early participation in the Tier I allows reviewing agencies to provide input before broad-based decisions are made. The Tier II analysis presents the opportunity to utilize synchronization at each of the traditional project development steps. When developing a synchronization agreement, an option for use with tiered EISs should be considered.

18. **How are timeframes and information needs affected when review under 33 U.S.C. Section 408 is required?** 33 U.S.C. Section 408 provides that it is unlawful to alter, occupy, or use any USACE federally authorized civil works projects without the permission of the Secretary of the Army, upon recommendation of the Chief of Engineers. This decisionmaking authority has been delegated to USACE Headquarters and USACE districts, depending on whether certain criteria are met. Further, a Section 408 permission can only be granted so long as such alteration is neither injurious to the public interest nor impairs the usefulness of the civil works project. Section 408 review can be triggered; for example, when road or rail construction includes crossing of USACE levees or construction of bridge piers within a USACE navigation channel. Few transportation or infrastructure projects require review under Section 408, but for those that do, timing of certain actions and decisions can be critical in facilitating an efficient review process. It is advisable for transportation agencies to contact the local USACE district early during the NEPA review process to determine if the project corridor crosses any federally authorized civil works project to determine if Section 408 review will be required.

    Of note, for those projects that require Section 408 review, USACE cannot render a permit decision under its regulatory authorities until the Section 408 review has been completed. This means that even if a synchronized review process is employed and USACE intends to fully adopt the USDOT NEPA document for its Section 404 review that USACE will not issue a decision until the Section 408 review is completed. To avoid lag time at the end of a concurrent NEPA review process and to obtain sufficient information on the viability of a preferred alternative meeting

[12] 40 C.F.R. 1502.20 and 1508.28.

Section 408 review criteria, the Section 408 review and its associated NEPA compliance should run concurrently with the transportation agency-led NEPA review process, to the extent practicable.

Many Section 408 reviews involve an engineering review. Advanced level design drawings of those features that affect the USACE Federal project can be required to facilitate this review. Project proponents should coordinate with the USACE district to determine the information requirements. Because the advanced level of design required for a Section 408 review may not be achieved until after selection of a preferred alternative, transportation agencies need to evaluate the costs and benefits of timing of the selection of a preferred alternative and advancement of design to be able to advance the Section 408 review process prior to issuance of the transportation agency's ROD.

Section 408 reviews within navigation channels may require a ship simulation. This ship simulation can inform USCG's bridge permitting review and ideally would be conducted concurrent with completion of a navigation impact report. To determine if a ship simulation is necessary, contact your local USACE district and coordinate timing with the local USCG district.

Chapter 2 – Programmatic Approaches

Over the course of this handbook, the synchronized review process has been outlined and several tools have been described to support this practice. However, the vast majority of actions proposed by a transportation agency are typically not large capital or new construction projects. These may be routine actions with generally predictable minor impacts to aquatic and other resources. For example, they may be actions that involve minor or minimal impacts to waters of the U.S., to protected species, or on navigation, and qualify for a categorical exclusion (CE) under NEPA. These routine actions with minor impacts may have a Federal nexus through USCG, USACE, or other Federal review, permit, or approval. For such routine actions with minor impacts, the in-depth coordination of a synchronized review may require more effort and resource commitment than would be beneficial.

Agencies have developed many techniques to address these types of situations in an efficient manner. Using these kinds of techniques, especially programmatic approaches, can help accomplish environmental compliance in a more expeditious manner without the in-depth coordination required of a synchronized review. It is in these circumstances that the programmatic approach will reap greater efficiency than in a synchronized review. This chapter covers the concept of programmatic approaches, including ones that are frequently used in lieu of a synchronized review.

Although permit applications are typically prepared and reviewed on a project-by-project basis, many activities have common components or a suite of similar activities that make them more appropriate for review on a programmatic level rather than in the context of a single permit action. For example, some frequent and recurring transportation activities, such as culvert replacement and road resurfacing, generally follow the same procedures and share similar levels of impact across similar eco-regions. Also, transportation agencies engaged in road shoulder widening or other routine activities may frequently encounter a certain protected species within a geographic area, resulting in a similar type of effect on that species. Programmatic approaches encompass a suite of techniques that allow regulatory and transportation agencies to set boundaries or thresholds for these types of activities. This results in an allowance for an abbreviated review process. These processes can include an upfront “batch review” of multiple activities for which authorization or concurrence may be granted during the initial review. It can also include a simple expedited review process for individual projects that fall within established parameters.

Programmatic approaches can be used at the national, regional, or field office levels. For example, USACE uses NWPs at the national level and regional general permits at the district level to regulate large numbers of similar activities that have minimal adverse impacts (both individually and cumulatively). These programmatic approaches result in less monetary and staff transactional costs than would be required for IP reviews for such activities.

The Services (i.e., USFWS and NMFS) perform ESA Section 7 programmatic consultations. These consultations are performed on actions that are similar in nature, a group of different actions proposed within a specified geographic area, or programs that adopt a framework for the development of future, site-specific actions either locally, statewide, or nationally that are federally authorized, funded, or carried out at a later time. In another example, USCG reviews preliminary determinations made by FHWA under

23 U.S.C. Section 144(c) early in the project development process to identify if a bridge permit is required.

A programmatic approach offers a number of advantages. First, it allows reviewing agencies to explore and seek resolution of broad issues that could benefit a large number of actions, saving time by eliminating the need to address the same issues repetitively on individual project reviews. Such long-term efficiency for environmental reviews provides more predictability in transportation planning and greater conservation success, as shown by the examples in Chapter 5 on mitigation. Second, issues can be discussed and resolved before they cause critical disagreement on a specific project. Third, an adaptive approach can be applied to the project development process of a transportation agency if shortcomings in the project development process are identified through a programmatic approach.

Because it can be difficult to identify trends in recurring issues at the national level, programmatic techniques are often most effective when developed and put into place at the regional or district level for the Federal agency. Locally developed techniques can most easily adapt to the variations among Federal agency field offices with respect to resources and variations in State and local regulations and policy. However, some programmatic approaches are useful at the national level, particularly when they result from similar techniques developed by more than one area office. Therefore, operating and management staff at all levels within resource, regulatory, and transportation agencies should be alert to identifying issues that can best be solved by a programmatic approach.

Resolving programmatic issues offers potentially great benefits for both the transportation agency and the other agencies involved with the issue. Developing a programmatic approach can sometimes require a significant upfront commitment of agency staff resources, but often results in a commensurate or greater level of reward in the long run. Setting a schedule for completion of the programmatic approach can help focus efforts. A programmatic approach can take many forms to address the scope of the issue. Implementation of a programmatic technique usually requires a joint effort between the transportation agency, affected Federal agency(ies), and potential State agencies. Several primary examples of programmatic approaches follow.

Clean Water Act (CWA) Alternative Permit Procedures

Under Section 404(e) of the CWA and 33 CFR Parts 325 and 330, USACE has the authority to issue general permits for categories of similar activities that have a minimal impact on the aquatic environment, both individually and cumulatively. USACE issues three types of general permits: NWPs, RGPs, and programmatic general permits (PGPs). NWPs apply across the country while USACE districts develop RGPs and PGPs that may apply district-wide or to a specific geographic area.

Development of NWPs occurs at the Headquarters level every five years and involves public notice and comment rulemaking. However, anyone may suggest revisions or new NWPs at any time according to 33 CFR 330.5(b)(1). Because NWPs apply to the broad spectrum of eco-regions across the Nation and its territories, NWPs are very general. Each NWP authorizes a specific category of work; NEPA compliance is completed for each of the NWPs at a national level when they are issued every five years in lieu of conducting NEPA compliance for each project-level verification. After USACE Headquarters issues the NWPs, individual division engineers have the discretion to add regional conditions to ensure activities authorized under the NWP are minimally impacting, given the specific ecological conditions in each

district. In addition, some districts have completely restricted the use of the NWP and instead use other forms of general permits. When a project proponent seeks to use an NWP, some NWPs require that the project proponent provide advance notification to the local USACE office, also known as submitting a preconstruction notification (PCN). Other NWPs allow the project proponent to proceed with the authorized work without additional notification as long as the work complies with all applicable terms and conditions. A transportation agency should contact the local USACE district to obtain information on which activities may proceed without notification under the NWP and those that require PCN.

Development of a new NWP is a large undertaking since it involves going through formal public notice and comment rulemaking, and is recommended only for those activities that are frequently conducted and have a minimal impact on the wide variety of ecological conditions present nationwide. However, use of an existing NWP is highly recommended for project types that have minimal impacts to the aquatic environment and are likely to meet the terms and conditions of an NWP. NWPs commonly in use in the review of transportation and other infrastructure projects include: NWP 3 for maintenance; NWP 12 for utility lines, including pipelines and transmission lines that may cross waters of the U.S.; NWP 13 for bank stabilization activities; NWP 14 for linear transportation projects, including roads and rail lines; and NWP 15 for USCG-approved bridges. NWP 15 is an especially effective tool for projects requiring both USCG and USACE reviews. It allows USACE to expeditiously authorize those bridge projects that have already undergone environmental review by a USDOT OA and USCG. Such bridge projects may also involve discharges of dredged or fill material incidental to the construction of a bridge across navigable waters, including cofferdams, abutments, foundation seals, piers, and temporary construction and access fills. In these instances, the USACE may issue a NWP 15. For example, three NWP 15 verifications were used to authorize the discharge of dredged or fill material associated with the Louisville-Southern Indiana Ohio River bridges. Each verification was issued within 30 days of USACE's Louisville District receiving a complete application.

RGP and PGP are also for categories of work with minimal impacts to the aquatic environment, but are applied within a smaller geographic area such as a USACE district, a watershed, or a county. Similar to NWP, use of RGP and PGP is highly recommended for project types with minimal impacts to the aquatic environment and that appear to meet the terms and conditions of an existing RGP or PGP. Development of an RGP or PGP is most appropriate when a transportation agency recognizes that they frequently need to seek authorization for a specific activity, like culvert replacement or ditch maintenance, which usually results in minimal impacts to the aquatic environment. Either a USACE district may decide to develop an RGP or PGP, or a transportation agency may request their local USACE district to develop one. These could be activities already covered by another RGP or NWP, for which there is a desire to modify the acreage limits or the notification thresholds to allow for broader applicability. For a transportation agency, demonstrating a track record of frequently reoccurring projects/actions with generally minimal impacts and predictable results helps the USACE district to more easily determine if an RGP or PGP is feasible. The process of developing an RGP or PGP is similar to that of an IP review: a public notice is issued, comments are solicited from the public, and then comments are addressed while any necessary consultations (such as those required for protected species or historic and cultural resources) are completed. NEPA compliance is completed, (as well as obtaining any necessary CZMA consistency concurrences and/or State water quality certifications), and then the District Engineer makes the determination to issue or deny the RGP or PGP. Also similar to NWP, RGP and PGP are effective for a five-year period in which a project proponent may seek verification from USACE of an activity under the

RGP or PGP. In the case of a PGP, a project proponent may seek verification from another entity, frequently a State or municipal agency, which administers the PGP on USACE's behalf. If a transportation agency is interested in pursuing development of an RGP or PGP, it should consider a proposed scope of activities to be covered by the RGP or PGP, and then contact the local USACE district office.

Because RGPs and PGPs are developed on a smaller geographic scale, the type of activities covered can often be tailored to better fit the transportation agency's common work types. For example, Norfolk District developed Regional Permit 01 (RP-01) for the Virginia Department of Transportation (VDOT) to use on roadway and railway projects that impact up to 1 acre or 1 thousand linear feet of waters of the U.S. within the Commonwealth of Virginia. This "transportation RGP" gives greater flexibility on the quantity of impacts than NWP 14, which is frequently used on linear road and rail projects. Another example is the development of a transportation RGP by the Huntington District in cooperation with the Ohio Department of Transportation (ODOT). The ODOT RGP covers similar categories of work as some of the NWPs and has similar acreage thresholds as the NWP, but has greater flexibility on linear footage of impacts to waters of the U.S.

The letter of permission (LOP) process, as indicated in 33 CFR 325.2(e), is another type of abbreviated review procedure for USACE. The abbreviated process includes coordination with Federal and State fish and wildlife agencies, as required by the Fish and Wildlife Coordination Act; adjacent property owners; and a public interest evaluation, but without the publishing of an individual public notice. LOPs may be used for activities under Section 10 of the Rivers and Harbors Act of 1899. Such activities can occur when the District Engineer determines that the activities generally do not result in significant individual or cumulative environmental impacts and should encounter no appreciable opposition. LOPs may also be used with Section 404 of the CWA after the District Engineer issues a public notice and does a public interest review on the activities proposed to be reviewed under LOP procedures. It is most beneficial to develop LOP procedures for those categories of work that may not meet the threshold of minimal individual and cumulative impacts needed for development of an RGP. But rather, they are routine, recurring activities that do not result in significant individual or cumulative environmental impacts, such as adding transit parking facilities or auxiliary lanes to existing highways. LOP procedures may also be desirable for use in concert with a watershed approach to mitigation or a Special Area Management Plan (SAMP). These concepts are discussed later in this chapter and in Chapter 5 on mitigation. Similar to an RGP, a transportation agency may contact the local USACE district office to start the conversation on appropriate categories of work for LOP procedures.

Nationwide Permit Number 23

Section 1508.4 of CEQ's NEPA regulations explains that CEs are categories of actions that have been determined not to have a significant effect on the human environment, either individually or cumulatively, and therefore, would not require additional NEPA review (i.e., analysis and documentation in an EA or EIS) unless extraordinary circumstances exist. Federal agencies undergo a rigorous review to establish their own CEs under NEPA, including substantiation to verify that activities indeed qualify for this abbreviated form of NEPA compliance. (Some CEs have also been created legislatively, in which case the process to establish them is different.) NWP 23 was developed to provide for an efficient review of those

activities that qualify for another Federal agency's CE, as long as those activities have minimal individual and cumulative adverse impacts to waters of the U.S.

NWP 23 is for activities that are determined to be categorically excluded by another Federal agency, and allows for an abbreviated review process with USACE for those activities. NWP 23 is flexible in the categories of work and thresholds to qualify, encompassing many categories of work that do not fall neatly within the descriptions of existing NWPs or RGPs or activities that may exceed thresholds of a NWP or RGP, but still are determined to have minimal impacts to waters of the U.S. through the NEPA documentation done by the Federal agency. For example, USACE's Savannah District used NWP 23 to authorize impacts to waters of the U.S. associated with improvements to a welcome center/rest stop along I-95 in Chatham County, Georgia. The Sacramento District also used NWP 23 to authorize impacts to waters of the U.S. associated with the construction of an interchange at State Road 70 and Feather River Boulevard in Yuba County, California. As with other NWPs, district and division engineers have the discretion to add activity-specific or regional conditions to NWP 23 to limit or exclude its use in order to ensure that only minimal individual and cumulative impacts to waters of the U.S. result from its use.

Any Federal agency may request USACE to review and include their CEs for use with NWP 23. There is considerable upfront effort to get CEs approved for use with NWP 23. This Headquarters-level review includes solicitation of public comment in the Federal Register, as well as an in-depth public interest review, culminating in a decision by the Chief of Engineers whether to approve, deny, or condition the use of CEs with NWP 23. Moreover, this may require substantiation that the category of actions do not individually or cumulatively have a significant effect on the human environment and therefore would not require additional NEPA review. Clear examples and evidence may be required. USACE may use the requesting agency's examples as benchmarks. FHWA is one of the agencies that currently has CEs approved for use with NWP 23. Guidance on the use of NWP 23 is captured in a USACE Regulatory Guidance Letter (RGL) (http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/GuidanceLetters.aspx). Transportation agencies should refer to the most recent RGL covering NWP 23 to determine which CEs are currently approved for use with NWP 23 and which activities require a pre-construction notification to USACE. If a CE is not included in the most recent RGL, it is not approved for use with NWP 23 and another NWP or type of permit may be used to review the proposed activity.

Special Area Management Plans (SAMPs)

A SAMP is a management tool tailored to address the specific resources and uses found in a particular location. For example, the CZMA defines a SAMP as "a comprehensive plan providing for natural resource protection and reasonable coastal-dependent economic growth containing a detailed and comprehensive statement of policies, standards and criteria to guide public and private uses of lands and waters; and mechanisms for timely implementation in specific geographic areas within the coastal zone" (16 U.S.C. § 1453). SAMP use has been expanded beyond the coastal zone and may be employed in other areas of concern. USACE, in cooperation with non-Federal entities, has successfully developed and implemented SAMPs for over 25 years. Guidance on developing SAMPs with USACE is captured in a USACE RGL.

SAMPs are recommended for improving the management of defined geographic areas that are environmentally sensitive and under increased development pressure. Potentially, a 5-year or longer term

transportation plan focuses on an area of rapid growth that also contains a large quantity of high-quality aquatic resources. This transportation plan could help a transportation agency identify an area that would be a good candidate for development of a SAMP. A SAMP will generally define areas and levels of impacts that are undesirable in the context of broader ecosystem needs, allowing the transportation agency to plan with greater certainty. In addition, a SAMP generally results in RGP or LOP procedures, allowing for a more efficient review of those activities designed consistent with the SAMP. This also helps the USACE district mitigate the challenge of project-by-project review in these sensitive areas, by considering impacts in a larger geographic context, both individually and cumulatively. SAMPs can help plan compensatory mitigation projects by identifying areas that are good candidates for the restoration, enhancement, and preservation of aquatic or other types of resources. For more information about SAMPs, see Chapter 5.

The challenge with developing a SAMP is that it is a labor-intensive effort and needs a local sponsoring agency to tie the effort into local needs and interests. The SAMP will need public input and comment—all agencies must be willing to conclude the SAMP with a defined regulatory product such as an RGP or LOP procedure and a corresponding State or local restriction for activities not covered by the SAMP. Activities not covered by the SAMP may still be reviewed under IP procedures.

