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**SAVANNAH DISTRICT, US ARMY CORPS OF ENGINEERS,
DRAFT GUIDELINES TO ESTABLISH AND OPERATE MITIGATION BANKS IN
GEORGIA**



This document was prepared by the Regulatory Division, Savannah District, US Army Corps of Engineers, and coordinated with the US Environmental Protection Agency, US Fish and Wildlife Service, National Marine Fisheries Services and Georgia Department of Natural Resources

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**SAVANNAH DISTRICT, US ARMY CORPS OF ENGINEERS,
GUIDELINES TO ESTABLISH AND OPERATE
MITIGATION BANKS IN GEORGIA**

This document contains instructions to aid potential mitigation bank sponsors in the banking instrument (BI) approval process and with the operation of Savannah District, US Army Corps of Engineers (herein after referenced as USACE)-Approved Mitigation Banks in the State of Georgia. This document is intended to be used as the Savannah District, US Army Corps of Engineers, Regulatory Division's Standard Operating Procedures for evaluating mitigation bank proposals in accordance with the requirements provided in the Final Mitigation Rule (hereinafter referred to as, Rule), dated April 10, 2008 (33 CFR Parts 325 and 332) and (40 CFR Part 230), until this document is further revised and reissued.¹

When undergoing the process of establishing a mitigation bank, it is imperative that all participants in the bank process are familiar with the requirements in the Rule and the procedures outlined herein. Of particular importance is to recognize that the purpose of a mitigation bank is to replace aquatic functions lost from authorized impacts to waters of the United States (US). Aquatic ecosystems, their related terrestrial ecosystems, and their underlying aquifers perform numerous interrelated environmental functions, including water cycling, nutrient and mineral cycling, and production of plant and animal matter. In addition, aquatic ecosystems provide humans with a wide range of important goods and services, including drinking water, rare plant and animal habitat, recreational and commercial fisheries, and other recreation opportunities. The functioning of ecosystems (interaction of organisms and the physical environment) often provides other services such as water purification, recharge of groundwater, maintenance of aquatic biodiversity, flood control, climate regulation, and various aesthetic qualities (Water Science and Technology Board 2004). The term "aquatic functions" in these guidelines refer to these collective aquatic processes, goods, and services. Any recreational or other proposed use of a mitigation bank site must be passive or otherwise not result in aquatic function loss, impairment or degradation. It is also the bank sponsor's responsibility to protect the bank site through the use of legal restrictions, signage and barriers to nuisance animals or inappropriate vehicular traffic.

1. PURPOSE AND SCOPE. The primary purpose of this document is to assist the bank sponsors, their agents, and other interested parties with the successful development and operation of wetland and stream mitigation banks, pursuant to the requirements provided in the Rule. A secondary purpose is to assist the Interagency Review Team (IRT) members in reviewing, commenting and approving mitigation bank documents. Detailed instructions are provided

¹The CWA provisions and regulations contain legally binding requirements. This guidance does not substitute for those provisions or regulations, nor is it a regulation itself. It does not impose legally binding requirements on EPA, the USACE or the regulated community, and may not apply to a particular situation depending on the circumstances. Any decisions regarding a particular mitigation bank will be based on the applicable statutes, regulations, and case law. Therefore, interested persons are free to raise questions about the appropriateness of the application of this guidance to a particular situation, and the USACE, in coordination with the other appropriate agencies, will consider whether or not the recommendations or interpretations of this guidance are appropriate in that situation based on the statutes, regulations, and case law. Note that nothing in this document should be interpreted or construed as a promise or guarantee that a project which satisfies the criteria or guidelines given herein will be assured of a permit or an approved banking instrument.

below to identify the different elements and analyses generally needed to prepare the Prospectus and BI, as well as, monitor and track the progression of the mitigation site and site credits. All BIs approved on or before July 9, 2008, are grandfathered and operation of these prior approved banks is not subject to the Rule or to these guidelines. However, any prior approved BI that requires a major amendment after July 9, 2008, or any new BI approved after this date, must comply with the Rule. For any bank proposal that has not received final BI approval prior to the issuance date of these guidelines, there is no grandfather provision in these guidelines. In other words, the issue is not a matter of meeting criteria contained in these guidelines (i.e., credit schedules, baseline data, monitoring, etc.) vs. meeting criteria contained in the former guidelines, but an issue of Rule compliance. It is the position of the USACE that regardless of the submittal date of a BI, if it complies with these guidelines, it would also comply with the Rule; and the former guidelines do not meet Rule requirements. Although it is not mandatory for a BI to comply with all aspects of these guidelines, the USACE strongly encourages and recommends that all documents submitted during the BI approval process comply with these guidelines. Failure to follow the procedures outlined in these guidelines will likely result in excessive delays in the BI approval process. For any bank proposed prior to the date of these guidelines, the USACE will evaluate documents submitted by the Bank Sponsor (sponsor) on a case-by-case basis and give consideration to where the bank is in the approval process.

This document does not address in-lieu-fee or site specific mitigation requirements. Additional guidance on these topics is provided in the Rule. All BIs not approved before July 10, 2008, must comply with the Rule.

2. SUMMARIES OF APPLICABLE LAWS AND REGULATIONS. This guidance is issued in accordance with the following statutes, regulations, and policies. It is intended to clarify provisions within these existing authorities and does not establish new requirements. References listed below do not identify all general environmental laws and regulations that apply to the authorities covered under the DA's Regulatory Program. Furthermore, each IRT representative shall ensure that their respective legal requirements are adequately addressed throughout the process, as required under law. The following list is not inclusive and only includes the primary references used to shape this guidance document.

2.1 Memorandum of Agreement between the Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation under the Clean Water Act (CWA) Section 404(b)(1) Guidelines (February 6, 1990). Fundamental to this guidance is the recognition by all parties that prior to approval of a mitigation plan, which may support the purchase of mitigation credits from an approved USACE mitigation bank, it is a permit applicant's responsibility to demonstrate that the proposed discharge would comply with the mitigation sequencing requirements of the Section 404(b)(1) Guidelines of the CWA, as follows: **Avoid** impacts to wetlands, streams and open waters through practicable upland alternatives; **Minimize** impacts to wetlands, streams and open waters, using all reasonable actions; and **Compensate** for unavoidable direct and indirect impacts to wetlands, streams and open waters that result in a loss of aquatic function(s). Additionally, all mitigation plans must address the needs of the Federal Government's policy of no net loss of aquatic resources. (Appendix 1.1)

2.2. Compensatory Mitigation for Losses of Aquatic Resources (33 CFR Part 332, 73 FR 19594-19705, April 10, 2008) and (40 CFR Part 230). The purpose of this act is to establish standards and criteria for the use of all types of compensatory mitigation, including off-site and on-site permittee-responsible mitigation, mitigation banks, and in-lieu fee mitigation, to offset unavoidable impacts to waters of the United States (US) authorized through the issuance of Department of the Army (DA) permits pursuant to section 404 of the CWA (33 U.S.C. 1344) and/or sections 9 or 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401, 403). This part implements section 314(b) of the 2004 National Defense Authorization Act (Pub. L. 108-136), which directs that the standards and criteria shall, to the maximum extent practicable, maximize available credits and opportunities for mitigation, provide for regional variations in wetland conditions, functions, and values, and apply equivalent standards and criteria to each type of compensatory mitigation. This part is intended to further clarify mitigation requirements established under USACE and US Environmental Protection Agency (EPA) regulations at 33 CFR Parts 325 and 332, and 40 CFR Part 230, respectively. The Rule is the primary regulation on which this document is based. Projects deemed appropriate for off-site compensatory mitigation at a mitigation bank must demonstrate full compliance with existing Federal statutes and regulations. (Appendix 1.2)

2.3. Regulatory Guidance Letter (RGL) 05-01. Guidance on the Use of Financial Assurances, and Suggested Language for Special Conditions for DA Permits Requiring Performance Bonds. The purposes of this guidance are: 1) to provide general guidance on the use of letters of credit, performance bonds and other financial assurances, and 2) to provide specific guidance for the use of performance bonds to ensure the completion of compensatory mitigation projects. This guidance applies to DA permits that are conditioned to include any type of financial assurance to ensure that required compensatory mitigation is completed. It may also be used when financial assurances are required for mitigation and/or restoration for unauthorized activities. (Appendix 1.3)

2.4. Memorandum for Regulatory Division, Savannah District, dated April 24, 2008. Performance Bonds and Other Financial Assurances (FA) and Requirements of RGL 05-01. The purposes of this memorandum are to provide guidance for determining when a FA is required and possible alternatives that should be considered prior to using FA. Furthermore, for bank purposes, FA, where appropriate, shall be structured to: include generally, the use of letters of credit, escrow accounts, irrevocable trusts, legislatively enacted dedicated funds; ensure that no more than 80% of the credits are incrementally released over the monitoring period, where established success criteria or milestones have been met, and the remaining credits are released only after the final monitoring period success criteria have been met; and ensure USACE is the beneficiary obligee and not the principal of surety. (Appendix 1.4)

2.5. RGL 08-03. Minimum Monitoring Requirements for Compensatory Mitigation Projects Involving the Restoration, Establishment, and/or Enhancement of Aquatic Resources. This RGL provides the Districts and regulated public guidance on minimum monitoring requirements for compensatory mitigation projects, including the required minimum content for monitoring reports (Appendix 1.5).

2.6. Standard Operating Procedure, Compensatory Mitigation (Wetlands, Openwater & Streams) (March 2004). This Standard Operating Procedure (SOP) provides the Savannah District, the IRT, and the regulated public predictability and consistency for the development, review and approval of compensatory mitigation plans. A key element of this SOP is the establishment of a method for calculating mitigation credits. While this method is not intended for use as project design criteria, appropriate application of the method should minimize uncertainty in the development and approval of mitigation plans and allow expeditious review of applications. When this SOP is used in the establishment of a Mitigation Bank, the USACE will consult with the IRT, with the goal of achieving a consensus of the IRT regarding the factors, elements, and design of the Mitigation Bank Plan. Once a mitigation bank receives final approval using a dated version of this SOP, that version would remain valid for that bank unless the bank is amended or substantially modified. With regard to an approved mitigation bank, the version of the SOP used to calculate credits generated by the bank would remain applicable to that bank for the purpose of re-calculating credits associated with proposed minor modifications to the bank. If a substantial modification is proposed for an approved mitigation bank, the last approved version may be required for use in re-calculating credits. Regardless of which version of the SOP might have been used to calculate credits for an approved mitigation bank, permit applicants intending to purchase mitigation bank credits are required to use the latest approved version of the SOP when calculating credit requirements. All decisions on which version of this SOP are applicable to any situation will be made by the USACE and are final. (Appendix 1.6)

2.7. Federal Aviation Administration (FAA) Advisory Circular on Hazardous Wildlife Attractants on or near Airports (AC No: 150/5200-33, 5/1/97). This advisory circular provides guidance on locating certain land uses having the potential to attract hazardous wildlife to or in the vicinity of public-use airports. Wetland and stream mitigation banks should be designed to not create a wildlife hazard. Bank sponsors will be required to coordinate with FAA in regard to any mitigation bank site within 5 statute miles of any airport that has potential to increase the wildlife attractant hazard and provide a summary of the findings to the USACE. If FAA determines the mitigation bank site will increase the wildlife attractant hazard, the proposed site may not be a feasible mitigation bank site. If after approval of a mitigation bank site, the FAA determines that a mitigation bank site has created a wildlife attractant hazard, it will be the bank sponsor's responsibility to resolve all issues and make any and all appropriate modifications/amendments to the mitigation bank site and the BI. Note: This may require some type of adaptive management to reduce the wildlife attractant hazard, which subsequently may require functional unit changes for the mitigation bank site. (Appendix 1.7)

3. SITE SELECTION. Selection of an appropriate bank site is one of the most critical steps in the decision-making process when determining if a mitigation bank site is feasible. It is the bank sponsor's responsibility to provide the supporting rationale necessary to justify selection of the proposed site. Note that the proposed site must be large enough to warrant the investment of USACE resources; for example, where the proposed mitigation bank is generally a minimum of 100 acres of wetland, excluding preservation areas and buffers, and/or the proposed stream mitigation bank is normally a minimum of 4,000 linear feet of stream, excluding preservation areas. Smaller banks may be considered where the bank sponsor's proposal can demonstrate that the proposed bank site is feasible for consideration due to some other circumstances that would make the proposed mitigation bank site a substantive ecological acquisition (e.g., it is adjacent to

another mitigation site, designated as a high-priority area by a state or federal agency, and/or supports habitat for endangered species).

4. SERVICE AREA. A service area is a designated geographic area (e.g., a watershed, multiple watersheds, an ecoregion, and/or a physiographic province) for which a permittee may secure mitigation credits for permitted impacts that occur within that same region, where appropriate credit is available for such purposes. Note that each bank will be associated with a primary and secondary service area in the State of Georgia.

In Georgia, there are 17 primary service areas² that are displayed on Figure 1. For each primary service area, there is an assigned secondary service area. Figures 2 – 18 depict both the primary and secondary service area. These service areas may also be viewed at <http://www.sas.usace.army.mil/MBSA.htm>.

4.1. Primary Service Areas. For the purpose of this guidance document, the primary service area is the designated geographic area, as described above, wherein a bank can reasonably be expected to provide appropriate compensation for impacts to wetlands, streams, stream corridors, and/or aquatic resources. For purposes of addressing USACE mitigation requirements, a bank's primary service area will have priority over any other approved banks secondary service area for all mitigation requirements, where appropriate credits are available.

4.2. Secondary Service Areas. For the purpose of this document, the secondary service area is the designated geographic area wherein a bank can reasonably be expected to provide appropriate compensation for minimal impacts to wetlands, streams, stream corridors, and/or aquatic resources.

The secondary service area may be utilized for compensatory mitigation for any DA Permit if: there are no available credits at any primary service area banks; and the applicant can thoroughly demonstrate with documentation that the secondary service area bank will replace the lost aquatic functions at the impact site with in-kind mitigation.³

Any secondary service area compensatory mitigation purchase must be approved by the USACE prior to purchase. Note that this guidance document takes priority over the Standard Operating Procedure for Compensatory Mitigation, dated March 2004, regarding the use of secondary service areas for compensatory mitigation.

²The US Geological Survey (USGS) has established 52 watersheds based on the 8-digit Hydrologic Unit Codes (HUC) within the state boundary of Georgia. In Georgia, these HUCs were reviewed by the IRT and used, in part, to establish standardized service areas. These service areas were developed to compensate lost aquatic functions associated with permitted impacts to waters to the US within a consistent geographical area where aquatic resources are similar in kind and function. The Savannah District issued a PN, dated March 2004, informing the public of the above service area procedures.

³In accordance with the preference hierarchy indicated in the Rule, a mitigation bank's secondary service area is typically more appropriate for compensatory mitigation requirements than in-lieu fee mitigation purchases. Development of a mitigation bank requires site identification in advance, project-specific planning, and significant investment of financial resources that is often not practicable for many in-lieu fee programs. For these reasons, the USACE should give preference to the use of mitigation bank credits when these considerations are applicable.

5. APPROVAL PROCESS AND REQUIREMENTS. This section provides an overview of the procedures to be employed for establishing and obtaining USACE approval for mitigation banks in the State of Georgia. In brief, the Bank Sponsor (or his/her designee) shall prepare and submit the following documents to the USACE for approval: Draft Prospectus; Prospectus; Draft BI; and Final BI. After the Draft Prospectus has been approved by the USACE, the information in the Draft Prospectus shall be used to support the development of the Prospectus, and the Prospectus shall be used to support the development of the Draft BI. Once the Draft BI is approved by the USACE, the compendium of all documents collectively will be considered the Final Banking Instrument, that is, after all responsible parties sign the contractual agreement.⁴ After signature, the Final BI will be considered approved. The Final BI must be approved by the USACE prior to the bank being eligible for use to mitigate for DA authorized impacts. After the Final BI is approved and all other site protection documents are in-place, work efforts may initiate on the site, with the understanding that all other obligations (e.g., monitoring and tracking) will be implemented in accordance with the signed document. The following sections outline the USACE recommended approach to meeting the procedural steps required by Rule, which if followed, will result in expeditious processing of bank proposals and BI approval, where appropriate.⁵

Prior to the release of credits, a Declaration of Conservation Covenants and Restrictions using the model language provided on the USACE Savannah District web site must be submitted to USACE Office of Counsel for written approval. Once approved, it must be recorded and a copy of the recorded document furnished to Office of Counsel providing for the perpetual protection of the bank site property. The location of the web site and contact for Office of Counsel for the restrictive covenant model language is: <http://www.sas.usace.army.mil>. Select the file entitled, "Obtaining a Permit." Select the file entitled "Compensatory Mitigation." Select the file entitled, "Model Declaration of Conservation Covenants and Restrictions." In addition to the required Declaration of Conservation Covenants and Restrictions, additional credit may be provided if a conservation easement is granted to a qualified holder under the Georgia Uniform Conservation Easement Act.

6. DRAFT PROSECTUS. The Draft Prospectus⁶ is the document that is used to characterize the existing site conditions; identify potential site challenges/opportunities in the watershed; and determine the overall feasibility of using the proposed site as a mitigation bank. This document shall contain this statement: I give the U.S. Army Corps of Engineers permission to conduct an on-site inspection; and I certify that I have the authority to make this request and give said permission. If the sponsor of the proposed mitigation bank is not the property owner at the time the Draft Prospectus is submitted, he/she must have the authority to pursue the mitigation banking process for the subject site. Additionally, the sponsor must own the subject bank site before the Final BI will be approved (see Section 8.1.3. below).

⁴Appendix 4 provides an example of the Contractual Agreement: Bank Approval Letter.

⁵Appendix 5 provides the outline and topics to be addressed in each document (i.e., draft Prospectus, Prospectus, draft BI, and final BI). Documentation shall be assembled so that revisions can be made and subject text replaced in sections such that the entire submittal does not need to be reproduced and resubmitted to the USACE. Only revised pages shall be submitted during the review process.

⁶See foot note 5 above.

6.1. **Required Elements.** The draft prospectus proposal shall include a description of the following factors. This information will be used to determine the overall feasibility and sustainability of the proposed site. The draft prospectus must address/include:

6.1.1. Bank Sponsor. The fee owner(s) of the property is the bank sponsor. The bank sponsor must propose or concur with the establishment of a mitigation bank, and is subject to the terms of the banking instrument and must sign the Declaration of Covenants and Restrictions. Provide the name of the property owner as shown on the deed of title, address, telephone number, fax number, and e-mail address. The entities identified at 6.1.1-6.1.3 will be referenced collectively in this guidance as "sponsor."

6.1.2. Bank Co-Sponsor. The co-sponsor is an entity that is not the fee owner of the property, but who is entitled to an ownership interest or profit in the credits generated by the bank by contract or other legal document, or by formation of a partnership, company or corporation, or as a governmental department. The co-sponsor may play the leading role in the establishment and operation of the bank. If there is a co-sponsor, in addition to the land owner-bank sponsor, provide the name of the co-sponsor, company or corporation name, name of primary point of contact, address, telephone number, fax number, and e-mail address. If the co-sponsor intends to acquire fee title to the property and become the bona fide bank sponsor, please so state. The property must be acquired before the final BI authorization is approved.

6.1.3. Agent, Consultant and/or Representative. This is an entity who is not the owner of the property (bank sponsor), and who has no ownership interest in the land or the credits generated by the bank (co-sponsor) but who acts solely as a representative, agent or consultant for the bank sponsor or the co-sponsor. If there is an agent, provide the name of the primary point of contact, address, telephone number and e-mail address.⁷

6.1.4. Proposed Service Area (see Section 4)

6.1.4.1. Primary Service Area

6.1.4.2. Secondary Service Area

6.1.5. Existing Site Conditions For All Banks (Streams and/or Wetland):⁸

6.1.5.1. Describe size, location, acreage of wetland and/or linear footage stream restoration, establishment, enhancement, and/or preservation at the mitigation bank site and position in watershed.⁹

⁷Property that is subject to third party holders of mineral or timber rights or easements shall not be considered as eligible for consideration as a mitigation bank unless said rights are released and extinguished.

⁸At Draft Prospectus, the Sponsor is not required to submit wetland/stream delineations or surveys, cultural resource surveys, or endangered species surveys.

⁹As discussed in Section 3, the proposed site must be large enough to warrant the investment of USACE resources necessary to be considered feasible. Small banks may be considered where the bank sponsor's proposal can demonstrate that the proposed bank site is feasible for consideration due to some other circumstances that would make the proposed mitigation bank site a substantive ecological acquisition.

6.1.5.2. Identify site coordinates (latitude/longitude), 8-digit HUC designation and 12-digit HUC designation (<http://datagateway.nrcs.usda.gov/GatewayHome.html>).

6.1.5.3. Identify existing and historic tree, shrub and herbaceous vegetation.

6.1.5.4. Discuss how the proposed mitigation bank will contribute to the objectives of the State Wildlife Action Plan by conserving or restoring habitat within areas designated as high priority waters or watersheds

(<http://georgiawildlife.dnr.state.ga.us/documentdetail.aspx?docid=89&pageid=13&category=conservation>), potential conservation opportunity areas

(<http://georgiawildlife.dnr.state.ga.us/documentdetail.aspx?docid=89&pageid=14&category=conservation>), or other high priority rare species/natural community sites designated by the Georgia Department of Natural Resources, Wildlife Resources Division, Nongame Conservation Section.

6.1.5.5. Discuss past, present and the potential for wildlife utilization.

6.1.5.6. Summarize findings from literature review regarding potential for federal and state threatened and endangered species to occur on the site (<http://www.fws.gov/Athens/>).

6.1.5.7. Summarize findings from literature review regarding potential for Cultural Resources to occur on the site (<http://www.nr.nps.gov/>).

6.1.5.8. Discuss compatibility with existing and proposed pipelines, power lines, roads, borrow pits, landfills or other manmade features (i.e. culverts, dams, or other in-stream structures) located adjacent to, nearby, and up and downstream (within 1 mile) of the proposed bank site, and any anticipated direct or indirect affect those features may have on the site. Would there be a potential for the bank site to become a corridor for future road or utility development? Photographs of the structures should be provided in the draft prospectus, to determine if they present a barrier to fish passage.

6.1.5.9. Discuss compatibility with past, present and future uses of lands located adjacent to, nearby or upstream of the proposed bank site (within 1 mile), and any anticipated direct or indirect affect those land uses may have on the site. Would there be a potential for adjacent land uses to result in ecological isolation of the bank?

6.1.5.10. Discuss compatibility with current and 30-year projection of impervious surfaces for county(s) within which the proposed bank site is located. The affect that the volume of impervious surface-induced storm water runoff would have on the bank site. Would the wetland or stream bank be able to handle anticipated increases in storm water discharges associated with anticipated changes in the percent of impervious surface land cover? See Appendix 2 for an example approach to calculating impervious surface-induced storm water runoff.

6.1.5.11. Discuss watershed-scale features,¹⁰ such as:

¹⁰ Use of a GIS-based system may provide information on other land disturbing activities that have occurred in the watershed, and where wetlands and streams are located. Good reference documents can be found at: http://www.epa.gov/owow/nps/watershed_handbook and <http://www1.gadnr.org/cwcs/Documents/strategy.html>

(a) Water quality. Document watershed and storm water management plans, existing aquatic resource impacts, proximity to 303(d) listed streams, potential for on-site or nearby sources of chemical contamination.

(b) Aquatic habitat diversity and connectivity. Discuss proximity to wildlife corridors, proximity to designated or primary trout waters, proximity to essential fish habitat, proximity to threatened and endangered (or candidate) species and proximity to wild and scenic rivers

6.1.5.12. Discuss floodplain Management Goals. Identify county/city floodplain management goals in which the proposed bank is located, if available, and discuss the positive and/or negative affects the proposed bank could have on those goals.

6.1.6. Existing Site Conditions For Stream Banks:

6.1.6.1. State linear feet of streams by type (NC Method) and order, and provide a preliminary evaluation of Rosgen stream type (e.g. C6, B2) as well as Simon channel evolution stage for each reach proposed to be included in the bank. (NC Method – http://h2o.enr.state.nc.us/ncwetlands/documents/NC_Stream_ID_Manual.pdf; Rosgen Stream Classification System - http://www.wildlandhydrology.com/assets/ARM_5-3.pdf; and Simon Channel Evolution – <http://www.epa.gov/warsss/sedsource/successn.htm>)

6.1.6.2. Describe stream geomorphology, including features such as riffles and pools, estimated width and depth at bankfull, estimated sinuosity, and estimated degree of entrenchment.

6.1.6.3. Describe existing aquatic function impairments.

6.1.6.4. Provide a Chemical Baseline Data Collection Plan. This data collection plan should include the core water quality variables (i.e. temp, pH, DO/BOD, and Total Suspended Solids), as identified in Appendix 10. The plan should also include the location of water quality monitoring stations and the frequency and timing of monitoring events. If any potential for on-site or nearby sources of chemical contamination are identified above, in Section 6.1.5.11(a), the sponsor will need to provide a plan for collecting samples and laboratory analysis.

6.1.7. Existing Site Conditions For Wetland Banks:

6.1.7.1. Acreage of wetlands by type (Cowardin) - (Cowardin System can be found at, http://www.fws.gov/wetlands/_documents/gNSDI/ClassificationWetlandsDeepwaterHabitatsUS.pdf).

6.1.7.2. Describe soils classifications, current and relict - (Soil classification descriptions can be found at, <http://soils.usda.gov/technical/classification/osd/index.html>).

6.1.7.3. Describe current and historic site hydrology; including source(s) of natural hydrology.

6.1.7.4. Describe existing aquatic function impairments.

6.1.8. Stream Bank Objectives. Identify bank objectives that would correct functional impairment. Objectives may also be parameters that would be monitored for documentation of functional lift and success. The following is a partial list of objectives for a stream bank:

6.1.8.1. Reduce turbidity - normal and storm flow conditions.

6.1.8.2. Ameliorate storm flow - essentially a flattening of the hydrograph for storm events.

6.1.8.3. Reduce excess nutrients (pick the nutrient(s) most likely to be reduced).

6.1.8.4. Reduce harmful levels of bacteria (fecal coliform or otherwise).

6.1.8.5. Change water temperature toward reference conditions.

6.1.8.6. Increase number/diversity of benthic organism.

6.1.8.7. Increase number/diversity of native fish.

6.1.8.8. Return endangered species or increase population if already present.

6.1.8.9. Reduce chemical pollutants/contaminants (organics, pesticides, metals, etc.).

6.1.8.10. Increase dissolved oxygen.

6.1.8.11. Improve 303d listing of stream.

6.1.8.12. Improve biodiversity.

6.1.8.13. Reduce abundance of invasive species.

6.1.8.14. Restore floodplain connectivity.

6.1.8.15. Increase/improve fish passage.

6.1.9. Wetland Bank Objectives. Identify bank objectives that would correct functional impairment. Objectives may also be parameters that would be monitored for documentation of functional lift and success. The following is a partial list of possible objectives for a wetland mitigation bank:

6.1.9.1. Restore natural hydrology.

6.1.9.2. Improve sediment retention.

6.1.9.3. Enhance flood-flow attenuation.

- 6.1.9.4. Enhance nutrient cycling and sequestration.
- 6.1.9.5. Increase groundwater recharge.
- 6.1.9.6. Create/enhance spawning sites and nursery areas for fish and other aquatic life.
- 6.1.9.7. Return endangered species or increase population if already present.
- 6.1.9.8. Reduce chemical pollutants/contaminants (organics, pesticides, metals, etc.).
- 6.1.9.9. Improve biodiversity.
- 6.1.9.10. Reduce abundance of invasive species.
- 6.1.10. Proposed Mitigation Plan:
 - 6.1.10.1. Describe resource (habitat) type(s) and amount(s) that will be provided.
 - 6.1.10.2. Describe method of compensation (restoration, enhancement, and/or preservation).
 - 6.1.10.3. Describe work to be performed on the site, including proposed enhancement and restoration efforts.
 - 6.1.10.4. For preservation areas, describe how all five of the of the following threshold criteria identified in the Rule at 33 CFR 332.3(h) are met. (See Appendix 1.2)
 - (a) The resources to be preserved provide important physical, chemical, or biological functions for the watershed.
 - (b) The resources to be preserved contribute significantly to the ecological sustainability of the watershed. In determining the contribution of those resources to the ecological sustainability of the watershed, the District Engineer (DE) must use appropriate quantitative assessment tools, where available.
 - (c) Preservation is determined by the DE to be appropriate and practicable (explain why the DE should determine that the proposed preservation area would be an appropriate and practicable component of the proposed mitigation bank site).
 - (d) The resources are under threat of destruction or adverse modifications.
 - (e) The preserved site will be permanently protected through an appropriate real estate or other legal instrument (e.g., easement, title transfer to state resource agency or land trust).
 - 6.1.10.5. In addition to a narrative description, provide data in the following table format for each discrete wetland area and/or stream reach for the proposed bank:

Habitat	Restoration	Enhancement	Preservation	Establishment
Wetland a (Cowardin Class)				
Wetland b (Cowardin Class)				

Channel Restoration		Riparian Buffer Work: (App. 1, Tab 7, Attachment C, Pg 4)			
Priority 1	xxx linear feet	1X minimum buffer width	Restoration or preservation	Left bank, right bank, or both	xxx linear feet
Priority 2	xxx linear feet	2X minimum buffer width	Restoration or preservation	Left bank, right bank, or both	xxx linear feet
Priority 3	xxx linear feet	3X minimum buffer width	Restoration or preservation	Left bank, right bank, or both	xxx linear feet
Priority 4	xxx linear feet	4X minimum buffer width	Restoration or preservation	Left bank, right bank, or both	xxx linear feet
Bank structure	xxx linear feet				
Structure removal	xxx linear feet				

6.1.11. Summarize Probability of Bank Success by Addressing the Following Elements:

6.1.11.1. Identify resource functions of the compensatory mitigation project in terms of the needs of the watershed, ecoregion, physiographic province, or other geographic area of interest.

6.1.11.2. Discuss ecological suitability of the site to achieve the objectives of the proposed mitigation bank, including the physical, chemical, and biological characteristics of the bank site and how that site will support the planned types of aquatic resources and functions.

6.1.11.3. Discuss site benefits, including: the potential functional gains and services to be generated by bank; self-sustainability (i.e., will site gains/services continue to function over time in a changing landscape or will long-term management be required to maintain ecological functions); and potential habitat supporting, for example, federal and state listed endangered or threatened or other important species/habitat that are located within the region of the proposed project site.

6.1.12. Discuss Qualifications of the Sponsor to Successfully Complete the Proposed Mitigation.

The USACE will make a case-by-case determination on all proposed mitigation banks concerning whether the standard credit release schedule system of financial assurances (Section 12.1) will be adequate to provide a high level of confidence of success, or if additional monetary financial assurances would also be required (Section 12.2). If the USACE should determine that additional financial assurances would be required, it would be the responsibility of the bank sponsor. The bank sponsor may also elect to voluntarily offer financial assurances. The USACE

will make a case-by-case determination on each bank proposal based on information provided by the bank sponsor in the draft prospectus, including but not limited to:

6.1.12.1. Success with past mitigation banks in Georgia or other states. All mitigation bank experience must be documented; successful and/or unsuccessful, under all corporations, LLCs or other company affiliations. Failure to provide past experience information will likely result in the requirement of monetary financial assurances.

6.1.12.2. Statement from the bank sponsor there is adequate financing available to accomplish proposed work on the mitigation bank site, with acknowledgment there would be no potential for credit release (i.e. sales) until after submission and approval of construction and planting reports.

6.1.12.3. Rationale to support why the proposed mitigation bank site and proposed restoration and/or enhancement activities would have an inherently high level of potential for success. Also explain why the proposed mitigation bank site and proposed restoration and/or enhancement activities would have an inherently low level of potential for problems or failure.

6.1.12.4. Statement from bank sponsor concerning mitigation banking experience of the environmental consulting firm to design and implement the mitigation bank. Where the decision regarding FA is based in part or solely on the use of an experienced consulting firm, the bank sponsor shall provide a copy of a contractual agreement documenting that work will be completed in accordance with the approved banking instrument by said firm.¹¹

6.1.12.5. Statement from bank sponsor concerning the training/experience of the team designing the stream or wetland restoration project and the contractors who will install the project.

6.1.13. Site Delineated on the Following Maps, Figures and Photographs:

6.1.13.1. Vicinity Map(s) (including written directions to site entrance) in 1:24,000 scale - (USGS Quadrangle Sheet data can be downloaded from <http://datagateway.nrcs.usda.gov/GatewayHome.html>).

6.1.13.2. County Road Map in 1:24,000 scale - (County Road data can be downloaded from <https://data.georgiaspatial.org/index.asp>).

6.1.13.3. Property Plat(s) - (Parcel data can be found at <http://gaassessors.com/>).

6.1.13.4. 12-digit HUC Map in 1:1,000,000 scale – (12-digit HUC data can be downloaded from <http://datagateway.nrcs.usda.gov/GatewayHome.html>).

6.1.13.5. USGS Quadrangle Sheet(s) in 1:12,000 scale – (USGS Quadrangle Sheet data can be downloaded from <http://datagateway.nrcs.usda.gov/GatewayHome.html>).

6.1.13.6. Aerial photograph in 1:12,000 scale – (Aerial photography data can be downloaded from <https://data.georgiaspatial.org/index.asp>).

¹¹The USACE may require a FA if the bank sponsor changes consulting firms prior to completion of construction.

6.1.13.7. NRCS Soil Map(s) in 1:12,000 scale – (Soils data can be downloaded from <http://soildatamart.nrcs.usda.gov>).

6.1.13.8. National Wetland Inventory Map(s) in 1:12,000 scale – (National Wetland Inventory data can be downloaded from http://wetlandswms.er.usgs.gov/imf/imf.jsp?site=extract_tool).

6.1.13.9. Standard Service Area Map in 1:2,750,000 scale – (8-digit HUC data can be downloaded from <http://datagateway.nrcs.usda.gov/GatewayHome.html>).

6.1.13.10. Georgia State Wildlife Action Plan (SWAP) Map in 1:24:000 scale.

6.1.14. Additional Required Maps, Figures and Photographs:

6.1.14.1. Identify and map any FAA-regulated airports within a five mile radius of proposed project site in 1:100,000 scale – (this information should be available on USGS quad sheets).

6.1.14.2. Identify and map known listed Federal/state listed Endangered or Threatened species sites that are located within a three mile radius of proposed project site in 1:24,000 scale – (This information is available at <http://www.georgiawildlife.org/documentdetail.aspx?docid=89&pageid=10&category=conservation>).

6.1.14.3. Identify and map known cultural resource sites that are located within a one mile radius of proposed project site in 1:24,000 scale – (National Register of Historic Places can be viewed at <http://nrhp.focus.nps.gov/natreghome.do?searchtype=natreghome>).

6.1.14.4. Identify and map proposed restoration, enhancement, preservation, creation, and upland buffer areas in 1:6,000 scale on a topographic map and aerial photograph.

6.1.14.5. Present site photographic records identifying all habitat types present on the site in 1:6,000 scale.

6.1.15. Real Property Requirements:

6.1.15.1. A title search must be conducted in the record deeds office in which the proposed bank site lies. Title Insurance is not required until the banking instrument has been approved.

6.1.15.2. Provide a copy of the deed of title – (Deed of title data can be found at <http://www.gscca.org/search/RealEstate/>, or at Tax Assessor's Office).

6.1.15.3. Provide copies of any deeds to secure the debt recorded by a financial or lending institution. If there is a deed to secure the debt, and the mitigation bank is approved, then prior to recording the restrictive covenant, the financial institution will be required to sign a "Consent and Agreement" to subordinate the security on the debt. See Section 4 above regarding web site

for Declaration of Conservation Covenants and Restrictions that includes language for the "Consent and Agreement."

6.1.15.4. Provide copies of all recorded easements, liens, right-of-ways and most recent recorded platted survey with location of the proposed bank site. If the bank is approved, the required survey of the bank site must show all existing easements and right-of ways on or across the bank site.

6.1.15.5. A proposed site will not be accepted if there are any outstanding mineral or timber rights or leases granted to a third party unless the rights are extinguished. State whether or not there are any outstanding third party rights or leases.

6.1.15.6. State whether the property is now protected by a conservation easement, as a park, green space, greenway, wildlife habitat, recreational area or by any other manner.

6.1.15.7. State whether the proposed bank site is part of a commercial or residential development. If so, no lots may be sold from any portion of the tract until the Declaration of Conservation Covenants and Restrictions is recorded. This rule will not be applicable if the bank site is a completely separately-owned tract and will be separately-managed and not made part of the common area.

6.1.15.8. State whether the bank site will be for use by the public. If so, state what uses the public will make of the site and whether it would entail any improvements to the site for passive recreation.

6.1.15.9. Provide a statement that assures that there will be access or right of way to the bank site provided by property adjacent to the bank site, by road or by common easement.

6.1.15.10. State that a title search has been completed and that there is no litigation, zoning or legal impairment to proceeding with the bank proposal.

6.2. Draft Prospectus Approval Process. The approval process is as follows:

6.2.1. Draft Prospectus Submittal. The Sponsor shall submit a draft prospectus to the USACE for review, comment, and consultation¹².

6.2.2. Within 30 Calendar Days of Receipt of the Draft Prospectus, the USACE will review the submittal for completeness.

6.2.3. Complete Draft Prospectus. If the draft prospectus is complete, the USACE:

6.2.3.1. May conduct a preliminary site visit, if necessary.

¹² Should any deadline referenced in this document fall on a weekend or holiday, the deadline shall be the next business day. All timelines are based on calendar days, not business days.

6.2.3.2. Will make a preliminary determination as to whether the site has potential to be a feasible mitigation bank site¹³.

6.2.3.3. Will place the bank on the agenda for the next available IRT meeting and request the bank sponsor provide a copy of the draft prospectus to each member of the IRT¹⁴.

6.2.3.4. Will identify the resource agencies and representative from each agency that will comprise the IRT for the proposed mitigation bank. The USACE will provide the Bank Sponsor with the name of each IRT member, their phone number, overnight mail address and email address. Approval process timelines are contingent upon the bank sponsor providing all documents to the identified IRT members at the specific office location. The bank sponsor will send all documents to IRT members by overnight mail, with verification of receipt; and by email. The bank sponsor will maintain a record of all documents sent to the IRT and the date for verification of IRT member receipt.

6.2.4. Incomplete Draft Prospectus. If the draft prospectus is incomplete, the USACE will identify additional elements to be addressed, necessary to complete the submittal, and request this information from the bank sponsor. If the bank sponsor fails to provide requested information within 45 calendar days, the bank will be administratively withdrawn until the information is received. Once the additional information is submitted to the USACE, the initial 30 day review period will start over.

6.2.5. Within 15 Calendar Days of the IRT Meeting or Site Visit, which ever occurs last, the IRT members shall provide the USACE Project Manager (PM) with a written (i.e., letter or email) opinion accepting or rejecting the feasibility of the proposed bank site as well as the rationale for the decision. If a member of the IRT fails to provide an opinion on the request, the USACE will assume there are no objections to the bank by that member.¹⁵

6.2.6. Within 30 Calendar Days of the IRT Meeting or Site Visit, which ever occurs last, the USACE will provide the sponsor and the IRT members with a letter or email, recommending a prospectus be prepared for the site or terminate the bank proposal request.

¹³If the site is not deemed feasible, the USACE will inform the sponsor and the IRT in writing; this letter will explain why the site is not feasible to support a mitigation bank and terminate the process.

¹⁴The Bank Sponsor shall provide the draft prospectus to the IRT members at least 30 days prior to the scheduled IRT meeting. In addition, the bank sponsor will send a copy of the draft prospectus to: Office of Counsel, Attention Regulatory Counsel, 100 W. Oglethorpe Avenue, Savannah, GA 31402-0889. If this step does not occur as prescribed, the bank sponsor will be responsible for arranging to have the bank's draft prospectus placed on the agenda for the following IRT meeting. Scheduling of the IRT meeting will depend on the submission date of the draft Prospectus and timeline of next scheduled IRT meeting. Approval process timelines are contingent upon the bank sponsor providing all documents to the appropriate IRT members at the specific office location. The bank sponsor will send all documents to IRT members by overnight mail, with verification of receipt; and a copy by email. The bank sponsor will maintain a comprehensive record of all documents sent to the IRT, with the verified date of IRT member receipt. The bank sponsor will follow-up with a phone call to each IRT member to confirm they received the document and the date of receipt. The bank sponsor will include an up-to-date copy of the document transmittal record with all submittals.

¹⁵ The USACE will not prompt IRT members to provide comments on the draft prospectus, prospectus, draft BI or final BI. As stipulated in the Rule, it is the responsibility of each IRT member to provide comments to the USACE during each phase of the BI approval process. Document transmittal and tracking is discussed at footnote 14.

Diagram 1 presents a summary of the steps and approximate timelines to finalize the Draft Prospectus. Timelines are contingent upon timely submittal of requested information.

7. PROSPECTUS. If the USACE determines the mitigation bank has merit and recommends that additional investigations are warranted for the proposed bank site, the Bank Sponsor may develop and submit a prospectus for the bank site. The Prospectus is the document that is used to demonstrate that there is a need for the mitigation bank; to characterize the existing site conditions; to identify potential site challenges/opportunities in the watershed; to describe onsite construction efforts; and to provide site management options, protective measures and other measures to ensure the long term success of the bank.

7.1. **Required Elements.** The information to be provided in the Prospectus¹⁶ along with the information presented in the draft Prospectus will be used to support the development of the bank's PN¹⁷ and mitigation plan.¹⁸ Information required includes the following:

7.1.1. USACE-Verified Delineation of On-site Waters of the US. The delineation shall be performed utilizing 1987 Wetland Delineation Manual (<http://el.ercd.usace.army.mil/elpubs/pdf/wlman87.pdf>) and the ordinary high water mark as described in RGL 05-05 (<http://www.usace.army.mil/CECW/Documents/cecwo/reg/rgls/rgl05-05.pdf>).¹⁹

7.1.2. Section 7 of the Endangered Species Act. Statement of potential effects on federal and state threatened and endangered species and supporting analysis for USACE determination.

7.1.3. Section 106 of the National Historic Preservation Act. Statement of potential effects on cultural resources and supporting analysis for USACE determination.

7.1.4. Detailed Baseline Data Collection Plan for Wetlands. The plan should provide details on the proposal for collecting the following data; actual baseline data is not required in the prospectus. The plan must include a methodology for analyzing collected baseline data and discuss anticipated results to be provided in the baseline study report.

7.1.4.1. Description of soils on site. (Soil classification descriptions can be found at <http://soils.usda.gov/technical/classification/osd/index.html>)

7.1.4.2. Description of current vegetation on site.

¹⁶Appendix 5 includes the outline to be used for addressing the topics presented herein.

¹⁷The purpose of a PN is to provide a summary of the Prospectus and indicate that the full Prospectus is available to the public upon request [33 CFR Part 332.8 (d)(4)]. The bank sponsor may submit an electronic Word copy of the PN to expedite the process. Appendix 3 provides an example PN.

¹⁸The Mitigation Plan must address the 12 criteria required in the Rule and provide clarity as to how the sponsor intends to construct a mitigation bank. The topics provided as components of the mitigation plan should be addressed briefly in the Prospectus and detailed in the BI.

¹⁹USACE will verify delineation of waters, with an expanded preliminary jurisdictional determination and forward a copy of the findings to the IRT members when the PN is issued for the bank. See the Savannah District website for protocols and forms for performing an expanded preliminary jurisdictional determination.

7.1.4.3. Location of transects for collecting vegetative species data.

7.1.4.4. Hydrologic monitoring plan:²⁰

- (a) Method for collection of data regarding flood frequency & duration of inundation.
- (b) Location, including reference map, and number of hydrologic monitoring wells proposed for the bank site and the associated proposed wetland reference site.
- (c) A discussion of why data collected from wells would adequately document variations in site hydrology.
- (d) Information on the type of wells proposed for use, and the frequency and duration of data collection.

7.1.5. Detailed Baseline Data Collection Plan for Streams. The plan should provide details on the proposal for collecting the following data; actual baseline data is not required in the prospectus. The plan must include a methodology for analyzing collected baseline data and discuss anticipated results to be provided in the baseline study report.

7.1.5.1. Method for collecting geomorphic data (see Table 2 in SOP at Appendix 1.6).

7.1.5.2. Stream flows using (ephemeral, intermittent, or perennial) NC, or USACE approved, methodology – (NC Method can be found at http://h2o.enr.state.nc.us/ncwetlands/documents/NC_Stream_ID_Manual.pdf).

7.1.5.3. Location of stream gauges.

7.1.5.4. Rosgen Classification - (Rosgen Stream Classification System can be found at http://www.wildlandhydrology.com/assets/ARM_5-3.pdf).

7.1.5.5. Simon Channel Evolution stage – (Simon Channel Evolution System can be found <http://www.epa.gov/warsss/sedsource/successn.htm>).

7.1.5.6. Geomorphic conditions .

7.1.5.7. Fish and benthos IBI – (Fish IBI http://georgiawildlife.dnr.state.ga.us/assets/documents/SOP_Part1.pdf; and Benthos IBI http://www.gaepd.org/Files_PDF/gaenviron/WPB_Macroinvertebrate_SOP/Macroinvertebrate_Wadeable_Streams.pdf).

7.1.5.8. Location of a reference stream(s), if applicable.

7.1.5.9. Riparian vegetation sampling.

7.1.6. Conceptual Mitigation Work Plan. Provide written specifications and work descriptions for the following:

²⁰Typically, collection of one year of baseline hydrology data is required in order to adequately characterize a wetland site.

7.1.6.1. Construction methods, timing, and sequence.

7.1.6.2. Methods for establishing the desired plant community.

7.1.6.3. Plans to control invasive plant species.

7.1.6.4. Soil management and erosion control measures.

7.1.6.5. For stream projects, the plan form geometry, channel form (e.g., typical channel cross-sections) and design discharge.

7.1.7. Summary of chemical baseline data collected for Streams.

7.1.8. Property Ownership. All the requirements set out in 5.1.9 are still applicable. In preparation for review of the Declaration of Conservation Covenants and Restrictions by Office of Counsel, identify the attorney that will prepare the restrictive covenants by name, telephone, address, email and fax number. The attorney for the bank sponsor should review the model language and instructions for the surveyor, legal description and have a consultant review the instructions for an exhibit that addresses the conservation services, functions and values. Title Insurance will be required to be submitted if the banking instrument is approved.

7.1.9. Statements Regarding Concurrence/Agreement to:

7.1.9.1. Address need for Adaptive Management, Contingency, Long-Term Management and/or Long-Term Maintenance Plans (Section 8).

7.1.9.2 Financial Assurances.

7.1.9.2. Use Bank Credit Methodology provided in Appendix 1.6, Attachments A, B, C and D; Performance/Success Criteria in Appendix 1.6, pages 7 and 8 ; Monitoring Criteria in Appendix 1.6, page 7; Reporting Protocol in Appendix 6; Tracking and Monitoring Procedures in Section 13; Credit Release Schedule in Section 12.

7.1.9.3. Be legally responsible for compensatory mitigation requirements once a permittee secures credits from the bank.

7.1.9.4. Comply with standard default and closure provisions.

7.2. **Prospectus Approval Process.** The Prospectus (or BI modification) approval process is as follows:

7.2.1. Prospectus Submittal. The Sponsor shall submit a prospectus to the USACE for review.

7.2.2. Within 30 Calendar Days of Receipt of the Prospectus, the USACE will review the submittal for completeness. If the Prospectus is complete, the USACE will request the bank

sponsor to provide copies of the prospectus to the IRT and publish a PN advertising the proposal.

7.2.3. Incomplete Prospectus. If the Prospectus is not complete, the USACE will identify what additional required element(s) needs to be addressed to complete the submittal and request these from the bank sponsor. If the bank sponsor fails to provide requested information within 45 calendar days, the project will be administratively withdrawn until the information is received. Once the additional information is submitted to the USACE, the initial 30 day review period will start over.

7.2.4. Complete Prospectus. If the Prospectus is complete and a PN is published, the comment period for the PN shall be 30 days, unless the USACE determines that a longer comment period is appropriate.

7.2.5. USACE and IRT Comments. The USACE and IRT members may also provide comments to the sponsor during the comment period, and copies of any such comments will also be distributed to all IRT members. All comments shall be substantive and offer constructive input to assist the bank sponsor in drafting an acceptable BI.

7.2.6. Within 15 Calendar Days of the Close of the PN Comment Period, the USACE will provide copies of all comments received in response to the PN to the IRT members and the bank sponsor.

7.2.7. Within 30 Calendar Days of the Close of the PN Comment Period, the USACE must provide written notification (via letter or email) to the sponsor and the IRT members discussing the practicability of the proposal and any additional information needed to proceed with preparation of the BI.

7.2.8. Final Baseline Study Plan. Once the bank sponsor has made any necessary corrections to the baseline study plan and prior to collection of baseline data, the bank sponsor shall submit a final baseline monitoring plan for USACE review and approval.

Diagram 2 presents a summary of the steps and approximate timelines to finalize the Prospectus. Timelines are contingent upon timely submittal of requested information.

8. DRAFT BANKING INSTRUMENT. If the USACE determines the Prospectus has merit and recommends that additional investigations are warranted for the proposed bank site, the Bank Sponsor may develop and submit a draft BI for the bank site. The BI shall additionally describe in detail the physical and legal characteristics of the mitigation bank and how it will be established and operated.

8.1. **Required Elements.** Specific elements to be addressed in the draft BI Final Mitigation Plan²¹ are below:

8.1.1. Baseline Study Findings.

²¹Appendix E includes the outline to be used for addressing the topics presented herein.

8.1.2. Mitigation Work Plan. Provide a detailed plan for the compensatory mitigation project, including, but not limited to:

8.1.2.1. A 60% design construction plan (i.e., preliminary design); including plan, profile and cross-section drawings necessary to adequately depict all proposed work. The plan must be of sufficient detail for the USACE to be able to clearly determine if and when work has been accomplished in accordance with the plan.

8.1.2.2. Construction methods (include description of equipment, materials, and methods to complete proposed work activity).

8.1.2.3. Construction timing and sequence (include a schedule showing earliest start and latest completion dates for all significant activities).

8.1.2.4. Drawings in accordance with the requirements given in the SOP (Appendix 1.6, page 8).

8.1.2.5. Source for native vegetation proposed for planting.

8.1.2.6. Methods for establishing the desired plant community.

8.1.2.7. Plans to control existing or potential invasive plant species.

8.1.2.8. Plans to control existing nuisance animals (i.e. beavers, deer, cows, feral hogs, etc.).

8.1.2.9. The proposed grading plan; including elevation(s) and slope(s) of the proposed mitigation area to ensure they conform with required elevation and hydrologic requirements, if practicable, for target plant species.

8.1.2.10. Soil management and erosion control measures.

8.1.3. Site Ownership and Protection. The following language should be placed in the BI:

8.1.3.1. Upon approval of the BI, the attorney for the bank sponsor will prepare a Declaration of Conservation Covenants and Restrictions using the model language provided on the USACE District web site and will submit it to Office of Counsel for review and approval prior to recording. The surveyor will follow the instructions provided for the platted survey and legal description. The Declaration shall be recorded in the record deeds office in the county in which the land lies and a recorded copy shall be provided to Office of Counsel showing the book and page numbers of its recorded location.

8.1.3.2. At any time during the life of the mitigation bank, should the real property and/or mitigation bank be transferred, sold, conveyed, merge with another entity, partnership, corporation or business, be subject to foreclosure, bankruptcy, judgment or any other action affecting the ownership of the real property and/or mitigation bank, the owner of the property and/or mitigation bank shall notify the USACE in writing a minimum of sixty days prior to any transfer or action affecting the sale of the real property or mitigation bank. No further credits

shall be sold until the USACE has reviewed the information and acknowledged the new owner. USACE shall determine whether the mitigation bank is in compliance and whether it may continue to operate and sell credits.

8.1.3.3. Should the mitigation bank sponsor determine to cease operation, notice should be provided to USACE.

8.1.3.4. The bank sponsor shall be responsible for repair of any damages to the environmental function and service of the bank site caused by trespass, vandalism, unauthorized uses or severe weather. Once the mitigation bank requirements and all monitoring has been completed, and all credits have been sold or ceased, then any damage to the bank property streams, wetlands and buffers caused by an Act of God, shall not be required to be restored. Except for Acts of God, the owner of the property shall be subject to requirements of long term management as set out in a management plan.

8.1.4. Financial Assurance (FA). The USACE shall require sufficient financial assurances to ensure a high level of confidence that the compensatory mitigation project will be successfully completed in accordance with applicable performance standards. In cases where an alternate mechanism is available to ensure a high level of confidence that the compensatory mitigation will be provided and maintained, the USACE may determine that financial assurances are not necessary for that compensatory mitigation project.

As discussed above at Section 6.1.12., the USACE will make a case-by-case determination on all proposed mitigation banks concerning whether the standard credit release schedule system of FA would be adequate to provide a high level of confidence of success, or if additional monetary FA would be required during the construction and/or monitoring phases of the bank.

If the USACE determines that FA is necessary for a proposed mitigation bank, the amount required will be determined by the USACE, in consultation with the project sponsor, and will be based on the size and complexity of the compensatory mitigation project, the degree of completion of the project at the time of project approval, the likelihood of success, the past performance of the project sponsor, and any other factors the USACE deems appropriate. FA may be in the form of performance bonds, escrow accounts, casualty insurance, letters of credit, legislative appropriations for government sponsored projects, or other appropriate instruments, subject to the approval of the USACE. The rationale for determining the need for and amount of the required FA must be documented in the draft BI. If financial assurances are required, the DA permit must include a special condition requiring the financial assurances to be in place prior to commencing the permitted activity. Under most circumstances, the financial assurance should address construction, maintenance, and annual monitoring costs associated with the proposed mitigation bank site. In determining the assurance amount, the USACE may also consider the cost of providing replacement mitigation, including costs for land acquisition, planning and engineering, legal fees, and mobilization. If FA is required, the following criteria are applicable:

8.1.4.1. FA will be phased out as performance standards are met. Once the mitigation bank has been determined by the USACE to be successful in accordance with its performance standards (i.e. upon completion of final success and release of final credits), the remaining obligations in

the FA will be released. The BI must clearly specify the conditions under which the FA are to be released to the permittee, sponsor, and/or other FA provider, including, as appropriate, linkage to achievement of performance standards, adaptive management, etc.

8.1.4.2. FA must be in a form that ensures the USACE will receive notification at least 120 days in advance of any termination or revocation. For third-party assurance providers, this may take the form of a contractual requirement for the assurance provider to notify the USACE at least 120 days before the assurance is revoked or terminated.

8.1.4.3. FA shall be payable at the direction of the USACE to his designee or to a standby trust agreement. When a standby trust is used (e.g., with performance bonds or letters of credit), all amounts paid by the FA provider shall be deposited directly into the standby trust fund for distribution by the trustee in accordance with the USACE's instructions. Situations that may result in payment of the FA could include, but are not limited to, default before the restoration work is completed, damage to the site during the monitoring period that is not adequately addressed by the bank's sponsor, or any other situation that leaves the site in a non-compliant condition where additional actions are necessary to correct non-functioning conditions.

8.1.5. Adaptive Management and Contingency Plans. The USACE acknowledges that it would be impractical for the bank sponsor to develop an adaptive management plan to address every potential problem that could arise during site construction and until the monitoring period has ended. However, the bank sponsor must make a statement in the BI acknowledging the potential for problems and the need for flexibility and responsiveness to address and correct such potential problems. To the extent practicable, the bank's sponsor should indicate that the BI will include specifics with regard to the potential for minor changes in site construction design to alleviate the need for formal modification of the approved BI. In the event that a mitigation bank cannot be constructed in accordance with the BI or if monitoring indicates that performance standards are not being met, the BI needs to include procedures for modification of the BI. Modification to the BI might include site modifications, design changes, revisions to maintenance requirements, revised monitoring requirements, revised performance standards and a resulting reduction of credit calculations. The bank sponsor must also acknowledge in the BI responsibility for proposing and implementing adaptive management measures necessary to correct adverse impacts to the bank site that may occur from a catastrophic event (e.g., wildfire, drought, flood, tornado, acts of vandalism, or encroachment) throughout the monitoring period.

8.1.6. Long-Term Management Plan, if Required. The Rule states that compensatory mitigation projects shall be designed, to the maximum extent practicable, to be self-sustaining once performance standards have been achieved. It has been and will continue to be the policy of the USACE that all mitigation banks must be self-sustaining. Physical features such as pumps, weirs, etc., that would require active long-term management generally would not be approved. Therefore, it is the position of the USACE that a long-term management plan would not be required for most banks. The BI must include a statement concerning the long-term sustainability of the proposed mitigation bank and whether there would be the need for a long-term management plan. Should the bank sponsor believe that a long-term management plan would be required, the BI must include adequate information necessary for the USACE to determine the long-term viability of the bank. In addition, the BI must identify the party

responsible for conducting all long-term management needs of the project. The BI may contain provisions allowing the sponsor to transfer the long-term management responsibilities of the project site to a land stewardship entity, such as a public agency, non-governmental organization, or private land manager, after review and approval by the USACE. The land stewardship entity need not be identified in the original permit or instrument, as long as the future transfer of long-term management responsibility is approved by the USACE.

8.1.7. Long-Term Maintenance Plan. The long-term maintenance plan should address all anticipated regularly scheduled activities that would be required at the mitigation bank site, after active monitoring has been completed. Long-term maintenance activities might include prescribed burning, invasive species control, fence repair, sign replacement, property inspections and reporting of encroachments. The plan must include a provision for long-term financing mechanisms where necessary. It would be anticipated that most long-term maintenance would be addressed through the use of a Conservation Easement (CE); with clauses and monetary support for the long-term maintenance requirements. In the event that a suitable CE holder cannot be located, the BI must identify the party responsible for ownership of all long-term maintenance of the project. The BI may contain provisions allowing the sponsor to transfer the long-term maintenance responsibilities of the bank site to a land stewardship entity, such as a public agency, non-governmental organization, or private land manager, after review and approval by the USACE. The BI must identify the party responsible for conducting all long-term maintenance needs of the project. Specific activities that would be included in the long-term maintenance plan include, but are not limited to:

8.1.7.1. Signage – Normally signage around the perimeter of the bank site will be necessary to protect against encroachments during and following construction activities. Signs will be placed at an appropriate height and spaced close enough together to provide an uninterrupted visual boundary. Signs will be a minimum of 8" width X 11" length, constructed of durable weather resistant material, properly maintained, and will remain posted for perpetuity. The signs shall state: "Wetland and/or Stream Mitigation Bank, No Trespassing", or other appropriate phrase, which must be approved by the IRT prior to posting. If the bank sponsor does not believe that signs would be needed to protect against encroachment, the reason must be stated.

8.1.7.2. Fencing – Fencing may be required to prevent nuisance animal and/or vehicular traffic entry into the bank site. If fencing is proposed, it will be three-strand barbed wire, at a minimum.

8.1.7.3. Roads – Existing roads may be maintained during the monitoring period in order to allow access for site work and inspections. Maintenance of any existing road to remain after the monitoring period must be addressed. Only roads necessary for approved recreational access will be allowed to remain. Road maintenance will be limited to mowing, minor grading and culvert replacement. No hard surfacing will be allowed (e.g., asphalt, gravel, stone).

8.1.7.4. Walking Trails – Pervious, non-intrusive walking trails may be installed in the upland and maintained, provided the bank site is to be used for outdoor educational purposes, and the USACE approves this use.

8.1.7.5. Wildlife Viewing Platforms – Wildlife viewing platforms may be installed and maintained, provided the bank site is to be used for outdoor educational purposes, and the USACE approves this use.

8.1.7.6. Timber Management – Management of timber is discouraged; natural processes are preferred. If timber management is proposed, it can only be for ecological enhancement of the site; no commercial harvesting will be allowed. Tree removal is discouraged; cutting trees and felling in place is preferred. The timber management plan must include the specific wildlife and tree species targeted for management, desired basal area, timing of cutting and other information necessary to clearly define the purpose of management.

8.1.8. Long-Term Management and Maintenance Funding. If the USACE has determined that the mitigation bank site will be ecologically self-sustaining once performance standards have been achieved (i.e. after final success and release of final credits), as described above, long-term management financing mechanisms may not be applicable. As indicated above, the bank sponsor must provide documentation to demonstrate that the mitigation bank site will be ecologically self-sustaining once performance standards have been achieved and should not require any long-term management financing mechanism.

Financing mechanisms will be required by USACE to support long-term maintenance as described in 8.1.7. The bank sponsor is responsible for providing for such management, maintenance, and long-term financing mechanisms.

Any provisions necessary for long-term financing must be addressed in the draft BI. The USACE may require provisions to address annual cost estimates, inflationary adjustments and other contingencies, as appropriate. Appropriate long-term financing mechanisms include non-wasting endowments, trusts, contractual arrangements with future responsible parties, and other appropriate financial instruments. In cases where the long-term management entity is a public authority or government agency, that entity must provide a plan for the long-term financing for maintenance of the site.

The long-term maintenance fund shall be in an amount sufficient to provide for the financial requirements of the long-term maintenance of the Bank in accordance with the Long-Term Maintenance Plan and the financing mechanism analysis and schedule.

In general, the bank sponsor shall provide a financial analysis that breaks down each of the long-term maintenance tasks, and demonstrates the cost associated with each task. For example, a Property Analysis Record (PAR), developed by the Center for Natural Lands Management, is an acceptable method that may be used for determining the amount of principal required to fully fund the long-term maintenance fund. The PAR is a computerized database methodology that calculates the cost of land management/maintenance on specific project inputs, goals, and final outcomes in perpetuity. Costs estimates are based on tasks implemented by a third party in present day dollars or equipment prices in present day dollars as well as other necessary administrative costs. Another way to fund long term maintenance would be through the use of an escrow account, as discussed at Section 12.1.2.1. A bank sponsor may propose another type of long-term financial funding, which would be subject to the approval of the USACE.

Funding to perform the long-term maintenance should be released yearly on an as needed basis. Funds for long-term maintenance should not be available until all success criteria have been met and the final credit release has been issued.

The long-term financing mechanism and a funding or trust agreement detailing the funding and distribution schedules for the long-term maintenance fund shall be provided by the bank sponsor in the final BI and are subject to approval by the USACE.

The Bank Sponsor shall fund the principal through deposits such that the principal is funded as follows:

8.1.8.1. A minimum of 100% of the principal for long-term maintenance shall be funded prior to the release of the credits following the sixth year of monitoring.

8.1.8.2. Any provisions necessary for long-term financing must be addressed in the original permit or instrument. The USACE may require provisions to address inflationary adjustments and other contingencies, as appropriate.

8.1.8.3. Principal fund deposits made by the Bank sponsor will be identified in the yearly monitoring reports provided to the IRT. At such time as the principal amount is fully funded, the Bank sponsor will provide final notice of long-term financing compliance to the IRT.

8.1.9. Bank Credit Methodology. Sponsor shall utilize the standard method for calculation of mitigation credits, as outlined in the SOP (Appendix 1.6), and provide completed worksheets to demonstrate how many credits of each type (i.e. stream, wetland) could potentially be generated, and the calculations used to reach that number.

8.1.10. Credit Release Schedule. The credit release schedule must be tied to achievement of specific milestones. All credit releases must be approved by the USACE, in consultation with the IRT, based on a determination that required milestones have been achieved. The USACE, in consultation with the IRT, may modify the credit release schedule, including reducing the number of available credits or suspending credit sales or transfers altogether, where necessary to ensure that all credit sales or transfers remain tied to compensatory mitigation projects with a high likelihood of meeting performance standards. Details regarding credit release schedules may be found below in Section 12.

8.1.11. Performance/Success Criteria. The sponsor shall utilize the applicable performance standards and success criteria, as outlined in the Mitigation Metrics and Performance Standards (Appendix 10), for each discreet segment/phase of the bank site and thoroughly discuss how these criteria will be used to document annual and final success.

8.1.12. Monitoring Criteria. The sponsor shall discuss how, when, where and why specific criteria are to be monitored for each discreet segment/phase of the bank site and how data collected will be used to assist with documentation of success. Suggested core and supplementary monitoring variables have been outlined in Appendix 10.

8.1.13. Reporting Protocols. A detailed discussion of specific reporting protocols for the submittal of monitoring reports or other status updates to the USACE may be found in Appendix 6. The sponsor should identify in this section which aspects detailed in Appendix 6 are applicable to the specific bank site, and which reporting criteria will be addressed.

8.1.14. Accounting Procedures. A detailed discussion of required accounting procedures for the tracking of mitigation credit sales, releases, and availability may be found in Appendix 7. The sponsor must comply with all aspects outlined in Appendix 7.

8.1.15. Adopt Standard Default and Closure Provisions. The following default and closure clause shall be included in all Draft/Final BIs: “In the event the bank sponsor defaults (i.e. fails to meet milestones, perform necessary repair and maintenance, provide timely monitoring reports, or any other responsibility identified in the BI), the USACE will notify the bank sponsor in writing that the bank is out of compliance and request a response within 30-days detailing how the discrepancies will be corrected. If no satisfactory resolution is reached, the USACE will close the subject bank and all remaining credits, either released or not, will be null and void. The bank will no longer be an acceptable source of compensatory mitigation for Department of the Army permits.” If the default and closure clause is activated, the USACE will make a determination as to what additional work or repair needs to take place to achieve the mitigation plan’s objective. If additional work is deemed necessary, the FA will be employed to fund the necessary work.

8.1.16. Statement that legal responsibility for providing compensatory mitigation lies with the sponsor once a permittee secures credits from the sponsor.

8.2. **Draft BI Approval Process**. The approval process is as follows:

8.2.1. BI Submittal. The Sponsor shall submit a draft BI to the USACE for review, comment, and consultation.

8.2.2. Within 30 Calendar Days of Receipt of the Draft BI, the USACE will review the submittal for completeness.

8.2.3. Complete Draft BI. If the draft BI is complete, the USACE will request the bank sponsor provide copies of the draft BI to the IRT. In addition, the bank sponsor will send a copy of the draft BI to the Savannah District Office of Counsel.

8.2.4. Incomplete Draft BI. If the draft BI is not complete, the USACE will identify what additional element(s) needs to be addressed to complete the submittal and request this from the bank sponsor. If the bank sponsor fails to provide requested information within 45 calendar days, the project will be administratively withdrawn until the information is received. Once the additional information is submitted to the USACE, the 30-day review period will start over.

8.2.5. Within 30 Calendar Days of Receipt of the Draft BI, the IRT members shall provide the PM with a written (letter or email) opinion (i.e., accept or provide substantive comments) on the

draft BI. IRT members shall provide rationale for decision. If a member of the IRT fails to provide an opinion on the request, the USACE will assume there are no objections to the request by that IRT member.

8.2.6. Unresolved Issues. If an IRT member has substantive unresolved issues the USACE will initiate discussions with the IRT and seek to resolve issues within an additional 30 calendar days.

8.2.7. Within 90 Calendar Days of Receipt of a Complete Draft BI, the USACE will notify the bank sponsor of what changes, if any, are needed.

Diagram 3 presents a summary of the steps and approximate timelines to finalize the Draft Prospectus. Timelines are contingent upon timely submittal of requested information.

8.3. **Timeline Extensions**. The deadlines above may be extended by the USACE where:

8.3.1. Compliance With Other Applicable Laws is Required, such as consultation under Section 7 of the Endangered Species Act or Section 106 of the National Historic Preservation Act.

8.3.2. Government-to-Government Consultation with Native American Tribes is Required.

8.3.3. Difficult to Obtain Information Required. Information needed from any party other than the sponsor which is essential to the USACE's decision cannot be reasonably obtained within the specified time frame.

8.3.4. Notification. When timeline extensions are needed by the USACE/IRT members, the USACE must promptly notify the sponsor in writing of the extension, and provide the rationale, the proposed timeline and the way forward for the request. Extensions shall be for the minimum time necessary to resolve the issue necessitating the extension.

9. FINAL BANKING INSTRUMENT. After the Draft BI is approved, the compendium of all documents collectively will be considered the Final BI. The Final BI is the approved instrument and is a legal and contractual document between the Bank Sponsor and the USACE that provides the information on how the USACE-approved bank will be operated, monitored and tracked.

The signature page for the bank document must be signed by all responsible parties, dated, and attached to the Final BI. (Appendix 4) The approval process for the BI is as follows:

9.1. The bank sponsor shall provide a copy of the approved draft BI to all IRT members. The bank sponsor shall provide a cover letter explaining changes that were made to the document to address all IRT comments/concerns that were provided on the draft BI.

9.2. Within 15 calendar days of receipt of the BI, IRT members will notify the USACE if the bank sponsor failed to adequately address their comments or resolve remaining issues.

9.3. Within 30 calendar days of receipt of the BI, the USACE will complete review the BI and determine whether it is consistent with these guidelines and the Rule. If the BI is consistent, the USACE will notify the IRT of its intent to approve the BI.

9.4. If the BI is not consistent with these guidelines and the Rule, the USACE will identify what additional required element(s) needs to be addressed to complete the submittal and request these from the bank sponsor; also within 30 calendar days of receipt of the BI. If the bank sponsor fails to provide requested information within 45 calendar days, the project will be administratively withdrawn until the information is received. Once the additional information is submitted to the USACE, the initial 30 day review period will start over.

9.5. If no IRT member objects to the BI by initiating the dispute resolution process (Section 11) within 45 days of receipt of the BI, the USACE will notify the sponsor of the final decision.

9.6. If any IRT member initiates the dispute resolution process, after receiving the BI, the USACE will notify the sponsor. Following conclusion of the dispute resolution process, the USACE will notify the sponsor of the final decision, and if the instrument or amendment is approved, arrange for it to be signed by the appropriate parties.

9.7. The final BI approval document signed by the Regulatory Division Chief and the Bank Sponsor will also serve to authorize restoration and enhancement activities described in the BI. If necessary, General and Special Conditions may be included in the permit authorization.

9.8. In accordance with the Rule, the USACE retains final authorities for approval, operation, and use of a BI in cases where the mitigation bank is used to satisfy compensatory mitigation requirements of a DA permit.²² The dispute resolution process is in the next section. Diagram 4 presents a summary of the steps and approximate timelines to finalize the BI. Timelines are contingent upon timely submittal of requested information.

10. INTERAGENCY REVIEW TEAM (IRT). IRT is an interagency group of Federal, tribal, state, and/or local regulatory and resource agency representatives that reviews documentation for and advises the USACE on establishing and managing a mitigation bank. In most cases, the IRT members may include: USACE; EPA; US Fish and Wildlife Service (FWS); Georgia Department of Natural Resources, EPD; Georgia Department of Natural Resources, Coastal Resources Division (Georgia CRD); Georgia Department of Natural Resources, Wildlife Resources Division (Georgia WRD) and National Marine Fisheries Services (NMFS). The IRT members, within their purview, will review the Draft Prospectus, Prospectus, BI, and other appropriate documents and provide comments to the USACE on the adequacy of the

²² The USACE will: (1) Verify delineation of waters of the US on the proposed mitigation site; (2) Determine when credits are to be released to the bank for use; (3) Determine the number of credits to be released to the bank for use; (4) Oversee operation of the bank; (5) Evaluate and approve monitoring plans and reports, with input from the IRT; (6) Evaluate and approve remediation plans and efforts, with input from the IRT; (7) Suspend the BI and the use of any credit sales as compensatory mitigation until any and all non-compliance issues are resolved. Additional financial assurances can be required after bank approval if satisfactory performance/progress is not demonstrated. If satisfactory performance/progress is not demonstrated, the USACE may also suspend the BI and the use of any credit sales as compensatory mitigation for Department of the Army Permits until any and all non-compliance issues are resolved; and (8) Determine when a bank has met all applicable success criteria, and approve the final release of credits, with input from the IRT. A final inspection of the bank site should be made by the IRT prior to the final release of credits.

documents.²³ After a BI is approved, the IRT members shall continue to provide assistance in reviewing and commenting on monitoring reports, adaptive management, contingency, and remedial actions, and other BI modifications that may arise. Within 15 days of receipt of one of the above documents, the IRT members will provide comments to the USACE for consideration.

The USACE will notify the IRT members of scheduled annual inspections of each active mitigation bank. If possible, IRT members should attend these site visits and provide comments to the USACE for consideration.

11. DISPUTE RESOLUTION. The dispute resolution process is as follows:

11.1. Within 45 day of receipt of a final BI, and after receipt of the USACE's notification of intent to approve a BI or amendment, the Regional Administrator of the EPA, the Field Supervisor of the FWS, the Regional Director of the NMFS, and/or other senior officials of agencies represented on the IRT may notify the USACE and other IRT members, by letter, if they object to the approval of the proposed final BI or amendment. This letter must include an explanation of the basis for the objection and, where feasible, offer recommendations for resolving the objections. If the USACE does not receive any objections within this time period, they may proceed to final action on the BI or amendment.

11.2. Within 30 calendar days of receipt of a letter of objection, the USACE must respond to the objection. The USACE's response may indicate their intent to not approve the BI or amendment as a result of the objection, intent to approve the BI or amendment despite the objection, or may provide a modified BI or amendment that attempts to address the objection. The USACE's response must be provided to all IRT members.

11.3. Within 15 calendar days of receipt of the USACE's response, the Regional Administrator or Regional Director may forward the issue to the Assistant Administrator for Water of the EPA, the Assistant Secretary for Fish and Wildlife and Parks of the FWS, or the Undersecretary for Oceans and Atmosphere of NOAA may further elevate the dispute to HQUSACE. In this case, the party responsible for the elevation must also notify the USACE by letter (with copies to all IRT members) that the issue has been formally elevated for HQUSACE review. This step is available only to IRT members representing federal agencies, however, other IRT members who do not agree with the USACE's final decision do not have to recognize the mitigation bank for purposes of their own programs and authorities. If an IRT member other than the one filing the original objection has a new objection based on the USACE's response, they may use the first step in this procedure to provide that objection to the USACE.

11.4. If the issue has not been forwarded to the objecting agency's Headquarters, then the USACE may proceed with final action on the BI or amendment.

11.5. If the issue has been forwarded to the objecting agency's Headquarters, the USACE must hold in abeyance the final action on the BI or amendment, pending HQUSACE level review described below.

²³Each agency shall ensure that their respective legal requirements are adequately addressed in the BI, as required under law.

11.6. Within 20 calendar days from the date of the letter requesting HQUSACE level review, the Assistant Administrator for Water, the Assistant Secretary for Fish and Wildlife and Parks, or the Undersecretary for Oceans and Atmosphere must either notify the Assistant Secretary of the Army (Civil Works) (ASA (CW)) that further review will not be requested, or request that the ASA (CW) review the final BI or amendment.

11.7. Within 30 calendar days of receipt of the letter from the objecting agency's Headquarters request for ASA (CW)'s review of the final BI, the ASA (CW), through the Director of Civil Works, must review the draft BI or amendment and advise the USACE on how to proceed with final action on that BI or amendment. The ASA (CW) must immediately notify the Assistant Administrator for Water, the Assistant Secretary for Fish and Wildlife and Parks, and/or the Undersecretary for Oceans and Atmosphere of the final decision.

11.8. In cases where the dispute resolution procedure is used, the USACE must notify the sponsor of his/her final decision within 150 calendar days of receipt of the final BI or amendment.

Diagram 6 presents a summary of the steps and approximate timelines to complete the Policy Dispute Resolution Process.

12. CREDIT RELEASES: A phased credit release schedule is required for all banks. The credit release schedule addresses the systematic release of credits during the construction phase and the minimum seven-year monitoring period. The credit release schedule will detail when specific milestones are to be completed and the amount of credit proposed for release upon successful completion of each milestone.

12.1. Selection of an Appropriate Credit Release Schedule. As discussed at Section 6.1.12, the USACE will make a case-by-case determination on all proposed mitigation banks during review of the draft prospectus, concerning whether credits release schedule 1 will be adequate to provide a high level of confidence of success, or if additional monetary financial assurances would also be required through the use of credits release schedules 2 or 3. The determination which credit release schedule would be appropriate for a particular mitigation bank proposal is at the sole discretion of the USACE and will be made during the draft prospectus review phase of the BI approval process. The USACE will make a case-by-case determination on each bank proposal based on information provided by the bank sponsor, including but not limited to: success with past mitigation banks in Georgia or other states; bank sponsors financial status; probability of bank success; past experience of the environmental consulting firm to design and implement the mitigation bank; and experience of the team designing the stream or wetland restoration project and the contractors who will install the project.

12.1.1. Summary of Credit Release Schedules. Table 3 below provides a limited summary of the three below discussed credit release schedules. Credit release procedures are not included in this table; all applicable procedures and prerequisites for credit releases are discussed below.

Year	Documented Activity, in List Sequence	Schedule 1	Schedule 2	Schedule 3
1	BI , RC, FA and/or Escrow	0%	10%	0%
1	Construction Begins	10%	10%	0%
2	Construction Completed	10%	10%	40%
3	1 st Year of Monitoring Report with Success	10%	10%	10%
4	2 nd Year of Monitoring Report with Success	10%	10%	10%
5	3 rd Year of Monitoring Report with Success	10%	10%	5%
6	4 th Year of Monitoring Report with Success	10%	10%	5%
7	5 th Year of Monitoring Report with Success	10%	5%	5%
8	6 th Year of Monitoring Report with Success	10%	5%	5%
9	7 th Year of Monitoring Report with Success	20%	20%	20%

12.1.2. Schedule 1; No Financial Assurances (FA):

12.1.2.1. The initial credit release will be no more than 10% of a bank’s total credit potential; and will be granted only after the bank sponsor submits documentation to the USACE that restoration/enhancement work has been initiated and a restrictive covenant has been recorded.

12.1.2.2. Upon successful completion of all required restoration/enhancement work in accordance with the BI, an additional 10% of a bank’s total credit potential will be released. The bank sponsor must submit a request for this release to the USACE, with a report documenting completion of all work. If the bank sponsor anticipates that completion of all required restoration/enhancement work would take longer than one year, a phased release of this 10% can be requested. In this situation, phasing would be 5% at the end of the first year of construction, with documentation that at least 50% of work has been completed; and the remaining 5% upon documentation that all work has been completed.

12.1.2.3. Upon successful completion of all required restoration/enhancement work, the USACE will notify the bank sponsor to begin the minimum seven-year monitoring period. All monitoring reports are to be submitted to the USACE and other participating IRT members within 30 days of completing in-the-field data collection, and no later than the end of June of each year²⁴. A minimum of ten months must pass between completion of all required restoration/enhancement work and submission of the end of first year monitoring report.

12.1.2.4. The end of first year monitoring release will be 10% of a bank’s total credit potential; and will be granted only after submission of the required monitoring report, completion of a compliance inspection, submission of comments and recommendations of the IRT and verification by the USACE that performance standards are being met²⁵.

²⁴ The bank sponsor shall submit a hard and electronic copy of all monitoring reports to the USACE and IRT agencies that participated in the BI approval process.

²⁵ The USACE Project Manager will notify IRT representatives a minimum of 15 days prior to the date of an annual monitoring inspection. Within 15 days of the date of the scheduled annual monitoring inspection, IRT members will submit comments and recommendations to the USACE.

12.1.2.5. End of year two, three, four, five and six releases will be 10%; and will be granted only after submission of the required monitoring report, completion of a compliance inspection, submission of comments and recommendations of the IRT, and verification by the USACE that performance standards are being met.

12.1.2.6. A minimum of 20% of a bank's total credit potential will be withheld until the end of the monitoring period.

12.1.2.7. Only after submission of the final monitoring report, completion of the final compliance inspection, and review of final IRT comments and recommendations would the USACE consider a final credit release.

12.1.2.8. Should any performance measures fail to be met at any point during the monitoring period, the USACE will suspend all further credit releases until the bank is brought into compliance.

12.1.2.9. Use of Schedule 1 may be appropriate for proposed banks where: the bank sponsor, environmental consultant, mitigation designer and contractors all have a track record of successful banks in Georgia or other states; the bank sponsor has the sufficient financial resources to accomplish mitigation work, monitoring, etc.; and the proposed bank site and mitigation plan have a very high probability of success.

12.1.3. Schedule 2: Construction and Monitoring Financial Assurances (FA):

12.1.3.1. The initial credit release will be no more than 10% of a bank's total credit potential; and will be granted only after the bank sponsor submits documentation to the USACE that a restrictive covenant has been recorded and Construction and Monitoring FA²⁶ are implemented.

12.1.3.2. A second credit release of 10% of a bank's total credit potential will be granted only after site construction work has been initiated. The bank sponsor must submit a request for this release to the USACE, with documentation of initiation of work.