Endangered Species Act (ESA)

Under Section 7(a)(2) of the ESA, each Federal agency must, in consultation with the USFWS and/or NMFS, ensure that any action it funds, authorizes, or carries out will not jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. In addition, under Section 7(a)(4) of the ESA, each Federal agency shall confer with the USFWS or NMFS on any action which is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat. Given the long-term nature of the projects anticipated by this guidance, the Federal agency should also consider addressing any potentially affected candidate species. In recent years, the Section 7 consultation workload for USFWS and NMFS has increased dramatically, resulting in the need to develop techniques to increase the efficiency of the consultation process. One of the most effective methods of accomplishing this has been the implementation of "programmatic consultation" in the formal and informal consultation processes. Programmatic consultation techniques have the potential to increase the efficiency of the Section 7 consultation process on the basis of the following:

- Providing cost-effective integration of ecosystem/recovery planning activities with agency activities;
- Minimizing potential "piecemeal" effects that can occur when evaluating individual projects rather than an agency program or plan;
- Completing an aggregate effects analysis for many similar projects/actions across a large geographic landscape rather than each individual proposed action; and
- Coordinating with other agencies' actions requiring ESA compliance (e.g., USACE CWA Section 404 reviews), to synchronize reviews necessary for infrastructure development, thereby increasing the efficiency of the overall environmental review process.

The term "programmatic consultation" encompasses several different types of ESA Section 7 consultations. A programmatic consultation may cover an action agency's program or plan (e.g., Forest

Service Land and Resource Management Plans, Bureau of Land Management Resource Management Plans, and Statewide Transportation Improvement Programs); a large group of similar actions (e.g., a transportation agency's routine operation activities and USACE permit activities); or different types of actions proposed within a large geographic area (e.g., a transportation agency's new construction projects within a particular State or regional area). Standards and guidelines or project design criteria are sometimes developed to delineate the scope of actions proposed to be covered by the programmatic consultation. Such standards and guidelines provide predictability to action agencies.

Both the Services (USFWS and NMFS) and action agencies have found that engaging in early planning and coordination allows the Services' biologists and the action agencies' technical experts to identify and address issues while there is maximum flexibility to modify project designs. Early coordination also allows managers to make appropriate adjustments to proposed activities during the project design phase to incorporate species' habitat needs, thus facilitating Section 7 consultation processes.

Programmatic Approaches for Bridges

The USCG and three USDOT OAs—FHWA, FTA, and FRA—have entered into a MOU (https://www.environment.fhwa.dot.gov/strmlng/MOU_multimodal_bridge_permits.asp) to enhance the efficiency and transparency of environmental reviews and bridge permitting decisions while maintaining the integrity of the permitting process. Per the MOU, USCG and USDOT OAs will work in a coordinated effort to identify, early in the process, a reasonable range of design alternatives that do not unreasonably obstruct navigation; prepare a coordinated environmental document that avoids consecutive agency review; and concurrently review Bridge Permit application materials whenever possible.

The USCG and FHWA have also entered into a MOA (https://www.environment.fhwa.dot.gov/strmlng/MOA_USCG_bridge_permits.asp) which outlines a detailed process for coordinating bridge permit applications for FHWA projects, including the requirements of MAP-21 and 23 U.S.C. § 144(c). The new process requires a navigation impact report to be conducted by the applicant early in the process to identify sizes and types of present and prospective vessels transiting the waterway. USCG will then make a preliminary determination based on the navigation impact report in order to identify design alternatives that would be an unreasonable obstruction to navigation and should not receive further consideration in the NEPA review process.

Essential Fish Habitat (EFH)

Under Section 305(b) of the MSA, each Federal agency shall consult with the Secretary of Commerce with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any EFH. To increase the efficiency of consultation processes, the implementation of "programmatic consultations" have been used.

As per implementing regulations Subparts J and K of 50 CFR Part 600, programmatic consultation provides a means for NMFS and a Federal agency to consult regarding a potentially large number of individual actions that may adversely affect EFH. Programmatic consultations will generally be the most appropriate option to address funding programs, large-scale planning efforts, and other instances where sufficient information is available to address all reasonably foreseeable adverse effects on EFH of an entire program, parts of a program, or a number of similar individual actions occurring within a given geographic area.

A Federal agency may request a programmatic consultation by providing NMFS with an EFH Assessment. The description of the proposed action in the EFH Assessment should describe the program and the nature and approximate number (annually or by some other appropriate time frame) of the actions. NMFS may also initiate programmatic consultation by requesting pertinent information from a Federal agency.

NMFS will respond to the Federal agency with programmatic EFH Conservation Recommendations and, if applicable, will identify any potential adverse effects that could not be addressed programmatically and require project-specific consultation. NMFS may also determine that a programmatic consultation is not appropriate, in which case all EFH Conservation Recommendations will be deferred to project-specific consultations. If appropriate, NMFS' response may include a General Concurrence, for activities which no further consultation is generally required.

Chapter 3 – Transportation and Other Infrastructure Liaisons

Transportation agencies have multiple points of contact within a regulatory or resource agency that may not have a thorough background in the planning and development that supports a transportation or infrastructure project before it enters the NEPA review phase. In addition, limited budgets and staff resources preclude many regulatory and resource agencies from assigning staff to work on pre-NEPA activities when staff may already be strained to process pending workload in a timely manner.

Certain statutory authorities allow some regulatory and resource agencies, including USACE, USCG, USFWS, NMFS, State Historic Preservation Offices, and EPA, to enter into funding agreements that provide the resources necessary to address this concern, including:

- 23 U.S.C. Section 139(j) - This statutory authority provides eligibility for certain transportation agencies to expend funds in order to expedite reviews.
- Section 214 of the Water Resources Development Act (WRDA) of 2000, as amended (33 U.S.C. Section 2352) - This USACE authority allows acceptance and expenditure of funds to expedite permit review processes under the authority of the Secretary of the Army.

Primarily, funds accepted under these authorities are used to hire additional personnel that serve as dedicated transportation liaisons—a primary point of contact within the regulatory or resource agency for the transportation agency. These liaisons focus their efforts on a variety of activities that can benefit both the transportation agency and the regulatory or resource agency, which are described further in this chapter. The terms often associated with these positions—"funded positions," "external liaisons," and "funded liaisons"—refer to dedicated staff (commonly housed at regulatory or resource agencies) funded by State DOTs to work on matters such as expedited project review and delivery.

Having interagency liaisons is not a new concept. However, it wasn't until the early 2000s that the concept was more widely adopted and spread into other infrastructure sectors through the enactment of Section 214 of WRDA 2000. Today, use of these authorities to support dedicated liaisons is a widely accepted practice to expedite the review of transportation and other infrastructure projects. Liaisons can provide the staff resources required for the effective early coordination that is necessary to support a synchronized review.

Each of these authorities and basic facts on transportation and other infrastructure liaisons is discussed in greater detail below.

23 U.S.C. Section 139(j)

Conducting an efficient and effective environmental review process requires coordination and collaboration between State transportation agencies and resource agencies. However, numerous demands on resource agency staff time often limit the ability of staff to participate in State transportation project planning or to expedite project reviews. Section 1309 of the Transportation Equity Act for the 21st Century (TEA-21), which was enacted in 1998, mandated an environmental streamlining process that improved transportation project delivery while protecting and enhancing the environment. One of the key elements of this process was cooperation between transportation and environmental resource agencies to develop and adhere to realistic project development timeframes. Recognizing insufficient staff levels as a barrier to streamlining the environmental review process, TEA-21 allowed States to use Federal-aid

project funds to provide additional resources to agencies that participate in the process, including Federal and State agencies and federally recognized Indian Tribes.

Building on and expanding the TEA-21 foundation, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was signed into law in August 2006. Several SAFETEA-LU provisions focused on improving efficiency in the highway program and project delivery. The Act also maintained Federal-aid eligibility for activities to support expedited environmental review and expanded eligibility of funding to include certain transportation planning activities. As outlined in SAFETEA-LU Section 6002 and codified in 23 U.S.C. Section 139(j), activities for which funds may be provided include transportation planning activities that precede the initiation of the environmental review process, dedicated staffing, training of agency personnel, information-gathering and mapping, and development of programmatic agreements. Section 1307 of MAP-21 continues the authority addressed in SAFETEA-LU and adds a new provision to 23 U.S.C. Section 139(j), requiring the development of an MOU that establishes projects and priorities to be addressed by the use of funds provided.[13]

Through the authority at 23 U.S.C. 139(j), FHWA and FTA may provide funds at the request of a State to affected Federal and State agencies and Indian tribes participating in the environmental review of highway and transit projects, who directly contribute to expediting and improving project delivery. In many cases, such funds have been used to employ staff at resource agencies who are dedicated to working on State DOT projects. While many States have chosen to utilize Federal funds to provide staff support to resource agencies, several—including California, North Carolina, and Washington—have opted to finance such support with State funds. For more information regarding 23 U.S.C. 139(j) funded positions, contact the appropriate FHWA Division Office or FHWA Headquarters' Office of Project Development and Environmental Review.

Section 214 of WRDA 2000 (33 U.S.C. Section 2352)

The idea for Section 214 was initiated in the Pacific Northwest after several municipal agencies and port authorities experienced delays on USACE reviews. Delays were due to high workloads among the few staff available to review permit applications and the listing of multiple threatened and endangered species. The thinking was that if these public agencies could share the cost of additional staff for the USACE district in exchange for prioritization of their public projects, then workload could be redistributed among the other staff thereby providing relief for all applicants. Section 214 was enacted with this principle in mind: that non-Federal public entities could contribute funds to expedite the permit review process for projects for a public purpose. The law required that the contribution of funds should not adversely affect other applicants, and that impartial decisionmaking must be preserved. Since 2000, the Section 214 program has grown dramatically nationwide. This program increased from one district to over 20 districts participating in Section 214 agreements in 15 years, including flood control and water management agencies, public works departments, port authorities, transit agencies, railroad agencies, State DOTs, and metropolitan planning organizations (MPOs).

[13] See FHWA's Questions and Answers section on 23 U.S.C. 139 to learn more: http://www.fhwa.dot.gov/map21/qandas/qaeerad.cfm.

The development of agreements under Section 214 of WRDA 2000, as amended, is governed by implementing guidance issued by USACE Headquarters. The funding agreement guidance requires that a process similar to that of an IP review be conducted prior to establishing an agreement. This includes a public notice announcing the proposal to accept and expend funds from the funding entity; a review to ensure the agreement is consistent with the intent of the statute and would not result in an adverse effect to other applicants; documentation supporting the District Engineer's decision on the agreement; and a final public notice announcing the District Engineer's decision on the agreement. The guidance sets other boundaries for the agreements. These include, but are not limited to: requirements to preserve impartial decisionmaking through a one-level-higher review of permit decisions; posting of final actions on the internet; and reporting annually to USACE Headquarters on the use of the agreement.

Section 214 provides greater flexibility on who may enter into an agreement than Section 139(j). While Section 139(j) currently only allows for liaisons for highway and transit projects and requires USDOT approval of the agreement, Section 214 may be used with any non-Federal public entity, including public transit and rail agencies, airport and seaport authorities, and other State and local agencies like public works departments or water resource management agencies. The Water Resources Reform and Development Act (WRRDA), enacted in June 2014, expanded the Section 214 authority for use with public-utility companies and natural gas companies for a period of 7 years, providing additional flexibility within the energy sector. Section 214, however, is more restrictive about the type of projects that may be reviewed. First, Section 214 can only be used for USACE reviews, whereas Section 139(j) can be used for reviews by other agencies such as EPA, USFWS, NMFS, or USCG. Additionally, while it is acceptable for projects reviewed under an agreement to have some private funding, projects reviewed under a Section 214 agreement must be for a public purpose. For example, some private funds may go towards the construction of high occupancy tolling lanes on an interstate highway. Despite the use of private funds, the interstate highway and the tolling lanes still are for the public's use and benefit. District Engineers have some discretion in determining if a project meets the public purpose requirement and may be reviewed under an agreement, consistent with USACE's implementing guidance.

For more information on Section 214 agreements in general, contact the Section 214 Program Manager within USACE Headquarters. To start the conversation on establishing a Section 214 agreement, contact your local USACE district office.

Transportation Liaison Roles and Related Resources

Transportation liaisons are personnel housed in State or Federal resource and regulatory agencies that facilitate the environmental and permit review process for transportation projects. For the purposes of this document, transportation liaisons refer to those positions funded by transportation agencies within Federal or State resource and regulatory agencies to expedite the environmental review process. Outside of this document, the term may be used generally to also refer to regulatory or resource agency staff who work on transportation issues but are not in positions funded by transportation agencies.

There are many benefits to having a transportation liaison. A dedicated point of contact within a resource or regulatory agency results in improved communication and coordination between the transportation agency and the resource and regulatory agencies and fosters a stronger relationship among the agencies. This improved communication leads to more predictable and streamlined environmental reviews and consultations, as all agencies will have a better understanding of what information is needed to complete

the process. In addition, this effective communication and strong interagency relationship can help advance projects through a synchronized process, even when encountering typical points of contention. For transportation agencies, a liaison offers access to environmental and regulatory expertise, helping to plan and design projects to avoid the most environmentally sensitive areas and associated challenges with a review of impacts to those areas.

Common liaison roles include:

- Communications
- Development of mitigation banking instruments
- Establishment of programmatic agreements, including synchronization agreements
- Permit application review, including routine actions and complex synchronized reviews
    - USCG bridge clearance requirements
- Project delivery
- Data-gathering and mapping activities
- Technical expertise related to environmental regulatory requirements
    - ESA (Section 7)
    - CWA (Sections 401, 402, and 404)
    - NEPA
    - MBTA and BGEPA
    - MMPA and MSA-EFH consultations
    - Wild and Scenic Rivers Act
    - State and local regulations and procedures
    - Transportation planning
- Tribal outreach

A transportation agency should conduct a self-assessment to determine (1) whether funding a liaison is permitted by law and (2) whether funding such a position would meet the agency's needs. Having a liaison is an appropriate tool for transportation agencies when there is a desire to prioritize a large quantity of permit applications; seek regular, early (pre-application or planning level) coordination and participation from a resource or regulatory agency; or for a select highly controversial or complex project for which there is a desire to have a reviewer's sole focus. A liaison may also be helpful for the main purpose of improving agency relationships and understanding of each other's processes through improved communication and cross-agency training. Most importantly, a liaison complements synchronization efforts. A liaison builds the interagency relationship and provides the focused and dedicated early coordination to advise the transportation agency on the level of NEPA review with appropriate considerations to satisfy other applicable regulatory review processes, allowing a synchronized review to proceed smoothly with easier and lower level resolution of most disputes. States that already have a synchronization agreement in place may further benefit by having a dedicated liaison(s) to participate in the synchronized review. Likewise, States that already have dedicated liaison(s) may be able to use that resource to begin synchronizing reviews.

For example, there may be a State-level initiative to replace a large quantity of bridges in a short timeframe. Having a dedicated liaison can help to meet this demand, since the transportation agency can advise the liaison to prioritize projects to better meet construction letting dates instead of a first-in, first-

out approach to review. This liaison should also be familiar with the goals to provide advice to the transportation agency on targeting the necessary information for the review and suggesting project revisions to facilitate the review process.

Transportation agencies that do not have sufficient workload or do not have more complex projects that also require one specific agency's involvement may not be able to initially justify the cost of an agreement in comparison with the perceived benefits. However, transportation agencies may work together to support a liaison program. For example, four port authorities along the Columbia River in Oregon and Washington equally share the cost of one full-time employee within USACE's Portland District to review port projects. The four port authorities mutually decide priorities among their projects for the liaison to prevent conflicts and work overload. Likewise, a transit agency may not have enough permit applications on its own to justify the cost of a liaison, but in cooperation with the State highway agency, an airport authority, and/or other transportation agency, a dedicated transportation liaison could be supported.

Once it is determined that there is sufficient need, the liaison program can be explored further. When pursuing a liaison program it is important to keep the size, duration, and purpose of the liaison agreement in mind, as well as the appropriate statutory authority to use. Liaison agreements may be established for a certain number of positions (for example, one full-time equivalent (FTE) or half of an FTE) or on an ad-hoc basis, and may consist of a variety of grade/position levels, depending on the quantity and complexity of the proposed workload. The nature and purpose of the work, who is seeking the work, and other related factors can affect whether a particular statutory authority is applicable. Several resources are available for transportation liaisons and for agencies considering a transportation liaison program. Resources range from an online community of practice (CoP) to more formal guidance.

The Transportation Liaison Community of Practice (CoP)

Transportation liaisons are a source of innovation and improved efficiency in the project delivery process. FHWA developed the Transportation Liaison CoP (https://www.environment.fhwa.dot.gov/liaisonCOP/default.aspx) to enrich the streamlining and coordination services liaisons provide to resource agencies and DOTs. The CoP offers a forum where:

- Liaisons and liaison managers can network with colleagues, access resources and best practices, and learn about the latest news and events related to liaison positions.
- Transportation agencies can learn about the benefits liaisons provide, access sample liaison and programmatic agreements, and network with other professionals to ask questions and share experiences.
- Resource and regulatory agencies can share and access technical information and best practices and learn more about the needs of transportation agencies.
- FHWA Divisions can connect with liaisons and transportation agency contacts and learn about innovative liaison programs and partnerships across the country.

To register for the Website, please visit the site at https://www.environment.fhwa.dot.gov/liaisonCOP/default.aspx. The CoP is open to State DOT, Federal resource and regulatory agencies, and FHWA.

Chapter 4 – Communication and Technology

Throughout this handbook, the concepts of effective coordination and communication have been featured as a key to successful implementation of NEPA review synchronization. Effective early coordination to support synchronized reviews often requires significant communication and information sharing. With agencies often not in close proximity, in-person communication or sharing of information by hard copy can be a challenge. While technology provides an excellent tool for facilitating a synchronized review, agencies should attempt to meet face to face when feasible, to discuss checkpoints and resolve issues that arise during a synchronized review. The benefits of an in-person exchange of ideas are invaluable.

Federal agencies have developed electronic tools for situations requiring rapid document and visual information sharing with many parties in distant locations. Some focus on improving collaboration through document sharing and comment-tracking capabilities, or by facilitating preparation of more thorough documents by prompting users to include specific information. Geospatial tools are more visual in nature, and display layers of information that can be used to inform project planning and development. These tools can help all agencies visualize a project's potential impacts on certain resources using the same information, better informing all parties of geographic areas of concern.

Electronic tools can be used to support development of information for decisions during a synchronized review process and can be just as effective with other reviews. Some of these tools are currently being applied during planning, but could apply to a synchronized review. Coordination points during a synchronized review could be supported by a combined geospatial and coordination tool, which would allow all agencies to view the same geospatial data and then capture agency comments in an electronic record. This list of tools described below is by no means inclusive of all the collaboration and geospatial tools that can be used for these purposes. For example, the Department of Energy is developing NEPAnode (http://nepanode.anl.gov/), a geospatial and collaboration tool to support NEPA reviews. The examples in this chapter are meant to highlight the primary tools in use by the Red Book agencies at the time of development of this document. Visit each tool's Website for more in-depth information and each agency's Website for information about new developments in that agency's technology.

Coordination Tools

Electronic National Environmental Policy Act Collaboration Support Tool (eNEPA)

eNEPA is a FHWA streamlining tool that facilitates the environmental review process through enhanced agency collaboration by allowing transportation agencies to share DEIS or EA documents with cooperating and participating agencies and keeping an electronic record of agency comments online. This tool was developed as a result of the longstanding FHWA priority to improve the timeliness and quality of the environmental review process. Since TEA-21 was enacted in 1998, a central focus of FHWA efforts to accelerate project delivery has been establishing coordinated environmental review processes with concurrent interagency reviews and established time periods. FHWA has developed eNEPA for use by State DOTs in support of interagency reviews with the intent of creating a transparent and streamlined process across States and transportation projects. FHWA believes that interagency collaboration will be greatly enhanced and expedited through the use of this tool. By improving the capability for concurrent agency reviews, particularly by Federal agency reviews, issues can be identified and addressed early in

the process, thereby simplifying and clarifying the review process and assisting agencies in fulfilling their NEPA responsibilities. eNEPA uses custom-designed EA and EIS workflows to guide the project sponsors through the NEPA review process. The project team can include Federal, State, and local reviewers to access documents. Key advantages include:

- Improved environmental outcomes;
- Better accountability for action and resource agencies;
- Clear, transparent, and expedited issue resolution;
- Shorter project timeframes with reduced uncertainty.

eNEPA can be set up and deployed following the major NEPA review milestones in which checkpoints are desired and can include all records, comments, and decisions. See Figure 7.

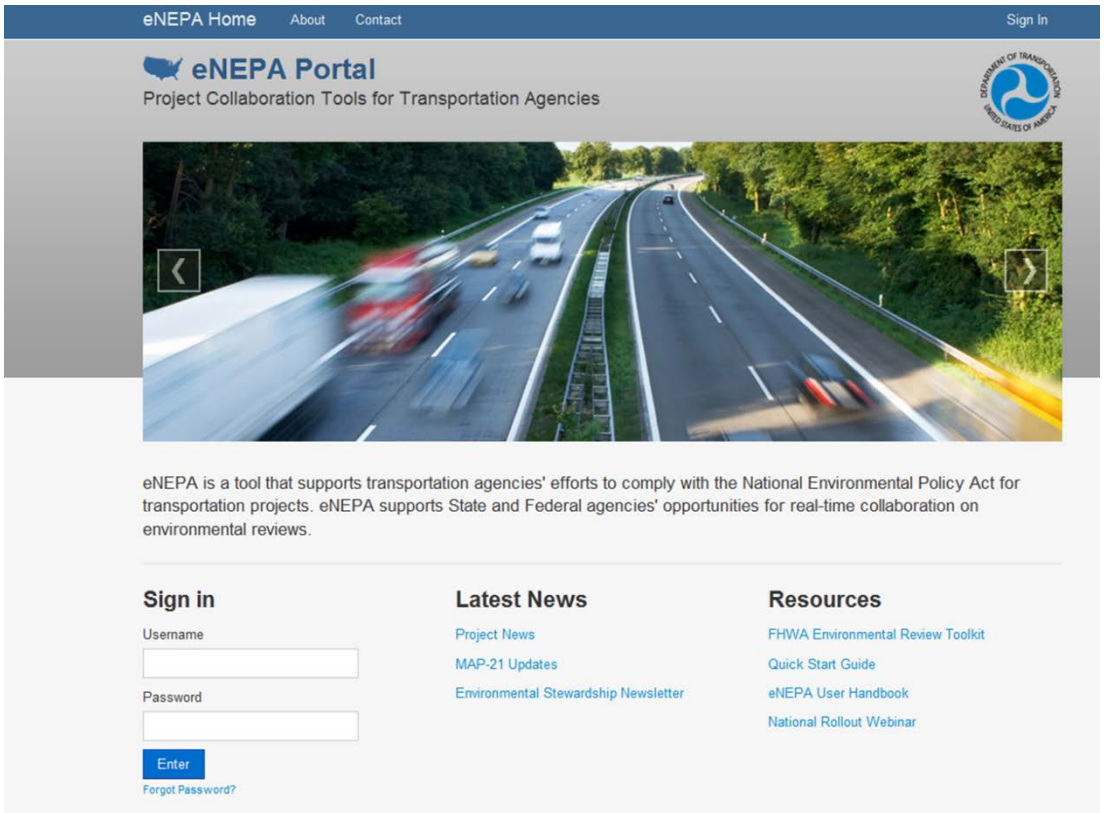


Figure 7: Screenshot of FHWA's eNEPA Portal.

The tool is available to registered users through the User Profile and Access Control System (UPACS) or, for non-UPACS users, at https://fhwaapps.fhwa.dot.gov/enepap/home/main. Please contact FHWA's Office of Project Development and Environmental Review to register.

Endangered Species Act (ESA) Webtool

The ESA Webtool is an online FHWA tool for State DOTs, FHWA, and Federal Service agencies (USFWS and NMFS) to streamline preparation of BAs and the consultation process under Section 7 of the ESA for projects where FHWA is the lead Federal action agency. The tool is intended to:

- Help BA preparers adequately prepare BAs for consultation with Federal Services agencies.
- Expedite internal assurance reviews.
- Increase consistency from project to project and region to region.
- Reduce project delays from incomplete BAs and requests for additional information.
- Streamline decisionmaking review and transaction times, increase quality of documentation and submitted materials, and promote accountability and transparency through tracking and reporting.

Along with file-sharing capabilities, the tool contains many resources designed to clarify the BA development and review process, including: a library, glossary, and FAQ resources; a downloadable National Biological Assessment Template with context-sensitive instructions; region-specific contacts and resources; and online file cabinets for BA documentation and collaboration. See Figure 8.

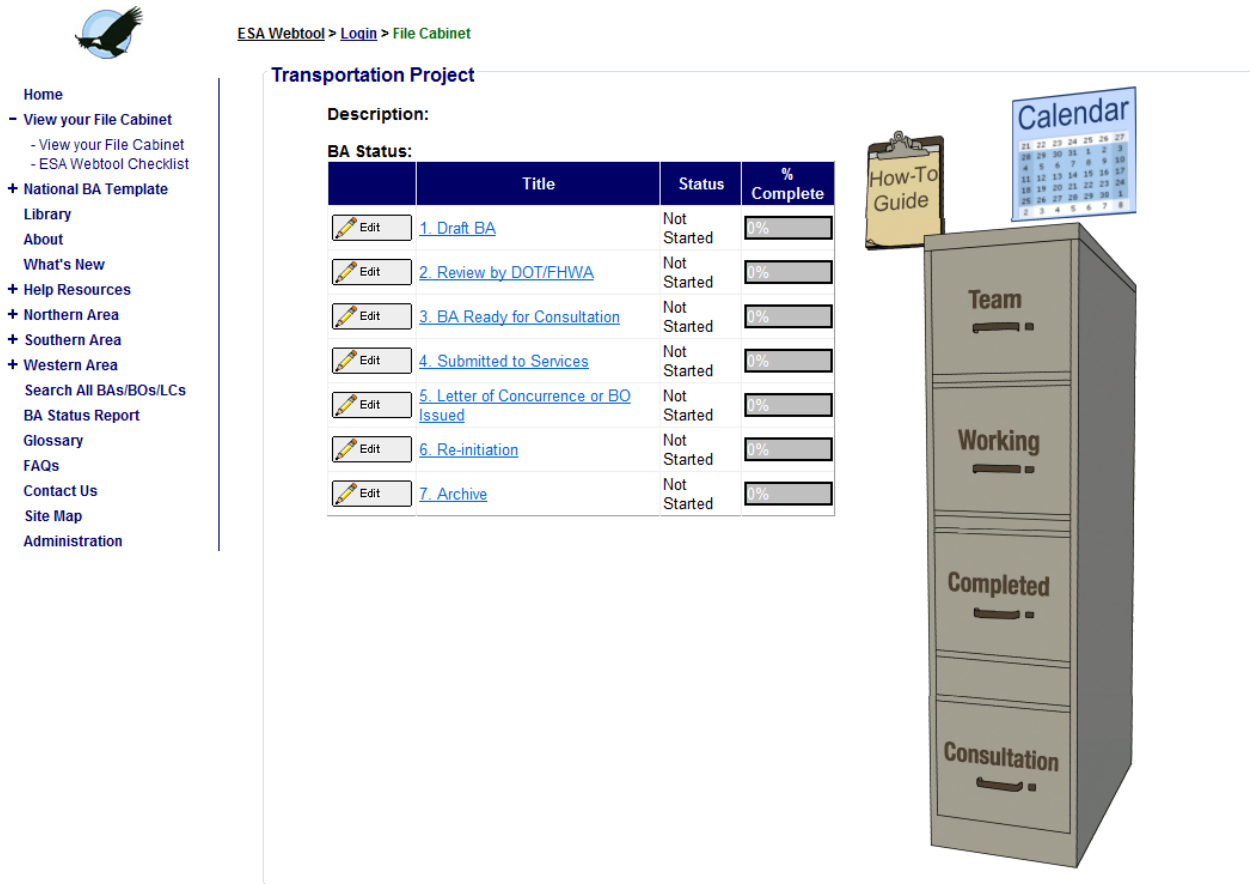


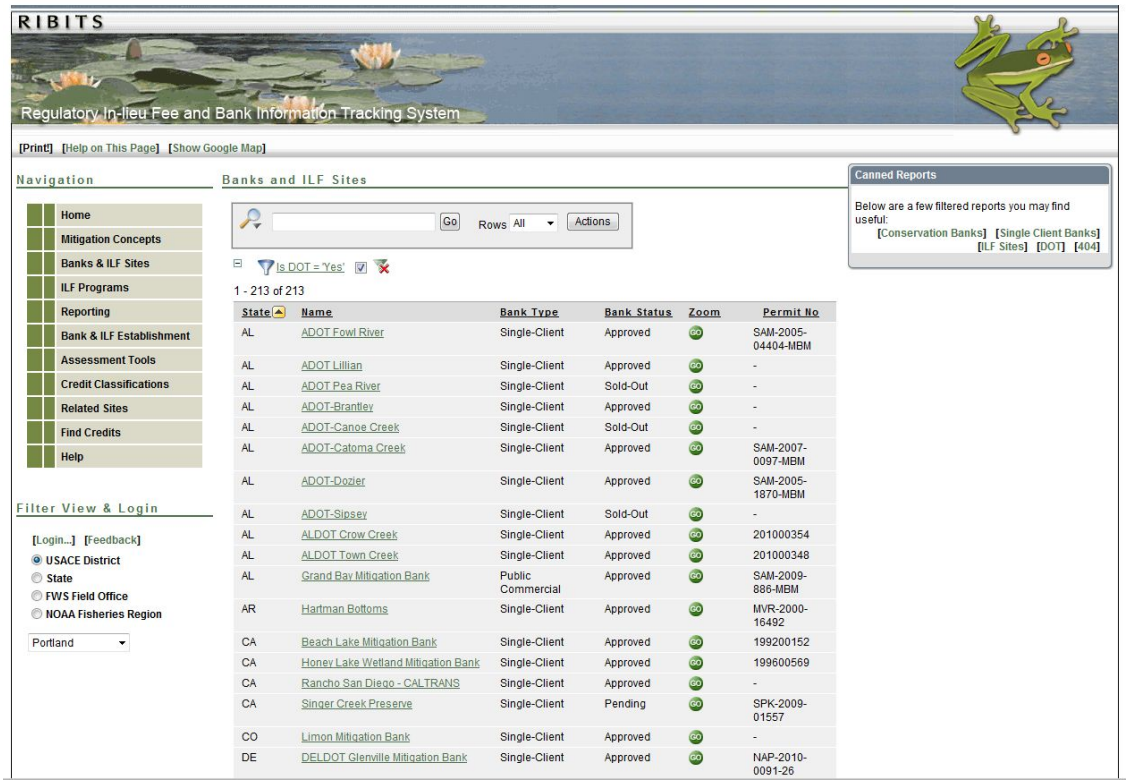
Figure 8: Screenshot of FHWA's ESA Webtool

The tool is available to registered users at http://www.environment.fhwa.dot.gov/ESAWebTool/Default.aspx.

Regulatory In-Lieu Fee and Bank Information Tracking System (RIBITS)

The Regulatory In-Lieu Fee and Bank Information Tracking System (RIBITS) is a Web-based application that was developed by USACE with support from the EPA and the USFWS to provide better information on wetland and stream mitigation banks and in-lieu fee (ILF) programs across the country to users including regulators, mitigation bank sponsors, Federal, State, and local agencies, and the general public. RIBITS users can access information on the types, locations, and numbers of banks and ILF project sites, related documents (monitoring reports, bank agreements, etc.), areas served, bank sponsor contact information, credit availability, and information on national and district policies and procedures that affect mitigation bank development and operation.

USFWS and NMFS may use RIBITS to track conservation banking activities (compensatory mitigation for impacts to protected and at-risk species). With support from FHWA, a suite of reporting tools was developed to allow users to filter, extract, and export credit ledger and geospatial data from RIBITS. Queries range from simple 'canned' reports to the ability to build custom queries for a region, State, district, or nationwide. Users can search for all applicable banks or ILF projects that have appropriate credits available for a given project location. Geospatial data, including bank locations, limits, and service areas, can be exported for use in other programs. RIBITS has become the "go-to" tool for information on mitigation bank and ILF programs. In this capacity, RIBITS is a helpful resource in exploring options for a compensatory mitigation plan earlier in the project development process, thereby supporting development and review of mitigation proposals concurrent with the NEPA review process. See Figure 9.



State	Name	Bank Type	Bank Status	Zoom	Permit No
AL	ADOT Fowl River	Single-Client	Approved	GO	SAM-2005-04404-MBM
AL	ADOT Lillian	Single-Client	Approved	GO	-
AL	ADOT Pea River	Single-Client	Sold-Out	GO	-
AL	ADOT-Brantley	Single-Client	Approved	GO	-
AL	ADOT-Canoe Creek	Single-Client	Sold-Out	GO	-
AL	ADOT-Catoma Creek	Single-Client	Approved	GO	SAM-2007-0097-MBM
AL	ADOT-Dozier	Single-Client	Approved	GO	SAM-2005-1870-MBM
AL	ADOT-Sipsey	Single-Client	Sold-Out	GO	-
AL	ALDOT Crow Creek	Single-Client	Approved	GO	201000354
AL	ALDOT Town Creek	Single-Client	Approved	GO	201000348
AL	Grand Bay Mitigation Bank	Public Commercial	Approved	GO	SAM-2009-886-MBM
AR	Hartman Bottoms	Single-Client	Approved	GO	MVR-2000-16492
CA	Beach Lake Mitigation Bank	Single-Client	Approved	GO	199200152
CA	Honey Lake Wetland Mitigation Bank	Single-Client	Approved	GO	199600569
CA	Rancho San Diego - CALTRANS	Single-Client	Approved	GO	-
CA	Singer Creek Preserve	Single-Client	Pending	GO	SPK-2009-01557
CO	Limon Mitigation Bank	Single-Client	Approved	GO	-
DE	DELDOT Glenville Mitigation Bank	Single-Client	Approved	GO	NAP-2010-0091-26

Figure 9: Screenshot of USACE's Regulatory In-lieu fee and Bank Information Tracking System (RIBITS).

The tool is available for use at http://ribits.usace.army.mil/.

Geospatial Tools

Information for Planning and Conservation (IPaC) Decision Support System

The USFWS is developing a Web-based IPaC decision support system that can be used to screen projects that will not affect species of concern, complete effects analyses, expedite environmental review and approval processes, and aid in coordinating conservation efforts across the landscape. Project proponents can now go online, specify a project location and type, and receive information regarding potential natural resources (including protected species, designated critical habitat areas, and national wildlife refuges) that may be affected by proposed activities (almost all Field Offices have activated this functionality; in the few areas of the country where species lists are not available online, IPaC directs the user to the appropriate field office). In addition, project proponents can also obtain conservation measures that can be incorporated into their project designs to address anticipated impacts and identify appropriate agency contacts, though data is still being entered into IPaC by USFWS biologists. IPaC informs the user about what conservation measures are currently available for identified species. As future phases of Environmental Conservation Online Systems (ECOS)-IPaC system are developed, project proponents will have the ability to construct and submit documents needed to complete Section 7 consultation and NEPA review processes, and apply for permits. Eventually, a reporting module will be used to collect information on the results of actions that were reviewed and approved or permitted. The USFWS also plans to link the ECOS-IPaC system to the 10(a)(1)(A) (Recovery Permits) permitting process to allow research results to be geographically linked to the landscape, thus increasing the ability to utilize this information when making management decisions and recommendations. Finally, the plan is to integrate all USFWS trust resources into ECOS-IPaC to provide the same or similar services and to better coordinate the USFWS's, State's, and its partners' conservation efforts. See Figure 10.