12.1.3.3. Upon successful completion of all required restoration/enhancement work in accordance with the BI, an additional 10% of a bank's total credit potential will be released. The bank sponsor must submit a request for this release to the USACE, with a report documenting completion of all work. Once the USACE has verified that all site construction work has been successfully completed in accordance with the BI, the USACE will then notify the bank sponsor that Construction FA are released and no longer required.

12.1.3.4. Upon successful completion of all required restoration/enhancement work, the USACE will notify the bank sponsor to begin the minimum seven-year monitoring period. All

²⁶ Monitoring Financial Assurances shall be in the form of an escrow account with funds derived from credit sales. The monetary amount of the fund will be adequate to replace potential deficits in aquatic function resulting from failure(s) of the bank to meet success criteria. Credit sale derived deposits to the escrow account will be progressive; with a greater percentage from early sales and a lesser percentage from later sales (i.e., 80% of the target fund amount will be deposited when 50% of credits have been sold).

monitoring reports are to be submitted to the USACE and other participating IRT members within 30 days of completing in-the-field data collection, and no later than the end of June of each year. A minimum of ten months must pass between completion of all required restoration/enhancement work and submission of the end of first year monitoring report.

12.1.3.5. The end of the first, second, third and fourth year monitoring release will be 10% of a bank's total credit potential; and will be granted only after submission of the required monitoring report, completion of a compliance inspection, submission of comments and recommendations of the IRT and verification by the USACE that performance standards are being met.

12.1.3.6. The end of the fifth and sixth year releases will be 5%; and will be granted only after submission of the required monitoring report, completion of a compliance inspection, submission of comments and recommendations of the IRT and verification by the USACE that performance standards are being met.

12.1.3.7. A minimum of 20% of a bank's total credit potential will be withheld until the end of the monitoring period.

12.1.3.8. Only after submission of the final monitoring report, completion of the final compliance inspection, and review of final IRT comments and recommendations would the USACE consider a final credit release.

12.1.3.9. Should any performance measures fail to be met at any point during the monitoring period, the USACE will suspend all further credit releases until the bank is brought into compliance.

12.1.3.10. Use of Schedule 2 may be appropriate for proposed banks where: the bank sponsor, environmental consultant, mitigation designer or contractors do not have a track record of successful banks in Georgia or other states; there is question or concern that the bank sponsor has the sufficient financial resources to accomplish mitigation work, monitoring, etc.; and/or there is question or concern with the probability of success for proposed bank site and/or mitigation plan.

12.1.4. Schedule 3; Monitoring Financial Assurances (FA):

12.1.4.1. The initial credit release will be no more than 40% of a bank's total credit potential; and will be granted only after the bank sponsor submits documentation to the USACE that a restrictive covenant has been recorded, Monitoring FA are implemented and all required restoration/enhancement work has been successful completion of in accordance with the BI. The bank sponsor must submit a request for this release to the USACE, with a report documenting completion of all work.

12.1.4.2. Upon successful completion of all required restoration/enhancement work, the USACE will notify the bank sponsor to begin the minimum seven-year monitoring period. All monitoring reports are to be submitted to the USACE and other participating IRT members within 30 days of completing in-the-field data collection, and no later than the end of June of

each year. A minimum of ten months must pass between completion of all required restoration/enhancement work and submission of the end of first year monitoring report.

12.1.4.3. The end of the first and second year monitoring release will be 10% of a bank's total credit potential; and will be granted only after submission of the required monitoring report, completion of a compliance inspection, submission of comments and recommendations of the IRT, and verification by the USACE that performance standards are being met.

12.1.4.4. The end of the third, fourth, fifth and sixth year releases will be 5%; and will be granted only after submission of the required monitoring report, completion of a compliance inspection, submission of comments and recommendations of the IRT, and verification by the USACE that performance standards are being met.

12.1.4.5. A minimum of 20% of a bank's total credit potential will be withheld until the end of the monitoring period.

12.1.4.6. Only after submission of the final monitoring report, completion of the final compliance inspection and review of final IRT comments and recommendations would the USACE consider a final credit release.

12.1.4.7. Should any performance measures fail to be met at any point during the monitoring period, the USACE will suspend all further credit releases until the bank is brought into compliance.

12.1.4.8. Use of Schedule 3 may be appropriate for proposed banks where the bank sponsor has sufficient financial resources to accomplish all mitigation site work prior to any credit release. Other factors such as the bank sponsor, environmental consultant, mitigation designer and contractor track record and probability of success would also be considered.

12.2. **Suspension of Credit Sales:**

12.2.1. Failure to Meet Performance Criteria. The USACE may suspend credit sales at any point during the monitoring period if mitigation milestones are not accomplished in accordance with the approved BI and/or if the banker fails to satisfactorily demonstrate that performance measures are being met.

12.2.2. Credit Over-Sales. If a bank "over-sells" credits (i.e., sells more credits than have been released), the USACE will immediately suspend further credit sales from the bank. Provided the USACE approves the next scheduled credit release, twice the number of over-sold credits will be permanently deducted from the bank's total credits. After deducting the appropriate number of credits, the bank would then be allowed to resume operation.

12.2.3. Inappropriate Service Area Sale. The bank sponsor is responsible for insuring that secondary service area credits are only sold if no primary service area credits are available from another bank. If a bank sells secondary service area credits, when primary service area credits

are available from another bank, these credits will be forfeited and permanently deducted from the bank's total available credits.

12.2.4. For Banks with Wetland and Stream Credits, any suspension of credit sales would apply to all bank credits.

12.2.5. Post Suspension - Resumption of Credit Sales. If credit sales are suspended for any reason, the banker is responsible for submitting information to the USACE necessary to bring the bank into compliance with the approved BI; including but not limited to monitoring report(s), a corrective action plan, an adaptive management plan or a plan for reduction in the potential credit generation for the bank. Based on information submitted by the banker and any necessary compliance inspection(s), the USACE will determine if and when bank credit sales may resume.

13. TRACKING AND MONITORING.

13.1. **Banker Responsibilities.** Within one (1) week of selling a partial credit, a credit or several credits at the said Bank, the Banker (or his/her designee) shall complete all sections of the USACE-approved reporting form (Appendix 7) and submit it to the USACE project manager responsible for the project requiring compensatory mitigation. Addresses are as follows:

Coastal Branch, Regulatory Division
Savannah District
US Army Corps of Engineers
Attention: (USACE Project Manager)
100 W. Oglethorpe Avenue
Savannah, Georgia 31402

Regulatory Division, Piedmont Branch
Savannah District
US Army Corps of Engineers
Attention: (USACE Project Manager)
1590 Adamson Parkway, Suite 200
Morrow, Georgia 30260-1777

Additionally, the Banker (or his/her designee) shall mail a copy of the credit sale and ledger to the Savannah District, Regulatory Division, Coastal Branch at the following address:

US Army Corps of Engineers, Savannah
Attention: RD-Mitigation Banking Program
100 West Oglethorpe Avenue
Savannah, Georgia 31402

These statements will be placed in the District Office's file for all banks and entered into the Regional Internet Bank Information Tracking System (RIBITS). Credit sale ledgers will consist of a list of all credit sales from the bank up to the date of the latest credit sale and be in the spreadsheet form contained in Appendix 7.

Ledgers shall include the following for each sale: the Department of the Army Permit number, name of the permittee or project, county of impact, date of the credit sale, number of credits sold, and type of credits sold, the bank's remaining credit balance, total credits released for sale as of the date of the ledger, and the total number of credits (or range of credits) the bank could generate after all releases.

If a bank has more than one area and it is not possible to combine the credits from all areas, it may be necessary to maintain and submit separate spreadsheets for each area. A bank that has both wetland and stream credits will use separate tables for each type of mitigation statement or ledger.

In addition to the above described reporting requirements, each bank is required to periodically submit monitoring reports in accordance with each bank's approved Banking Instrument.

13.2. USACE Responsibilities. USACE tracking will occur through use of the following:

13.2.1. Fact Sheets. To aid in the selection of a credit source, the banker will be required to submit a fact sheet for each approved bank. This fact sheet will also be used by the USACE when adding newly approved banks to the website and GMITT. The information contained on the fact sheet (Appendix 8) will be provided to all members of the Savannah District Regulatory Division for their use. Certain information from the fact sheet may be posted on the website as well. The fact sheets should be used in determining which compensatory mitigation bank(s) would best meet the compensation requirements of a DA permit in light of the watershed approach, in-kind replacement of lost functions and services, and proximity to permitted impacts.

13.2.2. Regional Internet Bank Information Tracking System (RIBITS). Until further notice, the USACE will enter and track credit data using RIBITS as an internal tracking tool. Presently, Savannah District banks are loaded into RIBITS, but may only be entered, viewed, and edited by approved Savannah District personnel. If discrepancies are identified between information provided by the Banker and that maintained by the USACE, the USACE project manager for the bank will coordinate correction of the information with the appropriate party.

In the future, the USACE will implement an interactive web-based mitigation bank tracking system known as RIBITS (Regional Internet Bank Information Tracking System). RIBITS is designed to allow anyone with access to the internet to track the status of approved mitigation banks. Ultimately, it will provide up-to-date mitigation banking information to bank sponsors, permit applicants, and the general public. It will allow everyone, including the public and all governmental entities, to look for information on operational and approved mitigation banks in any locality or watershed in the State of Georgia. It will allow the public to identify those banks that provide a given type of compensatory mitigation (i.e. stream, non-tidal or tidal wetland mitigation). It will also provide the public with detailed information on banking processes and procedures.

The updated web page may publicize bank specific information such as: service area counties, service area HUC, a map of the state of Georgia with county boundaries outlined; agent information, to include company name, point of contact, address, and telephone number; total acres within the bank site; the bank type (private commercial, public commercial); wetland/stream habitat types (i.e. estuarine, lacustrine, marine, palustrine, riparian, riverine, uplands, etc.); total withdrawn credits; total released credits; total potential credits; credit release schedules; credit ledger, to include transaction type (establishment, release, or withdrawal), date of transaction, habitat type, credit transactions (number of credits established, released, or withdrawn for each transaction), total credits withdrawn, balance of released credits, balance of

maximum potential credits, types of credits (wetland or stream), and impact HUC; a cyber repository (electronic copies of final BI which may include site performance standards, baseline site evaluations, monitoring requirements, credit release requests), monitoring reports, service area maps, and any final BI modifications; the USACE project manager assigned to each bank, and the IRT members along with respective contact information.

The web page will **NOT** publicize any confidential or proprietary information including but not limited to: credit prices, purchaser lists, sales statements, proof of purchase letters, any costs of bank property, taxes, labor costs, business costs, or any other monetary information related to any bank.

RIBITS is a dynamic system, and upon the Savannah District's total conversion, bank sponsors will be required to upload all credit transaction data for those banks under their responsibility. Bank sponsors will include a statement in each BI stating: "each credit transaction will be entered into RIBITS within 48 hours of each transaction in order to reflect an accurate credit balance." The USACE will include a special condition in each bank approval document stating that: "each credit transaction will be entered within 48 hours of that transaction. If the bank sponsor does not accurately enter all credit transactions, credit sales will be stopped from that bank until the information is corrected." Once RIBITS is in place and operational for the Savannah District, users may note that some of the records are more complete than others. Bank sponsors will be encouraged to provide additional information in order to make each entry as complete as possible.

14. MODIFICATIONS. The sponsor may request a bank modification where the sponsor provides a rationale supporting said modification.

14.1. Major Modification. If the sponsor proposes an expansion to the previously-approved bank site or a new site, the procedures identified in Section 5 shall be used to process the amendment.

14.2. Minor Modification. If the sponsor proposes to modify the adaptive management, the credit release plan or schedule, and the USACE determines that the proposed changes are not significant, the USACE may use the streamlined review process for the modification as follows:

14.2.1. USACE notifies IRT members and the sponsor of this determination and provides all parties with copies of the proposed modification and supporting documentation.

14.2.2. Within 30 calendar days of receipt of the information from the USACE, the IRT members and the sponsor shall notify the USACE if there are any concerns with the proposed modification.

14.2.3. If IRT members or the sponsor notify the USACE of such concerns, the USACE shall attempt to resolve those concerns.

14.2.4. Within 60 calendar days of providing the proposed modification to the IRT, the USACE must notify the IRT members of their intent to approve or disapprove the proposed modification.

14.2.5. If no IRT member objects by initiating the dispute resolution process within 15 calendar days of receipt of this notification, the USACE will notify the sponsor of his/her final decision and, if the modification is approved, arrange for it to be signed by the appropriate parties.

14.2.6. If any IRT member initiates the dispute resolution process, the USACE will so notify the sponsor.

14.2.7. Following conclusion of the dispute resolution process as detailed in Section F, the USACE will notify the sponsor of their final decision, and if the modification is approved, arrange for it to be signed by the appropriate parties.

15. POLICY DISPUTE RESOLUTION PROCESS. The Rule details the process for resolution of a dispute between the USACE and another IRT member with regard to the approval of a BI for a specific mitigation bank proposal. However, the Rule does not provide a process for resolution of a dispute between the USACE and USEPA over interpretation of the Rule. Policy disputes would concern issues that pertain to the mitigation banking program, and would not be limited to the approval of an individual BI. The USACE is implementing the following procedures to provide a process for resolution of disputes with USEPA with interpretation of the Rule and/or implementation of the Savannah District's Mitigation Banking Guidelines:

15.1. If the USACE or USEPA wishes to formally dispute a policy, the agency will prepare a written summary of the disputed issue, to include: the Rule citation(s) addressing the issue; the applicable section of the District Mitigation Banking Guidelines; the basis for the dispute; and a proposal for resolution of the issue. The USACE District Commander (DC) or the USEPA Regional Administrator (RA) will notify the other agency representative by letter of their request to formally initiate the mitigation banking policy dispute resolution procedures.

15.2. Within 30 days of the date of the letter requesting initiation of dispute resolution procedures, the receiving agency will respond by letter to acknowledge receipt of the request and confirm the date for a formal dispute resolution meeting.

15.3. Within 45 days of the date of the initial notification letter, a dispute resolution meeting will be held. During this meeting the agencies will make every effort to reach a mutually acceptable solution to the disputed issue. Should the agencies resolve the dispute, the USACE will make appropriate modifications to the District Mitigation Banking Guidelines, if applicable.

15.4. Should the agencies fail to reach a mutually acceptable solution to the disputed policy, the USACE or the USEPA has the option of using Part III (Elevation of Policy Issues) of the August 11, 1992, "Clean Water Act Section 404(q) Memorandum of Agreement Between the Environmental Protection Agency and the Department of the Army," to resolve the matter.

Diagram 6 presents a summary of the steps and approximate timelines to complete the Policy Dispute Resolution Process.

16. SUMMARY OF RESPONSIBILITIES. The above sections describe the processes required to establish, operate and use a USACE-approved mitigation bank. Diagrams 1 through 6 provide a schematic depicting the process to finalize an USACE-approved bank.

This document is available on the web at <http://www.sas.usace.army.mil/permit.htm>. Questions regarding use of this guidance on a specific bank must be addressed to assigned Project Manager.

Other inquiries or comments regarding this document should be addressed to:

Coastal Branch:

Coastal Branch, Regulatory Division
Savannah District
US Army Corps of Engineers
100 W. Oglethorpe Avenue
Savannah, Georgia 31402
POC: Mr. Richard Morgan, 912-652-5139
richard.w.morgan@usace.army.mil

Piedmont Branch:

Regulatory Division, Piedmont Branch
Savannah District
US Army Corps of Engineers
1590 Adamson Parkway, Suite 200
Morrow, Georgia 30260-1777
POC: Mr. Justin Hammonds, 770-904-2365
justin.a.hammonds@usace.army.mil

DIAGRAMS

DIAGRAM 1: DRAFT PROSPECTUS PROCESS AND TIMELINE

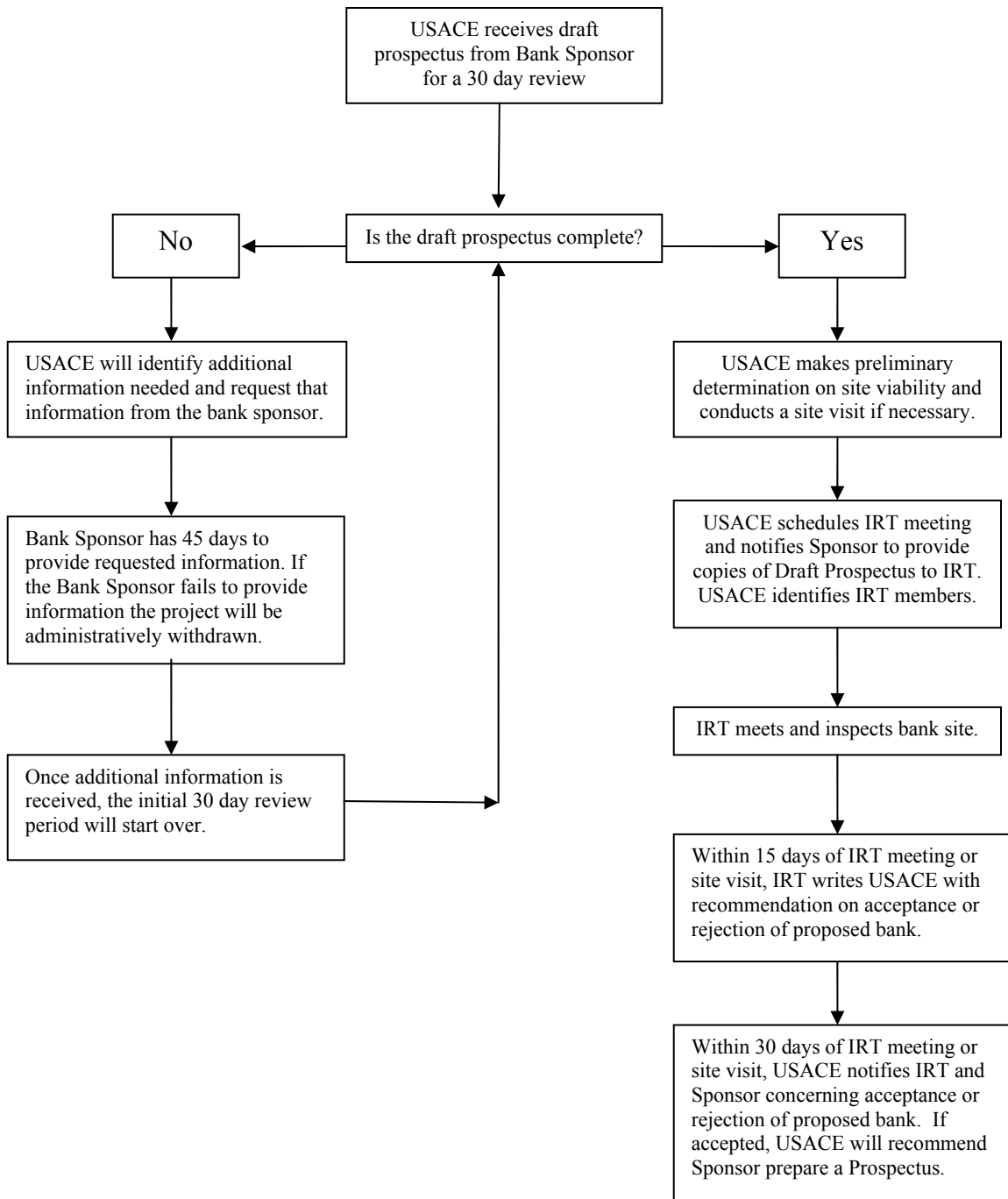


DIAGRAM 2: PROSPECTUS PROCESS AND TIMELINE

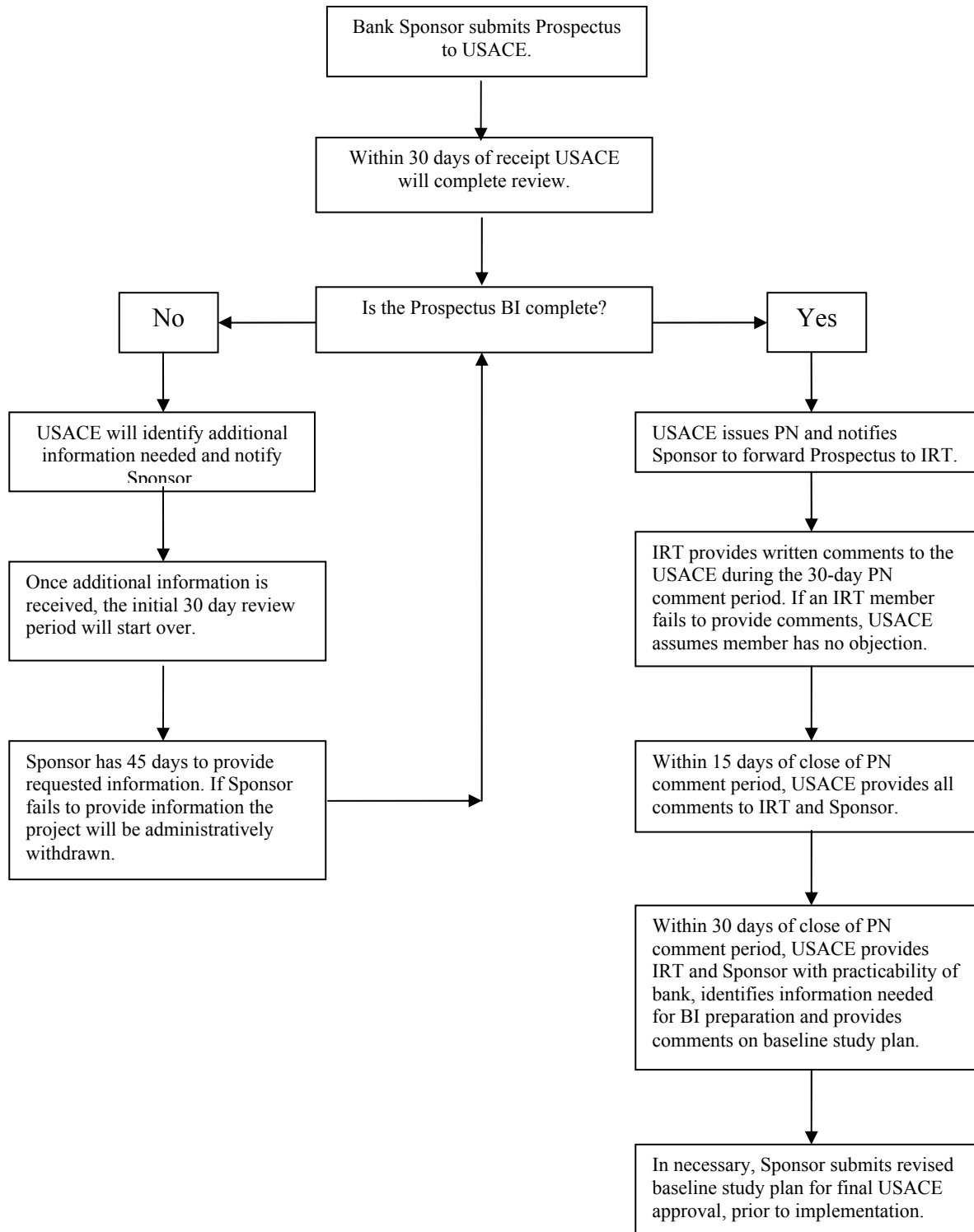


DIAGRAM 3: DRAFT BI PROCESS AND TIMELINE

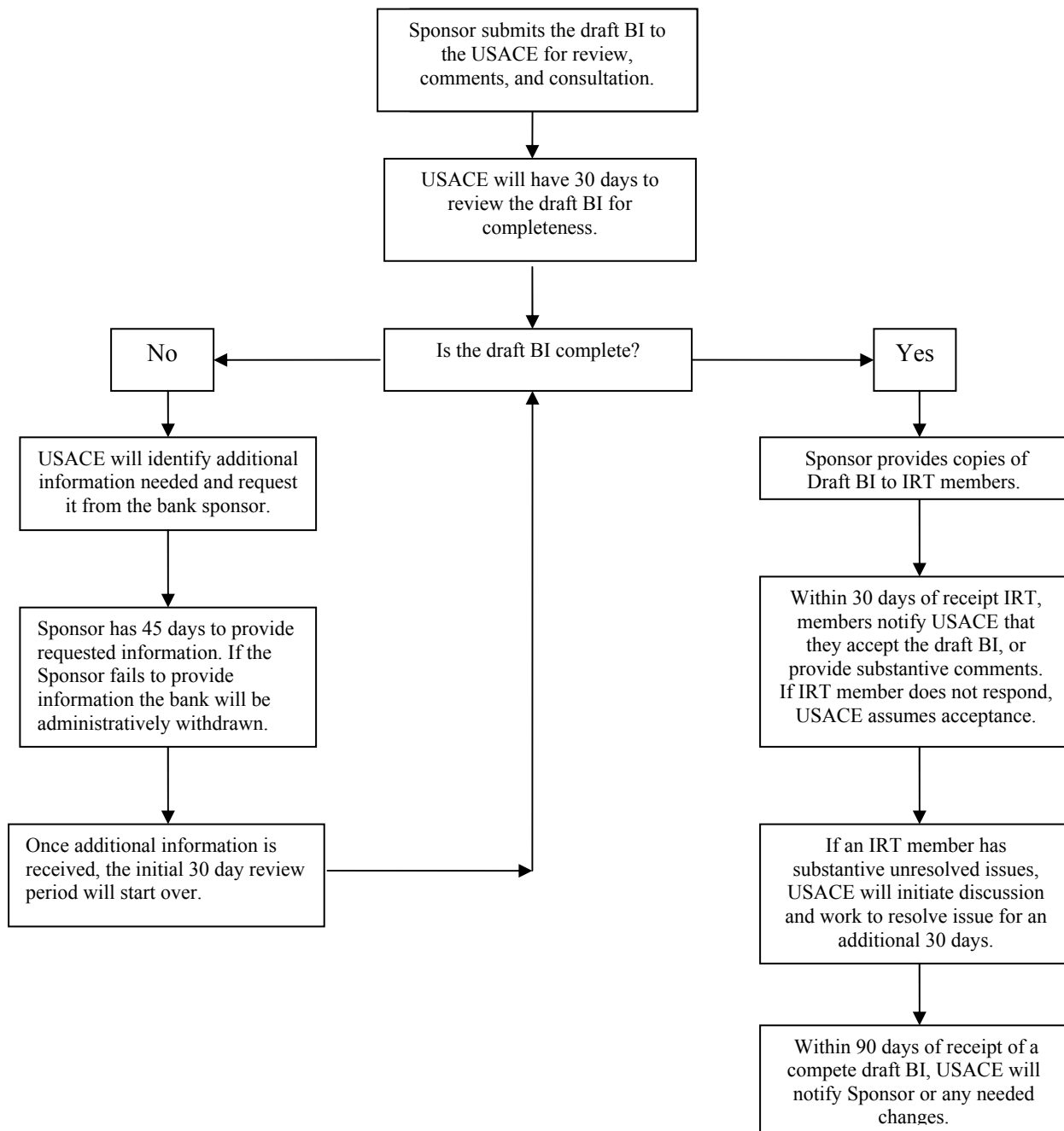


DIAGRAM 4: FINAL BANKING INSTRUMENT PROCESS AND TIMELINE

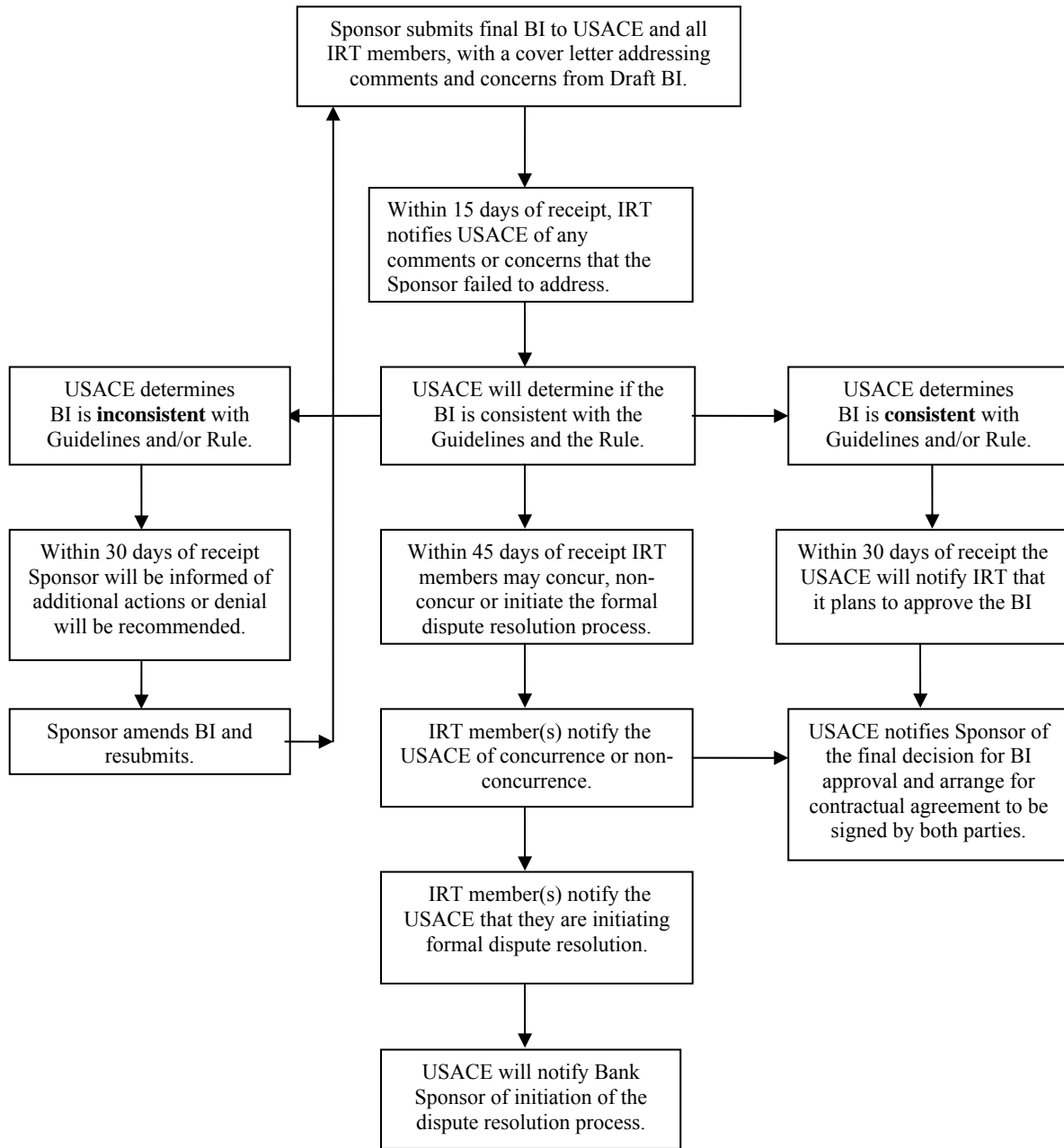


DIAGRAM 5: DISPUTE RESOLUTION PROCESS

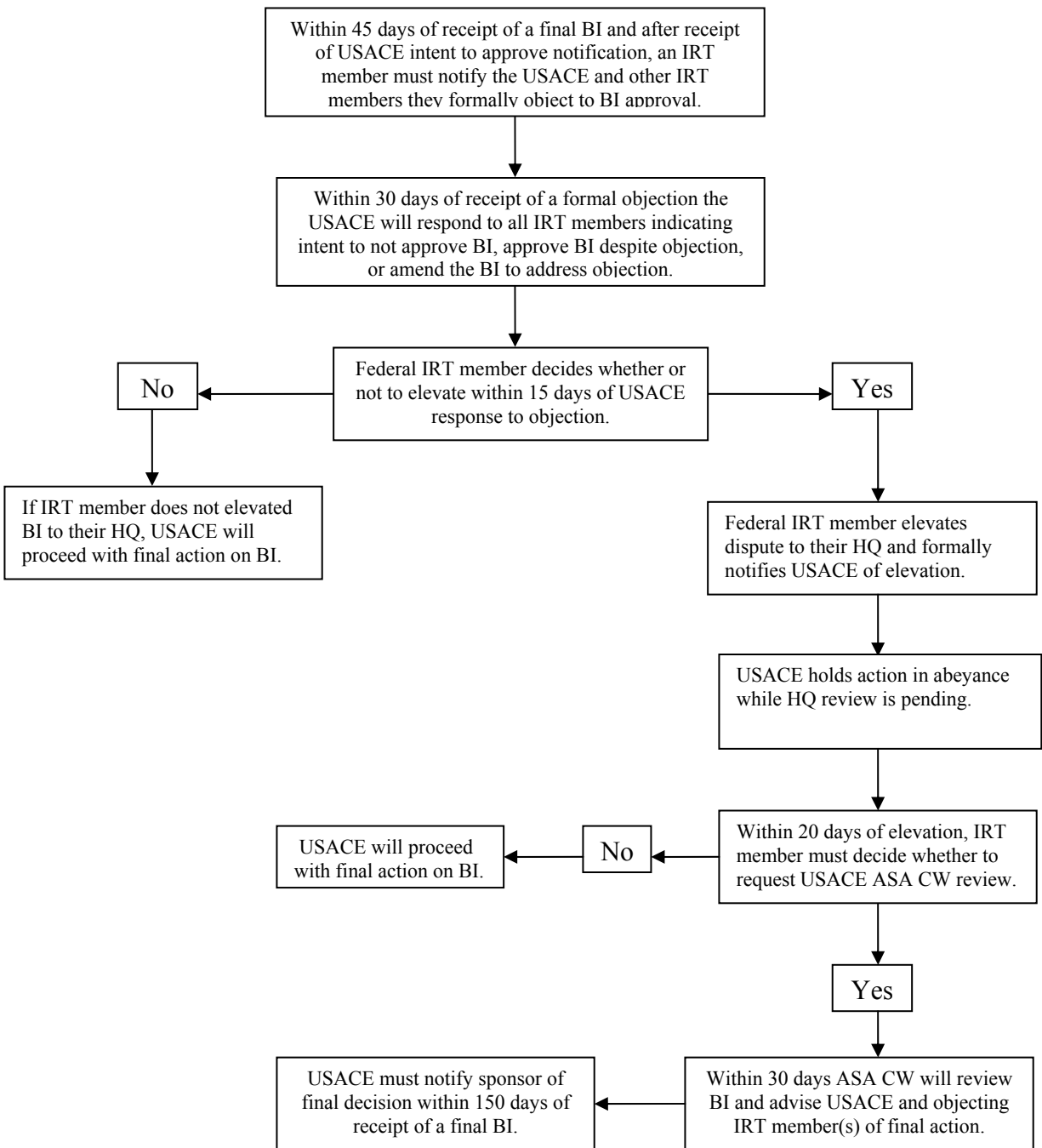
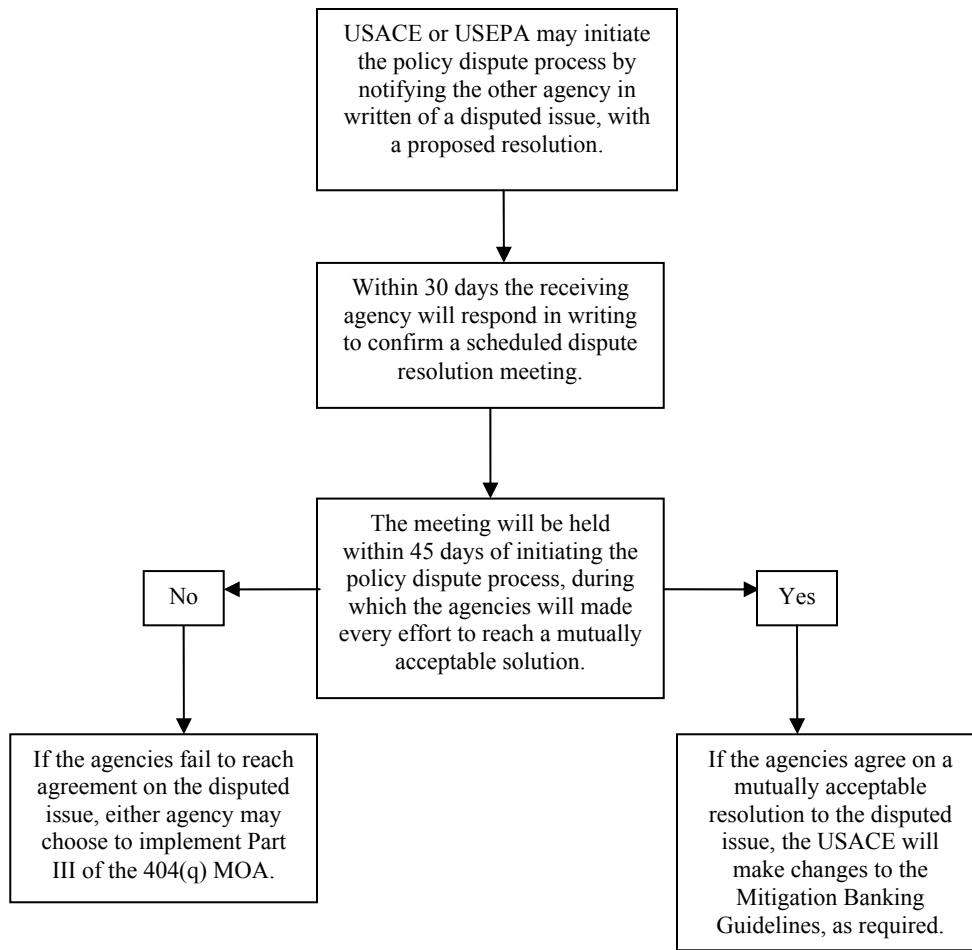


DIAGRAM 6: POLICY DISPUTE RESOLUTION PROCESS



ACRONYMS

ACRONYMS

ASA	Assistant Secretary of the Army
BI	Banking Instrument
CE	Conservation Easement
CW	Civil Works
CWA	Clean Water Act
DA	Department of the Army
DE	District Engineer (not written out in text)
Declaration	Declaration of Conservation Covenants and Restrictions
EPA	US Environmental Protection Agency
FA	Financial Assurance
FAA	Federal Aviation Administration
FWS	US Fish and Wildlife Service
Georgia DNR	Georgia Department of Natural Resources
Georgia EPD	Georgia Department of Natural Resources, Environmental Protection Division
Georgia CRD	Georgia Department of Natural Resources, Coastal Resources Division
Georgia WRD	Georgia Department of Natural Resources, Wildlife Resources Division
GMITT	Georgia Mitigation Tracking Tool
HUC	Hydrologic Unit Code
IRT	Interagency Review Team
LLC	Limited Liability Corporation
NMFS	National Marine Fisheries Services
NOAA	National Oceanic and Atmospheric Association
NRCS	National Resource Conservation Service
NWP	Nationwide Permit
NWI	National Wetlands Inventory
PAR	Property Analysis Record
PM	Project Manager
PN	Public Notice
RC	Restrictive Covenants
RIBITS Regulatory	Internet Banking Information and Tracking System
RGL	Regulatory Guidance Letter
Rule	Final Mitigation Rule
US	United States
USACE	US Army Corps of Engineers, Savannah District, Regulatory Division
USGS	US Geological Survey

FIGURES

Figure 1 - Overview of Primary Service Areas in the State of Georgia

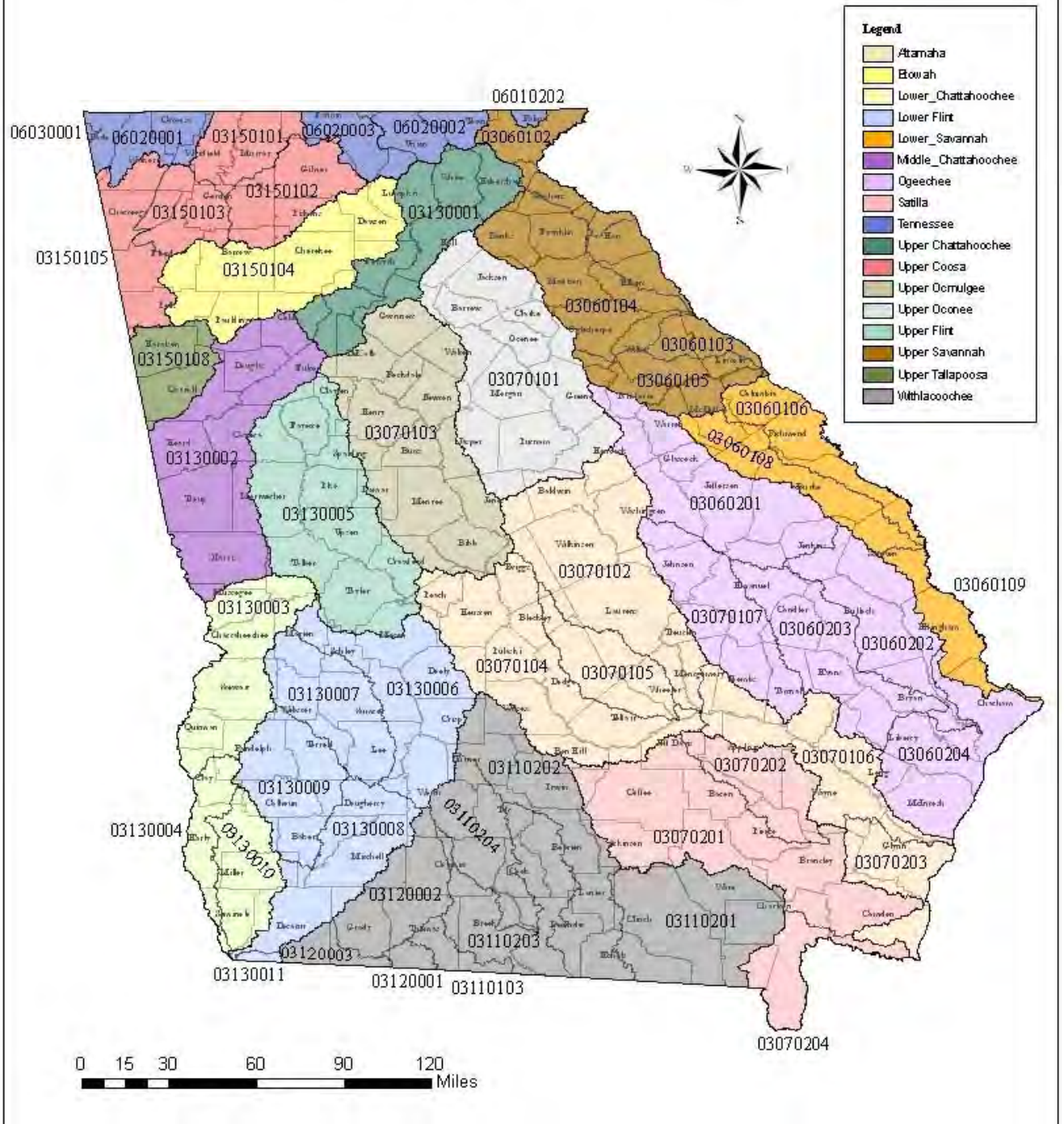


Figure 2 - Primary and Secondary Service Areas for the Altamaha Watershed

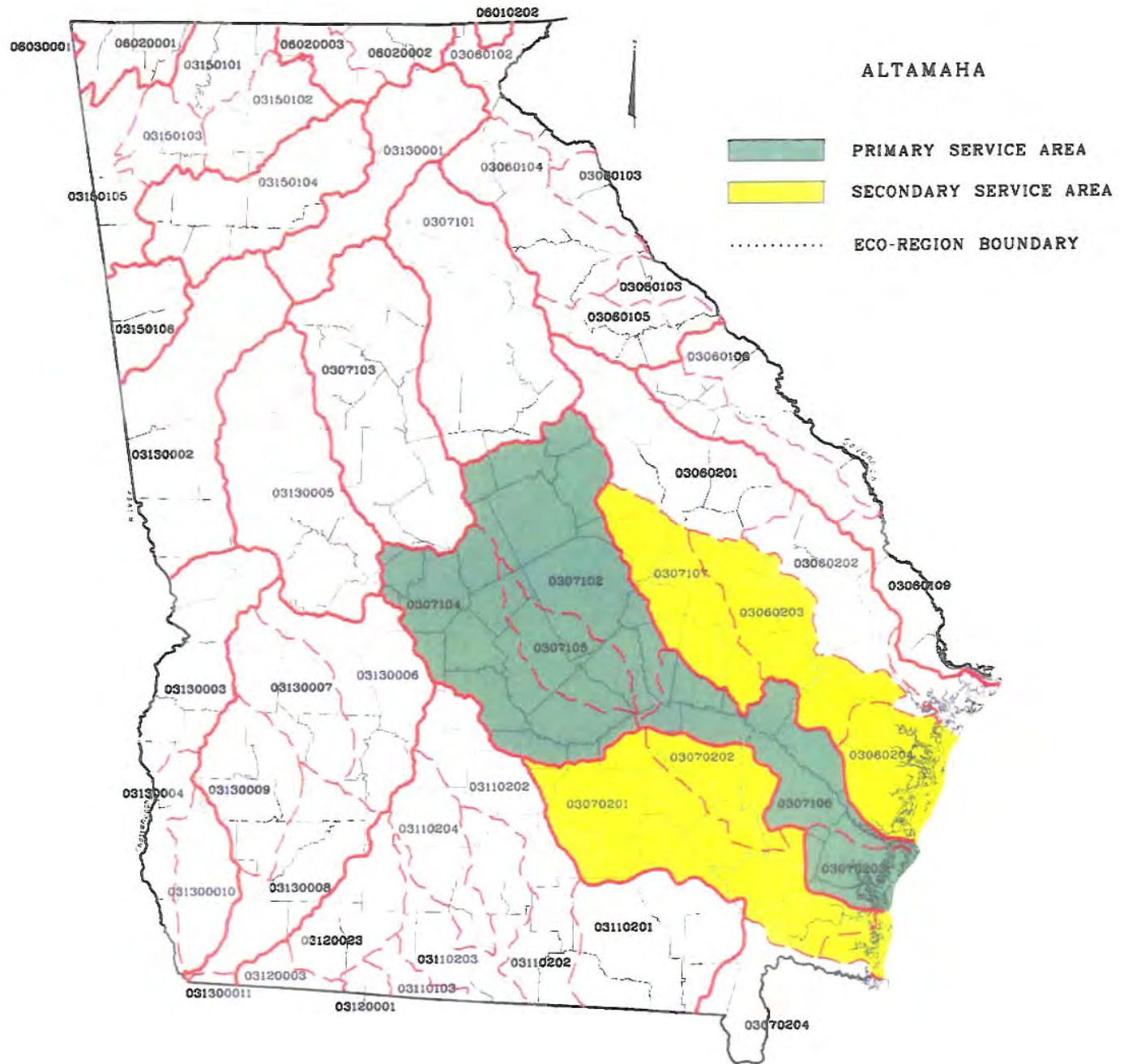


Figure 3 - Primary and Secondary Service Areas for the Etowah Watershed

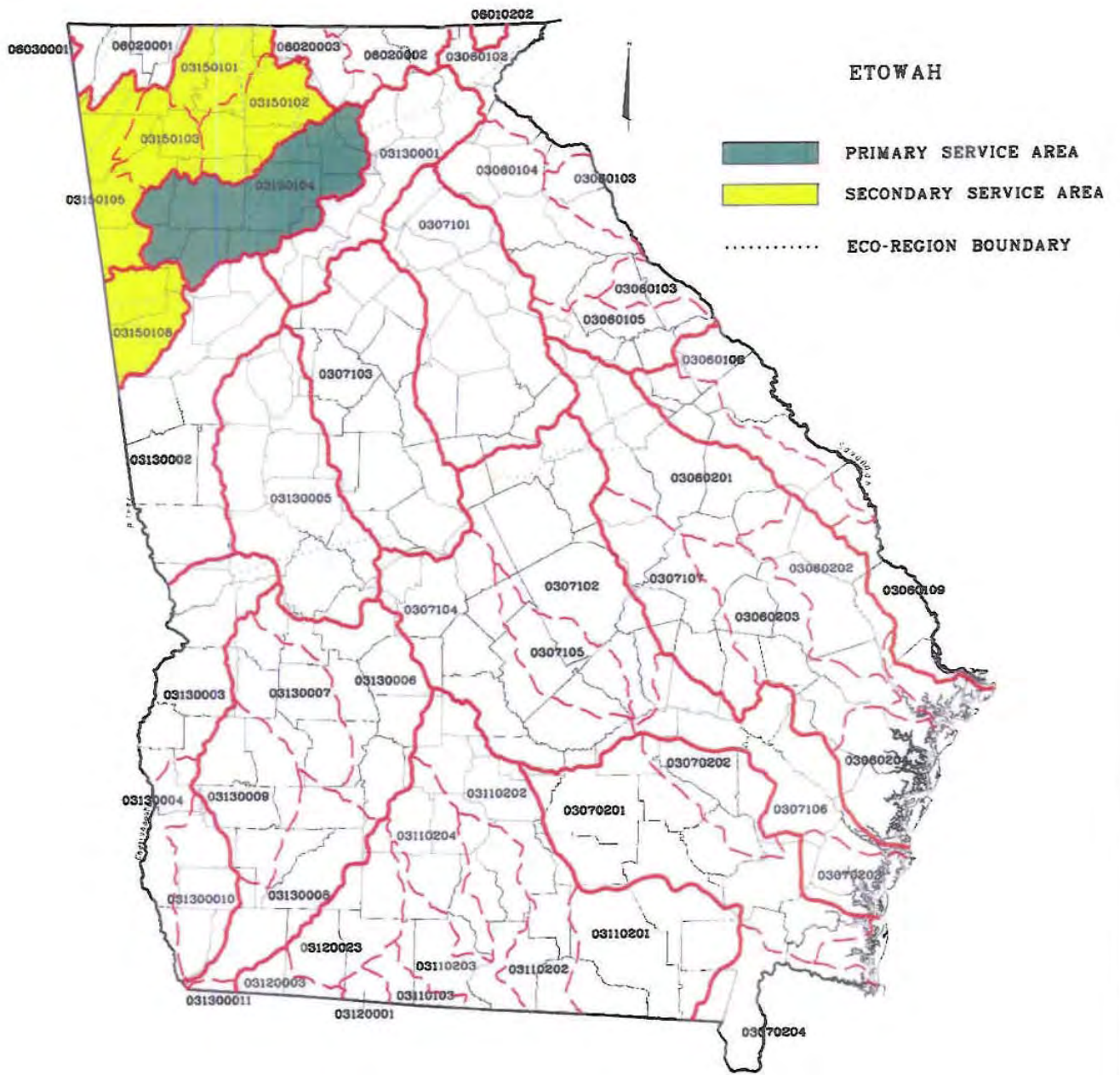


Figure 4 - Primary and Secondary Service Areas for the Lower Chattahoochee Watershed

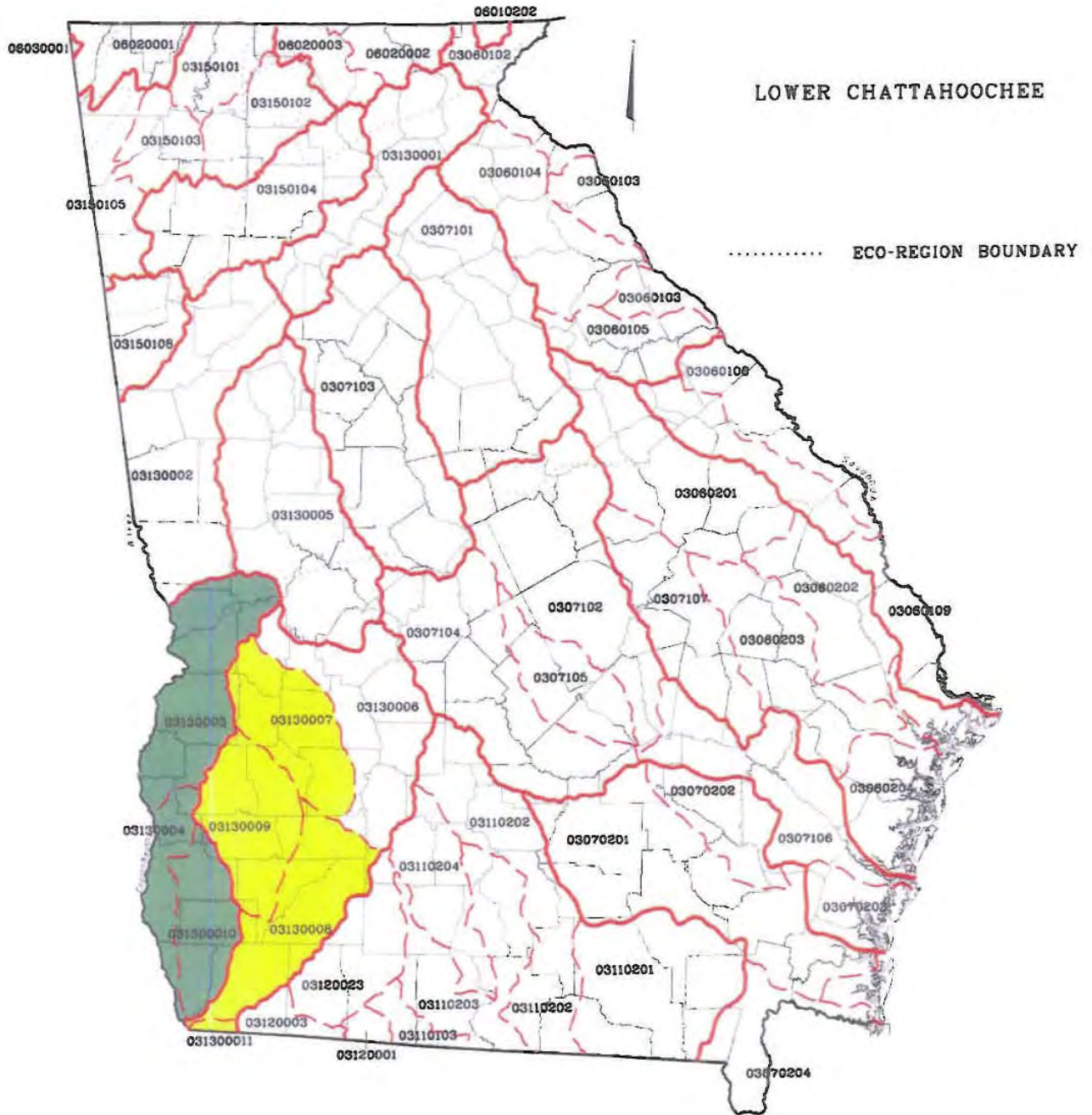


Figure 5 - Primary and Secondary Service Areas for the Lower Flint Watershed

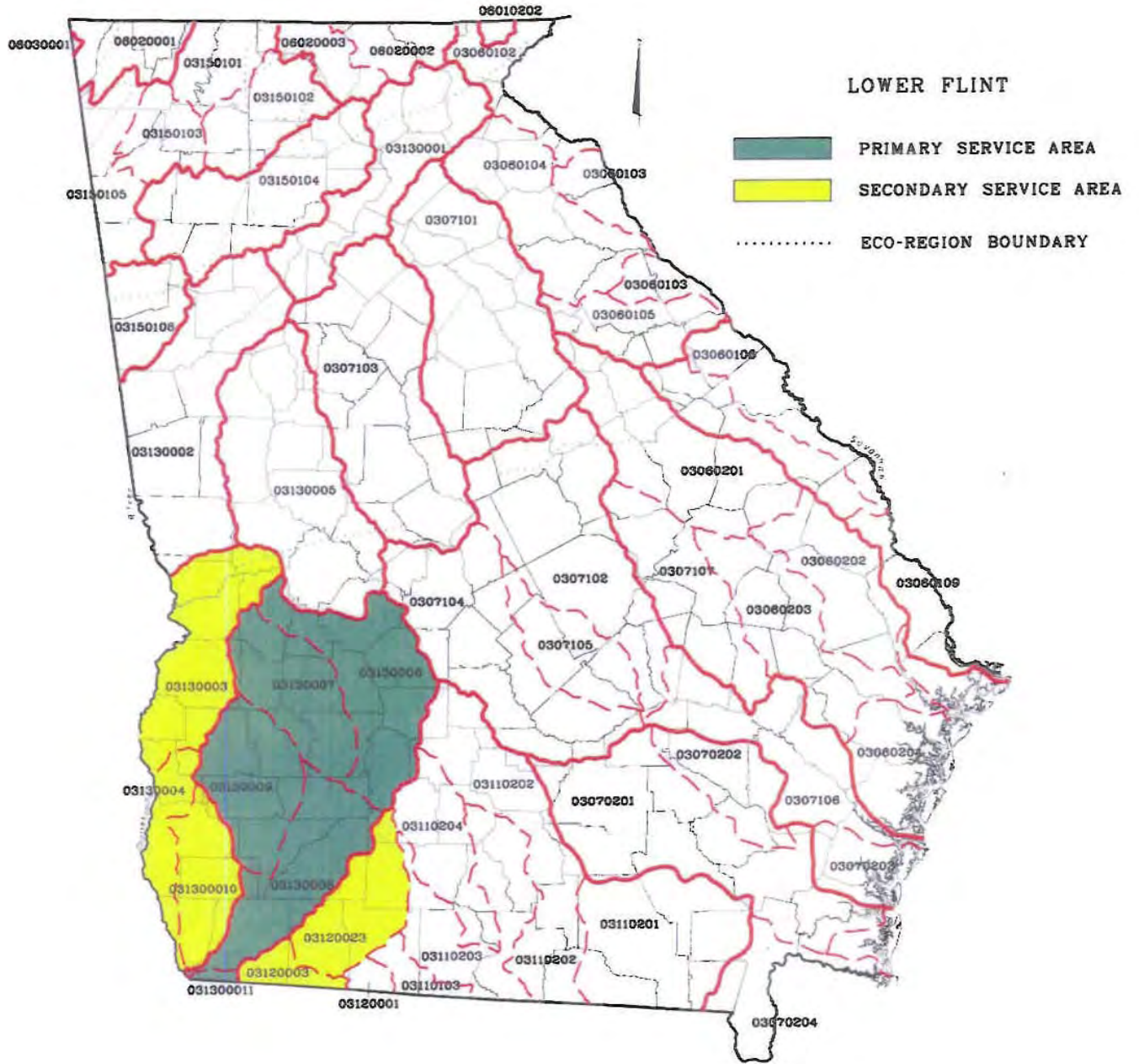


Figure 6 - Primary and Secondary Service Areas for the Lower Savannah Watershed

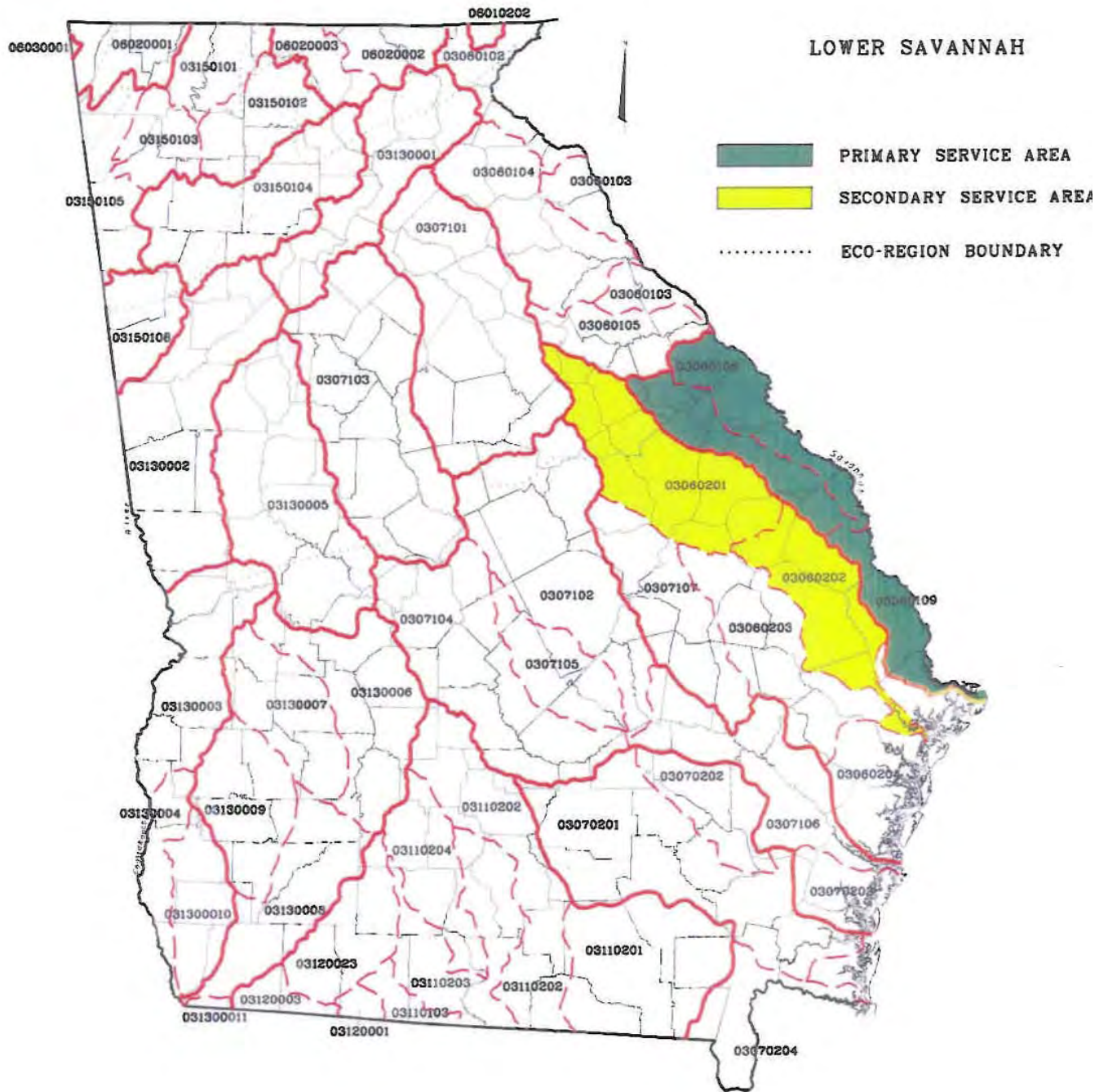


Figure 7 - Primary and Secondary Service Areas for the Mid Chattahoochee Watershed

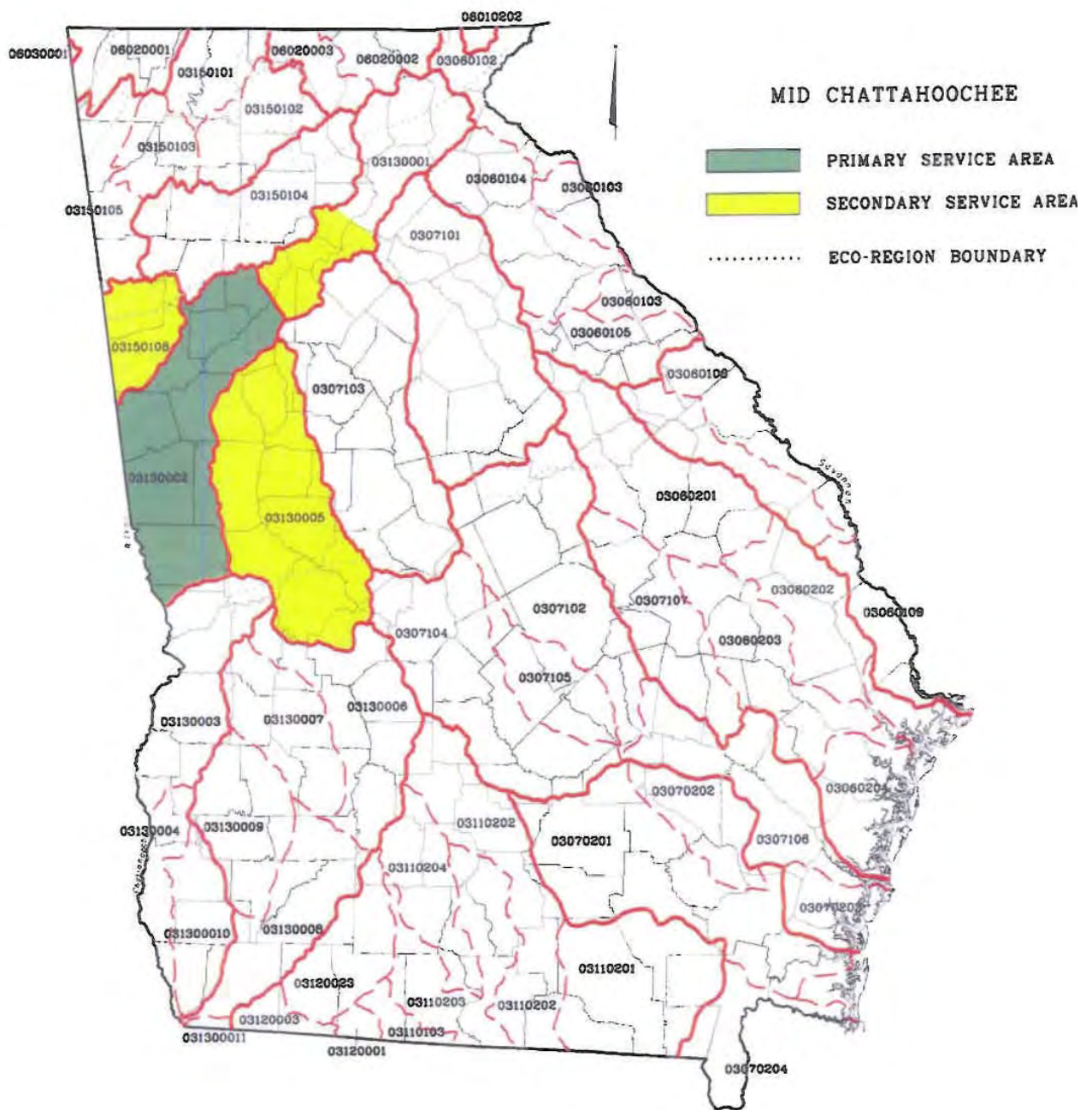


Figure 8 - Primary and Secondary Service Areas for the Ogeechee Watershed

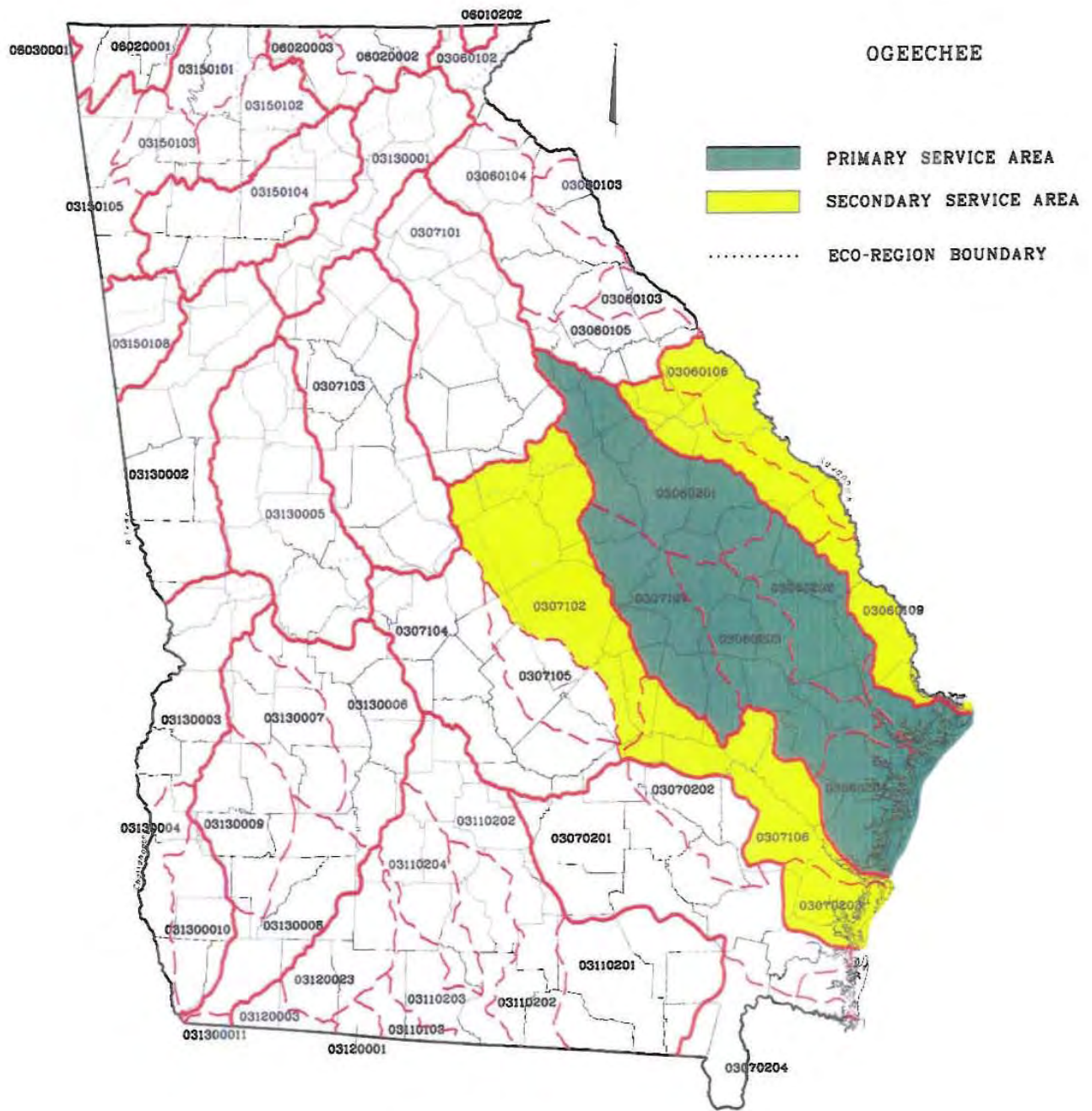


Figure 9 - Primary and Secondary Service Areas for the Satilla Watershed

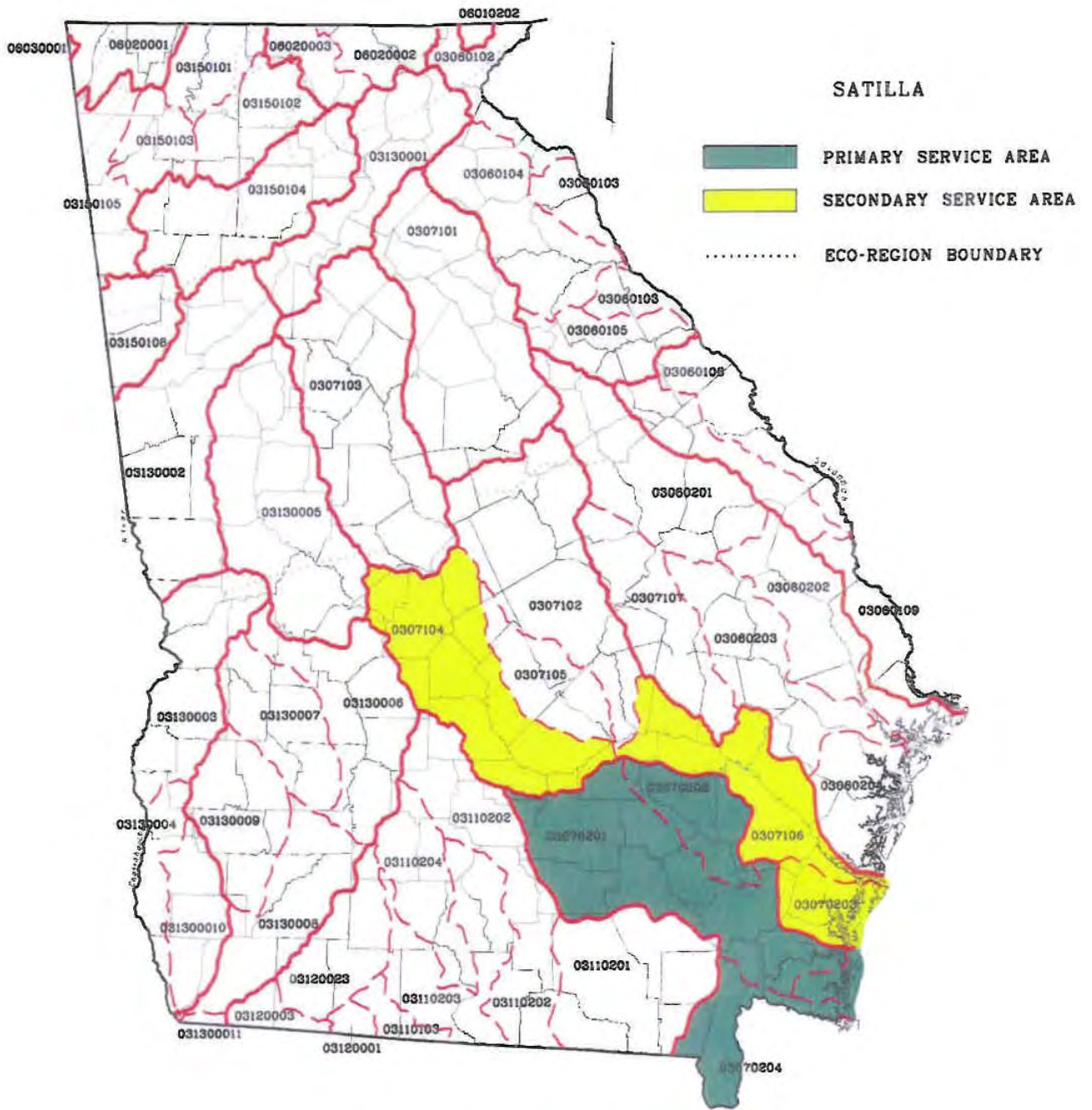


Figure 11 - Primary and Secondary Service Areas for the Upper Chattahoochee Watershed