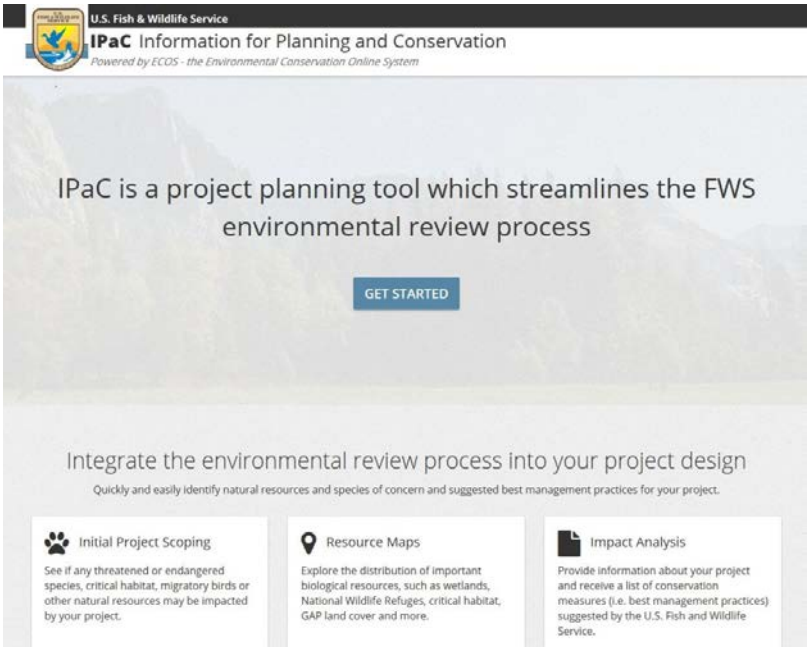


Figure 10: Screenshot of USFWS's Information for Planning and Conservation (IPaC) System.

The tool is available to the public at http://ecos.fws.gov/ipac/.

NEPAssist

NEPAssist is a geospatial, Web-based tool developed by EPA that facilitates the environmental review process and project planning in relation to environmental considerations. The application draws environmental data dynamically from EPA Geographic Information System databases and Web services and provides immediate screening of environmental assessment indicators for a user-defined area of interest. These features contribute to a streamlined review process that potentially raises important environmental issues at the earliest stages of project development. See Figure 11 for a screenshot of the Web tool.

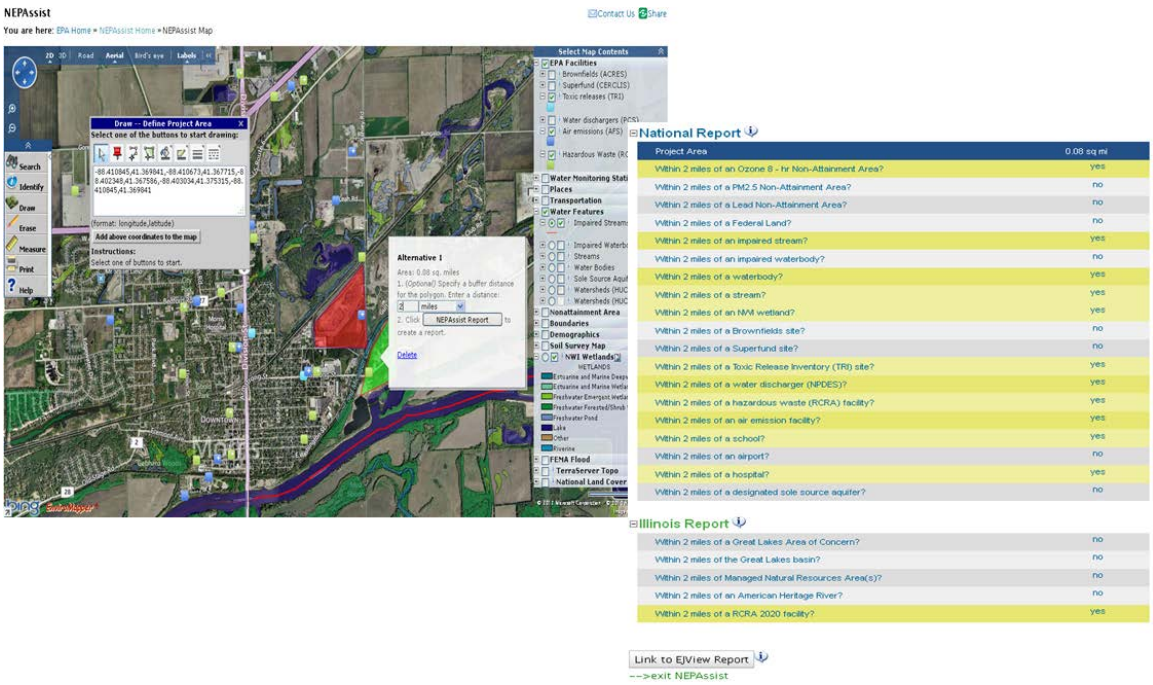


Figure 11: Screenshot of EPA's NEPAssist Web tool.

The tool is available for use at http://nepassisttool.epa.gov/nepassist/entry.aspx/.

EFH Mapper

This interactive, online mapping application provides the public and other resource managers an interactive platform for viewing a spatial representation of EFH, or those habitats that NMFS and the regional fishery management councils have identified and described as necessary to fish for spawning, breeding, feeding or growth to maturity.

Information available for viewing in the EFH Mapper includes EFH, habitat areas of particular concern (HAPCs), and EFH areas protected from fishing, where NMFS and the regional fishery management councils have used the EFH provisions established in Section 303 (a)(7) of the MSA to prevent, mitigate, or minimize adverse effects from fishing on EFH. Figure 12 shows a screenshot of this mapping tool.

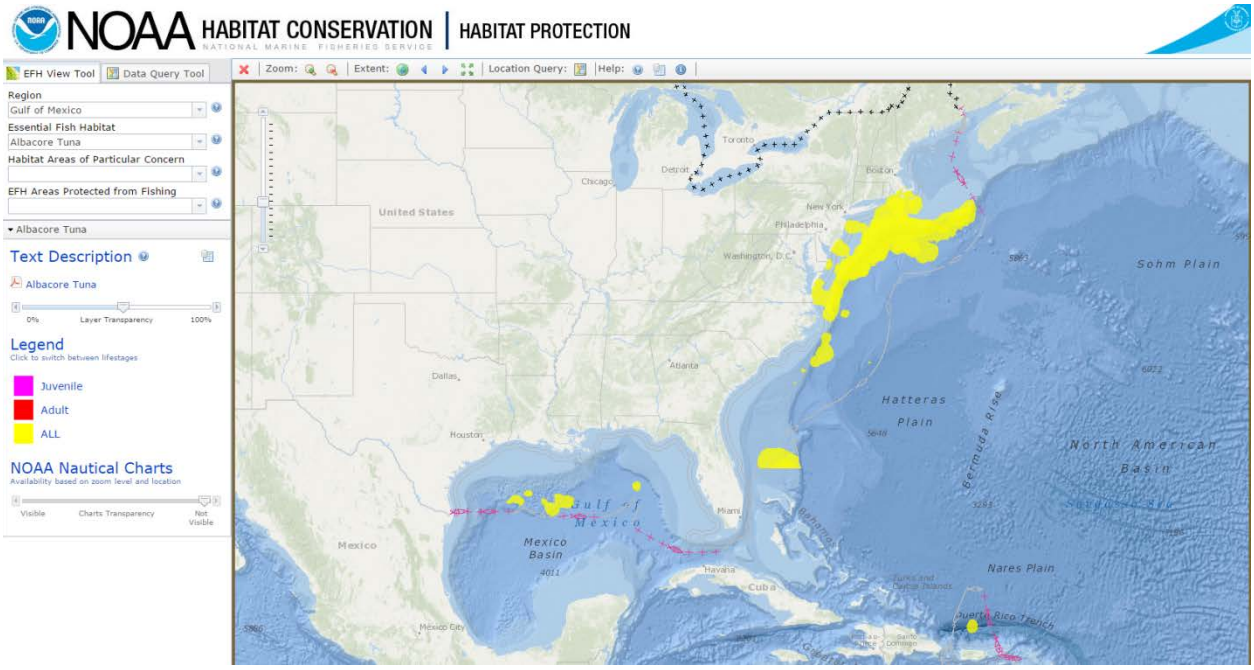


Figure 12: Screenshot of NOAA's EFH Mapper.

This tool is available for use at: http://www.habitat.noaa.gov/protection/efh/efhmapper/index.html.

Technology in Action

Many of these tools have the potential to streamline both transportation project planning and development. When geospatial and coordination tools are combined or made to work with each other, this potential is exponentially increased.

An example is the Florida DOT's Efficient Transportation Decision Making (ETDM) process, one of the most highly regarded tools developed by a State transportation agency. The ETDM process is Florida's procedure for reviewing qualifying transportation projects to consider potential environmental effects in the planning phase. It provides stakeholders the opportunity for early input, involvement, and coordination, and provides for the early identification of potential project effects and informs the development of scopes for projects advancing to the project development and environment phase.

Stakeholders involved in the ETDM process generally include MPOs/transportation planning organizations (TPOs), county and municipal governments, Federal and State agencies, Native American Tribes, and the public. These organizations and the public have the opportunity to provide input to the FDOT regarding a project's potential effects on the natural, physical, cultural, and community resources throughout the planning phase of project delivery. These comments help to determine the feasibility of a proposed project; focus the issues to be addressed during project development; allow for early identification of potential avoidance, minimization, and mitigation opportunities; and create products that may be used to promote efficiency and consistency during project development.

Coordination with agencies and stakeholders during the ETDM is facilitated through the Environmental Screening Tool (EST), an Internet-accessible, interactive database and mapping application. EST brings together resource and project data from multiple sources into one consistent format. It provides quick, standardized geospatial analyses, identifying potential natural, physical, cultural, and community resources present in the project area. EST also allows agencies the opportunity to provide input on proposed projects. While ETDM is focused on project planning and the earliest phases of project development, the basic concept of capturing agency and public comments on a variety of alternatives could be replicated for a synchronized NEPA review. See Figure 13.

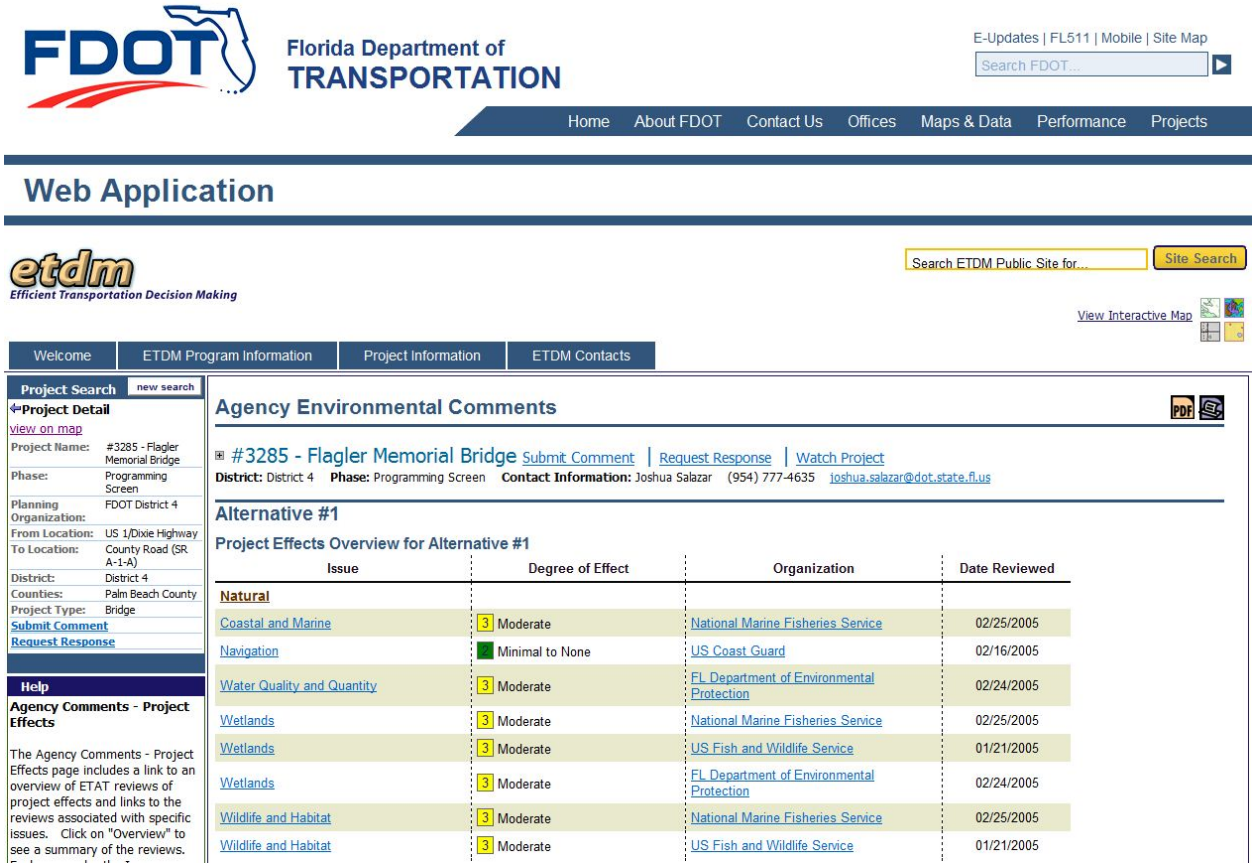


Figure 13: Screenshot of Florida DOT's ETDM tool.

ETDM can be viewed by the public at: https://etdmpub.fla-etat.org/est/.

Chapter 5 – Mitigation

CEQ NEPA regulations (40 CFR 1508.20) describe mitigation as avoiding, minimizing, rectifying, reducing, eliminating, or compensating for impacts to the environment. With this overarching definition, mitigation can take many forms, including revisions to project design or location, to avoid, minimize, rectify or compensate for a given remaining unavoidable adverse impact. Other environmental statutes such as CWA and ESA build on the concept of NEPA mitigation and may require more specific actions to address mitigation of specific resources.

Section 404 of the CWA requires project proponents to sequentially first avoid, and then minimize impacts to the maximum extent practicable, prior to consideration of compensatory mitigation. This critical mitigation sequence is required to comply with the Section 404(b)(1) guidelines. This sequence voids the notion that one can simply compensate to offset adverse impacts without carrying out avoidance or minimization. This principle should be carried forward when considering the various methods of compensatory mitigation discussed in this chapter. More specifically, conducting successful compensatory mitigation upfront does not relieve any applicant from the need to first avoid and minimize impacts to aquatic resources (i.e., compensatory mitigation alone cannot be used to advance an alternative). USACE regulations, described in this chapter, discuss five methods for carrying out compensatory mitigation:[14]

1. Re-establishment of a previously existing wetland or other aquatic site.
2. Rehabilitation of a previously existing wetland or other aquatic site.
3. Enhancement of an existing aquatic site's functions.
4. Establishment (creation) of a new aquatic site.
5. Preservation of an existing aquatic site.

Re-establishment and rehabilitation are typically referred to collectively as restoration, which is the term that will be used in the remainder of this handbook.

Lessons learned from years of implementation of multiple guidance memoranda on compensatory mitigation and reviews of scientific literature culminated in the development of the 2008 joint USACE and EPA final rule on compensatory mitigation for losses of aquatic resources (33 CFR 332 and 40 CFR 230), known as the 2008 Mitigation Rule. The 2008 Mitigation Rule creates a flexible regulatory framework, but reinforces the mitigation sequence of requiring avoidance and minimization first. This framework is intended to result in compensatory mitigation projects providing greater ecological benefits with a higher likelihood of success. In particular, the Rule requires USACE to consider what would be environmentally preferable, by assessing the likelihood for ecological success and sustainability.[15] At the same time, applicants can achieve greater direction and clarity on developing a compensatory mitigation proposal. This goal is embodied by the Rule's mitigation hierarchy. When compensating for losses of aquatic resources, it creates a preference for the use of mitigation banks, followed by ILF programs, and then permittee-responsible mitigation to reduce risk in compensatory mitigation projects and improve the likelihood of ecological success. The preference was based on information gathered during the

[14] 73 F.R. p. 19594.
[15] 33 C.F.R. Part 332.3(a)(1).

development of the Rule.[16] If appropriate, all of these mechanisms should incorporate a watershed approach. The watershed approach provides targeted ecological benefits in a relevant geographic area and for the types of resources of greatest concern in a particular watershed.

This chapter focuses primarily on concepts from USACE and EPA's 2008 Mitigation Rule. Such concepts explore the flexibility of the rule in developing compensatory mitigation proposals that can be employed by transportation agencies seeking more efficient review of upcoming projects. These concepts can require advanced planning or development by a transportation agency, which may occur early during NEPA or even during transportation planning. Identifying available compensatory mitigation options early in the review process can reduce later guesswork and subsequent delays from seeking appropriate mitigation once avoidance and minimization have occurred, but does not relieve the transportation agency from avoiding and minimizing impacts with those later projects. Early identification allows for the regulatory review process to occur simultaneously with NEPA and proceed more efficiently. Many of these concepts are also consistent with mitigating impacts to threatened and endangered species under the ESA; nevertheless, some features of the 2008 Mitigation Rule and ESA mitigation are different and such differences may not be fully accounted for in this document, even when including the elaborating points below. At the time of publication of this document, the USFWS is currently revising its 1981 Mitigation Policy (46 FR 7656 (1981-01-23)) to incorporate all USFWS trust resources and authorities, foster contemporary mitigation practices and establish a framework for delivering mitigation on a landscape scale. The term "landscape" here is not intended to exclude areas described in terms of aquatic conditions, such as watersheds, which may represent the appropriate landscape-scale. Use of a landscape approach, like the watershed approach, is intended to provide more effective mitigation and facilitate advanced identification of mitigation measures across a broad area. This chapter will additionally elaborate on potential points of alignment for mitigating impacts under the CWA and the ESA, as well as other statutes, when appropriate.