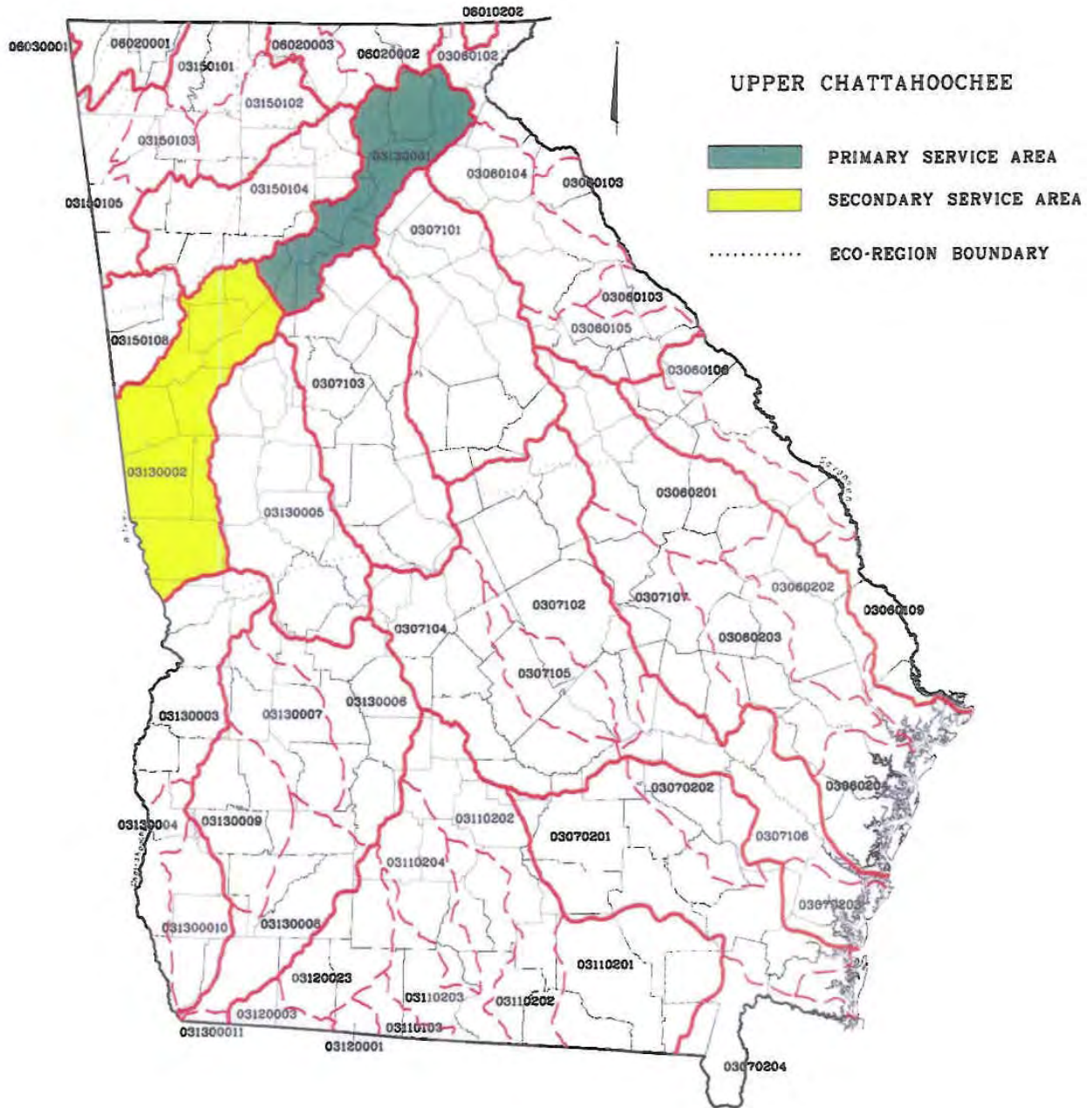


Figure 12 - Primary and Secondary Service Areas for the Upper Coosa Watershed

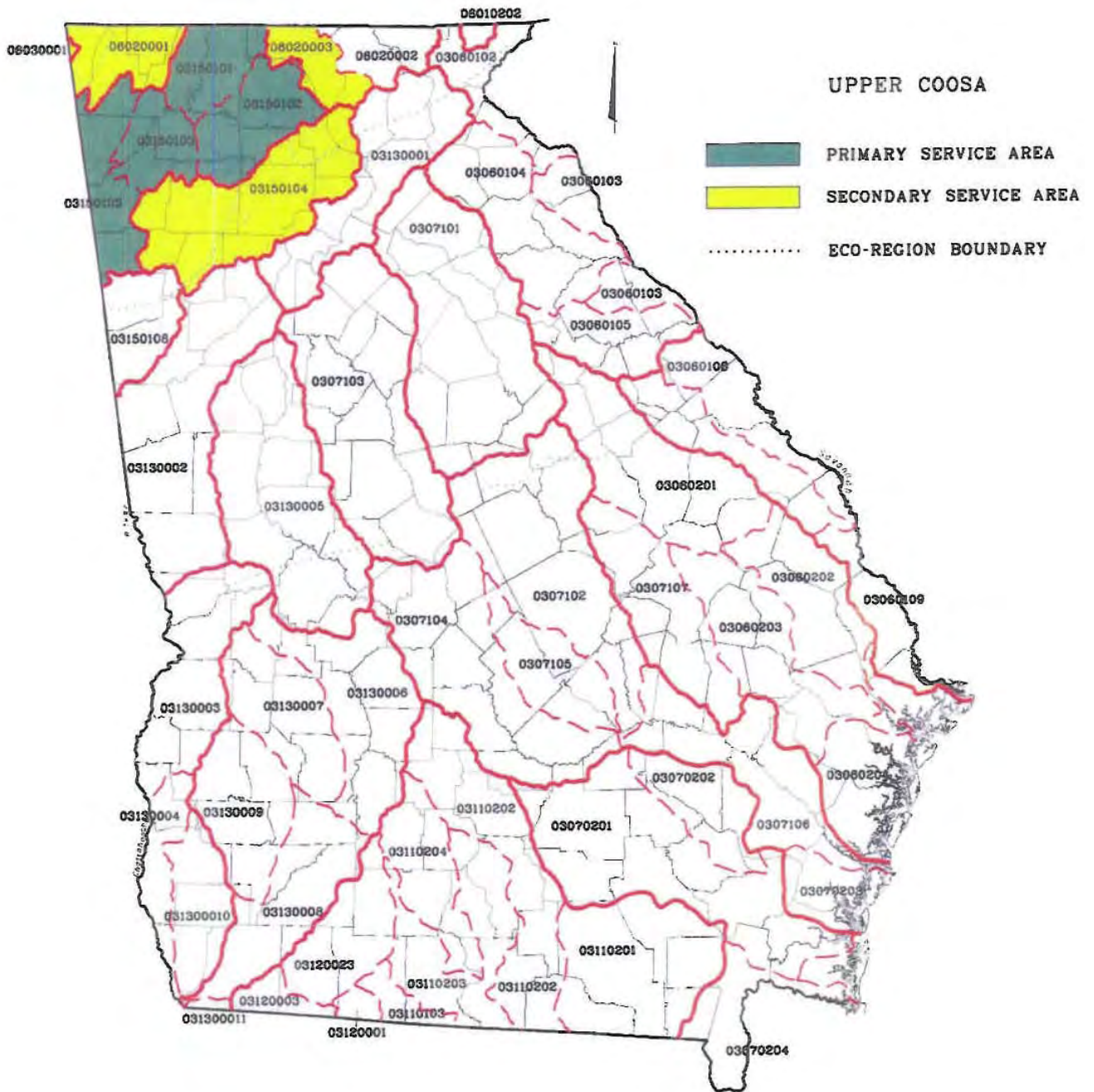


Figure 13 - Primary and Secondary Service Areas for the Upper Flint Watershed

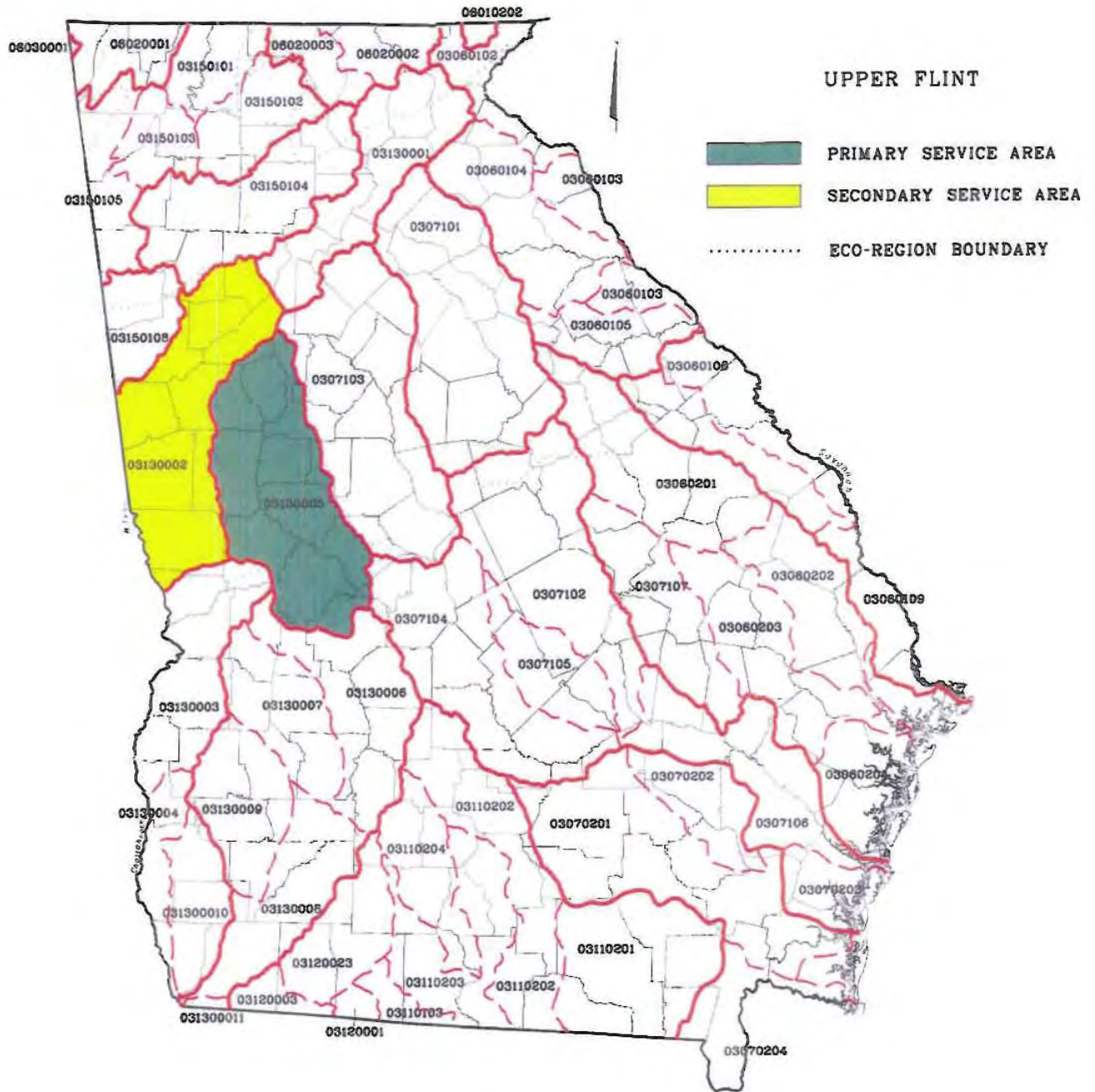


Figure 14 - Primary and Secondary Service Areas for the Upper Ocmulgee Watershed

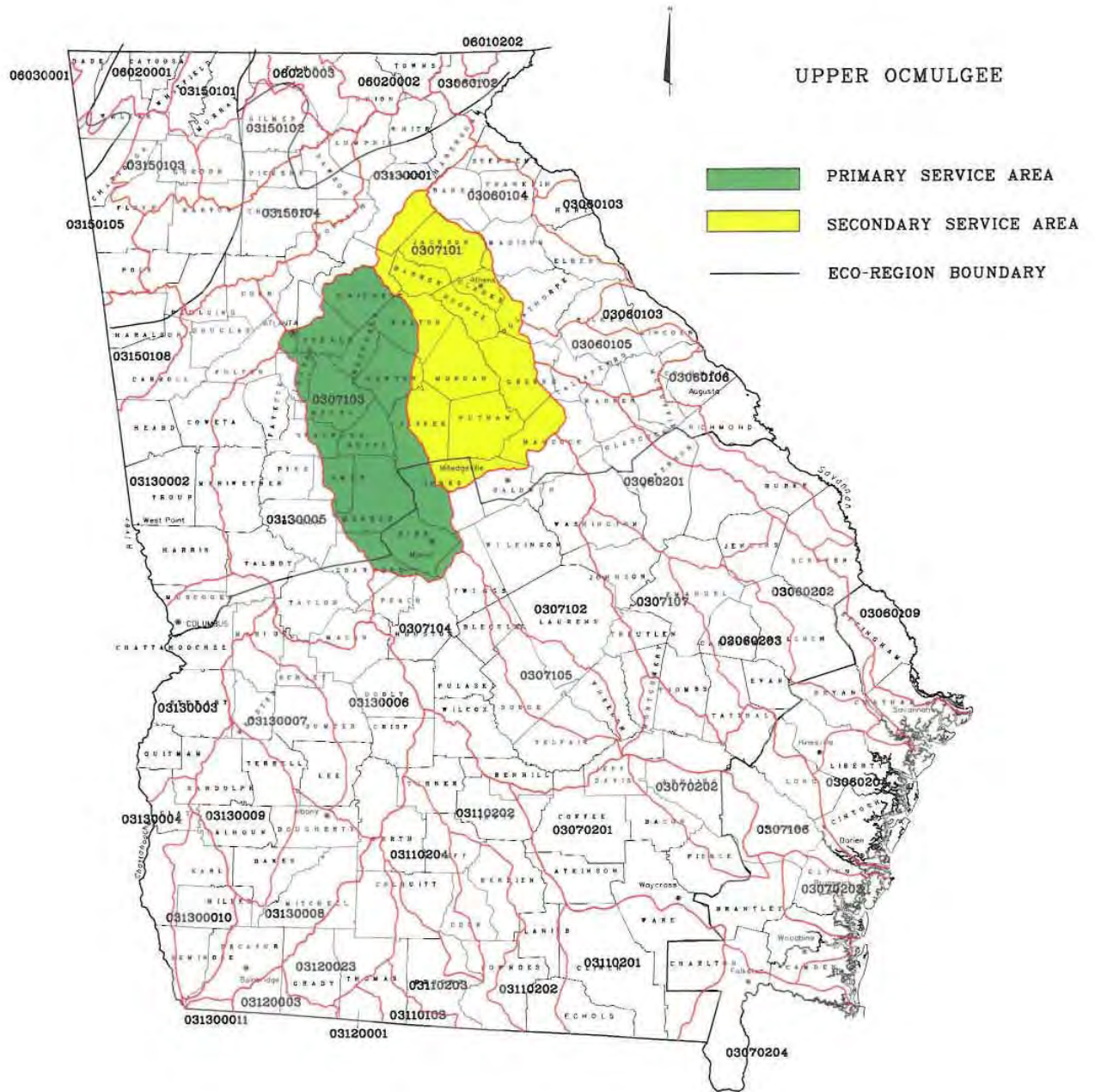


Figure 16 - Primary and Secondary Service Areas for the Upper Savannah Watershed

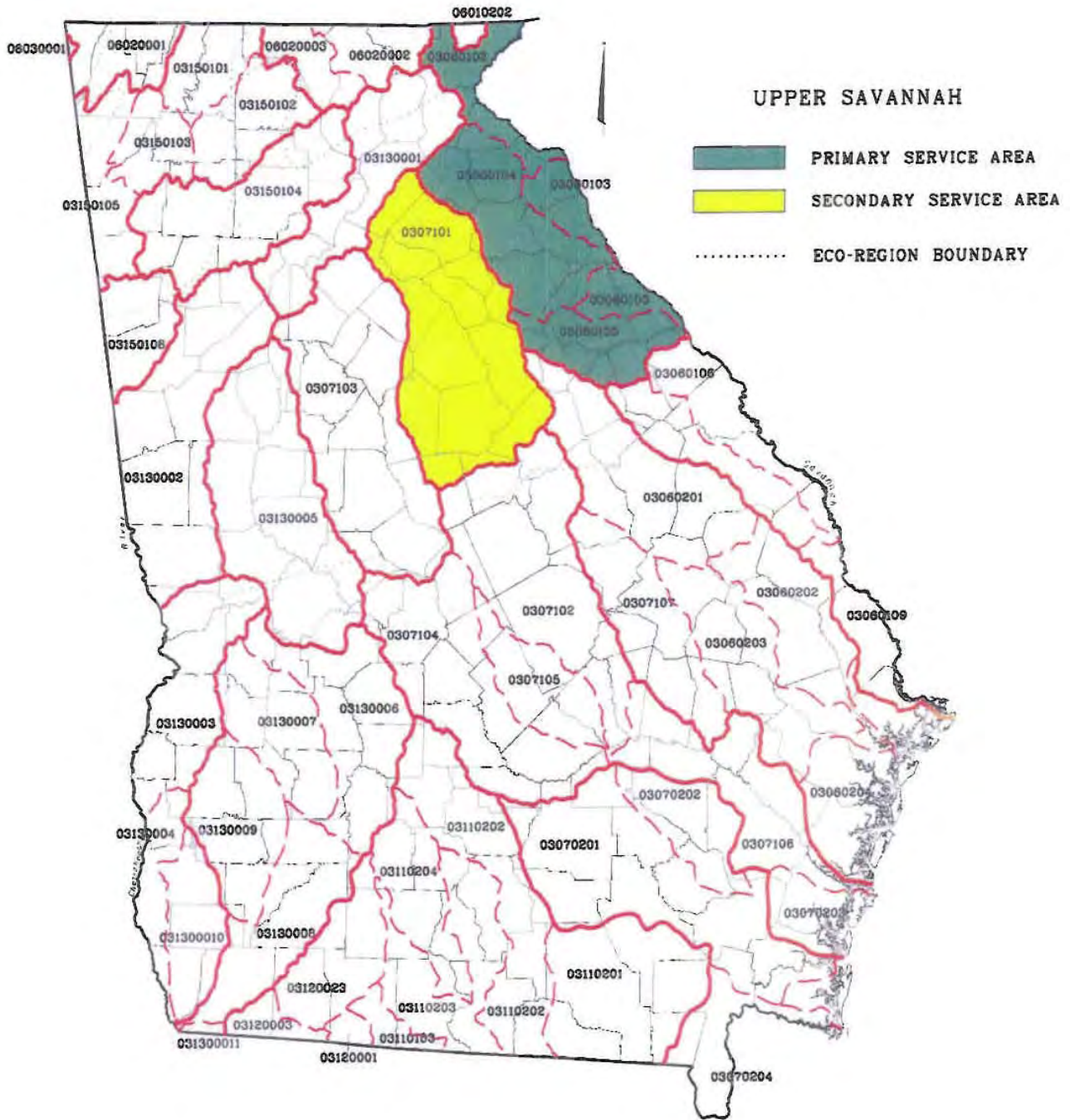


Figure 17 - Primary and Secondary Service Areas for the Upper Tallapoosa Watershed

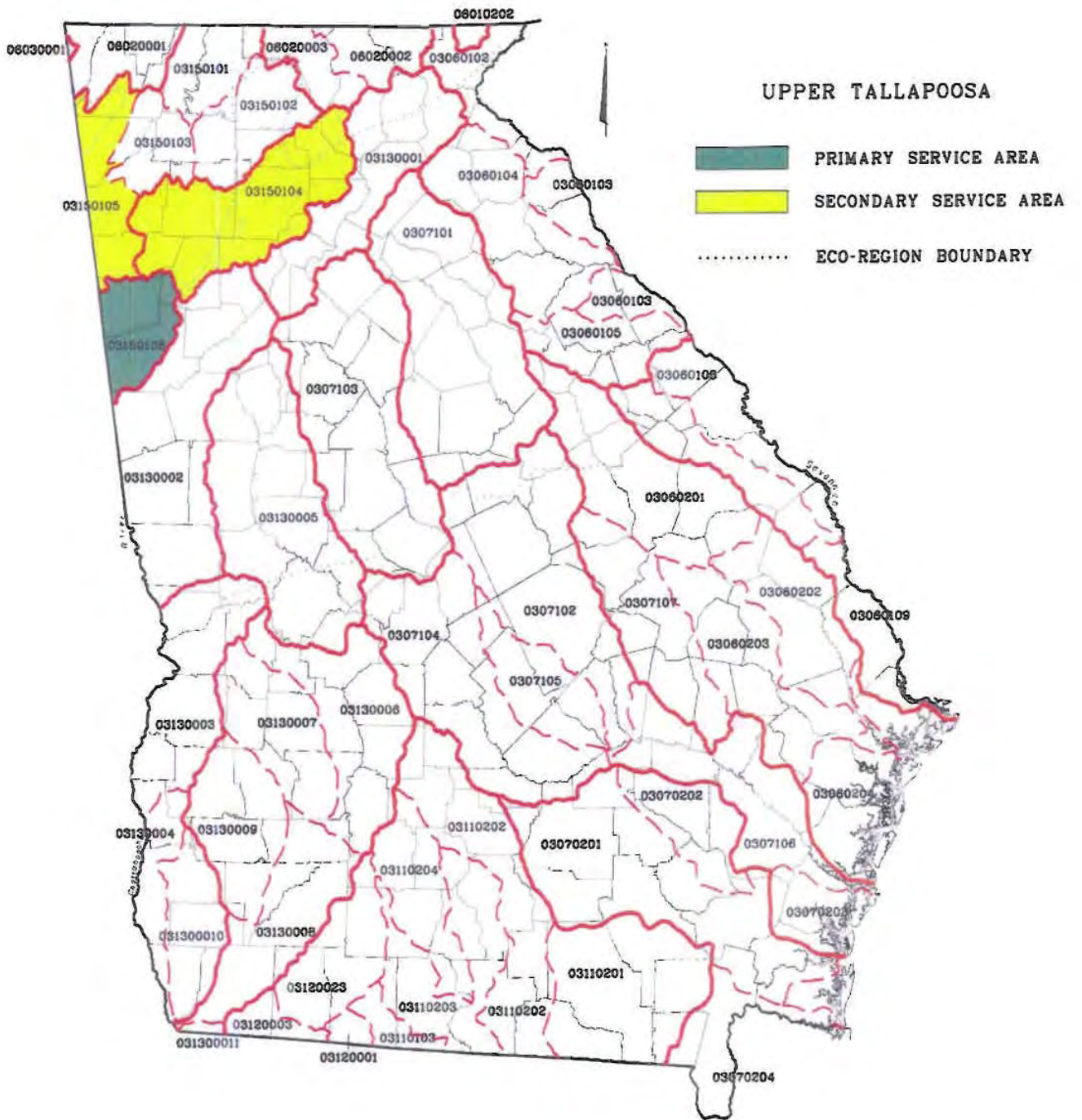
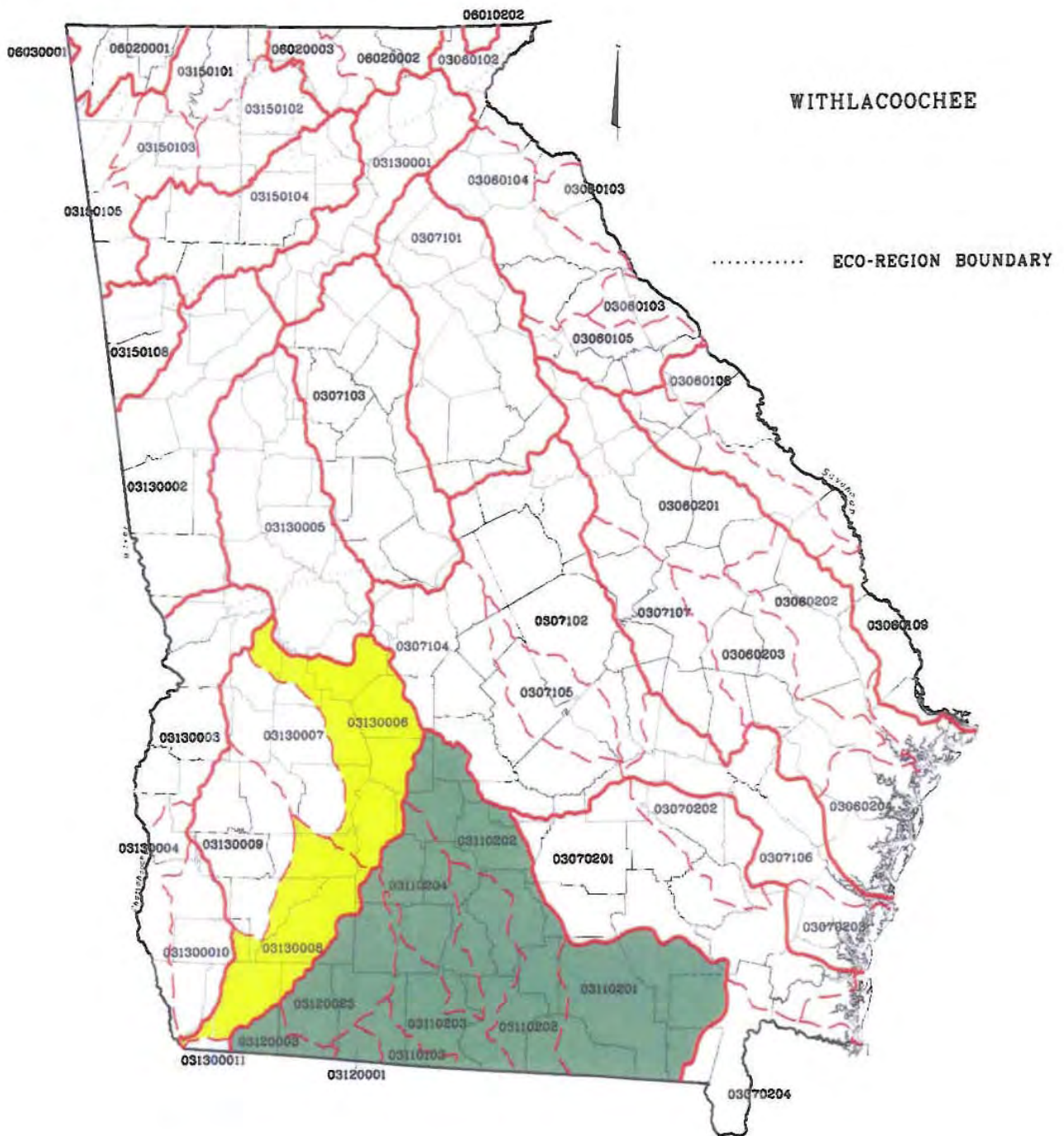


Figure 18 - Primary and Secondary Service Areas for the Withlacoochee Watershed



APPENDICES

APPENDIX 1.1

MEMORANDUM OF AGREEMENT
BETWEEN THE ENVIRONMENTAL
PROTECTION AGENCY AND THE
DEPARTMENT OF THE ARMY
CONCERNING THE
DETERMINATION OF
MITIGATION UNDER THE CLEAN
WATER ACT (CWA) SECTION
404 (B)(1) GUIDELINES
[FEBRUARY 6, 1990]

**MEMORANDUM OF AGREEMENT
BETWEEN THE ENVIRONMENTAL PROTECTION AGENCY
AND THE DEPARTMENT OF THE ARMY CONCERNING
THE DETERMINATION OF MITIGATION UNDER THE
CLEAN WATER ACT SECTION 404(b)(1) GUIDELINES**

February 6, 1990

I. Purpose

The United States Environmental Protection Agency (EPA) and the United States Department of the Army (Army) hereby articulate the policy and procedures to be used in the determination of the type and level of mitigation necessary to demonstrate compliance with the Clean Water Act (CWA) Section 404(b)(1) Guidelines ("Guidelines"). This Memorandum of Agreement (MOA) expresses the explicit intent of the Army and EPA to implement the objective of the CWA to restore and maintain the chemical, physical, and biological integrity of the Nation's waters, including wetlands. This MOA is specifically limited to the Section 404 Regulatory Program and is written to provide guidance for agency field personnel on the type and level of mitigation required to demonstrate compliance with requirements in the Guidelines. The policies and procedures discussed herein are consistent with current Section 404 regulatory practices and are provided in response to questions that have been raised about how the Guidelines are implemented. The MOA does not change the substantive requirements of the Guidelines. It is intended to provide guidance regarding the exercise of discretion under the Guidelines.

Although the Guidelines are clearly applicable to all discharges of dredged or fill material, including general permits and Corps of Engineers (Corps) civil works projects, this MOA focuses on standard permits (33 CFR 325.5(b)(1)) (Footnote 1). This focus is intended solely to reflect the unique procedural aspects associated with the review of standard permits, and does not obviate the need for other regulated activities to comply fully with the Guidelines. EPA and Army will seek to develop supplemental guidance for other regulated activities consistent with the policies and principles established in this document.

This MOA provides guidance to Corps and EPA personnel for implementing the Guidelines and must be adhered to when considering mitigation requirements for standard permit applications. The Corps will use this MOA when making its determination of compliance with the Guidelines with respect to mitigation for standard permit applications. EPA will use this MOA in developing its positions on compliance with the Guidelines for proposed discharges and will reflect this MOA when commenting on standard permit applications.

II. Policy

A. The Council on Environmental Quality (CEQ) has defined mitigation in its regulations at 40 CFR 1508.20 to include: avoiding impacts, minimizing impacts, rectifying impacts, reducing impacts over time, and compensating for impacts. The

Guidelines establish environmental criteria which must be met for activities to be permitted under Section 404 (Footnote 2). The types of mitigation enumerated by CEQ are compatible with the requirements of the Guidelines; however, as a practical matter, they can be combined to form three general types: avoidance, minimization and compensatory mitigation. The remainder of this MOA will speak in terms of these more general types of mitigation.

B. The Clean Water Act and the Guidelines set forth a goal of restoring and maintaining existing aquatic resources. The Corps will strive to avoid adverse impacts and offset unavoidable adverse impacts to existing aquatic resources, and for wetlands, will strive to achieve a goal of no overall net loss of values and functions. In focusing the goal of no overall net loss to wetlands only, EPA and Army have explicitly recognized the special significance of the nation's wetlands resources. This special recognition of wetlands resources does not in any manner diminish the value of other waters of the United States, which are often of high value. All waters of the United States, such as streams, rivers, lakes, etc., will be accorded the full measure of protection under the Guidelines, including the requirements for appropriate and practicable mitigation. The determination of what level of mitigation constitutes "appropriate" mitigation is based solely on the values and functions of the aquatic resource that will be impacted. "Practicable" is defined at Section 230.3(q) of the Guidelines (Footnote 3). However, the level of mitigation determined to be appropriate and practicable under Section 230.10(d) may lead to individual permit decisions which do not fully meet this goal because the mitigation measures necessary to meet this goal are not feasible, not practicable, or would accomplish only inconsequential reductions in impacts. Consequently, it is recognized that no net loss of wetlands functions and values may not be achieved in each and every permit action. However, it remains a goal of the Section 404 regulatory program to contribute to the national goal of no overall net loss of the nation's remaining wetlands base. EPA and Army are committed to working with others through the Administration's interagency task force and other avenues to help achieve this national goal.

C. In evaluating standard Section 404 permit applications, as a practical matter, information on all facets of a project, including potential mitigation, is typically gathered and reviewed at the same time. The Corps, except as indicated below, first makes a determination that potential impacts have been avoided to the maximum extent practicable; remaining unavoidable impacts will then be mitigated to the extent appropriate and practicable by requiring steps to minimize impacts and, finally, compensate for aquatic resource values. This sequence is considered satisfied where the proposed mitigation is in accordance with specific provisions of a Corps and EPA approved comprehensive plan that ensures compliance with the compensation requirements of the 404(b)(1) Guidelines (examples of such comprehensive plans may include Special Area Management Plans, Advance Identification areas (Section 230.80), and State Coastal Zone Management Plans). It may be appropriate to deviate from the sequence when EPA and the Corps agree the proposed discharge is necessary to avoid environmental harm (e.g., to protect a natural aquatic community from saltwater intrusion, chemical contamination, or other deleterious physical or chemical impacts), or

EPA and the Corps agree that the proposed discharge can reasonably be expected to result in environmental gain or insignificant losses.

In determining "appropriate and practicable" measures to offset unavoidable impacts, such measures should be appropriate to the scope and degree of those impacts and practicable in terms of cost, existing technology, and logistics in light of overall project purposes. The Corps will give full consideration to the views of the resource agencies when making this determination.

1. Avoidance (Footnote 4). Section 230.10(a) allows permit issuance for only the least environmentally damaging practicable alternative (Footnote 5). The thrust of this section on alternatives is avoidance of impacts. Section 230.10(a)(1) requires that no discharge shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact to the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. In addition, Section 230.10(a)(3) sets forth rebuttable presumptions that 1) alternatives for non-water dependent activities that do not involve special aquatic sites (Footnote 6) are available and 2) alternatives that do not involve special aquatic sites have less adverse impact on the aquatic environment. Compensatory mitigation may not be used as a method to reduce environmental impacts in the evaluation of the least environmentally damaging practicable alternatives for the purposes of requirements under Section 230.10(a).

2. Minimization. Section 230.10(d) states that appropriate and practicable steps to minimize the adverse impacts will be required through project modifications and permit conditions. Subpart H of the Guidelines describes several (but not all) means for minimizing impacts of an activity.

3. Compensatory Mitigation. Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts which remain after all appropriate and practicable minimization has been required. Compensatory actions (e.g., restoration of existing degraded wetlands or creation of man-made wetlands) should be undertaken, when practicable, in areas adjacent or contiguous to the discharge site (onsite compensatory mitigation). If on-site compensatory mitigation is not practicable, off-site compensatory mitigation should be undertaken in the same geographic area if practicable (i.e., in close physical proximity and, to the extent possible, the same watershed). In determining compensatory mitigation, the functional values lost by the resource to be impacted must be considered. Generally, in-kind compensatory mitigation is preferable to out-of-kind. There is continued uncertainty regarding the success of wetland creation or other habitat development. Therefore, in determining the nature and extent of habitat development of this type, careful consideration should be given to its likelihood of success. Because the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, restoration should be the first option considered. In the situation where the Corps is evaluating a project where a permit issued by another agency requires compensatory mitigation, the Corps may consider that mitigation as part of the overall application for purposes of public notice, but avoidance and minimization shall still be sought.

Mitigation banking may be an acceptable form of compensatory mitigation under specific criteria designed to ensure an environmentally successful bank. Where a mitigation bank has been approved by EPA and the Corps for purposes of providing compensatory mitigation for specific identified projects, use of that mitigation bank for those particular projects is considered as meeting the requirements of Section II.C.3 of this MOA, regardless of the practicability of other forms of compensatory mitigation. Additional guidance on mitigation banking will be provided. Simple purchase or "preservation" of existing wetlands resources may in only exceptional circumstances be accepted as compensatory mitigation. EPA and Army will develop specific guidance for preservation in the context of compensatory mitigation at a later date.

III. Other Procedures

A. Potential applicants for major projects should be encouraged to arrange preapplication meetings with the Corps and appropriate federal, state or Indian tribal, and local authorities to determine requirements and documentation required for proposed permit evaluations. As a result of such meetings, the applicant often revises a proposal to avoid or minimize adverse impacts after developing an understanding of the Guidelines requirements by which a future Section 404 permit decision will be made, in addition to gaining an understanding of other state or tribal, or local requirements. Compliance with other statutes, requirements and reviews, such as NEPA and Corps public interest review, may not in and of themselves satisfy the requirements in the Guidelines.

B. In achieving the goals of the CWA, the Corps will strive to avoid adverse impacts and offset unavoidable adverse impacts to existing aquatic resources. Measures which can accomplish this can be identified only through resource assessments tailored to the site performed by qualified professionals because ecological characteristics of each aquatic site are unique. Functional values should be assessed by applying aquatic site assessment techniques generally recognized by experts in the field and/or the best professional judgment of federal and state agency representatives, provided such assessments fully consider ecological functions included in the Guidelines. The objective of mitigation for unavoidable impacts is to offset environmental losses. Additionally for wetlands, such mitigation will provide, at a minimum, one for one functional replacement (i.e., no net loss of values), with an adequate margin of safety to reflect the expected degree of success associated with the mitigation plan, recognizing that this minimum requirement may not be appropriate and practicable, and thus may not be relevant in some cases, as discussed in Section II.B of this MOA (Footnote 7). In the absence of more definitive information on the functions and values of specific wetland sites, a minimum of 1 to 1 acreage replacement may be used as a reasonable surrogate for no net loss of functions and values. However, this ratio may be greater where the functional values of the area being impacted are demonstrably high and the replacement wetlands are of lower functional value or the likelihood of success of the mitigation project is low. Conversely, the ratio may be less than 1 to 1 for areas where the functional values associated with the area being impacted are demonstrably low and the likelihood of success associated with the mitigation proposal is high.

C. The Guidelines are established as the environmental standard for Section 404 permit issuance under the CWA. Aspects of a proposed project may be affected through a determination of requirements needed to comply with the Guidelines to achieve these CWA environmental goals.

D. Monitoring is an important aspect of mitigation, especially in areas of scientific uncertainty. Monitoring should be directed toward determining whether permit conditions are complied with and whether the purpose intended to be served by the condition is actually achieved. Any time it is determined that a permitter is in non-compliance with mitigation requirements of the permit, the Corps will take action in accordance with 33 CFR Part 326. Monitoring should not be required for purposes other than these, although information for other uses may accrue from the monitoring requirements. For projects to be permitted involving mitigation with higher levels of scientific uncertainty, such as some forms of compensatory mitigation, long term monitoring, reporting and potential remedial action should be required. This can be required of the applicant through permit conditions.

E. Mitigation requirements shall be conditions of standard Section 404 permits. Army regulations authorize mitigation requirements to be added as special conditions to an Army permit to satisfy legal requirements (e.g., conditions necessary to satisfy the Guidelines) [33 CFR 325.4(a)]. This ensures legal enforceability of the mitigation conditions and enhances the level of compliance. If the mitigation plan necessary to ensure compliance with the Guidelines is not reasonably implementable or enforceable, the permit shall be denied.

F. Nothing in this document is intended to diminish, modify or otherwise affect the statutory or regulatory authorities of the agencies involved. Furthermore, formal policy guidance on or interpretation of this document shall be issued jointly.

G. This MOA shall take effect February 7, 1990, and will apply to those completed standard permit applications which are received on or after the effective date. This MOA may be modified or revoked by agreement of both parties, or revoked by either party alone upon six (6) months written notice.

Robert W. Page
Assistant Secretary of the Army
(Civil Works)
LaJuana S. Wilcher
Assistant Administrator for Water
U.S. Environmental Protection Agency

Footnotes:

Footnote 1. Standard permits are those individual permits which have been processed through application of the Corps public interest review procedures (33 CFR 325) and the EPA's Section 404(b)(1) Guidelines, including public notice and receipt of comments.

Standard permits do not include letters of permission, regional permits, nationwide permits, or programmatic permits.

Footnote 2. (except where Section 404(b)(2) applies).

Footnote 3. Section 230.3(q) of the Guidelines reads as follows: "The term practicable means available and capable of being done after taking into consideration cost, *existing technology and logistics in light of over all project purposes.*" (Emphasis supplied)

Footnote 4. Avoidance as used in the 404(b)(1) Guidelines and this MOA does not include compensatory mitigation.

Footnote 5. It is important to recognize that there are circumstances where the impacts of the project are so significant that even if alternatives are not available, the discharge may not be permitted regardless of the compensatory mitigation proposed (40 CFR 230.10(c)).

Footnote 6. Special aquatic sites include sanctuaries and refuges, wetlands, mud flats, vegetated shallows, coral reefs and riffle and pool complexes.

Footnote 7. For example, there are certain areas where, due to hydrological conditions, the technology for restoration or creation of wetlands may not be available at present, or may otherwise be impracticable. In addition, avoidance, minimization, and compensatory mitigation may not be practicable where there is a high proportion of land which is wetlands. EPA and Army, at present, are discussing with representatives of the oil industry, the potential for a program of accelerated rehabilitation of abandoned oil facilities on the North Slope to serve as a vehicle for satisfying necessary compensation requirements.

APPENDIX 1.2

COMPENSATORY MITIGATION FOR LOSSES OF AQUATIC RESOURCES

[33 CFR PART 332, 73 FR,
19594-19705

APRIL 10, 2008] AND
[40 CFR PART 230]



Federal Register

**Thursday,
April 10, 2008**

Part II

Department of Defense

**Department of the Army, Corps of
Engineers
33 CFR Parts 325 and 332**

Environmental Protection Agency

**40 CFR Part 230
Compensatory Mitigation for Losses of
Aquatic Resources; Final Rule**

DEPARTMENT OF DEFENSE**Department of the Army, Corps of Engineers****33 CFR Parts 325 and 332****ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 230**

[EPA-HQ-OW-2006-0020; FRL-8545-4]

RIN 0710-AA55

Compensatory Mitigation for Losses of Aquatic Resources

AGENCIES: U.S. Army Corps of Engineers, DoD; and Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: The U.S. Army Corps of Engineers (the Corps) and the Environmental Protection Agency (EPA) are issuing regulations governing compensatory mitigation for activities authorized by permits issued by the Department of the Army. The regulations establish performance standards and criteria for the use of permittee-responsible compensatory mitigation, mitigation banks, and in-lieu programs to improve the quality and success of compensatory mitigation projects for activities authorized by Department of the Army permits.

This rule improves the planning, implementation and management of compensatory mitigation projects by emphasizing a watershed approach in selecting compensatory mitigation project locations, requiring measurable, enforceable ecological performance standards and regular monitoring for all types of compensation and specifying the components of a complete compensatory mitigation plan, including assurances of long-term protection of compensation sites, financial assurances, and identification of the parties responsible for specific project tasks.

This rule applies equivalent standards to permittee-responsible compensatory mitigation, mitigation banks and in-lieu fee mitigation to the maximum extent practicable. Since a mitigation bank must have an approved mitigation plan and other assurances in place before any of its credits can be used to offset permitted impacts, this rule establishes a preference for the use of mitigation bank credits, which reduces some of the risks and uncertainties associated with compensatory mitigation. This rule also significantly revises the requirements for in-lieu fee programs to address

concerns regarding their past performance and equivalency with the standards for mitigation banks and permittee-responsible compensatory mitigation.

DATES: The effective date is June 9, 2008.

ADDRESSES: Headquarters, U.S. Army Corps of Engineers, Operations and Regulatory Community of Practice, 441 G Street, NW., Washington, DC 20314-1000. Headquarters, U.S. Environmental Protection Agency, Wetlands Division, Mail code 4502T, 1200 Pennsylvania Ave, NW., Washington, DC 20460.

The Corps and EPA have established a docket for this action under Docket ID No. EPA-HQ-OW-2006-0020. All documents in the docket are listed on the <http://www.regulations.gov> web site. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through <http://www.regulations.gov> or in hard copy at the Water Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Water Docket is (202) 566-2426.

FOR FURTHER INFORMATION CONTACT: Mr. David Olson at 202-761-4922 or by e-mail at david.b.olson@usace.army.mil, or Mr. Palmer Hough at 202-566-1374 or by e-mail at hough.palmer@epa.gov. Additional information can also be found at the Corps Headquarters Regulatory Program webpage at: <http://www.usace.army.mil/cw/cecwo/reg/index.html> or the EPA compensatory mitigation webpage at: <http://www.epa.gov/wetlandsmitigation>.

SUPPLEMENTARY INFORMATION:

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- II. General Comments and Responses
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 - B. Most Frequently Raised Issues
 - 1. Section 404(b)(1) Guidelines
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 - 4. Watershed Approach
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- III. In-Lieu Fee Programs
- IV. Compliance With Section 314 of the NDAA

- V. Organization of the Final Rule
- VI. Discussion of Specific Sections of the Final Rule
- VII. Administrative Requirements

I. Background

Compensatory mitigation involves actions taken to offset unavoidable adverse impacts to wetlands, streams and other aquatic resources authorized by Clean Water Act section 404 permits and other Department of the Army (DA) permits. As such, compensatory mitigation is a critical tool in helping the federal government to meet the longstanding national goal of "no net loss" of wetland acreage and function. For impacts authorized under section 404, compensatory mitigation is not considered until after all appropriate and practicable steps have been taken to first avoid and then minimize adverse impacts to the aquatic ecosystem pursuant to 40 CFR part 230 (i.e., the CWA Section 404(b)(1) Guidelines).

Compensatory mitigation can be carried out through four methods: the *restoration* of a previously-existing wetland or other aquatic site, the *enhancement* of an existing aquatic site's functions, the *establishment* (i.e., creation) of a new aquatic site, or the *preservation* of an existing aquatic site. There are three mechanisms for providing compensatory mitigation: *permittee-responsible compensatory mitigation*, *mitigation banks* and *in-lieu fee mitigation*. Permittee-responsible mitigation is the most traditional form of compensation and continues to represent the majority of compensation acreage provided each year. As its name implies, the permittee retains responsibility for ensuring that required compensation activities are completed and successful. Permittee-responsible mitigation can be located at or adjacent to the impact site (i.e., on-site compensatory mitigation) or at another location generally within the same watershed as the impact site (i.e., off-site compensatory mitigation).

Mitigation banks and in-lieu fee mitigation both involve off-site compensation activities generally conducted by a third party, a mitigation bank sponsor or in-lieu fee program sponsor. When a permittee's compensatory mitigation requirements are satisfied by a mitigation bank or in-lieu fee program, responsibility for ensuring that required compensation is completed and successful shifts from the permittee to the bank or in-lieu fee sponsor. Mitigation banks and in-lieu fee programs both conduct consolidated aquatic resource restoration, enhancement, establishment and preservation projects; however, under

current practice, there are several important differences between in-lieu fee programs and mitigation banks.

First, in-lieu fee programs are generally administered by state governments, local governments, or non-profit non-governmental organizations while mitigation banks are usually (though not always) operated for profit by private entities. Second, in-lieu fee programs rely on fees collected from permittees to initiate compensatory mitigation projects while mitigation banks usually rely on private investment for initial financing. Most importantly, mitigation banks must achieve certain milestones, including site selection, plan approval, and financial assurances, before they can sell credits, and generally sell a majority of their credits only after the physical development of compensation sites has begun. In contrast, in-lieu fee programs generally initiate compensatory mitigation projects only after collecting fees, and there has often been a substantial time lag between permitted impacts and implementation of compensatory mitigation projects. Additionally, in-lieu fee programs have not generally been required to provide the same financial assurances as mitigation banks. For all of these reasons, there is greater risk and uncertainty associated with in-lieu fee programs regarding the implementation of the compensatory mitigation project and its adequacy to compensate for lost functions and services.

As noted in the preamble for the March 2006 proposal, the majority of the existing guidance regarding compensatory mitigation and the use of these three mechanisms for providing compensation exists in a number of national guidance documents released by the Corps and EPA over the past seventeen years (sometimes in association with other federal agencies such as the U.S. Fish and Wildlife Service and the National Marine Fisheries Service). Since these guidance documents were developed at different times, and in different regulatory contexts, concerns have been raised regarding the consistent, predictable and equitable interpretation and application of these guidance documents. In November 2003, Congress called for the development of regulatory standards and criteria for the use of compensatory mitigation in the section 404 program.

Section 314 of the National Defense Authorization Act (NDAA) for Fiscal Year 2004 (section 314) requires the Secretary of the Army, acting through the Chief of Engineers, to issue regulations "establishing performance

standards and criteria for the use, consistent with section 404 of the Federal Water Pollution Control Act (33 U.S.C. 1344, also known as the Clean Water Act), of on-site, off-site, and in-lieu fee mitigation and mitigation banking as compensation for lost wetlands functions in permits issued by the Secretary of the Army under such section." This provision also requires that those regulations, to the maximum extent practicable, "maximize available credits and opportunities for mitigation, provide flexibility for regional variations in wetland conditions, functions and values, and apply equivalent standards and criteria to each type of compensatory mitigation."

In response to this directive, the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency (the agencies) published a proposed rule in Part II of the March 28, 2006, issue of the **Federal Register** (71 FR 15520), with a 60-day public comment period. As a result of several requests, the Corps and EPA extended the comment period by an additional 30 days. The comment period ended on June 30, 2006.

In the preamble to the March 2006 proposal, the agencies noted their decision, in light of their respective statutory roles in the section 404 program, to pursue this rulemaking as a joint effort between the Corps and EPA. The preamble also discussed the Corps's decision to develop these standards for all DA permits which could potentially require compensatory mitigation. Thus, in addition to Clean Water Act section 404 permits, these standards also apply to DA permits issued under sections 9 and 10 of the Rivers and Harbors Act of 1899. Finally, the preamble also discussed why these standards should apply to compensatory mitigation for impacts to streams and other open waters in addition to wetlands.

As discussed in the preamble to the March 2006 proposal, in 2001 the National Research Council (NRC) released a comprehensive evaluation of the effectiveness of wetlands compensatory mitigation required under section 404 of the Clean Water Act. This report noted concerns with some past wetland compensatory mitigation and provided recommendations for the federal agencies, states, and other parties to improve compensatory mitigation. This report was an important resource in the development of today's rule.

II. General Comments and Responses

In response to the proposed rule, approximately 12,000 comments were received, including about 850 distinct comments and 11,150 additional

substantially identical e-mails and letters. Comments were provided by regulated entities, the scientific community, non-governmental organizations, mitigation bankers, in-lieu fee program sponsors, state and local government agencies, and other members of the public.

A. Overview

Most of the distinct commenters said that this rule is a necessary addition to regulations for implementing the Corps Regulatory Program and some expressed appreciation that the rule incorporates stakeholder feedback and lessons learned. Many commenters expressed general support for the proposed rule because: (1) It will promote predictability and consistency in compensatory mitigation; (2) it will further effective partnerships with private sector mitigation banks; (3) it responds to concerns raised by those participating in the development of Mitigation Action Plan products; (4) many provisions of the rule are consistent with the 2005 Millennium Ecosystem Assessment; (5) it brings greater technical clarity to the process of determining appropriate mitigation; (6) it provides greater focus on accountability through measurable and enforceable ecological performance standards, monitoring, and management; (7) it fosters incorporation of aquatic ecosystem science into compensatory mitigation plans; and (8) it increases public participation in the compensatory mitigation process. Some of these commenters also suggested modifications to the proposed rule, which are discussed in more detail below.

Some commenters, including most of the form letters, opposed the proposed rule or suggested extensive revisions to increase the protection of aquatic resources. The issues most frequently raised, considering both the individual and form letters, were: (1) Interaction of the proposed rule with the existing requirements of the Section 404 (b)(1) Guidelines, (2) compensatory mitigation standards for streams, (3) the amount of discretionary language in the proposed rule, (4) use of the watershed approach for identifying mitigation projects, and (5) the proposed phase-out of in-lieu fee mitigation. These five major issues and our responses to them are discussed below in part II.B. Many other general issues were raised as well, and a number of these are discussed in part II.C. Additional detail, and responses to comments on specific rule provisions, are provided in part VI.

B. Most Frequently Raised Issues

1. Section 404(b)(1) Guidelines

Many commenters stated that, consistent with existing regulations and policy, the rule should emphasize impact avoidance and that compensatory mitigation should not be considered until all efforts have been made to first avoid and then minimize impacts to streams and wetlands. Some commenters also asserted that the proposal would expand the district engineer's existing level of discretion in determining that an applicant has taken all appropriate and practicable steps to first avoid and then minimize impacts to the aquatic ecosystem. Some further asserted that the proposal could be construed to allow permits to be issued even if they cause or contribute to significant degradation of aquatic resources, an action prohibited by the Section 404(b)(1) Guidelines (40 CFR 230.10(c)).

The agencies agree that impacts must be first avoided and then minimized, and that compensatory mitigation should be used only for impacts that cannot be avoided or minimized. The agencies disagree that the rule will weaken or undermine the 404(b)(1) Guidelines, which are codified in regulation and remain unchanged. These requirements are essential to meeting the overall objective of the Clean Water Act to restore and maintain the chemical, physical and biological integrity of the nation's waters. We have clarified that none of them have changed by adding a new paragraph at 33 CFR 332.1(c)(1) [40 CFR 230.91(c)(1)] stating that nothing in these new rules affects the requirement that all DA permits subject to section 404 of the Clean Water Act comply with applicable provisions of the Section 404(b)(1) Guidelines. Thus, this rule does not expand the district engineer's existing level of discretion in determining that an applicant has taken all appropriate and practicable steps to first avoid and then minimize impacts to the aquatic ecosystem. Paragraph (c)(2) of this section has also been modified to clarify that individual section 404 permits will be issued only if compliance with all applicable provisions of the 404(b)(1) Guidelines has been achieved including those which require the permit applicant to take all appropriate and practicable steps to avoid and minimize adverse impacts to the aquatic ecosystem. For general permits, compliance with the Section 404(b)(1) Guidelines is clarified at 40 CFR 230.7.

In addition, a new paragraph at 33 CFR 332.1(f)(2) [40 CFR 230.91(f)(2)] has been added to the final rule which

clarifies which provisions of the 1990 Memorandum of Agreement (MOA) between the Department of the Army and the Environmental Protection Agency on the Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines have been superseded by this rule and which provisions remain in effect. Those that remain in effect include the provisions related to impact avoidance and minimization, evaluation of the least environmentally damaging practicable alternatives, and circumstances where the impacts of the proposed project are so significant that discharges may not be permitted regardless of the compensatory mitigation proposed.

Today's rule is focused on the compensation component of the mitigation sequence. Its purpose is to develop a comprehensive set of standards for compensatory mitigation pursuant to section 314 of the NDAA. Fulfilling this directive necessitates a detailed treatment of all critical aspects of compensatory mitigation. This does not affect compliance with other parts of our regulations, including the 404(b)(1) Guidelines. Additional discussion of this issue can be found in part VI of the preamble.

2. Compensatory Mitigation Standards for Streams

Many commenters stated that compensatory mitigation for stream impacts should not be addressed in this rule. Some stated that there is no scientific evidence that streams can be established (i.e., stream creation) or that other approaches taken in this rule such as stream restoration can compensate for stream losses. They suggested that the agencies should conduct further research on stream mitigation and demonstrate its success before including standards for stream mitigation in the rule. Some also noted that the statutory language in the NDAA refers only to wetlands.

On the other hand, other commenters expressed support for applying the rule to streams and other open waters. These commenters believe that physical alteration of aquatic resources should be mitigated to the extent practicable to support the objectives of the Clean Water Act and that because section 404 of the Clean Water Act authorizes discharges of dredged or fill material into lakes, streams, and wetlands, mitigation for those impacts should be required (and addressed in this rule) as well.

As noted in the preamble to the March 2006 proposal, we believe this rule should apply to compensatory mitigation for all types of aquatic

resources that can be impacted by activities authorized by DA permits, including streams and other open waters. We recognize that the scientific literature regarding the issue of stream establishment and re-establishment is limited and that some past projects have had limited success (Bernhardt and others 2007).¹ Accordingly, we have added a new paragraph at 33 CFR 332.3(e)(3) [40 CFR 230.93(e)(3)] that specifically notes that there are some aquatic resources types that are difficult to replace and streams are included among these. It emphasizes the need to avoid and minimize impacts to these 'difficult-to-replace' resources and requires that any compensation be provided by in-kind preservation, rehabilitation, or enhancement to the extent practicable. This language is intended to discourage stream establishment and re-establishment projects while still requiring compensation for unavoidable stream impacts in the form of stream corridor restoration (via rehabilitation), enhancement, and preservation projects, where practicable. District engineers will evaluate compensatory mitigation proposals for streams, and assess the likelihood of success before deciding whether the proposed compensation should be required.

We recognize that the science of stream restoration is still evolving and that more research is needed; however, the lack of a fully-developed set of tested hypotheses and techniques does not mean that stream mitigation (particularly via restoration, enhancement and preservation) cannot be successfully performed or that it should not be required where avoidance of impacts is not practicable. As noted by Bernhardt and others (2005),² "stream and river restoration can lead to species recovery, improved inland and coastal water quality, and new areas for wildlife habitat and recreational activities." There is a growing body of research that documents successful outcomes for stream restoration projects, examines stream restoration techniques and provides recommendations for effective stream and river restoration.

¹ Bernhardt, E.S., E.B. Sudduth, M.A. Palmer, J.D. Allan, J.L. Meyer, G. Alexander, J. Follstad-Shah, B. Hassett, R. Jenkinson, R. Lave, J. Rumps, and L. Pagano. 2007. Restoring rivers one reach at a time: Results from a survey of U.S. river restoration practitioners. *Restoration Ecology* 15:482-493.

² Bernhardt, E.S., M.A. Palmer, J.D. Allan, G. Alexander, K. Barnas, S. Brooks, J. Carr, S. Clayton, C. Dahm, J. Follstad-Shah, D. Galat, S. Gloss, P. Goodwin, D. Hart, B. Hassett, R. Jenkinson, S. Katz, G.M. Kondolf, P.S. Lake, R. Lave, J.L. Meyer, T.K. O'Donnell, L. Pagano, B. Powell, and E. Sudduth. 2005. Synthesizing U.S. river restoration efforts. *Science* 308: 636-637.

Successful outcomes for stream restoration with respect to water quality, habitat creation, species recovery and recreation, have been documented by Baron and others (2002);³ Buijse and others (2002);⁴ Muotka and Pekka (2002);⁵ Nakamura and Kunihiro (2006);⁶ and Petersen (1999).⁷ Criteria and recommendations for ecologically successful stream restoration have been addressed by Hassett and others (2005)⁸ Kauffman and others (1997)⁹ Lavendel (2002)¹⁰ Palmer and others (2005)¹¹ and Whalen and others (2002).¹² Assessment of the physical and biological effects of restoration activities has been performed by Reeves and others (1997);¹³ Slaney and others (1994)¹⁴ and Solazzi and others (2000).¹⁵ The applicability of specific tools to measure stream restoration success has been investigated by Paller and others (2000)¹⁶ and Lester and

others (2006).¹⁷ Somerville and Pruitt (2004)¹⁸ reviewed existing stream assessment and mitigation protocols and Roni and others (2002)¹⁹ reviewed stream restoration techniques. Shields and others (2003)²⁰ discussed the unique challenges associated with stream restoration research.

Under this final rule, mitigation plans for all wetland compensatory mitigation projects must contain the following twelve elements: Objectives; site selection criteria; site protection instruments (e.g., conservation easements); baseline information (for impact and compensation sites); credit determination methodology; mitigation work plan; maintenance plan; ecological performance standards; monitoring requirements; long-term management plan; adaptive management plan; and financial assurances (see 33 CFR 332.4(c) [40 CFR 230.94(c)]). Existing literature regarding stream restoration, as well as our experience with past stream mitigation projects supports our decision to require mitigation plans for stream compensatory mitigation projects to contain the same twelve fundamental elements. Some commenters noted that aspects of the mitigation work plan will differ between stream and wetland mitigation projects. Today's rule highlights some of these potential differences by noting additional elements that may be necessary for stream mitigation project work plans. These elements include planform geometry, channel form, watershed size, design discharge, and riparian area plantings and can be found at 33 CFR 332.4(c)(7) [40 CFR 230.94(c)(7)].

Another important modification was made to the section of the rule describing ecological performance standards. Like the proposal, today's rule requires that every mitigation plan include objective and verifiable ecological performance standards to assess whether the compensatory

mitigation project is achieving its objectives. Neither the proposal nor today's rule prescribe the individual variables or metrics that should be used to evaluate each aquatic resource type potentially restored, enhanced, established, or preserved in compensatory mitigation projects. Given the extremely large variation among the aquatic resource types found across the country, and the constant advances in the science of aquatic ecosystem restoration, overly prescriptive requirements would be impractical. However, in recognition of the need to strengthen this provision and to ensure that compensatory mitigation project performance standards reflect the latest advances in the science of stream and wetland restoration, we have modified the final rule at 33 CFR 332.5(b) [40 CFR 230.95(b)] to include a requirement that ecological performance standards be based on the best available science that can be measured or assessed in a practicable manner.

As stream scientists have noted, the proportion of stream restoration projects that have been monitored for performance is low (Bernhardt and others 2005).²¹ Today's rule, however, requires monitoring of mitigation projects for a minimum of five years with longer monitoring periods required for aquatic resources with slow development rates. This monitoring requirement will provide new data on stream restoration performance that will serve to increase knowledge and improve stream mitigation over time. (See 33 CFR 332.6 [40 CFR 230.96]). Also, in response to public comment, we removed a provision from 33 CFR 332.6(a) [40 CFR 230.96(a)] that would have allowed the district engineer to waive all monitoring requirements if they were determined not to be practicable.

While section 314 of the NDAA refers only to the development of compensatory mitigation standards for wetlands, we believe that in order to improve the performance and results of all types of compensatory mitigation this rule should include compensatory mitigation standards for all types of aquatic resources that can be impacted by activities authorized by DA permits, including streams and other open waters. Section 404(b) of the Clean Water Act authorizes EPA to develop

³ Baron, J.S. et al. 2002. Meeting ecological and societal needs for freshwater. *Ecological Applications* 12: 1247–1260.

⁴ Buijse, A.D. et al. 2002. Restoration strategies for river floodplains along the large lowland rivers in Europe. *Freshwater Biology* 47: 889–907.

⁵ Muotka, T. and P. Laasonen. 2002. Ecosystem recovery in restored headwater streams: The role of enhanced leaf retention. *Journal of Applied Ecology* 39: 145–156.

⁶ Nakamura, K. and K. Amano. 2006. River and wetland restoration: Lessons from Japan. *Bioscience* 56(5): 419–129.

⁷ Petersen, M.M. 1999. A natural approach to watershed planning, restoration and management. *Water Science and Technology* 39(12): 347–352.

⁸ Hassett, B. et al. 2005. Restoring watersheds project by project: Trends in Chesapeake Bay tributary restoration. *Frontiers in Ecology and the Environment* 3(5): 259–267.

⁹ Kauffman, J. Boone, R.L. Beschta, N.O., and D. Lytjen. 1997. An ecological perspective of riparian and stream restoration in the western United States. *Fisheries* 22(5): 12–24.

¹⁰ Lavendel, B. 2002. The business of ecological restoration. *Ecological Restoration* 20: 173–178.

¹¹ Palmer, M.A. et al. 2005. Standards for ecologically successful river restoration. *Journal of Applied Ecology* 42: 207–217.

¹² Whalen, P.J., L.A. Toth, J.W. Koebel, and P.K. Strayer. 2002. Kissimmee River Restoration: A case study. *Water Science and Technology* 45(11): 55–62.

¹³ Reeves, G.H., D.B. Hohler, B.E. Hansen, F.H. Everest, J.R. Sedell, T.L. Hickman, and D. Shively. 1997. Fish habitat restoration in the Pacific Northwest: Fish Creek of Oregon. Pages 335–359 in J.E. Williams, C.A. Wood, and M.P. Dombeck, editors. *Watershed Restoration: Principles and Practices*. American Fisheries Society, Bethesda, Maryland.

¹⁴ Slaney, P.A., B.O. Rublee, C.J. Perrin, and H. Goldberg. 1994. Debris structure placements and whole-river fertilization for salmonoids in a large regulated stream in British Columbia. *Bulletin of Marine Science* 55: 1160–1180.

¹⁵ Solazzi, M.F., T.E. Nickelson, S.L. Johnson, and J.D. Rodgers. 2000. Effects of increasing winter rearing habitat on abundance of salmonoids in two coastal Oregon streams. *Canadian Journal of Fisheries and Aquatic Sciences*. 57: 906–914

¹⁶ Paller, M.H., M.J.M. Reichert, J.M. Dean, and J.C. Seigle. 2000. Use of fish community data to evaluate restoration success of a riparian stream. *Ecological Engineering* 15: 171–187.

¹⁷ Lester, R., W. Wright, and M. Jones-Lennon. 2006. Determining Target Loads of Large and Small Wood for Stream Rehabilitation in High-Rainfall Agricultural Regions of Victoria, Australia. *Ecological Engineering* 28: 71–78.

¹⁸ Somerville, D.E. and B.A. Pruitt. 2004. Physical stream assessment: A review of selected protocols for use in the Clean Water Act Section 404 Program. Prepared for the U.S. Environmental Protection Agency, Office of Wetlands, Oceans, and Watersheds, Wetlands Division (Order No. 3W–0503–NATX). Washington, DC, 213 pp.

¹⁹ Roni, P. et al. 2002. A review of stream restoration techniques and a hierarchical strategy for prioritizing restoration in Pacific Northwest watersheds. *North American Journal of Fisheries Management* 22: 1–20.

²⁰ Shields, F. Douglas, C.M. Cooper Jr., Scott S. Knight and M.T. Moore. 2003. Stream corridor restoration research: A long and winding road. *Ecological Engineering* 20: 441–454.

²¹ Bernhardt, E.S., M.A. Palmer, J.D. Allan, G. Alexander, K. Barnas, S. Brooks, J. Carr, S. Clayton, C. Dahm, J. Follstad-Shah, D. Galat, S. Gloss, P. Goodwin, D. Hart, B. Hassett, R. Jenkinson, S. Katz, G.M. Kondolf, P.S. Lake, R. Lave, J.L. Meyer, T.K. O'Donnell, L. Pagano, B. Powell, and E. Sudduth. 2005. Synthesizing U.S. river restoration efforts. *Science* 308: 636–637.

the substantive environmental criteria used by the Corps in making section 404 permit decisions including those associated with all forms of compensatory mitigation. Also, section 501(a) of the Clean Water Act provides EPA with broad authority to conduct any rulemaking necessary to carry out its functions under the Clean Water Act.

While many stream restoration and rehabilitation activities have been conducted across the country, we recognize that not all of them have been successful. Much of the literature suggests that this is due to a lack of the kinds of comprehensive standards for project planning, implementation and management included in this rule. Accordingly, we determined that including stream mitigation in this rule would improve current standards and practices for compensatory mitigation of streams. Today's rule, with the addition of the above referenced modifications, includes the necessary provisions to appropriately treat stream mitigation. Additional discussion of this issue can be found in part VI of the preamble.

3. Discretionary Language

Many commenters expressed concern that the proposal leaves too much discretion to district engineers. Some commenters objected to use of "may", "should", and "can" in some rule provisions, and/or to use of the qualifier "appropriate and practicable" for some requirements. Commenters were concerned that such discretion might lead to authorization of inappropriate compensatory mitigation projects, inadequate enforcement and oversight, or excessive litigation.

In contrast, other commenters suggested even greater flexibility, to allow cost-effective compensatory mitigation based on case-specific circumstances.

In response to these comments, we have carefully evaluated all of the discretionary language in the proposed rule, and replaced it with binding and/or more clearly articulated requirements where appropriate. Such modifications were made to a number of key provisions in the rule including those related to mitigation type, the amount of mitigation necessary to offset permitted losses, financial assurances, credit releases, the use of preservation, ecological performance standards, and long-term site protection and management. Also, a number of requirements for in-lieu fee programs have been added to the rule, as part of the decision not to phase them out as originally proposed. (Note that the preamble to the proposed rule included an extensive discussion of and request

for comment on alternatives to the proposed phase-out. The new requirements for in-lieu fee programs reflect many of the comments received.) These specific modifications and additions are discussed in more detail in part VI of the preamble.

With these modifications, we believe that today's rule achieves a proper balance of binding requirements and discretion. The rule will help improve the quality and success of compensatory mitigation, while providing flexibility necessary to ensure that compensatory mitigation requirements for a particular DA permit appropriately offset authorized impacts. Some discretionary language is necessary for this rule because resource types, project impacts, and compensatory mitigation practices vary widely across both projects and regions of the country. District engineers need to take such variations into account, including variations in state and local requirements that affect the implementation and long-term management of compensatory mitigation projects. For example, laws and regulations governing real estate instrument and financial assurances vary from state to state. In addition, practices for restoring, establishing, and enhancing aquatic resources vary by resource type and by region. For these reasons, discretionary language is used where appropriate to promote both regulatory efficiency and project success, and to ensure that required mitigation is practicable.

4. Watershed Approach

Many comments addressed the watershed approach included in the proposal. A majority of commenters expressed support for the use of a watershed approach to compensatory mitigation. They noted that use of a watershed approach would improve the sustainability of compensatory mitigation projects and ensure that they are better integrated with the needs of the watershed. However, some commenters believed that additional specificity in the requirements relating to the use of a watershed approach was needed. For example, commenters requested clarification regarding use of the watershed approach in the absence of a watershed plan, parameters needed to implement a watershed approach, and the definition of the terms "watershed," "watershed plan" and "watershed approach."

Other commenters opposed the watershed approach described in the proposed rule. Some were particularly concerned about use of the watershed approach in the absence of a detailed watershed plan, arguing that this could

lead to inappropriate compensatory mitigation decisions and the cumulative loss of wetland functions. Others were more concerned about the analytical burden on permit applicants of developing watershed plans or justifying mitigation projects in terms of wider watershed considerations. Still others thought the concept was too ambiguous to be included in a regulation.

The agencies continue to believe that the watershed approach provides the appropriate framework for making compensatory mitigation decisions, but have made a number of changes to address specific comments. The primary objective of the watershed approach included in today's rule is to maintain and improve the quantity and quality of wetlands and other aquatic resources in watersheds through strategic selection of compensatory mitigation project sites. The watershed approach accomplishes this objective by expanding the informational and analytic basis of mitigation project site selection decisions and ensuring that both authorized impacts and mitigation are considered on a watershed scale rather than only project by project. This requires a degree of flexibility so that district engineers can authorize mitigation projects that most effectively address the case-specific circumstances and needs of the watershed, while remaining practicable for the permittee. In response to the concern about additional burden on permittees, the agencies recognize that the level of data and analysis appropriate for implementing the watershed approach must be commensurate with the scale of the project, and that there will be situations, particularly for projects with small impacts, where it would not be cost-effective to utilize a watershed approach. For this reason, the regulations at § 332.3(c)(1) [§ 230.93(c)(1)], state that the watershed approach is to be used to the extent appropriate and practicable, and the regulations at § 332.3(c)(3)(iii) [§ 230.93(c)(3)(iii)] state that the level of information and analysis must be commensurate with the scope and scale of the authorized impacts and functions lost.

We recognize that there are many different types of watershed plans that have been developed for purposes other than aquatic resource restoration, establishment, enhancement, and/or preservation activities and that such plans may be of limited use in making compensatory mitigation decisions. For example, some watershed plans are conceived to guide development activities or the placement of storm

water infrastructure. Therefore, we have modified § 332.3(c)(1) [§ 230.93(c)(1)] to state that the district engineer will determine whether a given watershed plan is appropriate for use in the watershed approach for compensatory mitigation.

We further recognize that in many areas, watershed plans appropriate for use in planning compensatory mitigation activities have not been developed. Therefore, consistent with the 2001 NRC Report, the watershed approach described in this final rule does not require a formal watershed plan. Although it would always be preferable to have an appropriate watershed plan, we believe that implementing a watershed approach to the degree practicable, even without a watershed plan, can improve compensatory mitigation site selection and project implementation. For example, the use of appropriately sited mitigation banks can support a watershed approach without using watershed plans. In the absence of an appropriate watershed plan, the watershed approach should be based on a structured consideration of watershed needs and how wetlands and other types of aquatic resources in specific locations will address those needs. To implement this approach, district engineers will utilize the considerations specified in § 332.3(c)(2) [§ 230.93(c)(2)] and available information on watershed conditions and needs, as described in § 332.3(c)(3) [§ 230.93(c)(3)].

In response to public input, we have revised the definition of “watershed plan” to clarify the kinds of plans appropriate for use in making compensation decisions. We have also added definitions for the terms “watershed” and “watershed approach” at § 332.2 [§ 230.92]. The appropriate watershed scale to use for the watershed approach will vary by geographic region, as well as by the particular aquatic resources under consideration. Since using a watershed approach is not appropriate in areas without watershed boundaries, such as marine waters, we have also added a provision (§ 332.3(c)(2)(v) [§ 230.93(c)(2)(v)]) to clarify that other types of spatial scales may be more appropriate in those areas. To enhance the use of the watershed approach, we have added a sentence to § 332.3(c)(2)(iv) [§ 230.93(c)(2)(iv)] stating that the identification and prioritization of resource needs should be as specific as possible. We have also added a provision, stating that a watershed approach may include on-site compensatory mitigation, off-site compensatory mitigation, or a combination of on-site and off-site

compensatory mitigation (see § 332.3(c)(2)(iii) [§ 230.93(c)(2)(iii)]).

We have revised § 332.3(c)(3) [§ 230.93(c)(3)] to clarify that district engineers will use available information for the watershed approach. That available information will address watershed conditions and needs and include potential and/or priority sites for compensatory mitigation projects. We have also indicated potential sources of appropriate information, such as wetland maps, soil surveys, aerial photographs, local ecological reports, etc. Public input on the watershed approach and our response to this input including the above mentioned modifications are discussed in more detail in part VI of the preamble.

5. In-Lieu Fee Programs

Many commenters, including many state officials, opposed the proposed phase-out of in-lieu programs. These commenters indicated that in certain areas (especially rural and coastal regions, the West, and Alaska) there are few mitigation banks and little potential for their development, and that permittee-responsible compensatory mitigation is often impractical. In-lieu fee programs are therefore the best (or only) option for compensatory mitigation in these areas. Some commenters also argued that in-lieu fee programs provide important benefits that other types of mitigation do not, such as a more thorough consideration of the needs of a watershed and the most appropriate locations and mitigation types to sustain and enhance its long-term health. Some commenters representing in-lieu fee programs stated that if they were held to all of the same standards as mitigation banks, particularly the requirement to secure project sites before selling any credits, they would have to cease operation and these benefits would be lost.

Many of these commenters also acknowledged problems in the current administration and performance of in-lieu fee mitigation, but stated that these problems were due to existing requirements and policies (or the lack thereof) rather than the in-lieu fee concept itself. They suggested that instead of phasing out in-lieu fee programs, the final rule should include standards that address these problems and ensure that in-lieu fee programs do in fact deliver mitigation that compensates for the impacts associated with the credits they sell. Commenters noted that the NDAA does not require that these standards be exactly the same as those for mitigation banks but rather “equivalent” to the maximum extent practicable. Some standards for in-lieu

fee programs suggested by commenters included: Limiting the number of credits that in-lieu fee programs can sell before they have secured sites, limiting the types of organizations that can be in-lieu fee sponsors, and establishing financial accounting standards to improve their accountability for credit fulfillment. A number of commenters acknowledged that even with significant improvements to in-lieu fee mitigation, mitigation banks would be more likely to minimize project uncertainties and temporal losses of aquatic resource functions. They suggested that the final rule should therefore stipulate that where the service areas of an in-lieu fee program and a mitigation bank overlap, the mitigation bank should be the preferred credit provider.

Other commenters supported the phase-out of in-lieu fee programs as proposed. These commenters pointed out shortfalls associated with current administration of in-lieu fee programs noting, for example, that prices for in-lieu fee credits are often too low and fail to cover all of the costs necessary to deliver the promised mitigation, including expenses for program administration, long-term maintenance of projects, and corrective action. This may result in undercutting of mitigation bank credit prices, since banks, as commercial ventures, must charge prices based on the full cost of producing compensation credits or go out of business. Furthermore, in-lieu fee programs often require fees from multiple permitted projects before they can initiate compensation projects, resulting in substantial delays between permitted impacts and compensation. Several commenters further stated that it was not fair for in-lieu fee programs to be allowed to continue to operate with lower or looser standards than mitigation banks and permittee-responsible mitigation. Commenters also noted that because credit release schedules for mitigation banks are tied to performance, they have a financial incentive to produce timely, successful mitigation that is lacking for in-lieu fee programs.

After carefully considering all comments received, the agencies have decided to retain in-lieu fee programs in today’s rule as a separate and distinct mechanism for providing compensatory mitigation for DA permits. We believe they can fulfill an important role in providing effective mitigation in circumstances where mitigation banks and permittee-responsible mitigation are not practicable. At the same time, we have included a number of new requirements for in-lieu fee programs to improve accountability and

performance, based to a large extent on existing practice at the most successful currently-operating in-lieu programs. Specifically, we have added a requirement for a compensation planning framework at § 332.8(c) [§ 230.98(c)] which details how the in-lieu fee program will select and secure project sites and implement mitigation projects in a watershed context. The framework is essentially a watershed plan designed to support resource restoration, and must include an analysis of historic aquatic resource losses and current conditions, a description of the general amounts, types and locations of aquatic resources the program will seek to provide and a prioritization strategy for selecting and implementing compensatory mitigation activities. This type of advanced planning will ensure that in-lieu fee programs are guided by a thorough understanding of the needs, opportunities, and challenges of the areas in which they operate, which will allow them to select and design more successful projects and better estimate full project costs.

The final rule also requires that the in-lieu fee program instrument establish a cap on the number of credits that the program can sell before securing a compensatory mitigation project site and conducting aquatic resource restoration, establishment, enhancement, and/or preservation at that site. These are defined as “advance credits” (see § 332.2 [§ 230.92]) and the rules for their establishment and use are provided at § 332.8(n) [§ 230.98(n)]. The rule also limits sponsorship of in-lieu fee programs specifically to governmental or non-profit natural resource management entities (see definition of “in-lieu fee program” at § 332.2 [§ 230.92]). District engineers and Interagency Review Team (IRT) members should carefully evaluate the capabilities and demonstrated performance of these natural resource management entities prior to approving them as in-lieu fee program sponsors in order to minimize the risks associated with allowing advance credit sales.

We have added a provision at § 332.8(i) [§ 230.98(i)] requiring in-lieu fee programs to establish a program account, including criteria for the management of this account. Funds collected from permittees, including interest on these funds, may only be used for the selection, design, acquisition, implementation, and management of in-lieu fee projects, with a small percentage allowed for administrative costs.

Provisions at § 332.8(d)(6)(iv)(B)–(C) [§ 230.98(d)(6)(iv)(B)–(C)] and

§ 332.8(o)(5)(ii) [§ 230.98(o)(5)(ii)] were included to improve the estimation of in-lieu fee project costs and the establishment of adequate fee schedules. Today’s rule ensures that the review, approval, and oversight of in-lieu fee programs is subject to the same level of interagency and public review as mitigation banks (see § 332.8(d) [§ 230.98(d)]). Similarly, today’s rule requires in-lieu fee projects to develop mitigation plans that meet the same standards as those applicable to mitigation banks and permittee-responsible projects (see § 332.8(j) [§ 230.98(j)]).

Properly organized in-lieu fee programs which comply with the new requirements established by today’s rule should actively support a watershed approach to compensatory mitigation, and will help advance goals for protecting and restoring aquatic resources within watersheds, especially in areas where there are no mitigation banks.

We recognize that even with these improvements to in-lieu fee programs, there will likely be less temporal loss of resources associated with mitigation provided by banks than with mitigation provided by in-lieu fee programs. We have therefore established a hierarchy in § 332.3(b) [§ 230.93(b)] for selecting the type and location of compensatory mitigation with an explicit preference for mitigation bank credits over advance credits from in-lieu fee programs when appropriate bank credits are available for use. Public input regarding in-lieu fee mitigation as well as all of these specific modifications and additions are discussed in more detail in parts III and VI of the preamble.

C. Other General Comments

Some commenters stated that the proposed rule should be revised to incorporate principles of ecological restoration and landscape ecology. Other commenters said that the proposed rule fails to recognize the dynamic nature of wetlands and provides disincentives for active management of wetland resources in ways that would benefit society. A few commenters remarked that the proposed rule does not adequately address compensatory mitigation for marine habitats or aquatic species.

We have revised the final rule to better incorporate principles of ecological restoration and landscape ecology, for example, at § 332.3(d) [§ 230.93(d)], which specifies detailed factors for the district engineer to use in determining ecological suitability for mitigation project sites. Section 404 directs the Corps to issue permits for

discharges of dredge and fill material, not to promote “active management” of wetlands. To the extent that active management may provide an alternative to permitted discharges, permit applicants should consider such approaches as part of the avoidance and minimization mitigation sequencing. Also, both permitted projects and compensatory mitigation projects may require on-going active management to protect resources, and conditions for such management may be incorporated into DA permits where appropriate. Finally, management of existing wetlands may itself involve discharges requiring DA permits, and in this case permit conditions will address issues related to the management and protection of affected resources, in accordance with applicable regulations, including this rule. We disagree that the rule does not adequately address marine habitats and species. While the specific projects needed to mitigate impacts to marine resources may be different, the procedural and analytical framework established in the final rule applies equally well to freshwater and marine resources.

Several commenters said that the proposed rule did not address concerns raised in recent reports on compensatory mitigation in the Corps Regulatory Program that were issued by the Government Accountability Office (GAO). Some commenters said that the proposed rule incorporates some of GAO’s recommendations, but expressed skepticism that the Corps has the resources to implement those provisions of this rule. These commenters asserted that the Corps needs to make compensatory mitigation compliance a high priority to ensure effective replacement of wetland acreage and function lost as a result of permitted activities.

One GAO report was issued in May 2001, and was entitled “Wetlands Protection: Assessments Needed to Determine Effectiveness of In-Lieu Fee Mitigation.” Another GAO report, “Wetlands Protection: Corps of Engineers Does Not Have an Effective Oversight Approach to Ensure That Compensatory Mitigation Is Occurring” was issued in September 2005. We have incorporated many of the recommendations of these GAO reports into this rule, by requiring the use of enforceable permit conditions, performance standards, and third-party agreements. In addition, this rule states that it supersedes certain agency guidance on compensatory mitigation, specifically the 1995 mitigation banking guidance, the 2000 in-lieu fee guidance, and Regulatory Guidance Letter (RGL)

02–02. That RGL provides guidance on compensatory mitigation projects for aquatic resources impacted by activities authorized by DA permits. This rule also clarifies the requirements for compensatory mitigation, as recommended by GAO. We agree that taking actions to determine compensatory mitigation compliance should be a high priority, and have provided general principles for establishing ecological performance standards and criteria. Corps districts and EPA regional offices will continue to work with other federal and state resource agencies to develop and refine specific performance standards and criteria to evaluate and ensure success of compensatory mitigation projects in their geographic areas of responsibility. These performance standards and criteria will take into account regional variations in aquatic resource characteristics, functions, and services.

A number of commenters discussed *ad hoc* mitigation, which has been defined in various reports as cash donations made by a permittee to satisfy their mitigation requirements. The majority of commenters stated that *ad hoc* mitigation should not be approved unless it meets the requirements specified in the rule. One commenter said that *ad hoc* mitigation is often unsuccessful because there is no evaluation process and no oversight for the compensatory mitigation that is to be completed, and there is no way to track the compensatory mitigation that was to occur. One commenter proposed that *ad hoc* mitigation should be allowed on a one-time basis where a compensatory mitigation opportunity and need arise concurrently, but are not of such a scale as to justify going through the review process in § 332.8 [§ 230.98]. Two of these commenters discussed *ad hoc* mitigation arrangements and stated that the Corps needs to improve record-keeping for *ad hoc* mitigation activities.

The May 2001 GAO report defines *ad hoc* mitigation as involving “mitigation payments from developers to third parties that are neither mitigation banks nor considered by the Corps to be in-lieu fee organizations.” For the purposes of this rule, *ad hoc* mitigation is considered to be a form of permittee-responsible mitigation. For a mitigation bank or in-lieu fee program to be used to provide compensatory mitigation for DA permits, and to have the responsibility for providing the required compensatory mitigation transfer from the permittee to the mitigation bank sponsor or in-lieu fee sponsor, there must be a mitigation banking or in-lieu fee program instrument approved by the

district engineer in accordance with the procedures in this final rule (see § 332.8 [§ 230.98]). Any other compensatory mitigation arrangements are considered to be permittee-responsible mitigation where the permittee retains responsibility for providing the required compensatory mitigation, and this will be reflected in the terms of the DA permit. Permittee-responsible mitigation also includes any *ad hoc* payments made to governmental or non-governmental organizations that are not in accordance with the terms of an approved in-lieu fee program instrument. When a governmental or non-governmental organization accepts an *ad hoc* payment from a permittee, that organization is in essence acting as a contractor to provide the compensatory mitigation for that permittee, and the permittee retains responsibility for any long-term protection and/or management of the compensatory mitigation project.

We also recognize the importance of record-keeping for compensatory mitigation projects, and have established procedures for using permit conditions, instruments, and ledgers to track the implementation and success of those projects. The Corps will also track permitted impacts and compensatory mitigation through databases, such as the OMBIL Regulatory Module (ORM–2), which is the primary automated information system for the Corps Regulatory Program, and the Regional Internet Bank Information Tracking System (RIBITS). All 38 Corps districts are now using ORM–2, which will help standardize data collection in the Corps Regulatory Program. It will also be used to collect data to assess the performance of the Regulatory Program. RIBITS is an automated information system with an interactive Web site. It is currently designed to track the status of mitigation banks and to provide up-to-date information to mitigation bank sponsors and customers. We are also considering modifying RIBITS to track the status of in-lieu fee programs. Use of RIBITS is currently limited to several districts, but we are planning to make RIBITS the standard tool for tracking sale and production of compensatory mitigation credits by third parties.

Several commenters expressed appreciation that the agencies incorporated many of the recommendations made in the 2001 NRC Report. A few commenters acknowledged that the proposed rule prioritized the location and types of compensatory mitigation projects in accordance with the NRC’s recommendations. However, they said that they disagree with the NRC’s

recommendations and suggested that the agencies establish a preference for on-site and in-kind mitigation in the final rule. They said that a preference for on-site and in-kind compensation would better support a “no net loss” goal for aquatic resources.

We disagree that the rule should establish a preference for on-site compensatory mitigation, because the failure rate for such projects is quite high. On-site compensatory mitigation activities, especially wetland restoration or establishment, are particularly sensitive to land use changes. Land use changes often alter local hydrology. Establishing appropriate hydrology patterns (i.e., duration and frequency) to support the desired aquatic habitat type is a key factor in successfully restoring or establishing those habitats. In many cases, there are circumstances in which on-site mitigation is neither practicable nor environmentally preferable. Under the watershed approach, it may be desirable to require some on-site mitigation measures to address water quality and quantify functions, and to require off-site mitigation to compensate for habitat functions.

We do agree that, in general, in-kind mitigation is preferable to out-of-kind mitigation because it is more likely to compensate for the functions and services lost at the impact site. The rule states that the compensatory mitigation should be of a similar type (e.g., Cowardin and/or hydrogeomorphic class) to the affected aquatic resource, unless the district engineer determines using the watershed approach described in the rule (see § 332.3(c) [§ 230.93(c)]) that out-of-kind compensatory mitigation will better serve the aquatic resource needs of the watershed. The term “in-kind” in § 332.2 [§ 230.92] is defined to include similarity in structural and functional type; therefore, the focus of the in-kind preference is on classes of aquatic resources (e.g., forested wetlands, perennial streams). However, all compensatory mitigation projects should provide a high level of functional capacity, even when compensating for degraded or low-quality resources. Replacement ratios may be used to adjust for the relative quality of impact sites and mitigation projects, where appropriate. With this rule, we are moving towards greater reliance on functional and condition assessments to quantify credits and debits, instead of surrogates such as acres and linear feet. We believe that more frequent use of such assessment methods will help improve the quality of aquatic resources in the United States.

For example, in a case where a project proponent is proposing to fill a degraded three acre wetland that provides one unit of wetland function per acre (as determined by a rigorous functional assessment method), the loss of that wetland may in some cases be offset by a compensatory mitigation project that provides fewer acres of high-functioning wetlands (as determined by the same functional assessment method). Conversely, where the impact is to a high-value resource, more than one-to-one replacement on an acreage basis may be necessary just to achieve functional equivalence between the impact and mitigation sites. Note that replacement ratios may also be greater than one-to-one for other reasons, such as to address uncertainty of success or temporal losses.

One commenter said that the Corps should be the principal agency administering the 404 wetlands regulatory program. The commenter stated that the involvement of multiple agencies in wetlands regulation only hinders the overall efforts of the Corps Regulatory Program. This commenter also stated that the Corps should build a stronger, more predictable compensatory mitigation program to both enhance environmental protection and provide a measure of certainty to both regulatory staff and permit applicants.

While we agree that the section 404 regulatory program should be as streamlined and efficient as possible, we do not agree that the involvement of other agencies necessarily hinders that efficiency. Today's rule will foster greater efficiency and predictability in the interagency process by providing clear deadlines for action on all types of compensatory mitigation, particularly banking and in-lieu fee program instruments. We note that the participation of other agencies in the section 404 permit process is required by various laws, regulations, and legally-binding agreements. For example, section 404(b) of the Clean Water Act specifically authorizes EPA to develop guidelines for the identification of disposal sites for dredged or fill material (the 404(b)(1) Guidelines), which provide substantive environmental criteria for avoidance, minimization and compensatory mitigation. The EPA is authorized by section 501(a) of the Clean Water Act to conduct any rulemaking necessary to carry out their functions under that act. As another example, the Fish and Wildlife Coordination Act and other statutes require consultation with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service for

activities that control or modify waterbodies.

Many commenters stated that the proposed rule is inconsistent with existing national regulations, and one commenter said that the proposed rule is inconsistent with regulations at 33 CFR 320.4(r), as well as the "Mitigation" general condition for the nationwide permits and other compensatory mitigation guidance documents that apply to the Corps Regulatory Program. This commenter also stated that the 404(b)(1) Guidelines provide no authority for requiring compensatory mitigation for unavoidable adverse impacts after all appropriate and practicable minimization has been required.

The agencies disagree with these comments. The Corps general mitigation policy at 33 CFR 320.4(r) describes types of mitigation, including avoiding, minimizing, rectifying, reducing, or compensating for resource losses. Since that provision was last promulgated in 1986, there have been policy changes that have resulted in the Corps requiring compensatory mitigation for more activities, not just those that result in significant resource losses. For example, when the nationwide permit regulations were revised in 1991, a provision was added (33 CFR 330.1(e)(3)) which stated that compensatory mitigation could be required by a district engineer to ensure that an NWP activity results in minimal adverse environmental effects. The final rule issued today also specifically states that it does not alter the regulations of 33 CFR 320.4(r), and that it supersedes certain guidance documents on compensatory mitigation. What is generally understood to be compensatory mitigation today (i.e., the restoration, establishment, enhancement, and/or preservation of aquatic resources) is in the 404(b)(1) Guidelines as an action to minimize adverse effects on populations of plants and animals (see 40 CFR 230.75(d)). Compensatory mitigation may also be required to satisfy other legal requirements, as a result of the public interest review process, or to compensate for other resource losses. As indicated in the preamble to this rule, today's rule does not affect the determination as to when compensatory mitigation is required, only the requirements for conducting such mitigation once the district engineer determines that it is necessary. As stated in the preamble to the March 28, 2006, proposed rule (71 FR 15524-15525), this rule does not change the threshold for determining when compensatory mitigation is required; instead it focuses on where and how compensatory

mitigation will be provided. The threshold for determining when compensatory mitigation is required for DA permits is generally addressed through 33 CFR 320.4(r) and specifically for the nationwide permits at 33 CFR 330.1(e)(3).

A number of commenters stated that the proposed rule gives preference to certain groups. One commenter said that the proposed rule promotes the interests of non-profit organizations, government agencies, and academics, instead of restoration practitioners and entrepreneurs. One commenter remarked that wetland mitigation and market-based approaches have the potential to expand land conservation practices through private investments and to provide additional economic incentives to help retain working farms and forests. Another commenter said that a market-driven approach will help small developers and allow for increased entrepreneurship in compensatory mitigation. One commenter said that the proposed rule would damage the economic viability of wetland mitigation banking and encourage losses of wetlands in floodplains, which would exacerbate property damage caused by flooding.

Under this rule, any entity, whether a non-profit group, government agency or commercial entrepreneur, has the opportunity to develop and implement compensatory mitigation projects. We believe we have complied with the statute requiring the promulgation of this rule, by maximizing available credits while raising requirements and standards to help ensure ecological performance. When evaluating compensatory mitigation options, district engineers will consider what would be environmentally preferable to offset the authorized impacts. In many instances, the environmentally preferable compensatory mitigation will be in the form of mitigation banks or in-lieu fee programs because they usually involve consolidating compensatory mitigation projects and resources, and providing financial planning and scientific expertise. They may also reduce temporal losses of functions and reduce uncertainty over project success. We have added a provision that in-lieu fee sponsors must be governmental or non-profit organizations. We believe this is appropriate in light of the fact that only in-lieu fee programs are allowed to sell advance credits, before a site has been secured or a specific mitigation project reviewed and approved.

We disagree that the rule will adversely affect the economic viability of mitigation banks and encourage

losses of wetlands in floodplains. By further clarifying the requirements and timelines for mitigation bank approval, and by establishing a preference for mitigation bank credits we believe the final rule will in fact enhance the economic viability of mitigation banks. Since the focus of this rule is on compensatory mitigation, avoidance and minimization of impacts to wetlands located in floodplains is more appropriately addressed through the application of Subpart B of the 404(b)(1) Guidelines, compliance with Executive Order 11988 (Floodplain Management), and compliance with the floodplain management requirements of the Federal Emergency Management Agency and state and local governments.

One commenter said that the rule will slow down the permitting process for new energy projects. Three commenters stated that section 1221 of the Energy Policy Act of 2005 (Pub. L. 109-58), through section 216(h) of the Federal Power Act, requires federal permit decisions associated with transmission facilities to be made in one year, unless it is not possible under other laws. These commenters said that the one-year time frame applies to DA permits.

This final rule will not have an adverse effect on processing times for DA permits that authorize the construction of transmission facilities. The rule promotes the development of mitigation banks and in-lieu fee programs, which can be used to provide compensatory mitigation for energy projects that require DA permits. Securing credits from third-party mitigation providers can help shorten permit processing times, because there is no need to review and approve site-specific mitigation plans for permittee-responsible mitigation. In cases where appropriate third-party mitigation credits are not available, the review and approval of permittee-responsible mitigation projects should be more timely, because this rule establishes clear guidelines and requirements for those compensatory mitigation projects. This rule does not change the circumstances under which compensatory mitigation is required, so additional compensatory mitigation will not be required for energy projects.

Wetland Protection

Many commenters said that the proposed rule does not adequately protect the Nation's wetlands, does not support the goal of "no net loss" of wetlands, does not support the objective of the Clean Water Act to maintain the chemical, physical, and biological integrity of wetlands, and will result in a significant loss of wetland acreage

across the country. Several commenters recommended that the final rule include provisions to make it more difficult to fill wetlands to ensure no net loss of wetland acreage and functions. However, one commenter said that although current federal regulations could be improved, those regulations are sufficient to ensure no net loss of wetlands in Florida. One commenter stated that over 33,000 acres of wetlands have been lost last year alone, and, with this much destruction, it is obvious that the agencies are not requiring enough avoidance of wetland impacts. Two commenters said that of the three goals stated in the proposed rule (i.e., to improve quality of mitigation, improve regulatory efficiency, and ensure opportunities for federal agency participation in mitigation banks), only one goal is focused on natural resource protection. These commenters also stated that regulatory efficiency should not be pursued at the expense of wetland protection.

A primary objective of the Clean Water Act is to restore and maintain the chemical, physical and biological integrity of the Nation's waters. Through its permit program, the Corps helps protect the aquatic environment by requiring project proponents to avoid and minimize regulated impacts to wetlands and other waters of the United States to the extent practicable. This rule was specifically promulgated to address compensatory mitigation. For activities that require a section 404 permit, avoidance and minimization are addressed through application of Subparts A through H of the 404(b)(1) Guidelines at 40 CFR part 230. Prior to issuing a permit, the Corps must evaluate the proposed work and its impacts on the aquatic environment and other public interest review factors, and determine whether the proposed work is in the public interest. Compensatory mitigation may be required to ensure that the proposed work is not contrary to the public interest and, if the activity involves discharges of dredged or fill material into waters of the United States, is in compliance with the 404(b)(1) Guidelines. The rule does not change or weaken existing regulatory requirements to avoid and minimize impacts to wetlands.

In fiscal year 2005, the Corps authorized 20,754 acres of wetland impacts, and required 56,693 acres of compensatory mitigation through wetland restoration, establishment, enhancement, and preservation to offset those unavoidable impacts. From fiscal years 2001 to 2005, the mean annual wetland impacts authorized were 23,000 acres, and the mean annual wetlands

compensatory mitigation required was 50,000 acres.

This rule incorporates many of the recommendations of the 2001 NRC Report, as well as appropriate recommendations from other evaluations of wetland compensation, to provide measures to help improve the success of wetland compensatory mitigation projects. By improving the success of these projects, the Corps Regulatory Program will help support the Administration's goal of increasing wetland acreage and quality. We believe that the rule will both improve the quality and success of compensatory mitigation and increase predictability and efficiency in the regulatory program.

Three commenters recommended adding a provision to the rule from the 1990 Mitigation Memorandum of Agreement (MOA) between the Army and EPA stating that no overall net loss of wetlands may not be achieved for each and every permit action, but the Corps would achieve this goal programmatically. One commenter noted that the "no net loss" goal for wetlands is required by statute for the Corps Civil Works Program (see 33 U.S.C. 2317(a)(1)).

That specific provision of the 1990 Mitigation MOA has not been superseded by this final rule. It is important to understand that the 1990 Mitigation MOA applies only to standard permits. It is not practicable or appropriate to require compensatory mitigation for every standard permit, or for every general permit authorization. The requirements of 33 U.S.C. 2317(a)(1) are more accurately presented as achieving an interim goal of "no overall net loss" of the nation's remaining wetlands base as measured by acreage and function, with a long-term goal of increasing the quality and quantity of the nation's wetlands. That provision of the United States Code applies to water resource development projects undertaken through Corps Civil Works program, not to activities authorized by DA permits.

Two commenters stated that developers should not be able to provide wetlands compensatory mitigation through mitigation banks or in-lieu fee programs. One commenter said that wetland buffers reduce adverse impacts of human disturbance on wetland habitats. Two commenters recommended emphasizing voluntary economic incentives and balancing economic needs with those of wetlands protection.

Under this rule, developers will be able to provide compensatory mitigation through mitigation banks, in-lieu fee

programs, or permittee-responsible mitigation. In many cases, the environmentally preferable compensatory mitigation will be provided through mitigation banks or in-lieu fee programs because they typically involve consolidating compensatory mitigation projects and resources, and providing financial planning and scientific expertise. For a particular activity requiring a DA permit, the Corps may consider any appropriate form of compensatory mitigation, as long as it complies with these regulations. We agree that wetland buffers often help ensure the long term viability of wetlands, and the rule promotes the use of such buffers. There are some federal programs that provide economic incentives to protect wetlands, but those programs have limited availability. Section 404 of the Clean Water Act is not structured to provide voluntary economic incentives for avoiding regulated activities in wetlands. Instead, it relies on a regulatory approach to wetland protection.

Aquatic Resource Functions, Services, and Values

A number of commenters discussed the concepts of "functions," "services," and "values" that were in the proposed rule. Two commenters suggested removing "values" and "services" from the rule. One commenter said there is disagreement on the definitions of these terms, and the rule should instead require a minimum one-to-one acreage ratio. One commenter said that functional capacity appears to represent natural wetland potential better than society-driven values and services and should be emphasized more. Another commenter said that the rule should explicitly require replacement of lost "values," because a shift from a broad concept of "function and value" to a narrow concept of function alone ignores social services and values that are important to the public interest, such as protection from natural hazards. One commenter said that the phrase "non-use values such as biodiversity" will subject the regulatory agency and the regulated community to uncertainty and litigation as opponents who object to a project challenge the details of an impact. One commenter suggested that functions, values, and services found in a given wetland can best be measured after the wetland conditions are established using biological indices, and that a framework or methodology is needed.

The terms "functions," "services," and "values" have been used in various documents to describe the attributes of

aquatic resources that are being replaced through compensatory mitigation. We included definitions for all three terms in the proposed rule. After considering the comments received in response to these concepts, we have eliminated the term "values" from the final rule because the term "services" is currently being used in the ecological literature to relate to the human benefits that are provided by an ecosystem. The concept of ecosystem services provides a more objective measure than "values" of the importance of the functions performed by the ecosystem to human populations. Ecosystem services is a useful concept for assessing the public interest, an important consideration in the Corps Regulatory Program. Consideration of "services" provided by aquatic resources is usually qualitative, and can be accomplished through evaluations of compensatory mitigation options, including siting those projects near human populations.

Using the concept of "services" also allows us to focus on how the general population benefits from ecological functions, instead of whether potentially affected parties may or may not "value" a particular aquatic resource and the functions it provides. The term "values" is more subjective, since a particular ecosystem service may be perceived to be valuable by some individuals but not others. The term "values" can also be read to imply monetary valuation, which is difficult for most aquatic resource functions and is not generally practical for most decisions. Therefore, we believe the regulatory program is appropriately focused on protecting "functions" (the physical, chemical and biological processes that occur in aquatic resources) and "services" (the benefits to humans that result from these functions). Accordingly, we have eliminated the term "values" from the rule, including the reference to "non-use values such as biodiversity." However, biodiversity is a potential service that some resources may provide.

The agencies have a long-standing policy of achieving no overall net loss for wetland acreage and function. Simply requiring one-to-one acreage replacement may not adequately compensate for the aquatic resource functions and services lost. Presently, there are methods that can be used by district engineers to assess aquatic resource functions or condition, such as hydrogeomorphic assessment methods and indices of biological integrity. There are efforts being undertaken to develop methods to assess ecosystem services, such as those that use indices of

wetland function to reflect the services provided by wetlands.

A number of commenters expressed concern that offsite mitigation can lead to transfer of wetland ecosystem services from urban to rural areas. However, one commenter said that the rule should not be written for the purpose of preventing urban wetland values from migrating to rural areas because local jurisdictions have other means for preventing this (e.g., zoning ordinances, eminent domain). Another commenter stated that because of a shortage of suitable sites in populated areas, it may not be possible to establish ecologically viable mitigation banks in certain heavily urbanized areas. This commenter said that mitigation banks in urban areas should be allowed to generate more credit per unit of restored resource to make these sites financially feasible.

We recognize that aquatic resources in urban settings can provide important functions and services, and we believe it is important that urban areas not become devoid of aquatic resources simply because it is more difficult to successfully restore or establish aquatic habitat in developed areas, or to obtain suitable compensatory mitigation project sites. However, in certain situations self-sustaining and ecologically successful aquatic resource restoration or establishment projects may not be feasible in urban areas because of changes in land use and the resulting impacts to local surface hydrology and groundwater. In these types of situations, the rule allows compensatory mitigation for impacts to urban wetlands to be conducted in rural areas if the applicable requirements of the rule and the Section 404(b)(1) Guidelines are met. Under the watershed approach adopted in the final rule, district engineers may require compensatory mitigation at more than one site. For example, compensatory mitigation may be required on-site to offset losses of water quality and flood storage functions, while off-site compensation may be required to offset losses of habitat functions. The siting of mitigation banks is dependent upon potential mitigation bank sponsors securing land suitable for compensatory mitigation projects. Such land may not be available in urban areas at a price, and a rate of return on that investment, that is acceptable to the sponsor. Credit valuation must be based on the ecological functions and services provided by the compensatory mitigation project, not the difficulty or cost of siting and constructing it. However, where appropriate, district engineers may consider the relative

ecological value of scarce aquatic resources in urban areas (at both the impact and mitigation sites) in determining appropriate compensation ratios. While preservation may be the most appropriate form of compensatory mitigation in urban areas in some cases, we encourage district engineers to look for opportunities to restore or establish aquatic resources in appropriate areas.

Mitigation Effectiveness

Many commenters stated that compensatory mitigation projects do not effectively replace natural wetlands, because created wetlands do not support the variety of native biota found in natural ecosystems, and there is no guarantee that they will function as natural wetlands. A large number of commenters also said that the rule fails to address the fact that many aquatic systems cannot be created. The commenters stated that there is no scientific data showing that the functions of headwater streams, and wetlands such as bogs and fens, can be reproduced, and the proposed rule would weaken protections for these waters by sanctioning uncertain mitigation practices. Several commenters stated that the rule does not include major improvements suggested by the scientific community to improve wetlands compensatory mitigation.

We have carefully considered reviews and criticisms of compensatory mitigation projects, especially the 2001 NRC Report, during the development of this rule. We recognize that there are compensatory mitigation projects that do not fully succeed in replacing the functions and services of aquatic resources that are lost or altered as a result of permitted activities. In an effort to improve compensatory mitigation practices in the Corps Regulatory Program, we have incorporated recommendations made in the 2001 NRC Report and other reports. We believe that this final rule accomplishes that objective and will help increase the success and quality of aquatic resource restoration, establishment, and enhancement activities by focusing on effective site selection at a landscape and watershed scale, requiring enforceable permit conditions (including ecological performance standards), requiring monitoring of compensatory mitigation, and undertaking adaptive management to help ensure success. We recognize that some types of aquatic resources are difficult to replace, such as bogs, fens, vernal pools, and streams. In response to these comments, we have added § 332.3(e)(3) [§ 230.93(e)(3)], which emphasizes avoidance and

minimization of impacts to difficult-to-replace resources, and if such avoidance and minimization is not practicable, requires that compensatory mitigation be provided through in-kind preservation, rehabilitation, or enhancement to the extent practical.

Mitigation Mechanisms

Several commenters said that the rule inappropriately treats permittee-responsible mitigation, mitigation banks, and in-lieu fee programs as though they are a single vehicle. Two commenters stated that in cases where a mitigation bank is successfully established, it should be preferred over permittee-responsible mitigation, but with the caveat that movement of aquatic resources from urban areas to rural areas should be monitored and possibly prevented. One commenter recommended that consolidated mitigation be allowed for linear facilities such as transmission lines. One commenter suggested the following clarification be included in the preamble to the final rule: "This rule is not intended to inhibit market-based opportunities for trading environmental credits beyond those required for compensatory wetland mitigation." According to that commenter, this would allow private landowners to sell credits for environmental services gained beyond those required for compensatory mitigation for DA permits.

This rule establishes, to the extent practicable, equivalent standards for all types of mitigation, as required by section 314. The administrative and procedural requirements in the final rule vary, because there are fundamental differences among mitigation banks, in-lieu fee programs, and permittee-responsible mitigation. It is not possible to impose exactly the same requirements on these three sources of compensatory mitigation, and fulfill the other requirement of section 314, which is to "maximize available credits and opportunities for mitigation." To maximize available credits, it is necessary to recognize the differences among the three sources, and impose equivalent standards and requirements to the extent practicable. Where it is not practicable to impose identical requirements, the rule adopts comparable alternative requirements to help ensure the ecological success of all types of compensatory mitigation. It is also important to emphasize that the rule applies equivalent *ecological* standards to all three types of compensatory mitigation; the differences are in procedures and timing of requirements. Site selection for third-

party mitigation should focus on the ecological benefits that the mitigation banks or in-lieu fee projects will provide to the watershed. This may or may not result in migration of aquatic resources from urban to rural areas within that watershed.

For linear projects, such as roads and utility lines, district engineers may determine that consolidated compensatory mitigation projects provide appropriate compensation for the authorized impacts, and are environmentally preferable to requiring numerous small permittee-responsible compensatory mitigation projects along the linear project corridor. We do not believe it is necessary to explicitly state that this rule is not intended to inhibit market-based environmental credit trading, as the rule only applies to compensatory mitigation required for DA permits. The ability of private landowners to sell credits for environmental services gained beyond those required for compensatory mitigation for DA permits is more appropriately addressed through other applicable programs.

General Comments on Mitigation Banking

Many general comments were received regarding mitigation banking. Some commenters encouraged broader use of banks, many others criticized a perceived preference for mitigation banks in the proposed rule. Several commenters recommended providing greater incentives for Corps districts to process commercial mitigation bank requests. One commenter suggested that this rule include incentives to private landholders to participate in wetland mitigation banking. Many commenters said the rule inappropriately promoted the economic needs of the mitigation banking industry over the needs of watersheds, and that the preference for mitigation banks over other forms of compensatory mitigation is not justified.

We recognize that mitigation banking is an important tool for compensatory mitigation. In this final rule, we have established a preference for mitigation bank credits, since mitigation banks must have an approved mitigation plan and other assurances in place before credits can be provided to permittees (see § 332.3(b)(2) [§ 230.93(b)(2)]). Because of the requirements imposed on mitigation banks, they generally involve less risk and uncertainty than in-lieu fee programs and permittee-responsible mitigation. This preference is based on administrative criteria, not ecological criteria. To the best of our knowledge, there have been few studies by independent parties of the ecological

performance of mitigation banks. The studies that we have reviewed have shown that mitigation banks have experienced many of the same problems as permittee-responsible mitigation (see the environmental assessment completed for this rule for summaries of those studies). The ecological success of mitigation banks, in-lieu fee programs, and permittee-responsible mitigation is dependent on many of the same factors, such as selecting appropriate sites and establishing the proper hydrology. We are not aware of any independent studies on the ecological performance of in-lieu fee projects. As discussed below, in response to comments received as a result of the proposed rule, we are retaining in-lieu fee programs as another form of third-party mitigation, with robust requirements to help ensure that they provide effective compensatory mitigation.

The timelines in this rule for processing proposed mitigation banks and in-lieu fee programs will promote timely decisions on instruments for these third-party mitigation activities. Participation in mitigation banks is not limited to entrepreneurs; private landowners can also submit proposed mitigation banks for consideration. We recognize that mitigation banks are not currently available in many areas of the country, or will be able to provide in-kind compensation for some types of aquatic resources. Therefore, to support a watershed approach for compensatory mitigation, we are retaining in-lieu fee programs as a separate form of third-party mitigation in this final rule, because in-lieu fee programs can provide ecologically beneficial compensatory mitigation in areas not served by mitigation banks. The preference for mitigation banks can be overridden by district engineers on a case-by-case basis if, for example, an approved in-lieu fee program has released credits available, or the permittee is proposing a compensatory mitigation project that will restore an outstanding resource.

Several commenters said that references to economic factors should be removed from consideration of the mitigation service area and there should be a greater consideration of the watershed approach, in order to be more consistent with other forms of compensatory mitigation. Several commenters stated that overdependence on mitigation banks will promote less successful compensatory mitigation projects. They cited a recent study in Ohio that showed that mitigation banks have not provided successful mitigation for permitted impacts. Several other commenters noted that there are too

many areas in the country that are underserved by mitigation banks. One commenter recommended non-profit management of mitigation banking, because non-profit entities can do more work for the actual cost and their ultimate goal is stream restoration, not maximizing the amount of profit.

Mitigation banks and in-lieu fee programs must be sited in such a way as to effectively replace lost aquatic resource functions and services and address key watershed needs within their service areas. However, consideration of economic factors is also important in determining the service area, to make it possible for third-party mitigation sponsors to develop and implement these projects. If service areas are too small to support economically viable mitigation banks or in-lieu fee programs, then we would have to rely on permittee-responsible mitigation. As discussed in the environmental assessment for this rule, permittee-responsible mitigation is generally less likely to be a successful source of compensatory mitigation. However, to ensure the benefits of third-party mitigation, economic factors should not supersede ecological considerations in the final service area determination. The benefits of mitigation banks and in-lieu fee programs are discussed in § 332.3(a)(1) [§ 230.93(a)(1)].

The agencies agree that there are certain advantages to non-profit and governmental agencies as third-party mitigation sponsors. They do not need to earn a profit, and are more likely to act in the public interest. However, commercial banks also have certain advantages. They have a strong financial incentive to provide effective, timely mitigation that may be lacking for non-commercial entities. Under today's final rule, mitigation bank sponsors may be either commercial, non-profit, or governmental entities, while in-lieu fee program sponsorship is limited to governmental and non-profit entities.

Some commenters supported the mitigation banking rules, while others disagreed with the proposal to eliminate in-lieu-fee programs. Several commenters said that the cost of bank credits should be established in the context of the marketplace. One commenter stated that over-promoting mitigation banks could lead to a monopolistic pricing structure. Numerous commenters asserted that the process of establishing a mitigation bank should be streamlined. Some commenters supported the termination of wetland mitigation banks that do not comply with the Clean Water Act.

In this final rule, we have established criteria and standards for both mitigation banks and in-lieu fee programs, to maximize the available credits for use in the Corps regulatory program, as well as the Corps Civil Works Program and military construction activities. Credit costs for mitigation banks will be determined by their sponsors. The rule does attempt to streamline the process for establishing both mitigation banks and in-lieu fee programs, while recognizing the need for thorough and effective IRT and public review before credit sales can begin. To accomplish these goals, the final rule establishes reasonable deadlines for each step in the review and approval process. To continue operating, approved mitigation banks and in-lieu fee programs must comply with the terms of their instruments and these regulations, and district engineers will take appropriate actions if credits are not produced in accordance with approved credit release schedules. This ensures compliance with the Clean Water Act.

Regional Issues

A number of commenters expressed concern about how the rule will be implemented at the district or regional level, or with regard to specific issues such as coal mining and port facilities. One commenter welcomed the improved consistency in Corps implementation of a federal mitigation regulation with similar standards, timelines, and laws across states, for administrative reasons rather than biological/ecological differences. One commenter expressed concern that Corps districts will develop stricter requirements than those in the rule and another commenter stated that the rule places too much authority with the district engineer and not enough with state and local officials who are more familiar with local needs. Other commenters stated that the rule could conflict with state or local programs, and if the state enacts stricter standards for mitigation, the Corps must adopt those standards into DA permits. Many commenters noted that mitigation banking is being given preference over other types of mitigation despite state agency efforts to develop rules to encourage site-specific in-kind mitigation. In this way, the proposed rule fails to account for existing state and local regulations. Numerous commenters stated that coordination between state, local, and federal administrators is necessary or the rule may undermine functioning state and local mitigation plans.

The rule provides district engineers the flexibility to address permit-specific situations, while ensuring clear and consistent national standards and requirements. While we expect district engineers to work closely with their state and local partners, particularly on Interagency Review Teams, it is essential that this rule is consistent with Congressional intent as provided by section 314. This rule must also be consistent with the other Corps regulations at 33 CFR parts 320 through 331, which govern the implementation of the Corps Regulatory Program. Of course, it would be desirable to have consistent compensatory mitigation requirements across the various levels of government that have regulatory authority over a particular project, but there are usually differences because of variability among agency authorities, missions, and objectives. State and local governments may impose different requirements to address local or regional needs or concerns. Compensatory mitigation decisions made by district engineers must address federal concerns and authority, and must focus on compliance with the Clean Water Act and other federal requirements. There are likely to be cases where the compensatory mitigation requirements imposed by the Corps are different from those imposed by state or local governments, but in most cases they are likely to be similar. All section 404 permits require section 401 water quality certification by states and tribes. Where states feel that federal requirements are not stringent enough, they may impose more protective requirements in accordance with their water quality standards.

In this final rule, preference is given to mitigation banks, if the authorized impacts occur in the service area of a mitigation bank that has the appropriate number and resource type of credits available. If permittee-responsible mitigation is required by a state or local government with regulatory authorities that are similar to the Corps under section 404 of the Clean Water Act or sections 9 or 10 of the Rivers and Harbors Act of 1899, and the mitigation project will appropriately offset the permitted impacts, then the district engineer may determine that the permittee-responsible mitigation is acceptable for the purposes of the DA permit. We encourage coordination among federal, state, and local governments to avoid duplicate or conflicting compensatory mitigation requirements, as long as those requirements are consistent with federal requirements.

Several commenters cited various successful state programs and said that these programs should not be subject to the additional administrative burden of IRT review and approval of each separate mitigation project, and that their success could be disrupted by application of the rule. A number of commenters discussed the unique regulatory scheme that applies to mining, stated that the rule does not recognize the temporary nature of coal mining impacts on streams, and that the agencies must reconsider application of some of the proposed requirements, particularly those addressing monitoring and long-term assurances, in the context of the mining industry's regulatory environment.

District engineers will continue to work with successful state programs to streamline the review process to the maximum extent possible under these regulations. Third-party mitigation projects will be reviewed by district engineers and other interested members of the IRT. That interagency review is often helpful in providing different areas of expertise to evaluate the potential that each compensatory mitigation project has for successfully offsetting functions lost as a result of impacts authorized by DA permits. Established relationships between state programs and their federal counterparts will not be disrupted by this rule. Corps oversight is necessary to ensure the continued success of these programs. To help take advantage of established relationships, we have added a provision to the final rule that allows the district engineer and any member of the IRT to enter into a memorandum of agreement to perform some or all review functions (see § 332.8(b)(5) [§ 230.98(b)(5)]). However, the district engineer cannot delegate his or her authority for final approval of instruments or other documents.

As for mining activities, this rule does not change how the Corps will evaluate permit applications or assess the need for compensatory mitigation for those activities. What constitutes a temporary impact, and the need for compensatory mitigation, is determined on a case-by-case basis, depending on the specific circumstances of the project. The district engineer will determine the appropriate time interval for distinguishing between temporary and permanent impacts. Monitoring of compensatory mitigation sites is required and monitoring reports must be submitted to the district engineer in accordance with the special conditions of the DA permit or the terms of the mitigation banking or in-lieu fee program instrument. However, the

content and level of detail of monitoring reports is commensurate with the scale, scope, and type of the compensatory mitigation project. Requirements relating to financial assurances and long-term management are determined on a case-by-case basis, depending on the specific circumstances of the project.

Need for Clarification

Several commenters stated that the proposed rule does not specifically state whether it applies to general permits. Most of these commenters argued that the rule should apply solely to individual permits, and that nationwide and regional general permits should continue to be governed by 33 CFR part 330, because the requirements of the proposed rule conflict with the more flexible standards that apply to the nationwide permits and will greatly limit their utility. Two commenters stated that the proposed rule should also apply to general permits. One commenter said that the rule should include provisions that would eliminate all general permits that do not comply with the Clean Water Act.

The rule applies to compensatory mitigation required by all DA permits, including individual and general permits. We have made changes to this rule to clarify those provisions that are applied differently to individual permits and general permits. With these modifications, this rule does not conflict with the regulations at 33 CFR part 330, or the NWP general condition governing mitigation (i.e., general condition 20 of the 2007 nationwide permits, as published in the March 12, 2007, issue of the **Federal Register** (72 FR 11193)). District engineers will determine specific compensatory mitigation requirements for each permitted activity based on case-specific considerations, including whether the activity is being authorized under a general or individual permit. This rule does not alter the circumstances under which the district engineers require compensatory mitigation or the threshold for determining when compensatory mitigation is required for a particular activity. The compliance of general permits with section 404(e) of the Clean Water Act is addressed through application of the Corps regulations governing the issuance of general permits, as well as the criteria in the 404(b)(1) Guidelines for issuing general permits (40 CFR 230.7) and concerns about those permits that do not relate to compensatory mitigation are outside the scope of this rule.

One commenter recommended that the rule specify when the term "project"

refers to an authorized or permitted activity. One commenter recommended that the agencies reconsider use of the term "ecological." Many readers may view this only in terms of species habitat, while in some cases other functions, such as flood control or water quality improvement, may be as or more important than habitat.

To provide clarity in the final rule, we have used the term "project" to refer to compensatory mitigation projects, and used the terms "permitted impacts" and "authorized impacts" when referring to the activities that adversely affect waters of the United States and may require compensatory mitigation. The term "ecological," as used in this rule, is intended to be interpreted broadly as dealing with interrelationships of organisms (including humans) and their environment. The term "ecological" can refer to other features and functions of aquatic systems besides species habitat. For example, ecological functions provided by aquatic resources also include biogeochemical functions, which can help improve water quality. The agencies agree that water quality and flood control are important ecological services that should be compensated for when adversely impacted by permitted activities.

One commenter stated that the proposed rule has implications for USDA program participants who perform conservation or other activities in wetlands and for wetland activities conducted on National Forest System (NFS) lands. The USDA is exploring how it may facilitate its constituents' involvement in wetland mitigation activities.

This rule specifies compensatory mitigation requirements for DA permits. Compensatory mitigation projects may be conducted on agricultural lands and NFS lands. District engineers will consider the number and type of compensatory mitigation credits that may be provided through aquatic resource restoration, establishment, enhancement, and/or preservation activities on these lands, over and above any environmental improvements that result from USDA programs (see § 332.3(j) [§ 230.93(j)]). Resources that are restored, established, enhanced or preserved to satisfy the requirements of other federal programs may not also be used for compensatory mitigation for DA permits, although district engineers may evaluate and approve on a case-by-case basis situations where a consolidated project is used to satisfy more than one set of requirements, provided the same resource is not "double counted." For example, if 10 acres of wetlands were needed as

compensatory mitigation for a DA permit, and 10 acres were needed for some other federal program, a 20 acre project could be authorized to fulfill the requirements of both, but the same 10-acre project could not.

One commenter said that the agencies should use "District Commander" instead of "district engineer" when referring to the person that will implement this rule. The term "District Commander" refers to the person in charge of a particular Corps district. The term "district engineer" refers to the District Commander and any of his or her designees (i.e., persons who are authorized to take actions on his or her behalf). This rule uses the term "district engineer" because most day-to-day regulatory decisions are made by the District Commander's designees.

One commenter stated that subsurface impacts are not addressed, including subsurface extraction (mining) of oil, gas, ground water, and the aquifer matrix (e.g., rock, sand, shell). The commenter cited an example where a Corps permit involved the removal of thousands of acres (surface area) of aquifer matrix (in that case, limestone), resulting in greatly increased groundwater flow occurring in the vicinity of these mine pits despite erroneous assumptions of low flow by the regulatory agencies.

It is not possible in this preamble to address the details of the particular case the commenter cites. To the extent that DA authorization is required for subsurface extraction activities, district engineers will determine the need for compensatory mitigation on a case-by-case basis.

Transition to the New Rule

Several commenters recommended that the agencies clarify that the new regulations apply only to applications submitted after the effective date of the rules. One commenter added that the rule should recognize that applicants in the permitting process have expended substantial resources needed to obtain permits under the current rules, and those resources have been committed in reliance on the current rules governing compensatory mitigation. Therefore, the new requirements should not be applied retroactively to permit applicants who have invested substantial effort in developing data and plans under the previous rules and guidance. One commenter requested a clear statement that the rule does not apply to existing compensatory mitigation projects under Corps permits.

This final rule will apply to permit applications received after the effective date of this rule, unless the district

engineer has made a written determination that applying these new rules to a particular project would result in a substantial hardship to a permit applicant. In such cases, the district engineer will consider whether the applicant can fully demonstrate that substantial resources have been expended or committed in reliance on previous guidance governing compensatory mitigation for DA permits. Final engineering design work, contractual commitments for construction, or purchase or long-term leasing of property will, in most cases, be considered a substantial commitment of resources. Permit applications received prior to the effective date will be processed in accordance with the previous compensatory mitigation guidance.

Need for Additional Guidance

Four commenters requested more detailed guidance on how and when riparian areas and upland buffers can be used as compensatory mitigation. Several commenters requested further guidance from agencies to implement the watershed approach consistently across the nation, on issues such as determination of watershed boundaries, information needed in watershed plans, and how to identify the needs of a particular watershed. Other commenters recommended that the agencies develop guidance on compensatory mitigation for open and navigable waters, performance standards, mitigation ratios, financial assurances, the implementation of adaptive management, and credit determination methods. Another commenter suggested that the agencies prepare regional reference manuals that provide guidance on how to best design compensatory projects appropriate to meet the needs of watershed units in that region.

Many of these questions, such as how to determine watershed scale and boundaries, must be answered by district engineers at a regional or local level, to address landscape variability and other factors. Other questions must be answered on a case-by-case basis, after considering the impacts and the compensatory mitigation that may be necessary to offset those impacts. However, we recognize the need to provide more information to the public and agency personnel, and we will continue to develop guidance, as necessary, outside of this rulemaking.

Economic Issues

Two commenters expressed concern over the increase in mitigation costs that will result from more stringent

performance standards and the delay of credit releases until performance is achieved. One commenter stated that the requirements of the rule will overly complicate the permitting process and ultimately impact the availability of affordable housing. If the costs of purchasing credits from a mitigation bank are too high, the district engineer should take that into account and allow other off-site or out-of-kind mitigation.

In some cases, the cost of performing compensatory mitigation may increase as a result of implementation of this rule. Since this rule is generally based on existing practice, with improvements to enhance performance and efficiency, we do not believe that it will cause a substantial increase in compliance costs. We believe that ecological performance standards and other aspects of this rule are necessary to improve the success of compensatory mitigation in the Corps Regulatory Program. District engineers will take costs into account when evaluating compensatory mitigation options, since practicability is one consideration when determining compensatory mitigation requirements for DA permits.

One commenter strongly objected to adding any provision in the final rule that would require the Corps to “determine what an adequate price might be” of compensatory mitigation credits as suggested in the discussion section of the proposed regulation.

The Corps will not determine the price of compensatory mitigation credits. The rule states that the cost of compensatory mitigation credits is determined by the sponsor of a mitigation bank or in-lieu fee program. However, the district engineer may evaluate fee schedules for in-lieu fee programs to determine whether those fees satisfy the criteria in § 332.8(n)(5)(ii) [§ 230.98(n)(5)(ii)], and are sufficient for providing the required compensatory mitigation.

Implementation Issues

A number of commenters stated that the requirements of the proposed rule will place an enormous burden on the Corps’ staff and resources and may further delay implementation of projects. Numerous commenters asserted that additional resources must be allocated to reviewing monitoring reports, conducting site visits, and taking enforcement action when permittees and mitigation banks do not perform their prescribed mitigation requirements. Other commenters stressed the need to educate potential sponsors on how to operate wetland mitigation banks. Commenters also stated that the rule would place a

disproportionate burden on permittees. However, another commenter stated that project proponents must consider mitigation requirements early in the project planning cycle to implement mitigation in advance of, or concurrent with, a project.

This rule will not place a large incremental burden on Corps staff and other resources because it builds on existing requirements and practices and promotes those that have been successful in the past. To develop this rule, we have considered the recommendations from the 2001 NRC Report and the 2001 and 2005 GAO reports, as well as other studies of compensatory mitigation projects, to establish regulations that will help ensure that compensatory mitigation successfully replaces functions that are lost as a result of permitted activities. Monitoring, site visits, and compliance activities are essential actions for ensuring compensatory mitigation success but they are not new. What is new is the greater clarity and consistency of requirements in these areas that the rule provides. The Corps already conducts compliance inspections on compensatory mitigation projects, including mitigation banks and in-lieu fee programs, as its resources allow and will continue to do so.

We believe that the rule will increase regulatory efficiency by providing clear, consistent requirements, improving the third-party mitigation review process, and encouraging compensatory mitigation planning to be performed in advance of permitted activities through the use of mitigation banks and in-lieu fee programs. We do not believe that this rule will place a substantial burden on permittees. As more credits are generated by third-party mitigation providers, burdens on permittees should be reduced. This rule does not change the circumstances under which compensatory mitigation is required. As in the past, the district engineer will require compensatory mitigation to the extent appropriate and practicable. This rule appropriately balances the need for consistency with the need for flexibility, including its requirements for permittee-responsible mitigation. District engineers will continue to determine on a case-by-case basis what is required to satisfy the requirements of the 404(b)(1) Guidelines and other aspects of the Corps Regulatory Program.

One commenter recommended that permit review staff go to each site before making a decision. Another commenter recommended that the agencies clearly define their roles ahead of time to reduce interagency conflicts, and that if

such conflicts should occur, the Corps should work to resolve them rather than the applicant.

Because of resource constraints, site visits cannot be conducted for each permit application. Districts must prioritize their site visits to determine which sites require on-site evaluations. The Corps is the decision-maker for activities that require DA authorization. The Corps fully considers agency views when making its decisions regarding whether to issue or deny permits. This rule further clarifies the roles and responsibilities of the Corps and other agencies, including the Interagency Review Team, in the review and approval of compensatory mitigation, and provides realistic deadlines for each step in the process. The rule also contains a dispute resolution procedure through which disagreements among Federal agencies regarding third-party mitigation proposals will be addressed expeditiously.

A number of commenters discussed enforcement and compliance with mitigation permit conditions and claimed that there are insufficient staffing levels for these activities. Several commenters recommended that the Corps and state agencies place a stronger emphasis on staffing in order to increase permit compliance and enforcement of mitigation requirements. Several commenters cited the 2005 GAO report’s finding that compliance with mitigation performance standards has been inadequate, which provides a disincentive for parties to comply with mitigation requirements. They stated that third-party mitigation instruments and/or permit conditions often do not adequately specify the mitigation activities to be performed, the standards to be achieved, and the time frames for performance. Several commenters requested clarification of the Corps’ compliance authorities related to mitigation requirements.

The agencies agree that vigorous enforcement and compliance activities are necessary for the success of the regulatory program, including compensatory mitigation. The Corps believes that it has adequate resources in these areas. In the Corps Regulatory Program’s performance measures required by the Administration’s Program Assessment Rating Tool (PART), enforcement and compliance metrics comprise six of the eight performance measures. These performance measures relate to compliance inspections on activities authorized by individual permits and general permits, field inspections of active mitigation sites, compliance inspections or audits on active

mitigation banks and in-lieu fee programs, resolution of non-compliance issues, and resolution of enforcement actions. The inclusion of so many metrics in the PART reflects the high priority placed on enforcement and compliance activities by the Corps regulatory program, which will help address the concerns raised in the two GAO reports. This rule will also address compliance and enforcement issues by more clearly specifying the required information for both permittee-responsible mitigation and third-party mitigation instruments plans. This rule also includes new requirements related to ecological performance standards, monitoring and credit release schedules.

We have clarified the language in the rule that addresses non-compliance with compensatory mitigation permit conditions or third-party mitigation instruments and plans. Permittees responsible for mitigation as a permit condition will be subject to the compliance and enforcement provisions at 33 CFR part 326. If the district engineer determines that a mitigation bank or in-lieu fee program is not meeting performance standards or complying with the terms of the instrument, appropriate actions will be taken, such as requiring adaptive management, decreasing available credits, suspending credit sales altogether, and/or directing that financial assurance resources (e.g., escrow monies) be used to perform remediation or alternative mitigation. As a last resort, if a sponsor does not comply with the terms of its instrument, the district engineer can take appropriate legal action to compel compliance.

Three commenters suggested emphasizing that compliance with new mitigation requirements fully meets requirements of section 404 of Clean Water Act, therefore, there is no need for supplemental mitigation to address the uncertainty of mitigation outcomes.

Although this rule provides standards and requirements for compensatory mitigation for DA permits, there are provisions that allow district engineers to require additional compensatory mitigation when necessary to address the risk and uncertainty associated with compensatory mitigation projects. For example, adaptive management may involve requiring additional compensation if the original compensatory mitigation project does not perform as well as expected. As another example, higher amounts of compensatory mitigation may be required if the aquatic resource restoration, establishment, enhancement, and/or preservation

activity is conducted after the permitted activity, to account for both temporal losses and the risk of failure associated with the prospective mitigation.

A few commenters expressed concern that if developers are responsible for developing watershed plans, and those plans are used by others to implement a watershed approach, this might create an incentive to develop a plan that meets future development expansion needs rather than watershed needs.

This rule does not require prospective permittees to develop watershed plans. District engineers will determine whether an existing watershed plan is appropriate for use in determining compensatory mitigation requirements (see § 332.3(c)(1) [§ 230.93(c)(1)]). In general, watershed plans will be developed by governmental and/or non-profit resource planners, in consultation with watershed stakeholders. The purpose of a watershed plan is to maintain and improve the quality and quantity of aquatic resources within a watershed, not to facilitate development. District engineers will ensure that watershed plans used to determine compensatory mitigation requirements for DA permits have been developed through appropriate processes to satisfy this purpose.

Transfer of Responsibility

In the proposal, we requested comments on the appropriate legal mechanism for transferring the responsibility for providing compensatory mitigation from the permittee to a mitigation bank or an in-lieu fee program. We proposed an option of using parallel permit conditions and instrument provisions, that would acknowledge the transfer of responsibility from the permittee to the sponsor. Another option we solicited comments on was co-permitting, where the sponsor would sign the DA permit and assume responsibility for providing compensatory mitigation credits.

Two commenters expressed support for co-permitting, but several other commenters said that co-permitting is not an appropriate mechanism for transferring responsibility. Some commenters said that a sponsor should only sign documents that deal exclusively with the credits, debits, and use of a mitigation bank for compensatory mitigation. Two commenters stated that transfer of responsibility from the permittee to a mitigation bank is an incentive for using mitigation banks. Several commenters supported the use of the suggested permit conditions and instrument provisions provided in the preamble to

the proposed rule, when credits are to be secured from a mitigation bank.

After evaluating these comments, we have determined that the most effective approach for transferring compensatory mitigation responsibilities from a permittee to a mitigation bank or in-lieu fee program sponsor is through the use of permit conditions and instrument provisions. The rules governing this transfer are provided at § 332.3(l) [§ 230.93(l)]. This process requires submittal of appropriate documentation after the permittee has secured the appropriate number and resource type of credits from the sponsor. These requirements are discussed in greater detail in the preamble discussion of § 332.3(l) [§ 230.93(l)].

Other Issues

A couple of commenters submitted questions about the Corps permit application, other publications, and record-keeping. Commenters requested better guidance on the information required for permit applications, such as sample drawings and checklists, and recommended electronic filing of permit applications.

Many Corps districts have posted information on their web sites to assist permit applicants. Such information includes tips on providing complete permit applications, as well as sample drawings and checklists. The Corps regulations at 33 CFR 325.1(d) discuss what is required for a complete application for an individual permit. Project proponents should also review the general conditions for the nationwide permits and regional general permits to determine what is necessary for a complete general permit verification request. The Corps is developing an electronic permit application, which will allow its districts to accept permit applications through the Internet. As discussed above, the Corps is implementing a new automated information system to better track impacts authorized by authorized activities, and any required compensatory mitigation.

One commenter said that poor record-keeping has made it difficult to evaluate the successes and failures of individual projects and the regional and national impacts of the program. Commenters also asked that the public have easy access to all relevant planning documents during the public comment period on permits. One commenter recommended creating a clearinghouse for wetlands funding or information needs with a single person to track follow-up and successes. This could provide information to support a watershed approach in specific areas

and possibly to support in-lieu fee programs. One commenter said the rule should not apply to ephemeral washes.

Archiving of monitoring reports for compensatory mitigation projects is done in accordance with district-specific practices and resources. Monitoring reports are part of the administrative record for a permit action or third-party mitigation instrument, and are public information. However, a Corps district may charge reasonable fees for duplication to provide those reports to interested parties. It is impractical to make all planning documents available during public notice comment periods. Typically, not all of this information is provided to the Corps prior to the public comment period. However, the rule requires that public notice for DA permits include a discussion of mitigation plans, including any compensatory mitigation. Public comment can then help inform the development of detailed planning documents. The Corps does not intend at this time to create a clearinghouse for wetlands funding and wetlands-related information; however, the Corps will provide information to the public on mitigation required and fulfilled under the section 404 program. This rule only applies to compensatory mitigation for activities in waters of the United States authorized by DA permits. It does not alter the definition of "waters of the United States" at 33 CFR part 328 or 40 CFR 230.2(s). Discharges of dredged or fill material into features that are not waters of the United States do not require permits under section 404 of the Clean Water Act, and therefore would not require compensatory mitigation that would be subject to this rule. In cases where ephemeral washes are determined to be waters of the U.S., this rule applies; there are no technical reasons for addressing them differently from other waters of the U.S.

Several commenters highlighted general concerns regarding climate change. Some of these commenters cited important ecosystem services provided by wetlands, streams and other aquatic resources such as absorbing storm surges, providing drinking water, and sequestering carbon and noted that these ecosystem services will be of increasing importance as climate patterns shift. A few commenters wanted to know how concerns about climate change were considered in the development of today's rule.

We agree that protecting our Nation's existing aquatic resource base is an important way to help foster ecological and economic resilience as climatic patterns shift. Today's rule reaffirms the existing requirement to avoid and

minimize impacts to the nation's aquatic resources and to require, in cases where it is appropriate and practicable to do so, compensatory mitigation for impacts that cannot be avoided or minimized. Compensatory mitigation projects planned and designed using the watershed approach and the standards provided by today's rule are likely to provide ecosystem functions and services that, in addition to offsetting losses resulting from activities authorized by DA permits, also provide the ecological and economic resilience needed to address climate change. For example, the reestablishment of a forested wetland may also provide carbon sequestration benefits, over the long term, through the growth of trees. As another example, coastal wetland restoration projects could be designed to take into account reasonably foreseeable rises in sea level.

III. In-Lieu Fee Programs

In the proposed rule we proposed to phase out in-lieu fee programs and require existing in-lieu fee programs to comply with the same standards and requirements as mitigation banks. In the preamble to the proposed rule, we also explained the differences between mitigation banks and in-lieu fee programs, and the agencies expressed concern that providing less stringent oversight or up-front requirements for in-lieu fee programs might not ensure that the compensatory mitigation is performed. Another concern was compliance with section 314 of NDAA, which directs us to apply equivalent standards and criteria to each type of compensatory mitigation to the maximum extent practicable. At the time, the agencies could not find strong grounds for concluding that meeting the same requirements as mitigation banks is not appropriate or practicable for in-lieu fee programs. The agencies also acknowledged that phasing out in-lieu fee programs would pose some challenges for the ability of the Corps Regulatory Program to support the objectives of the Clean Water Act and ensure high-quality mitigation in all parts of the country.

In response to the proposed rule, many commenters, including 29 states, as well as industry groups and environmental organizations, supported retaining in-lieu fee programs as a separate mechanism for providing compensatory mitigation for DA permits. These commenters said that an alternative form of third-party mitigation is needed in areas not serviced by mitigation banks. Many of these commenters also stated that the desired performance of in-lieu fee

programs can be achieved by imposing appropriate rules and standards, with Corps oversight. Some commenters indicated that the proposal to phase out in-lieu fee programs is contrary to section 314, because it wouldn't comply with the statutory requirement for the rule to "maximize available credits." Over 30 commenters described successful in-lieu fee programs.

After carefully considering all comments, for and against, we have decided to retain in-lieu fee programs as a distinct third-party compensation option, subject to equivalent ecological standards as the other types of compensatory mitigation (mitigation banks and permittee-responsible mitigation) but somewhat different administrative and procedural requirements. We agree that in-lieu fee programs are important sources of compensatory mitigation in areas that do not have mitigation banks, because they can provide consolidated compensatory mitigation projects that have greater ecological benefits than small, geographically separated, permittee-responsible mitigation. We also agree that in-lieu fee programs can provide important ecological and societal benefits by focusing primarily on the watershed needs and by siting multiple compensatory mitigation projects in strategic locations in a watershed. We believe that this final rule achieves the statutory mandate of section 314 in that it establishes, to the maximum extent practicable, equivalent standards for all three types of compensatory mitigation.

Commenters suggested various approaches to in-lieu fee programs. One commenter suggested that the agencies delay the effective date of the final rule until more conclusive data are available to support the decision of whether to retain or eliminate in-lieu fee programs. One commenter recommended forming a technical working group to evaluate the effectiveness of in-lieu fee programs and their role in compensatory mitigation. Another commenter recommended comparing poorly performing in-lieu fee programs to more successful programs, to evaluate the differences in organization, oversight, mitigation approach and quality of mitigation, and to develop appropriate standards and requirements. Many commenters proposed rule language to provide accountability and ensure ecological success for in-lieu fee programs.

We do not believe it is necessary to delay issuing a final rule until further studies can be done on in-lieu fee programs. We structured the proposed rule to solicit comment on appropriate

standards and criteria that could be established to ensure that in-lieu fee programs provide successful compensatory mitigation in a timely manner. Many of the requirements that apply to mitigation banks are applied to in-lieu fee programs, although some requirements will not be exactly the same, because of the fundamental differences between mitigation banks and in-lieu fee programs. Where it is necessary to promulgate different requirements for in-lieu fee programs, we believe those requirements will ensure the same level of success for in-lieu fee programs as for the other types of mitigation, and produce mitigation that meets the same high ecological standards. We have examined several successful in-lieu fee programs to establish effective standards and requirements.

In the preamble to the proposed rule, we posed a set of questions on the proposed phase-out of in-lieu fee programs, and solicited public comment on retaining in-lieu fee programs as a distinct regulatory entity. We asked for public comment on 7 specific areas in which requirements for in-lieu fee programs might differ from mitigation banks if they were retained: (1) The degree of up-front planning required before credits could be sold (e.g., in-lieu fee programs might not be required to identify and secure a site and provide detailed site plans for the compensatory mitigation project); (2) the level and types of financial assurances that would be required; (3) the types of projects for which they could be used (e.g., in-lieu fee programs might be limited to providing compensatory mitigation only for nationwide permits and other general permits, or for projects below a specified acreage cutoff, such as 1 acre); (4) the required compensation ratios (e.g., these could be higher for in-lieu fee programs than for mitigation banks); (5) the credit release schedule (e.g., in-lieu fee programs might be permitted to sell more credits at an earlier point in the planning process); (6) the specific types of aquatic resources for which they could be used to compensate (e.g., not allowing in-lieu fee programs for tidal wetlands or in coastal areas); and (7) the types of permitted sponsoring entities (i.e., in-lieu fee programs might be limited to government agencies and/or non-profit land stewardship entities with proven track records). Comments received in response to these questions are provided below. We also solicited comments on other ways in which the requirements for mitigation banks and in-lieu fee programs might differ.

Degree of up-front planning required before credits can be sold. Several

commenters stated that in-lieu fee programs should be subject to the same amount of up-front planning as mitigation banks. Other commenters suggested that instead of identifying a specific site (which is required for proposed mitigation banks, except for umbrella banks), in-lieu fee programs should identify specific types of sites (e.g., impounded salt marshes) that their program would target. Another commenter suggested that in-lieu fee programs should submit a full mitigation plan to the district engineer for approval before the start of each project. Commenters representing in-lieu fee programs said that it would be challenging in some cases to identify sites and provide detailed plans before selling credits, and that such a requirement might make it impossible for them to operate.

In recognition of these challenges, the final rule does not require the same level of up-front planning by in-lieu fee programs as it does for banks before credit sales can occur. However, it does require that a comprehensive program instrument be submitted to the Corps, reviewed by the IRT, and approved by the district engineer before any credit sales take place. Several new requirements have been added to the provisions for in-lieu fee program instruments, designed to ensure greater accountability and success in providing mitigation to fulfill credit sales in a timely manner. First, we have added a requirement in the rule for in-lieu programs fees to develop a compensation planning framework that will be used to select, secure, and implement aquatic resource restoration, establishment, enhancement, and/or preservation activities within the service area(s) for the in-lieu fee program. Specific sites may or may not be identified, but selection of the sites must be consistent with the compensation planning framework. The comprehensive planning framework is essentially a watershed plan for the service area of the in-lieu fee program. A mitigation plan that meets the requirements of § 332.4(c) [§ 230.94(c)] and is consistent with the comprehensive planning framework must subsequently be submitted and approved by the district engineer, in consultation with the IRT, for each in-lieu fee project site prior to commencing work. Second, the instrument will specify a limited number of advance credit sales that can occur before specific sites are secured and mitigation plans approved. Once that number of credits is sold, no more advance credits can be sold until an equivalent number

of credits, tied to a specific site and mitigation plan, has been released in accordance with an approved credit release schedule. Third, the instrument must provide for the establishment of an account that will segregate funds received from credit sales and ensure that these funds, including interest earned, are used only to provide the required mitigation, minus a small allowance for administrative costs.

Required level of financial assurances. A number of commenters stated that in-lieu fee programs should be required to provide the same level of financial assurances as mitigation banks. Two commenters asserted that these financial assurances would ensure a more successful completion of mitigation projects. Other commenters indicated that providing the same level of financial assurances as banks prior to beginning credit sales would be challenging for in-lieu fee programs, which usually do not have up-front investors, and might prevent them from operating. In addition, government agencies often face legal or procedural restrictions that prevent them from providing the same types of financial assurances that are generally required of banks.

The agencies believe that financial assurances are important to ensure successful initiation and completion of compensatory mitigation projects, but also recognize the challenges faced by in-lieu fee programs in this regard. Therefore, the rule states that the district engineer shall require sufficient financial assurances to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with applicable performance standards. There may be cases where financial assurances are not necessary because an alternate mechanism is available to ensure a high level of confidence that the compensatory mitigation will be provided and maintained (e.g., a formal, documented commitment from a government agency or public authority). Consideration of the sponsor's past performance in providing ecologically successful mitigation projects would also influence the district engineer's determination regarding the level of financial assurances necessary to ensure a high level of confidence in successful project completion—this is true for banks as well as in-lieu fee programs.

Types of projects for which in-lieu fee program credits could be used. Several commenters stated that in-lieu fee programs should be limited to certain types of projects, such as those resulting in minor impacts. One commenter suggested limiting in-lieu fee programs

to activities that have less than 0.25 acre of impacts, and another commenter recommended restricting in-lieu fee programs to general permit activities resulting in less than one acre of impacts. Another commenter suggested that in-lieu fee programs should be available to provide compensation for impacts from linear transportation projects because those activities undergo environmental reviews and the compensatory mitigation is usually identified in advance of the proposed impacts. One commenter stated that in-lieu fee programs should not be restricted to a specific type or impact size. Two commenters said that in-lieu fee programs should only be used for activities authorized by general permit. A number of commenters stated that use of in-lieu fee programs should not be limited to a specific project size or permit type.

In most cases, in-lieu fee programs implement compensatory mitigation projects after the impacts authorized by DA permits have occurred. Therefore, the timing of compensatory mitigation projects provided by in-lieu fee programs results in some risk and uncertainty. To address that risk and uncertainty, and to reduce temporal losses of aquatic resource functions, we have established a preference hierarchy for mitigation options at § 332.3(b) [§ 230.93(b)]. This hierarchy, which is discussed in greater detail elsewhere in this preamble, generally provides a preference for mitigation bank credits, when the permitted activity is in the service area of an approved bank with the appropriate types of credits available. In the absence of an approved bank, in-lieu fee programs have certain advantages over permittee-responsible mitigation. They generally involve larger parcels, have access to appropriate scientific and technical expertise, may have a proven track record in establishing successful mitigation in the past, and will generally have a more fully developed watershed approach, developed through their required comprehensive planning framework. For these reasons, we do not believe it is appropriate to limit the use of in-lieu fee programs to any particular impact type or size. Rather, we believe the preference hierarchy described above will ensure that a mitigation option is selected with the highest probability of delivering successful, high-quality mitigation among the available choices in a given case.

Required compensation ratios. A number of commenters stated that in-lieu fee programs should be required to mitigate at a certain ratio that should take into account temporal loss of

wetland functions when compensatory mitigation is not fully functional at the time the permitted impacts occur. One commenter asserted that increasing the required mitigation ratios for in-lieu fee programs unfairly penalizes applicants in areas that do not have operating mitigation banks. Two commenters recommended higher mitigation ratios where in-lieu fee programs funds are used for preservation.

We have added § 332.3(f)(3) [§ 230.93(f)(3)] to allow district engineers to require additional compensatory mitigation in cases where released credits are not available to provide the appropriate type of compensatory mitigation. This additional compensatory mitigation is to account for the higher risk and uncertainty associated with compensatory mitigation projects that will be implemented after the permitted impacts have occurred. For all sources of compensatory mitigation, the amount of required compensation must be sufficient to replace lost aquatic resource functions. Other factors to be considered when determining the appropriate amount of compensatory mitigation to offset permitted impacts are: The method of compensatory mitigation (i.e., restoration, establishment, enhancement, preservation), the likelihood of success, differences between the functions lost at the impact site and the functions expected to be produced by the compensatory mitigation project, temporal losses of aquatic resource functions, the difficulty of restoring or establishing the desired aquatic resource type and functions, and/or the distance between the affected aquatic resource and the compensation site. The preference for released credits does not unfairly penalize permittees, since it is appropriate to require higher amounts of compensatory mitigation to account for risk and uncertainty. The rationale for the required compensation ratio must be documented in the administrative record for the permit action. In cases where preservation is used to provide compensatory mitigation, district engineers will generally require higher compensation ratios. While the rule does not explicitly differentiate between mitigation banks and in-lieu fee programs in the determination of ratios, the factors to be considered will generally result in higher ratios for in-lieu fee programs.

Credit release schedule. One commenter stated that fewer credits should be released to in-lieu fee programs than to mitigation banks. In contrast, other commenters said that in-lieu fee programs should have 100

percent of their credits released in advance, and/or that they should have no limit on advance credit sales.

We do not agree that in-lieu fee programs should be allowed unlimited credit sales prior to providing any mitigation; this would not provide adequate assurance that credits will be fulfilled in a timely manner. However, in recognition of the fundamental differences between mitigation banks and in-lieu fee programs, the final rule does allow an in-lieu fee program to sell a limited number of credits before securing a compensatory mitigation project site and conducting aquatic resource restoration, establishment, enhancement, and/or preservation at that site. Those credits are called "advance credits" and the sponsor can only sell such credits up to the limit specified in its approved instrument—under no circumstances may credits be sold prior to approval of an instrument meeting the requirements of § 332.8 [§ 230.98]. The number of advance credits will be determined by the district engineer, in consultation with the IRT, and will be specified in the instrument by service area. The amount of available advance credits will be based on an evaluation of the compensation planning framework, the size of the service area(s), the resources available to the program (e.g., an independent funding stream for government sponsored in-lieu fee programs) and other considerations identified by the district engineer during consultation with the IRT. If the in-lieu fee program instrument covers more than one service area, the advance credit limit will be specified for each service area. In addition, as each in-lieu fee project is approved by the district engineer (in consultation with the IRT), it will have an associated credit release schedule. As in-lieu fee projects are implemented and credits released, advance credits are converted to released credits and the sponsor can sell additional advance credits in that service area. In certain limited cases, such as when there is insufficient permitted activity in a given service area to support a viable mitigation project within a reasonable time frame, the district engineer may authorize the use of released credits from a different service area to fulfill advance credits sales. This might occur, for example, with a state-wide program managed by a government agency. In such cases, the district engineer should ensure that the approved mitigation compensates for the lost resources to the extent feasible, even though it may be some distance away, or in a different watershed.

Limiting the establishment and use of in-lieu fee programs to specific types of aquatic resources or geographic regions. Three commenters stated that in-lieu fee programs should be used only to provide compensatory mitigation for specific aquatic resource types. One commenter suggested that in-lieu fee programs should be retained solely for rapidly developing urban watersheds and coastal watersheds, and two commenters suggested that these programs be used specifically for stream compensatory mitigation. Two commenters said that use of in-lieu fee programs should not be restricted by resource type, but credits from in-lieu fee programs should be accepted only when those credits are different from the credits provided by a mitigation bank operating in the same service area.

In this final rule, we have not limited in-lieu fee programs to providing compensatory mitigation for specific types of aquatic resources or geographic regions, for much the same reasons that we have not limited them to specific project types or sizes. Instead, as discussed above, we have established a preference hierarchy in § 332.3(b) [§ 230.93(b)] that will ensure that mitigation options with the highest likelihood of success and greatest value to the watershed will be selected from the available choices. This flexibility is needed because there is great regional variation in aquatic resource types and watershed needs, and there is also much variability in the types of credits produced by both mitigation banks and in-lieu fee programs. We do not agree that in-lieu fee programs should be limited to certain types of aquatic resources, because in some cases they may provide the greatest assurance of delivering successful, high-quality mitigation for the resource in question, especially in areas where there are no mitigation banks.

Types of sponsoring entities. Several commenters suggested that only federal or state governmental entities or non-profit land stewardship organizations be allowed to be in-lieu fee program sponsors, because they have the capacity to provide permanent stewardship of compensatory mitigation project sites. However, one commenter stated that there is no evidence that government agencies or non-profit organizations provide compensatory mitigation that is superior to that provided by for-profit entities.

Through the definition of “in-lieu fee program” provided in § 332.2 [§ 230.92], we have limited sponsorship of in-lieu fee programs to governmental or non-profit natural resources management entities. In this rule, we have

established different requirements for mitigation banks and in-lieu fee programs that reflect basic differences in how those types of compensatory mitigation are provided and managed. In general, mitigation banks are established at single sites, to provide compensatory mitigation for pre-determined types of aquatic resource losses in a single or several neighboring watersheds. In contrast, in-lieu fee programs often provide compensatory mitigation at multiple sites within multiple service areas, and may serve areas where a mitigation bank is not economically viable because there is not sufficient development activity to ensure that enough credits can be sold within a reasonable time frame. For these reasons, in-lieu fee programs have fewer up-front planning requirements than mitigation banks, and are not expected to be operated as commercial ventures. The agencies thus believe it is appropriate to limit sponsorship of in-lieu fee programs to governmental or non-profit land management entities that operate explicitly in the public interest, rather than to serve the needs of investors. We are not aware of any independent studies that have examined the quality and ecological success of compensatory mitigation projects provided by for-profit entities versus governmental or non-profit entities, however we believe the rule provides appropriate safeguards and incentives to ensure that both types of entities (commercial and non-commercial) will provide successful compensatory mitigation given their differing organization, purposes, and constraints.

Preference for “in-place” compensatory mitigation. Five commenters stated that in-lieu fee programs should be retained but that the rule should contain a preference for in-place compensatory mitigation. One commenter indicated that in-lieu fee programs and in-place mitigation should have the same level of preference. One commenter said that adding such a provision would promote poor environmental stewardship because in-lieu fee programs would be excluded from areas where there are high credit demands. Another commenter said that a preference for in-place compensation would not be desirable if it led to approved mitigation banks having large service areas, because the compensatory mitigation could be a substantial distance from the location of the permitted impacts. This commenter stated that in-lieu fee programs should be retained in the final rule to provide ecologically appropriate

compensatory mitigation in areas with thin markets for mitigation bank credits.

In § 332.3(b) [§ 230.93(b)] we have established a preference hierarchy for compensatory mitigation options (i.e., mitigation banks, in-lieu fee programs, and permittee-responsible mitigation). We have established a preference for mitigation bank credits, because a secured site, an approved mitigation plan and other assurances must be in place before an initial allocation of credits can be sold or transferred to permittees. Before additional credits can be sold, the mitigation bank must achieve appropriate ecological milestones set out in its credit release schedule. Therefore, mitigation bank credits are generally more likely to be fulfilled sooner (or to be already fulfilled), than in-lieu fee program credits. We recognize, however, that this is not always the case. Some in-lieu fee programs may have the appropriate number and resource type of released credits available, and the final rule allows the district engineer to modify the hierarchy in cases where the reasons underlying it do not apply (e.g., an in-lieu fee program has available released credits that are just as certain and close to fulfillment as credits from a bank). When considering the options in § 332.3(b)(2)–(6) [§ 230.93(b)(2)–(6)], district engineers have the discretion to modify the hierarchy in order to approve the use of the environmentally preferable compensatory mitigation. Another example is when a permittee with a proven track record and access to appropriate scientific expertise proposes a high-value mitigation project, even though credits from an approved in-lieu fee program or mitigation bank are available.

Differences between the standards for mitigation banks and in-lieu fee programs. Several commenters noted that the fundamental difference between in-lieu fee programs and mitigation banks is timing. Two of these commenters pointed out that mitigation banks, like in-lieu fee programs, receive credit before compensatory mitigation projects are implemented. Another commenter suggested that in-lieu fee programs should adhere to the same standards as mitigation banks for the implementation of compensatory mitigation projects, but should be allowed to collect funds before acquiring a compensatory mitigation project site. Two commenters stated that the rule should recognize the inherent differences between mitigation banks and in-lieu fee programs but that all sources of compensatory mitigation should be held to standards that assure successful performance. Another

commenter said that if the standards were the same for mitigation banks and in-lieu fee programs, private mitigation banks would dominate the process, resulting in poor geographic distribution of compensatory mitigation, significantly reduced ecological diversity, and less protection and restoration of important aquatic resources.

According to the 2001 NRC Report, the principal difference between mitigation banks and in-lieu fee programs is timing. Mitigation banks and in-lieu fee programs are financed and planned differently, which creates the timing difference observed by the NRC. Since commercial mitigation banks sponsors have up-front financing, they can acquire and plan their mitigation bank sites before submitting their proposals to district engineers for consideration. In contrast, in-lieu fee programs do not generally have this up-front financing available, so they must obtain funds from permittees (under an in-lieu fee program instrument or agreement) before they can acquire and plan in-lieu fee project sites, and implement those projects.

We agree that mitigation banks and in-lieu fee programs should be held to the same standards, to the maximum extent practicable, as required by NDAA section 314. We believe the final rule accomplishes this goal. The standards provided in this rule will help ensure that the compensatory mitigation provided by mitigation banks and in-lieu fee programs both offset the impacts incurred by permittees who secure credits from these third-party mitigation providers. To maximize compensatory mitigation options, the inherent differences between mitigation banks and in-lieu fee programs warrant somewhat different procedural requirements. The most substantial differences relate to timing and financing. We recognize that in-lieu fee programs are usually not able to capitalize compensatory mitigation projects up-front. Instead, they must collect funds from permittees before they can secure a suitable site and develop and implement a compensatory mitigation project. For this reason, in-lieu fee programs, but not banks, are allowed to sell advance credits. Unless an in-lieu fee program has a surplus of credits available in a service area (i.e., released credits), the compensatory mitigation will take place after the permitted impacts have occurred. To help ensure that the collected funds are used in a timely manner to initiate compensatory mitigation projects, we are including a time limit of three growing seasons for fulfillment of

advance credits (see § 332.8(n)(4) [§ 230.98(n)(4)]) and requiring in-lieu fee programs to establish accounts to retain the collected funds. Those funds can only be used for the selection, design, acquisition, implementation, and management of in-lieu fee projects, with a small percentage allowed for administrative costs.

However, the substantive mitigation requirements, as well as many of the procedural requirements are the same for both banks and in-lieu fee programs. Both are subject to the same requirements for plan approval, performance standards, monitoring, adaptive management and long-term stewardship. Proposed mitigation banks and in-lieu fee programs will both be required to undergo review by Interagency Review Teams, both for their instruments and for their specific mitigation project plans, though in the case of mitigation banks these two steps are usually accomplished simultaneously, while for in-lieu fee programs instrument review and approval will usually take place prior to development of a particular project. Public involvement is required in the same way for both types of third-party providers as well. By including equivalent substantive ecological standards while recognizing certain administrative and procedural differences, the rule will also help maximize available credits from sponsors willing to provide third-party mitigation in a range of service areas, from high-development areas that can support economically-viable banks to remote areas that cannot, but that still have occasional mitigation needs. We recognize that in-lieu fee programs have sometimes provided compensatory mitigation for different types of aquatic resources than mitigation banks, and this rule does not interfere with that practice.

Proposed in-lieu fee regulatory text. A few commenters proposed in-lieu fee regulatory text. One commenter suggested that the district commander may only consider in-lieu fee preservation as the primary mitigation if no other form of mitigation is available, feasible or practicable. Another commenter proposed that each in-lieu fee program should draft a program agreement that is submitted for public review and comment and the review of the district engineer and the Interagency Review Team (IRT). Under that agreement, fees paid to each in-lieu fee program would be determined by the market rate of mitigation bank credits within a watershed and would be reviewed periodically by the IRT. One commenter suggested that all in-lieu fee

programs should be required to have an approved operating agreement or instrument. This commenter said that an in-lieu fee program should have to project the type and location of impacts and receive advance payments so that the compensatory mitigation would be implemented in advance of permitted impacts. Another commenter suggested that each in-lieu fee program be required to have an approved Memorandum of Understanding and a program manager responsible for administering the program. This commenter also said that district engineers should determine acceptable fee amounts for the required compensatory mitigation and should be the final approval authority for all proposed expenditures of funds collected for compensatory mitigation for DA permits.

We have considered the regulatory text proposed by these commenters. The final rule requires a prospectus, public notice and comment period, and IRT review of proposed in-lieu fee program instruments. The use of preservation as compensatory mitigation will be determined by district engineers on a case-by-case basis in accordance with § 332.3(h) [§ 230.93(h)]. In-lieu fee programs must have approved instruments before they can be used to provide compensatory mitigation for DA permits. We do not believe it is practical to require in-lieu fee programs to receive advance payments so that they could do compensatory mitigation in advance of permitted impacts. If it were possible for in-lieu fee programs to fulfill such a requirement, they could operate as mitigation banks. We do not believe it is appropriate for district engineers to determine credit costs for in-lieu fee programs, but they will review the fees set by sponsors to determine whether they comply with the requirement for full cost accounting to ensure that the required compensatory mitigation is provided and maintained.

IV. Compliance With Section 314 of the NDAA

Section 314 of the NDAA requires the issuance of standards and criteria for compensatory mitigation that, to the maximum extent practicable, (1) maximize available credits and opportunities for mitigation, (2) provide flexibility for regional variations in wetland conditions, functions and values, and (3) apply equivalent standards and criteria to each type of compensatory mitigation.

With respect to maximizing available credits and opportunities for mitigation, the preference established in today's rule for the use of credits provided by

mitigation banks (see § 332.3(b) [§ 230.93(b)]) should stimulate an increase in the number of mitigation banks and correspondingly the number of bank credits available for use. Also, today's rule provides greater efficiency and predictability to the process of authorizing new mitigation banks and in-lieu fee programs and associated projects by establishing clear standards and criteria for instruments and mitigation plans, and setting reasonable timelines for review and decision-making. These improvements in regulatory efficiency and predictability should serve to stimulate an increase in the number of mitigation banks and in-lieu fee programs, and therefore an overall increase in the number of third-party compensatory mitigation credits available to offset permitted impacts. Additionally, our decision to retain and reform in-lieu fee mitigation, rather than eliminate it, will provide a range of compensation options for permit applicants, and help to ensure that viable options are available in areas not served by banks. Thus, consistent with the NDAA, today's rule maximizes available credits and opportunities for mitigation to the maximum extent practicable.

With respect to providing flexibility for regional variations in wetland conditions, functions and values, as previously noted, we believe that today's rule achieves the proper balance of binding requirements and flexibility necessary to ensure that compensatory mitigation decisions are reasonable and based on case-specific circumstances. An adequate degree of flexibility is necessary for this rule because practices for restoring, establishing, and enhancing aquatic resources vary by resource type and by geographic region. For example, today's rule does not proscribe a one-size-fits-all set of ecological performance standards to evaluate the success of all compensation projects. Instead, the rule recognizes that ecological performance standards will vary depending upon aquatic resource type, geographic region, and compensation method but requires that they be based the best available science that can be measured or assessed in a practicable manner. Thus, consistent with the NDAA, today's rule provides flexibility for regional variations in wetland and aquatic resource conditions, functions and values to the maximum extent practicable.

Additionally, today's rule requires "equivalent" standards, to the maximum extent practicable, for all three mechanisms for providing compensatory mitigation: permittee-responsible compensatory mitigation,

mitigation banks, and in-lieu fee mitigation. Because there are fundamental differences in how these three types of compensatory mitigation are structured and conducted, we do not believe that Congress intended to require the promulgation of identical standards for all three methods of compensation. Instead, we interpret "equivalent" standards to mean standards which are equal in value, force, or meaning (See, e.g., *The American Heritage Dictionary of the English Language, Fourth Edition*). With that goal in mind, today's rule requires that compensation projects provided by all three compensation mechanisms have mitigation plans which include the same 12 fundamental components: objectives; site selection criteria; site protection instruments (e.g., conservation easements); baseline information (for impact and compensation sites); credit determination methodology; mitigation work plan; maintenance plan; ecological performance standards; monitoring requirements; long-term management plan; adaptive management plan; and financial assurances (see 33 CFR 332.4(c) [40 CFR 230.94(c)]). There are minor differences in the specific requirements for these components in order to accommodate the different nature of the three mitigation approaches. There are also procedural and timing differences among the requirements for the three types of mitigation. For example, in-lieu fee programs are allowed to sell a limited number of credits before having an approved site and mitigation plan, while banks are not. However, to compensate for this difference and ensure that the standards are "equivalent" to the maximum extent practicable, in-lieu fee programs are required to develop a compensation planning framework and adhere to strict accountability requirements for all fees collected, requirements which go beyond those applied to banks. We have also included a preference for bank credits over advanced credits from in-lieu fee programs, and limited in-lieu fee program sponsorship to qualified governmental and non-profit resource management agencies. We thus believe that the final rule fulfills the statutory directive to provide "equivalent" standards for the three types of mitigation to the maximum extent practicable. Specific rule provisions that apply to each of the types of compensatory mitigation, and the reasons for their differences, are discussed throughout today's preamble.

V. Organization of the Final Rule

The proposed compensatory mitigation regulation in 33 CFR part 332 [40 CFR part 230], is organized into the following sections:

Section 332.1 [230.91], *Purpose and general considerations*, describes the basic purpose of the proposed rule and general principles concerning compensatory mitigation.

Section 332.2 [230.92], *Definitions*, provides definitions of important terms relating to compensatory mitigation and the Corps Regulatory Program.

Section 332.3 [230.93], *General compensatory mitigation requirements*, describes general compensatory mitigation requirements for DA permits, including permit conditions and financial assurances. This section also describes the watershed approach to compensatory mitigation.

Section 332.4 [230.94], *Planning and documentation*, describes the review of proposed compensatory mitigation activities, as well as requirements for mitigation plans.

Section 332.5 [230.95], *Ecological performance standards*, describes principles for establishing ecological performance standards for compensatory mitigation projects.

Section 332.6 [230.96], *Monitoring*, describes general requirements for monitoring compensatory mitigation projects.

Section 332.7 [230.97], *Management*, describes general requirements for site protection, sustainability, adaptive management, and long-term management of compensatory mitigation projects.

Section 332.8 [230.98], *Mitigation banks and in-lieu fee programs*, provides requirements that are specifically applicable to mitigation banks and in-lieu fee programs.

VI. Discussion of Specific Sections of the Final Rule

The final rule is presented in two parallel sections: Changes to Corps regulation in 33 CFR and changes to EPA regulation in 40 CFR. The two sections are almost entirely the same, with minor exceptions. These include: (1) Corps changes to permit application requirements at 33 CFR 325.1; (2) Conforming changes to EPA's existing mitigation regulations at 40 CFR part 230, making appropriate citations for the addition of new §§ 230.91 through 230.98; and (3) References to the Rivers and Harbors Act of 1899, in which the EPA does not have a regulatory role, have been omitted from the text in 40 CFR part 230.

33 CFR 325.1 Application for Permits

In the proposed rule, the Corps proposed to modify § 325.1(d) by adding a new paragraph requiring a mitigation statement for section 404 permit applications. Several commenters supported the proposed requirement. One commenter said that geographic coordinates and monitoring data should also be required for this mitigation statement. A number of commenters objected to the proposed requirement. One commenter believed requiring this statement is unnecessary because some impacts to waters of the United States are unavoidable. Another commenter said that determining whether the proposed avoidance and minimization is sufficient, appropriate, or practicable is highly subjective and may invite litigation. This commenter remarked that it is the Corps' responsibility to determine whether appropriate and practicable avoidance, minimization, and compensation has been provided prior to making a decision on a section 404 permit. Several commenters said that this provision should be modified, to clarify that the mitigation statement is to be brief, since it is provided at the beginning of the permit application process and is likely to change as a result of the evaluation process. One commenter stated that this paragraph should be modified to allow the permit applicant to explain why compensatory mitigation should not be required, since many individual permits are issued under section 404 that do not require compensatory mitigation.

This requirement has been adopted in the final rule because it will provide useful information for the permit evaluation process. Section 325.1(d)(7) has been changed to allow permit applicants to explain why they believe compensatory mitigation should not be required for particular activities. The mitigation statement should be brief, because the permit evaluation process is an iterative process, and district engineers often require additional avoidance and minimization as they evaluate permit applications. The Corps does not agree that it would be appropriate to require geographic coordinates or monitoring data with the mitigation statement. The permit application will indicate the location of the proposed work. Monitoring data may be required at a later time, depending on the conditions of the issued permit. See the discussion of section 332.4(b)(1) below for a description of public notice requirements for the mitigation statement.