The Watershed Approach

Aquatic resources and the areas that drain to aquatic resources do not stop at city, county, or State boundaries. Accordingly, impacts to aquatic resources and the actions required to mitigate them, are not necessarily limited by such geopolitical boundaries. Changes in land use and cover, including transportation and urban development, as well as agriculture, ranching, and mineral extraction within a given watershed can have a material effect on the function of a nearby tributary and the downstream water body. Accordingly, selecting a mitigation site based on watershed characteristics instead of prescribing to geopolitical boundaries or proximity to the impact site can result in more ecologically successful mitigation. A keystone principle of the 2008 Mitigation Rule is to promote the use of a watershed approach to mitigation by strategic selection of resources and areas that can have the greatest material effect on improving the quality and function of the watershed as a whole.

[16] 33 C.F.R. Part 332.3(b).

Employing a watershed approach does not need to be complicated. A transportation agency along with resource or regulatory agencies can:

- Define the relevant geographic scope of the watershed [such as by Hydrologic Unit Code (HUC) map layers, topographic maps, or other watershed boundary maps].
- Apply general considerations outlined in 33 C.F.R. Section 332.3(c)(2)(i), such as current trends in development and sources of watershed impairments.
- Target those areas or actions which have the greatest material effect on improving the quality and function of the watershed as a whole.

By targeting these areas and resources instead of automatically showing a preference for on-site mitigation (as close to the impact as possible), a transportation agency can use a watershed approach at the most basic level. For example, if a water body with excessive nutrients has dairies and cattle grazing as a primary land use within its watershed, a watershed approach to mitigation may focus on restoration of freshwater marsh areas. Alternatively, it could focus on the restoration of riparian areas next to streams that previously buffered those streams from agricultural practices, even if the transportation project impacted emergent wetlands that were not adjacent to agricultural areas.

Simple application of a watershed approach is effective when a watershed plan has not been established and is an appropriate complement to ad-hoc synchronization of reviews. For example, if the area in question does not frequently see large-scale transportation projects, the upfront effort and cost to establish a formal synchronization agreement or watershed plan may not be justified for the transportation agency. By looking analytically at the affected watershed(s) as part of early coordination done in a synchronized review, a transportation agency will have sufficient time and opportunity to develop a compensatory mitigation proposal consistent with regulatory requirements. This could occur as the concurrent NEPA and regulatory review process advances, rather than having to pause at the end of the review process while trying to develop a compensatory mitigation proposal. The result is a more efficient environmental review process that also provides more effective compensatory mitigation for remaining unavoidable impacts.

As described above, a formal watershed plan is not required for a watershed approach. However, a watershed plan that appropriately considers compensatory mitigation for losses of aquatic resources can be useful in more rapidly identifying stressors and mitigation priorities and needs. If such a watershed plan or other similar landscape-scale planning effort that adequately considers aquatic resources and their functions has already been developed for a specific area, transportation agencies are encouraged to use it to the extent practicable to employ a watershed approach to compensatory mitigation. For example, the transportation agency could use recommendations and maps within a watershed plan to identify priority areas and resource types, and then identify priorities for avoidance, minimization, and compensatory mitigation activities.

Establishing a watershed plan can be a resource intensive effort, but can produce great efficiencies. Plans can provide a transportation agency with information on the more sensitive aquatic resources to be avoided and activities that may cause greater stress on a watershed, as well as suggesting resources and activities that can better mitigate those stressors. MAP-21 further supports the development of programmatic mitigation plans as part of the statewide or metropolitan planning process under 23 U.S.C. Section 169. These programmatic mitigation plans can include or take the form of a watershed plan. To

take advantage of the efficiencies gained through a watershed plan, transportation agencies could develop multiple purpose watershed plans that cover aquatic resources, water quality, habitats for protected, candidate listed and sensitive species, or other natural resources of concern. Due to the upfront effort required, development of a watershed plan to support a transportation agency's mitigation program would likely be more beneficial in situations where a larger amount of transportation development is expected to occur within a specific watershed or adjoining watersheds. These situations require a sufficient quantity of aquatic resources (and other natural resources for multiple purpose watershed plans) with a nexus to a regulatory framework for which the transportation agency would anticipate needing compensatory mitigation for in the coming years. When developing a watershed plan, collaborating with other agencies that may have regulatory interests or expertise in the plan is crucial. Therefore, the transportation agency should first contact other Federal, State, local, and/or Tribal agencies that may have regulatory interest or expertise with the concerned resources within the prospective watershed. Through collaboration with the appropriate agencies at the appropriate levels of government, the type of resources and scope of the watershed plan can be developed as well as a work plan for completion.

The **Eco-Logical approach** is a tool that helps infrastructure and resource agencies collaborate early in the transportation planning process to integrate natural resource and infrastructure data at an ecosystem-scale to identify critical ecological resources and establish joint environmental priorities.

The Integrated Ecological Framework (IEF) lays out a flexible, nine-step process that can guide infrastructure and resources agencies through visioning, data integration, priority-setting, agreements, and project implementation. As part of the IEF, agencies develop a watershed plan (also referred to as a Regional Ecosystem Framework, or REF). The development and application of the REF, or watershed plan, is a critical part of FHWA's Eco-Logical approach to transportation project development.

Transportation agencies, in implementing an Eco-Logical approach (https://www.environment.fhwa.dot.gov/ecological/ImplementingEcoLogicalApproach/default.asp) (see text box), may choose to develop information under a watershed-based Regional Ecosystem Framework (https://www.environment.fhwa.dot.gov/ecological/ImplementingEcoLogicalApproach/Step3.asp), or REF (e.g., regional, ecosystem, watershed, or statewide scale). The REF contains infrastructure data overlaid on resource data that helps agencies visualize mitigation opportunities and needs across the watershed. The process of developing the REF allows agencies to articulate their own goals and constraints, and agencies can use the REF to set joint priorities at an ecosystem scale. The Eco-Logical approach and the application of the REF specifically, support a watershed approach to project development and compensatory mitigation.

Another concrete example of using a watershed approach is the development of SAMPs. The specifics on SAMPs are covered in Chapter 2 of this handbook. Developing a SAMP for a specific watershed can function as a watershed plan, helping a transportation agency avoid the most sensitive resources in a watershed. A SAMP can also help mitigate in those areas that will be more effective at addressing watershed stressors or protecting natural resources important to the watershed. The abbreviated permit

procedures with USACE associated with a SAMP can also help provide for a more efficient review and authorization of transportation projects consistent with this type of a watershed approach.

Consideration of a watershed approach may be employed with any of the venues of mitigation: mitigation banks, conservation banks, ILF programs, or permittee-responsible mitigation. It is recommended that it be used to the extent appropriate and practicable. For more information on applying the watershed approach to mitigation, including any watershed plans or SAMPs in your area, contact the mitigation subject matter expert within the regulatory office of your local USACE district.

Maryland's Watershed Resources Registry (WRR)

A premier example of the use of the watershed approach to mitigation by a transportation agency is Maryland's Watershed Resources Registry (WRR). Since June 2012, the Maryland State Highway Administration (MD SHA) has been using the WRR to find and evaluate mitigation opportunities in the State. The WRR tool was created through a partnership between EPA Region 3, USACE's Baltimore District, MD SHA, Maryland Department of Natural Resources, Maryland Department of the Environment, and several other agencies. Together these agencies created GIS-based spatial analyses to assist in prioritizing areas for mitigation or restoration. The analyses were based on desirable land qualities that were agreed upon by the participating agencies. In the spatial analyses, for example, wetland restoration opportunities must not already be a wetland and must not be forested. Additionally, they must have very poorly drained soils, somewhat poorly drained soils, or poorly drained soil, which suggest that they may be good candidates for successful wetland restoration efforts. Other factors that increase a given area's score could include being located near but not in a stream or wetland; near but not in an already protected area; or within a 303(d) impaired watershed. These analyses were then publicized on an interactive mapping Website that lets MD SHA and others visualize the most preferable areas for mitigation in a given watershed. MD SHA, or user of the Website, can search for mitigation areas within a specific watershed or county, areas that received a given score or higher, and areas that were larger than a given acreage, or some combination of these factors. The mitigation opportunities found by the WRR are not guaranteed to qualify as a mitigation site; however, by using it, MD SHA is able to find compensatory mitigation candidates much more quickly and earlier in the design process than it was able to in the past.

The result is an easy-to-use tool that helps MD SHA find a compensatory mitigation site and activity that is more likely to satisfy regulatory requirements, thus saving time and effort during the review process. A close-up view of mitigation opportunities appears in Figure 14, with the deeper orange indicating a higher score.

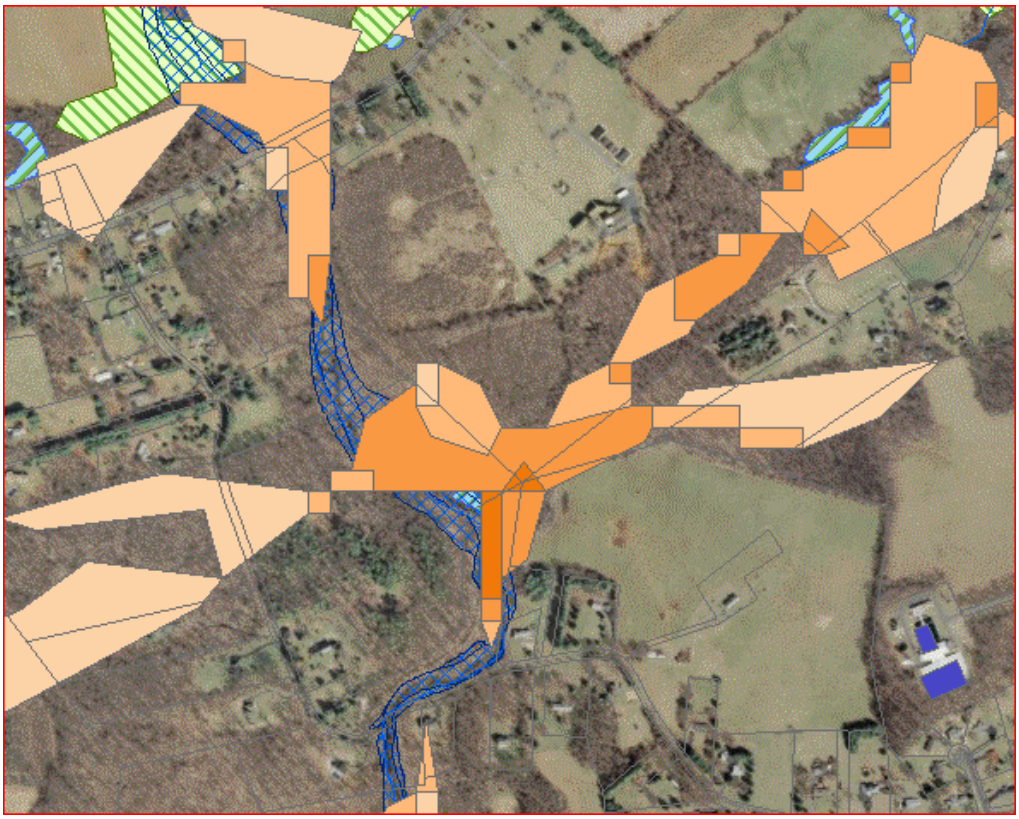


Figure 14: Screenshot of priority areas as scored by Maryland's Watershed Resources Registry (WRR).

Use of the WRR is now a standard business practice and works as a complement to Maryland's Streamlined Environmental and Regulatory Process, the State's version of a synchronization agreement. As part of the synchronization agreement, MD SHA seeks interagency review of conceptual mitigation after selecting the preferred alternative. This occurs during preparation of a FEIS. By coupling the capabilities of the WRR with the synchronized review process, MD SHA is able to efficiently advance a project through NEPA and the Section 404 review while better addressing the regulatory principle of mitigating with a watershed approach.

The WRR is now in use statewide and can be accessed by the public at http://watershedresourcesregistry.com/home.html.

USFWS Mitigation Policy

The USFWS is currently revising its 1981 Service Mitigation Policy (46 FR 7656 (1981-01-23)). There are two principle reasons for the revision: to incorporate all existing USFWS authorities and trust responsibilities under one mitigation policy, including USFWS responsibilities under the ESA, and to align USFWS-recommended mitigation for impacts to fish and wildlife resources with landscape-scale conservation strategies. This is an umbrella policy for all USFWS mitigation activities and seeks to establish a framework for field staff to use when crafting mitigation measures in a broader ecological context. The policy will continue to recognize the importance of avoiding, minimizing, rectifying, reducing, and eliminating adverse effects to resources, in that order, before compensating for their loss. As such, CEQ mitigation elements remain the desirable sequence of steps in the mitigation planning

process. The policy also encourages advanced mitigation planning and the establishment of aggregated mitigation areas on the landscape – avoiding a piecemeal approach to offsetting impacts.

Banking and In-Lieu Fee (ILF) Programs

Use of mitigation banks, conservation banks, and ILF programs are now widely accepted as appropriate and desirable ways to mitigate for remaining unavoidable losses to certain resources. The 2008 Mitigation Rule establishes a preference for aquatic resource compensatory mitigation requirements to be met through the purchase of bank credits, or if bank credits are not available, though the purchase of credits from an ILF program. Mitigation banks tend to be larger, more contiguous areas of restored and protected resources managed by a third party, who is typically a mitigation banker, in advance of permitted impacts. Another form of banking has also been developed for impacts to species under ESA. Conservation banks are typically permanently protected lands that contain natural resource values, which are conserved and permanently managed for listed species or candidates for listing, or are otherwise species-at-risk. Conservation banks function to offset adverse impacts to these species that occurred elsewhere, sometimes referred to as off-site mitigation. In the conservation banking context, bankers commit to permanently protecting the land and managing it to benefit these species. With USFWS or NMFS agreement, these habitat protections and improvement can be quantified as habitat credits and sold to action agencies and project proponents to offset impacts to these species. Mitigation banks also produce credits, which represent the restoration, enhancement, establishment, or preservation of aquatic resources. If appropriate to the underlying projects and its impacts, these credits can be sold or transferred to transportation agencies or other permittees to fulfill the aquatic resource compensatory mitigation requirements of their permits or to compensate for the remaining unavoidable impacts to species that a proposed project may have. This purchase of credits can save transportation agencies time and money. 23 U.S.C. 119(g)(4) allows for a preference towards third party mitigation , which states, "At the discretion of the project sponsor, preference shall be given, to the maximum extent practicable, to mitigating an environmental impact through the use of a mitigation bank ILF, or other third-party mitigation arrangement, if the use of credits from the mitigation bank or ILF, or the other third-party mitigation arrangement for the project, is approved by the applicable Federal agency."

As with any type of mitigation, conservation banking is not a substitute for avoiding and minimizing effect on protected species on-site. The purpose of conservation banking is to provide compensatory mitigation in a manner that is more ecologically effective than small on-site preserves. In 2003, Federal guidelines (http://www.fws.gov/endangered/landowners/conservation-banking.html) were developed to promote conservation banks as a tool for mitigating adverse impacts to species and foster national consistency by standardizing the establishment and operational criteria for conservation banks. These guidelines are currently being revised by the USFWS.

The USFWS has approved over 125 conservation banks in 11 States; NMFS has approved 7 conservation banks in 2 States. Transportation agencies can use USACE's RIBITS (https://ribits.usace.army.mil/ribits_apex/f?p=107:2) tool to see a current listing of mitigation banks, conservation banks, and ILF programs, including credit ledgers. FHWA, USFWS, and NMFS all use RIBITS so that tracking is consistent across agencies.

Prior to a mitigation bank or ILF program being available to offset remaining unavoidable impacts to aquatic resources, the bank or ILF sponsor goes through the Interagency Review Team (IRT) process.

The IRT process is described in the regulations in detail at 33 CFR 332.8(d). To initiate the IRT process, an entity seeking to establish a bank or ILF program (the sponsor) would need to develop and submit a prospectus to the local USACE district. The prospectus is a summary of information on the bank or ILF program including the objectives for the bank or ILF program, the proposed service area, a long-term management strategy, and related information. USACE, as the chair of the IRT, shares the submitted information with IRT members. After a complete prospectus is received, there is a public review and comment period that mimics USACE's public notice procedures for IP reviews. If the mitigation bank or ILF program requires a permit from USACE, that permit review can occur concurrently with review of the prospectus with the public notice as a point of alignment. Upon completion of the public comment period, USACE evaluates the prospectus on its merits. At this point, USACE either advises the sponsor to proceed with development of a draft instrument, or to revise the prospectus. A draft instrument goes into greater detail on the proposed bank or ILF program, including specifics on the service area, accounting procedures, reporting protocols, default and closure provisions, and mitigation work plans and credit release schedules for mitigation banks. The IRT then reviews the draft instrument and continues to work with the sponsor on resolving any concerns with the instrument until a final instrument is prepared. USACE makes the decision on whether to approve the final instrument.

Upon approval of a final instrument, the document can be signed and the bank or ILF program established. A transportation agency then needs to purchase "credits" from the approved mitigation bank or ILF program. For CWA credits, the banker or ILF program sponsor maintains full liability (severance of liability for the transportation agency) to ensure that the mitigation work is completed successfully. These mitigation banks and ILF programs may sell credits to a variety of entities including transportation agencies, project developers, and the general public.