33 CFR 332.1 and 40 CFR 230.91 Purpose and General Considerations

(a) *Purpose.* Many commenters stated that the proposed rule restricts flexibility for mitigation options for both the permit applicant and the Corps, and therefore it is inconsistent with section 314. Many commenters declared that the proposed elimination of in-lieu fee programs conflicts with this statute, because it reduces mitigation opportunities available to permittees as well as the quality and success of compensatory mitigation projects. One commenter said that to comply with the statutory mandate to maximize available credits and opportunities for mitigation, the rule should specify that mitigation banks are the preferred choice when available. A number of commenters believe that the proposed rule unfairly promotes mitigation banking and restricts other compensatory mitigation opportunities.

In response to the comments, we have made substantial changes to this rule to better comply with the statutory mandate. We have retained in-lieu fee programs as a separate mechanism for providing compensatory mitigation, with clear and stringent standards to help ensure performance in replacing aquatic resource functions and services lost as a result of activities authorized by DA permits. We have also established a preference for mitigation bank credits, because of the lower risks associated with mitigation banks. This preference is discussed in greater detail below. In this final rule, we have applied equivalent standards to all sources of compensatory mitigation, to the extent it is practicable to do so, given the fundamental differences among permittee-responsible mitigation, mitigation banks, and in-lieu fee programs.

Many commenters said that the rule should apply equivalent standards and criteria to each type of compensatory mitigation. A number of commenters expressed concern that the proposed rule does not accomplish that objective. One commenter suggested establishing equivalent levels of interagency review for proposed compensatory mitigation projects. Several commenters said that the statute should be interpreted as requiring the establishment of similar levels of accountability for mitigation banks, in-lieu fee programs, and permittee-responsible mitigation. This would allow the retention of in-lieu fee programs as a separate mechanism for providing compensatory mitigation for DA permits. One commenter remarked that the proposed rule goes much further than establishing equivalent

standards and criteria by providing a strong preference for the use of mitigation banks. This commenter said that the proposed rule incorrectly asserts that mitigation banks are always successful and therefore other forms of compensatory mitigation should be held to the same standards as mitigation banks in order to achieve success. One commenter stated that the objective of this rule should be to effectively mitigate for losses of aquatic resources, not to level the playing field between mitigation banks and in-lieu fee programs. Three commenters said that the proposed rule provides equivalent standards for different types of compensatory mitigation, but it needs to focus on improving success, regardless of whether permittee-responsible mitigation, mitigation banks, or in-lieu fee programs are used.

This final rule applies equivalent standards and criteria to all sources of compensatory mitigation, to the maximum extent practicable. It is not practicable to apply exactly the same standards and criteria to mitigation banks, in-lieu fee programs, and permittee-responsible mitigation, nor are the agencies required to do so, as discussed above. There are inherent differences among these sources of compensatory mitigation. As many commenters pointed out, there are many areas of the country where there are no mitigation banks or in-lieu fee programs. Flexibility in compensatory mitigation requirements is needed to account for regional variations in aquatic resources, as well as state and local laws and regulations. There also needs to be flexibility regarding the requirements for permittee-responsible mitigation. Practicability is an important consideration when determining compensatory mitigation requirements. We agree that the final rule should provide similar levels of accountability among the three sources of compensatory mitigation. We strongly agree that the focus should be on ecological success of compensatory mitigation projects, not the source of the compensatory mitigation. The preferences provided in § 332.3(b) [§ 230.93(b)] are based primarily on administrative criteria that take into account risk and uncertainty in providing the required compensatory mitigation. This rule provides tools to help improve ecological success of compensatory mitigation projects, but the rule itself cannot guarantee that success. Ecological success is dependent upon effective project planning, site selection, and implementation.

One commenter said that the agencies should clarify that they may conduct

rulemaking without public notice and comment and still comply with the Administrative Procedure Act.

We acknowledge that, in limited circumstances, agencies can conduct rulemaking without a public notice and comment process. For example, an agency may issue a direct final rule for routine and non-controversial regulations, if the agency believes the rule would not result in adverse comments. It is unlikely that any rulemaking related to compensatory mitigation would result in no adverse comments. In the interest of transparency, the agencies have agreed that any future changes to this rule will involve notice and comment rulemaking.

Many commenters said that stream compensatory mitigation should not be included in this rule. A number of commenters stated that there is no scientific evidence that streams can be created or replaced, or that other approaches taken in this rule can compensate for stream losses. Many of these commenters asserted that the agencies should conduct further research on stream mitigation and demonstrate its success before including standards for stream mitigation in the rule. Some commenters noted that the statute requiring the promulgation of this rule refers only to wetlands. Several commenters expressed support for applying the rule to streams and other open waters. One commenter said that physical alteration of the nation's waters should be mitigated to the extent possible to support the objective of the Clean Water Act. Since section 404 of the Clean Water Act authorizes discharges of dredged or fill material into lakes, streams, and wetlands, mitigation for those impacts should be provided.

We believe that is appropriate to apply this rule to all types of aquatic resources, not just wetlands. This rule addresses the basic requirements of compensatory mitigation projects: planning and documentation, performance standards, monitoring, and management. Stream compensatory mitigation projects also require these basic elements. The final rule recognizes the challenges associated with stream restoration and provides in § 332.3(e)(3) [§ 230.93(e)(3)] that compensation for difficult to replace resources, such as streams, should be provided through in-kind rehabilitation, enhancement or preservation if practicable. The feasibility and appropriateness of compensatory mitigation for a particular aquatic resource type is to be addressed on a case-by-case basis by district engineers. Effective implementation of

this rule, including the ecological performance of compensatory mitigation projects, is dependent upon critical thinking by decision-makers to determine whether a particular compensatory mitigation proposal at a specific site is technically feasible and capable of providing the desired aquatic resource functions and services. Stream restoration and rehabilitation activities have been conducted all across the country, with varying levels of success. There are areas of the country, such as the southeastern coastal plain, where it may be possible to rehabilitate functioning streams if appropriate geologic and hydrologic conditions are present. Compensatory mitigation required by the Corps helps support the objective of the Clean Water Act, by offsetting losses of aquatic resource functions that result from activities authorized by DA permits.

(b) *Applicability.* One commenter said that the proposed rule is inconsistent with 33 CFR 320.4(r), which limits requirements for compensatory mitigation to "significant resource losses."

This final rule does not alter the circumstances when compensatory mitigation is required. The Corps has required compensatory mitigation for minor activities, such as activities authorized by nationwide permits, for many years to ensure that those activities result in minimal individual and cumulative adverse effects on the aquatic environment and are in the public interest. Prior to issuing an individual permit, the Corps determines on a case-by-case basis whether compensatory mitigation is necessary to ensure that the authorized activity is in the public interest and, if it involves a discharge of dredged or fill material, complies with the 404(b)(1) Guidelines.

Several commenters supported the use of areas not subject to regulatory jurisdiction under the Clean Water Act and/or sections 9 and 10 of the Rivers and Harbors Act of 1899 to provide compensatory mitigation for DA permits. One commenter said that using non-jurisdictional areas as compensatory mitigation can support a watershed approach.

We agree with these comments, and have retained this provision in the final rule.

A number of commenters believe that the rule should clarify the Corps' authority to require mitigation in light of the U.S. Supreme Court Decisions in *Solid Waste Agency of Northern Cook County v. Army Corps of Engineers* (2001) and *Rapanos et ux., et al. v. United States* (2006) (Rapanos). Some commenters noted that if the Corps

cannot directly regulate discharges of dredged or fill material into a non-jurisdictional wetland, then the Corps cannot require that particular wetland to be used to mitigate impacts to other wetlands. Such an approach would allow the Corps to indirectly regulate non-jurisdictional wetlands. One commenter stated that the Rapanos decision should apply not only to determining whether a particular water body or wetland is jurisdictional under the Clean Water Act, but it should also guide the development of criteria and standards that inform mitigation decisions.

This rule is not the appropriate venue for addressing Clean Water Act jurisdiction. The Corps does not generally require that any particular wetland or resource be used to provide compensatory mitigation. Rather, the project sponsor proposes a mitigation option and the Corps determines whether the proposed option is adequate to compensate for resource functions and services lost at the impact site. We believe that non-jurisdictional waters can be used to provide compensatory mitigation for activities authorized by DA permits, if the rehabilitation, enhancement, and/or preservation of those waters is determined to be appropriate compensation for authorized impacts. The Rapanos decision is limited to the question of Clean Water Act jurisdiction, not decision-making for compensatory mitigation.

(c) *Sequencing.* Many commenters stated that the rule should emphasize avoidance and minimization, not just compensatory mitigation. They said that compensatory mitigation should not be considered until all efforts have been made to first avoid and then minimize unavoidable impacts to waters of the United States. Many commenters believe that the proposed rule grants district engineers too much discretion to determine that permit applicants have avoided and minimized impacts to aquatic resources. Two commenters said that the rule needs to be rewritten to treat compensatory mitigation as a last resort to ensure protection and enhancement of the nation's streams and wetlands.

This rule addresses only the compensation component of the section 404 mitigation sequence. Avoidance and minimization are addressed through other regulations, such as the Section 404(b)(1) Guidelines for activities involving discharges of dredged or fill material into waters of the United States. Activities involving discharges of dredged or fill material into waters of the United States must comply with all

applicable provisions of the 404(b)(1) Guidelines before a section 404 permit can be issued. For activities that require DA permits pursuant to sections 9 or 10 of the Rivers and Harbors Act of 1899, avoidance and minimization requirements are provided through application of the Corps Regulatory Program's mitigation policy at 33 CFR 320.4(r).

A number of commenters said that the proposed rule is inconsistent with the 404(b)(1) Guidelines as they relate to the consideration of practicable alternatives. They indicated that allowing permit applicants to use compensatory mitigation instead of using practicable alternatives will result in significant adverse impacts to the environment. Two commenters recommended that the rule include measures to be used to avoid impacts to wetlands, and limit permit issuance to those impacts that were truly unavoidable. Several commenters said that the sequencing provision in the proposed rule fails to recognize changes that occur to wetlands over time, and it does not take into account innovative steps in wetland management that can be used to benefit society.

Consideration of practicable alternatives is provided through application of the 404(b)(1) Guidelines for activities that involve discharges of dredged or fill material into waters of the United States. Using compensatory mitigation to minimize adverse effects to the aquatic environment is consistent with the 404(b)(1) Guidelines (see 40 CFR 230.75). Avoidance and minimization are achieved through application of the 404(b)(1) Guidelines for activities that require section 404 permits. We have added a new paragraph (c)(1) to this section to clarify that nothing in this rule affects the requirement that all section 404 permits comply with applicable provisions of the 404(b)(1) Guidelines. Paragraph (c)(2) of this section has been modified to clarify that individual section 404 permits will be issued only when compliance with applicable provisions of the 404(b)(1) Guidelines has been achieved, including those which require the permit applicant to take all appropriate and practicable steps to avoid and minimize adverse impacts to aquatic resources. For general permits, compliance with the 404(b)(1) Guidelines is addressed through application of 40 CFR 230.7. There are many reasons why wetlands change over time, most of which are not under the control of the Corps. Paragraph (c) of this section can only address those changes that result from discharges of dredged or fill material into waters of

the United States, including jurisdictional wetlands.

Several commenters said that the final rule should include exemptions to the mitigation sequencing requirements when the discharge is necessary to avoid environmental harm or can be reasonably expected to result in environmental gains or insignificant impacts. Other commenters expressed concern that strict adherence to mitigation sequencing will prevent the implementation of large scale compensatory mitigation projects. Some commenters asserted that rigid rules for on-site avoidance often result in small areas for compensatory mitigation projects, which are unlikely to function properly.

Potential exemptions to the mitigation sequence are beyond the scope of today's rulemaking. However, we do note that these exemptions to the mitigation sequence are addressed through specific provisions of the 1990 Mitigation Memorandum of Agreement (MOA) between the U.S. EPA and the Department of the Army. Those provisions of the 1990 Mitigation MOA are not affected by this final rule. The 404(b)(1) Guidelines and the provisions of the 1990 Mitigation MOA that are retained after this final rule goes into effect provide sufficient flexibility to allow the development of large scale compensatory mitigation projects. Avoiding waters of the United States to the maximum extent practicable on the project site does not result in small areas for compensatory mitigation that may be required by the district engineer, since this rule does not require on-site compensatory mitigation. This rule takes a watershed approach to compensatory mitigation, and emphasizes that compensatory mitigation projects should be placed in appropriate locations within a watershed.

One commenter stated that the definition of "practicable" should take into account public safety and maintenance. Another commenter suggested that the rule should require the district engineer to consider whether the wetland functions lost as a result of a permitted activity can be practicably replaced.

The definition of "practicable" provides sufficient flexibility to take into account public safety and maintenance when making decisions on applications for DA permits. In § 332.3 [§ 230.93], there are several provisions that require the district engineer to consider the likelihood of success when determining appropriate and practicable compensatory mitigation.

We have also added a new provision at § 332.1(c)(3) [§ 230.91(c)(3)] reminding the public that in some cases that district engineer may determine that a proposed permit cannot be issued because of the lack of appropriate and practicable mitigation options. While the Corps envisions that this will be an unusual situation, it is possible that the impacts at a particular site would be so significant, and the avoidance, minimization and compensation options are so limited, that it is simply not possible to adequately mitigate the project impacts.

(d) *Public interest.* We received no comments on this provision. In the proposed rule, this provision was in paragraph (c) of this section, which discusses the mitigation sequence under the Clean Water Act Section 404(b)(1) Guidelines. Since the public interest review is a different process than mitigation sequencing, we have moved this sentence to a separate paragraph.

(e) *Accounting for regional variations.* Many commenters said that the rule should provide flexibility to address regional issues relating to compensatory mitigation. For example, a number of commenters discussed implementation of section 404 of the Clean Water Act in the State of Alaska, where there is a clear understanding that compensatory mitigation is not always warranted or practicable. Some of these commenters cited the May 13, 1994, "Statements on the Mitigation Sequence and No Net Loss of Wetlands in Alaska" issued by the U.S. EPA and the Department of the Army. These commenters said that the final rule should identify Alaska as a special case in which local flexibility is needed and will be applied. In Alaska, there are limited opportunities to create or restore wetlands because of its environmental conditions.

As discussed elsewhere in this preamble, this rule does not change the circumstances under which compensatory mitigation is required for DA permits. Therefore, it does not change the May 13, 1994, Alaska mitigation statement cited above. We have modified appropriate provisions of this rule to clarify the flexibility and discretion available to district engineers when determining compensatory mitigation requirements for DA permits.

Some commenters cited examples where regional flexibility is needed to maximize available mitigation credits. An important tool for regional flexibility is to be able to use all three mechanisms (permittee-responsible mitigation, mitigation banks, and in-lieu fee programs) for providing compensatory mitigation. One commenter said that there is only one small mitigation bank

in Alaska because of its climate, geography, and limited opportunities for wetland establishment or restoration. Other commenters stated that opportunities to develop mitigation banks in southern Nevada and other areas of the southwest are extremely limited because of the low availability of water. Another commenter noted that in areas where most of the land is owned by the federal government, opportunities to develop mitigation banks are substantially limited.

This rule supports all three mitigation sources used in the Corps Regulatory Program: permittee-responsible mitigation, mitigation banks, and in-lieu fee programs. We acknowledge that there are areas where mitigation banks are unlikely to be established. In such areas, in-lieu fee programs may be established. Permittee-responsible mitigation may also be required if there are no third-party mitigation options and the district engineer determines that compensatory mitigation is necessary to offset losses of aquatic resource functions.

One commenter suggested that each Corps district establish region-specific methodologies for calculating compensatory mitigation needs. According to this commenter, this would allow regional experts to set regional strategies for compensatory mitigation. One commenter said that this rule should provide district engineers with operational standards for regional variations, but only to the extent necessary to promote ecologically sound and successful restoration of wetland functions.

Regional methods for determining compensatory mitigation requirements can be developed by Corps districts and other entities. District engineers are also encouraged to establish regional strategies for compensatory mitigation, through watershed planning or other means. The development of regional methods and watershed plans is a resource-intensive enterprise, and any Corps district efforts towards developing such products are dependent on available resources. We do not believe it would be appropriate to provide operational standards in a national rule, because regional standards are more effectively developed at the local level.

(f) Relationship to other guidance documents. Many commenters recommended adding a provision to the rule that clarifies whether previously issued guidance documents relating to compensatory mitigation in the Corps Regulatory Program are superseded by this final rule. These commenters cited the 1995 Mitigation Banking Guidance,

the 2000 In-Lieu Fee Guidance, and the 1990 Mitigation Memorandum of Agreement between the U.S. EPA and the Department of the Army as documents about which such clarification is needed.

We agree that such a provision is appropriate to provide clarity for the regulated public and government agencies. We have added paragraph (f)(1) to this section, which states that this rule replaces the mitigation banking guidance issued on November 28, 1995, the in-lieu fee guidance issued on November 7, 2000, and Regulatory Guidance Letter 02-02 which was issued on December 24, 2002. Since this rule does not address all provisions of the 1990 Mitigation MOA that relate to compensatory mitigation, paragraph (f)(2) discusses which provisions of this MOA are superseded by the rule. This rule supersedes only those provisions of the MOA relating to the amount, type, and location of compensatory mitigation, and the use of preservation as a mitigation component.

Other Corps guidance documents that relate to compensatory mitigation for DA permits, such as local guidance issued by Corps districts, should be revised as necessary so that they are consistent with this final rule.

33 CFR 332.2 and 40 CFR 230.92 Definitions

Adaptive management. Two commenters supported the proposed definition of adaptive management. Two commenters suggested that the definition should require consideration of likely risks to compensatory mitigation project sites. Other commenters stated that the definition should clarify that adaptive management involves a strategy that addresses challenges faced in the restoration of dynamic systems. Two commenters said that there is potential to use this definition to relax or modify project-specific performance criteria to account for poor design or unexpected as-built conditions to achieve project goals.

We have modified this definition to account for two aspects of adaptive management: (1) Addressing challenges that are likely to occur with compensatory mitigation projects, and (2) addressing unforeseen changes to those projects. The likely challenges are those that are reasonably foreseeable, which may typically occur for the restoration, establishment, or enhancement of a particular aquatic habitat type in a specific area. For the purposes of this rule, adaptive management does not require anticipation of all potential challenges,

since that would be impossible to accomplish. We have also changed this definition to state that adaptive management requires consideration of the risk, uncertainty, and dynamic nature of compensatory mitigation projects. Consideration of those factors can help proponents optimize the ecological performance of compensatory mitigation projects. The last sentence of this definition has been modified to clarify that the adaptive management process involves the selection of appropriate measures that will provide aquatic resource functions. Another change to the last sentence acknowledges that analysis of monitoring results will be used to identify and implement measures to rectify problems.

Advance credits. We have adopted this new definition to define one of the two types of credits that can be provided by in-lieu fee programs. Advance credits are compensatory mitigation credits available for sale by an in-lieu fee program sponsor prior to being fulfilled through implementation of an approved mitigation plan for an in-lieu fee project. An approved in-lieu fee project will have a credit release schedule, and as the milestones in the credit release schedule are achieved, the credits that are produced will be released to fulfill the sponsor's obligation for credit production on behalf of the permittees who secured credits from that sponsor. The number of advance credits that a sponsor may make available to permittees is specified by service area in the in-lieu fee program instrument. In-lieu fee programs cannot sell advance credits until they have an approved instrument specifying the maximum allowable number of advance credits and a schedule for fulfilling any advance credit sales. Considerations for determining the appropriate number of advance credits for a given service area are discussed elsewhere in this preamble.

Buffer. Two commenters recommended modifying this definition to include areas providing upland habitat next to aquatic resources, in addition to protecting those resources from disturbance. Another commenter said that this definition should include buffers associated with ephemeral channels. One commenter noted that there is inconsistency in the proposed rule: in one section the term "buffer" includes upland areas, but in another section of the proposed rule it implies that buffers do not include uplands. This commenter recommended using this term consistently throughout the rule to eliminate confusion. One

commenter said that buffers may include wetlands.

Although upland buffers usually provide habitat next to aquatic resources, we do not believe it is necessary to explicitly state that in this definition. Upland buffers can be established and maintained next to ephemeral channels, but we do not believe such clarification is needed. We have modified this definition by adding the word "wetland" since buffers may be comprised of uplands, wetlands, and/or riparian areas. Riparian areas may or may not be wetlands.

Compensatory mitigation. Two commenters suggested that this definition should not be limited to aquatic resources. It should also acknowledge ecological improvements in uplands. Another commenter said that the definition should clarify that preservation is always a required component of compensatory mitigation, and in certain circumstances it may be the sole component. One commenter stated that this definition should be expanded to include functional surrogates for hydrology, such as integrated storm water management facilities.

This rule is limited to compensatory mitigation for impacts to aquatic resources, since the Corps regulates activities in waters of the United States, including navigable waters. Mitigation required by district engineers to address impacts to other resources, such as endangered species or historic properties, is governed by other provisions in the Corps regulations. Preservation is not always a required component of compensatory mitigation, although long-term protection through real estate instruments or other mechanisms is usually required for compensatory mitigation project sites. Preservation is one means of providing compensatory mitigation; compensation may also be provided through restoration, enhancement, or establishment, or any combination of those four methods. Preservation is rarely the sole source of compensatory mitigation for a DA permit; in most cases, aquatic resource restoration, establishment, and/or enhancement is required to achieve a minimum of one-to-one replacement of lost aquatic resources and any required preservation augments that replacement. Use of various techniques to offset losses of hydrologic functions, such as integrated storm water management facilities, is considered to be an action to minimize effects in accordance with 40 CFR part 230, Subpart H. District engineer can consider the use of such features when determining the appropriate amount of

compensatory mitigation required for DA permits.

Compensatory mitigation project. Two commenters recommended expanding this definition to include ecological improvements in uplands, where appropriate. One commenter said it was unclear whether forms of third-party mitigation other than mitigation banks are considered to be compensatory mitigation projects. One commenter suggested adding in-lieu fee programs to this definition.

This definition has been simplified by replacing the phrase "a restoration, establishment, enhancement, and/or preservation activity" with "compensatory mitigation." In this rule, district engineers have the discretion to include uplands, such as non-wetland riparian areas and buffers, as part of the overall compensatory mitigation project if those features are essential to maintaining the ecological viability of adjoining aquatic resources. We do not believe it is necessary to state this concept in the definition, since it is addressed in § 332.3(i) [§ 230.93(i)]. We have removed the term "third-party" from this definition, and added the phrase "or an in-lieu fee program" to clarify that compensatory mitigation projects include mitigation banks and in-lieu fee programs.

Condition. We have adopted this new definition since methods other than functional assessments can be used to evaluate permitted impacts and compensatory mitigation projects. This definition is based on concepts provided in the 2004 report entitled "Review of Rapid Assessment Methods for Assessing Wetland Condition" which was published by the U.S. EPA (EPA/620/R-04/009).

Credit. One commenter noted that the proposed definition is based on measures of function. This commenter said that if there are no units of measure included, measures of function cannot be used to calculate credits. Another commenter stated that units of measure are needed to calculate numbers of credits.

We have modified this definition by adding the phrase "or other suitable metric" to the list of examples of potential measures. There are a variety of methods that can be used to determine the number of credits provided by a compensatory mitigation project. In some cases, condition assessments may be used to determine available credits. The units of measure will depend on the method of determining credits. We have also inserted the word "aquatic" before "functions" in the last sentence, to clarify that credits are to be based on

aquatic functions provided by resource restoration, establishment, enhancement, or preservation.

For the purposes of this rule, credits from a mitigation bank or an in-lieu fee project are produced in accordance with a credit release schedule associated with an approved mitigation plan. For permittee responsible mitigation, credits are produced when a compensatory mitigation project is implemented in accordance with the approved mitigation plan.

DA. There were no comments received on the proposed definition. This definition is adopted as proposed.

Days. There were no comments received on the proposed definition. This definition is adopted as proposed.

Debit. One commenter noted that the proposed definition is based on measures of function. This commenter said that if there are no units of measure included, measures of function cannot be used to calculate debits. Another commenter stated that units of measure are needed to calculate numbers of debits.

For the same reasons provided in the preamble discussion of the term "credit," we have modified this definition to refer to other suitable metrics. The units of measure depend on the method of determining debits.

Enhancement. One commenter expressed support for the proposed definition. Several commenters requested changes to this definition to provide clarification. They said that it is difficult to distinguish between enhancement, restoration, rehabilitation, and re-establishment. Two commenters suggested that this definition should not be limited to aquatic resources, since ecological improvements could be made to uplands. Two commenters stated that the definition should limit enhancement to increases in function within the normal range of the particular type of ecosystem. Two commenters disagreed that enhancement does not result in an increase in aquatic resource area.

Enhancement differs from restoration, rehabilitation, and re-establishment because the objective of enhancement is usually to improve one or two functions, which may result in a decrease in the performance of other functions. Increasing those particular functions does not change the amount of area occupied by the aquatic resource. In contrast, re-establishment and rehabilitation (which are forms of restoration) are intended to return most, if not all, natural and/or historic functions to a former or degraded aquatic resource. We acknowledge that ecological functions of uplands can be

augmented through enhancement activities, but the scope of this rule is focused on aquatic resources. Enhancement activities are likely to result in limited changes in functional performance, because of inherent limits to functional capacity at a particular compensatory mitigation project site. If a compensatory mitigation activity results in an increase in aquatic resource area, in addition to increases in one or more aquatic resource functions, then it would probably be more appropriately classified as restoration. However, there may be cases where an increase in aquatic resource area is considered to be an adverse effect (e.g., impoundment of a forested wetland and adjacent uplands that kills the trees and changes habitat types). While enhancement does not result in a gain in aquatic resource area for purposes of tracking “not net loss” of wetlands, this does not mean that it cannot be used to compensate for a loss in resource area at the impact site. The district engineer will determine on a case-by-case basis the appropriate type and amount of mitigation to compensate for permitted impacts.

Establishment (creation). One commenter said that establishment should not be used in areas with poor hydrology. Two commenters stated that this definition should not be limited to aquatic resources, since ecological improvement can be made to uplands. One commenter recommended using the term “creation” instead of “establishment” because the term “establishment” does not convey the difficulties and risks associated with wetland creation. Another commenter said that deepwater sites are regulated waters and filling those waters to make a wetland is conversion, not establishment (creation).

District engineers will evaluate proposed establishment (creation) projects to determine if there is appropriate hydrology to support the desired aquatic resource. As discussed above, we acknowledge that ecological functions of uplands can be enhanced, but that is outside the scope of this rule. The term “establishment” is used in this rule, to be consistent with the terminology developed by the White House Wetlands Working Group (WHWWG) in 2000 to track wetland gains and losses. The WHWWG terminology continues to be used for wetland reporting, such as the Council on Environmental Quality’s reports on implementation of the President’s wetlands goals. We acknowledge that deepwater sites are usually considered to be waters of the United States and we

have struck the phrase “or deepwater” from this definition.

Fulfillment of advance credit sales of an in-lieu fee program. This definition was developed for use in the regulations governing in-lieu fee programs. The fulfillment of advance credits from in-lieu fee programs is accomplished when an approved mitigation plan for an in-lieu fee project is implemented by the in-lieu fee program sponsor. Each approved mitigation plan for an in-lieu fee project will have a credit release schedule. As each milestone of the credit release schedule is achieved, a number of credits will be produced. The number of credits produced will fulfill that sponsor’s obligations for that same number of advance credits. Only after all previously sold advance credits in a service area have been fulfilled can additional released credits from the project be sold. As advance credits within a service area are fulfilled through the approved release of credits for an in-lieu fee project, an equal number of new advance credits in that service area become available to be provided or transferred (sold) to permittees.

Functional capacity. There were no comments received on the proposed definition. This definition is adopted as proposed.

Functions. A few commenters supported the proposed definition. Many commenters recommended that the agencies provide clarification to this definition. Several commenters said that this definition should either identify which functions are to be measured or define standard protocols for functional assessment methods. One commenter suggested that the assessed functions should include primary and secondary production, nutrient uptake and transformation, nutrient and organic matter input, storage, and export, and organic matter decomposition rates. Another commenter said that the definition should apply only to wetlands, not streams.

District engineers will determine appropriate functional assessments to use for particular permitting situations. We do not believe it is necessary to specify the type of functions provided by aquatic resources, since this definition is intended to have general applicability. We have removed the phrase “aquatic resources and other” from this definition, since the term “functions” applies to physical, chemical, and biological processes that occur in any ecosystem. Even though the focus of the Corps Regulatory Program is on functions provided by aquatic resources, we believe this definition should be based on the

general concept of what an ecosystem function is.

Impact. Two commenters said that the proposed rule incorrectly assumes that all impacts are adverse, and that the definition should recognize that some impacts may be beneficial.

We acknowledge that not all impacts authorized by DA permits are adverse, but the focus of this rule is on providing compensatory mitigation for losses of waters of the United States. Activities authorized by DA permits that benefit aquatic resources do not generally require compensatory mitigation. When determining the compensatory mitigation requirements for a particular permit, district engineers should consider environmentally beneficial activities that are provided by components of the overall project. In cases where environmentally beneficial activities or mitigation measures related to the aquatic environment are incorporated into the overall project, a smaller amount of compensatory mitigation may be required to offset the authorized adverse impacts to waters of the United States.

In-kind. Several commenters said that the proposed definition is too vague. Two of these commenters stated that in-kind compensation should be structurally and functionally similar. One commenter requested that the definition clarify the difference between “functionally similar” and “structurally similar”. Two commenters suggested that the final rule adopt the current definition of in-kind mitigation, which refers to specific ecological types of wetlands.

We have changed the phrase “and/or” to “and” to define in-kind mitigation as being of a similar structural and functional type as the impacted resource. The modification of this definition will also help clarify that in-kind mitigation should provide similar types of structure and functions as the impacted resource, while accommodating high quality compensatory mitigation projects. In-kind mitigation projects should result in resource structure and functional capacity that are comparable to reference aquatic resources. In other words, in-kind mitigation should not consist of replacing a degraded aquatic resource with a degraded compensation resource. An in-kind compensatory mitigation project should result in a high quality aquatic resource. Thus, a mitigation project that was the same class of wetlands as the impacted resource, but with greater species diversity and habitat quality, would be considered appropriate in-kind mitigation.

In-lieu fee program. Many commenters said that the rule should define the term “in-lieu fee program.” Several commenters stated that such a definition is necessary to clarify which programs would be subject to new regulations governing in-lieu fee programs.

We have added a definition of this term to the final rule. It is parallel to the definition of “mitigation bank” while recognizing basic differences between mitigation banks and in-lieu fee programs. This definition discusses how an in-lieu fee program is similar to a mitigation bank, but it also clarifies that the rules governing the operation and use of in-lieu fee programs differ from those that govern mitigation banks.

In-lieu fee program instrument. We have added a definition of this term that is parallel to the definition of “mitigation banking instrument.”

Instrument. We are adding this new definition to clarify that the use of the generic term “instrument” in this final rule may refer to either a mitigation banking instrument or an in-lieu fee program instrument.

Interagency Review Team. One commenter suggested modifying this definition to clarify that an Interagency Review Team (IRT) can review documents for more than one mitigation bank. Another commenter said that the term “mitigation bank review team” should be used instead since in-lieu fee programs would be phased out under the proposed rule.

We do not believe it is necessary to change this definition to state that an IRT can review more than one proposed mitigation bank at a time. A different IRT may be established for each proposed mitigation bank or in-lieu fee program, or the same IRT may be involved in all proposed mitigation banks or in-lieu fee programs in an area. Since this final rule provides for both mitigation banks and in-lieu fee programs, it would be inappropriate to revert to using “mitigation bank review team.”

Mitigation bank. Three commenters recommended using the word “aquatic” in place of “similar” to clarify that the district engineer can require out-of-kind compensatory mitigation. Two commenters said that this definition should acknowledge that ecological improvements to uplands may be provided through a mitigation bank. One commenter stated that this definition should include language to reflect the fact that a mitigation bank cannot be used to offset impacts to aquatic resources unless certain performance standards have been met.

We have modified the first sentence of this definition by removing the word “aquatic” and adding examples of resource types that could be used as compensatory mitigation for impacts authorized by DA permits: wetlands, streams, riparian areas. This change is consistent with the practice of allowing out-of-kind compensation.

Compensatory mitigation may be provided through the establishment and maintenance of non-wetland riparian areas, which are not aquatic resources. The changes to the first sentence also allow recognition that upland areas may provide important ecological functions within a mitigation bank, and compensatory mitigation credit can be provided by those functions. We do not believe it would be accurate to state in this definition that performance standards must be met before a mitigation bank may be used to provide compensatory mitigation for authorized impacts to aquatic resources. When a mitigation bank is approved, and certain administrative activities are accomplished, a limited number of credits may be released which can be sold or transferred to permittees to fulfill their compensatory mitigation requirements.

Mitigation banking instrument. One commenter suggested modifying this definition to allow federal facility management plans, integrated natural resource management plans, or other acceptable documentation to be used as mitigation banking instruments.

Federal facility management plans, integrated natural resource management plans, and similar documents are more appropriately considered as site protection instruments, not mitigation banking instruments. A mitigation banking instrument governs the establishment and operation of a mitigation bank, which involves more issues than how the site will be managed.

Off-site. Many commenters requested a more explicit definition of this term. Several commenters said that the term “near” is subjective and should be more clearly defined. One commenter suggested using “hydrologically connected” instead of “near.” Two commenters expressed support for the flexibility provided by the use of the term “or near” in this definition. One commenter said that the term “parcel” should be defined in measurable units, to establish reasonable distances and areas for parcels. Another commenter suggested that the agencies should consider loosening the definition of off-site mitigation instead of allowing for more opportunities for out-of-kind mitigation.

We have removed the phrase “or near” to simplify this definition and to remove ambiguity. Off-site compensatory mitigation is located on a parcel of land other than the parcel containing the impact site or a parcel contiguous to the impact site. The revised definition does not establish minimum distances for a compensatory mitigation project to be considered off-site. The use of in-kind mitigation versus out-of-kind mitigation is more appropriately addressed by district engineers on a case-by-case basis in response to project-specific circumstances, instead of modifying this definition.

On-site. Many commenters requested a more explicit definition of this term. Several commenters said that the term “near” should be more clearly defined because it is subjective. One commenter stated that the term “near” should be replaced with “hydrologically connected.” Some commenters expressed support for the flexibility provided by the use of the term “near” in this definition. Two commenters said that the term “parcel” should be defined more clearly.

For the same reasons as provided in the preamble discussion of the changes to the definition of “off-site,” we have modified the definition of “on-site” by removing the phrase “or near.” These changes will help ensure that these two definitions complement each other.

Out-of-kind. Two commenters said that the word “or” should replace the phrase “and/or” in this definition, to state that out-of-kind mitigation should be structurally or functionally similar. One commenter remarked that this definition should provide clarification on what are accepted forms of out-of-kind mitigation. Two commenters suggested that this definition refer to specific ecological types of wetlands.

We have removed the phrase “and/or” and replaced it with the word “and” since out-of-kind mitigation differs from the resources impacted by the authorized work in both structure and function. Providing clarification on accepted forms of out-of-kind mitigation is beyond the scope of this definition. Appropriate out-of-kind mitigation will be determined by a district engineer on a case-by-case basis in response to an application for a DA permit. There are a number of classification systems for the various ecological types of aquatic resources. For the purposes of a regulatory definition that applies to a wide variety of aquatic resources, it would not be appropriate to modify this definition to refer to a particular classification system.

Performance standards. One commenter requested that the agencies expand this definition to explain, in greater detail, what performance standards are.

We do not believe it would be appropriate to provide greater detail regarding performance standards in this definition. Performance standards will vary by aquatic resource type, and those standards are also likely to vary among geographic regions. Performance standards are also dependent on the techniques used to measure how well a compensatory mitigation project is meeting its objectives. General criteria for establishing appropriate ecological performance standards are provided in § 332.5 [§ 230.95].

Permittee-responsible mitigation. There were no comments on this proposed definition. This definition is adopted as proposed.

Preservation. Some commenters said that this definition should be clearer, while other commenters stated that the proposed definition is adequate. Two commenters recommended modifying this definition to explicitly state that the preserved site will be permanently protected through appropriate real estate or legal instruments. One of these commenters noted that making such a change would avoid passive mitigation that results in little or no mitigation benefits. Two commenters said that preservation should not be limited to aquatic resources, but should also include ecological improvements in uplands when appropriate. One commenter suggested revising this definition to acknowledge gains in aquatic resource functions, services, and values.

The protection of a compensatory mitigation project site is more appropriately addressed through the rule provisions for site protection in § 332.7(a) [§ 230.97(a)]. This definition merely explains what preservation is, in the context of compensatory mitigation for DA permits. As part of an overall compensatory mitigation project, uplands such as non-wetland riparian areas may be included with preserved aquatic resources, if they help protect or sustain those aquatic resources. Although preservation helps sustain the functions and services provided by the preserved aquatic resources, by preventing direct impacts through land use changes, there is no gain in acreage. There may be a "passive" gain in functions and services over the long-term, if the preservation activity serves to remove or reduce stressors on the resource, however the main purpose of preservation is to prevent a future loss of resources, not to provide a gain. For

this reason, higher compensation ratios are generally required.

Release of credits. This definition has been added to describe actions where the district engineer, in consultation with the IRT, determines that credits associated with an approved mitigation plan for a mitigation bank are available for sale, transfer, or debit, or in the case of an in-lieu fee program, for fulfillment of advance credit sales. The credit release schedule for an approved mitigation bank or in-lieu fee project plan will be used to determine the number and resource type of credits that are released, as long as appropriate milestones specified in that schedule are achieved. A proportion of projected credits for a specific mitigation bank or in-lieu fee project may be released upon approval of the mitigation plan.

Re-establishment. Three commenters said that this definition should be deleted from this rule. One commenter found this definition useful, while others remarked that this definition is unclear and difficult to distinguish from "restoration" and "enhancement." Two other commenters recommended expanding this definition to include ecological improvements in uplands, instead of limiting it to aquatic resources.

Re-establishment is a form of restoration, where the functions are returned to the site where an aquatic resource previously existed. The other form of restoration is rehabilitation, which results in an improvement in most, if not all, aquatic resource functions at a degraded site. Re-establishment differs from enhancement because enhancement is the augmentation of certain functions in an existing aquatic resource. It is not appropriate to address ecological improvements to uplands in this definition, since it is focused on aquatic resource functions. Ecological improvements to uplands that are conducted as part of a compensatory mitigation project can be considered by the district engineer when determining the amount of credits provided by that compensatory mitigation project.

Reference aquatic resources. Three commenters said that the proposed definition contradicts extensive scientific literature that describes the use of reference conditions in ecological assessment. These commenters stated that the range of variability encompassed by anthropogenic disturbances should not be included in this definition. One commenter added that the term "reference condition" is used to describe aquatic systems that are stable and highly functional, and restoration projects should use reference

streams and wetlands as models to establish objectives. Another commenter recommended modifying this definition to describe the use of reference sites.

We have revised this definition to make it consistent with its current application in ecological assessment. Reference aquatic resources represent the full range of variability exhibited by a regional class of aquatic resources. That variability is due to both natural processes and anthropogenic disturbances. The term "reference standard" is used for the subset of reference aquatic resources that are the least disturbed and exhibit the highest levels of functions. Aquatic resources are not stable; instead, they are dynamic ecosystems that change over time. For the purposes of compensatory mitigation for DA permits, reference sites are used to help establish realistic objectives for compensatory mitigation projects, but these sites have other uses as well.

Rehabilitation. Many commenters said that the proposed definition is unclear. One commenter recommended eliminating this definition and another commenter stated that the term "enhancement" should be used instead. One commenter supported the proposed definition. Two commenters suggested that this definition should not be limited to aquatic resources, but should also include ecological improvements to uplands where applicable. One commenter recommended modifying the second sentence of this definition to read: "Restoration of an aquatic resource can result in an increase in function with or without an increase in size."

Rehabilitation differs from enhancement in that rehabilitation is intended to result in a general improvement in the suite of the functions performed by a degraded aquatic resource. In contrast, enhancement activities focus on increasing one or two functions, rather than all the functions being performed by an existing aquatic resource. For the purposes of this rule, ecological improvements to uplands are more appropriately addressed through the crediting of compensatory mitigation projects. We do not believe it is necessary to add the suggested sentence to this definition, since rehabilitation does not include re-establishment, which is the other type of restoration. The lack of gain in aquatic resource area is already addressed by the last sentence of the definition of "rehabilitation." We note that, while rehabilitation does not result in a gain in aquatic resource area for purposes of tracking "not net loss" of wetlands, this does not mean that it cannot be used to compensate for a loss

in resource area at the impact site. The district engineer will determine on a case-by-case basis the appropriate type and amount of mitigation to compensate for permitted impacts.

Restoration. Several commenters requested clarification of the proposed definition, and one commenter said that the definition should explain how restoration differs from enhancement. One commenter said that rehabilitation should not be considered as a form of restoration because rehabilitation does not result in an increase in wetland acreage, even though it improves wetland functions and/or values. Two commenters stated that this definition should not be limited to aquatic resources, so it should also include ecological improvements to uplands when appropriate.

Restoration differs from enhancement in that it results in either the re-establishment of an aquatic resource or the rehabilitation of a suite of functions at a degraded aquatic resource. In contrast, enhancement activities focus on the improvement of a subset of specific functions of an aquatic resource. Rehabilitation results in a general improvement in the amount of functions performed by aquatic resources, and is considered to be a form of restoration. As stated above, ecological improvements to uplands are more appropriately addressed through crediting of compensatory mitigation projects.

Riparian areas. One commenter suggested defining this term more narrowly, to specify the type of vegetation that characterizes riparian areas. One commenter recommended modifying this definition to limit it to open waters, since wetlands are also considered to be waterbodies.

We have modified the first sentence of this definition to clarify that riparian areas are lands adjacent to streams, rivers, lakes, and marine-estuarine shorelines. To simplify this definition, we have also removed the second sentence of the proposed definition.

Service area. There were no comments on this proposed definition. This definition is adopted as proposed.

Services. Several commenters said that the proposed definition of this term is unclear and too subjective. According to one commenter, using a subjective measure such as services to assess mitigation success will hinder the government's administration of the program. In addition, it will create compliance problems for industry, because they will not be able to effectively plan future activities as a result of this uncertain, subjective measure. Two commenters said that the

definitions of services and values should be combined. Other commenters recommended removing both terms from the final rule. One commenter stated that the reference to aquatic resources should be deleted because services are provided by all types of ecosystems, not just aquatic ecosystems.

This definition has been simplified by deleting the phrase "aquatic resource and other" since services may be provided by any type of ecosystem, including non-aquatic ecosystems. The concept of ecosystem services is important for considering where compensatory mitigation projects should be located. The relative locations of compensatory mitigation projects in the landscape helps address certain public interest factors, such as water quality, flood hazards, and fish and wildlife protection.

Sponsor. One commenter suggested that this definition should include an entity responsible for establishing and operating a mitigation bank or in-lieu fee program.

We have changed this definition to clarify that the sponsor is responsible for establishing, and in most cases operating, a mitigation bank or in-lieu fee program. There may be cases where sponsor turns over the long-term management (and ownership) of the mitigation bank site or in-lieu fee project site to another entity, so the word "operating" is modified by the phrase "in most circumstances" to reflect those situations.

Standard permit. There were no comments received on the proposed definition. It is adopted as proposed.

Temporal loss. We have added a definition of temporal loss which clarifies that temporal loss is the time lag between the loss of aquatic resource functions caused by the permitted impacts and the replacement of aquatic resource functions at the compensatory mitigation site. Temporal loss is one factor that must be considered in determining compensation ratios. The definition also provides that the district engineer may determine that compensation for temporal loss is not necessary when a mitigation project is initiated prior to or concurrent with the permitted impacts, except for resources with long development times (e.g., forested wetlands). This is intended to provide an additional incentive for timely mitigation.

Values. Two commenters said that the definitions of services and values should be combined. Several commenters said that the proposed definition of this term is unclear and too subjective, and others indicated that this definition should be deleted. One

commenter stated that using value as a measure of mitigation success reduces the predictability and regulatory certainty needed for industry and government to operate efficiently.

We have deleted this definition, since the term "services" is the current term being used to signify the importance of ecosystem functions to human populations. The use of the term "values" in the Regulatory Program during the past few decades has been similar to the way "services" is used today in most of the academic environmental literature, as well as policy documents. The use of the term "services" instead of "values" will provide a more objective means of assessing how impacted aquatic resources and compensatory mitigation projects relate to people.

In addition, ecosystem services can be more easily described than values. They are usually simply presented in qualitative terms as the benefits that are being provided to people in the watershed or other area of interest. The term "value" can have different meanings (e.g., monetary versus non-monetary values; landowner versus societal values). The valuation of aquatic resources and their functions is a complicated issue, and one that is unnecessary to resolve for this rule. Use of the term "services" will assist in program implementation, since agencies and stakeholders are more likely to reach a common understanding through descriptions of the ecosystem services being provided by a particular site.

Watershed. Many commenters recommend adding a definition of "watershed" to the rule. One commenter said that the definition should recognize that watersheds vary from region to region. On the other hand, another commenter stated that the definition should be interpreted and applied in a consistent manner regardless of the geographic location of the compensatory mitigation project. This commenter also suggested that the rule specifically identify the watersheds that are eligible for use as locations for compensatory mitigation projects.

We have adopted a definition for this term, based on the definition provided in EPA's Watershed Plan Handbook, which was published in December 2006. District engineers will determine appropriate watershed scales for compensatory mitigation projects, including services areas for mitigation banks and in-lieu fee programs. We do not believe it would be appropriate to identify specific watersheds in which compensatory mitigation can be conducted. In general, compensatory mitigation projects should be located in

the same watershed as the permitted impacts, at a scale determined to be appropriate by the district engineer based on the factors specified in the rule.

Watershed approach. Two commenters asked that the final rule include a definition of this term. We have added a definition of “watershed approach” that is based on concepts in this final rule.

Watershed plan. Several commenters said that there should be opportunities for local watershed groups or non-governmental organizations to develop watershed plans. Two commenters stated that this definition should be limited to plans with a specific goal of aquatic resource restoration and preservation to ensure that the watershed plan goals are consistent with federal, tribal, and state regulations. One commenter said that watershed plans should not include priority sites for aquatic resource restoration. On the other hand, another commenter stated that a watershed plan should identify priority sites for restoration and should also have a goal of ecosystem restoration. One commenter said that the proposed rule implies that any available watershed plan should be used to identify compensatory mitigation sites. This commenter stated that such an approach would be inappropriate unless the watershed plan is developed for the purpose of compensatory mitigation, including the protection of both natural and built environments.

We have modified this definition to include appropriate non-governmental organizations, such as local watershed groups, as potential developers of watershed plans. We have also changed this definition to clarify that, for the purposes of this rule, watershed plans are developed for the specific goal of aquatic resource restoration, establishment, enhancement, and preservation. This clarification is necessary because there are many different types of watershed plans, and those plans may be intended to fulfill a wide variety of purposes. We believe it is appropriate for watershed plans to identify priority sites for compensatory mitigation projects. In addition, we have replaced the word “ecological” with the phrase “aquatic resource” to clarify that a watershed plan appropriate for use in implementing this rule should address aquatic resource conditions in a watershed. In the last sentence of this definition, we have replaced the phrase “watershed management plans” with “wetland management plans” to avoid a circular definition. As discussed below in § 332.3(c) [§ 230.93(c)], district engineers will determine whether a

particular watershed plan is appropriate for use in a watershed approach to compensatory mitigation.

Several commenters said that key terms in the proposed rule are either undefined or vaguely defined. A number of commenters suggested additional terms to define in the final rule. These terms include “larger projects” and “smaller projects.” We do not believe it would be appropriate to provide specific definitions to distinguish between large and small projects. The difference between large and small is subjective, and should be at the discretion of the district engineer after considering site-specific and project-specific criteria. Other requested definitions are discussed in more detail below.

One commenter requested a definition of the term “aquatic resource function” since it is used repeatedly throughout the rule. We have provided a general definition of the term “functions” in this section, which applies to aquatic resources as well as other types of ecological resources.

Two commenters asked for a definition of “aquatic resource type” since it is used throughout the rule. Three commenters said that the final rule should define “aquatic resources.” We do not believe it is necessary to define these terms in this rule. Different aquatic resource types may be distinguished through a variety of classification systems. What constitutes an aquatic resource is also dependent on the classification system used. Different regions may have different thresholds for making distinctions among aquatic, mesic, and xeric resources.

Two commenters said that the rule should include a definition of “successful mitigation.” One commenter proposed a set of criteria to be used to determine if the mitigation is successful.

Successful compensatory mitigation projects will be identified by evaluating those projects against their ecological performance standards. Therefore, successful mitigation will be determined on a case-by-case basis.

Two commenters asked for a definition of “mitigation type.” We have defined mitigation types in the final rule: restoration (which includes re-establishment and rehabilitation), establishment, enhancement, and preservation. We have also defined the terms “in-kind” and “out-of-kind.”

One commenter said that the rule should have a definition of “complete prospectus.” A complete prospectus contains the items listed at § 332.8(d)(2) [§ 230.98(d)(2)].

One commenter requested a definition of “umbrella mitigation banking instrument.” We do not believe it is necessary to define this term, because it is described at § 332.8(h) [§ 230.98(h)].

One commenter said that the final rule should include a definition of “unavoidable impacts.” It is not necessary to define this term, since unavoidable impacts are identified on a case-by-case basis when a district engineer evaluates a permit application.

One commenter stated that this rule should provide a definition of “conversion” as it relates to man-made changes to aquatic resources. This commenter also requested that the final rule contain guidelines to determine when a conversion would be ecologically appropriate.

We do not believe it is necessary to define the term “conversion” since it is commonly understood to refer to an action that changes an area from one resource type to another resource type. Establishing guidelines for evaluating conversion is beyond the scope of this rule. For proposed changes to aquatic resources that require DA authorization, district engineers will determine on a case-by-case basis whether those activities constitute conversions and whether proposed conversions are in compliance with applicable regulations.

One commenter suggested adding a definition of “aggregate mitigation site,” to account for cases where a permittee desires to provide a single compensatory mitigation project for multiple impacts to waters of the United States. We do not believe it is necessary to define this term. District engineers can consider compensatory mitigation that has been provided in advance by permittees when evaluating compensatory mitigation options (see 33 CFR 332.3(b) and 40 CFR 230.92(b)).

One commenter said that the rule should include a definition of “degraded.” It would not be appropriate to define this term, since it is subjective. Assessment methods can be used to determine whether a particular resource is degraded, based on a threshold chosen by the district engineer. Best professional judgment may also be used to identify degraded resources in situations where appropriate assessment methods are not available.

One commenter stated that the term “stream” should be defined. We do not believe it is necessary to define this term. District engineers can determine on a case-by-case basis whether a particular waterbody is a stream.

One commenter requested a definition of “ecoregion.” We do not believe it is necessary to define this term. There are a number of classification systems for

identifying ecoregions. Ecoregions may also be identified through local criteria. District engineers will use appropriate criteria if ecoregions are to be used to define service areas for mitigation banks or in-lieu fee programs.

*33 CFR 332.3 and 40 CFR 230.93
General Compensatory Mitigation
Requirements*

Three commenters suggested that paragraph (c) of this section should be put in front of paragraph (b) of this section. Two commenters proposed that the Corps automated information system used for compensatory mitigation should include a regional list of rare habitat types.

We do not agree that paragraph (c) of this section, which discusses the watershed approach, should be placed in front of paragraph (b), which presents criteria concerning the type and location of compensatory mitigation. As discussed below, paragraph (b) has a preference hierarchy that includes the watershed approach. Although mitigation banks and in-lieu fee projects should be strategically located in areas that support a watershed approach to compensatory mitigation, the preference hierarchy in paragraph (b) will be first considered when determining the compensatory mitigation required for a DA permit. If a mitigation bank or in-lieu fee program does not have the appropriate number and resource type of credits available, then permittee-responsible mitigation should be determined using the watershed approach described in paragraph (c) of this section. District engineers have the discretion to add appropriate data layers to the Corps automated information system to include information on rare habitat types, but it is not necessary to make that a requirement in this rule.

(a) *General considerations.* One commenter remarked that the proposed rule does not provide criteria, standards, or meaningful guidance to ensure that the district engineer will require mitigation that will protect water quality. Another commenter said that there should be sufficient flexibility in the final rule to support new approaches or strategies that meet the standards identified, but do not fall into one of the existing categories.

Water quality standards are more appropriately addressed through the water quality certification process under section 401 of the Clean Water Act. A district engineer can require water quality management measures as part of the overall compensatory mitigation package required for a particular DA permit. Even though this rule is focused on a watershed approach, it provides

flexibility for district engineers to use innovative approaches or strategies for determining more effective compensatory mitigation requirements that provide greater benefits for the aquatic environment. We have added to this section a provision that allows the district engineer, when evaluating compensatory mitigation options, to consider what would be environmentally preferable, taking into account the likelihood for ecological success and sustainability, the location of the compensation site relative to the impact site and their relative significance within the watershed, and the costs of the compensatory mitigation project.

One commenter stated that the economic cost of mitigation should not be a primary consideration when determining the amount, location, or type of compensatory mitigation required, and that reference to economic costs should be deleted from this section. Several commenters said that the district engineer should not be required to consider economic costs when assessing the success and sustainability of a mitigation project. Another commenter, however, recommended that the final rule require the district engineer to consider economic factors more comprehensively, including not only the economic cost of the compensatory mitigation, but also the full range of costs and benefits to society stemming from the loss of aquatic resources.

Economic costs are an important consideration when determining the practicability of a proposed compensatory mitigation project. In addition to economic costs, existing technology and logistics must also be considered. If a particular compensatory mitigation project is cost-prohibitive, then an alternative compensation project that is more practicable should be required. District engineers will also consider impacts to the public interest, including potential losses of aquatic resource functions and services, when evaluating permit applications and compensatory mitigation proposals, and determining appropriate and practicable compensatory mitigation requirements.

We have added § 332.3(a)(2) [§ 230.93(a)(2)] to provide clarification regarding the potential mechanisms for providing compensatory mitigation. It states that restoration should be the first option considered since the likelihood of success is greater. Restoration also helps reduce impacts to ecologically important uplands, such as mature forests, where compensatory mitigation activities may be proposed because of land availability. The 404(b)(1)

Guidelines prohibit discharges in areas where there may be other significant environmental consequences (see 40 CFR 230.10(a)).

Some commenters recommended that the rule allow compensatory mitigation projects on federal lands where state wildlife agencies lease management rights for fish and wildlife purposes. Others commenters suggested prohibiting compensatory mitigation projects on existing public conservation lands.

We have added § 332.3(a)(3) [§ 230.93(a)(3)], which was moved from § 332.8(a)(2) [§ 230.98(a)(2)] of the proposed rule. We have modified this paragraph to be generally applicable to all compensatory mitigation projects, not just mitigation banks. Compensatory mitigation projects may be located on federal lands, as long as those projects comply with the provisions of this part, including the site protection requirements in § 332.7(a)(4) [§ 230.97(a)(4)].

(b) *Type and location of compensatory mitigation.* Several commenters stated that the established order of preference in the proposed rule (i.e., mitigation bank credits; permittee-responsible mitigation in accordance with a watershed plan or watershed approach; on-site, in-kind permittee-responsible mitigation; and lastly, off-site, out-of-kind permittee-responsible mitigation) is too limiting and creates inefficiency. Many commenters stated that the proposed rule establishes a preference for mitigation banks, and some of these commenters argued that the preference for mitigation banks over in-lieu fee programs cannot be justified. One commenter suggested that this rule stipulate that mitigation banks should not necessarily represent a “first resort” to fulfilling mitigation requirements if there are on-site opportunities that are likely to provide greater ecological benefits. However, another commenter said that section 314 warrants a stronger preference for using approved mitigation banks.

We have substantially revised and reorganized this section of the final rule, and have provided flexibility for district engineers to make compensatory mitigation decisions based on what is environmentally preferable and is most likely to successfully provide the required compensatory mitigation. Sections 332.3(b)(2)–(6) [§ 230.93(b)(2)–(6)] present a preference hierarchy, which was developed through careful consideration of comments received in response to the proposed rule, as well as various studies on the different approaches for providing compensatory mitigation. The hierarchy is based on

administrative and environmental considerations, to reduce risk and uncertainty associated with compensatory mitigation projects, as well as temporal losses of aquatic resource functions and services. Reduction of risk and uncertainty associated with compensatory mitigation projects is achieved by favoring compensatory mitigation that is further along in the planning and approval process or will better support a watershed approach. Since there are time lags associated with all sources of compensatory mitigation (see the 2001 NRC Report), our focus is on reducing temporal losses to the extent practicable. Administrative considerations include the regulations governing mitigation banks, in-lieu fee programs, and permittee-responsible mitigation that are provided in this rule, as well as the timing of actions required for those sources of compensatory mitigation. Environmental considerations include the expected ecological benefits of third-party compensatory mitigation as well as independent studies that have shown that the ecological success of permittee-responsible mitigation is uneven. There have been few independent studies of the ecological success of mitigation banks and in-lieu fee programs, so we have no basis for establishing a preference based solely on third-party mitigation success.

Section 332.3(b)(1) [§ 230.93(b)(1)] discusses general principles for determining the appropriate type and location for compensatory mitigation projects. Some of these principles were taken from § 332.3(b)(4) [§ 230.93(b)(4)] of the proposed rule, which discussed the use of off-site and out-of-kind compensation. Since these basic principles should be applied earlier in the selection process, we have moved those provisions to § 332.3(a)(1) [§ 230.93(a)(1)] of the final rule. Paragraph (b)(1) of this section also states that the compensatory mitigation options provided in paragraphs (b)(2) through (b)(6) should be applied in the order they are given, to make it clear that this is a hierarchy from highest to lowest preference. It is important to understand that this is a preference hierarchy that does not override a district engineer's judgment as to what constitutes the most appropriate and practicable compensatory mitigation based on consideration of case-specific circumstances. In this paragraph, we have added a provision to address compensating for impacts to marine resources. This provision states that compensatory mitigation project sites

for marine resources should be located in the same marine ecological system as the impact site, citing reef complexes and littoral drift cells as examples of marine ecological systems. We have also added provisions indicating that compensation for impacts to aquatic resources in coastal watersheds should be located in a coastal watershed where practicable, and that mitigation projects should not be located where they will increase risks to aviation by attracting wildlife to areas where aircraft-wildlife strikes may occur (e.g., near airports).

Section 332.3(b)(2) [§ 230.93(b)(2)] establishes a preference for the use of mitigation bank credits if the mitigation bank has the appropriate number and resource type of credits available. This preference is based on the requirements in this rule: before credits can be sold or transferred to permittees the sponsor must have an approved instrument, as well as an approved mitigation plan and other assurances in place. Those other assurances are specified in the mitigation banking instrument and usually include securing the mitigation bank site, establishing financial assurances, and finalizing the appropriate site protection mechanisms. Because of these requirements for mitigation banks, there is generally less risk and uncertainty (and less temporal loss) than there is with in-lieu fee programs and permittee-responsibility. Because of the credit release schedule required for mitigation banks, there is some degree of demonstrated success in providing the compensatory mitigation. In addition, the planning and resources involved in developing and implementing a mitigation bank help provide greater assurance that the compensatory mitigation project will provide environmental benefits. However, district engineers can apply these considerations to other sources of compensatory mitigation to override the preference for mitigation bank credits. For example, the district engineer may authorize the use of released credits from an in-lieu fee program since the requirements for release of these credits are comparable to the requirements for release of credits from an approved mitigation bank. In a situation where the permittee has proposed to restore an outstanding resource, and has provided sufficient scientific and technical analysis to demonstrate that such a project will be successful, the district engineer may authorize the use of that compensatory mitigation project instead of mitigation bank credits.

If the permitted impacts are not in the service area of an approved mitigation bank, or are in the service area of an approved mitigation bank, but that

mitigation bank does not have the appropriate number and resource type of credits available, and an approved in-lieu fee program does not have appropriate released credits available, § 332.3(b)(3) [§ 230.93(b)(3)] establishes a preference for in-lieu fee program credits. In-lieu fee programs fall into the next level of the hierarchy because of the levels of planning and review they are required to perform as a result of this rule. In-lieu fee programs are required to develop a compensation planning framework that supports a watershed approach (see § 332.8(c) [§ 230.98(c)]). In-lieu fee programs can also bring substantial expertise to aquatic resource restoration and protection activities, and many in-lieu fee program sponsors are conservation organizations with an interest in long-term management of aquatic resources. This preference may be overridden by a high quality permittee-responsible mitigation project or one that is likely to meet performance standards before the in-lieu fee program sponsor fulfills his or her obligation for advance credits.

If an approved mitigation bank or in-lieu fee program cannot be used to provide the required compensatory mitigation, § 332.3(b)(4) establishes a preference for permittee-responsible mitigation conducted under a watershed approach. In cases where a watershed approach is not practicable for permittee-responsible mitigation, under § 332.3(b)(5) [§ 230.93(b)(5)] the district engineer should consider options for on-site and/or in-kind compensation to fulfill the compensatory mitigation requirements. The last option under the preference hierarchy is for permittee-responsible mitigation through off-site and/or out-of-kind compensatory mitigation (see § 332.3(b)(6) [§ 230.93(b)(6)]).

One commenter said the proposed rule seems excessively rigid, and the limited funds available to public agencies should be used to implement mitigation where it will be most cost-effective. One commenter said that wetland establishment should not be an acceptable form of wetland compensation, as it is too uncertain and has a bad track record. One commenter recommended that this section be re-organized to explain how the watershed approach should be applied to each mitigation location option.

Cost considerations may be used to evaluate whether the proposed compensatory mitigation requirement for a DA permit is practicable. However, the ecological success of the compensatory mitigation project and its effectiveness at offsetting the permitted impacts are also important

considerations. We recognize that wetland establishment may not be successful in many situations, so we have established a preference for restoration in § 332.3(a)(2) [§ 230.93(a)(2)]. The watershed approach is discussed in § 332.3(c) [§ 230.93(c)]. District engineers will apply the watershed approach to the extent practicable when considering compensatory mitigation options, as well as during the review and approval of instruments for mitigation banks and in-lieu fee programs.

The final rule states that compensatory mitigation decisions will be based on what is environmentally preferable, which, in a particular situation, might be on-site compensation. As discussed above, it provides a hierarchy of preferences for satisfying compensatory mitigation requirements for DA permits, starting with mitigation bank credits.

Many commenters supported eliminating the preference for in-kind and on-site compensatory mitigation. Most of these commenters said that compensatory mitigation requirements should be based on ecological criteria, as well as the likelihood of offsetting the permitted impacts, not on a preference for on-site mitigation. Some commenters noted that rigid rules favoring on-site compensation often yield small, poorly functioning compensatory mitigation projects. One commenter noted that federal agencies that review permit applications are often restricted from accepting more environmentally meaningful compensation proposals because of the preference for in-kind, on-site compensatory mitigation projects. Several other commenters, however, recommended that the final rule express a preference for on-site mitigation. Two commenters said that compensatory mitigation wetlands should be located as close as possible to the impacted wetlands, and should be the same wetland type. A few commenters suggested that on-site, in-kind mitigation should be preferred until substantive watershed-level plans are developed to guide compensatory mitigation decisions. Several commenters stated that off-site mitigation should only be considered if other forms of mitigation are likely to be ineffective, and several commenters requested clarification of the circumstances under which off-site or out-of-kind mitigation can be provided. A few commenters stated that district engineers needed to be provided direction for considering off-site mitigation.

We believe that compensatory mitigation requirements should be

guided by ecological and practicability considerations, to help ensure that the required compensation successfully fulfills its objective, to offset aquatic resource functions lost as a result of the permitted impacts. The watershed approach, as well as the other considerations provided in § 332.3 [§ 230.93] will help meet these objectives. Because of its poor record of ecological success, a preference for on-site mitigation cannot be justified. The final rule is supported by the findings of the 2001 NRC Report, which indicated that an automatic preference for on-site, in-kind compensatory mitigation is inconsistent with a watershed approach, since there are circumstances in which on-site or in-kind mitigation is neither practicable nor environmentally preferable. District engineers will use available tools and information to guide their decision-making regarding where compensatory mitigation projects should be located. As additional data are gathered, and new tools are developed, district engineers will use those items as appropriate.

A number of commenters agreed that it may be appropriate to replace certain aquatic resource functions on-site and other functions off-site and that this flexibility is a positive aspect of the rule. However, several commenters suggested that the rule should not allow a combination of off-site and on-site mitigation, as it is overly burdensome and would dilute the overall effectiveness of compensation. One commenter said that compensating for functions at different locations may create situations where each site is not fully functional. Two commenters stated that the rule should allow a single, permittee-sponsored mitigation project to compensate for the aquatic impacts of a linear facility, such as a transmission line, which may affect more than one watershed.

We believe that using a combination of on-site and off-site compensatory mitigation is often necessary or preferable to successfully offset the functions lost at the impact site. This is an important facet of a watershed approach to compensatory mitigation. To be effective, compensatory mitigation projects must be located in appropriate landscape settings. The off-site aquatic habitat restoration or establishment activities should provide the suite of functions performed by that habitat. The on-site mitigation will likely focus on effectively replacing specific functions, such as water quality or water quantity functions. Therefore, from a watershed perspective, there will likely be a net increase in aquatic

resource functions. In general, off-site compensatory mitigation will be located in the same watershed as the impact site. District engineers also have flexibility under this rule to allow compensation for linear projects to be conducted on one or multiple sites, based on environmentally preferable and practicable compensatory mitigation options.

A number of commenters expressed concern that an emphasis on off-site compensatory mitigation can lead to the transfer of wetland ecosystem services from urban to rural areas. Two commenters argued that unless the rule requires applicants to include a description of service values and benefits at the impact site and the compensatory mitigation project site, rural areas will benefit and urban populations will incur the costs. One commenter stated that recent and past studies indicate that the location of mitigation banks is dictated primarily by land costs rather than by sound scientific watershed principles.

We recognize that aquatic resources in urban settings can provide important functions and services, and we believe it is important that urban areas not become devoid of aquatic resources simply because it is more difficult to successfully restore or establish aquatic habitat in developed areas. Compensatory mitigation required by district engineers will be located in areas where it is appropriate and practicable to conduct successful aquatic resource restoration, establishment, and enhancement activities. In some cases, this will result in compensatory mitigation for impacts in urban areas to be conducted in more remote locations; in other cases, it may be appropriate to replace certain aquatic resources in urban areas. Site selection is a primary consideration for compensatory mitigation projects and district engineers will evaluate proposed mitigation projects, including mitigation banks, using the watershed approach to ensure that they contribute to the functions and sustainability of aquatic resources within a watershed. As discussed above, the use of a combination of on-site and off-site compensatory mitigation can be effective in retaining aquatic resource functions and services in urban areas.

(c) Watershed approach to compensatory mitigation. Many commenters supported use of a watershed approach for compensatory mitigation. One commenter said that consideration of watershed functions is an orderly, incremental next step to move section 404 permitting towards a watershed-based perspective. One

commenter stated that an ecosystem approach will result in a comprehensive package that best fits the landscape and its needs. Several commenters noted that the use of a watershed approach would increase the flexibility for compensatory mitigation and ensure a project's sustainability. Four commenters encouraged the Corps to use its funding to develop a general and flexible framework for consideration of landscape or watershed needs, rather than formal watershed plans.

We have retained the watershed approach in the final rule, with modifications made in response to specific comments. The watershed approach retains many of the recommendations from the 2001 NRC Report. While the watershed approach provides flexibility for identifying an appropriate compensatory mitigation project, as well as its location in the watershed, a main objective of the watershed approach is to maintain and improve the quantity and quality of wetlands and other aquatic resources in watersheds through strategic selection of compensatory mitigation project sites. As experience is gained in the use of the watershed approach, Corps districts will use that experience to improve decision-making for compensatory mitigation requirements.

One commenter suggested that use of a watershed approach be encouraged, but not required, and a few commenters asserted that the term "watershed approach" is too ambiguous to be a mandatory requirement. Many commenters recommended that the agencies not require use of the watershed approach until there is consensus on how watersheds are defined and the development of planning tools. One commenter said that a state, district, or county cannot be compelled to establish a watershed approach. One commenter stated that the language in § 332.3(c)(3) [§ 230.93(c)(3)] suggests that watershed approach will be taken on a project-by-project basis and contradicts the entire idea of a watershed approach. This commenter added that watershed studies should not be project-specific.

The watershed approach described in the proposed rule is intended to be a general framework for better decision-making for compensatory mitigation requirements for DA permits. The rule language needs to be flexible, so that district engineers can adapt the general framework to more effectively address aquatic resource needs in their regions. We have added a definition of the term "watershed" to § 332.2 [§ 230.92], but the appropriate watershed scale to use for the watershed approach will vary by

region, as well as the particular aquatic resources under consideration. There are a number of planning tools available for use with a watershed approach, and more will be developed as this rule is implemented and further experience is gained from using a watershed perspective. As stated in § 332.3(c)(1) [§ 230.93(c)(1)], the watershed approach is to be used to the extent appropriate and practicable. There will be situations, such as compensatory mitigation requirements for small impacts, where it would not be cost-effective to utilize a watershed approach. Since using a watershed approach is not appropriate in areas without watershed boundaries, such as marine waters, we have added a provision (§ 332.3(c)(2)(v) [§ 230.93(c)(2)(v)]) to clarify that other types of spatial scales may be more appropriate in those areas. This rule does not require the development of watershed studies on a project-by-project basis.

Several commenters supported the idea of a watershed and/or ecosystem approach but said that watershed plans should be prepared before permitted impacts can occur. A few commenters stated that many existing watershed plans are not comprehensive. One commenter noted that it will be difficult to implement the watershed approach in a meaningful way in the majority of developing watersheds that are without watershed plans. Several commenters requested that the rule stipulate that only mitigation banks that conform to approved watershed plans shall be approved by the district engineer and the IRT. Several commenters stated that, in the absence of a watershed plan, a watershed approach will lead to inappropriate mitigation and the cumulative loss of wetland functions. These commenters also noted that the proposed rule did not provide an incentive to undertake real watershed planning, and recommended that the agencies develop criteria and standards for watershed plans that incorporate the recommendations of the National Research Council and the elements of watershed plans discussed in the rule.

As with the 2001 NRC Report, the watershed approach described in this final rule does not require a formal watershed plan. The watershed approach may be based on a structured consideration of watershed needs and how wetlands and other types of aquatic resources in specific locations will address those needs. We realize that in many areas, watershed plans appropriate for use in planning compensatory mitigation activities have not been developed. Although it would

be desirable to have watershed plans designed to more fully support a watershed approach, we believe that a watershed approach can be effectively implemented without watershed plans. Mitigation banks can support a watershed approach without using watershed plans. There are different types of watershed plans that could be developed for purposes other than aquatic resource restoration, establishment, enhancement, and/or preservation activities. For example, some watershed plans are conceived to guide development activities or the placement of storm water infrastructure. Therefore, we have modified § 332.3(c)(1) [§ 230.93(c)(1)] to state that the district engineer will determine whether a watershed plan is appropriate for use in the watershed approach for compensatory mitigation. The final rule does not provide disincentives to develop watershed plans. District engineers are encouraged to work with other government agencies and stakeholders to develop watershed plans to support decision-making in the Corps Regulatory Program, but we also recognize that the development of watershed plans is resource-intensive, and may not be feasible in many areas. Criteria and standards for developing watershed plans appropriate for use in the Corps Regulatory Program may be established at a later time.

Some commenters stated that it is unclear how the watershed approach will be implemented in the absence of a watershed plan. One commenter stated that most watershed management plans are relatively small in scope relative to an economically sustainable service area, and therefore using such plans can thwart regional water quality needs. Others argued that the government, not permit applicants, should develop watershed plans, because most applicants lack the time and resources needed to develop those plans. One commenter said that watershed plans vary considerably from region to region and are usually unable to support evaluations of compensatory mitigation needs. This commenter recommended that EPA and the Corps establish a certification process to assure the format and information content of watershed plans is sufficient to meet the intent of the proposed rule.

To implement a watershed approach in the absence of a watershed plan, district engineers will utilize the considerations specified in § 332.3(c)(2) [§ 230.93(c)(2)] and available information on watershed conditions and needs, as discussed in § 332.3(c)(3) [§ 230.93(c)(3)]. Although many of the watershed plans that have been

developed in the past focus on small watersheds, water quality considerations can be effectively addressed through a watershed approach without relying on watershed plans. Most watershed plans will be developed through collaboration among federal, tribal, state, and local government agencies, as well as non-governmental organizations, landowners, and various other stakeholders. This rule does not require the development of watershed plans by permit applicants. As discussed above, the district engineer will determine whether an existing watershed plan is appropriate for use in a watershed approach for compensatory mitigation. We do not believe it is necessary to establish a certification process for appropriate watershed plans.

Commenters requested clarification regarding watershed parameters, interstate watersheds, the effect the watershed approach will have on section 404 permitting, and the definitions of watershed and watershed approach. A few commenters cited the high cost of obtaining data for a watershed approach and the difficulties in developing watershed plans. Many commenters recommended additional considerations to be included in the watershed approach. These considerations include the following: (1) Potential wetland landscape function; (2) aquatic resources in an ecosystem context; (3) decisions regarding mitigation for aquatic resources that take into account the needs of the ecosystem as a whole, including mitigation priorities for other resources, such as endangered species; (4) interactions and habitat connectivity; (5) inventory of historic as well as existing aquatic resources and conditions; (6) social values; (7) provision of adequate and suitable on-site storm water management; (8) consideration of aquatic resource problems and risks, and specific opportunities for addressing those problems and risks; and (9) evaluation of functions of the current wetland landscape.

Appropriate watershed parameters for use in a watershed approach will be determined by district engineers for their regions of responsibility. District engineers may consult with other agencies and other interested parties to identify watershed parameters that should be used. The intended effect of implementing a watershed approach to compensatory mitigation is to improve the success and effectiveness of aquatic resource restoration, establishment, enhancement, and/or preservation required by DA permits, and to maintain and improve aquatic resource functions

and services within watersheds. The terms “watershed” and “watershed approach” have been defined at § 332.2 [§ 230.92]. If an appropriate watershed plan is not available, district engineers are to use a watershed approach based on analysis of available information (see § 332.3(c)(3)(i) [§ 230.93(c)(3)(i)]). Permit applicants are not required to incur substantial costs to provide information for the watershed approach. The nine considerations provided in the previous paragraph are already addressed through various provisions in this rule. For example, social values are considered as ecosystem services. We have added a sentence to § 332.3(c)(2)(iv) [§ 230.93(c)(2)(iv)] (§ 332.3(c)(2)(ii) [§ 230.93(c)(2)(ii)] in the proposed rule) to state that the identification and prioritization of resource needs should be as specific as possible, to enhance the use of the watershed approach. We have also added a provision to this section which states that a watershed approach may include on-site compensatory mitigation, off-site compensatory mitigation, or a combination of on-site and off-site compensatory mitigation (see § 332.3(c)(2)(iii) [§ 230.93(c)(2)(iii)]).

Many commenters did not believe that the rule should specify minimum information requirements for use of the watershed approach to compensatory mitigation site selection. Several commenters said that this would place an undue burden on the regulated community and the agencies, especially if the information is not available, and could potentially delay the issuance of permits or the implementation of mitigation plans. Others expressed concern that, because the minimum information mentioned in the preamble is not currently available in many areas, a requirement for such information would limit the use of a watershed approach. Some commenters argued that the rule should not rely on only the applicants to provide supporting data for a watershed approach. Several commenters supported the inclusion of minimal information requirements. One commenter noted that these requirements are necessary to establish a consistent and scientifically defensible method of using the watershed approach. One commenter suggested that the requirements be based on information generally known to be available for most watersheds. Other commenters argued that all projects regardless of size should be subject to the requirement for additional information.

We have revised § 332.3(c)(3) [§ 230.93(c)(3)] to clarify the information

that the district engineers should use as the basis for a watershed approach, and to identify potential sources for such information. While there is no bright line for the minimum amount of information needed to support a watershed approach, the final rule identifies information that is generally needed to implement a watershed approach effectively. That information will address watershed conditions and needs, and should include potential sites (as well as priority sites) for compensatory mitigation projects. We have indicated that appropriate information may be available from sources such as wetland maps, soil surveys, aerial photographs, local ecological reports, etc. In § 332.3(c)(3)(iii) [§ 230.93(c)(3)(iii)], we state that the level of information and analysis must be commensurate with the scope and scale of the proposed impacts that require a DA permit, as well as the functions lost as a result of those impacts. Larger projects will generally warrant greater investment in information gathering to ensure proper consideration of watershed factors in the selection of appropriate compensatory mitigation.

(d) Site selection. One commenter stated that the proposed site selection criteria are well-defined and appropriate. Another commenter said that the criteria were too broad. One commenter stated that the rule should require the district engineer to deny the use of compensatory mitigation project sites that are not ecologically suitable. Two commenters suggested that site selection criteria should consider species that should be present or have access to the compensatory mitigation project site. Another commenter noted that the proposed rule provides end goals of a site selection process but does not provide details concerning how these goals would be met. One commenter stated that requirements that further limit compensatory mitigation site selection would be overly burdensome. Two commenters expressed concern that mitigation banks would be prohibited near airports. One commenter recommended that the agencies discourage compensatory mitigation projects on public lands as these tend to result in a loss of wetlands accompanied only by some limited improvement in lands already set aside for conservation purposes.

This provision provides site criteria that district engineers must consider, to the extent practicable, to help determine whether a proposed compensatory mitigation project site will be suitable for successfully replacing lost aquatic resource functions. They are general

considerations, since it is impractical to provide a comprehensive list that accounts for different regions across the country. If a proposed compensatory mitigation project site is determined to be unsuitable, then other sites ought to be considered. Section 332.3(d)(1)(vi) [§ 230.93(d)(1)(vi)] includes consideration of habitats for species of interest. In some cases, selecting an appropriate compensatory mitigation project site will be an iterative process, so that the most suitable site for achieving as many objectives as possible can be found. The intent of § 332.3(d) [§ 230.93(d)] is to assist in site selection that will support ecologically successful and sustainable compensatory mitigation projects. As discussed in the preamble to the proposed rule, locating compensatory mitigation projects (including mitigation banks) near airports is likely to attract wildlife species and pose hazards to aviation. This does not mean that no compensatory mitigation projects can be located near any airport; it means that compatibility with existing facilities must be considered. We believe it is appropriate, in some instances, to site compensatory mitigation projects on public lands, where they are consistent with the use and management of the public land, and the credits are based solely on aquatic resource functions provided by the compensatory mitigation project, over and above those provided by public programs already planned or in place.

(e) Mitigation type. Many commenters recommended that the rule retain a preference for in-kind mitigation. Several commenters stated that out-of-kind mitigation does not address the specific functions, services, or values of the resource being impacted. Several commenters said that the current preference for on-site, in-kind mitigation should be continued until substantive watershed-level plans are developed to guide compensatory mitigation activities, and one commenter noted that the proposed rule appears to allow the district engineer to accept out-of-kind mitigation without determining if it serves the needs of the watershed. One commenter was concerned that the rule has loosened the definition of in-kind to allow more flexibility, which would lead to a more relaxed mitigation approach, and other commenters noted that a broad application of “out-of-kind” would allow the replacement of a wetland with a stream habitat or vice versa.

The final rule retains a preference for in-kind mitigation. As defined in § 332.2 [§ 230.92], the term “in-kind” refers to similar structural and functional types.

However, we would like to clarify that in-kind mitigation does not mean compensating for impacts to degraded aquatic resources by providing degraded compensatory mitigation projects. A compensatory mitigation project should result in high quality aquatic resources that provide optimum functions within its landscape context, taking into account unavoidable constraints.

We have modified the example in § 332.3(e)(2) [§ 230.93(e)(2)] to provide clarification as to what constitutes in-kind mitigation in terms of aquatic resource type. The revised example states that tidal wetlands are most likely to compensate for unavoidable impacts to tidal wetlands. Perennial streams are used as the other example of in-kind mitigation. Although out-of-kind mitigation may not offset all aquatic resource functions and services provided by the aquatic resource being affected by the permitted activity, out-of-kind mitigation may be important for restoring or improving watersheds, especially in cases where certain aquatic resource types have been disproportionately lost from a watershed (see the 2001 NRC Report). It is not necessary to develop watershed plans to allow out-of-kind mitigation, but watershed factors need to be considered. Section 332.3(e)(2) [§ 230.93(e)(2)] requires district engineers to document the basis for requiring out-of-kind mitigation in the administrative record for the permit action.

Several commenters supported the provision in the proposed rule that allows for out-of-kind compensation, and one commenter said that out-of-kind mitigation should be used when it is “environmentally preferable” to in-kind mitigation. A number of commenters requested further guidance on when out-of-kind mitigation is appropriate and a more definitive and transparent list of “factors” to be considered when proposing or evaluating out-of-kind mitigation. One commenter noted that the rule as proposed does not limit the types of projects that could be authorized as compensatory mitigation for permanent stream losses. Another commenter suggested that stream mitigation should only be appropriate compensation for wetland impacts in limited situations. One commenter expressed concern that the requirements in the proposed rule will make it difficult to provide in-kind compensation for losses of ephemeral channels.

The final rule states that district engineers can require the use of out-of-kind compensatory mitigation when he or she determines that it will serve the

aquatic resource needs of the watershed. In addition, § 332.3(a)(1) [§ 230.93(a)(1)] states that, when evaluating compensatory mitigation options, the district engineer will consider what is environmentally preferable. This includes consideration of in-kind versus out-of-kind mitigation. District engineers will determine on a case-by-case basis if out-of-kind mitigation would be more appropriate for offsetting the losses of aquatic resource functions caused by the permitted impacts. In this rule, it would not be appropriate to list factors for consideration, since these are likely to vary by geographic region and by watershed. District engineers will determine appropriate and practicable compensatory mitigation requirements for permanent losses of streams. Unless there are case-specific watershed considerations that warrant out-of-kind mitigation for stream impacts, district engineers will generally require stream restoration, enhancement, or preservation activities to provide required compensatory mitigation for permitted impacts to streams. The appropriateness and practicability of requiring in-kind compensation for permitted losses of ephemeral streams will be determined by district engineers on a case-by-case basis.

One commenter recommended that the rule specify the types of compensatory mitigation activities that are preferred. This commenter said that re-establishment should be the preferred method of mitigation and that establishment should be rarely accepted. Another commenter stated that the proposal places full discretion with the district engineer for making determinations of what type of compensatory mitigation might be most appropriate in any given scenario.

Preferred compensatory mitigation activities in terms of what would be best for the aquatic environment, including a particular watershed, will be determined by the district engineer on a case-by-case basis. We have added a new paragraph at § 332.3(a)(2) [§ 230.93(a)(2)], which states that restoration should be the first option considered for providing compensatory mitigation. Aquatic resource establishment may be acceptable after considering the likelihood of success of a particular compensatory mitigation project, including the suitability of the proposed site to satisfy the objectives of the compensatory mitigation project after that project is fully implemented. The final rule retains the discretion of the district engineer to determine the appropriateness and practicability of any compensatory mitigation required for DA permits.

Three commenters supported adding a provision which states that district engineers should not permit out-of-kind mitigation for rare or hard to replace wetlands. Two commenters also stated that such a provision would eliminate compensatory mitigation for those habitat types that are not the easiest to recreate or those that would not have a relatively high likelihood of success. Some commenters objected to the inclusion of "relative likelihood of success in establishing different habitat types" as it allows impacts to higher quality, difficult-to-replace wetlands (e.g., fens or forested wetlands), without requiring their replacement. One commenter added that meeting ecological needs should take priority over the likelihood of a compensatory mitigation project's success. One commenter noted that a strict preference for on-site, in-kind mitigation often results in compensatory mitigation projects that have relatively little ecological value, are more difficult to establish, and are less likely to be sustained over the long term.

To reduce losses of difficult-to-replace aquatic resources, we have added § 332.3(e)(3) [§ 230.93(e)(3)] which states that, in cases where further avoidance and minimization is not practicable, the required compensatory mitigation must be provided through in-kind rehabilitation, enhancement or preservation to the extent practicable. When evaluating a request for a section 404 permit for an activity that would result in the loss of a difficult-to-replace aquatic resource, the district engineer will determine whether the proposed activity fully complies with the 404(b)(1) Guidelines, including requirements to avoid and minimize impacts to those resources to the maximum extent practicable and to consider alternatives. The likelihood of success must be considered when evaluating compensatory mitigation proposal. If the potential for successfully satisfying the objectives of a compensatory mitigation project is low, then an alternative compensatory mitigation project with a higher likelihood of success should be required instead. There will always be some risk and uncertainty associated with compensatory mitigation projects, but risks and uncertainties need to be minimized as much as possible so that the objectives of those projects will be achieved.

A few other commenters suggested that the rule specify that the credit or ratio authorized for out-of-kind mitigation be equivalent across mitigation providers. Two commenters recommended that stream credits be

treated the same as wetlands credits in the rule.

Appropriate compensation ratios will be determined by district engineers on a case-by-case basis (see § 332.3(f) [§ 230.93(f)]). District engineers will determine the appropriate units of measure for wetland and stream credits.

(f) *Amount of compensatory mitigation.* Some commenters agreed with the minimum mitigation ratio in the proposed rule. Many commenters argued that the suggested baseline mitigation ratio of one-to-one in the proposed rule is not conservative enough, and is not scientifically defensible given the high documented rate of failure or under-performance of many mitigation sites. A considerable number of these commenters also argued that mitigation should never be at a ratio that is less than one-to-one. One commenter suggested that a 1.5 to 1 ratio would be a better minimum ratio and would reasonably account for expected failures. One commenter stated that the rule gives the district engineer too much discretion to decide on the replacement ratio.

We have modified § 332.3(f)(1) [§ 230.93(f)(1)] to clarify that, in cases where the district engineer determines that compensatory mitigation is required to offset unavoidable impacts to aquatic resources, the amount of compensatory mitigation must be, to the extent appropriate and practicable, sufficient to replace lost aquatic resource functions. With this rule, we are encouraging the use of functional and condition assessments to determine the appropriate amount of compensatory mitigation needed to offset authorized impacts, instead of relying primarily on surrogate measures such as acres and linear feet. In the future, there will be more assessment methods available to quantify impacts and compensatory mitigation. We recognize that, in some cases, it may not be appropriate and practicable to require full replacement of aquatic resource functions. This paragraph also states that in cases where functional or condition assessments or other suitable metrics are not used, a minimum one-to-one acreage or linear foot compensation ratio must be used. The latter provision will help ensure that an equivalent area or length of aquatic habitat will be used to provide compensatory mitigation, to help offset aquatic resource losses that will occur as a result of the permitted activity. When determining the appropriate compensation ratio in the absence of a functional or condition assessment method, it is necessary to rely on other metrics, such as area and linear

measures. In this rule, a baseline ratio greater than one-to-one cannot be justified because of the uncertainties surrounding impact and compensatory mitigation sites. Those uncertainties must be accounted for on a case-by-case basis by district engineers. Most aquatic resources likely to be impacted by activities that require DA permits are degraded to some degree. District engineers can only require an amount of compensatory mitigation that is roughly proportional with the permitted impacts, so that it is sufficient to offset those lost aquatic resource functions. Only in cases where a functional or condition assessment or other suitable metric is used can the district engineer require less than one-to-one compensation on an acreage or linear foot basis. Even in cases where functional or condition assessment methods are used, these will not usually result in less than one-to-one ratios, because of the other factors (uncertainty, temporal loss) that must be considered.

A few commenters noted said there is no scientific basis for a replacement ratio based on linear feet. According to these commenters, compensatory mitigation credits and debits must be based on the net gain or loss of stream functions, not stream length. Several commenters argued that the use of a required minimum replacement ratio in the absence of a functional assessment is too inflexible for stream mitigation. One commenter supported efforts to achieve a one-to-one replacement ratio in stream mitigation. Another commenter argued that a one-to-one minimum replacement ratio would be too inflexible and that, in some instances, stream restoration is better handled by other means (e.g., rotational grazing and livestock exclusion).

The use of linear feet may be more appropriate for determining compensatory mitigation amounts for aquatic resources that are more linear in nature, such as streams. District engineers retain the discretion to quantify stream impacts and required compensatory mitigation in terms of area or other appropriate units of measure. Where they are available and appropriate for use, we encourage the use of functional and condition assessments to quantify debits and credits for stream impacts and compensation. The amount of required stream compensatory mitigation is dependent on the method of providing the compensation, as well as other factors (see § 332.3(f)(2) [§ 230.93(f)(2)]).

Many commenters requested further guidance as to when functional assessments should be used to determine the required amount of

compensatory mitigation. A few commenters stated that there could be situations where a functional assessment is inappropriate or not needed (e.g., temporary impacts to unvegetated waters). Commenters also requested clarification as to whether a preferred assessment method would be specified in the final rule, if the district engineer will perform these assessments, and how the Corps planned to reconcile differences in opinion regarding functional assessments. While some commenters supported the use of functional assessments, others recommended retaining replacement ratios based on area until there is an approved model for accurate functional assessment. According to one commenter, functional assessment methods and mitigation ratios should be determined with input or consensus from the regulated community. One commenter said that use of a functional assessment methodology should never result in less mitigation than the amount of acreage or linear footage impacted. However, several commenters urged the agencies to insert language into the rule that would provide district engineers with explicit guidelines to allow for mitigation ratios of less than one-to-one where appropriate.

Functional assessments will be used to determine compensatory mitigation amounts in cases where such methods are available, appropriate, and practicable for use. There are on-going efforts to develop and refine functional assessment methods and other science-based assessment tools. If appropriate functional assessment methods are not available, or if it is not practicable to use the appropriate and available functional assessment method for a particular project, then other appropriate metrics are to be used. We have modified § 332.3(f)(1) [§ 230.93(f)(1)] to include the use of condition assessment methods and other appropriate metrics for determining the amount of compensatory mitigation that is to be required for DA permits. Condition assessments are typically based on indices of biological integrity. District engineers will determine on a case-by-case basis whether a particular functional or condition assessment method is appropriate and practicable for calculating compensatory mitigation amounts for DA permits. District engineers may consult with the regulated public and other stakeholders on the appropriateness of using existing functional or condition assessment methods in a particular region, or for certain types of aquatic resources, but

the district engineer retains responsibility for the final decision as to how much mitigation will be required and how it is determined.

Since functional assessments typically provide quantitative measures of specific functions performed by an impact site, and expected functions to be provided by the compensatory mitigation project site, there may be cases where the compensatory mitigation project site is expected to provide higher levels of functions than the impact site, especially if the impact site is substantially degraded. Where quantitative measures are used, there needs to be flexibility to ensure that the required compensatory mitigation is roughly proportional to the permitted impacts.

In § 332.3(f)(2) [§ 230.93(f)(2)], we have added “likelihood of success” and “the distance between the affected aquatic resource and the compensation site” to the list of factors to be considered by district engineers when determining the appropriate amount of compensatory mitigation for permitted impacts. We have also added a new § 332.3(f)(3) [§ 230.93(f)(3)], to state that in cases where an in-lieu fee program will be used to provide the required compensatory mitigation, and advance credits will be used to provide that compensatory mitigation, the district engineer must require additional compensatory mitigation to account for the risk and uncertainty associated with in-lieu fee projects that have not yet been implemented. Finally we note that, while temporal loss must also be considered in determining mitigation ratios, the definition of “temporal loss” in § 332.2 [§ 230.92] specifies that district engineers may determine that additional compensation for temporal loss is not required if the mitigation is initiated prior to or concurrent with the permitted impacts, except for resources with long development times (e.g., forested wetlands).

(g) *Use of mitigation banks and in-lieu fee programs.* Two commenters supported the use of mitigation banks for all DA authorizations. One commenter requested clarification on whether mitigation banks could provide compensatory mitigation for all types of mitigation requirements. A few commenters stated that mitigation banks should not be used to provide compensation for after-the-fact permits until all appropriate federal, state and local enforcement conditions are met, and that compensatory mitigation should not be allowed instead of restoration if the activity would not have been eligible for a DA permit. Another commenter suggested that

ratios for after-the-fact permits should be higher. Another commenter said that mitigation banks should only be used in after-the-fact permits with a debit penalty.

Since the final rule includes in-lieu fee programs as a source of compensatory mitigation, we have modified this paragraph to include both mitigation banks and in-lieu fee programs. We have also modified this paragraph to refer to the preference hierarchy provided in § 332.3(b) [§ 230.93(b)]. Mitigation banks and in-lieu fee programs may be used to compensate for impacts to aquatic resources authorized by general permits and individual permits, including after-the-fact permits. Corps enforcement actions will be handled in accordance with the regulations at 33 CFR part 326, which stipulate when after-the-fact permit applications will be accepted. If the district engineer determines that compensatory mitigation is necessary, he will determine the appropriate ratio based on what is required to compensate for the aquatic resources.

Two commenters said that the provision stating that mitigation banks may also be used to satisfy requirements arising out of an enforcement action, such as supplemental environmental projects, should be included in 33 CFR 332.3(g). One commenter said that mitigation banks should be used to resolve violations.

The Corps does not have the authority to require supplemental environmental projects to resolve Clean Water Act violations. EPA has a Supplemental Environmental Projects (SEP) Policy that allows the Agency to consider projects proposed by violators to mitigate the penalties assessed for violations of the CWA. Mitigation banks and in-lieu fee programs can qualify as these types of projects if they meet the basic requirements of the Agency’s SEP Policy.

(h) *Preservation.* Many commenters supported the use of preservation as a form of compensatory mitigation. Several commenters said that preservation is needed in urban and coastal areas. Other commenters stated that preservation is important to sustainable ecosystems and to protect watershed health. Several commenters recommended that the rule require the use of a permanent legal instrument to ensure the protection of the preserved site. Several additional commenters argued that compensation ratios should be greater than one-to-one for preservation mitigation projects. Some commenters supported a requirement that any use of preservation should be the result of a watershed plan or a

watershed approach. One commenter said that the requirement for the preserved resource to “contribute to the ecological sustainability of the watershed” is too vague.

The 2001 NRC Report stated that wetland preservation is an important tool for maintaining wetland diversity in a watershed, and achieving the goals of the Clean Water Act in that watershed. Preservation is particularly valuable for protecting unique, rare, or difficult-to-replace aquatic resources, such as bogs, fens, and streams, and may be the most appropriate form of compensatory mitigation for those resources. We recognize that wetland preservation does not, in the short term, result in new wetland resources and thus contribute to the “no overall net loss” goal, but over longer time periods preservation helps reduce wetland losses by removing the protected wetlands from the pool of wetlands that may be subject to future development activities that require DA permits. Aquatic resource preservation, when combined with restoration or establishment activities, can provide important aquatic services in a watershed. Section 332.3(h)(1)(v) [§ 230.93(h)(1)(v)] requires the site containing the preserved resources to be permanently protected through appropriate instruments.

Decisions on whether to allow preservation as part of a compensatory mitigation package will be made by the district engineer, based, to the extent appropriate and practicable, on the watershed approach. We have modified § 332.3(h)(1) [§ 230.93(h)(1)] to clarify that all five criteria must be met for preservation to be used as compensatory mitigation for DA permits. We have also modified § 332.3(h)(1)(ii) [§ 230.93(h)(1)(ii)] to state that the resources to be preserved must provide a significant contribution to the ecological sustainability of the watershed. In determining whether this requirement is met, the district engineer may also consider whether the resource to be preserved is unique, rare, or hard to replace. To support compliance with that requirement, this provision also requires the district engineer to use appropriate quantitative assessment tools, in cases where such tools are available. The district engineer will also decide whether a proposed preservation site contributes to ecological sustainability of the watershed, based on case-specific factors.

Many commenters stated that preservation alone is not an acceptable form of compensatory mitigation and preservation does not promote “no net loss” of wetlands. Several commenters

said that preservation and enhancement should only be used to augment aquatic resource restoration and establishment. Other commenters recommended that only a small percentage of credits for a particular compensatory mitigation project should be given for preservation and only when it is used in conjunction with restoration, enhancement, and/or establishment.

As stated in § 332.3(h)(2) [§ 230.93(h)(2)], preservation will be provided in conjunction with aquatic resource restoration, establishment, and/or enhancement activities, unless the district engineer waives this requirement in a situation where preservation has been identified as a high priority using a watershed approach. If the district engineer makes such a waiver, a higher compensation ratio shall be required. For each mitigation bank and in-lieu fee project involving preservation, the district engineer, in consultation with the IRT, will determine the number of credits that will result from that preservation activity.

(i) *Buffers.* Many commenters agreed that upland buffers and riparian areas should be used as compensatory mitigation. Several commenters stated that buffers should be required for all compensatory mitigation projects. Some commenters noted that uplands and buffers play important roles in wetland and stream mitigation banks and are an integral part of a compensatory mitigation project’s functions and values. One commenter said that buffers should not be used to generate compensatory mitigation credits unless they contribute substantially to habitat connectivity. A number of commenters said that buffers should not be used as compensatory mitigation.

Upland buffers and non-wetland riparian areas can provide substantial contributions to the ecological sustainability of aquatic resources within watersheds. These areas may also be critical to the success of aquatic resource restoration, establishment, enhancement, and preservation activities. It is not feasible to require buffers for all compensatory mitigation projects; such decisions need to be made by district engineers on a case-by-case basis. We have added a sentence to § 332.3(i) [§ 230.93(i)] to clarify that buffers may provide habitat or corridors necessary for the ecological functioning of aquatic resources.

One commenter said that the final rule should allow credit for riparian and upland areas that serve as the principal or sole compensatory mitigation in certain circumstances (e.g., in arid regions in the western United States).

Some commenters suggested that adjacent upland habitat should not be counted separately for compensatory mitigation credit, unless a minimum one-to-one ratio of wetland restoration or establishment is provided. Three commenters requested guidance that explains how and when buffers could be used to provide compensatory mitigation credit.

We have added a sentence to § 332.3(i) [§ 230.93(i)] to clarify that in cases where buffers are required by the district engineer as part of a compensatory mitigation project, compensatory mitigation credit will be provided for those buffers. In most cases, the required buffers will supplement aquatic resource restoration, establishment, enhancement, and/or preservation activities. To qualify as providing compensatory mitigation credit, adjacent upland habitat must contribute to the long-term viability of the adjoining aquatic resources. District engineers will determine on a case-by-case basis whether buffers are necessary components of compensatory mitigation projects.

(j) *Relationship to other federal, tribal, state, and local programs.* Several commenters requested clarification regarding the relationship between compensatory mitigation undertaken for purposes of compensating for losses under the Corps Regulatory Program and mitigation actions taken under other federal, state, or local programs. Many commenters said that the same compensatory mitigation project site or mitigation bank should satisfy all sets of statutory requirements without the need for additional compensatory mitigation required by the Corps, as long as the functions provided through compensatory mitigation under each statute are the same or complementary. One commenter noted that the rule should recognize that compensatory mitigation, including compensation provided by mitigation banks, may be designed to comprehensively address requirements under multiple programs and authorities for the same activity. Another commenter stated that this provision is contrary to the intent of the statute that the regulations should maximize opportunities for mitigation credits. Other commenters, however, supported this provision of the proposed rule.

Compensatory mitigation projects used to fulfill the compensation requirements for DA permits may be used to satisfy the environmental requirements for other programs, such as wetlands regulatory programs administered by tribal, state, and local

governments. In cases where tribal, state, or local governments regulate similar activities to those regulated by the Corps, compensatory mitigation projects may be designed to fulfill all applicable compensation requirements. For example, a surface coal mining activity that requires authorization under section 404 of the Clean Water Act and the Surface Mining Control and Reclamation Act (SMCRA) may offset environmental losses through a compensatory mitigation project that is designed to satisfy the requirements of both statutes. Also, mitigation banks and in-lieu fee programs that are developed for the purposes of providing compensatory mitigation under the Corps Regulatory Program may also be used to provide compensatory mitigation for Corps Civil Works projects (see section 2036(c) of the 2007 Water Resources Development Act) or activities conducted on military installations (see 10 U.S.C. 2694b).

We have revised § 332.3(j) [§ 230.93(j)] by subdividing it into several paragraphs to make it easier to read. In § 332.3(j)(1) [§ 230.93(j)(1)], we have replaced the phrase “compensate for environmental impacts authorized under” with the phrase “satisfy the environmental requirements of” to clarify that a single compensatory mitigation project can be used to satisfy the requirements of more than one law. We have replaced the reference to the National Pollutant Discharge Elimination System Program (NPDES) with the phrase “other federal programs such as the Surface Mining Control and Reclamation Act” since activities authorized under the NPDES do not generally require compensatory mitigation. A coal mining project that requires authorization under both section 404 of the Clean Water Act and SMCRA can often satisfy the compensatory mitigation requirements for both authorizations through a single compensatory mitigation project.

Section 332.3(j) [§ 230.93(j)] is not contrary to section 314. It requires accounting for the use of compensatory mitigation credits. It does not limit production of compensatory mitigation credits; instead, it prevents the same credits from being used for different projects.

In § 332.3(j)(1)(i) [§ 230.93(j)(1)(i)], we have modified the rule language to state that the compensatory mitigation project must include appropriate compensation required by the DA permit. This is intended to address situations where a compensatory mitigation project may be designed to address the environmental requirements of both the DA permit and other permits issued by other federal,

tribal, state, or local agencies. In such cases, the additional environmental benefits required through those other permits could be satisfied by other components of the compensation project.

In the revisions to § 332.3(j)(1)(ii) [§ 230.93(j)(1)(ii)], we are clarifying that the same credits can not be used to provide mitigation for more than one permitted activity. We are also clarifying that in-lieu fee programs can be designed to holistically address requirements under multiple programs and authorities. We have added § 332.3(j)(3) [§ 230.93(j)(3)] to clarify that compensatory mitigation projects can also be designed to satisfy the mitigation requirements of the Endangered Species Act, as long as they comply with the requirements of this section.

One commenter noted that the proposed rule does not recognize the inherent ability of many of these programs to provide the necessary financial incentives for landowners to restore and enhance their wetlands and wildlife habitat as part of a larger resource management plan for their lands in the hopes of garnering future compensatory mitigation credits. Two commenters agreed with the provision in the proposed rule that stipulates that projects undertaken with federal funds should not be used to generate mitigation credits. Two commenters disagreed with this proposed provision. One commenter stated that the agencies should retain flexibility in managing these landscapes and promote creativity in assigning credits for large-scale mitigation banks that offer a variety of ecosystem services beyond wetlands replacement.

Section 332.3(j)(2) [§ 230.93(j)(2)] has been made into a separate paragraph to address situations where federal funding is provided for wetland conservation projects. In cases where a landowner has taken advantage of financial incentives to restore or enhance wetlands on their property, that landowner can also produce compensatory mitigation credits that can be used for DA permits, as long as those credits are the result of supplemental ecological improvements. In other words, the ecological improvements that result from the financial incentives provided to the landowner cannot be used to satisfy compensatory mitigation requirements of DA permits, but additional ecological improvements involving aquatic resource restoration, establishment, enhancement, and/or preservation may be used as compensatory mitigation for DA permits, provided these additional

improvements were not part of the requirements for obtaining the financial incentives. For example, if a federal program has a 50% landowner match requirement, neither the federally funded portion of the project, nor the landowner's 50% match, which is part of the requirements for obtaining federal funding, may be used for compensatory mitigation credits. However, if the landowner provides a greater than 50% match, any improvements provided by the landowner over and above those required for federal funding could be used as compensatory mitigation credits. Note however that in order to sell credits to a third party, a landowner must have an approved mitigation banking instrument. The final rule provides flexibility for managing landscapes to produce a variety of ecological functions and services, but the rule also requires careful accounting of any credits that are produced.

(k) Permit conditions. Many commenters supported the provision in the proposed rule that calls for compensatory mitigation requirements to be included as enforceable conditions of DA permits. One commenter stated that performance standards should be mandatory and enforceable permit components. One commenter stated that financial assurances should be included in the DA permit. Another commenter requested clarification of whether the term “describe” means to provide an overview of the proposed mechanism for financing a compensatory mitigation project or whether the intent is to give Corps the right to review and/or approve a final draft legal instrument.

We have substantially revised this section to clarify the requirements for special conditions for individual permits requiring permittee-responsible mitigation (§ 332.3(k)(2) [§ 230.93(k)(2)]), requirements for special conditions for general permits requiring permittee-responsible mitigation (§ 332.3(k)(3) [§ 230.93(k)(3)]), and the use of mitigation banks and in-lieu fee programs (§ 332.3(k)(4) [§ 230.93(k)(4)]). For individual permits that require permittee-responsible mitigation, the special conditions must identify who is responsible for providing the compensatory mitigation, incorporate by reference the approved mitigation plan, state the objectives and substantive requirements of the compensatory mitigation project, and describe any required financial assurances or long-term management. For general permit authorizations that require permittee-responsible mitigation, the special conditions must describe the compensatory mitigation proposal,

require district engineer approval of a final mitigation plan before commencing work in waters of the United States (unless exceptions are granted), and address, as appropriate, the requirements of § 332.3(k)(2) [§ 230.93(k)(2)]. Examples of situations where the district engineer may waive the requirement to approve a final mitigation plan before the permittee commences work in waters of the United States include after-the-fact permits and cases where the authorized work must be completed immediately (e.g., emergency situations).

If a mitigation bank or in-lieu fee program will be used to provide the required compensatory mitigation, § 332.3(k)(4) [§ 230.93(k)(4)] describes requirements for permit conditions. For individual permits and general permits, the special conditions must specify the number and resource type of third-party mitigation credits the permittee is required to secure. For individual permits (i.e., standard individual permits and letters of permission), the special conditions must specify the particular mitigation bank or in-lieu fee program that will be used to provide the compensatory mitigation. For general permits, there is more flexibility because of the timeframes that must be met, such as the 45-day pre-construction notification review period for nationwide permits. For general permit verifications, the special conditions must specify either the mitigation bank or in-lieu fee program that will be used, or state that the use of a mitigation bank or in-lieu fee program will be identified at a later time, once the permittee has negotiated the terms of securing the appropriate number and resource type of credits from the sponsor, and the district engineer has approved the use of those credits. In the latter case, once the district engineer has approved the use of those credits, the permittee would then secure the credits from the sponsor in order to fulfill his or her compensatory mitigation requirements. Once the permittee has secured credits from the sponsor, and provided the appropriate documentation to the district engineer (see § 332.3(l) [§ 230.93(l)]), the responsibility for providing the required compensatory mitigation is transferred from the permittee to the third-party mitigation sponsor.

The provision requiring a description of any required financial assurances is intended to ensure that the provisions regarding those financial assurances are addressed as enforceable conditions of the DA permit. The regulations relating to financial assurances at § 332.3(n) [§ 230.93(n)] should be used as a guide for writing those conditions.

Several commenters argued that compensatory mitigation plans should not be included in permits, and some commenters said that this provision would delay the permitting process. Two commenters recommended flexibility in this section so the district engineer can accept a preliminary compensatory mitigation plan prior to permit issuance and an approved final mitigation plan prior to the start of construction.

The approved mitigation plans must be linked to the individual permit or to the general permit verification through special conditions, so that the Corps has a legal basis for ensuring compliance with the terms and conditions of its permits. For individual permits, the mitigation plan must be approved before the permit can be issued (see § 332.4(c)(1) [§ 230.93(c)(1)]). Approval of a final mitigation plan prior to issuance of an individual permit is necessary to ensure that the approved compensatory mitigation project provides appropriate compensation for the permitted impacts. For general permits that require compensatory mitigation, the district engineer may approve a conceptual or detailed mitigation plan in order to meet applicable timeframes for general permit verifications. However, the permittee cannot begin work in waters of the United States authorized by general permit until a final mitigation plan has been approved by the district engineer.

Two commenters said that both the permittee and the mitigation bank must be required to comply with the permit conditions relating to compensatory mitigation and be subject to enforcement for failure to meet their obligations. One commenter stated that if an in-lieu fee program is approved by the district engineer to provide required compensatory mitigation for a DA permit, the special conditions of that DA permit must indicate which in-lieu fee program will be used to provide that compensatory mitigation. One commenter asked whether the Corps has the authority to specify in a permit condition that the permittee must purchase credits at a specific bank, which could restrict the permittee's ability to negotiate, and would prevent the permittee from purchasing credits from a given bank because they were the least expensive rather than the most environmentally beneficial.

In cases where the district engineer has determined that the use of a mitigation bank or in-lieu fee program is appropriate to satisfy some or all of the compensatory mitigation requirements for a DA permit, the responsibility for providing the compensatory mitigation

is transferred to the third-party mitigation sponsor once the permittee has secured the appropriate number and resource type of credits and the necessary documentation has been provided to the district engineer in accordance with § 332.3(l) [§ 230.93(l)]. The Corps has the authority to impose conditions on a DA permit that specify which mitigation bank or in-lieu fee program will be used to provide the required compensatory mitigation. Permittees are free to negotiate with mitigation banks or in-lieu fee programs before the permit is issued. Once they have made arrangements to purchase the appropriate number of credits, the name of the third-party provider and the number and resource type of credits must be approved by the district engineer, and in the case of an individual permit, included as a special condition in the permit. If the permittee later finds an alternative source of third-party mitigation, then he or she can request a permit modification to change the special conditions to use that alternative compensatory mitigation, contingent upon approval by the district engineer. The district engineer will determine whether the modified compensatory mitigation proposal is sufficient for offsetting the permitted losses of aquatic resources. For general permits, the district engineer has the option of specifying the mitigation bank or in-lieu fee program in the special conditions, or stating that the use of a mitigation bank or in-lieu fee program is contingent upon approval by the district engineer.

Three commenters supported the inclusion of long-term management provisions in the permit conditions. According to one commenter, requiring adequate arrangements for long-term management funds prior to permit issuance will help ensure mitigation project success and provide a significant incentive for the permit applicant to supply adequate financing acceptable to the resources agencies. One commenter argued that it would be difficult to enforce this permit condition until a proven tool for control of invasive species is found. Another commenter was unclear if the intent was to describe the long-term management provisions or give the Corps the right to review and/or approve the legal instrument.

The control of invasive species is an implementation issue that is more appropriately addressed on a case-by-case basis. For the purposes of § 332.3(k) [§ 230.93(k)], the special conditions should address, to the extent appropriate, how the provisions at § 332.7(d) [§ 230.97(d)] will be satisfied. That section discusses long-term

management for compensatory mitigation projects. District engineers will evaluate proposals for long-term management to determine whether they are sufficient for the purposes of compensatory mitigation for DA permits. The requirements for long-term management plans will be specified through enforceable special conditions.

(l) *Party responsible for compensatory mitigation.* One commenter stated that when a mitigation bank or in-lieu fee program is cited as a responsible party in the permit, responsibility should be transferred from the permittee to the sponsor once the permittee has completed the payment transaction. One commenter, however, said that the responsibility for compensatory mitigation should remain with the project proponent. If a project proponent has the responsibility to provide successful mitigation, that person has an incentive to avoid and minimize impacts.

In this rule, when a permittee has secured the required number and resource type of credits from an approved mitigation bank or in-lieu fee program, and the district engineer receives the documentation specified in § 332.3(l)(3) [§ 230.93(l)(3)], the responsibility for providing the required compensatory mitigation is transferred to the sponsor. As indicated in §§ 332.3(l)(2) and 332.8(d)(8) [§§ 230.93(l)(2) and 230.98(d)(8)], a mitigation banking instrument and an in-lieu fee program instrument must have a provision stating that the legal responsibility for providing compensatory mitigation lies with the sponsor once a permittee has secured credits from that sponsor (see § 332.8(d)(6)(ii)(C) [§ 230.98(d)(6)(ii)(C)]). The combination of the third-party instrument and the documentation demonstrating that the permittee has secured the appropriate number and resource type of credits, establishes a legally enforceable transfer of responsibility. If the sponsor fails to provide the required compensatory mitigation, the district engineer will take appropriate action to achieve compliance with the terms of the instrument. Such actions may include suspending credit sales, use of the financial assurances to provide alternative compensation, referring the non-compliance with the terms of the instrument to the Department of Justice, or using in-lieu fee program account funds to secure credits from another source of third-party mitigation.

We have modified § 332.3(l)(2) [§ 230.93(l)(2)] to include in-lieu fee programs. This provision states that mitigation banking instruments and in-

lieu fee program instruments must contain a provision expressing the sponsor's agreement to assume responsibility for providing the required compensatory mitigation once the credits have been secured by the permittee and the district engineer receives the appropriate documentation.

In addition, we have modified § 332.3(l)(3) [§ 230.93(l)(3)] to explain what documentation is required to confirm that the appropriate number and resource type of credits have been secured from the sponsor. This paragraph also states that the district engineer may pursue measures against the sponsor to ensure compliance if that entity fails to provide the required compensatory mitigation in a timely manner.

(m) *Timing.* Several commenters said that all temporal losses should be considered in mitigation ratios. Some commenters recommended that the rule require additional compensatory mitigation if functions have not been restored in a certain time frame, and this should not be left to the discretion of the district engineer. These commenters stated that many functions are likely to require more than one year to become restored or established. Three commenters requested more flexibility in timing requirements. One commenter said that the final rule should not require permanent mitigation, particularly at a ratio greater than one-to-one, for temporary losses of wetland functions.

District engineers can require additional compensatory mitigation to offset temporary losses of aquatic resource functions if the compensatory mitigation project cannot be implemented in advance of, or concurrent with, the permitted impacts. Factors to be considered in determining appropriate compensatory mitigation ratios are provided at § 332.3(f)(2) [§ 230.93(f)(2)]. We understand that different functions often develop at different rates after aquatic resource restoration, establishment, or enhancement activities are implemented, because of the ecosystem development processes that occur. However, it is usually not feasible to require full functionality of a compensatory mitigation project to be achieved before the permitted impacts occur. The provisions in this rule are intended to minimize temporal losses of aquatic resource functions, to the extent practicable. There is sufficient flexibility in the timing requirements provided by this rule. District engineers will determine appropriate compensatory mitigation requirements for temporary impacts. It is important to

understand that temporary impacts may result in permanent changes to, or losses of, specific functions. As an incentive for timely mitigation, district engineers may determine that additional compensation for temporal losses is not necessary if the mitigation project is initiated prior to or concurrent with the permitted impacts, except in the case of resources with long development times (e.g., forested wetlands).

One commenter noted that it is virtually impossible to implement a compensatory mitigation project in advance of, or concurrently with, permitted impacts on large, multi-phased, linear transportation projects that are constructed over several years. Another commenter stated that the proposed rule is silent on how it would be applied to projects that occur in phases, where the amount of compensatory mitigation should be timed to correspond to each phase of development. This commenter said that the rule ought to provide the flexibility to allow applicants to build phased mitigation that tracks the project phases.

For linear transportation projects, district engineers will consider the practicability of requiring advance or concurrent compensatory mitigation. Depending on the specific circumstances surrounding a phased development project, compensatory mitigation may be required up-front as the first phase of the development project is constructed. Or there could be separate compensatory mitigation projects required for each phase. The appropriate approach for phased construction projects is at the discretion of the district engineer.

(n) *Financial assurances.* Most commenters supported the provision in the proposed rule that requires mitigation providers to secure financial assurances to ensure project completion and long-term management. Other commenters did not agree with the financial assurances provisions. Some commenters said that the financial assurance provisions should be strengthened. One commenter suggested that financial assurances should only be required for larger, more critical projects comprising several acres, large-scale preservation and protection, or wetland banking projects. One commenter stated that financial assurances should not be required for projects authorized by nationwide permits.

We have modified § 332.3(n) [§ 230.93(n)] to address the comments received on the proposed financial assurance provisions. The district engineer shall require sufficient financial assurances to ensure a high level of confidence that the

compensatory mitigation project will be successfully completed, in accordance with applicable performance standards. In cases where an alternate mechanism is available to ensure a high level of confidence that the compensatory mitigation will be provided and maintained (e.g., a formal, documented commitment from a government agency or public authority) the district engineer may determine that financial assurances are not necessary for that compensatory mitigation project. Decisions regarding the appropriate type and amount of financial assurances should not be based solely on the size of the compensatory mitigation project, or whether it is a mitigation bank. The risk and uncertainty associated with a specific compensatory mitigation project should be considered. For small losses of waters of the United States authorized by nationwide permits and regional general permits, it may not be practicable to require financial assurances, and permit conditions may be all that is necessary to provide a high level of confidence that the required compensatory mitigation is provided.

Two commenters stated that compensatory mitigation providers who have substantial assets and can demonstrate a continuing ability to cover expenses associated with compensatory mitigation requirements should not have to provide financial assurances. Two commenters said that the use of financial instruments, such as those proposed in the rule, is inconsistent with other EPA programs with potentially much greater financial liability.

Section 332.3(n)(2) [§ 230.93(n)(2)] identifies a number of different mechanisms that can be used to address financial assurance requirements at the discretion of the district engineer.

Three commenters said that the financial assurance requirements should not be duplicative of the financial assurances that a permittee may be required to give under state or local law to secure the performance of the same activities.

District engineers can consider whether financial assurances required for compensatory mitigation projects under state or local laws are sufficient for the purposes of achieving compliance with compensatory mitigation requirements for DA permits. State or local requirements for financial assurances may be adequate in cases where the same compensatory mitigation project will be used to satisfy the requirements of the Corps Regulatory Program, as well as similar state or local regulatory programs.

Two commenters said that, because a mitigation bank sponsor is not allowed 100 percent immediate credit release, the sponsor should only have to post financial assurances for the percentage of the mitigation bank site that has been debited for use and that has not met final or interim performance standards.

The initial debiting (release of credits) for mitigation banks provided at § 332.8(m) [§ 230.93(m)] provides some capital to the mitigation bank sponsor once the instrument has been approved and certain tasks are achieved. That capital is intended to support the success of the mitigation bank during its early stages of development. Since the ecological success of a mitigation bank is usually dependent upon having sufficient funds available to do the tasks necessary for aquatic resource restoration, establishment, and/or enhancement activities, the amount of any required financial assurances must reflect the costs of doing those necessary activities. The district engineer, in consultation with the sponsor and the IRT, will determine the appropriate amount for the required financial assurances.

Three commenters stated that financial assurances should not be required for government agencies. One commenter said that government agencies should be required to provide financial assurances if adequate funding cannot be assured.

This rule does provide flexibility for government agencies in meeting financial assurance requirements. In cases where a formal, documented commitment from a government agency is provided, the district engineer may determine that financial assurances are not necessary for that compensatory mitigation project. This flexibility is afforded since government agencies tend to be relatively stable entities, and operate in the public interest.

Two commenters stated that financial assurances should include all construction and monitoring costs.

We have added a new sentence to § 332.3(n)(2) [§ 230.93(n)(2)] to clarify that district engineers will consider construction and monitoring costs, as well as costs for land acquisition, planning and engineering, legal fees, mobilization, and long-term stewardship when determining amounts of required financial assurances. In addition, we have modified this paragraph to require documentation of the basis for the financial assurance amount in the administrative record for either the DA permit or the third-party mitigation instrument. We have also added a new paragraph (3) to § 332.3(n) [§ 230.93(n)], which states that if

financial assurances are required, the DA permit must include a special condition requiring those assurances to be in place before commencing the permitted activity.

Several commenters recommended that the final rule explicitly state that financial assurances are only to be released upon the full completion of all compensatory mitigation requirements. In contrast, some commenters said that financial assurance should be phased out as phases of compensatory mitigation projects are completed. A few commenters stated that a portion of the financial assurance should be retained until the end of the monitoring period, after the compensatory mitigation project has met all legal and performance standards.

Section 332.3(n)(4) [§ 230.93(n)(4)] states that financial assurances shall be phased out once the compensatory mitigation project has been determined by the district engineer to be successful in accordance with its performance standards. The DA permit or third-party mitigation instrument has to clearly specify the conditions under which the financial assurances will be released. Financial assurances should not be phased out until the district engineer decides that the compensatory mitigation project has met its performance standards. Phasing out financial assurances in increments before compliance with performance standards has been achieved would increase the risk that insufficient financial assurances would be available if the compensatory mitigation project were to fail at a later date.

One commenter said that the proposed rules for financial assurance will consume critical federal and state staff resources in managing, tracking, and enforcing these new requirements, and it could result in considerable expenses for many permittees with little value added.

Financial assurances are important to ensure that a compensatory mitigation project will be implemented and maintained. Requiring financial assurances is not a new practice, so we do not expect there to be substantial changes in staff resources for managing, tracking, and enforcing this rule.

A number of commenters supported the suggestion requiring advance notice to the district engineer before financial assurances are canceled or allowed to lapse. Several commenters said that a minimum of 120 days should be the standard for notification and a few commenters indicated that 30 days should be the minimum. Other commenters recommended minimum time periods of 45, 60, and 90 days. One

commenter suggested that the Corps suspend or revoke a permit if the financial assurance has lapsed. Another commenter stated that, in order to perform this function adequately, the Corps district would need additional staff.

We have added paragraph (5) to § 332.3(n) [§ 230.93(n)] to require financial assurances to be in a form that ensures that the district engineer receives notification at least 120 days in advance of any termination or revocation. District engineers will determine, on a case-by-case basis, the appropriate action to take if notified that the financial assurances will lapse. We do not believe that this provision would impose additional burdens on Corps staff, since it simply provides notice in cases where a requirement for a compensatory mitigation project is not being fulfilled.

One commenter suggested that the financial assurances should be structured to ensure that in the event of a failure of a compensatory mitigation project, the Corps can easily obtain funds to pay for project correction by a third party, if needed.

The Corps lacks statutory authority to accept directly, retain, and draw upon financial assurances, such as performance bonds, to ensure compliance with permit conditions. These limitations are a result of the Miscellaneous Receipts Statute (31 U.S.C. § 3302(b)). If the Corps were to directly, retain, and draw upon those funds, the monies would be categorized as a "miscellaneous receipt" under the Miscellaneous Receipts Statute and would be deposited in the U.S. Treasury without being used to ensure permit compliance.

District engineers have the authority to condition the approval of a permit to require the posting and execution of financial assurances by a third-party mitigation sponsor or a permittee, as long as the Corps is not positioned to accept directly, retain, or draw upon those funds in the event of a default. Financial assurances should be executed with the signatures of an additional governmental or non-governmental environmental management entity or entities as a bond "surety" or "sureties," who agree to ensure performance if the Corps should determine that the sponsor or permittee, as the bond "principal," has defaulted on any of his or her responsibilities. The third-party instrument or permit conditions should also specify that the Corps stands as a third-party "obligee" to the principal and surety(ies) of the bond, possessing the full and final authority to determine the penal sum

amount, and to determine whether the principal and the surety(ies) have specifically performed some or all of the obligations, covenants, terms, conditions, and agreements of the financial assurance. Finally, the financial assurance should specify that if both the principal and the surety(ies) default in their responsibilities, the Corps retains the full and final discretionary authority to identify new parties as additional surety(ies) to the bond.

We have added a new paragraph (6) to § 332.3(n) [§ 230.93(n)] to state that financial assurance are to be payable at the direction of the district engineer to his designee or to a standby trust agreement. In cases where a standby trust is used, all amounts paid by the financial assurance provider are to be directly deposited into the standby trust fund for distribution by the trustee in accordance with the district engineer's instructions. Still, the district engineer cannot accept directly, retain, or draw upon those funds.

Several commenters recommended that each Corps district be required to develop consistent requirements for financial assurances, so that there will be a level playing field among mitigation providers for all types of compensatory mitigation. One commenter requested that Corps project managers and attorneys receive training on how to evaluate the appropriateness of a proposed financial assurance. One commenter suggested that the agencies incorporate an appeals or arbitration process into the rule in case a district engineer imposes excessive or other unreasonable requirements.

Additional guidance for financial assurances is provided by Regulatory Guidance Letter 05-01, which is available at: http://www.usace.army.mil/cw/cecwo/reg/rgls/rgl05_01.pdf. For individual permits, prospective permittees can utilize the Corps administrative appeal process. The administrative appeal process can be used in cases where a district engineer proffers an individual permit, and the prospective permittee does not agree with the terms and conditions of that permit. The regulations governing the Corps administrative appeal process are found at 33 CFR part 331.

(o) *Compliance with applicable law.* No comments were received on this subsection. In the second sentence, we have added "in-lieu fee program" instrument, since this final rule includes in-lieu fee programs as another source of compensatory mitigation for DA permits.

33 CFR 332.4 and 40 CFR 230.94 Planning and Documentation

(a) *Pre-application consultations.* Several commenters supported the provision for pre-application consultations, as they would save time and reduce misunderstandings. Some commenters expressed concern that pre-application meetings would stretch district staff resources. A few commenters said that discussing compensatory mitigation before the public review and comment period is at odds with sequencing requirements, which require consideration of avoidance and minimization prior to consideration of compensatory mitigation.

We believe that pre-application coordination is an important tool that provides prospective permit applicants an opportunity to address important issues in early planning stages. The Corps current regulations already include pre-application consultations (see 33 CFR 325.1(b)), so we do not believe this provision would place additional burdens on district resources. We have removed the word "compensatory" from this paragraph to clarify that all potential mitigation measures, including avoidance, minimization, and compensation, should be discussed during pre-application consultations.

(b) *Public review and comment.* Many commenters supported the proposed requirement that public notices include a statement describing how impacts to aquatic resources will be avoided, minimized, and compensated for. These commenters stated that the requirement would result in better up-front planning and design and would allow for more meaningful public participation. There were many other commenters, however, who did not support this proposed provision. Several of these commenters recommended that only a brief statement of avoidance, minimization, and compensation, or conceptual mitigation plan, be included in the public notice. Several commenters suggested that this subsection should be reworded to ensure that the public and the agencies are aware that any mitigation options described in a public notice are preliminary measures that the applicant has proposed, and may be changed during the evaluation process. Some commenters requested that the final rule specify that this provision is required of all permits, instead of limiting it to individual permits.

We have clarified in the final rule that the mitigation statement in the public notice is to be based on the information submitted by the applicant, in

accordance with the new requirement at 33 CFR 325.1(d)(7). As discussed in the section of this preamble that addresses § 325.1(d)(7), this should be a brief statement because this occurs in the early stages of the evaluation process, and the evaluation of mitigation options is an iterative process. As district engineers conduct their evaluations in accordance with applicable Corps regulations, the 404(b)(1) Guidelines, and regulations governing other applicable laws (e.g., section 7 of the Endangered Species Act), additional avoidance and minimization may be required, and compensatory mitigation requirements will be determined in greater detail to offset the permitted impacts to the extent appropriate and practicable. We have also modified § 332.4(b)(1) [§ 230.94(b)(1)] to allow prospective permittees to indicate an intention to use an approved in-lieu fee program. In the last sentence of § 332.4(b)(1) [§ 230.94(b)(1)] we have replaced the word “project” with impacts, since the impacts that require DA authorization often comprise a small proportion of the overall project. The Corps can only require appropriate and practicable compensatory mitigation to offset the permitted impacts to waters of the United States (see 33 CFR 320.4(r)(2)).

We do not believe it is necessary to reword this subsection to clarify that the mitigation statement contains preliminary mitigation measures proposed by the permit applicant. It is understood that these preliminary measures may be revised in response to public comment and other input to the permit process. It would not be appropriate to expand the requirements of § 332.4(b) [§ 230.94(b)] to letters of permission and general permits because those forms of authorization do not require project-specific public notices. Public notices are required only for standard permits.

We have added § 332.4(b)(2) [§ 230.94(b)(2)] to require district engineers to consider any timely comments and recommendations received from other federal agencies, tribal, state, or local governments, and the public. We have modified § 332.4(b)(3) [§ 230.94(b)(3)] to state that, for activities authorized by letters of permission and general permits, district engineers must comply with review and approval processes for compensatory mitigation proposals and plans that are applicable to those forms of DA authorization. We have also modified § 332.4(b)(1) [§ 230.94(b)(1)] to provide that certain information may be kept confidential for business purposes. For example, permittees may not want

to reveal the exact parcel of land that they are considering for a compensatory mitigation project if they have not yet secured the site, since revealing this information may adversely affect their ability to do so. The district engineer must agree that any information withheld is legitimately confidential for business purposes, and must ensure that adequate information is included in the public notice to enable the public to provide meaningful comment.

(c) *Mitigation plan.* Many commenters supported the provision that requires a permit applicant to prepare a detailed draft mitigation plan and submit it to the district engineer for review and approval. Commenters noted that this requirement emphasizes the need for up-front planning for compensatory mitigation, and provides a level of assurance that the compensatory mitigation project will be completed. Three commenters recommended that an applicant also be required to submit a draft mitigation plan to other appropriate federal, state, or local government agencies. One commenter supported the provision but also suggested that the final rule should provide a time frame for the Corps to review and approve the mitigation plan to ensure that the permit process is not delayed by this requirement. Another commenter said that it was unclear if this provision applies to general permits. One commenter indicated that National Environmental Policy Act case law does not establish a requirement for a complete mitigation plan to be provided at the time of permit issuance.

We have revised § 332.4(c) [§ 230.94(c)] to clarify the different requirements for mitigation plans for individual permits, general permits, and third-party mitigation. Section 332.4(c)(1)(i) [§ 230.94(c)(1)(i)] describes mitigation plan requirements for individual permits. Before an individual permit can be issued, a final mitigation plan must be approved by the district engineer. This will help ensure that the required compensatory mitigation is appropriate for the authorized impacts. The final mitigation plan must include the items listed in § 332.4(c)(2) through (c)(14) [§ 230.94(c)(2) through (c)(14)], but the level of detail should be commensurate with the scale and scope of the impacts that will be authorized by the individual permit. We have also added language to this paragraph that allows district engineers to utilize permit conditions to address any of the items listed in paragraphs (c)(2) through (c)(14). Paragraph (c)(1)(i) does not require the prospective permittee to provide contract-ready mitigation plans. However, the mitigation plans need to

be sufficiently detailed to demonstrate that the items listed in paragraphs (c)(2) through (c)(14) have been appropriately addressed. District engineers must also ensure that the final mitigation plans have the appropriate level of detail necessary for compliance under the Corps regulatory authorities. If the prospective permittee intends to use a mitigation bank or in-lieu fee program to provide the required compensatory mitigation, he or she needs to provide the name of the mitigation bank or in-lieu fee program, as well as baseline information and a description of the number of credits to be provided.

For activities authorized by individual permits, district engineers may coordinate draft mitigation plans with commenting agencies during the permit application evaluation process. We do not agree that it is necessary to impose a requirement for district engineers to approve a final mitigation plan within a specific number of days.

To address requirements for mitigation plans for activities authorized by general permits, we have added § 332.4(c)(1)(ii) [§ 230.94(c)(1)(ii)]. If compensatory mitigation is required for an activity authorized by a general permit, the district engineer may approve a conceptual or detailed mitigation plan to meet required timeframes for general permit verifications. A final mitigation plan must be approved by the district engineer before the permittee commences work in waters of the United States. If third-party mitigation will be used, the mitigation plan must include information on the baseline conditions and the credits to be provided, and either the name of the specific mitigation bank or in-lieu fee program to be used, or a statement that a mitigation bank or in-lieu fee program will be used, contingent upon approval of the district engineer. The latter provision will allow permittees to seek the appropriate number and resource type of credits from a third-party mitigation sponsor and negotiate the terms of securing those credits. However, the number and resource type of credits must be approved by the district engineer before those credits are secured by the permittee (see § 332.3(k)(4) [§ 230.93(k)(4)]).

For mitigation banks and in-lieu fee programs, we have added § 332.4(c)(1)(iii) [§ 230.94(c)(1)(iii)], which states that the mitigation plans must include the items listed in paragraphs (c)(2) through (c)(14) of this section. Mitigation plans must be prepared for each separate compensatory mitigation project site. The review and approval process for

mitigation plans for third-party mitigation is provided at § 332.8 [§ 230.98].

Three commenters supported the proposed list of items to be included in mitigation plans. One commenter stated that requiring these items would improve the efficiency of permit reviews and the success of compensatory mitigation projects. There were also many commenters who disagreed with these requirements. Several commenters said that requiring these items to be included in mitigation plans would delay compensatory mitigation projects. One commenter stated that the content of a mitigation plan should not be left to the discretion of the district engineer. In contrast, another commenter stated that the final rule needs to provide flexibility for the district engineer to decide, on a case-by-case basis, what needs to be included in a mitigation plan; such considerations should be based on the size and nature of the compensatory mitigation project. One commenter recommended that in-lieu fee programs should be required to submit a draft mitigation strategy, in place of the mitigation plan.

The items listed in § 332.4(c)(2) through (c)(14) [§ 230.94(c)(2) through (c)(14)] are necessary to help ensure that mitigation plans for DA permits contain the appropriate types of information for the purposes of developing successful compensatory mitigation projects and facilitating effective compliance measures. Because of the potential variability among compensatory mitigation project types, as well as differences in compensatory mitigation practices among regions, the rule provides flexibility in the level of detail required for the content of mitigation plans. It specifies that while all required items must be addressed, the level of detail should be commensurate with the scope and scale of the impacts. This is up to the district engineer to determine. Under the regulations governing in-lieu fee programs, a sponsor will be required to develop a compensation planning framework (see § 332.8(c) [§ 230.98(c)]), as well as mitigation plans for each in-lieu fee project (see § 332.8(j) [§ 230.98(j)]).

One commenter objected to the proposed language stating that the level of detail in the mitigation plan would be commensurate with the scale and scope of the project, because that language is vague and would result in mitigation plans of varied thoroughness and quality. Another commenter said that the level of detail should take the nature of the impacted resource into account. One commenter stated that the level of detail should not be related to the size

and scale of the project; instead, the level of detail should be sufficient to evaluate the water quality benefits and to ensure that the compensatory mitigation project offsets the impacts.

Flexibility in the level of detail required for mitigation plans is necessary to account for differences in compensatory mitigation projects. It would be impractical to require the same level of detail for all mitigation plans developed for individual permits, general permits, and third-party mitigation. Rather, projects with significant impacts will necessarily need to devote more effort and resources to mitigation planning than projects with minor impacts. We have modified § 332.4(c)(1)(i) [§ 230.94(c)(1)(i)] to state that, for individual permits, the level of detail of the mitigation plan should be commensurate with the scale and scope of the impacts. The same principle applies to general permits. Compensatory mitigation projects required for DA permits rarely focus solely on water quality benefits. These projects usually result in the restoration, establishment, and/or enhancement of other aquatic resource functions, such as habitat and water quantity storage.

(2) *Objectives.* We added “physiographic province” to the list of types of geographic areas that may be served by the objectives of a compensatory mitigation project.

(3) *Site selection.* We have added a reference to § 332.3(d) [§ 230.93(d)] to this paragraph.

(4) *Site protection instrument.* One commenter recommended that every parcel of land set aside for compensatory mitigation have a recorded conservation easement held by a third-party governmental agency or non-profit organization. Another commenter suggested that the site protection instrument should ensure the permanent protection of the mitigation site.

Specific requirements for site protection are provided in § 332.7(a) [§ 230.97(a)]. In some cases, it is not practicable to require execution of a conservation easement that would be held by a third party. For example, it may not be possible to find a third-party willing to hold the conservation easement. While the goal of the rule is to ensure permanent protection of all compensatory mitigation project sites, we recognize that the degree of long-term protection afforded by real estate instruments varies from state to state.

(5) *Baseline information.* One commenter recommended the addition of stream-oriented baseline information requirements. Other commenters recommended requiring additional

baseline information, including geographic coordinates of all impact and mitigation sites, planned alterations to lands or waters adjacent to the proposed site, flooding frequency of a proposed mitigation site, and a delineation of waters of the United States, including jurisdictional wetlands (if any unavoidable impacts to jurisdictional waters will occur on the proposed mitigation site).

We have modified this paragraph to add several more examples of information that may be required as baseline information. A map showing the locations of the impact and mitigation site(s) or the geographic coordinates for those site(s) should be provided. Also, information concerning other site characteristics appropriate to the type of resource proposed as compensation may also be included in the baseline information. We have added a sentence stating that the baseline information should also include a delineation of waters of the United States on the proposed compensatory mitigation project site. We have added a reference to in-lieu fee programs to the last sentence of this paragraph, since we are including in-lieu fee programs in this rule.

(6) *Determination of credits.* One commenter recommended that the explanation of the rationale for determining credits should be detailed and should include results of a functional assessment of the impacted habitat.

We believe that the level of detail of the mitigation plan, including the rationale for determining credits, should be commensurate with the scale and scope of the impacts. Appropriate functional or condition assessments may not be available in some regions, and for some activities that require DA authorization, it may not be practicable to use functional or condition assessments. We have added a reference to § 332.3(f) [§ 230.93(f)] since credit determinations are related to the amount of compensatory mitigation required. In § 332.4(c)(6)(i) [§ 230.94(c)(6)(i)], we are clarifying that the determination of credits relates to the required permittee-responsible mitigation. Section 332.4(c)(6)(ii) [§ 230.94(c)(6)(ii)] applies to permittees intending to secure credits from mitigation banks or in-lieu fee programs.

(7) *Mitigation work plan.* One commenter suggested that the mitigation work plan should specify whether the wetland to be used to provide compensatory mitigation will be permanent, temporary, or ephemeral.

The mitigation work plan is to provide written specifications and work

descriptions for compensatory mitigation projects. If wetlands compensatory mitigation is to be provided, the objectives are the most appropriate place to describe the wetland type. We have modified this paragraph by replacing “plant species to be planted at the site” with “methods for establishing the desired plant community” since the means for establishing a particular plant community is not limited to planting certain species at the compensatory mitigation project site. We have also added “soil management” since soil amendments and other techniques may be needed for the project. Also, we added information on elements that might be needed for stream mitigation project work plans, such as planform geometry, channel form, watershed size, design discharge, and riparian area plantings.

(8) *Maintenance plan.* We received no comments and made no changes to this paragraph.

(9) *Performance standards.* One commenter expressed concern that the requirement to include ecologically based performance standards in a mitigation plan for impacts to ephemeral channels will create a significant burden for permit applicants. This commenter also said that such requirements will put local Corps staff in a difficult position in terms of evaluating such standards, when no widely available metrics exist.

Ecological performance standards are necessary to assess whether the project is achieving its objectives. Performance standards will vary by aquatic resource type and geographic region. This rule provides the district engineer with flexibility to require standards that are appropriate for compensatory mitigation projects that involve ephemeral streams. Since ecological performance standards are discussed in more detail in § 332.5 [§ 230.95], we have added a reference to that subsection.

(10) *Monitoring requirements.* One commenter suggested replacing “adaptive management” with “remedial measures” in this paragraph.

Since this rule utilizes adaptive management to address deficiencies in compensatory mitigation projects, it would not be appropriate to make the suggested change. Since monitoring is discussed in more detail at § 332.6 [§ 230.96], we have added a reference to that subsection.

(11) *Long-term management plan.* Several commenters supported the inclusion of a long-term management plan in the mitigation plan. One commenter recommended that the long-term management plan also include a

description of long-term management needs and detailed annual cost estimates for these needs, and identify the funding mechanism that will be used to meet those needs. Two commenters said that there should be no requirement for long-term management other than for structural components that may have been constructed as part of the compensatory mitigation project, once monitoring requirements have been fulfilled and the compensatory mitigation project has been determined to be successful.

In order for compensatory mitigation to offset permitted losses, compensation projects need to be sustainable for the long-term. Accordingly, the rule requires that provisions necessary for long-term management be provided as permit conditions or as stipulations in a mitigation banking or in-lieu fee program instrument. Specific requirements for long-term management plans are provided in § 332.7(d) [§ 230.97(d)]. In response to these comments, we have added a new § 332.7(d)(2) [§ 230.97(d)(2)] to state that a long-term management plan should include a description of long-term management needs, annual cost estimates for these needs, and identify the funding mechanism that will be used to meet those needs. Since long-term management is discussed in more detail in § 332.7(d) [§ 230.97(d)], we have added a reference to that subsection.

(12) *Adaptive management plan.* We have modified this paragraph to reflect changes to the definition of adaptive management at § 332.2 [§ 230.92] and the regulations governing adaptive management at § 332.7(c) [§ 230.97(c)]. We have also added a reference to § 332.7(c) [§ 230.97(c)], since the rules governing adaptive management are provided in that subsection.

(13) *Financial assurances.* One commenter requested further clarification of the term “high level of confidence.” Another commenter noted that requiring financial assurances would cause a workload burden on Corps districts.

Financial assurances are intended to provide a pool of funds that would be available to implement a compensatory mitigation project. The term “high level of confidence” is used because having sufficient funding is often a critical element for successfully providing the required compensation. The funds available from financial assurances can be used to correct deficiencies in a compensatory mitigation project or to provide alternative compensation. Requiring financial assurances for compensatory mitigation projects is not

a new practice, so it will not cause substantial increases in the Corps workload. Since financial assurances are discussed in more detail in § 332.3(n) [§ 230.93(n)], we have added a reference to that subsection.

(14) *Other information.* Two commenters recommended that the mitigation plan include a discussion of the alternative mitigation options considered and a full explanation of why the chosen option will best replace the functions and values of the impacted aquatic resource.

Alternative compensatory mitigation options are more appropriately discussed prior to submittal of a mitigation plan. Once the district engineer has determined the appropriate and practicable compensatory mitigation option for a particular DA permit, the prospective permittee will prepare the mitigation plan.

33 CFR 332.5 and 40 CFR 230.95 Ecological Performance Standards

A number of commenters supported the use of ecological performance standards because they are based on objective and verifiable characteristics that can be measured with a “reasonable amount of effort.” Three commenters supported establishing criteria and metrics based on aquatic functions rather than type and amount of wetlands or streams. Several commenters stated that the proposed rule focuses on process and procedure, but lacks explicit ecological performance measures. However, a number of commenters supported the lack of specifics in the proposed rule so that ecological performance standards are tailored to each site.

We have modified § 332.5 [§ 230.95] by splitting it into two paragraphs. Paragraph (a) states that the approved mitigation plan must contain performance standards to assess whether the compensatory mitigation project is achieving its objectives. The last sentence of § 332.5(a) [§ 230.95(a)] has been modified to clarify that other applicable metrics, such as acres, could be used to evaluate compensatory mitigation projects. In § 332.5(b) [§ 230.95(b)] we have modified the first sentence to state that performance standards must be objective and verifiable. We have also added a sentence to paragraph (b), to require ecological performance standards to be based on the best available science that can be measured or assessed in a practicable manner. This will help ensure that performance standards for compensatory mitigation projects are based on ecological outcomes, not construction tasks or administrative

milestones that may not reflect gains in aquatic resource functions or services.

This rule cannot provide specific ecological performance standards for use in compensatory mitigation projects. Instead, it must focus on the general principles for ecological performance standards. Performance standards must be developed on a project-by-project basis, to address the objectives of a compensatory mitigation project. District engineers can develop templates for ecological performance standards, to provide consistent standards for the types of aquatic resources found in their areas of responsibility.

Some commenters noted that the proposed rule emphasizes functional standards instead of area-based performance standards, and said that it will be difficult for the Corps to move to a functional approach because simple functional assessment methods do not exist for many types of wetlands, and regulators are much more comfortable with measuring acres and linear feet. A few commenters contended that nowhere in the rule is compensatory mitigation required to actually replace the functions of the aquatic habitat destroyed.

Functional standards are necessary to demonstrate that compensatory mitigation projects offset losses of aquatic resource functions resulting from activities authorized by DA permits. Area-based performance standards tied to functions can also be used, to determine the functional capacity of a compensatory mitigation project. However, area or linear measures alone would not constitute ecological performance standards. Functional or condition assessments should be used where appropriate and practicable to better describe how compensatory mitigation projects offset losses of aquatic resource functions. We are continuing to develop and refine functional assessment methods and other science-based assessment tools, but where such tools are not available, the performance standards must still attempt to describe a successful project in ecological terms that can be measured (e.g., the project has established an appropriate hydrologic regime or has an appropriate number of acres of specific types of plant communities at specified levels of development, including particular species, etc). The purpose of compensatory mitigation is discussed in § 332.3(a)(1) [§ 230.93(a)(1)]. This paragraph states that the “fundamental objective of compensatory mitigation is to offset unavoidable impacts to waters of the United States authorized by DA permits.”

One commenter suggested that the Corps welcome partnerships with local and state agencies and quickly approve performance standards in watersheds with extensive wetland inventory and functional data. A few commenters recommended that the agencies provide detail on aquatic resource characteristics to be considered (e.g., vegetation, soil and hydrology), specification of wetland factors that might require remediation to meet performance standards, and development of a pre-planning simulation for adaptive management. Several commenters said that the proposed rule fails to provide guidance as to how proposed performance-based standards will be interpreted and applied, and that ecological success criteria are vague and not likely to include meaningful criteria that will account for all wetland functions.

District engineers are encouraged to work with federal, state, and local resource agencies to develop ecological performance standards that are appropriate for the types of aquatic resources found in their areas of responsibility. District engineers are responsible for developing ecological performance standards that are objective and verifiable. Such performance standards must be clearly written, so that independent parties can assess whether compensatory mitigation projects are meeting their performance standards. Ecological performance standards may be based on specific wetland characteristics. We have added a new sentence to § 332.5(b) [§ 230.95(b)] to clarify that reference aquatic resources can be used to establish performance standards that are reasonably achievable, by reflecting the range of variability exhibited by the regional class of aquatic resources.

R 332.6 and 40 CFR 230.96 Monitoring

(a) *General.* Commenters generally supported the emphasis on compensatory mitigation project site management and monitoring. Several commenters said that the agencies must strengthen compliance monitoring and enforcement activities. Three commenters said that Corps guidance states that monitoring reports are a high priority when “substantial mitigation” is required, but it does not define substantial mitigation.

Compliance activities are dependent upon available resources, and the Corps is placing greater emphasis on compensatory mitigation project compliance through its performance standards developed under the Program Assessment Rating Tool for the President’s “Budget and Performance

Integration” management initiative. The Corps guidance relating to “substantial mitigation” is not part of this rulemaking, and therefore does not need to be defined. That guidance appeared in the Corps Regulatory Program’s Standard Operating Procedure dated October 15, 1999, which is in the process of being revised. Under this final rule, monitoring reports are required for all mitigation project sites, but the content and level of detail of the reports must be commensurate with the scale and scope of the mitigation project.

We have added § 332.6(a)(2) [§ 230.96(a)(2)] to clarify that district engineers may conduct site inspections on a regular basis during the monitoring period to evaluate the performance of compensatory mitigation project sites. These site visits will be used to verify the findings of monitoring reports. We have modified the language that was in § 332.6(c)(2) [§ 230.96(c)(2)] of the proposed rule, since only the district engineer has the authority to conduct site visits to assess compliance with the conditions of a DA authorization. Representatives of federal, tribal, state, or local resources agencies may be asked to participate in these site visits, at the invitation of the district engineer and with the express consent of the landowner.

(b) *Monitoring period.* There was no consensus among commenters regarding the appropriate length for monitoring periods. One commenter said that compensatory mitigation in coral reef habitats should be monitored for more than five years. Another commenter suggested that monitoring be required for seven to ten years. Several commenters stated that monitoring periods should be flexible and site specific. A number of commenters supported the proposed five year monitoring period. One commenter said that longer monitoring periods are needed to account for the development of certain aquatic resource types, or for natural events, such as drought or floods, that may affect the development of plant communities. This commenter also said that longer monitoring periods are necessary to develop realistic objectives and performance standards.

We believe that five years is an appropriate starting point for determining the required monitoring period. The final rule states that the mitigation plan must provide for a monitoring period that is sufficient to demonstrate that the compensatory mitigation project has met performance standards, but not less than five years, and a longer monitoring period must be required for aquatic resources with slow

development rates (e.g., forested wetlands, bogs). The rule also allows the district engineer to reduce or waive remaining monitoring requirements upon a determination that the compensatory mitigation project has achieved its performance standards. To reduce or waive the remaining monitoring requirements before the five year period ends, there should be at least two consecutive monitoring reports issued where the success criteria are met. This will help account for variability in environmental conditions, to ensure that the compensatory mitigation project is truly meeting its performance standards. Performance standards should be designed, to the extent practicable, to account for the ecological characteristics of early developmental stages of aquatic ecosystems, so that a determination of ecological success can be made within five years. For aquatic habitat types where five years is insufficient to determine ecological success through performance standards that satisfy the criteria at § 332.5 [§ 230.95], longer monitoring periods may be required. We have modified the last sentence of § 332.6(b) [§ 230.96(b)] to include adaptive management as a reason for revising monitoring requirements.

(c) Monitoring reports. Many commenters stated that monitoring reports should be standardized to expedite the Corps review and that minimum monitoring requirements and performance standards should be provided in the rule. A number of commenters said that the Corps should specify the minimum required reporting elements for each habitat type. Some commenters recommended that monitoring reports include sufficient detail to facilitate scientific comparison between the functions of filled wetlands and the functions of mitigation bank credits used to compensate for those filled wetlands. One commenter stated that the rule should require inspections and brief progress or status reports for all compensatory mitigation projects that require monitoring, to facilitate adaptive management.

We have modified § 332.6(a)(1) [§ 230.96(a)(1)] to clarify that the content and level of detail for monitoring reports must be commensurate with the scale and scope of the compensatory mitigation project, as well as the compensatory mitigation project type. The information to be included in a monitoring report is at the discretion of the district engineer, who should take into account the characteristics of the compensatory mitigation project when determining those requirements. The content of

monitoring reports will also depend on the ecological performance standards for the compensatory mitigation project, since the purpose of the monitoring report is to demonstrate how the project is progressing towards achieving those standards. If the performance standards require the use of functional assessments to assess the performance of the compensatory mitigation project, then the results of those assessments should be provided in the monitoring reports. We do not believe it is appropriate to require monitoring reports to include scientific comparisons of wetland functions between mitigation and impact sites, because the tools necessary to conduct such comparisons are not available in many areas, or they may not be practicable for certain types of projects, such as small compensatory mitigation projects provided for activities authorized by general permits. Furthermore, the appropriateness of the required mitigation to replace aquatic functions and services lost at the impact site is evaluated at the time the mitigation plan is approved, including the identification of appropriate ecological performance standards for the mitigation project. After this point, monitoring is needed to ensure that the mitigation project is developing as planned and progressing satisfactorily towards meeting the performance standards. District engineers will determine, on a case-by-case basis, the need for site inspections to assess compensatory mitigation project sites.

We have modified § 332.6(c)(1) [§ 230.96(c)(1)] to state that as-built plans may be provided in monitoring reports. We have also modified § 332.6(c)(1) [§ 230.96(c)(1)] to stipulate that monitoring reports may include the results of condition assessments or other types of assessments.

Two commenters stated that Corps guidance does not instruct district engineers on what actions to take if permittees or third-party mitigation providers fail to submit required mitigation reports. Several commenters recommended that mitigation plans and mitigation banking instruments include built-in, agreed-upon penalties for failure to submit accurate, timely, and complete monitoring reports that are required by the permit or instrument.

We have added § 332.6(c)(2) [§ 230.96(c)(2)] to stipulate that the permittee or sponsor is responsible for submitting monitoring reports as required by the special conditions of the DA permit or the terms of the third-party mitigation instrument. If permittees or third-party mitigation sponsors do not provide the required

monitoring reports, they are not in compliance with the terms and conditions of their permits or instruments, respectively. In such cases, district engineers will take appropriate compliance actions in accordance with the Corps regulations at 33 CFR part 326. Failure to comply with the conditions of a DA permit issued under section 404 of the Clean Water Act could result in the assessment of Class I administrative penalties. Therefore, it is important that monitoring report requirements be specified as conditions in DA permits.

Some commenters said that monitoring reports should be made available to the public, but other commenters indicated that they should not be made public.

Since monitoring reports are public information, § 332.6(c)(3) [§ 230.96(c)(3)] has been changed to clarify that monitoring reports must be provided to interested federal, tribal, state, and local resource agencies, and the public upon request. District engineers may establish policies and procedures for how to fulfill these requests for monitoring reports and other public information, including establishing time frames for responding to the requests and recouping nominal costs for filling those requests (e.g., duplication costs). As discussed above, we have moved the language regarding site inspections that was in § 332.6(c)(2) [§ 230.96(c)(2)] of the proposed rule to § 332.6(a)(2) [§ 230.96(a)(2)], since it is a general issue relating to monitoring.

33 CFR 332.7 and 40 CFR 230.97 Management

(a) Site protection. Several commenters supported the flexibility regarding the use of real estate and legal instruments for long-term site protection. A number of commenters stated that compensatory mitigation project sites should be protected in perpetuity through conservation easements, rather than deed restrictions or other legal instruments. A few commenters said that conservation easements are an overly restrictive and unnecessary requirement for stream mitigation. One commenter said that when a compensatory mitigation project is located within a right-of-way owned by a public agency, requiring a real estate instrument is unnecessary. Several commenters said that the proposed rule ignores the jurisdiction of federal and state regulatory programs, and compromises private property rights. These commenters believe that the rule exceeds the authority of the agencies to regulate activities under section 404 of the Clean Water Act.

The goal of the rule is to ensure permanent protection of all compensatory mitigation project sites. Specifically the rule states that the aquatic habitats, riparian areas, buffers, and uplands that comprise the overall compensatory mitigation project must be provided long-term protection through real estate instruments or other available mechanisms. However, we recognize that the terms of real estate or legal instruments used to protect compensatory mitigation project sites will differ, because of the variability in real estate laws among states and local jurisdictions. For example, in some states perpetual protection cannot be required, because the real estate or legal instruments may be in effect for a limited number of years. Therefore, we cannot require specific terms for real estate instruments in this rule. The terms for conservation easements, restrictive covenants, and other mechanisms are more appropriately addressed by district engineers on a case-by-case basis. However, we have added a provision which states that, where practicable, a conservation easement or restrictive covenant should establish in an appropriate third party (e.g., governmental or non-profit resource management agency) the right to enforce site protections and provide the third party the resources necessary to monitor and enforce these site protections. For stream compensatory mitigation projects, appropriate means of site protection will be determined by district engineers, after considering the characteristics of the compensation activities and the real estate interests of the project proponent. For example, in-stream rehabilitation measures may not warrant long-term protection. Specific requirements for site protection are at the discretion of the district engineer. There are other examples of situations where it may not be feasible to require site protection through real estate or legal instruments for compensatory mitigation projects. One potential situation is the construction of oyster habitat or the restoration of sea grass beds in state-owned tidal waters, where the project proponent does not have a real estate interest, but may obtain authorization to conduct those environmentally beneficial activities. Another example may be the restoration of tidal marshes or other coastal resources, since the long-term sustainability of those projects in the dynamic coastal environment cannot be assured because of the natural littoral processes that occur in those areas.

This rule does not exceed the agencies' authority under the Clean

Water Act. The Corps has the authority to add special conditions to its permits, when such conditions are necessary to satisfy legal requirements such as compliance with the 404(b)(1) Guidelines or to satisfy the public interest (see 33 CFR 325.4(a)). For example, compensatory mitigation may be required to comply with the 404(b)(1) Guidelines and to support the objective of the Clean Water Act, which is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. This final rule addresses compensatory mitigation that may be required for DA permits issued under the Corps jurisdictional authority under section 404 of the Clean Water Act and sections 9 and 10 the Rivers and Harbors Act of 1899. Compensatory mitigation requirements that may be imposed by state regulatory programs are to be addressed through applicable state regulations. While compensatory mitigation requirements may affect how private property is used, such permit conditions do not necessarily result in a taking of private property.

If a compensatory mitigation project is located in a right-of-way owned by a public agency, then alternative mechanisms may be used to provide site protection. This rule does not compromise private property rights. Permittees can propose alternative compensatory mitigation projects in cases where a particular parcel of land is needed for uses other than compensatory mitigation.

One commenter asked for clarification as to why there is a preference for non-profit conservation organizations versus for-profit conservation organizations. Some commenters requested a definition of the phrase "long-term protection."

We do not state a preference for non-profit conservation organizations. Section 332.7(a)(1) [§ 230.97(a)(1)] provides examples of suitable land managers, and does not limit potential land managers. Long-term protection refers to measures taken to sustain and preserve the compensatory mitigation project after performance standards are met and monitoring requirements have been fulfilled.

Several commenters asserted that in addition to fishing and grazing rights, compatible uses of compensatory mitigation projects on public lands should include non-motorized public recreation, including development of multi-use trails. They said that the agencies should recognize that any trails or other features or activities that would impact jurisdictional waters of the United States would require DA permits and compensatory mitigation. Other

commenters recommended restricting incompatible uses. One commenter stated that a mitigation bank needs to be preserved in perpetuity and protected from negative impacts. This commenter said that the phrase "restrict or" should be removed from § 332.7(a) [§ 230.97(a)] of the proposed rule, because incompatible uses must not be allowed.

To the extent appropriate and practicable, incompatible uses that might jeopardize the objectives of the compensatory mitigation project will be prohibited. District engineers will determine which uses are compatible and incompatible on a case-by-case basis. We have added mineral extraction to § 332.7(a)(2) [§ 230.97(a)(2)] as an example of an incompatible use. We have removed the phrase "restrict or" from this provision (now designated as § 332.7(a)(2) [§ 230.97(a)(2)]).

To address potential alterations to compensatory mitigation projects on public lands, including federal facilities, that may result from changes in statutes, regulations, or agency needs or mission, we have also added § 332.7(a)(4) [§ 230.97(a)(4)]. This provision requires the public agency authorizing the incompatible use to provide alternative compensatory mitigation acceptable to the district engineer for any loss in functions resulting from the incompatible use.

Several commenters said that in cases where a third party is the holder of the conservation easement, the easement should contain a requirement that the regulating agency be notified should there be any action taken to void the easement (e.g., in legal actions related to bankruptcy, tax reversion, or similar circumstances). In the event that a third party holder defaults on an easement or is no longer authorized to hold an easement, then that easement should revert to the regulating agency.

We have added § 332.7(a)(3) [§ 230.97(a)(3)] to require long-term protection mechanisms to include provisions requiring 60-day advance notification to the district engineer if any action is taken to void or modify the mechanism. The Corps, however, does not have authority to hold easements for compensatory mitigation projects.

(b) *Sustainability*. A number of commenters agreed that compensatory mitigation projects should be designed to be self-sustaining once performance standards have been achieved. One commenter expressed a preference for self-sustaining mitigation projects to those requiring on-going human intervention, such as irrigation, but acknowledged that in arid regions, surface water supplies may be severely limited or unavailable because of

established water rights. This commenter said that pumped groundwater may be the only practicable solution.

This rule requires compensatory mitigation projects to be designed, to the maximum extent practicable, to be self-sustaining once performance standards have been achieved. Where use of active structures such as pumps cannot be avoided, it is permitted, however the project sponsor should carefully evaluate the project design to ensure that it is self-sustaining to the maximum extent practicable. At the end of § 332.7(b) [§ 230.97(b)], we have added a provision requiring the acquisition and protection of water rights where needed. That provision also requires documentation in the permit conditions or the third-party mitigation instrument.

Several commenters stated that monitoring will be required to make sure that mitigation projects are self-sustaining. One commenter recommended denying compensatory mitigation credit for projects requiring active engineering features or excessive management such as pumps or manipulated impoundments except in exceptional circumstances. Another commenter said that language supporting active management and maintenance, as well as adaptive management, should be included. Commenters also stated that when an existing, human-created wetland is being impacted, it may be appropriate to develop mitigation features with shorter life expectancies.

Determining whether an implemented compensatory mitigation project is self-sustaining should occur during the original monitoring period. In general, compensatory mitigation should not require active engineering features such as pumps, but should be appropriately sited to ensure that natural hydrology and landscape position will support long-term sustainability. If this is not possible in some areas, district engineers may decide that active engineering features or active management may be necessary for a compensatory mitigation project to meet its objectives. Adaptive management and long-term management are addressed in paragraphs (c) and (d) of this section, respectively. Appropriate compensatory mitigation project design, objectives, and life expectancies are most appropriately determined by district engineers on a case-by-case basis.

(c) *Adaptive management.* A number of commenters supported the use of adaptive management to address unforeseen changes in aquatic resource functions of compensatory mitigation

projects. Several commenters recommended the use of legal instruments to protect compensatory mitigation sites instead of relying on adaptive management strategies. One commenter suggested that if a permittee has made a “good faith effort” to meet performance standards, no additional compensatory mitigation requirements should be imposed other than an extension of the monitoring period. Several commenters said that requiring adaptive management efforts beyond what is currently required as remediation or contingency actions will impose additional financial and resource burdens on mitigation providers. One commenter requested that the final rule clarify that “monitoring and adaptive management” will not be used as a substitute for developing a mitigation site plan.