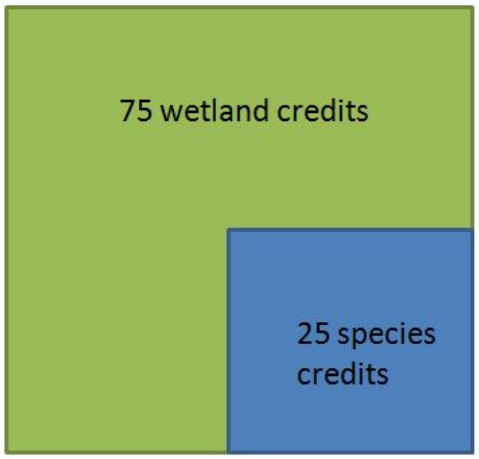
Some transportation agencies find that their need for aquatic resource credits is sufficient enough that establishing a mitigation bank solely for their use is justified. Some upfront work is required in establishing this type of single-user bank. It includes taking an in-depth look at near-future projects and the short- to long-range forecast of the transportation agency's need for compensatory mitigation to target an appropriate area and type of resource that will be more likely to be usable for future project mitigation needs. These details can often be found in the Statewide Transportation Improvement Program (STIP) or Transportation Improvement Program (TIP) documents. A single-user bank would go through the same IRT review process as other mitigation banks, except the transportation agency would be considered the sponsor. However, once a single-user bank is established for a transportation agency, the 2008 Mitigation Rule denotes a preference for this type of compensatory mitigation.[17] This rule gives the transportation agency an available (and preferable) source of compensatory mitigation to keep the regulatory review process moving, once avoidance and minimization have been completed, and supports better review synchronization. Costs to the transportation agency may be lower in certain circumstances to have one larger area of acquisition and mitigation work with the establishment of the bank, instead of seeking multiple smaller compensatory mitigation parcels or multiple purchases of commercial credits.

Transportation agencies, mainly State highway agencies that have extensive experience with mitigation banks, are finding that having an umbrella mitigation banking instrument is another useful tool. With an umbrella mitigation banking instrument, the transportation agency can obtain approval for multiple bank

[17] 33 C.F.R. Part 332.3(b)(2).

sites via the IRT review process with one banking instrument instead of needing a separate approved instrument for each bank site. However, the addition of a new site to an umbrella mitigation banking instrument would still require a public notice and the full IRT review and decision [33 CFR 332.8(h)]. This is especially beneficial for those transportation agencies that would like to have a group of mitigation banks to cover the distant areas of concentrated development within a State. Several State DOTs have obtained umbrella mitigation banking instruments including Pennsylvania DOT, Georgia DOT, North Dakota DOT, and Missouri DOT. Having an umbrella mitigation banking instrument can help a transportation agency obtain multiple single-user banks online more efficiently. This supports more efficient reviews of upcoming projects that may require mitigation for remaining unavoidable impacts to aquatic resources.

In some areas where mitigation needs for species align with mitigation needs for aquatic resources, dual conservation and wetland mitigation banks can be established. In these banks, each credit may have a wetland component or attribute, a species component or attribute, or a combination of wetland and species components (see graphics below). This can be a very effective option, allowing a project proponent to obtain mitigation credit to fulfill two regulatory requirements (ESA and CWA) from one source. However, a critical consideration in these dual-purpose credits (i.e., credits that can satisfy mitigation requirements for both the ESA and CWA) is to not allow double counting of credits. Specifically, this means that a credit used to mitigate a unit of loss for CWA purposes for one project cannot be used to mitigate a unit of loss for ESA purposes for another project. Once established as a dual-purpose credit, sometimes referred to as a “stacked” credit, it cannot be divided into a separate CWA credit and ESA credit to be sold or transferred separately. Dual-purpose credits are established when the credits are released from a bank, and the credit must meet both CWA and ESA agency requirements for release prior to being available for use. See Figure 15 and Figure 16.



Dual wetland and conservation bank in which the wetland and species credits are located in different areas of the bank and are tracked in separate ledgers

Wetland Ledger	Transaction	Credits Remaining (75 to start)
Applicant A needs 5 wetland credits only	Debit of 5 wetland credits	70 wetland credits
Applicant B needs 5 wetland credits and 3 species credits	Debit of 5 wetland credits	65 wetland credits
Applicant C needs 5 wetland credits and 5 species credits	Debit of 5 wetland credits	60 wetland credits
Applicant D needs 5 species credits only	No transaction	60 wetland credits

Species Ledger	Transaction	Credits Remaining (25 to start)
Applicant A needs 5 wetland credits only	No transaction	25 species credits
Applicant B needs 5 wetland credits and 3 species credits	Debit of 3 species credits	22 species credits
Applicant C needs 5 wetland credits and 5 species credits	Debit of 5 species credits	17 species credits
Applicant D needs 5 species credits only	Debit of 5 species credits	12 species credits

Figure 15: Dual wetland and conservation bank with distinct credits and separate ledgers.

Bank Ledger	Transaction	Credits Remaining (100 to start)
Applicant A needs 5 wetland credits only	Debit of 5 dual credits	95 dual credits
Applicant B needs 5 wetland credits and 3 species credits	Debit of 5 dual credits, separate purchase of species credits not required	90 dual credits
Applicant C needs 5 wetland credits and 5 species credits	Debit of 5 dual credits, separate purchase of species credits not required	85 dual credits
Applicant D needs 5 species credits only	Debit of 5 dual credits	80 dual credits

Dual wetland and conservation bank in which 1 dual credit satisfies 1 wetland credit and 1 species credit. A single ledger is used and each credit can only be used once, whether the applicant needs a wetland credit, a species credit, or both.

Figure 16: Dual wetland and conservation bank with dual credits and a single ledger.

Similar to mitigation banks, ILF programs allow a project proponent to purchase credits from a third party. Unlike a mitigation bank in which there is a defined physical site at the time the mitigation bank is approved, an ILF program may have only identified a suite of potential mitigation sites. Restoration activities occur after sufficient credits are sold or transferred to permittees to generate the funding for executing potential mitigation projects. ILF programs are reviewed and approved under the same process

as mitigation banks, requiring IRT review and approval of an enabling instrument. An ILF program can also serve a single user, such as a transportation agency (see the North Carolina example, below). Development of or use of an ILF program may prove more beneficial for those situations where a transportation agency may be likely to impact a greater variety of resources in different locations. This diversity could make the investment to develop a mitigation bank in one location costly, since the likelihood would be low that the site could cover the variety of resources and have a large enough service area. An ILF program may be more likely to have several upcoming sites that target the variety of resource mitigation that the transportation agency is seeking. Alternatively, the transportation agency may develop an ILF program specifically to address this varied mitigation need.

North Carolina Department of Environment and Natural Resources (NCDENR) Mitigation Program

North Carolina has one of the Nation's premier ILF programs with its North Carolina Department of Environment and Natural Resources (NCDENR) Mitigation Program, also referred to as the Ecosystem Enhancement Program (EEP) or Division of Mitigation Services. This ILF program, run by NCDENR, provides mitigation for North Carolina DOT (NCDOT) projects, as well as for other permittees in advance of proposed impacts, assisting in more efficient reviews of transportation projects within the State. The program began in the late 1990s when NCDOT projects were experiencing delays in part because of remaining unavoidable impacts to aquatic resources and issues with communication and operation processes with the NCDENR managed wetland mitigation program. In 2001, more than 10 State and Federal agencies, including USACE's Wilmington District, collaborated to develop a solution that offered a systemic shift to provide mitigation well in advance of proposed impacts. This solution was embodied in an MOA establishing the NCDENR Mitigation Program as EEP in 2003. Subsequent to issuing the 2008 Mitigation Rule, USACE's Wilmington District worked with NCDENR and the IRT to establish an ILF instrument for the NCDENR Mitigation Program in 2010.

Four separate ILF programs fall under the NCDENR Mitigation Program to provide mitigation options for the general public in addition to NCDOT. One of these, the NCDOT Stream and Wetland In-Lieu Fee Program, is a stream and wetland program specifically created for NCDOT use. Another part of the NCDENR Mitigation Program provides stream and wetland mitigation for other types of projects, such as development projects. The ILF program instrument approved by the USACE's Wilmington District in 2010 covers both of these programs. Each year NCDOT provides the NCDENR Mitigation Program with an updated list of planned transportation projects scheduled for construction within the next seven years, including an estimate of wetland and stream mitigation needs. This information helps shape the NCDENR Mitigation Program's proposed work to meet these needs in advance of proposed impacts. NCDOT then pays the NCDENR Mitigation Program actual mitigation costs on a quarterly basis. Through the creation and use of the NCDENR Mitigation Program, NCDOT's NEPA/404 merger agreement has successfully removed compensatory stream and wetland mitigation as a challenge in the transportation project development process, while at the same time satisfying the tenets of the 2008 Mitigation Rule. As of November 2012, NCDOT indicated that none of their projects have been delayed because of lack of mitigation since 2003, helping to efficiently move forward nearly $14 billion in transportation projects. See Figure 17.

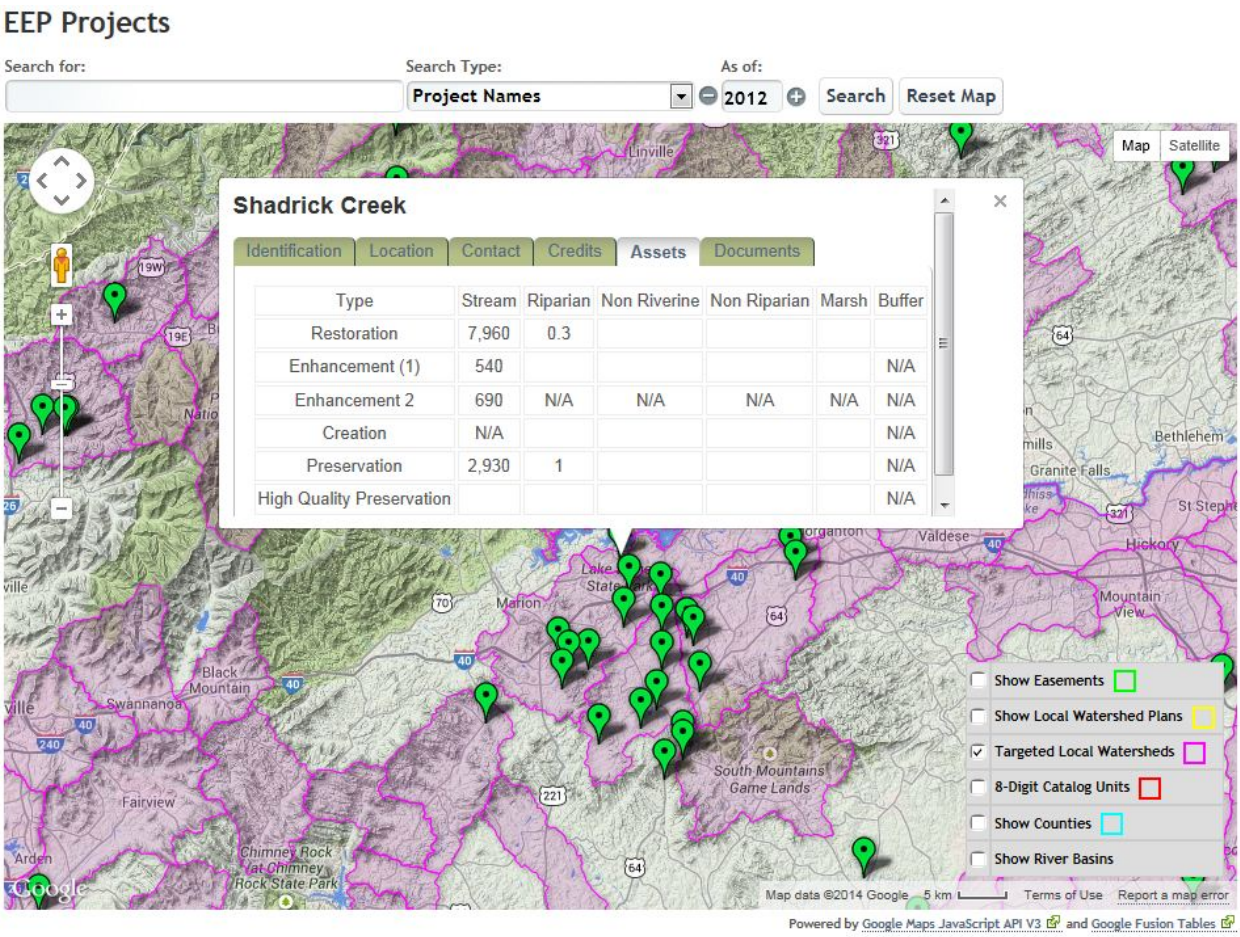


Figure 17: Map of sites and targeted watersheds within NCDENR Mitigation Program in western North Carolina.

Advanced Permittee-Responsible Mitigation

The benefits of most compensatory mitigation actions are generally not instantaneous, and in the case of wetland or stream restoration, can take several years to be realized. This time lag or temporal loss is typically considered during the evaluation of impacts and a corresponding compensatory mitigation proposal and can contribute to higher ratios or a higher quantity of credits required to adequately offset project impacts. In addition, compensatory mitigation has inherent risk as the functions of some resources are difficult to replicate, which reinforces the need to avoid and minimize prior to impacting resources. Similar to temporal losses, some functional assessments and mitigation protocols may require additional mitigation to compensate for the level of risk and the time lag. An innovative way to minimize or even eliminate temporal losses and risk by being able to demonstrate success of a compensatory mitigation project is by conducting the mitigation work in advance of a proposed transportation project. The 2008 Mitigation Rule reflects this in Part 332.3(m), where it states, "Implementation of the compensatory mitigation project shall be, to the maximum extent practicable, in advance of or concurrent with the activity causing the authorized impacts" (emphasis added). Similar to a mitigation bank, in which the restoration, enhancement, establishment, or preservation occurs well in advance of any impacts to aquatic resources through monitored releases of credits, advanced permittee-responsible mitigation can involve restoration, enhancement, establishment, or preservation of aquatic resources at a timeframe prior to

authorized impacts to aquatic resources. Such sequencing could include conducting the mitigation work while a permit review is ongoing, prior to applying for a permit, or even during the initial planning phase of a project. For advanced permittee-responsible mitigation, the future permit applicant retains full responsibility and liability for the mitigation work. Transportation agencies should coordinate with the applicable USDOT OA if they expect to use Federal funds to develop this type of advanced mitigation.

Permittees may ask how they can develop a compensatory mitigation proposal during or in advance of a permit application review and still meet the mitigation sequence of avoid, then minimize first. Advanced mitigation does not affect the mitigation sequence or the Section 404(b)(1) guidelines compliance. These evaluations will still occur, albeit potentially after the compensatory mitigation work is completed. Since projects still must comply with the Section 404(b)(1) guidelines and the mitigation sequence, projects may still not receive approval, even if there was already successful compensatory mitigation for the proposed impacts. Projects may also be required by the permitting authorities to avoid aquatic resources to the extent that compensatory mitigation is not required. Modifications to projects to comply with the Section 404(b)(1) guidelines may also result in a change in the type or quantity of compensatory mitigation needed. Transportation agencies need to understand these risks before pursuing advanced mitigation projects.

With all the risks that a transportation agency would assume with advanced mitigation, important benefits remain. Often transportation agencies wait until late in the environmental review process to explore mitigation options and find that ideal sites may not be available or come at too high a cost. The review may then be delayed to give the transportation agency an opportunity to find a compensatory mitigation site and develop a compensatory mitigation plan of sufficient detail to meet the requirements at 33 CFR 332.4. Having an established compensatory mitigation site that already demonstrates compliance with success criteria is a beneficial tool to keep the review process moving, by providing greater assurances that remaining unavoidable impacts to aquatic resources will be compensated for sufficiently. Some transportation agencies are also quickly recognizing the rising costs of providing sufficient compensatory mitigation for aquatic resources. Cost differences for even a small amount of compensatory mitigation for difficult to replace resources in areas of high land value can be substantial, far outweighing the risk of developing compensatory mitigation in advance of a project.

Ultimately, there are a multitude of reasons for a transportation agency to pursue advanced permittee-responsible mitigation, including: when there is greater certainty of the types of resources to be impacted; difficult to replace resources are likely to be impacted; land value for potential mitigation sites is rapidly escalating; preferential site availability is limited; and/or riskier mitigation work, such as wetland establishment, is proposed. For example, a transportation agency may look at a long-range transportation plan and see there is a high potential to impact coastal salt marsh within the proposed corridors. Because many coastal areas are already developed and undeveloped land comes at a higher cost, the transportation agency could pursue acquisition of potential mitigation sites now instead of several years later when property values are potentially higher and availability of sites becomes more limited. A prevalence of coastal salt marsh within the footprint of the likely corridors gives the transportation agency greater confidence that restoring, enhancing, creating, or preserving coastal salt marshes now correlates to a greater ability to use the “lift” generated to offset impacts when those corridors eventually develop into projects being evaluated through the NEPA and regulatory review processes.

Advanced permittee-responsible mitigation is not as simple as undertaking some compensatory mitigation work and then asking for credit for it later. To be handled appropriately, USACE should be engaged early in the development of the advanced permittee-responsible mitigation proposal. USACE will advise the transportation agency of any local district policy or limitations on advanced mitigation (such as limitations on the transfer or sale of excess credits to another entity). The transportation agency will also need to work with USACE and any other appropriate agencies, such as EPA, USFWS, and NMFS, should the advanced mitigation proposal seek to compensate for impacts to both protected species and aquatic resources. Another critical first step with advance permittee-responsible mitigation is to work with the local USACE district on establishing the baseline condition at the advanced mitigation site. The established baseline is where the improvements in functions are measured from to determine the quantity of functional "lift" and corresponding credits generated by an advanced mitigation site. Advanced permittee-responsible mitigation projects do not need to go through the IRT process; however, separate authorization from USACE may be required if the mitigation work results in jurisdictional impacts to waters of the U.S. Generally, the remaining review would be similar to the review of a compensatory mitigation proposal consistent with 33 CFR Parts 332.3 and 332.4. USACE districts have some discretion in the exact procedure and documentation used to approve an advanced permittee-responsible mitigation project. Transportation agencies should discuss any likely additional information needs for the review early with their local USACE district.