We have modified § 332.7(c) [§ 230.97(c)] to be consistent with the changes to the definition of adaptive management made in § 332.2 [§ 230.92]. The protection of compensatory mitigation projects sites through real estate instruments and other mechanisms will not address poor performance that could be remedied through adaptive management measures. The focus of adaptive management should be on taking measures to achieve performance and satisfy the objectives of the compensatory mitigation project. Extending the monitoring period may not be an appropriate adaptive management approach to achieve the desired performance, however, if the district engineer determines that the project is progressing towards meeting performance standards and that more time is all that is needed, he may determine that extension of the monitoring period is an appropriate adaptive management response. We recognize that there may be additional costs associated with an adaptive management approach, but we believe that such an approach is necessary to achieve compensatory mitigation project objectives, or to provide comparable or superior ecological benefits. An adaptive management plan is part of a mitigation plan (see § 332.4(c)(12) [§ 230.94(c)(12)]), not a substitute for a complete mitigation plan.

We have added § 332.7(c)(1) [§ 230.97(c)(1)] to require permittees or third-party mitigation sponsors to notify the district engineer if a permittee-responsible mitigation project or a mitigation bank or in-lieu fee project cannot be constructed in accordance with the approved mitigation plans. Any significant modification of a compensatory mitigation project

requires the approval of the district engineer, and must comply with the conditions of the permit or the third-party mitigation instrument. If a change is necessary that does not comply with the permit or instrument as approved, the permit or instrument must be modified.

Several commenters stated that an adaptive management plan should describe a technical approach to dealing with performance issues such as invasive species, but should not depend on agency review and approval of specific management decisions. One commenter said that requiring applicants to develop up-front adaptive management plans would allow flexibility and responsiveness on the part of the applicant while preserving final agency approval or disapproval of the results. Several commenters recommended allowing responsible parties to determine remediation actions and report on those actions and the results to the district engineer. A number of commenters said that the proposed rule leaves the district engineer too much discretion to dismiss remediation measures as not being “appropriate and practicable.”

Management decisions that deviate from the approved mitigation plans require approval from the district engineer. However, a certain amount of responsiveness to conditions on the ground may be built in to the mitigation plan itself. In such cases, as long as the project sponsor is operating in accordance with the approved mitigation plan, no special notification or additional approval is required, although monitoring reports should include appropriate information to allow the district engineer to assess how the project is progressing. In § 332.7(c)(2) [§ 230.97(c)(2)] of the final rule, we have modified this paragraph to require the responsible party to notify the district engineer as soon as possible if the compensatory mitigation project is not achieving its performance standards as anticipated. The district engineer may determine that modification of the approved mitigation plans is necessary to ensure compliance with the DA permit or third-party instrument. District engineers will evaluate proposed measures to determine if they will address deficiencies in the compensatory mitigation project and/or require modification of the approved mitigation plans. It is necessary to provide the district engineer with the authority to determine whether remediation measures are appropriate and practicable. If the proposed remediation measures do not meet those two criteria, the district engineer may

determine that it is necessary for the responsible party to provide alternative compensatory mitigation. In § 332.7(c) [§ 230.7(c)] we have replaced the phrase “remediation measures” with “measures” since appropriate measures may involve activities other than remediation.

One commenter agreed that the performance standards may need to be revised, but only if performance and conditions at the compensatory mitigation project site warrant revision of the objectives. Another commenter stated that § 332.7(c)(3) [§ 230.97(c)(3)] of the proposed rule should be modified to clarify that performance standards will not be lowered simply because the compensatory mitigation project has not been able to meet those standards.

The last sentence of § 332.7(c)(2) [§ 230.97(c)(2)] states that district engineers will consider whether compensatory mitigation projects are providing comparable ecological benefits to the original objectives, when determining whether it is necessary to require adaptive management. This will not result in a lowering of performance standards. Alternative compensatory mitigation may be required to offset a shortfall in aquatic resource functions. District engineers will also consider whether the compensatory mitigation project is providing ecological benefits that are comparable or superior to the approved compensatory mitigation project (see § 332.7(c)(4) [§ 230.97(c)(4)]).

Several commenters agreed with statements in the preamble of the proposed rule indicating that district engineers will not require additional monitoring or corrective actions for compensatory mitigation projects that have not developed as intended due to natural catastrophes. A number of commenters suggested that flooding issues should be further explained in the final rule, or references to those issues eliminated. Several commenters said that the final rule should avoid creating a loophole in those cases where diseased vegetation results from poor stock or contractor error, and not a natural catastrophe. A few commenters recognized that, at certain stages of restoration projects, those activities may not be able to withstand a natural disaster; in such cases the district engineer should have discretion to extend deadlines for completion. One commenter stated that the discussion of natural disasters should be part of the adaptive management plan. Another commenter asked for guidance on using financial assurances to address damage caused by a natural disaster.

In § 332.7(c)(4) [§ 230.97(c)(4)], we address adaptive management as it relates to natural disasters. Except in the case of natural disasters, this rule does not allow revisions to performance standards unless they reflect ecological benefits that are comparable or superior to the originally approved objectives. If a natural disaster causes deficiencies in a compensatory mitigation project, the district engineer will evaluate the circumstances and determine whether it would be appropriate and practicable to require measures to address those deficiencies. Additional monitoring may be required to assess how a compensatory mitigation project is responding to a natural disaster. District engineers will determine on a case-by-case basis whether flood events warrant taking action to repair compensatory mitigation projects. In cases where diseased plant stock may have been used at a compensatory mitigation project site, it may be appropriate either to require replanting, or to allow natural revegetation. It is appropriate for adaptive management plans to consider potential natural disasters that may occur, to the extent that they can be reasonably foreseen. Financial assurances may be used to provide alternative compensatory mitigation if the compensatory mitigation project fails as a result of a natural disaster that occurs before the monitoring period has ended.

(d) *Long-term management.* One commenter suggested that § 332.7(d) [§ 230.97(d)] conflicts with § 332.7(b) [§ 230.97(b)], which states that compensatory mitigation projects should be designed to be self-sustaining. Many commenters supported the proposed requirement to identify the party responsible for the long-term management of the compensatory mitigation project site. Several commenters agreed that the mitigation bank sponsor should maintain management responsibilities unless they are formally transferred to another party. Several commenters stated that funding for the long-term management of mitigated projects must be arranged prior to the issuance of any permits.

Although compensatory mitigation projects should, to the extent it is practicable to do so, be self-sustaining, active long-term management and maintenance are often necessary for a compensatory mitigation project to fulfill its objectives. In such cases, provisions for long-term management need to be provided as permit conditions or as stipulations in a mitigation banking or in-lieu fee program instrument. Such permit conditions or instrument stipulations

should identify the party responsible for long-term management, and if another party agrees to assume that responsibility at a later date, the permit or instrument can be modified by the district engineer to transfer that responsibility. For permittee-responsible mitigation, § 332.7(d)(4) [§ 230.97(d)(4)] has been added to require approval of any required long-term financing mechanisms before the permitted impacts occur.

We have added § 332.7(d)(2) [§ 230.97(d)(2)], which states that a long-term management plan should include a description of long-term management needs for the compensatory mitigation project and annual cost estimates for those needs, and identify the funding mechanism that will support the long-term management activities. In § 332.7(d)(3) [§ 230.97(d)(3)], which was § 332.7(d)(2) [§ 230.97(d)(2)] of the proposed rule, we have added a sentence to allow the district engineer to impose, where appropriate, provisions to address inflationary adjustments and other contingencies.

One commenter supported the requirement for a long-term management plan that identifies the responsible entity and addresses “long-term funding mechanisms” as specified in the proposed § 332.4(c)(11) [§ 230.94(c)(11)], but believed that this requirement conflicts with the proposed § 332.3(n)(3) [§ 230.93(n)(3)], which states that financial assurances would be phased out once performance standards have been met. Instead, this commenter suggests that the rule be clarified by describing the two required types of financial assurances: (1) Financial assurances for the construction and establishment of the compensatory mitigation project, which would be phased out incrementally as performance standards are met, and (2) funding for long-term management of the compensatory mitigation project. Several commenters said that the rule should more explicitly recognize that funding of long-term management can be “phased-out” or reduced over time.

In this rule, financial assurances are used to provide a high level of confidence that compensatory mitigation projects will be completed, whereas long-term management measures are used to help ensure the long-term sustainability of compensatory mitigation projects. Funding for financial assurances is handled differently than funding for long-term management. The final rule clearly differentiates between financial assurances for construction and establishment of compensatory mitigation projects and funding

mechanisms for long-term management of those projects. In general, funding for long-term management should not be phased out over time, since those activities usually need to be conducted for substantial periods of time. There may be occasions where long-term management is no longer necessary because a compensatory mitigation project has developed to the point where active management measures are no longer needed to fulfill the objectives of that project. In such cases, the responsible party should contact the district engineer and request that the long-term management provisions be modified to release those obligations.

Several commenters said that long-term management for compensatory mitigation projects on public land should not be required, or at the very least should be privately funded. Several commenters stated that the proposed rule is ambiguous and could result in different standards applying to compensatory mitigation sites on public lands versus private lands because it allows district engineers flexibility in determining requirements for long-term management on public lands on a case-specific basis. One commenter said that adequate financing of long-term stewardship of a compensatory mitigation site should be demonstrated for the public or private authority accepting stewardship responsibility, because this will ensure consistency of site maintenance whether the responsible party is a private or public entity.

In cases where compensatory mitigation project sites are owned by public entities, it may not be necessary to include provisions for the financing of any required long-term management if, for example, a formal, documented commitment from a government agency is provided (i.e., stewardship commitment). For public agencies, identifying adequate financing at the time of permit issuance may be problematic since agency funding can vary from year-to-year with budget cycles, thus underscoring the need for a formal, documented commitment. In cases of non-governmental organizations or private land managers accepting responsibility for long-term management of compensatory mitigation projects, including mitigation bank sites or in-lieu fee project sites, it will be necessary for those entities to demonstrate that there will be adequate funds available for the long-term management activities. It is important to note that many public and private land managers are no longer accepting the long-term stewardship responsibilities of compensatory mitigation sites unless

an endowment or other source of long-term funding is provided by the permittee or sponsor.

Although not included in the text of the proposed rule, in the preamble we requested comments on including a provision that would require that the arrangements for adequate capitalization of long-term management funds be finalized prior to permit issuance. Several commenters disagreed with adding such a provision. They said that finalization of long-term management funds should not be required prior to permit issuance because it is often difficult to locate and establish a long-term management entity. These commenters also indicated it may take substantial time to arrange adequate capitalization of long-term management funds. However, several other commenters said that capitalization should take place prior to the permit issuance in order to ensure that compensatory mitigation project sites will be maintained in the long-term. An alternative solution offered by several commenters would be to require mitigation banks to provide incremental long-term management funding as credits are released. These commenters also suggested that an endowment fund be created in order to aid in the establishment of mitigation banks.

We have added § 332.7(d)(4) [§ 230.97(d)(4)] to require approval of any required long-term financing mechanisms before the activity authorized by the DA permit is initiated. This does not mean that the long-term management measures need to be established and fully funded, but they do need to be described and approved. This provision applies to permittee-responsible mitigation projects. For third-party mitigation, provisions necessary for long-term management must be addressed in the instrument (see § 332.7(d)(3) [§ 230.97(d)(3)]). For mitigation banks and in-lieu fee programs, long-term management is also addressed in § 332.8(u) [§ 230.98(u)]. For in-lieu fee programs, costs per unit credit are explicitly required to take into account long-term management and protection of in-lieu fee project sites (see § 332.8(o)(5)(ii) [§ 230.98(o)(5)(ii)]). For banks, this will be taken care of by market pricing of credits, since the bank sponsor is responsible for long-term management and must ensure that revenues are adequate to cover this responsibility.

In cases where long-term financing for long-term management of compensatory mitigation projects is necessary, district engineers should consider the need to make inflationary adjustments and certain financial assumptions. For

example, district engineers may consider total return assumptions and capitalization rates in the case of endowments, or Consumer Price Index adjustments in the case of annual payments.

33 CFR 332.8 and 40 CFR 230.98 Mitigation Banks and In-Lieu Fee Programs

(a) *General considerations.* Four commenters supported the provision in the proposed rule that stipulates mitigation banks can be sited on public or private land. There were several commenters, however, who opposed locating mitigation banks on public land. One commenter stated that public lands are to be protected, held in public trust, and managed for their natural resources, ecosystem services, and the recreational and aesthetic values. This commenter said that when private lands are impacted and those impacts are mitigated on public lands, the public gains nothing and more natural habitat is lost. Commenters also stated that it is not appropriate for private developers to profit from compensatory mitigation projects conducted on lands purchased with public funds. One commenter said that, given the current demands for management on public lands, that use of public lands cannot be adequately controlled to assure long-term success of the mitigation bank. Four commenters noted that the statement that credits are based solely on aquatic resource functions may be interpreted as limiting credits to only those activities in wetlands and other aquatic resources, and not activities in uplands that support and enhance those functions.

We have moved § 332.8(a)(2) [§ 230.98(a)(2)] of the proposed rule to § 332.3(a)(3) [§ 230.93(a)(3)], since the principles in this paragraph should apply to all compensatory mitigation projects, including permittee-responsible mitigation. Public entities should be allowed to establish mitigation banks or in-lieu fee projects on their lands. Public entities are often prospective permittees who may need to provide compensatory mitigation for their projects. As long as mitigation banks or in-lieu fee projects established on public lands provide environmental benefits over and above what normal management activities provide, there should be no conflict. Credits secured by private developers can provide a source of income for public entities to conduct aquatic resource restoration, establishment, enhancement, and/or preservation activities that could not be done under their current budgets. Credits provided by mitigation banks and in-lieu fee projects include

environmental benefits resulting from riparian areas, buffers, and uplands (see § 332.8(o)(7) [§ 230.98(o)(7)]).

Several commenters said that mitigation bank site selection should be tied to watershed analyses, and should, to the extent possible, dovetail with existing regional watershed plans, many of which identify or prioritize regional restoration needs. One commenter noted that the mitigation bank approval process does not require a watershed assessment, and said that such an assessment is essential for determining the ecological functions that the mitigation bank is likely to achieve.

The selection of mitigation bank sites should, to the extent practicable, follow a watershed approach. As stated in § 332.8(b)(3) [§ 230.98(b)(3)], the district engineer and the IRT are to use a watershed approach when evaluating proposed mitigation banks and in-lieu fee programs. For in-lieu fee programs, the required compensation planning framework must support a watershed approach to compensatory mitigation (see § 332.8(c)(1) [§ 230.98(c)(1)]).

We have modified § 332.8(a) [§ 230.98(a)] by adding in-lieu fee programs, since § 332.8 [§ 230.98] contains regulations governing both forms of third-party mitigation: mitigation banks and in-lieu fee programs. We have divided § 332.8(a)(1) [§ 230.98(a)(1)] of the proposed rule into two paragraphs. Section 332.8(a)(1) [§ 230.98(a)(1)] states that all mitigation banks and in-lieu fee programs must have an approved instrument signed by the sponsor and the district engineer before being used to provide compensatory mitigation for DA permits. This provision facilitates compliance with terms of a mitigation banking instrument or an in-lieu fee program instrument. So called "ad hoc" third-party mitigation providers cannot operate as banks or in-lieu fee programs without an approved instrument. While a permittee-responsible mitigation project is free to use a third party to provide some or all of the design, construction and management services required for project implementation, liability for project success cannot be transferred to a third party except where there is an approved instrument. Section 332.8(a)(2) [§ 230.98(a)(2)] stipulates that mitigation bank sites and in-lieu fee project sites must be planned and designed to be self-sustaining, but may also require some active management to ensure their long-term viability and sustainability.

(b) *Interagency Review Team*. Three commenters supported the establishment of the Interagency Review Team (IRT). Several commenters,

however, stated that the IRT impedes the process. Those commenters recommended streamlining the review process by eliminating the IRT and using public notices instead. One commenter said that it is unclear whether an IRT is a standing committee or whether a new one is formed for each mitigation bank proposal. One commenter asked who will fund IRT activities. Several commenters asked for clarification on the role of the IRT. One commenter said that the team should retain the name "mitigation bank review team."

The participation of the IRT is necessary to provide expertise and advice to district engineers who are evaluating third-party mitigation proposals from potential mitigation bank sponsors and in-lieu fee program sponsors. Because of our experience with the 1995 mitigation banking guidance, we believe that the IRT review process is more effective than a simple public notice process for determining the potential success and usefulness of a proposed mitigation bank. With this rule, we are extending the IRT review process to all in-lieu fee programs, with the hope of achieving the same benefits.

District engineers have the flexibility to establish standing IRTs in their geographic areas of responsibility, or to establish a new IRT for each proposed mitigation bank or in-lieu fee program. Participation in an IRT will be funded through that agency's budget. Since the IRT concept will be used for both mitigation banks and in-lieu fee programs, we are retaining "interagency review team."

Many commenters stated that state, local, or tribal entities should be included in the IRT. Some commenters also recommended that the IRT have a state co-chair whenever the mitigation bank is being implemented under both state and federal mitigation banking programs, rather than allowing the district engineer discretion to make that determination. Some commenters said that the proposed rule diminishes the advisory role of state and federal resource agencies. Many commenters stressed the need for collaboration with state and local agency personnel. One commenter stated that the rule must establish strong, uniform standards so as not to undermine states that currently employ more stringent and protective mitigation standards for aquatic resources. This commenter also said that the rule should prompt those states with weak programs to raise their standards, and to ensure that state and local agencies have a more equal role with their federal counterparts.

Representatives of the U.S. EPA, National Marine Fisheries Service, and U.S. Fish and Wildlife Service will automatically be included on the IRT if they choose to participate. Beyond this, the district engineer determines the composition of the IRT. Section 332.8(b)(2) [§ 230.98(b)(2)] states that the district engineer will seek to include in the IRT all public agencies with a substantive interest in the establishment of a mitigation bank or in-lieu fee program. This includes state, local, or tribal entities. As stated in § 332.8(b)(1) [§ 230.98(b)(1)], other federal, tribal, state, or local agencies may serve as co-chairs of an IRT, if the mitigation bank or in-lieu fee program will also be used to satisfy their requirements. Since this rule is focused on compensatory mitigation for DA permits, we believe it is appropriate for the district engineer to be the primary authority to administer these regulations. There are states that have developed their own regulations governing mitigation banks or in-lieu fee programs. This rule merely addresses the federal concerns regarding compensatory mitigation required by DA permits under section 404 of the Clean Water Act and/or sections 9 and 10 of the Rivers and Harbors Act of 1899. Therefore, it reflects the decision-making responsibilities of the U.S. Army Corps of Engineers. It does not affect state or local government aquatic resource regulatory programs. State or local governments can issue their own regulations governing compensatory mitigation required under their environmental statutes or regulations.

A number of commenters recommended that the district engineer exercise the ultimate authority for approvals granted under this rule following due consideration of the IRT recommendations. However, several commenters said that decisions should not rest solely with district engineers. Numerous respondents requested the elimination of the requirement in the rule that the resource agencies be signatories to the mitigation banking document. One commenter said that the rule should be expanded to accommodate additional review processes.

As stated in § 332.8(b)(4) [§ 230.98(b)(4)], the district engineer retains the final authority for approving mitigation banking instruments or in-lieu fee program instruments, since these third-party mitigation sources will be used to satisfy compensatory mitigation requirements for DA permits. If there is a co-chair, that co-chair will decide whether the proposed mitigation bank or in-lieu fee program can be used to provide compensatory mitigation

under the other federal, tribal, state, or local program. We believe that allowing IRT members to sign mitigation banking instruments or in-lieu fee program instruments is beneficial, and helps demonstrate their support of approved instruments; however, under today's rule they are not required to do so and the district engineer may approve an instrument regardless of whether or not other IRT member agencies sign it. In § 332.8(b)(3) [§ 230.98(b)(3)] we have added a sentence that allows IRT members the option of submitting letters of concurrence, instead of signing an instrument. We do not agree that this rule should be expanded to other review processes. This rule was promulgated in response to the congressional mandate in section 314 of the National Defense Authorization Act for Fiscal Year 2004, which only directed the development of standards and criteria for compensatory mitigation for CWA section 404 permits. For program efficiency, we have included requirements for RHA section 9 and 10 permits as well, but we do not believe it is efficient or appropriate to cover review processes for requirements under other statutes in these regulations.

Since the final rule contains in-lieu fee programs, in § 332.8(b)(3) [§ 230.98(b)(3)] we have modified the second sentence to clarify that the IRT will review the prospectus, instrument, and other appropriate documents and provide comments to the district engineer. Examples of "other appropriate documents" include mitigation plans for mitigation banks and in-lieu fee project sites, as well as monitoring reports, proposed adaptive management measures, and documents supporting proposed credit releases. Also included are the compensation planning frameworks required of all in-lieu fee programs, which are included as part of their instruments. At the end of § 332.8(b)(3) [§ 230.98(b)(3)], we have added two sentences. One sentence stipulates that comments from IRT members must be received within specified time limits, to ensure timely processing of instruments. The other sentence states that IRT comments received after specified deadlines will only be considered at the discretion of the district engineer to the extent doing so does not jeopardize the deadlines for the district engineer's actions.

We have also added § 332.8(b)(5) [§ 230.98(b)(5)], which allows district engineers and IRT members to enter into memoranda of agreement with other agencies to perform some or all of the IRT functions described in § 332.8 [§ 230.98]. This may be particularly appropriate in states with robust

programmatic general permits for the section 404 program. However, the district engineer retains sole authority for approving instruments and other documentation.

(c) *Compensation planning framework for in-lieu fee programs.* We have added this section to the final rule to provide a level of watershed planning for in-lieu fee programs that goes beyond the watershed planning typically conducted by mitigation banks. The compensation planning framework is also intended to help reduce some of the risk and uncertainty surrounding in-lieu fee programs, since those programs will be able to sell a limited number of credits before selecting and implementing compensatory mitigation projects. The compensation planning framework will be used to select, secure, and implement aquatic resource restoration, establishment, enhancement, and/or preservation activities.

In the proposed rule, the agencies proposed to phase out the use of in-lieu fee programs within 5 years. We also asked for comment on this provision, and asked that commenters who supported continued authorization of in-lieu fee programs as third-party mitigation providers explain their rationale for allowing two different types of providers (banks and in-lieu fee programs) to operate under different requirements. We also asked for comment on how to ensure that in-lieu fee programs achieve the same level of success and certainty in providing compensation for permitted impacts as mitigation banks. One response we received to this request was that many in-lieu fee programs conduct more extensive and intensive watershed-based resource planning prior to securing sites and developing mitigation plans for specific projects. These commenters argued that in-lieu fee programs were better positioned to identify and provide resources that best meet the needs of the watershed, even when these resources are not the "easiest" to provide, or appropriate sites are more expensive or difficult to secure. The agencies have determined that this may be a legitimate advantage of in-lieu fee programs, and this consideration was part of the basis for our determination to allow continued authorization of in-lieu programs in this final rule. To ensure that this benefit is realized, we have formalized this comprehensive planning process in the requirement for in-lieu fee programs to include a compensation planning framework in their instrument.

The compensation planning framework will include the following

information: One or more geographic service areas; a general description of the threats to aquatic resources in the service area(s), including how the in-lieu fee program would help offset impacts resulting from those threats; an analysis of historic aquatic resource loss in the service area(s); an analysis of current aquatic resource conditions in the service area(s), supported by an appropriate level of field documentation; a statement of aquatic resource goals and objectives for each service area, including general amounts, types, and locations of aquatic resources the proposed in-lieu fee program will seek to provide; a prioritization strategy for selecting and implementing compensatory mitigation activities; an explanation of any preservation objectives, including how those preservation activities would satisfy the criteria at § 332.3(h); a description of any public or private stakeholder involvement in the development of the framework; a description of the long-term protection and management strategies for activities; a strategy for periodic evaluation and reporting on the in-lieu fee program's progress in achieving its goals and objectives; and other information determined by the district engineer to be necessary for effective compensation planning by in-lieu fee programs.

The level of detail necessary for the compensation planning framework is at the discretion of the district engineer, and will take into account the characteristics of the service area(s) and the scope of the in-lieu fee program. Once the planning framework is approved as part of the in-lieu fee program instrument, all specific mitigation projects developed by the in-lieu fee program to provide compensation for DA permits must be consistent with it. Any modification to the framework must be approved as a significant modification to the instrument by the district engineer, after consultation with the IRT.

(d)(1) *Review process.* Many commenters supported the proposed timeframes for the review of mitigation banking instruments. Several commenters said that the time frames should be shorter. Several commenters stated that the proposed time frames are inadequate to allow all agencies time to receive, review, and comment on proposed mitigation banks. One commenter stated that setting unrealistic deadlines will only serve to weaken the process and discourage any substantive review of third-party mitigation proposals. Some commenters expressed concern that the proposed time frames may be unachievable due to

the workloads of the Corps and the IRT. Several commenters said that the IRT process would result in delays in implementation and increased costs for mitigation banks, as well as increased risk of failure or environmental deterioration of mitigation bank sites resulting from time-consuming modifications of instruments. Two commenters stated that the Corps should place deadlines on its own actions, such as establishing a time frame for a district engineer to approve or deny a final mitigation banking instrument.

In response to comments, we have modified a number of time frames in the final rule to provide sufficient time to complete specific tasks. For instance, we have changed § 332.8(d)(8) [§ 230.98(d)(8)] to increase, from 15 days to 30 days, the period by which the district engineer must notify the IRT whether or not he intends to approve the instrument or amendment. We have also added time frames to certain provisions to make the review process more effective. For example, we have added a requirement for a district engineer to notify the sponsor within 30 days whether a draft instrument or amendment is complete (see § 332.8(d)(6)(i) [§ 230.98(d)(6)(i)]).

We believe that the time frames in the final rule will provide efficiency to the review and approval process for third-party mitigation, while taking into account the workload of the agencies. We do not agree that these timeframes would adversely affect an agency's ability to provide substantive comments. It is important to consider the savings on time and resources that third-party mitigation can provide in comparison to permittee-responsible mitigation, where individual mitigation plans must be reviewed and approved in accordance with the regulations in this part. We also believe that the time frames provided in this rule will result in fewer delays for mitigation banks and in-lieu fee programs, since the 1995 mitigation banking guidance and the 2000 in-lieu fee guidance did not establish time frames for review and approval. The reduced delays, as well as the required time frames for project implementation, will help protect the environment through timely implementation of compensatory mitigation projects. This rule imposes appropriate time frames for the Corps to complete its decisions, to ensure timely responses to requests to approve third-party mitigation instruments or amendments to previously approved instruments.

Several commenters recommended that the rule provide flexibility for

Corps districts to take advantage of state procedures to the extent practicable to make it easier for sponsors to go through the permit process and to avoid unnecessary duplication of effort.

In areas where DA permits are needed to construct mitigation banks or in-lieu fee projects, and programmatic general permits are available to authorize such activities, district engineers are encouraged to use those programmatic general permits to provide the required authorization. District engineers have the discretion to determine that use of programmatic general permits may not be appropriate for authorizing the construction of mitigation banks, to ensure adequate coordination of instrument approval and any required DA authorization. District engineers are also free to enter into MOAs with state agencies administering programmatic general permits to perform some or all of the review functions associated with mitigation bank and in-lieu fee program approval; however, the district engineer retains the final responsibility and authority for ensuring that the requirements of the CWA and this part are met.

One commenter noted that the proposed rule does not require that permits be issued or denied within a fixed amount of time and mitigation banks should not categorically be accorded a higher priority than permit decisions.

The procedures for issuing DA permits are provided at 33 CFR part 325, and are outside the scope of today's rule. The regulations governing the timing for processing DA permit applications are provided at 33 CFR 325.2(d).

Since the final rule includes in-lieu fee programs as a source of compensatory mitigation for DA permits, we have revised § 332.8(d)(1) [§ 230.98(d)(1)] to include in-lieu fee programs. Since in-lieu fee programs usually cannot secure compensatory mitigation project sites until a period of time after the in-lieu fee program instrument is approved and the in-lieu fee program becomes operational, we have added a provision that stipulates that mitigation plans for in-lieu fee project sites will be prepared as those sites are identified. The sentence stating that a mitigation banking instrument must include the mitigation plan by reference has been moved to § 332.8(l)(2) [§ 230.98(l)(2)] and modified to include in-lieu fee projects.

(d)(2) *Prospectus*. A number of commenters requested clarification on the definition of what constitutes a "complete" prospectus, and who determines whether a prospectus is

complete. Other commenters stated that the proposed time period of 15 days for the district engineer to notify a potential sponsor whether the prospectus is complete is too short. One commenter stated that the proposed rule may force trained scientists to quickly become de facto financiers who are expected to understand prospectus preparation.

We have modified § 332.8(d)(2) [§ 230.98(d)(2)] to include in-lieu fee programs. We have also modified this paragraph to clarify that the review process for a proposed mitigation bank or in-lieu fee program begins when the sponsor submits a complete prospectus to the district engineer. We have changed the time period for the district engineer to notify the sponsor whether the prospectus is complete to 30 days, to allow adequate time for this review to occur. An entity who wants to develop a mitigation bank or in-lieu fee program must be able to provide a complete prospectus. We believe that the requirements for a complete prospectus constitute basic information that is necessary for district engineers, IRT members, and the public to effectively evaluate the potential for the proposed mitigation bank or in-lieu fee program to provide successful and sustainable compensatory mitigation projects. As with any business venture, knowledge in financial matters is often a requisite for success.

For a proposed mitigation bank, a complete prospectus includes the following information: The objectives of the proposed mitigation bank; how the mitigation bank will be established and operated; the proposed service area; the general need for and technical feasibility of the proposed mitigation bank; the proposed ownership arrangements and long-term management strategy for the mitigation bank; the qualifications of the sponsor to successfully complete the type(s) of mitigation project(s) proposed, including information describing any past such activities by the sponsor; the ecological suitability of the site to achieve the objectives of the proposed mitigation bank, including the physical, chemical, and biological characteristics of the bank site and how that site will support the planned types of aquatic resources and functions; and assurance of sufficient water rights to support the long-term sustainability of the mitigation bank.

For a proposed in-lieu fee program, a complete prospectus includes the following information: The objectives of the proposed in-lieu fee program; how the in-lieu fee program will be established and operated; the proposed service area(s); the general need for and

technical feasibility of the proposed in-lieu fee program; the proposed ownership arrangements and long-term management strategy for the in-lieu fee project sites; the qualifications of the sponsor to successfully complete the type(s) of mitigation project(s) proposed, including information describing any past such activities by the sponsor; the compensation planning framework; and a description of the in-lieu fee program account.

To clarify that a sponsor does not need to submit a new prospectus to request modification of an approved instrument, we have added a sentence stating that the sponsor needs to submit a written request for instrument modification, with appropriate documentation. What constitutes appropriate documentation for an instrument modification is at the discretion of the district engineer, and is dependent on the type of modification.

(d)(3) Preliminary review of prospectus. A few commenters asked why site visits are not mentioned within the preliminary review process.

A district engineer may conduct site visits as necessary to provide feedback on a draft prospectus.

(d)(4) Public review and comment. Several commenters said that issuing the public notice when a mitigation bank prospectus is received is inefficient because the mitigation plan may only be preliminary. A number of commenters agree with the proposed length of the public comment period, others suggested extending it to 60 or 90 days. Some commenters opposed any public comment period, contending that it will complicate the process. On the other hand, several commenters said that the public comment period is required by the National Environmental Policy Act. Several commenters suggested that there be public notice and comment for draft mitigation banking instruments.

The public notice is an important means of assisting district engineers in making informed decisions on proposed mitigation banks and in-lieu fee programs, as well as modifications of third-party mitigation instruments. Comments submitted in response to a public notice can help ensure that a proposed third-party mitigation operation is in the public interest and complies with applicable laws and regulations. We have modified § 332.8(d)(4) [§ 230.98(d)(4)] to specify that the public notice will be 30 days, unless the district engineer determines that more time is necessary to solicit meaningful comment. We do not believe it would be appropriate to have comment periods of less than 30 days

for third-party mitigation operations. We have also added a sentence to this paragraph to require, for proposed modifications of approved instruments, a public notice that includes a summary of the proposed modification and any appropriate documentation. We do not believe it is necessary to subject draft mitigation banking instruments to a public notice and comment process, because these documents are essentially contractual in nature. The principle aspects of a proposed mitigation bank or in-lieu fee program that would benefit from the public notice and comment process are covered by the prospectus.

Several commenters said that there should be public notices announcing final mitigation banking instruments. Some commenters asked whether the resulting mitigation bank instrument and the alternatives analysis will be available to the public. A number of commenters said that the Corps must be required to make mitigation plans, instruments, and monitoring reports easily accessible to resource agencies and the public so that they may assist in holding permittees and banks accountable for mitigation compliance.

District engineers may announce the approval of a mitigation banking instrument or an in-lieu fee program instrument by issuing a public notice. Approved third-party mitigation instruments are public information that will be provided to interested parties upon request. Alternatives analyses are not typically conducted for third-party mitigation activities. If a permit is required to construct a mitigation bank or in-lieu fee project, and an alternatives analysis was required to issue that permit, then the documentation of the alternatives analysis would be in the administrative record for the permit action. The last sentence of § 332.8(d)(8) [§ 230.98(d)(8)] states that final mitigation banking and in-lieu fee program instruments must be made available to the public upon request.

(d)(5) Initial evaluation. We have added this provision to the final rule, to allow district engineers to provide prospective third-party mitigation sponsors with an initial evaluation of the potential for the proposed mitigation bank or in-lieu fee program to provide compensatory mitigation for DA permits. Initial evaluation letters will be provided to sponsors within 30 days of the end of the public notice comment period. A sponsor may either submit a draft instrument or revise the prospectus, depending on the district engineer's initial evaluation.

This provision will add efficiency to the review and approval process, because potentially unsuitable

proposals for third-party mitigation will not proceed to draft instruments that are unlikely to be approved. This initial evaluation allows for feedback from the district engineer, so that a sponsor can revise the prospectus to address any deficiencies. The initial evaluation process does not apply to modifications of previously approved instruments.

(d)(6) Draft instrument. In § 332.8(d)(6)(i) [§ 230.98(d)(6)(i)] we added a requirement that the district engineer determine, within 30 days of receipt of a draft instrument, whether that draft instrument is complete. If the draft instrument is incomplete, the district engineer will notify the sponsor to request the information necessary to make the draft instrument complete and notify the sponsor as soon as he receives the additional information and determines that the instrument is complete.

We also added a sentence to § 332.8(d)(6)(i) [§ 230.98(d)(6)(i)], which states that in the case of an instrument modification, the sponsor must prepare a draft amendment and submit it to the district engineer. This clarifies that, for instrument modifications, the sponsor is not required to submit a new draft instrument. A draft amendment may consist of a specific instrument provision or a new or modified mitigation plan.

In § 332.8(d)(6)(i) [§ 230.98(d)(6)(i)], we also explained the required content of draft mitigation banking or in-lieu fee program instruments. For mitigation banks, a draft instrument must include: a description of the proposed geographic service area of the mitigation bank; accounting procedures; a provision stating that legal responsibility for providing the compensatory mitigation lies with the sponsor once a permittee secures credits from the sponsor; default and closure provisions; reporting protocols; mitigation plans that include all applicable items listed in § 332.4(c)(2) through (14); a credit release schedule; and any other information deemed necessary by the district engineer.

For in-lieu fee programs, the draft instrument must include: A description of the proposed geographic service area(s) of the in-lieu fee program; accounting procedures; a provision stating that legal responsibility for providing the compensatory mitigation lies with the sponsor once a permittee secures credits from the sponsor; default and closure provisions; reporting protocols; the compensation planning framework; specification of the initial allocation of advance credits and a draft fee schedule for these credits, by service area, including an explanation of the

basis for the allocation and draft fee schedule; a methodology for determining future project-specific credits and fees; a description of the in-lieu fee program account required by § 332.8(i); and any other information deemed necessary by the district engineer.

Several commenters requested that the rule define “service area” more clearly. One commenter supported the increased flexibility in defining the service areas that can be served by mitigation banks, but another commenter said that the proposed definition is too restrictive. A number of commenters stated that service areas should be determined solely on the basis of its suitability to restore functions for impacted resources within a watershed, without regard to whether there are sufficient mitigation needs to support an economically viable bank. A few commenters agreed with the proposed rule that economic viability should be included in the determination of mitigation bank service areas. One commenter said that the service areas of mitigation banks should be based on watershed plans or, in the absence of a plan, the service area should be limited to the area and types of wetlands for which they can reasonably be expected to compensate functionally. Several commenters supported the provision that the district engineer, with input from the IRT, will determine a mitigation bank’s service area.

The criteria for establishing service areas for mitigation banks and in-lieu fee programs is provided in § 332.8(d)(6)(ii)(A) [§ 230.98(d)(6)(ii)(A)] of the final rule. The service area may be based on watersheds, ecoregions, physiogeographic regions, or other types of geographic area deemed appropriate by the district engineer, after consulting with the IRT. The service area must be appropriately sized to ensure that the aquatic resources provided will effectively compensate for adverse environmental impacts across the entire service area. In addition, the economic viability of the bank or in-lieu fee program may also be considered in determining the size of the service area. We believe it is necessary to allow economic factors to be taken into account, so that the environmental benefits of third-party mitigation discussed in §§ 332.3(a) and (b) [§§ 230.93(a) and (b)] can be realized. Banks will only be established if the prospective sponsor believes that there will be enough business to justify the initial investment of time and financial resources. And in-lieu fee programs will only be successful if they can collect enough fees to finance viable mitigation

projects. We do not believe it is practical to require watershed plans prior to establishing service areas for mitigation banks. There are few watershed plans available that would provide concrete information for establishing service areas for mitigation banks. The Corps believes that ecologically-suitable service area sizes can be established through the review processes required for mitigation banks even in the absence of a formal watershed plan, though district engineers must use a watershed approach in making this determination to the extent practicable. As for in-lieu fee programs, the compensation planning framework is itself a type of watershed plan, specifically tailored to the types of information needed to define an appropriate service area for the in-lieu fee program and guide site and project selection within that area.

Several commenters stated that the size of the mitigation bank service area specified in the proposed rule is too large. One commenter said that a 6- or 8-digit HUC is too large to guide appropriate ecological replacement of lost functions. Two commenters argued that the size of a mitigation bank’s service area should be based on the local watershed area. Several other commenters, however, believed that the service areas suggested in the proposed rule are too small. Some of these commenters noted that certain states have over 50 (e.g., North Dakota) or 100 (e.g., Alaska) 8-digit HUCs, and that developing a mitigation bank for each HUC would be difficult. One commenter noted that the size of a service area should be driven by environmental factors, and that there should not be different sizes for urban areas versus rural areas. Three commenters agreed that, as proposed in the preamble, single-user mitigation banks (e.g., those sponsored by state departments of transportation) should be given additional flexibility for the size of the service area. Two commenters, however, disagreed with this provision and argued that the size of the service area should not be based on the characteristics of the bank sponsor.

In the final rule, we have retained the examples of service area based on 8-or 6-digit hydrologic unit codes for urban and rural areas. It is important to remember that these are examples, and that the district engineer, in consultation with the IRT, will determine the appropriate service area(s) for mitigation banks and in-lieu fee programs. District engineers can take into account the sponsor’s needs and capabilities (as well as relevant statutory or regulatory authorities if the sponsor

is a government agency) when determining service areas for a third-party mitigation operation.

Two commenters said that § 332.8(c)(5)(iii) [§ 230.98(c)(5)(iii)] of the proposed rule is inconsistent with the proposed § 332.8(j) [§ 230.98(j)]. One commenter stated that this provision should address that fact that most mitigation banks will need to sell some initial credits to fund site acquisition and construction associated with starting a new mitigation bank. Another commenter suggested that the agencies provide a credit release schedule template in the final rule.

The two provisions cited in the previous paragraph are not inconsistent with each other. The provision concerning the credit release schedule for a mitigation bank is at § 332.8(d)(6)(iii)(B) [§ 230.98(d)(6)(iii)(B)] of the final rule. This provision requires the achievement of specific milestones for credit releases to occur. The initial credit release (initial debiting) for mitigation banks provided by § 332.8(m) [§ 230.98(m)] of the final rule requires achievement of appropriate milestones, such as approval of the mitigation banking instrument mitigation plan, securing the mitigation bank site, and establishing appropriate financial assurances. The initial debiting allows the mitigation bank sponsor to obtain some capital that will be used to fund subsequent operations at the mitigation bank. We do not believe it would be appropriate to provide a credit release schedule template in the final rule, because credit release schedules are likely to vary from project to project.

Two commenters asked whether the requirement to include accounting procedures in a mitigation banking instrument is linked to the ledger account in § 332.8(l)(1) [§ 230.98(l)(1)] of the proposed rule, or to the financial assurance requirements of mitigation plans in general.

The requirements for a ledger account are stipulated in § 332.8(q)(1) [§ 230.98(q)(1)] of the final rule. Ledger reports are required for both mitigation banks and in-lieu fee programs. The draft instrument must describe the accounting procedures that will be used for the mitigation bank or in-lieu fee program. Additional requirements for mitigation bank or in-lieu fee program accounting procedures are provided in § 332.8(p) [§ 230.98(p)] of the final rule. In § 332.8(q)(3) [§ 230.98(q)(3)] of the final rule, we have added a requirement for an annual report showing the activities for any financial assurances accounts and long-term management funding accounts.

One commenter said that the agencies should provide more guidance on mitigation bank closure procedures.

Default and closure provisions for the mitigation bank or in-lieu fee program must be described in the instrument (see § 332.8(d)(ii)(D) [§ 230.98(d)(ii)(D)]). The instrument must also describe the site protection and long-term management for the mitigation bank. For umbrella mitigation bank sites or in-lieu fee project sites, the site protection and long-term management will normally be addressed in the approved mitigation plans. Specific closure procedures for mitigation banks are at the discretion of the district engineer.

(d)(7) IRT review. One commenter recommended that the IRT's review of the draft prospectus and mitigation banking instrument be concurrent with the Corps review to help streamline the approval process. One commenter noted that the rule does not provide a funding mechanism for Corps staff to spend more time in the review of mitigation banking proposals. Several commenters suggested that the rule establish a method earlier in the review process for rejecting poor mitigation banking proposals. One commenter said that the rule should clarify that the Corps has the authority to reject reviewing agency suggestions that exceed the Corps' statutory authority, are insufficiently related to the purposes of the mitigation bank, or are excessive in scope or scale.

The preliminary review of a draft prospectus provided in § 332.8(d)(3) [§ 230.98(d)(3)] will be conducted concurrently by the Corps and the IRT. As for the review of draft instruments, we believe it is more efficient for the district engineer to evaluate whether the draft instrument is complete before providing copies to the IRT members for their review. Funding for the Corps review of third-party mitigation instruments will be provided through Regulatory Program appropriations. We have added § 332.8(d)(5) [§ 230.98(d)(5)] to provide for an initial evaluation of proposed mitigation banks or in-lieu fee programs, to allow early notification to sponsors of proposed third-party mitigation operations that are unlikely to be acceptable for providing compensatory mitigation for DA permits. As stated in § 332.8(b)(4) [§ 230.98(b)(4)], the district engineer will give full consideration to any timely comments and advice provided by the IRT, but the district engineer alone retains final authority for approval of instruments for mitigation banks or in-lieu fee programs used to provide compensatory mitigation for DA permits.

To facilitate IRT review of draft instruments or amendments, § 332.8(d)(7) [§ 230.98(d)(7)] of the final rule states that the sponsor must provide the district engineer with a sufficient number of copies of those documents. The district engineer will promptly distribute copies of those documents to the IRT members for a 30-day comment period, which will begin five days later. The five day waiting period will ensure that the IRT members will have a full 30 days to review the draft instrument or amendment. This paragraph was also changed, where appropriate, to include amendments of approved instruments.

We have also modified this paragraph to make it clear that the district engineer will seek to resolve concerns raised by IRT members using a consensus based approach, to the extent practicable, but that this cannot be allowed to jeopardize meeting the time frames in the rule. The rule provides 90 days from the time the complete draft instrument is distributed to IRT members for the district engineer to notify the sponsor whether it is generally acceptable, and if so, what changes are needed for the final instrument. Alternately, within this same time frame (90 days), the district engineer must notify the sponsor if there are significant unresolved concerns that may lead to disapproval of the final instrument, or to a formal objection by one or more IRT members. Use of a consensus-based approach does not alter the responsibility of the district engineer to make a final determination regarding the draft instrument within the specified time frames.

(d)(8) Final instrument. Many commenters supported the proposed process for mitigation bank approval. Two commenters specifically supported the provision that gives the district engineer the final authority to approve a mitigation banking instrument. One commenter said that the final rule should require the sponsor to address any comments provided as a result of the IRT review process. One commenter said that if the district engineer does not make a decision on a final mitigation banking instrument as provided, the instrument should be considered to be approved by default. Two commenters encouraged the agencies to establish a process to appeal a district engineer's decision not to approve a mitigation banking instrument.

We have modified this paragraph to require the sponsor to submit supporting documentation with the final instrument. This supporting documentation must explain how the final instrument addresses the comments provided by the IRT. As

stated in § 332.8(a)(1) [§ 230.98(a)(1)], for a mitigation bank or in-lieu fee program to be able to provide compensatory mitigation for DA permits, it must have an instrument approved by the district engineer. Allowing approval by default would be inappropriate as there would be no assurance that compensatory mitigation provided by the bank or in-lieu fee program would meet the requirements of the Clean Water Act and this part. Therefore, this final rule does not include a default approval provision. We do not believe it is necessary to establish an appeal process for third-party mitigation instruments. District engineers have the discretion to determine whether a proposed mitigation bank or in-lieu fee program will be suitable for providing compensatory mitigation for DA permits. When the district engineer disapproves an instrument, he must provide comments to the sponsor indicating the deficiencies that formed the basis for the disapproval. If a proposed mitigation bank or in-lieu fee program is not approved, a prospective sponsor can modify that proposal to correct these deficiencies and resubmit it for consideration.

(e) Dispute resolution process. Three commenters supported the dispute resolution process as outlined in the proposed rule. Two commenters asserted that the dispute resolution process will slow mitigation bank development. Two commenters said that resource agency staff should be granted full involvement in decision-making over the development of mitigation banking instruments, instead of elevating their concerns over proposed instruments to headquarters. One commenter recommended that each district develop a mitigation bank template in coordination with federal and state agencies, and that the use of this template will reduce the need to go through a dispute resolution process. One commenter stated that the higher level review in this process may only drive it farther away from any perceived watershed or biologically-based approach.

We have modified § 332.8(e) [§ 230.98(e)] to include amendments of approved mitigation banking instruments and in-lieu fee program instruments. We do not agree that the dispute resolution process will slow the decision-making process for third-party mitigation instruments. On the contrary, the dispute resolution process will facilitate decision-making through the involvement of higher level agency personnel. The decision to approve a mitigation bank or in-lieu fee program to

provide compensatory mitigation for DA permits lies solely with the district engineer. As explained in § 332.8(b) [§ 230.98(b)], the role of the IRT is to provide comments and advice on the establishment and use of mitigation banks and in-lieu fee programs. Although district engineers are encouraged to develop templates for mitigation banking and in-lieu fee program instruments, the development of such templates does not need to be addressed in this rule. The dispute resolution process is not expected to conflict with a watershed approach, since it is an administrative process intended to resolve objections to proposed instruments.

One commenter said that the milestones and time frames established in the proposed rule are adequate to move the process along, while giving time for appropriate comment. One commenter expressed concern that 15 days for the Interagency Review Team to initiate the dispute resolution process is too short.

We have retained the time frames in the dispute resolution process. We believe that 15 days is sufficient for a member agency of the IRT to initiate the dispute resolution process. The IRT members will have already thoroughly reviewed the draft instrument, and had the proposed final instrument for 30 days before this 15-day time period begins. Any remaining issues should already have been identified by that time and evaluated to determine whether they warrant elevation to the agency's headquarters. In § 332.8(e)(3) [§ 230.98(e)(3)], we have added electronic mail as an acceptable means for notifying district engineers that an issue has been forwarded to Headquarters for review.

Two commenters recommended that the dispute resolution process include procedures to address disputes when they are with a co-chair from a tribal, state, or local program. One commenter said a mitigation banking instrument should not be approved over the objections of the state in which the mitigation bank is located. Another commenter suggested that the rule should allow for coordination with states that have separate appeals procedures.

This process is intended to resolve disputes that are within the purview of the Corps to address. If there is a co-chair involved in the approval process, and there is an IRT objection that is solely under the authority of the tribal, state, or local co-chair to address, then the co-chair should address those objections. The co-chair also has the option of not approving the instrument,

so that the mitigation bank or in-lieu fee program cannot be used to provide compensatory mitigation for tribal, state, or local authorizations. District engineers should try to address state objections to proposed mitigation banks and in-lieu fee programs, but final decisions must be based on federal interests, including applicable federal laws, regulations, and executive orders. State appeals procedures do not apply to federal decisions regarding mitigation banks and in-lieu fee programs. A state can choose not to approve a mitigation bank or in-lieu fee program to provide compensatory mitigation for its authorizations.

(f) *Extension of deadlines.* One commenter said that deadlines should be established for review and response, but that these deadlines should have built-in flexibility for extenuating circumstances.

We have revised this paragraph to account for the potential issues that may warrant allowing additional time to reach decisions on third-party mitigation instruments. In § 332.8(f)(1)(i) [§ 230.98(f)(1)(i)], we have added consultation under section 7 of the Endangered Species Act or section 106 of the National Historic Preservation Act as potential reasons for needing more time to process mitigation banking or in-lieu fee program instrument proposals. We have added § 332.8(f)(1)(ii) [§ 230.98(f)(1)(ii)] to include government-to-government consultation with Indian tribes, since it may be necessary to conduct such consultation if a proposed mitigation bank or in-lieu fee program may affect an Indian tribe's interests, such as protected tribal resources, tribal rights, or Indian lands. In § 332.8(f)(1)(ii) [§ 230.98(f)(1)(ii)], in-lieu fee programs and proposed instrument modifications have been added to include these actions as potentially needed deadline extensions.

(g) *Modification of instruments.* Two commenters stated that the proposed mechanism for modifying mitigation banking instruments is a fair and effective way of addressing the grandfathering of operational mitigation banks. Another commenter suggested that the Corps establish an administrative appeal process for mitigation banking instrument modifications.

Since in-lieu fee programs have been added to this rule, we have included the modification of in-lieu fee program instruments in § 332.8(g) [§ 230.98(g)]. We do not believe it is necessary to establish an administrative appeal process for modifications of third-party mitigation instruments.

Several commenters supported the streamlined mitigation bank permit modification process proposed in the rule. One commenter said that the process will not sufficiently reduce permitting burdens and time frames to justify elimination of in-lieu fee programs. One commenter believed that the time frame for IRT review in this process is too long and has the potential to delay decision-making for simple changes to an instrument. One commenter requested that the agencies provide examples of "non-significant" changes that would allow use of the streamlined review process to modify an instrument.

We have retained in-lieu fee programs in this final rule, and the streamlined review process for instrument modifications also applies to certain actions pertaining to in-lieu fee programs. Examples of such actions include adaptive management, credit releases, and changes in credit release schedules. We believe that IRT review of proposed instrument modifications is necessary, and that the time frames are sufficient to ensure that substantive comments can be provided in a timely manner. District engineers have the discretion to determine what changes that are not listed in § 332.8(g) [§ 230.98(g)] warrant use of the streamlined review process. Examples might include minor changes to a mitigation project plan that do not substantively change the character of the project or its ability to provide appropriate mitigation for DA permits. The addition and approval of umbrella mitigation bank sites and in-lieu fee project sites, or the expansion of previously approved mitigation bank or in-lieu fee project sites, must be evaluated through the full instrument amendment process in § 332.8(d) [§ 230.98(d)].

(h) *Umbrella mitigation banking instruments.* Four commenters supported development of umbrella mitigation banking instruments. One commenter did not support the authorization of umbrella mitigation banking instruments, because they usually cover sites that are in different geographic locations and have different site conditions. Several commenters suggested that the rule require the entity proposing an umbrella agreement have at least one site in place, and limit credit releases to sites that have been reviewed and permitted. Several commenters opposed the provision in the rule that requires a major modification to the instrument for additional umbrella mitigation bank sites. These commenters said that this requirement will impede project

development schedules. One commenter stated that the sponsor of an umbrella mitigation banking instrument should not be able to sell credits until the site has been acquired, the mitigation plan approved, and the financial assurances are in place.

In this paragraph, we have clarified that adding more mitigation bank sites to an umbrella mitigation banking instrument requires following the procedures at § 332.8(g)(1) [§ 230.98(g)(1)] for amending an approved instrument. In response to a proposal to add a new site to an umbrella mitigation banking instrument, the district engineer and the IRT will review the proposed mitigation plan. The district engineer, in consultation with the IRT, will determine whether the proposed site is acceptable for providing compensatory mitigation for DA permits within the service area governed by that instrument. The proposed rule, as well as the final rule, requires a mitigation bank site to be included in the initial mitigation banking instrument. The mitigation banking instrument becomes an umbrella instrument when additional compensatory mitigation project sites are added (see § 332.8(h) [§ 230.98(h)]). We have added a sentence to this paragraph that requires credit withdrawal from umbrella mitigation bank sites to be consistent with § 332.8(m) [§ 230.98(m)]. In particular, any additional projects must have an approved plan, a secured site, and appropriate financial assurances in place before any credits can be sold or transferred. After the initial credit release, further releases are tied to achievement of milestones and performance standards in accordance with an approved credit release schedule.

(i) *In-lieu fee project account.* We have added this provision to require in-lieu fee program sponsors to establish program accounts at financial institutions that are a member of the Federal Deposit Insurance Corporation (FDIC). The purpose of the program account is to ensure that the funds collected from permittees by the in-lieu fee program sponsor are used within a reasonable time period to provide compensatory mitigation for DA permits, instead of other activities. Requiring the sponsor to establish the account with a member of the FDIC is intended to protect those funds from being lost through default. The interest and other earnings accruing to the account must remain in the account, to fund in-lieu fee projects. The funds placed into the in-lieu fee program account may only be used for the

selection, design, acquisition, implementation, and management of in-lieu fee projects, with a small percentage being allowed for administrative costs. The percentage that can be used for administrative costs will be determined by the district engineer, in consultation with the IRT. If the sponsor conducts activities, such as educational programs, in addition to aquatic resource restoration, establishment, enhancement, and/or preservation activities that are used to provide compensatory mitigation for DA permits, the in-lieu fee program account must be separate from the accounts that fund those supplemental activities.

Section 332.8(i)(2) [§ 230.98(i)(2)] requires in-lieu fee program sponsors to submit proposed in-lieu fee projects to the district engineer for funding approval. Disbursements from the in-lieu fee program account can only be made after the district engineer provides written approval of a proposed in-lieu fee project. The district engineer's decision will occur after consultation with the IRT. The district engineer does not need to authorize each individual disbursement from the account, but must provide written approval for the project, based on a review of the project mitigation plan, which will include a description of activities and projected costs. Once the project is authorized, funds disbursed from the account must be spent for the project in a manner consistent with the approved project mitigation plan. The terms of the in-lieu fee program account must specify that the district engineer has the authority to direct those funds to alternative compensatory mitigation projects if the sponsor does not provide the compensatory mitigation in accordance with required time frames. As with financial assurances, the Corps lacks statutory authority to accept directly, retain, and draw upon funds that are in the in-lieu fee program account, because of the requirements of the Miscellaneous Receipts Statute (31 U.S.C. 3302(b)). Therefore, the terms of the in-lieu fee program instrument must be carefully crafted to ensure that the district engineer can direct the funds deposited in the in-lieu fee program account to be used for providing compensatory mitigation for DA permits, without the Corps directly accepting or disbursing the funds.

The in-lieu fee program sponsor is also required to provide annual reports to the district engineer and the IRT regarding the in-lieu fee program account (see § 332.8(i)(3) [§ 230.98(i)(3)]). The district engineer may audit the records for the in-lieu fee

program account, to ensure compliance with this rule.

(j) *In-lieu fee project approval.* We added § 332.8(j) [§ 230.98(j)] to provide a process for the review and approval of in-lieu fee projects. The mitigation plans for in-lieu fee projects must include the information required by § 332.4(c)(2) through (c)(14) [§ 230.94(c)(2) through (c)(14)]. The mitigation plan must also include a credit release schedule, which is similar to the credit release schedule required for mitigation banks. The review and approval of in-lieu fee projects will be conducted as instrument modifications in accordance with the procedures at § 332.8(g)(1) [§ 230.98(g)(1)]. In-lieu fee projects may be conducted by other parties on behalf of the in-lieu fee program sponsor, but the project must still be approved by the district engineer and the sponsor remains responsible for compliance with the terms of the instrument and the approved mitigation plan.

Section 332.8(j)(2) [§ 230.98(j)(2)] states that if a DA permit is required for the in-lieu fee project, then the permit should not be issued until the relevant provisions of the mitigation plan have been substantively determined. This will help ensure that the special conditions of the DA permit reflect the provisions of the mitigation plan, including the ecological performance standards, site protection mechanisms, and financial assurances.

(k) *Coordination of mitigation banking instruments and DA permit issuance.* Two commenters supported the provision in the rule that prohibits district engineers from issuing a permit authorizing the construction of a mitigation bank until all relevant provisions of the mitigation banking instrument have been substantively determined. One commenter suggested that this provision be modified so that the section 404 permit process could be concurrent with the review of the mitigation banking instrument. Another commenter said that delaying construction of mitigation banks would exacerbate financial problems that often occur shortly after the mitigation banking instrument is approved.

We have revised this paragraph to include the development of new compensatory mitigation project sites under an umbrella mitigation banking instrument. We have also modified this paragraph to state that the DA permit should not be issued until all relevant provisions of the mitigation plan have been substantively determined, including the ecological performance standards. District engineers are encouraged to conduct the evaluation for a DA permit to construct a mitigation

bank concurrently with the review process for the mitigation banking instrument. Delaying issuance of the DA permit until the content of the mitigation plan has been determined should help reduce costs by avoiding the need to modify the permit and its special conditions to accurately reflect the approved mitigation plan.

(l) *Project implementation.* We added a new § 332.8(l)(1) [§ 230.98(l)(1)] to clarify that a third-party mitigation sponsor must have an approved instrument before collecting funds from permittees to satisfy compensatory mitigation requirements for DA permits.

Section 332.8(l)(2) [§ 230.98(l)(2)] contains the text from the proposed rule, and it has been modified to include in-lieu fee programs. We have added § 332.8(l)(3) [§ 230.98(l)(3)] to stipulate that in-lieu fee program sponsors are responsible for the implementation, long-term management, and any required remediation of in-lieu fee projects, even in cases where those projects are conducted by other parties through requests for proposals or other contracting mechanisms.

(m) *Credit withdrawal from mitigation banks.* One commenter said that the rule should make it clear that for initial debiting of a percentage of the mitigation bank credits to occur, the mitigation bank needs to be constructed within a short time frame. Another commenter stated that if the rule allows mitigation banks to pre-sell credits with appropriate financial securities in place, the mitigation banks will be able to produce more environmental benefits. One commenter recommended adding a provision to limit the number of credits provided through establishment (creation) to no more than 25 percent of the total credits that will be produced by the mitigation bank, because establishment activities are less likely to succeed.

We have added a provision requiring initial implementation of the approved mitigation plan no later than the first full growing season after the date the first credit transaction occurs, to ensure timely construction of the mitigation bank. A purpose of the initial debiting is to provide a source of funds for conducting activities that support the continued development of the mitigation bank. We do not believe it would be appropriate to place a limit on the percentage of credits that can be produced through aquatic resource establishment activities. Such decisions should be made on a case by case basis by the district engineer, after consulting with the IRT. Likelihood of success is one of the factors that the district

engineer and the IRT will consider in making such decisions.

(n) *Advance credits for in-lieu fee programs.* We have added § 332.8(n) [§ 230.98(n)] to provide an analogous standard to the initial debiting for mitigation banks that is provided by § 332.8(m) [§ 230.98(m)]. The limitations in § 332.8(n) [§ 230.98(n)] are also intended to reduce risk and uncertainty for in-lieu fee programs and to ensure timely implementation of in-lieu fee projects. The goal of the requirements in this paragraph is not to place an arbitrary limit on the availability of advance credits within a service area, but rather to ensure that in-lieu fee programs do not sell more advance credits than they can reasonably deliver in the time frame specified in § 332.8(n)(4) [§ 230.98(n)(4)], generally 3 years.

This does not mean that the number of advance credits will necessarily be small. The number of advance credits authorized for an in-lieu fee program will be limited by service area, and specified in the in-lieu fee program instrument. District engineers will determine the number of advance credits allowed per service area, after consulting with the IRT in accordance with the procedures in § 332.8(d) [§ 230.98(d)]. The number of advance credits will be based on an evaluation of the compensation planning framework; the sponsor's past performance for implementing aquatic resource restoration, establishment, enhancement, and/or preservation activities in the proposed service area or other areas; and the projected financing necessary to begin planning and implementation of in-lieu fee projects. For example, in service areas with larger numbers of permitted impacts, and where a sponsor with demonstrated past successes is likely to produce a substantial amount of compensatory mitigation within the time frame specified in § 332.8(n)(4) [§ 230.98(n)(4)], district engineers can authorize a higher number of advance credits. As another example, if an in-lieu fee program is being established by a sponsor that does not have a history of successfully implementing aquatic resource restoration, establishment, enhancement, and/or preservation projects, the district engineer may authorize a smaller number of advance credits to address potential risks. If an in-lieu fee program sells all of its advance credits and it appears likely that it can fulfill a higher number of advance credits within the required time frame, it may apply for an instrument modification to increase the number of available advance credits.

Section 332.8(n)(2) [§ 230.98(n)(2)] allows the district engineer to require the sponsor to provide confidential supporting information to determine an appropriate limit for advance credits. Such confidential supporting information may include locations of potential in-lieu fee project sites that have been identified by the sponsor. It may be necessary to keep this information confidential to lessen the risk of land speculation activities that could drive up the price of prospective in-lieu fee project sites before the sponsor can collect sufficient fees to secure those sites.

Each approved in-lieu fee project will have an approved mitigation plan, with a credit release schedule. As in-lieu fee projects are implemented by the in-lieu fee sponsor in accordance with approved mitigation plans, credits will be released as milestones in the credit release schedule are achieved. As released credits are produced, these must first be used to fulfill any advance credits that have been sold in the service area, after which any remaining released credits may also be sold. Once advance credits are fulfilled, an equivalent number of new advance credits will become available, which the sponsor may sell as advance credits. Therefore, the advance credit account is a rolling account, and when released credits are produced and previously sold advance credits are fulfilled, the advance credit account will have new advance credits available for sale, but not more than the advance credit limit specified in the instrument (see § 332.8(n)(3) [§ 230.98(n)(3)]).

Within a particular service area, § 332.8(n)(4) [§ 230.98(n)(4)] requires in-lieu fee program sponsors to secure in-lieu fee project sites and conduct the initial physical and biological improvements (e.g., grading and planting) by the third full growing season after the first advance credit for that service area is secured by a permittee. District engineers have the discretion to allow more time to plan and initiate in-lieu fee projects. An example of where this discretion may be appropriate would be a service area where credit demand is lower than expected, and the in-lieu fee program has not been able to collect enough funds to secure an in-lieu fee project site and plan and implement the compensatory mitigation project within the three growing season time period. The district engineer also has the discretion to direct the sponsor to use the funds in the in-lieu fee program account required by § 332.8(i) [§ 230.98(i)] to provide alternative compensatory mitigation to fulfill the

obligations created through the sale or transfer of advance credits. In rare circumstances, the district engineer may allow an in-lieu fee program to fulfill advance credits sold in one service area with released credits from a different service area. This should only occur in situations where the number of unfulfilled advance credits is small, the prospects for collecting more fees in the service area are poor, and the district engineer determines that fulfilling the advance credits in another service area will provide adequate compensation for the previously authorized impacts represented by the advance credits. This may happen in the case of state-wide in-lieu fee programs that have some remote service areas with very small numbers of authorized impacts.

We have added § 332.8(n)(5) [§ 230.98(n)(5)] to address compliance with in-lieu fee program instruments. District engineers will review the operations of approved in-lieu fee programs, to assess their performance. If an in-lieu fee program is not complying with the terms of its instrument, the district engineer may suspend credit sales or take other appropriate action until the sponsor complies with the terms of the instrument. This paragraph also makes it clear that permittees who secure credits from in-lieu fee programs are not responsible for in-lieu fee program compliance.

(o) *Determining credits.* (1) *Units of measure.* Several commenters said that credits should not be expressed as acres or linear feet, because those units do not adequately account for functions and values. Several commenters suggested that the agencies revise this section to relate back to the functional approach provided by the definition of "credit" in § 332.2 [§ 230.92]. Two commenters recommended that the agencies develop appropriate means for quantifying debits for stream impacts and compensatory mitigation credits for stream mitigation. One commenter suggested that the rule establish specific alternative quantitative measures other than acres or stream length units, and provide methods for tracking each of the wetland functions and values that result in credits or debits. Another commenter said that all mitigation bank credit transactions should be based on the accrual of functions, not on areal measures. One commenter stated that all functional assessment studies should be standardized within a watershed, and preferably across regions, districts, or states.

It is not always possible to quantify credits by functional or condition assessments, so there is a need to use other metrics, such as acres or linear

feet. The requirements in § 332.8(o) [§ 230.98(o)] are consistent with the definition of credit in § 332.2 [§ 230.92]. We have modified § 332.8(o)(1) [§ 230.98(o)(1)] to include "other suitable metrics" as potential units for quantifying credits or debits. Appropriate units for quantifying credits and debits will be determined by district engineers on a case-by-case basis. District engineers are encouraged to use science-based assessment methods for determining aquatic habitat condition, such as the index of biological integrity, where practicable. District engineers and other entities, such as scientists, may develop assessment methods for stream impacts and compensatory mitigation that could be used to quantify debits and credits. Stream assessment methods are likely to vary by geographic region, and may be developed locally. The development of an automated information system to track specific aquatic resource functions that are lost as a result of permitted activities, or are produced by compensatory mitigation projects, is outside the scope of this rule, however the Corps is working to improve its tracking of permitted impacts and compensatory mitigation. In many areas of the country, and for certain types of wetlands, there may not be functional or condition assessment methods available, so other measures such as acres, may need to be used to quantify credits and debits. We do not agree that functional assessment methods should be standardized within watershed, districts, or states. Functional assessment methods will vary among resource type, and sometimes by regional categories, such as ecoregion or physiographic region.

(o)(2) *Assessment.* Several commenters supported the use of functional assessments to determine credits. One commenter recommended that functional assessments should be required for all mitigation banks. Another commenter said that functional assessments are just one tool that could be used. Two commenters recommended that the rule prescribe specific methods for conducting functional assessments. One commenter supported the use of functional assessments for both credits and debits. According to one commenter, the agencies have had considerable difficulty successfully tracking compensatory mitigation by type and location (e.g., in-kind, on-site), and functional assessments would greatly increase the complexity of this process. One commenter stated that the district engineer should incorporate the most

current information on restoration and creation techniques and success rates, functional assessment, and other relevant factors when determining the number of credits a mitigation bank will provide. Another commenter recommended that value or socio-economic services should be included in mitigation crediting.

We have modified this paragraph by changing the heading to refer to "assessment" since we have amended the rule to include the use of other suitable metrics, such as condition assessments. The term "condition" is defined in § 332.2 [§ 230.92]. An index of biological integrity is an example of another type of assessment method that can be used to assess and describe the aquatic resource types that will be restored, established, enhanced, and/or preserved by mitigation banks or in-lieu fee programs.

We cannot revise this rule to require the use of functional assessments for all mitigation banks or in-lieu fee programs. In some areas of the country, appropriate functional assessments are not available. Condition assessments or other types of assessment methods may be more appropriate in some regions. The new automated information system being used in the Corps Regulatory Program (ORM 2.0) will help improve the tracking of compensatory mitigation projects by type and location. This automated information system is a spatially-enabled system that will allow tracking of the locations of impact sites and compensatory mitigation sites, as well as the aquatic resource types that are present at impact sites or are required as compensatory mitigation. District engineers, in consultation with the IRT, will evaluate compensatory mitigation proposals for mitigation banks and in-lieu fee programs, to determine the number of credits that are likely to be provided. This evaluation should include the type of compensatory mitigation being conducted (e.g., reestablishment, rehabilitation), the potential for success, the type of aquatic resource being provided, and other relevant aspects of the mitigation bank or in-lieu fee project. Although the services provided by aquatic resource functions are important to consider when determining the type and location of compensatory mitigation projects, there are few methods available for assessing services. Therefore, in most cases consideration of services will be conducted through best professional judgment. As discussed elsewhere in this preamble, there are numerous difficulties in assessing aquatic resource values, and

this rule focuses on functions and services.

(o)(3) *Credit production.* We have modified this paragraph to refer to pre- and post-compensatory mitigation project site conditions, since this section applies to mitigation banks and in-lieu fee projects. We have also changed this paragraph to require the use of functional or condition assessments, or other suitable metrics, to determine the number of credits produced by a mitigation bank or in-lieu fee project. In areas where appropriate assessment methods are not available, or practicable to use, other suitable metrics such as acres or linear feet may be used. We have removed the last two sentences of the proposed text of this paragraph, which stated that, for enhancement activities, the number of credits should only reflect those enhancements produced by the construction of the mitigation bank. These two sentences are no longer necessary, because of the other changes to this paragraph. However, it is still the case that credits for enhancement activities should only include the “functional lift” generated by the activity.

(o)(4) *Credit value.* We have not changed this paragraph in the final rule.

(o)(5) *Credit costs.* We added this provision to clarify that the cost of compensatory mitigation credits provided by a mitigation bank or an in-lieu fee program shall be determined by the sponsor. Section 332.8(o)(5)(ii) [§ 230.98(o)(5)(ii)] requires in-lieu fee programs to use full cost accounting methods, so that the cost per unit credit includes the expected costs associated with the restoration, establishment, enhancement, and/or preservation of aquatic resources in the service area. This paragraph also states that the cost per unit credit for in-lieu fee programs should factor in contingency costs, to address uncertainties in construction and real estate expenses. The cost per unit credit must also reflect resources needed for long-term management and protection of the in-lieu fee project site, as well as any financial assurances that may be necessary to ensure successful completion of those projects. District engineers can evaluate the fee structure of an in-lieu fee program to determine whether the sponsor is complying with this provision. Compliance with these requirements is necessary to ensure that an in-lieu fee program generates sufficient funds so that it can select and implement compensatory mitigation projects in a timely manner. One concern raised about in-lieu fee programs in the past is that they have sometimes underpriced credits, with the result that they may not be able to

deliver the required mitigation. This provision is intended to ensure that in-lieu fee programs develop realistic price schedules, while still leaving determination of credit prices to the program sponsor, rather than the Corps.

(o)(6) *Credits provided by preservation.* One commenter said that preservation and/or enhancement should only be considered in combination with restoration, to ensure no net loss on an acreage basis. A commenter said that credits associated with preservation should be released as soon as possible, since functional capacity is not an issue. One commenter stated that preservation credits should be sparingly granted and should never allow preservation of landscape features of a different type than those adversely affected by the permitted activity.

The regulations governing the use of preservation as compensatory mitigation are provided in § 332.3(h) [§ 230.93(h)]. The use of aquatic resource preservation to provide compensatory mitigation will be determined by the district engineer in accordance with § 332.3 [§ 230.93]. When evaluating the Corps Regulatory Program’s contribution to the Administration’s wetlands goals, it is important to consider the compensatory mitigation requirements imposed on permittees, since the compensatory mitigation requirements for a specific DA permit may consist of a package of compensation activities. In other words, a permittee could provide the required compensatory mitigation through more than one compensation type. When a permittee proposes to use preservation to provide compensatory mitigation, § 332.3(h)(2) [§ 230.98(h)(2)] requires that the preservation be done, to the extent appropriate and practicable, in conjunction with aquatic resource restoration, establishment, and/or enhancement activities. For example, a permittee may provide some of the required compensatory mitigation through a permittee-responsible restoration project, and provide the remaining compensatory mitigation by securing preservation credits from an in-lieu fee program or a mitigation bank. Preservation may also be used as the only form of compensatory mitigation, at the discretion of the district engineer, but this should only be allowed where preservation of specific resources has been identified as a high priority using a watershed approach, and in this case higher compensation ratios should be required.

When using a watershed approach, the district engineer may determine that preservation of out-of-kind aquatic resources is an appropriate means of providing compensatory mitigation.

Two commenters said that the proposed rule is unclear whether preservation is to be applied to an entire mitigation bank, above and beyond any establishment, enhancement, or restoration that is conducted to produce credits at that mitigation bank, or whether it only applies to those areas of the mitigation bank where preservation of existing aquatic resources will occur.

The long-term protection of compensatory mitigation project sites, including mitigation banks and in-lieu fee programs is addressed in § 332.7(a) [§ 230.97(a)]. This is a different issue that the use of preservation as compensatory mitigation. As defined in § 332.2 [§ 230.92], preservation is the removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. If there are existing aquatic resources on a mitigation bank site or an in-lieu fee project site, and those aquatic resources will not be enhanced or rehabilitated to produce enhancement or restoration credits, then the district engineer may determine that there are preservation credits being provided, once the appropriate site protection mechanisms are implemented.

We have modified § 332.8(o)(6) [§ 230.98(o)(6)] of the final rule to include other suitable metrics as a means of quantifying preservation credits. We have also added in-lieu fee programs to this paragraph, since the final rule includes those programs as a form of third-party mitigation. We have removed the reference to § 332.3(c) [§ 230.93(c)] because the subsection on the watershed approach does not explicitly discuss watershed functions.

(o)(7) *Credits provided by riparian areas, buffers, and uplands.* Several commenters supported the use of riparian areas, buffers, and uplands to provide credits. One commenter said that buffer credits should only be included if the minimum one-to-one mitigation ratio is increased and the proportion of enhancement and rehabilitation as a component of mitigation is strictly limited. One commenter suggested that buffers in and of themselves should not be used to generate mitigation credits unless they are above and beyond what is required and will contribute substantially to habitat connectivity. Several commenters suggested that the agencies revise this section to relate back to the functional approach provided by the definition of the term “credit” in § 332.2 [§ 230.92]. Several commenters stated that mitigation credits provided through riparian areas, buffers, or uplands should not be expressed as acres or linear feet because those units do not

adequately account for their associated functions and values. Three commenters requested more detailed guidance regarding how and when mitigation credits can be given for buffers.

Section 332.3(f)(1) [§ 230.93(f)(1)] states that the amount of the required compensatory mitigation must be, to the extent appropriate and practicable, sufficient to replace lost aquatic resource functions. In cases where a mitigation bank or in-lieu fee project has released riparian area, buffer, or upland credits, district engineers will determine the appropriateness of those credits in fulfilling the requirements of § 332.3(f)(1) [§ 230.93(f)(1)]. In general, third-party mitigation credits provided by riparian areas, buffers, and uplands will supplement the credits produced through aquatic resource restoration, establishment, enhancement, and/or preservation activities, to provide a compensatory mitigation package that is appropriate for offsetting the permitted losses of aquatic resource functions. As stated in § 332.8(o)(7) [§ 230.98(o)(7)], non-aquatic resources can only be used for compensatory mitigation when they are essential for maintaining the ecological viability of adjoining aquatic resources.

Riparian areas are critical components of stream ecosystems, as well as other open waters. Riparian areas provide important ecological functions, and directly influence the functions of streams, especially in terms of habitat quality and water quality. Therefore, it is important for mitigation banks and in-lieu fee projects containing streams and other open waters to include riparian areas as part of the overall compensatory mitigation project. In such cases, compensatory mitigation credits should also be awarded to those riparian areas. Buffers next to wetlands, and uplands that provide habitat connectivity and other ecological functions, may also generate compensatory mitigation credits because of their contribution to the ecological functions of the overall mitigation bank or in-lieu fee project site.

We have revised the definition of "credit" in § 332.2 [§ 230.92] to be consistent with this paragraph. Although the definition of "credit" refers to the accrual or attainment of aquatic functions at a compensatory mitigation site, riparian areas, buffers, and uplands are often critical for maintaining the integrity and sustainability of aquatic resource functions. Therefore, compensatory mitigation credits can be produced through the restoration, establishment, enhancement, and/or preservation of

riparian areas, buffers, and uplands that support aquatic resources.

In areas where there are no appropriate assessment methods available, or the available methods are impractical to use, acreage and linear measures may be the only means for quantifying the credits produced through the restoration, establishment, enhancement, and/or preservation of riparian areas, buffers, and uplands. District engineers will determine on a case-by-case basis when buffers are essential to maintaining the ecological viability of adjoining aquatic resources, and thus eligible to produce compensatory mitigation credits.

We have modified § 332.8(o)(7) [§ 230.98(o)(7)] of the final rule to include other suitable metrics as a means of quantifying credits for buffers, riparian areas and uplands. We have also added in-lieu fee programs to this paragraph, since the final rule includes those programs as a form of third-party mitigation. We have removed the reference to § 332.3(c) [§ 230.93(c)] because the subsection on the watershed approach does not explicitly discuss watershed functions.

(o)(8) *Credit release schedule.* One commenter recommended that the rule include a provision to ensure that mitigation credit releases are equivalent for all mitigation providers. One commenter said that § 332.8(k)(7)–(8) [§ 230.98(k)(7)–(8)] of the proposed rule should be revised to apply equivalent credit release standards for all sources of mitigation, not just mitigation banks. This commenter also recommended that the rule specify an initial release amount so that the amount does not vary significantly across the country as it does today. One commenter suggested that credit releases prior to the achievement of any performance standards should be restricted to no more than 15 percent of the total estimated credits to be generated by a mitigation bank. Another commenter recommended that the agencies remove the provision that district engineers must approve credit releases because the Corps has the monitoring period to ensure compliance with performance standards and has the ability to prevent future credit sales until satisfactory remediation takes place.

In the final rule, we have developed similar standards for credit releases for mitigation banks and in-lieu fee programs that take into account the fundamental differences between these two forms of third party mitigation. Similar to the credit release schedule for a mitigation bank site, each approved in-lieu fee project will have a credit release schedule. The credit release

schedule for an in-lieu fee project will be based on its approved mitigation plan. In terms of credit release schedules, the difference between mitigation banks and in-lieu fee programs lies with the initial debiting for mitigation banks provided under § 332.8(m) [§ 230.98(m)] and the advance credits allowed for in-lieu fee programs under § 332.8(n) [§ 230.98(n)]. For permittee-responsible mitigation, it is usually not feasible or practicable to require advance compensatory mitigation, although we are reducing the risks associated with permittee-responsible mitigation by requiring, to the maximum extent practicable, implementation of those compensatory mitigation projects in advance or concurrent with the activity causing the authorized impacts (see § 332.3(m) [§ 230.93(m)]). We are also allowing district engineers to not require additional compensation for temporal losses when project sponsors initiate compensation prior to or concurrent with permitted impacts, as a further incentive for timely mitigation.

We do not believe it would be appropriate to specify a particular amount for the initial debiting for mitigation banks. There are a variety of factors that can affect the initial debiting, such as the type of compensatory mitigation being done at the mitigation bank and the assurances that are required to be in place for the initial debiting to occur. It is necessary for district engineers to approve credit releases, to ensure that all applicable criteria are met, and that those credits are acceptable for providing compensatory mitigation for DA permits.

One commenter supported the principle underlying § 332.8(k)(7) [§ 230.98(k)(7)] of the proposed rule, which ties credit release to performance-based milestones, but has experienced disparate practices across the country.

The performance-based milestones that will be used to establish credit release schedules will be based on the specific attributes of the aquatic resource restoration, establishment, enhancement, and/or preservation activity that is being conducted to generate credits at the mitigation bank or in-lieu fee project. Section 332.1(e) [§ 230.91(d)] states that where appropriate, district engineers shall account for regional characteristics when determining performance standards for compensatory mitigation projects. This principle applies to mitigation banks and in-lieu fee projects, as well as permittee-responsible mitigation.

We have revised § 332.8(o)(8) [§ 230.98(o)(8)] to clarify the requirements for credit release schedules. Subparagraph (i) discusses general considerations for credit release schedules. We have removed considerations of initial capital costs needed to establish a mitigation bank, since the credit release schedule is to be based on an approved mitigation plan and its ecological performance standards. We have added subparagraph (ii) to this subsection to describe the credit release schedule for a single-site mitigation bank. We have added subparagraph (iii) to this subsection to address credit release schedules for in-lieu fee projects and umbrella mitigation bank sites, since in-lieu fee projects and umbrella mitigation bank sites are usually identified after the instrument is approved.

In the second sentence of § 332.8(o)(8)(i) [§ 230.98(o)(8)(i)], the final rule states that the credit release schedule should reserve a significant share of the total credits for release only after full achievement of ecological performance standards. What constitutes a significant share is at the discretion of the district engineer, after consulting with the IRT and may vary depending on the nature of the mitigation compensatory project and the risks and uncertainty associated with successful completion of that mitigation project. "Significant share" does not necessarily mean a majority. Rather, for the purposes of this paragraph, the term "significant share" refers to a proportion of projected credits that will provide the sponsor with a significant incentive to complete a mitigation bank or in-lieu fee project and ensure that all performance standards are achieved.