Ideally, documenting a baseline and physically conducting the mitigation work would occur during the transportation planning phase to allow the site to mature and demonstrate functionality. However, there is some flexibility on the timing of advanced mitigation when synchronizing reviews. When synchronizing NEPA and Section 404 reviews, review of a compensatory mitigation proposal can occur after a preferred alternative is chosen by the transportation agency. The transportation agency will need to have the mitigation proposal ready earlier during the NEPA process. If the advanced mitigation work requires substantial upfront time to demonstrate success or generate lift, execution of the advanced mitigation work may need to be placed earlier in the planning and project development schedule. Transportation agencies should consult with their local USACE district office to determine the appropriate time to initiate and execute an advanced mitigation proposal relative to a synchronized review.

Washington State Advanced Mitigation Guide

Recognizing both the ecological and economic benefits of pursuing advanced permittee-responsible mitigation, the USACE Seattle District and two Washington State agencies, the Department of Ecology and Department of Fish and Wildlife, worked together to develop an interagency regulatory guide (https://fortress.wa.gov/ecy/publications/publications/1206015.pdf) on advanced permittee-responsible mitigation. This guide, released in December 2012, also included significant input by the Washington State Department of Transportation (WSDOT), as WSDOT would likely have a large interest in pursuing advance mitigation for its road projects.

The guide outlines these agencies' policy on several important components of the use of advanced mitigation. Components include the pertinent Federal and State regulations, description of the risk the applicant would presume, essential and recommended information needed to pursue an advanced mitigation site, and practices for use of an established advanced mitigation site. Of note, the agencies require project proponents to establish a baseline, but recommend that a credit-generating schedule and proposed area for use be outlined upfront to avoid later negotiations on these issues. The agencies also

encourage project proponents to propose advanced mitigation sites using a watershed approach. Project proponents need to clearly demonstrate why the proposal would be ecologically preferable to a mitigation bank or ILF program should there already be existing banks and programs with available credits in the area. Lastly, the agencies prohibit the sale or transfer of any excess credits generated by an advanced mitigation site. For the purposes of this agreement, this is to clearly demarcate the difference between advanced permittee-responsible mitigation, responsibility for which is maintained by the permittee; from mitigation and banks or ILF programs, in which the liability and responsibility for mitigation is transferred to a third party.

To establish the guide, the interagency workgroup met every other month for two years. This was an intensive public effort that included local governments, Tribes, and WSDOT throughout the process. In addition, the draft guide was provided for comments to local governments, Tribes, consultants, a local group of wetland specialists, bankers, and ILF sponsors, as well as attorneys for each of the agencies on the workgroup. The majority of the comments received were incorporated into the final guide. To date, the guide has been used on several mitigation sites for WSDOT, local governments, and even a few private developers. The most common use to date is for concurrent mitigation sites that have excess acreage for mitigation. To maximize a site's potential, the excess area is included in the initial mitigation construction efforts and tracked as advance mitigation for future actions. WSDOT and local governments have been establishing several mitigation projects solely as advance sites. At the time of publication of this document, a few of these sites are in the second year of establishment and are meeting agreed-upon performance standards.

Appendix A – Glossary of Definitions, Laws, and Regulations

Adaptive Management - The development of a management strategy that anticipates likely challenges associated with compensatory mitigation projects and provides for the implementation of actions to address those challenges, as well as unforeseen changes to those projects. It requires consideration of the risk, uncertainty, and dynamic nature of compensatory mitigation projects and guides modification of those projects to optimize performance. It includes the selection of appropriate measures that will ensure that the aquatic resource functions are provided and involves analysis of monitoring results to identify potential problems of a compensatory mitigation project and the identification and implementation of measures to rectify those problems. (33 CFR 332.2)

Adverse Effect - Any impact which reduces the quality and/or quantity of a resource. Adverse effects may be direct or indirect, and may consist of alterations to or loss of the resource. The term adverse effect is used frequently in many Federal reviews including those done under Section 106 of the NHPA (36 C.F.R. 800), Section 7 of the ESA (50 C.F.R. 402), Section 404 of the CWA (40 C.F.R. 230, Subpart H), and the MSA. Adverse effects to EFH are defined in regulation at 50 C.F.R. 600.810.

Alternative Screening Criteria - Indicators of how well a specific scenario, solution set, or alternative meet the purpose and need; the evaluation methodology contains specific evaluation criteria to support a comparison of the potential solutions under consideration.

Basic Project Purpose - The basic project purpose comprises the fundamental, essential, or irreducible purpose of the project, and is used by USACE to determine whether the applicant's project is water dependent. If the basic project purpose is not water dependent, the presumption is that practicable alternative sites or designs that do not affect special aquatic sites are available.

BA - An analysis to evaluate the potential effects of the action on listed and proposed species and designated and proposed critical habitat and determine whether any such species or habitat is likely to be adversely affected by the action and is used in determining whether formal consultation or a conference is necessary. (50 CFR 402.12)

Biological Opinion - Biological opinion is the document that states the opinion of the Service (USFWS or NMFS) as to whether or not the Federal action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. (50 CFR 402.02)

CE - Categories of actions that have been determined through adopted procedures to "not individually or cumulatively have a significant effect on the human environment ... and ... for which, therefore, neither an environmental assessment nor an environmental impact statement is required." (40 CFR 1508.4)

Compensatory Mitigation - The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved. Compensatory mitigation for losses to aquatic resources is defined in regulation at 33 CFR 332.2.

Concurrence - Each team member and the agency that he/she represents agrees to the decisions made at those defining points in the project development process unless there are substantial changes to the proposed action or significant new circumstances or information relevant to the environmental concerns.

EFH Conservation Recommendation - A recommendation provided by NMFS to a Federal or State agency pursuant to section 305(b)(4)(A) of the MSA regarding measures that can be taken by that agency to conserve EFH. EFH Conservation Recommendations may be provided as part of an EFH consultation with a Federal agency, or may be provided independently by NMFS to any Federal or state agency whose actions would adversely affect EFH.

ESA Consultation - Coordination pursuant to Section 7(a)(2) of the ESA to ensure that actions are not likely to jeopardize the continued existence of listed species or adversely modify designated critical habitats. Coordination may be with the National Oceanic and Atmospheric Administration (NOAA) or the Department of the Interior or both. (50 CFR Part 402)

Fill Material - Material placed in waters of the U.S. where the material has the effect of either replacing any portion of a water of the United States with dry land or changing the bottom elevation of any portion of a water of the United States. (33 CFR 323.2)

Financial Assurances - A mechanism to ensure a high level of confidence that a compensatory mitigation project will be successfully completed, in accordance with applicable performance standards. (33 CFR 332.3(n))

FONSI - A document by a Federal agency briefly presenting the reasons why an action, not otherwise excluded, will not have a significant effect on the human environment and for which an environmental impact statement therefore will not be prepared. It shall include the environmental assessment or a summary of it and shall note any other environmental documents related to it. If the assessment is included, the finding need not repeat any of the discussion in the assessment but may incorporate it by reference. (40 CFR 1508.13)

ILF Program - A program involving the restoration, establishment, enhancement, and/or preservation of aquatic resources through funds paid to a governmental or nonprofit natural resources management entity to satisfy compensatory mitigation requirements for USACE permits. Similar to a mitigation bank, an ILF program sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the in-lieu program sponsor. However, the rules governing the operation and use of ILF programs are somewhat different from the rules governing operation and use of mitigation banks. The operation and use of an ILF program are governed by an ILF program instrument. (33 CFR 332.2)

LEDPA - The alternative that demonstrates compliance with the Section 404(b)(1) guidelines of the CWA that is the practicable alternative to the proposed discharge which would have the least adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. (33 CFR 230.10)

Logical Termini - The (1) rational endpoints for a transportation improvement, and (2) rational endpoints for a review of the environmental impacts. The environmental impact review frequently covers a broader geographic area than the strict limits of the transportation improvements.

Merger Agreement - A formalized type of synchronization that ensures that the documentation and coordination conducted comply with NEPA and will meet the standards of all signatories and that any preferred alternative selected under the joint NEPA / CWA Section 404 decisionmaking process also complies with CWA Section 404(b)(1) guidelines.

OA - An agency within the USDOT with its own management and organizational structure.

Practicable - Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. (40 CFR 230.3)

Programmatic Approach - An approach that reduces the need for project-by-project reviews, eliminates repetitive discussion of the same issue, or focuses on the actual issues ripe for analyses at each level of review, while maintaining appropriate consideration for the environment.

Purpose and Need - The NEPA CEQ regulations require a Purpose and Need statement to “briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action” (40 C.F.R. 1502.13). While not defined in regulation, in the transportation context and in practice, the “Purpose” defines the transportation problem to be solved and outlines goals and objectives that should be included as part of a successful solution to the problem, and the “Need” provides data to support the problem statement (Purpose).

Reasonable - In terms of NEPA compliance, practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.

ROD - The ROD identifies the selected alternative, presents the basis for the decision, identifies all the alternatives considered, specifies the "environmentally preferable alternative," and provides information on any adopted means to avoid, minimize, and compensate for environmental impacts. (40 CFR 1505.2)

Rulemaking - For purposes of this document, “rulemaking” refers to the process that executive government (https://en.wikipedia.org/wiki/Executive) and independent agencies (https://en.wikipedia.org/wiki/Independent_agencies_of_the_United_States_government) use to create, or *promulgate*, regulations (https://en.wikipedia.org/wiki/Regulation).

Scoping - An early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action. (40 CFR 1501.7)

Single and Complete Project - For projects other than linear projects, the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. (33 CFR 330.2(i))

Single and Complete Linear Project - That portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location; except that for linear

projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project. (33 CFR 330.2(i))

Synchronization - To cause things to agree in time or make things happen at the same time and speed.

Synchronized Review Process - Performing the various environmental review and permitting procedures or consultation requirements necessary for a proposed project in a concurrent fashion, to the extent allowable and feasible.

Tiering - Refers to the coverage of general matters in broader environmental impact statements (such as national program or policy statements) with subsequent narrower statements or environmental analyses (such as regional or basinwide program statements or ultimately site-specific statements) incorporating by reference the general discussions and concentrating solely on the issues specific to the statement subsequently prepared. (40 CFR 1508.28)

Transportation Agency - For the purposes of this document, a Federal, State, or local government agency and/or project sponsor responsible for transportation systems and other infrastructure. This term is meant to be equally inclusive of those entities pursuing infrastructure projects.

Transportation Liaison - For the purposes of this document, those positions funded by transportation agencies within Federal or State resource and regulatory agencies to expedite the environmental review process. Outside of this document, the term may be used outside generally to also refer to regulatory or resource agency staff who work on transportation issues but are not in positions funded by transportation agencies.

Watershed - A land area that drains to a common waterway, such as a stream, lake, estuary, wetland, or ultimately the ocean. (33 CFR 332.2)

Watershed Approach - An analytical process for making compensatory mitigation decisions that support the sustainability or improvement of aquatic resources in a watershed. It involves consideration of watershed needs, and how locations and types of compensatory mitigation projects address those needs. A landscape perspective is used to identify the types and locations of compensatory mitigation projects that will benefit the watershed and offset losses of aquatic resource functions and services caused by activities authorized by USACE permits. (33 CFR 332.2)

Appendix B – References and Resources

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Appendix C – Coordination & Implementation Table for a Sample EIS Project

This table provides an overview of how different agencies can undertake a synchronized coordination process for a sample transportation EIS (combined FEIS/ROD) project during various stages of project development. This table helps identify the information and actions based on general best practices.

	Transportation Agency (NEPA)	USACE (404, 10, 103)	USCG (Bridges)	USFWS/NMFS	NMFS (MSA-EFH)
Transportation Planning[18]	Participate in Pre-Application meeting with resource agencies. Scope project to identify transportation deficiencies and system considerations. Develop project need.	Engage, as appropriate, to help transportation agency avoid aquatic resources.	Provide Bridge Permit Application Guide, navigation impact report, and environmental requirements to applicant. Provide navigational points of contact to assist with collection of navigation data.	Coordinate as needed to identify potential natural resources of concern, particularly federally protected trust resources.	Coordinate as early as practicable regarding actions that may adversely affect EFH. Early coordination should occur during pre-application planning for projects subject to a Federal permit or license and during preliminary planning for projects to be funded or undertaken directly by a Federal agency.

[18] For FHWA and FTA, this refers to requirements set forth in 23 U.S.C. 134-135; where appropriate, transportation planning may involve MPOs.

	Transportation Agency (NEPA)	USACE (404, 10, 103)	USCG (Bridges)	USFWS/NMFS	NMFS (MSA-EFH)
Project Initiation /NEPA Phase/Scoping Determination of Agency Roles	Conduct formal project scoping process. Publish NOI in Federal Register. Develop project coordination plan and invite participating agencies.[19] Designate, in writing, lead Federal agency status to all cooperating agencies.	Accept cooperating agency role and identify responsibilities. Formally start pre-application coordination.	Develop project plan with other agencies involved to include agency responsibilities, defining initial issues/concerns, the need for public meetings, application requirements, and project schedule/milestones. Obtain level of NEPA document from applicant, if known. Identify lead Federal agency and cooperating agency. Determine who will act on behalf of other agencies for ESA, NHPA, etc. Obtain designation in writing from lead Federal agency. Within 30 days of invitation, provide written acceptance of cooperating/ participating agency status to transportation agency.	Establish cooperating agency status per jurisdiction by law or areas of expertise. Identify roles, responsibilities, and timeframes for draft reviews. Document in a letter or an MOU with the lead agency. Specifically, when early planning or scoping identifies potential effects to marine mammals, cooperative development of NEPA analysis may afford significant streamlining of the MMPA incidental take authorization process which also requires NEPA analysis.	Designate lead Federal agency if more than one Federal agency is responsible for a Federal action. The lead agency should notify NMFS in writing that it is representing one or more additional agencies. A Federal agency may also designate a non-Federal representative to conduct an EFH consultation by giving written notice of such designation to NMFS.
Purpose & Need	Develop project purpose and need statement. Provide opportunities for the involvement of agencies and the public.	Review and comment on transportation agency's NEPA project purpose and need. Define basic and overall	Review and comment on transportation agency's project purpose and need statement.	Review and comment on transportation agency's project purpose and need statement to ensure that the range of potential alternatives is	Review and comment on transportation agency's project purpose and need statement.

[19] Applies to FHWA and FTA only.

	Transportation Agency (NEPA)	USACE (404, 10, 103)	USCG (Bridges)	USFWS/NMFS	NMFS (MSA-EFH)
Purpose & Need (cont'd)		project purposes for 404(b)(1) Guidelines.		not limited so as to reduce the ability to avoid and minimize effects to Federal trust resources. Measurable objectives associated with the need of each action should be included in the purpose and need as a means to determine that there is a true need for the project.	
Impact Analysis Methodology Identification of potentially affected resources in project area	Develop impact analysis methodology for affected resources. Prepare navigation impact report for the USCG.	Comment on transportation agency's impact analysis methodology, identify areas of concern, data needs, and permit needs. Provide ship simulation data and information on proposed channel modification and dredge projects to the USCG, if applicable.	Receive ship simulation data and information on proposed channel modification and dredge projects from the USACE, if applicable. Once the applicant-prepared navigation impact report is provided to the USCG, provide Preliminary Navigation Determination in writing to the applicant. State that the determination is good for x years if no navigation changes on the waterway. Reiterate USCG environmental requirements for the NEPA document.	Identify significant issues to be addressed. Help arrange for collection of necessary data. Develop preliminary federally protected species list (including proposed and candidate species). Identify designated critical habitat areas and migratory bird habitat areas. Identify connected, cumulative, or similar actions associated with the proposed action.	For any Federal action that may adversely affect EFH, Federal agencies must provide NMFS with a written assessment of the effects of that action on EFH. The level of detail in an EFH Assessment should be commensurate with the complexity and magnitude of the potential adverse effects of the action. The assessment must contain 1. a description of the action; 2. an analysis

	Transportation Agency (NEPA)	USACE (404, 10, 103)	USCG (Bridges)	USFWS/NMFS	NMFS (MSA-EFH)
Impact Analysis Methodology Identification of potentially affected resources in project area (cont'd)					of the potential adverse effects of the action on EFH and the managed species; 3. The Federal agency's conclusions regarding the effects of the action on EFH; and 4. Proposed mitigation, if applicable.
Alternatives Development	Develop screening criteria to ensure a reasonable range of alternatives are carried forward.	Assist transportation agency in identifying aquatic resources along potential alternatives. The transportation agency may choose to field delineate or use a variety of desk references to determine the presence/ absence of aquatic resources. Review screening criteria.	If not already received, request from applicant a navigation impact report which will be used by the USCG to make a Preliminary Navigation Determination in writing to the applicant. Provide input to proposed alternative designs and locations. Identify proposed designs, if any, that are unreasonable obstructions to navigation.	Help identify Federal trust resources along potential alternatives. Assist in the development of alternatives that are the least impactful to Federal trust resources. Review screening criteria.	Consider project modifications that may avoid and/or minimize adverse effects. Completing a careful alternatives analysis and incorporating design stipulations and "best management practices" can lessen or eliminate potential adverse effects to EFH. Review screening criteria.
Alternatives Analysis & Screening	Using screening criteria, screen alternatives that meet purpose and need for further	Review alternatives presented for practicability in terms of the	Provide input to proposed alternative designs and locations. Identify proposed designs, if any, that are unreasonable obstructions	Provide federally protected species list for potential alternatives. Review and comment on effects analyzes for	Review alternatives and provide feedback to ensure that alternatives avoid and/or minimize

	Transportation Agency (NEPA)	USACE (404, 10, 103)	USCG (Bridges)	USFWS/NMFS	NMFS (MSA-EFH)
Alternatives Analysis & Screening (cont'd)	analysis and include the no-build alternative.	404(b)(1) Guidelines. Provide feedback to ensure that any alternatives eliminated are not the LEDPA.	to navigation.	each alternative. Help identify additional alternatives or modified alternatives to avoid and minimize impacts to Federal trust resources, particularly federally protected species, migratory birds, and Refuges.	adverse effects on EFH to the maximum extent practicable.
Administrative DEIS Document Review	Identify the preferred alternative in collaboration with resource agencies. Share administrative DEIS for agency review. Prepare conceptual mitigation plan for resource agency review. State DOT/Project Sponsor.	Review administrative draft NEPA document for adequate documentation of potential impacts to aquatic resources. Conduct jurisdictional determination (approved or preliminary). Determine if any alternatives may require Section 408 review. Provide initial feedback on transportation agency's development of compensatory	Review and comment in writing on preliminary/ administrative draft NEPA document. Provide input in writing and participate in consultations, as required. Issue a USCG public notice when sufficient information is received regarding the application and design of the bridge. The application need not be complete in order to issue a USCG public notice.	Review and comment on preliminary/ administrative draft NEPA document. Help identify mitigation actions (avoidance, minimization, and compensatory mitigation). Review BA/ Evaluation for alternative that most minimizes adverse effects to listed species and its habitat within the action area.	Review and comment on the preliminary/ administrative draft NEPA document. NMFS provides EFH Conservation Recommendations as part of comments on the DEIS in a separate section of the comment letter called "EFH Conservation Recommendations."

	Transportation Agency (NEPA)	USACE (404, 10, 103)	USCG (Bridges)	USFWS/NMFS	NMFS (MSA-EFH)
		mitigation plan.			
NOA of DEIS in Federal Register. Circulate DEIS	Publish Notice of Availability (NOA) in Federal Register. Consider and address public and agency formal comments. Submits 404 application package if enough project detail exists.	Comment on transportation agency's preferred alternative being consistent with USACE's preliminary LEDPA determination. Receive and process a formal permit application. Review conceptual compensatory mitigation plan.		Provide additional comments on preferred alternative, as needed. Provide Concurrence Letter or Biological Opinion for ESA compliance. Review draft compensatory mitigation plan.	Within 30 days of receiving EFH Conservation Recommendations, the Federal agency sends a preliminary response stating that the agency has received NMFS' EFH Conservation Recommendations, will consider them fully, has not yet made a decision on the project, but will respond fully when the agency has made a decision.
FEIS/ROD Review and Preparation	Address resource/regulatory agency comments received on the DEIS. Develop and sign the combined FEIS/ROD Document. Publish NOA of FEIS/ROD in Federal	Verify any concerns have been addressed and documentation of impacts to aquatic resources is sufficient. Issue the Public Notice for application. Provide feedback on development of final compensatory	Review and comment in writing on final NEPA documents. Prepare USCG NEPA determination for approval in conjunction with the lead Federal agency.	Ensure comments on draft NEPA document have been adequately addressed. Provide feedback on final compensatory mitigation plan.	The lead Federal agency provides a final response in the FEIS, in a section or chapter clearly labeled as such. The response includes a description of measures proposed to avoid, mitigate, or offset the impact of the activity on EFH, and an explanation for any decisions that are

	Transportation Agency (NEPA)	USACE (404, 10, 103)	USCG (Bridges)	USFWS/NMFS	NMFS (MSA-EFH)
FEIS/ROD Review and Preparation (cont'd)	Register.	mitigation plan.			inconsistent with NMFS recommendations. Alternatively, the Federal agency may send a final response prior to the issuance of the FEIS. This would allow time for NMFS to request further review before the EIS is finalized.
Final Project Design/Final Mitigation Plan Development	Advance final design of project. Advance final design of project mitigation plan based on direct, indirect, secondary, and cumulative impacts as appropriate.	Review transportation agency's final compensatory mitigation plan. Address any comments from Public Notice.	Adjudicate navigation comments received during the public notice period. When all final required documents and certifications have been received and are sufficient to make a USCG permit decision, the USCG shall make a written determination that the application is complete and provide to the applicant. Advise applicant in writing within 30 days of receipt of a completed application form (in accordance with the Bridge Permit Application Guide) if the application is incomplete.	Coordinate as needed on final mitigation plan, and ESA/MMPA compliance as needed.	

	Transportation Agency (NEPA)	USACE (404, 10, 103)	USCG (Bridges)	USFWS/NMFS	NMFS (MSA-EFH)
Final Project Design/Final Mitigation Plan Development (cont'd)			Provide a list of missing materials, if applicable. A projected permit date shall also be provided in the determination to align applicant and USCG expectations for permit decision.		
Final Permit Review	Address any issues or concerns with permit.	Make formal LEDPA determination and write a separate ROD or FONSI, adopting as much of the transportation agency's NEPA document as feasible. Render permit decision.	Ensure consultations under applicable laws are completed before permit decision. Render permit decision.		
Construction	Construct and comply with OA's NEPA decision and 404 permit general and special conditions. Conduct Environmental Commitment reviews during project construction.	Assure compliance with any special conditions of the permit.	Enforce conditions of USCG permit regarding construction schedules and in-water work requirements. Coordinate with the USCG regarding construction schedules to ensure safety of navigation.	Assure compliance with Biological Opinion, MMPA incidental take authorization and compensatory mitigation plan.	Assure compliance with EFH Conservation Recommendations.

Appendix D – Illinois Department of Transportation Agreement

Statewide Implementation Agreement **September 1, 2007**

STATEWIDE IMPLEMENTATION AGREEMENT

NATIONAL ENVIRONMENTAL POLICY ACT
AND
CLEAN WATER ACT SECTION 404

CONCURRENT NEPA/404 PROCESSES
FOR
TRANSPORTATION PROJECTS
IN
ILLINOIS

I. Background

In 1996, the Federal Highway Administration – Illinois Division (FHWA); the Illinois Department of Transportation (IDOT); the U.S. Army Corps of Engineers (USACE) – Rock Island, Chicago, St. Louis, Memphis and Louisville Districts; the U.S. Environmental Protection Agency (USEPA); the U.S. Fish and Wildlife Service (USFWS) – Rock Island and Chicago Field Offices; and the Eighth District of the U.S. Coast Guard entered into a Statewide Implementation Agreement (SIA) for Concurrent National Environmental Policy Act (NEPA) and Section 404 of the Clean Water Act (Section 404) processes for transportation actions in Illinois. The SIA was based on guidance from FHWA's Region 5 that encouraged cooperation between the agencies and the efficient implementation of transportation actions. The signatory agencies periodically revisit the SIA to ensure that it meets all current laws and regulations and to ensure efficiency in the use of the agreement. This SIA supersedes all previous SIA agreements among the signatories and addresses current Federal and State legislation and requirements.

In August of 2005, Congress enacted the Safe, Accountable, Flexible, Efficient Transportation Equity Act –A Legacy for Users (SAFETEA-LU). Section 6002 of SAFETEA-LU created a new section in the U.S. Code (23 USC §139) that contained provisions establishing new requirements for the environmental processes for Environmental Impact Statements (EISs). These new requirements include the opportunity for public and agency input in defining the Purpose and Need for an action and the range of alternatives carried forward in the EIS. While the Section 6002 requirements are not directly referenced in this SIA, nothing in this SIA contradicts the Section 6002 requirements.

In addition, in August of 2005 IDOT adopted a Context Sensitive Solutions (CSS) policy. This policy requires IDOT to implement the CSS approach on all new construction, reconstruction, and major expansion of transportation facilities in Illinois. The CSS approach requires early, often, and continual involvement of stakeholders from the conceptual phases through design, construction, and operation phases of a transportation project in Illinois. Through the CSS approach, the signatories of this SIA will be identified as stakeholders when appropriate. Stakeholder input will be sought for the Purpose and Need, alternatives analysis, and preferred alternative. FHWA and IDOT have developed a procedural memorandum outlining the CSS approach for highway projects in Illinois. While the

CSS approach is not specifically addressed in this SIA, and while the concurrent NEPA/404 processes described in this SIA are separate and distinct, CSS procedures will be utilized in conjunction with this SIA in most instances.

II. Purpose

The purpose of this SIA is to establish a process to coordinate the review among resource agencies of transportation projects that impact waters of the United States. This process is intended to:

- Expedite construction of necessary transportation projects, with benefits to mobility and the economy at large, and
- Enable more transportation projects to proceed on budget and on schedule, while
- Protecting and enhancing the chemical, physical, and biological integrity of the waters of the United States in Illinois.

III. Applicability

Proposed projects meeting the following applicability criteria will be processed in accordance with the terms of this SIA:

- The FHWA is required to complete either an Environmental Assessment (EA) or an EIS under NEPA; and
- An individual permit under Section 404 is required for the project.

Proposed projects that meet the applicability criteria may be excluded from this SIA if:

- The signatory agencies agree that the project is not of sufficient complexity to warrant coordination under this SIA, or
- The signatory agencies agree that the discovery of the need for an individual Section 404 permit occurs after FHWA has approved the EA or final EIS, making the application of the SIA impractical.

If a project initially meets the applicability criteria, but is later found to be eligible for a nationwide or regional permit, FHWA and IDOT will notify the other signatory agencies and the project will cease to be processed under this SIA. FHWA and IDOT may initially determine a project is eligible for a nationwide or regional permit and later conclude an individual permit will be required. Under these circumstances, FHWA and IDOT will review the applicability criteria and determine if the project should be processed under this SIA.

Projects that do not meet the applicability criteria may warrant processing in accordance with this SIA. FHWA and IDOT may consult with the other signatory agencies to determine if a project that does not meet the applicability criteria should be processed under this SIA. Any signatory agency may request FHWA and IDOT develop a project that does not meet the applicability criteria under this SIA. FHWA and IDOT reserve the right to determine if a project will be processed under this SIA if the applicability criteria are not met.

IV. Definitions

Concurrence - Confirmation by the agency that:

1. The information to date is sufficient for this stage, and
2. The project may proceed to the next stage of project development.

Concurrence Points - Milestones within the NEPA process where FHWA and IDOT request agency concurrence. The concurrence points under this SIA are 1) purpose and need, 2) alternatives to be carried forward, and 3) preferred alternative. The intent of the concurrence points in the process is to limit the revisiting of decisions that have been agreed upon earlier in the process and encourage early substantive participation by the agencies.

Waters of the United States - Those waters as defined in 33 CFR 328.3.

V. Signatory Agency Roles and Responsibilities

Under this SIA, signatory agencies commit to:

- Considering the potential impacts to waters of the United States in Illinois at the earliest practicable time in the planning phase of project development;
- Avoiding adverse impacts to such waters to the extent practicable;
- Minimizing and mitigating unavoidable adverse impacts and for wetlands, striving to achieve a goal of no overall net loss of values and functions; and
- Pursuing interagency cooperation and consultation diligently throughout the integrated NEPA/404 process to ensure that the concerns of the signatory agencies are given timely and appropriate consideration and that those agencies are involved at key decision points in project development.

Signatory agency participation in this process does not imply endorsement of transportation projects. Nothing in this SIA is intended to diminish, modify, or otherwise affect the statutory or regulatory authorities of the agencies involved.

IDOT will ensure data collection, including information for determining compliance with the Section 404(b)1 guidelines, will take place early in the coordination process so that information will be available for discussion at the concurrence point meetings. All signatory agencies will be responsible for reviewing the data and evaluations, and providing supplemental information and/or comments, as appropriate.

IDOT will provide information to the signatory agencies regarding the analysis of alternatives to avoid, minimize, and mitigate adverse impacts to Waters of the United States. This information may be presented in a matrix or similar summary. The signatory agencies will provide input on the adequacy of the avoidance, minimization, and mitigation analysis of the alternatives.

VI. Implementing Procedures

FHWA and/or IDOT will notify the other signatory agencies of their intention to process a project in accordance with this SIA. FHWA and IDOT may invite additional resource agencies to attend meetings for informational purposes.

FHWA and IDOT will seek concurrence from the appropriate signatory agencies for the following:

1) Purpose and Need,
2) Alternatives to be Carried Forward, and
3) Preferred Alternative

Concurrence does not imply an agency has endorsed the project or released its obligation to determine if the project meets statutory review criteria. Concurrence points will not be revisited unless there is new information or significant changes to the project, the environment, or laws and regulations which affect the concurrence point achieved.

Concurrence on projects processed under this SIA will occur at regularly scheduled NEPA/404 concurrence meetings. The regularly scheduled concurrence meetings will be planned for the first week in February, June, and September. FHWA will contact all signatory agencies within 60 days of these times to confirm the meeting will be held and obtain a specific date. FHWA, in consultation with the signatory agencies, may adjust the meeting date or cancel the meeting. At least 30 days prior to a concurrence meeting, FHWA or IDOT will provide the signatory agencies, and other agencies as appropriate, the concurrence point package for each proposed action that will be discussed to allow agencies sufficient time to review and prepare their comments. The notification letter will include the time and place of the meeting, an agenda, descriptions of the proposed actions to be discussed, and the concurrence point(s) being sought by FHWA and IDOT.

The timing of the FHWA and IDOT request for signatory agency concurrence on the concurrence points may vary based upon the proposed action's complexity. On less complex actions, FHWA and IDOT may seek concurrence on several or all concurrence points simultaneously. For more complex actions, FHWA and IDOT will seek concurrence on the concurrence points separately.

FHWA and IDOT will summarize and distribute to all signatory agencies a meeting summary following a concurrence meeting. The signatory agencies will provide comments on the meeting summary within 30 days of receipt. FHWA and IDOT will finalize the meeting summary and re-distribute it to the signatory agencies. The finalized meeting summary will serve to document the decisions on concurrence for the proposed actions discussed at the NEPA/404 concurrence meeting.

For major or complex actions, or those on expedited schedules, separate NEPA/404 concurrence meetings may be scheduled in lieu of the regularly scheduled concurrence meetings. FHWA and IDOT may also request signatory agency concurrence via e-mail. Signatory agencies may indicate their concurrence by e-mail to FHWA and IDOT.

Concurrence Point #1, Purpose and Need

The Concurrence Point #1 Package will include the preliminary Purpose and Need statement developed by FHWA and IDOT. Prior to submitting the package, FHWA and IDOT will ensure it:

- Provides sufficient data and analysis to support the reasons for proposing the action;
- Establishes the logical termini for the proposed action;
- Establishes that the proposed action has independent utility; and
- Is as comprehensive, specific and concise as possible.

Concurrence Point #2, Alternatives to be Carried Forward

The Concurrence Point #2 Package will include the Purpose and Need statement resulting from Concurrence Point #1 and the preliminary alternatives proposed to be carried forward for further analysis developed by FHWA and IDOT. Prior to submitting the package, FHWA and IDOT will ensure it contains:

- A description of all alternatives considered;
- The alternatives analysis methodology for eliminating alternatives; and
- An explanation of the way in which Alternatives to be Carried Forward address the Purpose and Need and that they are reasonable or practicable.

Alternatives may be dismissed for reasons including, but not limited to, not satisfying the purpose and need, environmental impacts, or engineering and economic factors.

Concurrence Point #3, Preferred Alternative

The Concurrence Point #3 Package will include the Purpose and Need resulting from Concurrence Point #1, the alternatives analysis resulting from Concurrence Point #2, and FHWA and IDOT's preliminary Preferred Alternative. Prior to submitting the package, FHWA and IDOT will ensure it:

- Identifies the environmentally Preferred Alternative,
- Summarizes comments received on the draft EIS or the EA,
- Explains the rationale for the selection of the preliminary Preferred Alternative,
- Explains the rationale for the dismissal of the other Alternatives Carried Forward, and
- Contains a draft of the "Only Practicable Alternative Finding" required by Executive Order 11990, Protection of Wetlands.

Dispute Resolution

If any signatory agency does not concur with any concurrence point, FHWA and IDOT will work with them to address their concerns. If FHWA and IDOT, after making good-faith efforts to address their concerns, conclude that an impasse has been reached on concurrence with one or more signatory agencies, FHWA and IDOT may proceed to the next stage of project development without that agency's concurrence. FHWA and IDOT will notify all signatory agencies of their decision and proposed course of action. The decision to move an action forward without concurrence does not eliminate a signatory agency's statutory or regulatory authorities, or their right to elevate the dispute through established agency dispute resolution procedures. FHWA and IDOT recognize and accept the risk of proceeding on an action without receiving a signatory agency's concurrence.

VII. Modification/Termination

This SIA may be modified upon approval of all signatory agencies. Signatory agencies may submit proposed modifications to FHWA and IDOT. FHWA and IDOT will circulate proposals for modification to the other signatory agencies for a 30-day period of review. Approval of such proposals will be indicated by written acceptance. A signatory agency may terminate participation in this agreement upon written notice to all other signatory agencies.

STATEWIDE IMPLEMENTATION AGREEMENT
NATIONAL ENVIRONMENTAL POLICY ACT
AND
CLEAN WATER ACT SECTION 404

CONCURRENT NEPA/404 PROCESSES
FOR
TRANSPORTATION PROJECTS
IN
ILLINOIS

The Federal Agencies in cooperation with the Illinois Department of Transportation (IDOT) agree to implement, to the fullest extent practicable and as funding and staffing level allow, the process in the Statewide Implementation Agreement.

This agreement becomes effective upon signature of all agencies and may be modified by written approval of each agency. This agreement may be revoked by agreement of all agencies or by any agency upon 30-days written notice to the other agencies.

U.S. Army Corps of Engineers

NAME, Chief
Regulatory Branch
Rock Island District

NAME, Chief
Regulatory Branch
Chicago District

NAME, Branch Chief
Regulatory Branch
St. Louis District

NAME, Chief
Regulatory Branch
Louisville District

NAME, Chief
Regulatory Branch
Memphis District

U.S. Fish and Wildlife Service

NAME
Field Supervisor
Rock Island Illinois Field Office

NAME
Field Supervisor
Chicago Illinois Field Office

U.S. Environmental Protection Agency

NAME
Manager, Federal Activities Program
Region Five

U.S. Coast Guard

NAME
Bridge Administrator
Eighth Coast Guard District

Illinois Department of Transportation
Milt Sees
Director of Highways

Federal Highway Administration
Norman Stoner
Division Administrator