(o)(9) Credit release approval. Two commenters recommended that § 332.8(k)(8) [§ 230.98(k)(8)] of the proposed rule establish a time frame for the district engineer to make a final decision on credit release. One commenter said that 45 to 60 days is a more appropriate time frame for the IRT to review a request for credit release. According to another commenter, if the district engineer fails to approve or deny the release of credits within 45 days of submittal of appropriate documentation, the credit release should be deemed approved. One commenter stated that the Corps does not have enough staff to make site visits to determine if the appropriate milestones for a release of credits have been achieved.

We have added a time frame for district engineers to make decisions on requests for credit releases. The time frame is based on the date the comment period for the IRT ends. The last

sentence of § 332.8(o)(9) [§ 230.98(o)(9)] states that district engineers shall make decisions within 30 days of the end of the comment period. The IRT must provide comments within 15 days of receiving documentation showing that appropriate milestones have been achieved, unless the district engineer determines that a site visit is necessary to approve credit releases. In this case, the IRT members have 15 days from the date of the site visit to provide their comments. The timing for site visits may be affected by a variety of factors, such as seasonal conditions that may impair the ability of the district engineer and the IRT members to evaluate the ecological conditions at the mitigation bank site or the in-lieu fee project site. We have revised § 332.8(o)(9) [§ 230.98(o)(9)] to require district engineers to schedule site visits as soon as it is practicable to do so. The need to conduct site visits to evaluate requests for credit releases is at the discretion of the district engineer. The rule allows a total of 45 days for the district engineer to make a decision after distributing documentation to the IRT, or after the site visit, whichever is later. We believe this is a reasonable time frame that appropriately balances the need of the project sponsor for timely credit releases with the need to ensure that performance based milestones have indeed been met before credits are released.

Two commenters said that credits should not be released from a mitigation bank until it is functioning in a manner that replaces the functions and values of the impacted aquatic resource. One commenter said that limiting the time and availability of releases of credits significantly diminishes the value of the mitigation bank and provides significant disincentives to investing in mitigation banks. One commenter suggested that, if projected mitigation credits are released before a performance milestone is reached, the purchaser of the credits should agree to assume responsibility for providing the compensatory mitigation, in the event of a default by the sponsor of the mitigation bank.

As stated in § 332.8(o)(8) [§ 230.98(o)(8)], credit releases are to be tied to performance based milestones, and a significant share of credits should not be released until the ecological performance standards are fully achieved. Linking credit release approval to the functions and values of the aquatic resources impacted by activities authorized by DA permits is impractical to implement. Credit releases must be tied to achievement of the performance based milestones of a mitigation bank site or an in-lieu fee

program site. The number and type of credits that a permittee is required to secure from a mitigation bank or in-lieu fee program sponsor is to be determined by the district engineer at the time of permit issuance, after considering the functions that will be lost as a result of the permitted activity.

The responsibility for providing the required compensatory mitigation is transferred from the permittee to the third-party mitigation sponsor after the permittee takes the necessary steps to secure those credits and the district engineer has received the appropriate documentation in accordance with § 332.3(l) [§ 290.93(l)]. If the mitigation bank or in-lieu fee project does not achieve its performance milestones or standards, the district engineer will take appropriate action, which may include suspending credit sales or terminating the instrument (see § 332.8(o)(10) [§ 230.98(o)(10)]).

Adjustments to credit totals and release schedules. In § 332.8(k)(9)(i) [§ 230.98(k)(9)(i)] of the proposed rule, we had a provision that would have allowed a sponsor to submit documentation to the district engineer to request adjustments to credit totals and credit release schedules for mitigation banks that develop aquatic resource functions substantially in excess of the credit totals and credit release schedules specified in the original approved instrument.

Two commenters objected to this proposed provision, stating that it could create an incentive for setting low performance standards and result in credits from the same acreage being sold as compensatory mitigation for more than one project. Two commenters did not agree that there could be a reasonable circumstance in which "excess" credits could be generated by a mitigation bank. According to one commenter, this provision would be difficult to apply fairly since the assessment of whether a compensatory mitigation project site has merely met its anticipated aquatic functions or substantially exceeded them could be quite contentious and subjective. Two commenters recommended that "acres and linear feet" not "functions" should be the basis of credit adjustments because most areas of the country have not developed function assessment methodologies. One commenter said that an administrative appeals process should be available for any adjustments of credits.

In response to these comments, and after considering the potential difficulties in implementation, we have removed this provision from the final rule. In general, the performance

standards for a mitigation bank or in-lieu fee project should reflect high functioning resources. Thus, it is unlikely that the functional lift provided at a site will “exceed” what is required to meet performance standards. The agencies agree that trying to identify “excess” functional lift would be contentious and potentially arbitrary. If a mitigation bank site or an in-lieu fee project site results in substantially more acres or linear feet of established, enhanced, restored or preserved aquatic resource than was originally anticipated when the mitigation plan and associated credit release schedule were approved, the sponsor can request a modification in accordance with the procedures at § 332.8(g) [§ 230.98(g)]. As discussed elsewhere in this preamble, we have not provided an administrative appeal process for third-party mitigation activities.

(o)(10) Suspension and termination. Two commenters said that the district engineer should not suspend credit sales for credits already released. One commenter stated that if a mitigation bank is not meeting performance standards or is not in compliance with monitoring requirements, reduction or suspension of credits should be a mandatory penalty, to provide an incentive for mitigation bank sponsors to monitor their sites.

We have modified the proposed § 332.8(k)(9)(ii) [§ 230.98(k)(9)(ii)] so that it applies to mitigation banks and in-lieu fee programs. We have also amended this paragraph to state that the district engineer will take appropriate action if the mitigation bank or in-lieu fee program is not meeting performance standards or complying with the terms of its instrument. Appropriate action may include suspending credit sales, adaptive management, decreasing available credits, utilizing financial assurances, or terminating the instrument.

Except for advance credits for in-lieu fee programs, credit releases should not occur unless the mitigation bank or in-lieu fee project is meeting the applicable milestones specified in the credit release schedule. If those milestones are not being satisfied, the credits do not become available for fulfilling the compensatory mitigation requirements for DA permits. In such cases, adaptive management or other measures may be required to achieve the performance that will result in a credit release. The district engineer needs some flexibility to determine the appropriate response when performance standards are not being met on schedule. In some cases, a little more time may be adequate, in other cases more active adaptive

management may be needed. District engineers will take appropriate action to ensure compliance with monitoring requirements, which, unlike ecological performance standards, are under the full control of the project sponsor. We believe that the provisions at § 332.8(o)(10) [§ 230.98(o)(10)] contain appropriate incentives to ensure performance of third-party mitigation and associated requirements (e.g., monitoring).

(p) Accounting procedures. To help clarify the requirements for tracking credit production and credit transactions among sponsors and permittees, we have added a new paragraph to this section. Section 332.8(p)(1) [§ 230.98(p)(1)] contains the requirements that were in § 332.8(l)(1) [§ 230.98(l)(1)] of the proposed rule. It requires mitigation bank sponsors to establish and maintain ledgers to account for all credit transactions. As each approved credit transaction occurs, the sponsor must notify the district engineer. This will help ensure that a mitigation bank credit is not sold or transferred to more than one permittee.

Since this rule includes in-lieu fee programs, we have added § 332.8(p)(2) [§ 230.98(p)(2)] to require in-lieu fee program sponsors to establish and maintain annual report ledgers, as well as individual ledgers for tracking released credits provided by in-lieu fee projects. Annual report ledgers must be done in accordance with the requirements for in-lieu fee program accounts at § 332.8(i)(3) [§ 230.98(i)(3)].

(q) Reporting. (1) Ledger account. Two commenters requested that the rule clarify: (1) The information included in the annual report compared to the information included in the updated ledger, and (2) the role of the IRT in reviewing the annual report. One commenter suggested that the ledger account include a description of the type and location of wetlands filled for all credit transactions. One commenter said that ledger accounts should be standardized for easy comparison across mitigation banks.

To assist in the accounting procedures required by § 332.8(p) [§ 230.98(p)], § 332.8(q)(1) [§ 230.98(q)(1)] describes the information required for ledger reports. Ledger reports must show the beginning and ending balances of available credits and permitted impacts (i.e., debits) for each resource type, all credit additions and subtractions, and other changes in credit availability, such as the release of additional credits or the suspension of credit sales. Members of an IRT can review ledger reports, and if they have concerns over the use of credits, they may invoke the procedures

in § 332.8(s) [§ 230.98(s)]. This rule addresses the minimum requirements for ledgers. District engineers can develop ledger templates for use in their districts.

(q)(2) Monitoring reports. Three commenters stated that the rule should require annual monitoring reports. One commenter believed that monitoring reports for mitigation banks should be required at least after one, three, and five years. Several commenters suggested that monitoring reports should be made available for public review. Other commenters stated the need for built-in, agreed-upon enforcement penalties for failure to submit accurate, timely, and complete reports as required by the plan and the permit. One commenter asked for clarification for the actions taken in the event of a bankruptcy. One commenter supported the standardization of monitoring reports, including attachments of the raw data so that results can be verified, or more easily checked in the field.

Monitoring requirements, including the frequency for providing monitoring reports to the district engineer and the IRT, will be determined on a case-by-case basis and specified in either the instrument or approved mitigation plans. As stated in § 332.6(c)(3) [§ 230.96(c)(3)], monitoring reports must be provided to interested agencies and the public upon request. Failure to submit required monitoring reports may result in suspension of credit sales or termination of the instrument (see § 332.8(o)(10) [§ 230.98(o)(10)]). The required content of monitoring reports for mitigation banks and in-lieu fee projects will be determined by district engineers, in consultation with the IRTs. Monitoring report templates can be developed by district engineers, to provide a standard format for those documents.

(q)(3) Financial assurance and long-term management funding report. To improve the oversight of financial assurances and long-term management funding, we have added a provision to this rule that allows district engineers to require sponsors to provide annual reports showing balances of accounts for financial assurances and long-term management. These reports should also document the status of financial assurances, including when they might expire.

(r) Use of credits. Two commenters recommended that the rule include language clarifying that credits that are withdrawn from a mitigation bank, but are not used because the permitted impacts did not occur, may be reinstated into the mitigation bank. One

commenter did not agree that any authorized activity should be eligible to use a mitigation bank to compensate for unavoidable impacts to aquatic resources. One commenter said that selling mitigation credits by wetland type does not provide any additional environmental benefit and will lead to confusion.

We have revised this paragraph to clarify that it is the district engineer's decision whether to allow the use of credits from mitigation banks or in-lieu fee programs to provide compensatory mitigation for a particular activity authorized by a DA permit. If a permittee secures third-party credits from a sponsor, but decides not to proceed with the authorized work, he or she should notify the district engineer. It is at the sponsor's discretion whether to buy back any unused credits. Any such transactions should be documented in the ledger reports required by § 332.8(q)(1) [§ 230.98(q)(1)]. Categorizing credits by aquatic resource type helps account for in-kind mitigation versus out-of-kind mitigation. Other metrics can also be used to track credit types. The instrument should specify how credits are to be categorized for accounting purposes for a mitigation bank or in-lieu fee program.

(s) IRT concerns with use of credits. We have modified this paragraph to include in-lieu fee programs. We have added a sentence to the end of this paragraph to stipulate that nothing in these regulations governing mitigation banks and in-lieu programs limits the authorities designated to IRT agencies under existing statutes or regulations.

(t) Site protection. One commenter stated that the rule should not require aquatic resources replaced by the mitigation bank to be afforded long-term protection through "real estate instruments." Another commenter said that all compensatory mitigation projects that require a real property protection instrument should also require a long-term funding mechanism to ensure compliance monitoring of the long-term protection instrument.

The goal of the rule is to ensure permanent protection of all compensatory mitigation project sites. Specifically the rule states that the aquatic habitats, riparian areas, buffers, and uplands that comprise the overall compensatory mitigation project must be provided long-term protection through real estate instruments or other available mechanisms. As stated in the rule, any provisions necessary for long-term management, including compliance monitoring, must be addressed in the original permit or instrument.

We added this section to the final rule to clarify that real estate instruments, management plans, or other long-term protection mechanisms used for long-term protection must be finalized before any mitigation bank credits can be released. For in-lieu fee programs, real estate instruments, management plans, or other long-term protection mechanisms used for long-term protection must become finalized before any credits can be released for individual projects and used to fulfill advance credits or sold to permittees.

(u) Long-term management. One commenter noted that many long-term management organizations will not commit to managing a compensatory mitigation site until the site is well established, which may be five years after the instrument is signed. Therefore, the party responsible for the long-term management may not be known at the time the instrument is approved. This commenter said that the rule should include a sentence that allows for flexibility in when this party is identified.

Section 332.8(u)(2) [§ 230.98(u)(2)] states that the instrument may contain provisions allowing the sponsor to transfer long-term management responsibilities to another party, such as a public agency, non-governmental organization, or private land manager, with approval from the district engineer. Therefore, this rule provides the flexibility to change the party responsible for the required long-term management.

In § 332.8(u)(1) [§ 230.98(u)(1)] we have added language clarifying that for umbrella mitigation banks and in-lieu fee programs, the legal mechanism and the party responsible for long-term management of the compensatory mitigation project site must be documented in the approved mitigation plans. We have also added a sentence to the end of this paragraph to state that the long-term management plan should include a description of long-term management needs and identify the funding mechanism that will be used to meet those needs.

We have added § 332.8(u)(3) [§ 230.98(u)(3)], which stipulates that funding mechanisms for long-term management must be described in the instrument or approved mitigation plan. Section 332.8(u)(4) [§ 230.98(u)(4)] addresses the acquisition and protection of water rights. For umbrella mitigation banks and in-lieu fee projects, the acquisition and protection of water rights is to be documented in the approved mitigation plans.

(v) Grandfathering of existing instruments. Two commenters

supported the proposed grandfathering for existing mitigation banks. Four commenters, however, said that the rule should provide a schedule whereby all existing mitigation banks will be brought into compliance with the new guidelines. According to one commenter, five years may be too short a time period for in-lieu fee programs to effectively transition to a mitigation bank. Another commenter said that the timeline is too restrictive and requests that it be extended.

For mitigation banks, § 332.8(v)(1) [§ 230.98(v)(1)] states that mitigation banks approved before July 9, 2008 may continue to operate under the terms of their existing instruments. However, any modification of that instrument must be consistent with the terms of this part. Such modifications include the expansion of an existing mitigation bank site or the addition of another type of credits to a mitigation bank.

For in-lieu fee programs, § 332.8(v)(2) [§ 230.98(v)(2)] requires that all in-lieu fee programs approved on or after July 9, 2008 must meet the requirements of this part. For in-lieu fee programs operating under instruments approved before July 9, 2008, those programs may continue to operate under their instruments for two years after the effective date of this rule. The purpose of the grandfathering period is to allow time for the in-lieu fee program to conform its instrument to the requirements of today's rule. The district engineer may, in consultation with the IRT, extend the grandfathering period by up to an additional three years where there is good cause, and the in-lieu fee program is providing appropriate compensatory mitigation in a timely manner. An example of good cause would be an extension to allow an existing in-lieu fee program that supports a programmatic general permit or a regional general permit to continue to operate until that general permit expires. We have also added a provision allowing a project constructed under the terms of a previous instrument to continue operating under those terms indefinitely, provided the district engineer determines that the project is providing appropriate mitigation substantially consistent with the terms of this part. This provision is parallel to the grandfathering allowed for existing mitigation banks. The agencies see no value in requiring the terms for a previously constructed in-lieu project to be revised in this situation.

Proposed Elimination of In-Lieu Fee Programs

Many commenters, including the representatives of 29 states, stated that

in-lieu fee programs should not be eliminated. A number of commenters said that elimination of in-lieu fee programs would decrease the number of mitigation options and thus lead to less compensatory mitigation. Many commenters stated that in certain areas, especially in rural and coastal regions, the West, and Alaska, there are few mitigation banks and little incentive to establish mitigation banks. In these areas, in-lieu fee programs are the only available option for compensatory mitigation. Many commenters said that in-lieu fee programs offer more flexibility in site selection and can target specific resources, enhancing functions that are outside of a real estate boundary. One commenter also noted that if compensatory mitigation is to be based on a watershed approach, in-lieu fee programs will always be needed in watersheds that do not have mitigation banks. Several commenters said that the under-performance of many current in-lieu fee programs is the result of the structure of existing policies rather than the compensatory mitigation mechanism, and that these problems could be alleviated by making specific and targeted improvements and establishing and enforcing consistent program standards. Some commenters stated that by eliminating in-lieu fee programs, the proposed rule is inappropriately promoting for-profit mitigation banking. Instead of eliminating in-lieu fee programs, these commenters said that equivalent standards should be established that are based on ensuring successful and sustainable aquatic resource functions, not economic viability. Five commenters suggested that the rule stipulate that where the service areas of an in-lieu fee program and a mitigation bank overlap, the mitigation bank should have preference as a credit provider.

After carefully considering the comments received in response to the proposed rule, including the responses to the questions we posed in the preamble to the proposal, we have retained in-lieu fee programs as a separate mechanism for providing compensatory mitigation for DA permits. Several commenters provided suggested regulations for in-lieu fee programs, and we have evaluated that language as we developed this final rule. Where the in-lieu fee program regulations differ from the rules for mitigation banks, we believe we have adopted standards and criteria that will result in successful in-lieu fee programs that will provide compensatory mitigation in a timely manner, with a

high level of accountability. We also recognize that in-lieu fee programs can actively support a watershed approach to compensatory mitigation, and can help advance goals for protecting and restoring aquatic resources within watersheds, especially in areas where there are no mitigation banks. To further this goal, we have added a requirement for in-lieu fee programs to develop a compensation planning framework as part of their instrument that identifies watershed needs and priorities and explains how the in-lieu fee program will target its mitigation activities to those needs and priorities. In § 332.3(b) [§ 230.93(b)], we have established a hierarchy for district engineers to consider compensatory mitigation options, with a preference for mitigation bank credits because those credits are usually more developed at the time the impacts to waters of the United States authorized by the DA permit are expected to occur.

Other commenters supported the elimination of in-lieu fee programs as proposed in the rule. Several commenters said that in-lieu fee arrangements should not have different standards than mitigation banks and permittee-responsible mitigation. One commenter suggested that mitigation providers currently operating under in-lieu fee arrangements should be required to submit applications to become mitigation banks within one year of the final rule. Those in-lieu fee programs that do not submit a proposal on time could no longer accept fees; those that do submit a proposal could continue to operate until two years after the promulgation of the final rule. Some commenters also noted that, unlike in-lieu fee programs, mitigation banks are self-implementing and have a financial incentive to perform. One commenter stated that mitigation banks are more suitable to handle compensatory mitigation needs and have a more sufficient mechanism to ensure accountability and adequate financial assurances and measurable performance standards. Others said that the quality of land used in in-lieu fee programs is poor and that the suspension of such programs would improve the performance and accountability of the mitigation program. Some commenters stated that in-lieu fee programs are not adequately capitalized to complete meaningful projects and must use funds for administrative and operations costs. Another commenter stated that cost estimates for in-lieu fee programs are almost always too conservative and seldom cover additional expenses incurred in the administration of the in-

lieu fee program, maintenance, and management of aquatic resources, or correction of failures.

After evaluating the comments received in response to the proposed rule, we have determined that it is not appropriate to require in-lieu fee programs to be modified to comply with exactly the same standards as mitigation banks. The fundamental difference between mitigation banks and in-lieu fee programs is timing, and the difference in timing is due to the need for in-lieu fee programs to accumulate funds before they can secure sites, design and plan aquatic resource restoration, establishment, enhancement, and/or preservation activities, and implement those activities. Unlike commercial mitigation bank sponsors, in-lieu fee program sponsors usually do not have funds available to secure and develop prospective compensatory mitigation projects. Because mitigation bank projects are usually further along in implementation than in-lieu fee programs or permittee-responsible mitigation, we have established a preference for the use of mitigation bank credits at § 332.3(b)(2) [§ 230.98(b)(2)]. However, in-lieu fee programs can provide other benefits that we believe justify allowing them to operate under slightly different requirements. In particular, they can perform more thorough watershed planning than is often done by banks, and may be able to better target their activities to watershed needs and priorities. There is no basis for the assertion that land used for in-lieu fee projects is of poor quality. There are successful in-lieu fee programs operating in different areas of the country, and we have looked at how those programs are structured when writing this final rule. To provide greater accountability in the use of funds collected in advance of project approval and construction, we have added a provision requiring in-lieu fee programs to segregate funds collected from permittees in a program account, with provisions in the instrument that will allow the district engineer to redirect those funds to other mitigation activities if the program does not provide the required mitigation in a timely manner. This rule acknowledges that there are administrative costs associated with operating in-lieu fee programs, and a small percentage of fees collected from permittees (to be determined by the district engineer and specified in the instrument) can be used to defray those administrative costs.

Commenters suggested various time frames for the proposed phase-out of in-lieu fee programs: One year, two years,

three years, and five years. One commenter said current in-lieu fee program instruments should be allowed to continue as long as is necessary to fully fund already established and approved projects. Another commenter stated that stream in-lieu fee programs should take longer to phase out. Another commenter proposed that the phase-out period include a proportional reduction of activity of in-lieu fee programs on the basis of the percentage of money collected as the time nears for the program to end.

Section 332.8(v)(2) [§ 230.98(v)(2)] addresses the transition for current in-lieu fee programs to the requirements in this rule. It provides 2 years, with a possible extension of up to 3 additional years, for in-lieu fee programs to obtain an approved instrument that meets the requirements of this rule. It also allows projects already constructed under the terms of a prior instrument to continue operating under those terms, provided the project is providing appropriate mitigation that is substantially consistent with the requirements of the rule. We are retaining in-lieu fee programs, so § 332.9 [§ 230.99] has not been included in this final rule.

One commenter proposed that the rule include provisions requiring data collection on the part of in-lieu fee programs so regulators can determine if these programs are functioning in an equitable manner.

The rule significantly expands the tracking and reporting requirements for in-lieu fee programs in order to improve in-lieu fee program performance and accountability (see § 332.8(i) [§ 230.98(i)]).

EPA Regulations at 40 CFR Part 230

40 CFR 230.12 Findings of Compliance or Non-Compliance With the Restrictions on Discharge Referencing New Subpart J

We received no comments, and therefore this provision is adopted as proposed.

40 CFR Part 230 Subpart H—Actions To Minimize Adverse Effects

We received no comments, and therefore this provision is adopted as proposed.

40 CFR 230.75 Actions Affecting Plant and Animal Populations, Conforming Changes Referencing New Subpart J

We received no comments, and therefore this provision is adopted as proposed.

Comments on Administrative Requirements

One commenter stated that if the rule adopts a broad definition of watershed plan, it would allow guidance documents that may not have been through a regulatory review process to become federal permit requirements. The commenter believes that this would violate the Administrative Procedure Act (APA).

Watershed plans prepared for the purpose of implementing a watershed approach to compensatory mitigation are not a federal permit requirement, either because of this rule, or through special conditions of DA permits. The final rule states that district engineers will use the watershed approach to guide compensatory mitigation decisions, to the extent appropriate and practicable. Mitigation decisions are based on a number of factors in addition to the watershed approach, and the specific compensatory mitigation option required by the district engineer will be determined in accordance with the requirements of this part and other applicable regulations, and will be included as part of the special conditions of the DA permit. Any watershed plan that was used to help guide the selection, however, is not a permit condition.

Environmental Assessment/Regulatory Analysis

Two commenters said that the draft Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) prepared for this rule fail to assess the potentially significant adverse environmental effects of the new rule, and fail to consider a reasonable range of alternatives. One commenter requested that an environmental impact statement be prepared on this proposed rule because it will have a significant adverse impact on the environment by allowing more filling of existing wetlands. Two other commenters requested that an environmental impact statement be prepared to address the long-term cumulative loss of existing wetlands due to the Corps' regulatory program and its reliance on mitigation banking to compensate for wetland losses from non-water dependent activities. However, one commenter stated that the implementation of the rule as proposed does not have environmental impacts, and the draft environmental assessment seems to stretch to find changes in the physical and human environment that may result from implementation of the proposed rule. This commenter also said that the draft environmental assessment relies

too heavily on the watershed approach as the factor that may improve the performance of wetland mitigation. It would be more accurate to identify the "level playing field" aspect of the proposed rule as the key change from current practices. Another commenter noted that the draft environmental assessment for the proposed rule does not include any data on the number of stream impacts permitted or the amount of stream compensatory mitigation required.

We believe that the environmental assessment addresses a sufficient number of alternatives. This rule is intended to improve the performance of compensatory mitigation required for DA permits, which will reduce cumulative wetland losses. Since this rule was developed by examining existing practices, and adopting measures to improve those practices, there are unlikely to be substantive changes to the physical and human environment, other than improved performance of aquatic resource restoration, establishment, enhancement, and preservation activities. By developing, to the extent practicable, equivalent standards for permittee-responsible mitigation, mitigation banks, and in-lieu fee programs, and using a watershed approach, we believe that this rule will improve performance. The Corps has not collected data on stream impacts and compensatory mitigation, so we did not have such data to use in the environmental assessment.

E.O. 13132—Federalism

One commenter stated that the proposed rule has federalism impacts that were not addressed in the preamble, as it would seriously limit state authority regarding mitigation.

We do not agree that the final rule limits any state's authority regarding compensatory mitigation. States may continue to apply any compensatory mitigation requirements for state regulatory programs that they determine to be appropriate. This rule establishes requirements for permittees who must perform compensatory mitigation for DA permits, including mitigation banks and in-lieu fee programs. All section 404 permits, including their mitigation requirements, remain subject to state review and approval through the water quality certification required under section 401 of the CWA.

Unfunded Mandates Reform Act

One commenter said that the cost of developing a comprehensive watershed assessment and plan is much higher than described in the draft

environmental assessment. This commenter noted that the rule increases flexibility because of the increased number of compensatory mitigation opportunities that are identified, but also increases the costs because of the increased number of sites that must be evaluated to see if they will satisfy the goals and technical parameters for successful compensatory mitigation. This commenter also recommended that this rule be re-evaluated for its compliance with the Unfunded Mandates Reform Act. Another commenter supported additional funding for agencies that will be members of the Interagency Review Team (IRT).

This rule does not require the development of watershed plans. If there is an existing watershed plan, the district engineer may determine that it is appropriate for use in the watershed approach. Requiring more careful consideration of potential compensatory mitigation sites does not constitute an unfunded mandate. Instead, it is merely a means to achieve compliance with permit conditions and third-party mitigation instruments. Although this rule encourages the participation of other agencies on IRTs, such participation is not required, and therefore does not constitute an unfunded mandate.

E.O. 13211—Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

One commenter stated that it is not clear that the proposed regulations do not have the potential to have an “adverse effect on energy supply, distribution, or use.” The commenter believes that this particular rule will result in additional consultation and reporting obligations for the applicant, as well as an additional burden to an already strained Corps review staff and resources. Another commenter argued that the proposed rule could significantly impact the viability of energy exploration and development in Alaska by increasing costs of compensatory mitigation, requiring specific kinds of financial assurances, and in general removing the flexibility needed to work effectively in the state.

The final rule does not significantly alter permitting processes for energy projects. It has been developed from existing practices, and does not change the circumstances under which compensatory mitigation is required. This rule provides requirements to help ensure that the required compensatory mitigation meets its objectives and successfully replaces aquatic resource functions that are lost as a result of the

permitted impacts. District engineers still have the flexibility to tailor compensatory mitigation requirements to permit-specific circumstances.

National Technology Transfer and Advancement Act

One commenter identified a typographical error in the preamble description of the National Technology Transfer and Advancement Act, which we have corrected.

VII. Administrative Requirements

Plain Language

In compliance with the principles in the President’s Memorandum of June 1, 1998 (63 FR 31855), regarding plain language, this preamble is written using plain language. The use of “we” in this notice refers to the Corps and EPA. We have also used the active voice, short sentences, and common everyday terms except for necessary technical terms.

Paperwork Reduction Act

This action will impose a new information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*). Applicants for Clean Water Act section 404 permits will be required, under 33 CFR 325.1(d)(7) of the final rule, to submit a statement explaining how impacts associated with the proposed activity are to be avoided and minimized. This statement must also describe any proposed compensatory mitigation for impacts to waters of the United States, or include an explanation of why compensatory mitigation should not be required. In addition, in-lieu fee program sponsors must provide additional information as part of their application for an instrument, beyond what was previously required. Specifically, they must include a compensation planning framework, and information describing their program account. Both in-lieu fee programs and mitigation banks are also subject to new annual reporting requirements, including a ledger report and, at the discretion of the district engineer, reporting on financial assurances and long-term management. Some other reporting requirements, such as monitoring reports and most of the information required to apply for an instrument, are substantially the same as existing requirements.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid Office of Management and Budget (OMB) control number. For the Corps Regulatory Program under section 10 of

the Rivers and Harbors Act of 1899, section 404 of the Clean Water Act, and section 103 of the Marine Protection, Research and Sanctuaries Act of 1972, the current OMB approval number for information collection requirements is maintained by the Corps of Engineers (OMB approval number 0710–0003, which expires on April 30, 2008). As a result of the new information collection requirement in the final rule, we will modify our standard permit application form in accordance with the requirements of the Paperwork Reduction Act. The Corps is currently preparing a revised ICR that includes the new requirements in this final rule, along with an estimate of their associated burden. The new burden associated with this rule includes the estimated number of hours needed to: (1) Prepare a compensation planning framework for a proposed in-lieu fee program, (2) provide a description of the in-lieu fee program account, (3) prepare annual reports required for mitigation banks and in-lieu fee programs, such as financial assurance and long-term management funding reports, and (4) provide annual monitoring reports for mitigation banks and in-lieu fee projects.

We estimate that it will take approximately 80 hours for a prospective in-lieu fee sponsor to develop a compensation planning framework. A description of a proposed in-lieu fee program account will take approximately 12 hours to complete. We estimate that, over the next three years, there will be eight existing in-lieu fee programs per year that will convert to the requirements of this rule and two new in-lieu fee programs proposed per year, resulting in an annual burden of 920 hours to produce those documents. We estimate that an average of 8 hours will be needed to produce an annual report for a mitigation bank or in-lieu fee program. To produce a monitoring report for a mitigation bank or in-lieu fee project, we estimate that 80 hours will be needed. We also estimate that there will be 391 existing mitigation banks, 25 new mitigation banks, 58 existing in-lieu fee programs, and 2 new in-lieu fee programs that would be required to produce annual reports and monitoring reports each year. Based on an estimate of the number of existing and new mitigation banks and in-lieu fee programs, we estimate that the annual burden for producing these annual reports and monitoring reports will be 42,000 hours.

We are in the process of preparing a new information collection request that will include the information collection burden associated with the approval

and oversight of mitigation banks and in-lieu fee programs. These requirements to do not become effective until approved by OMB.

Executive Order 12866

Under Executive Order 12866 (58 FR 51735, October 4, 1993), we must determine whether the regulatory action is “significant” and therefore subject to review by OMB and the requirements of the Executive Order. The Executive Order defines “significant regulatory action” as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President’s priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, we have determined that the final rule is a “significant regulatory action” and the draft was submitted to OMB for review.

The regulatory analysis required by E.O. 12866 has been prepared for this final rule. The regulatory analysis is available on the internet at: <http://www.usace.army.mil/inet/functions/cw/cecwo/reg/citizen.htm>. It is also available by contacting Headquarters, U.S. Army Corps of Engineers, Operations and Regulatory Community of Practice, 441 G Street, NW., Washington, DC 20314–1000.

Executive Order 13132

Executive Order 13132, entitled “Federalism” (64 FR 43255, August 10, 1999), requires the Corps to develop an accountable process to ensure “meaningful and timely input by state and local officials in the development of regulatory policies that have Federalism implications.” The final rule does not have Federalism implications. We do not believe that the final rule will have substantial direct effects on the states, on the relationship between the federal government and the states, or on the distribution of power and responsibilities among the various levels of government. The final rule does not impose new substantive

requirements. In addition, the final rule will not impose any additional substantive obligations on state or local governments. State and local governments that administer in-lieu fee programs to provide compensatory mitigation for impacts to wetlands and other aquatic resources can modify their in-lieu fee programs to conform with the requirements of this final rule. Therefore, Executive Order 13132 does not apply to this final rule. However, in the spirit of Executive Order 13132, we specifically requested comment from state and local officials on the proposed rule, and fully considered those comments when preparing this final rule.

Regulatory Flexibility Act, as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996, 5 U.S.C. 601 et seq.

The Regulatory Flexibility Act generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice-and-comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations and small governmental jurisdictions.

For purposes of assessing the impacts of this final rule on small entities, a small entity is defined as: (1) A small business based on Small Business Administration size standards; (2) a small governmental jurisdiction that is a government of a city, county, town, school district, or special district with a population of less than 50,000; or (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

The statutory basis for the final rule is section 314 of the National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108–136), which is discussed above. After considering the economic impacts of the final rule on small entities, we certify that this action will not have a significant impact on a substantial number of small entities. Small entities subject to the final rule include those small entities that need to obtain DA permits pursuant to section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act of 1899.

This rulemaking will not significantly change compensatory mitigation requirements, or change the number of permitted activities that require compensatory mitigation. This rule

further clarifies mitigation requirements established by Corps and EPA, and is generally consistent with current agency practices. Some provisions of the rule may result in increases in compliance costs, other provisions may result in decreases in compliance costs, but most of the provisions in the rule are expected to result in little or no changes in compliance costs. To the extent that it promotes mitigation banking and in-lieu fee programs, the rule may lower compensatory mitigation costs for small projects by making credits more widely available. For a more detailed analysis of potential economic impacts of this rule, please see the regulatory analysis in the Environmental Assessment prepared for the final rule.

Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for federal agencies to assess the effects of their regulatory actions on state, local, and tribal governments and the private sector. Under section 202 of the UMRA, the agencies generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with “federal mandates” that may result in expenditures to state, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year. Before promulgating a rule for which a written statement is needed, section 205 of the UMRA generally requires the agencies to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows an agency to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the agency publishes with the final rule an explanation why that alternative was not adopted. Before an agency establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed, under section 203 of the UMRA, a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of regulatory proposals with significant federal intergovernmental mandates, and informing, educating, and advising

small governments on compliance with the regulatory requirements.

The final rule is generally consistent with current agency practice and we have therefore determined that it does not contain a federal mandate that may result in expenditures of \$100 million or more for state, local, and tribal governments, in the aggregate, or the private sector in any one year. Therefore, the final rule is not subject to the requirements of sections 202 and 205 of the UMRA. For the same reasons, we have determined that the final rule contains no regulatory requirements that might significantly or uniquely affect small governments. Therefore, the final rule is not subject to the requirements of section 203 of UMRA.

Executive Order 13045

Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997), applies to any rule that: (1) Is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that we have reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, we must evaluate the environmental health or safety effects of the proposed rule on children, and explain why the regulation is preferable to other potentially effective and reasonably feasible alternatives.

The final rule is not subject to this Executive Order because it is not economically significant as defined in Executive Order 12866. In addition, it does not concern an environmental or safety risk that we have reason to believe may have a disproportionate effect on children.

Executive Order 13175

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 6, 2000), requires agencies to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." The phrase "policies that have tribal implications" is defined in the Executive Order to include regulations that have "substantial direct effects on one or more Indian tribes, on the relationship between the federal government and the tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes."

The final rule does not have tribal implications. It is generally consistent with current agency practice and will

not have substantial direct effects on tribal governments, on the relationship between the federal government and the tribes, or on the distribution of power and responsibilities between the federal government and tribes. Therefore, Executive Order 13175 does not apply to this final rule. However, in the spirit of Executive Order 13175, we specifically requested comment from tribal officials on the proposed rule, and have fully considered those comments when preparing the final rule.

Environmental Documentation

The Corps has prepared a final Environmental Assessment (EA) and a Finding of No Significant Impact (FONSI) for the final rule. The final EA and the FONSI are available at: <http://www.usace.army.mil/inet/functions/cw/cecwo/reg/citizen.htm>. It is also available by contacting Headquarters, U.S. Army Corps of Engineers, Operations and Regulatory Community of Practice, 441 G Street, NW., Washington, DC 20314-1000.

Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. We will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States.

Executive Order 12898

Executive Order 12898 requires that, to the greatest extent practicable and permitted by law, each federal agency must make achieving environmental justice part of its mission. Executive Order 12898 provides that each federal agency conduct its programs, policies, and activities that substantially affect human health or the environment in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under such programs, policies, and activities because of their race, color, or national origin.

The final rule is not expected to negatively impact any community, and therefore is not expected to cause any

disproportionately high and adverse impacts to minority or low-income communities.

Executive Order 13211

The final rule is not a "significant energy action" as defined in Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law No. 104-113, section 12(d), (15 U.S.C. 272 note), directs us to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs us to provide Congress, through the Office of Management and Budget (OMB), explanations when we decide not to use available and applicable voluntary consensus standards.

This action does not require the use of any particular technical standards. To the extent that functional and condition assessment methods are used to assess impacts to aquatic resources and determine appropriate compensation, district engineers are encouraged to use voluntary consensus methods where available.

List of Subjects

33 CFR Part 325

Administrative practice and procedure, Intergovernmental relations, Environmental protection, Navigation, Water pollution control, Waterways.

33 CFR Part 332

Administrative practice and procedure, Intergovernmental relations, Navigation (water), Water pollution control, Water resources, Watersheds, Waterways.

40 CFR Part 230

Environmental Protection, Water pollution control.

Corps of Engineers

33 CFR Chapter II

■ For the reasons stated in the preamble, the Corps amends 33 CFR chapter II as set forth below:

PART 325—PROCESSING OF DEPARTMENT OF THE ARMY PERMITS

■ 1. The authority citation for part 325 continues to read as follows:

Authority: 33 U.S.C. 401 *et seq.*; 33 U.S.C. 1344; 33 U.S.C. 1413.

■ 2. Amend § 325.1 by redesignating paragraphs (d)(7), (d)(8), and (d)(9) as paragraphs (d)(8), (d)(9), and (d)(10), respectively, and adding new paragraph (d)(7) as follows:

§ 325.1 Applications for permits.

* * * * *

(d) * * *

(7) For activities involving discharges of dredged or fill material into waters of the United States, the application must include a statement describing how impacts to waters of the United States are to be avoided and minimized. The application must also include either a statement describing how impacts to waters of the United States are to be compensated for or a statement explaining why compensatory mitigation should not be required for the proposed impacts. (See § 332.4(b)(1) of this chapter.)

* * * * *

■ 3. Add part 332 to read as follows:

PART 332—COMPENSATORY MITIGATION FOR LOSSES OF AQUATIC RESOURCES

Sec.

332.1 Purpose and general considerations.

332.2 Definitions.

332.3 General compensatory mitigation requirements.

332.4 Planning and documentation.

332.5 Ecological performance standards.

332.6 Monitoring.

332.7 Management.

332.8 Mitigation banks and in-lieu fee programs.

Authority: 33 U.S.C. 401 *et seq.*; 33 U.S.C. 1344; and Pub. L. 108–136.

§ 332.1 Purpose and general considerations.

(a) *Purpose.* (1) The purpose of this part is to establish standards and criteria for the use of all types of compensatory mitigation, including on-site and off-site permittee-responsible mitigation, mitigation banks, and in-lieu fee mitigation to offset unavoidable impacts to waters of the United States authorized through the issuance of

Department of the Army (DA) permits pursuant to section 404 of the Clean Water Act (33 U.S.C. 1344) and/or sections 9 or 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401, 403). This part implements section 314(b) of the 2004 National Defense Authorization Act (Pub. L. 108–136), which directs that the standards and criteria shall, to the maximum extent practicable, maximize available credits and opportunities for mitigation, provide for regional variations in wetland conditions, functions, and values, and apply equivalent standards and criteria to each type of compensatory mitigation. This part is intended to further clarify mitigation requirements established under U.S. Army Corps of Engineers (Corps) and U.S. Environmental Protection Agency (U.S. EPA) regulations at 33 CFR part 320 and 40 CFR part 230, respectively.

(2) This part has been jointly developed by the Secretary of the Army, acting through the Chief of Engineers, and the Administrator of the Environmental Protection Agency. From time to time guidance on interpreting and implementing this part may be prepared jointly by U.S. EPA and the Corps at the national or regional level. No modifications to the basic application, meaning, or intent of this part will be made without further joint rulemaking by the Secretary of the Army, acting through the Chief of Engineers and the Administrator of the Environmental Protection Agency, pursuant to the Administrative Procedure Act (5 U.S.C. 551 *et seq.*).

(b) *Applicability.* This part does not alter the regulations at § 320.4(r) of this title, which address the general mitigation requirements for DA permits. In particular, it does not alter the circumstances under which compensatory mitigation is required or the definitions of “waters of the United States” or “navigable waters of the United States,” which are provided at parts 328 and 329 of this chapter, respectively. Use of resources as compensatory mitigation that are not otherwise subject to regulation under section 404 of the Clean Water Act and/or sections 9 or 10 of the Rivers and Harbors Act of 1899 does not in and of itself make them subject to such regulation.

(c) *Sequencing.* (1) Nothing in this section affects the requirement that all DA permits subject to section 404 of the Clean Water Act comply with applicable provisions of the Section 404(b)(1) Guidelines at 40 CFR part 230.

(2) Pursuant to these requirements, the district engineer will issue an individual section 404 permit only upon

a determination that the proposed discharge complies with applicable provisions of 40 CFR part 230, including those which require the permit applicant to take all appropriate and practicable steps to avoid and minimize adverse impacts to waters of the United States. Practicable means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. Compensatory mitigation for unavoidable impacts may be required to ensure that an activity requiring a section 404 permit complies with the Section 404(b)(1) Guidelines.

(3) Compensatory mitigation for unavoidable impacts may be required to ensure that an activity requiring a section 404 permit complies with the Section 404(b)(1) Guidelines. During the 404(b)(1) Guidelines compliance analysis, the district engineer may determine that a DA permit for the proposed activity cannot be issued because of the lack of appropriate and practicable compensatory mitigation options.

(d) *Public interest.* Compensatory mitigation may also be required to ensure that an activity requiring authorization under section 404 of the Clean Water Act and/or sections 9 or 10 of the Rivers and Harbors Act of 1899 is not contrary to the public interest.

(e) *Accounting for regional variations.* Where appropriate, district engineers shall account for regional characteristics of aquatic resource types, functions and services when determining performance standards and monitoring requirements for compensatory mitigation projects.

(f) *Relationship to other guidance documents.* (1) This part applies instead of the “Federal Guidance for the Establishment, Use, and Operation of Mitigation Banks,” which was issued on November 28, 1995, the “Federal Guidance on the Use of In-Lieu Fee Arrangements for Compensatory Mitigation Under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act,” which was issued on November 7, 2000, and Regulatory Guidance Letter 02–02, “Guidance on Compensatory Mitigation Projects for Aquatic Resource Impacts Under the Corps Regulatory Program Pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899” which was issued on December 24, 2002. These guidance documents are no longer to be used as compensatory mitigation policy in the Corps Regulatory Program.

(2) In addition, this part also applies instead of the provisions relating to the amount, type, and location of compensatory mitigation projects,

including the use of preservation, in the February 6, 1990, Memorandum of Agreement (MOA) between the Department of the Army and the Environmental Protection Agency on the Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines. All other provisions of this MOA remain in effect.

§ 332.2 Definitions.

For the purposes of this part, the following terms are defined:

Adaptive management means 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.

Advance credits means any credits of an approved in-lieu fee program that are available for sale prior to being fulfilled in accordance with an approved mitigation project plan. Advance credit sales require an approved in-lieu fee program instrument that meets all applicable requirements including a specific allocation of advance credits, by service area where applicable. The instrument must also contain a schedule for fulfillment of advance credit sales.

Buffer means an upland, wetland, and/or riparian area that protects and/or enhances aquatic resource functions associated with wetlands, rivers, streams, lakes, marine, and estuarine systems from disturbances associated with adjacent land uses.

Compensatory mitigation means the restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Compensatory mitigation project means compensatory mitigation implemented by the permittee as a requirement of a DA permit (i.e., permittee-responsible mitigation), or by

a mitigation bank or an in-lieu fee program.

Condition means the relative ability of an aquatic resource to support and maintain a community of organisms having a species composition, diversity, and functional organization comparable to reference aquatic resources in the region.

Credit means a unit of measure (e.g., a functional or areal measure or other suitable metric) representing the accrual or attainment of aquatic functions at a compensatory mitigation site. The measure of aquatic functions is based on the resources restored, established, enhanced, or preserved.

DA means Department of the Army.

Days means calendar days.

Debit means a unit of measure (e.g., a functional or areal measure or other suitable metric) representing the loss of aquatic functions at an impact or project site. The measure of aquatic functions is based on the resources impacted by the authorized activity.

Enhancement means the manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment (creation) means the manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area and functions.

Fulfillment of advance credit sales of an in-lieu fee program means application of credits released in accordance with a credit release schedule in an approved mitigation project plan to satisfy the mitigation requirements represented by the advance credits. Only after any advance credit sales within a service area have been fulfilled through the application of released credits from an in-lieu fee project (in accordance with the credit release schedule for an approved mitigation project plan), may additional released credits from that project be sold or transferred to permittees. When advance credits are fulfilled, an equal number of new advance credits is restored to the program sponsor for sale or transfer to permit applicants.

Functional capacity means the degree to which an area of aquatic resource performs a specific function.

Functions means the physical, chemical, and biological processes that occur in ecosystems.

Impact means adverse effect.

In-kind means a resource of a similar structural and functional type to the impacted resource.

In-lieu fee program means a program involving the restoration, establishment, enhancement, and/or preservation of aquatic resources through funds paid to a governmental or non-profit natural resources management entity to satisfy compensatory mitigation requirements for DA permits. Similar to a mitigation bank, an in-lieu fee 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 in-lieu fee programs are somewhat different from the rules governing operation and use of mitigation banks. The operation and use of an in-lieu fee program are governed by an in-lieu fee program instrument.

In-lieu fee program instrument means the legal document for the establishment, operation, and use of an in-lieu fee program.

Instrument means mitigation banking instrument or in-lieu fee program instrument.

Interagency Review Team (IRT) means an interagency group of federal, tribal, state, and/or local regulatory and resource agency representatives that reviews documentation for, and advises the district engineer on, the establishment and management of a mitigation bank or an in-lieu fee program.

Mitigation bank means a site, or suite of sites, where resources (e.g., wetlands, streams, riparian areas) are restored, established, enhanced, and/or preserved for the purpose of providing compensatory mitigation for impacts authorized by DA permits. In general, a mitigation bank sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the mitigation bank sponsor. The operation and use of a mitigation bank are governed by a mitigation banking instrument.

Mitigation banking instrument means the legal document for the establishment, operation, and use of a mitigation bank.

Off-site means an area that is neither located on the same parcel of land as the impact site, nor on a parcel of land contiguous to the parcel containing the impact site.

On-site means an area located on the same parcel of land as the impact site,

or on a parcel of land contiguous to the impact site.

Out-of-kind means a resource of a different structural and functional type from the impacted resource.

Performance standards are observable or measurable physical (including hydrological), chemical and/or biological attributes that are used to determine if a compensatory mitigation project meets its objectives.

Permittee-responsible mitigation means an aquatic resource restoration, establishment, enhancement, and/or preservation activity undertaken by the permittee (or an authorized agent or contractor) to provide compensatory mitigation for which the permittee retains full responsibility.

Preservation means the removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Reference aquatic resources are a set of aquatic resources that represent the full range of variability exhibited by a regional class of aquatic resources as a result of natural processes and anthropogenic disturbances.

Rehabilitation means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Release of credits means a determination by the district engineer, in consultation with the IRT, that credits associated with an approved mitigation plan are available for sale or transfer, or in the case of an in-lieu fee program, for fulfillment of advance credit sales. A proportion of projected credits for a specific mitigation bank or in-lieu fee project may be released upon approval of the mitigation plan, with additional credits released as milestones specified in the credit release schedule are achieved.

Restoration means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riparian areas are lands adjacent to streams, rivers, lakes, and estuarine-marine shorelines. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality.

Service area means the geographic area within which impacts can be mitigated at a specific mitigation bank or an in-lieu fee program, as designated in its instrument.

Services mean the benefits that human populations receive from functions that occur in ecosystems.

Sponsor means any public or private entity responsible for establishing, and in most circumstances, operating a mitigation bank or in-lieu fee program.

Standard permit means a standard, individual permit issued under the authority of section 404 of the Clean Water Act and/or sections 9 or 10 of the Rivers and Harbors Act of 1899.

Temporal loss is the time lag between the loss of aquatic resource functions caused by the permitted impacts and the replacement of aquatic resource functions at the compensatory mitigation site. Higher compensation ratios may be required to compensate for temporal loss. When the compensatory mitigation project is initiated prior to, or concurrent with, the permitted impacts, the district engineer may determine that compensation for temporal loss is not necessary, unless the resource has a long development time.

Watershed means a land area that drains to a common waterway, such as a stream, lake, estuary, wetland, or ultimately the ocean.

Watershed approach means 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 DA permits. The watershed approach may involve consideration of landscape scale, historic and potential aquatic

resource conditions, past and projected aquatic resource impacts in the watershed, and terrestrial connections between aquatic resources when determining compensatory mitigation requirements for DA permits.

Watershed plan means a plan developed by federal, tribal, state, and/or local government agencies or appropriate non-governmental organizations, in consultation with relevant stakeholders, for the specific goal of aquatic resource restoration, establishment, enhancement, and preservation. A watershed plan addresses aquatic resource conditions in the watershed, multiple stakeholder interests, and land uses. Watershed plans may also identify priority sites for aquatic resource restoration and protection. Examples of watershed plans include special area management plans, advance identification programs, and wetland management plans.

§ 332.3 General compensatory mitigation requirements.

(a) *General considerations.* (1) The fundamental objective of compensatory mitigation is to offset environmental losses resulting from unavoidable impacts to waters of the United States authorized by DA permits. The district engineer must determine the compensatory mitigation to be required in a DA permit, based on what is practicable and capable of compensating for the aquatic resource functions that will be lost as a result of the permitted activity. When evaluating compensatory mitigation options, the district engineer will consider what would be environmentally preferable. In making this determination, the district engineer must assess the likelihood for ecological success and sustainability, the location of the compensation site relative to the impact site and their significance within the watershed, and the costs of the compensatory mitigation project. In many cases, the environmentally preferable compensatory mitigation may be provided through mitigation banks or in-lieu fee programs because they usually involve consolidating compensatory mitigation projects where ecologically appropriate, consolidating resources, providing financial planning and scientific expertise (which often is not practical for permittee-responsible compensatory mitigation projects), reducing temporal losses of functions, and reducing uncertainty over project success. Compensatory mitigation requirements must be commensurate with the amount and type of impact that is associated with a particular DA permit. Permit applicants are responsible for proposing an

appropriate compensatory mitigation option to offset unavoidable impacts.

(2) Compensatory mitigation may be performed using the methods of restoration, enhancement, establishment, and in certain circumstances preservation. Restoration should generally be the first option considered because the likelihood of success is greater and the impacts to potentially ecologically important uplands are reduced compared to establishment, and the potential gains in terms of aquatic resource functions are greater, compared to enhancement and preservation.

(3) Compensatory mitigation projects may be sited on public or private lands. Credits for compensatory mitigation projects on public land must be based solely on aquatic resource functions provided by the compensatory mitigation project, over and above those provided by public programs already planned or in place. All compensatory mitigation projects must comply with the standards in this part, if they are to be used to provide compensatory mitigation for activities authorized by DA permits, regardless of whether they are sited on public or private lands and whether the sponsor is a governmental or private entity.

(b) *Type and location of compensatory mitigation.* (1) When considering options for successfully providing the required compensatory mitigation, the district engineer shall consider the type and location options in the order presented in paragraphs (b)(2) through (b)(6) of this section. In general, the required compensatory mitigation should be located within the same watershed as the impact site, and should be located where it is most likely to successfully replace lost functions and services, taking into account such watershed scale features as aquatic habitat diversity, habitat connectivity, relationships to hydrologic sources (including the availability of water rights), trends in land use, ecological benefits, and compatibility with adjacent land uses. When compensating for impacts to marine resources, the location of the compensatory mitigation site should be chosen to replace lost functions and services within the same marine ecological system (e.g., reef complex, littoral drift cell). Compensation for impacts to aquatic resources in coastal watersheds (watersheds that include a tidal water body) should also be located in a coastal watershed where practicable. Compensatory mitigation projects should not be located where they will increase risks to aviation by attracting

wildlife to areas where aircraft-wildlife strikes may occur (e.g., near airports).

(2) *Mitigation bank credits.* When permitted impacts are located within the service area of an approved mitigation bank, and the bank has the appropriate number and resource type of credits available, the permittee's compensatory mitigation requirements may be met by securing those credits from the sponsor. Since an approved instrument (including an approved mitigation plan and appropriate real estate and financial assurances) for a mitigation bank is required to be in place before its credits can begin to be used to compensate for authorized impacts, use of a mitigation bank can help reduce risk and uncertainty, as well as temporal loss of resource functions and services. Mitigation bank credits are not released for debiting until specific milestones associated with the mitigation bank site's protection and development are achieved, thus use of mitigation bank credits can also help reduce risk that mitigation will not be fully successful. Mitigation banks typically involve larger, more ecologically valuable parcels, and more rigorous scientific and technical analysis, planning and implementation than permittee-responsible mitigation. Also, development of a mitigation bank requires site identification in advance, project-specific planning, and significant investment of financial resources that is often not practicable for many in-lieu fee programs. For these reasons, the district engineer should give preference to the use of mitigation bank credits when these considerations are applicable. However, these same considerations may also be used to override this preference, where appropriate, as, for example, where an in-lieu fee program has released credits available from a specific approved in-lieu fee project, or a permittee-responsible project will restore an outstanding resource based on rigorous scientific and technical analysis.

(3) *In-lieu fee program credits.* Where permitted impacts are located within the service area of an approved in-lieu fee program, and the sponsor has the appropriate number and resource type of credits available, the permittee's compensatory mitigation requirements may be met by securing those credits from the sponsor. Where permitted impacts are not located in the service area of an approved mitigation bank, or the approved mitigation bank does not have the appropriate number and resource type of credits available to offset those impacts, in-lieu fee mitigation, if available, is generally preferable to permittee-responsible

mitigation. In-lieu fee projects typically involve larger, more ecologically valuable parcels, and more rigorous scientific and technical analysis, planning and implementation than permittee-responsible mitigation. They also devote significant resources to identifying and addressing high-priority resource needs on a watershed scale, as reflected in their compensation planning framework. For these reasons, the district engineer should give preference to in-lieu fee program credits over permittee-responsible mitigation, where these considerations are applicable. However, as with the preference for mitigation bank credits, these same considerations may be used to override this preference where appropriate. Additionally, in cases where permittee-responsible mitigation is likely to successfully meet performance standards before advance credits secured from an in-lieu fee program are fulfilled, the district engineer should also give consideration to this factor in deciding between in-lieu fee mitigation and permittee-responsible mitigation.

(4) *Permittee-responsible mitigation under a watershed approach.* Where permitted impacts are not in the service area of an approved mitigation bank or in-lieu fee program that has the appropriate number and resource type of credits available, permittee-responsible mitigation is the only option. Where practicable and likely to be successful and sustainable, the resource type and location for the required permittee-responsible compensatory mitigation should be determined using the principles of a watershed approach as outlined in paragraph (c) of this section.

(5) *Permittee-responsible mitigation through on-site and in-kind mitigation.* In cases where a watershed approach is not practicable, the district engineer should consider opportunities to offset anticipated aquatic resource impacts by requiring on-site and in-kind compensatory mitigation. The district engineer must also consider the practicability of on-site compensatory mitigation and its compatibility with the proposed project.

(6) *Permittee-responsible mitigation through off-site and/or out-of-kind mitigation.* If, after considering opportunities for on-site, in-kind compensatory mitigation as provided in paragraph (b)(5) of this section, the district engineer determines that these compensatory mitigation opportunities are not practicable, are unlikely to compensate for the permitted impacts, or will be incompatible with the proposed project, and an alternative,

practicable off-site and/or out-of-kind mitigation opportunity is identified that has a greater likelihood of offsetting the permitted impacts or is environmentally preferable to on-site or in-kind mitigation, the district engineer should require that this alternative compensatory mitigation be provided.

(c) *Watershed approach to compensatory mitigation.* (1) The district engineer must use a watershed approach to establish compensatory mitigation requirements in DA permits to the extent appropriate and practicable. Where a watershed plan is available, the district engineer will determine whether the plan is appropriate for use in the watershed approach for compensatory mitigation. In cases where the district engineer determines that an appropriate watershed plan is available, the watershed approach should be based on that plan. Where no such plan is available, the watershed approach should be based on information provided by the project sponsor or available from other sources. The ultimate goal of a watershed approach is to maintain and improve the quality and quantity of aquatic resources within watersheds through strategic selection of compensatory mitigation sites.

(2) *Considerations.* (i) A watershed approach to compensatory mitigation considers the importance of landscape position and resource type of compensatory mitigation projects for the sustainability of aquatic resource functions within the watershed. Such an approach considers how the types and locations of compensatory mitigation projects will provide the desired aquatic resource functions, and will continue to function over time in a changing landscape. It also considers the habitat requirements of important species, habitat loss or conversion trends, sources of watershed impairment, and current development trends, as well as the requirements of other regulatory and non-regulatory programs that affect the watershed, such as storm water management or habitat conservation programs. It includes the protection and maintenance of terrestrial resources, such as non-wetland riparian areas and uplands, when those resources contribute to or improve the overall ecological functioning of aquatic resources in the watershed. Compensatory mitigation requirements determined through the watershed approach should not focus exclusively on specific functions (e.g., water quality or habitat for certain species), but should provide, where practicable, the suite of functions typically provided by the affected aquatic resource.

(ii) Locational factors (e.g., hydrology, surrounding land use) are important to the success of compensatory mitigation for impacted habitat functions and may lead to siting of such mitigation away from the project area. However, consideration should also be given to functions and services (e.g., water quality, flood control, shoreline protection) that will likely need to be addressed at or near the areas impacted by the permitted impacts.

(iii) A watershed approach may include on-site compensatory mitigation, off-site compensatory mitigation (including mitigation banks or in-lieu fee programs), or a combination of on-site and off-site compensatory mitigation.

(iv) A watershed approach to compensatory mitigation should include, to the extent practicable, inventories of historic and existing aquatic resources, including identification of degraded aquatic resources, and identification of immediate and long-term aquatic resource needs within watersheds that can be met through permittee-responsible mitigation projects, mitigation banks, or in-lieu fee programs. Planning efforts should identify and prioritize aquatic resource restoration, establishment, and enhancement activities, and preservation of existing aquatic resources that are important for maintaining or improving ecological functions of the watershed. The identification and prioritization of resource needs should be as specific as possible, to enhance the usefulness of the approach in determining compensatory mitigation requirements.

(v) A watershed approach is not appropriate in areas where watershed boundaries do not exist, such as marine areas. In such cases, an appropriate spatial scale should be used to replace lost functions and services within the same ecological system (e.g., reef complex, littoral drift cell).

(3) *Information Needs.* (i) In the absence of a watershed plan determined by the district engineer under paragraph (c)(1) of this section to be appropriate for use in the watershed approach, the district engineer will use a watershed approach based on analysis of information regarding watershed conditions and needs, including potential sites for aquatic resource restoration activities and priorities for aquatic resource restoration and preservation. Such information includes: current trends in habitat loss or conversion; cumulative impacts of past development activities, current development trends, the presence and

needs of sensitive species; site conditions that favor or hinder the success of compensatory mitigation projects; and chronic environmental problems such as flooding or poor water quality.

(ii) This information may be available from sources such as wetland maps; soil surveys; U.S. Geological Survey topographic and hydrologic maps; aerial photographs; information on rare, endangered and threatened species and critical habitat; local ecological reports or studies; and other information sources that could be used to identify locations for suitable compensatory mitigation projects in the watershed.

(iii) The level of information and analysis needed to support a watershed approach must be commensurate with the scope and scale of the proposed impacts requiring a DA permit, as well as the functions lost as a result of those impacts.

(4) *Watershed scale.* The size of watershed addressed using a watershed approach should not be larger than is appropriate to ensure that the aquatic resources provided through compensation activities will effectively compensate for adverse environmental impacts resulting from activities authorized by DA permits. The district engineer should consider relevant environmental factors and appropriate locally developed standards and criteria when determining the appropriate watershed scale in guiding compensation activities.

(d) *Site selection.* (1) The compensatory mitigation project site must be ecologically suitable for providing the desired aquatic resource functions. In determining the ecological suitability of the compensatory mitigation project site, the district engineer must consider, to the extent practicable, the following factors:

(i) Hydrological conditions, soil characteristics, and other physical and chemical characteristics;

(ii) Watershed-scale features, such as aquatic habitat diversity, habitat connectivity, and other landscape scale functions;

(iii) The size and location of the compensatory mitigation site relative to hydrologic sources (including the availability of water rights) and other ecological features;

(iv) Compatibility with adjacent land uses and watershed management plans;

(v) Reasonably foreseeable effects the compensatory mitigation project will have on ecologically important aquatic or terrestrial resources (e.g., shallow sub-tidal habitat, mature forests), cultural sites, or habitat for federally- or

state-listed threatened and endangered species; and

(vi) Other relevant factors including, but not limited to, development trends, anticipated land use changes, habitat status and trends, the relative locations of the impact and mitigation sites in the stream network, local or regional goals for the restoration or protection of particular habitat types or functions (e.g., re-establishment of habitat corridors or habitat for species of concern), water quality goals, floodplain management goals, and the relative potential for chemical contamination of the aquatic resources.

(2) District engineers may require on-site, off-site, or a combination of on-site and off-site compensatory mitigation to replace permitted losses of aquatic resource functions and services.

(3) Applicants should propose compensation sites adjacent to existing aquatic resources or where aquatic resources previously existed.

(e) *Mitigation type.* (1) In general, in-kind mitigation is preferable to out-of-kind mitigation because it is most likely to compensate for the functions and services lost at the impact site. For example, tidal wetland compensatory mitigation projects are most likely to compensate for unavoidable impacts to tidal wetlands, while perennial stream compensatory mitigation projects are most likely to compensate for unavoidable impacts to perennial streams. Thus, except as provided in paragraph (e)(2) of this section, the required compensatory mitigation shall be of a similar type to the affected aquatic resource.

(2) If the district engineer determines, using the watershed approach in accordance with paragraph (c) of this section that out-of-kind compensatory mitigation will serve the aquatic resource needs of the watershed, the district engineer may authorize the use of such out-of-kind compensatory mitigation. The basis for authorization of out-of-kind compensatory mitigation must be documented in the administrative record for the permit action.

(3) For difficult-to-replace resources (e.g., bogs, fens, springs, streams, Atlantic white cedar swamps) if further avoidance and minimization is not practicable, the required compensation should be provided, if practicable, through in-kind rehabilitation, enhancement, or preservation since there is greater certainty that these methods of compensation will successfully offset permitted impacts.

(f) *Amount of compensatory mitigation.* (1) If the district engineer determines that compensatory

mitigation is necessary to offset unavoidable impacts to aquatic resources, the amount of required compensatory mitigation must be, to the extent practicable, sufficient to replace lost aquatic resource functions. In cases where appropriate functional or condition assessment methods or other suitable metrics are available, these methods should be used where practicable to determine how much compensatory mitigation is required. If a functional or condition assessment or other suitable metric is not used, a minimum one-to-one acreage or linear foot compensation ratio must be used.

(2) The district engineer must require a mitigation ratio greater than one-to-one where necessary to account for the method of compensatory mitigation (e.g., preservation), the likelihood of success, differences between the functions lost at the impact site and the functions expected to be produced by the compensatory mitigation project, temporal losses of aquatic resource functions, the difficulty of restoring or establishing the desired aquatic resource type and functions, and/or the distance between the affected aquatic resource and the compensation site. The rationale for the required replacement ratio must be documented in the administrative record for the permit action.

(3) If an in-lieu fee program will be used to provide the required compensatory mitigation, and the appropriate number and resource type of released credits are not available, the district engineer must require sufficient compensation to account for the risk and uncertainty associated with in-lieu fee projects that have not been implemented before the permitted impacts have occurred.

(g) *Use of mitigation banks and in-lieu fee programs.* Mitigation banks and in-lieu fee programs may be used to compensate for impacts to aquatic resources authorized by general permits and individual permits, including after-the-fact permits, in accordance with the preference hierarchy in paragraph (b) of this section.

(h) *Preservation.* (1) Preservation may be used to provide compensatory mitigation for activities authorized by DA permits when all the following criteria are met:

(i) The resources to be preserved provide important physical, chemical, or biological functions for the watershed;

(ii) The resources to be preserved contribute significantly to the ecological sustainability of the watershed. In determining the contribution of those resources to the ecological sustainability

of the watershed, the district engineer must use appropriate quantitative assessment tools, where available;

(iii) Preservation is determined by the district engineer to be appropriate and practicable;

(iv) The resources are under threat of destruction or adverse modifications; and

(v) The preserved site will be permanently protected through an appropriate real estate or other legal instrument (e.g., easement, title transfer to state resource agency or land trust).

(2) Where preservation is used to provide compensatory mitigation, to the extent appropriate and practicable the preservation shall be done in conjunction with aquatic resource restoration, establishment, and/or enhancement activities. This requirement may be waived by the district engineer where preservation has been identified as a high priority using a watershed approach described in paragraph (c) of this section, but compensation ratios shall be higher.

(i) *Buffers.* District engineers may require the restoration, establishment, enhancement, and preservation, as well as the maintenance, of riparian areas and/or buffers around aquatic resources where necessary to ensure the long-term viability of those resources. Buffers may also provide habitat or corridors necessary for the ecological functioning of aquatic resources. If buffers are required by the district engineer as part of the compensatory mitigation project, compensatory mitigation credit will be provided for those buffers.

(j) *Relationship to other federal, tribal, state, and local programs.* (1) Compensatory mitigation projects for DA permits may also be used to satisfy the environmental requirements of other programs, such as tribal, state, or local wetlands regulatory programs, other federal programs such as the Surface Mining Control and Reclamation Act, Corps civil works projects, and Department of Defense military construction projects, consistent with the terms and requirements of these programs and subject to the following considerations:

(i) The compensatory mitigation project must include appropriate compensation required by the DA permit for unavoidable impacts to aquatic resources authorized by that permit.

(ii) Under no circumstances may the same credits be used to provide mitigation for more than one permitted activity. However, where appropriate, compensatory mitigation projects, including mitigation banks and in-lieu fee projects, may be designed to

holistically address requirements under multiple programs and authorities for the same activity.

(2) Except for projects undertaken by federal agencies, or where federal funding is specifically authorized to provide compensatory mitigation, federally-funded aquatic resource restoration or conservation projects undertaken for purposes other than compensatory mitigation, such as the Wetlands Reserve Program, Conservation Reserve Program, and Partners for Wildlife Program activities, cannot be used for the purpose of generating compensatory mitigation credits for activities authorized by DA permits. However, compensatory mitigation credits may be generated by activities undertaken in conjunction with, but supplemental to, such programs in order to maximize the overall ecological benefits of the restoration or conservation project.

(3) Compensatory mitigation projects may also be used to provide compensatory mitigation under the Endangered Species Act or for Habitat Conservation Plans, as long as they comply with the requirements of paragraph (j)(1) of this section.

(k) *Permit conditions.* (1) The compensatory mitigation requirements for a DA permit, including the amount and type of compensatory mitigation, must be clearly stated in the special conditions of the individual permit or general permit verification (see 33 CFR 325.4 and 330.6(a)). The special conditions must be enforceable.

(2) For an individual permit that requires permittee-responsible mitigation, the special conditions must:

(i) Identify the party responsible for providing the compensatory mitigation;

(ii) Incorporate, by reference, the final mitigation plan approved by the district engineer;

(iii) State the objectives, performance standards, and monitoring required for the compensatory mitigation project, unless they are provided in the approved final mitigation plan; and

(iv) Describe any required financial assurances or long-term management provisions for the compensatory mitigation project, unless they are specified in the approved final mitigation plan.

(3) For a general permit activity that requires permittee-responsible compensatory mitigation, the special conditions must describe the compensatory mitigation proposal, which may be either conceptual or detailed. The general permit verification must also include a special condition that states that the permittee cannot commence work in waters of the United

States until the district engineer approves the final mitigation plan, unless the district engineer determines that such a special condition is not practicable and not necessary to ensure timely completion of the required compensatory mitigation. To the extent appropriate and practicable, special conditions of the general permit verification should also address the requirements of paragraph (k)(2) of this section.

(4) If a mitigation bank or in-lieu fee program is used to provide the required compensatory mitigation, the special conditions must indicate whether a mitigation bank or in-lieu fee program will be used, and specify the number and resource type of credits the permittee is required to secure. In the case of an individual permit, the special condition must also identify the specific mitigation bank or in-lieu fee program that will be used. For general permit verifications, the special conditions may either identify the specific mitigation bank or in-lieu fee program, or state that the specific mitigation bank or in-lieu fee program used to provide the required compensatory mitigation must be approved by the district engineer before the credits are secured.

(l) *Party responsible for compensatory mitigation.* (1) For permittee-responsible mitigation, the special conditions of the DA permit must clearly indicate the party or parties responsible for the implementation, performance, and long-term management of the compensatory mitigation project.

(2) For mitigation banks and in-lieu fee programs, the instrument must clearly indicate the party or parties responsible for the implementation, performance, and long-term management of the compensatory mitigation project(s). The instrument must also contain a provision expressing the sponsor's agreement to assume responsibility for a permittee's compensatory mitigation requirements, once that permittee has secured the appropriate number and resource type of credits from the sponsor and the district engineer has received the documentation described in paragraph (l)(3) of this section.

(3) If use of a mitigation bank or in-lieu fee program is approved by the district engineer to provide part or all of the required compensatory mitigation for a DA permit, the permittee retains responsibility for providing the compensatory mitigation until the appropriate number and resource type of credits have been secured from a sponsor and the district engineer has received documentation that confirms that the sponsor has accepted the

responsibility for providing the required compensatory mitigation. This documentation may consist of a letter or form signed by the sponsor, with the permit number and a statement indicating the number and resource type of credits that have been secured from the sponsor. Copies of this documentation will be retained in the administrative records for both the permit and the instrument. If the sponsor fails to provide the required compensatory mitigation, the district engineer may pursue measures against the sponsor to ensure compliance.

(m) *Timing.* 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. The district engineer shall require, to the extent appropriate and practicable, additional compensatory mitigation to offset temporal losses of aquatic functions that will result from the permitted activity.

(n) *Financial assurances.* (1) The district engineer shall require sufficient financial assurances to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with applicable performance standards. In cases where an alternate mechanism is available to ensure a high level of confidence that the compensatory mitigation will be provided and maintained (e.g., a formal, documented commitment from a government agency or public authority) the district engineer may determine that financial assurances are not necessary for that compensatory mitigation project.

(2) The amount of the required financial assurances must be determined by the district engineer, in consultation with the project sponsor, and must be based on the size and complexity of the compensatory mitigation project, the degree of completion of the project at the time of project approval, the likelihood of success, the past performance of the project sponsor, and any other factors the district engineer deems appropriate. Financial assurances may be in the form of performance bonds, escrow accounts, casualty insurance, letters of credit, legislative appropriations for government sponsored projects, or other appropriate instruments, subject to the approval of the district engineer. The rationale for determining the amount of the required financial assurances must be documented in the administrative record for either the DA permit or the instrument. In determining the assurance amount, the district engineer shall consider the cost of providing

replacement mitigation, including costs for land acquisition, planning and engineering, legal fees, mobilization, construction, and monitoring.

(3) If financial assurances are required, the DA permit must include a special condition requiring the financial assurances to be in place prior to commencing the permitted activity.

(4) Financial assurances shall be phased out once the compensatory mitigation project has been determined by the district engineer to be successful in accordance with its performance standards. The DA permit or instrument must clearly specify the conditions under which the financial assurances are to be released to the permittee, sponsor, and/or other financial assurance provider, including, as appropriate, linkage to achievement of performance standards, adaptive management, or compliance with special conditions.

(5) A financial assurance must be in a form that ensures that the district engineer will receive notification at least 120 days in advance of any termination or revocation. For third-party assurance providers, this may take the form of a contractual requirement for the assurance provider to notify the district engineer at least 120 days before the assurance is revoked or terminated.

(6) Financial assurances shall be payable at the direction of the district engineer to his designee or to a standby trust agreement. When a standby trust is used (e.g., with performance bonds or letters of credit) all amounts paid by the financial assurance provider shall be deposited directly into the standby trust fund for distribution by the trustee in accordance with the district engineer's instructions.

(o) *Compliance with applicable law.* The compensatory mitigation project must comply with all applicable federal, state, and local laws. The DA permit, mitigation banking instrument, or in-lieu fee program instrument must not require participation by the Corps or any other federal agency in project management, including receipt or management of financial assurances or long-term financing mechanisms, except as determined by the Corps or other agency to be consistent with its statutory authority, mission, and priorities.

§ 332.4 Planning and documentation.

(a) *Pre-application consultations.* Potential applicants for standard permits are encouraged to participate in pre-application meetings with the Corps and appropriate agencies to discuss potential mitigation requirements and information needs.

(b) *Public review and comment.* (1) For an activity that requires a standard DA permit pursuant to section 404 of the Clean Water Act, the public notice for the proposed activity must contain a statement explaining how impacts associated with the proposed activity are to be avoided, minimized, and compensated for. This explanation shall address, to the extent that such information is provided in the mitigation statement required by § 325.1(d)(7) of this chapter, the proposed avoidance and minimization and the amount, type, and location of any proposed compensatory mitigation, including any out-of-kind compensation, or indicate an intention to use an approved mitigation bank or in-lieu fee program. The level of detail provided in the public notice must be commensurate with the scope and scale of the impacts. The notice shall not include information that the district engineer and the permittee believe should be kept confidential for business purposes, such as the exact location of a proposed mitigation site that has not yet been secured. The permittee must clearly identify any information being claimed as confidential in the mitigation statement when submitted. In such cases, the notice must still provide enough information to enable the public to provide meaningful comment on the proposed mitigation.

(2) For individual permits, district engineers must consider any timely comments and recommendations from other federal agencies; tribal, state, or local governments; and the public.

(3) For activities authorized by letters of permission or general permits, the review and approval process for compensatory mitigation proposals and plans must be conducted in accordance with the terms and conditions of those permits and applicable regulations including the applicable provisions of this part.

(c) *Mitigation plan.* (1) *Preparation and Approval.* (i) For individual permits, the permittee must prepare a draft mitigation plan and submit it to the district engineer for review. After addressing any comments provided by the district engineer, the permittee must prepare a final mitigation plan, which must be approved by the district engineer prior to issuing the individual permit. The approved final mitigation plan must be incorporated into the individual permit by reference. The final mitigation plan must include the items described in paragraphs (c)(2) through (c)(14) of this section, but the level of detail of the mitigation plan should be commensurate with the scale and scope of the impacts. As an

alternative, the district engineer may determine that it would be more appropriate to address any of the items described in paragraphs (c)(2) through (c)(14) of this section as permit conditions, instead of components of a compensatory mitigation plan. For permittees who intend to fulfill their compensatory mitigation obligations by securing credits from approved mitigation banks or in-lieu fee programs, their mitigation plans need include only the items described in paragraphs (c)(5) and (c)(6) of this section, and the name of the specific mitigation bank or in-lieu fee program to be used.

(ii) For general permits, if compensatory mitigation is required, the district engineer may approve a conceptual or detailed compensatory mitigation plan to meet required time frames for general permit verifications, but a final mitigation plan incorporating the elements in paragraphs (c)(2) through (c)(14) of this section, at a level of detail commensurate with the scale and scope of the impacts, must be approved by the district engineer before the permittee commences work in waters of the United States. As an alternative, the district engineer may determine that it would be more appropriate to address any of the items described in paragraphs (c)(2) through (c)(14) of this section as permit conditions, instead of components of a compensatory mitigation plan. For permittees who intend to fulfill their compensatory mitigation obligations by securing credits from approved mitigation banks or in-lieu fee programs, their mitigation plans need include only the items described in paragraphs (c)(5) and (c)(6) of this section, and either the name of the specific mitigation bank or in-lieu fee program to be used or a statement indicating that a mitigation bank or in-lieu fee program will be used (contingent upon approval by the district engineer).

(iii) Mitigation banks and in-lieu fee programs must prepare a mitigation plan including the items in paragraphs (c)(2) through (c)(14) of this section for each separate compensatory mitigation project site. For mitigation banks and in-lieu fee programs, the preparation and approval process for mitigation plans is described in § 332.8.

(2) *Objectives.* A description of the resource type(s) and amount(s) that will be provided, the method of compensation (i.e., restoration, establishment, enhancement, and/or preservation), and the manner in which the resource functions of the compensatory mitigation project will address the needs of the watershed,

ecoregion, physiographic province, or other geographic area of interest.

(3) *Site selection.* A description of the factors considered during the site selection process. This should include consideration of watershed needs, on-site alternatives where applicable, and the practicability of accomplishing ecologically self-sustaining aquatic resource restoration, establishment, enhancement, and/or preservation at the compensatory mitigation project site. (See § 332.3(d).)

(4) *Site protection instrument.* A description of the legal arrangements and instrument, including site ownership, that will be used to ensure the long-term protection of the compensatory mitigation project site (see § 332.7(a)).

(5) *Baseline information.* A description of the ecological characteristics of the proposed compensatory mitigation project site and, in the case of an application for a DA permit, the impact site. This may include descriptions of historic and existing plant communities, historic and existing hydrology, soil conditions, a map showing the locations of the impact and mitigation site(s) or the geographic coordinates for those site(s), and other site characteristics appropriate to the type of resource proposed as compensation. The baseline information should also include a delineation of waters of the United States on the proposed compensatory mitigation project site. A prospective permittee planning to secure credits from an approved mitigation bank or in-lieu fee program only needs to provide baseline information about the impact site, not the mitigation bank or in-lieu fee project site.

(6) *Determination of credits.* A description of the number of credits to be provided, including a brief explanation of the rationale for this determination. (See § 332.3(f).)

(i) For permittee-responsible mitigation, this should include an explanation of how the compensatory mitigation project will provide the required compensation for unavoidable impacts to aquatic resources resulting from the permitted activity.

(ii) For permittees intending to secure credits from an approved mitigation bank or in-lieu fee program, it should include the number and resource type of credits to be secured and how these were determined.

(7) *Mitigation work plan.* Detailed written specifications and work descriptions for the compensatory mitigation project, including, but not limited to, the geographic boundaries of the project; construction methods,

timing, and sequence; source(s) of water, including connections to existing waters and uplands; methods for establishing the desired plant community; plans to control invasive plant species; the proposed grading plan, including elevations and slopes of the substrate; soil management; and erosion control measures. For stream compensatory mitigation projects, the mitigation work plan may also include other relevant information, such as planform geometry, channel form (e.g., typical channel cross-sections), watershed size, design discharge, and riparian area plantings.

(8) *Maintenance plan.* A description and schedule of maintenance requirements to ensure the continued viability of the resource once initial construction is completed.

(9) *Performance standards.* Ecologically-based standards that will be used to determine whether the compensatory mitigation project is achieving its objectives. (See § 332.5.)

(10) *Monitoring requirements.* A description of parameters to be monitored in order to determine if the compensatory mitigation project is on track to meet performance standards and if adaptive management is needed. A schedule for monitoring and reporting on monitoring results to the district engineer must be included. (See § 332.6.)

(11) *Long-term management plan.* A description of how the compensatory mitigation project will be managed after performance standards have been achieved to ensure the long-term sustainability of the resource, including long-term financing mechanisms and the party responsible for long-term management. (See § 332.7(d).)

(12) *Adaptive management plan.* A management strategy to address unforeseen changes in site conditions or other components of the compensatory mitigation project, including the party or parties responsible for implementing adaptive management measures. The adaptive management plan will guide decisions for revising compensatory mitigation plans and implementing measures to address both foreseeable and unforeseen circumstances that adversely affect compensatory mitigation success. (See § 332.7(c).)

(13) *Financial assurances.* A description of financial assurances that will be provided and how they are sufficient to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with its performance standards (see § 332.3(n)).

(14) *Other information.* The district engineer may require additional

information as necessary to determine the appropriateness, feasibility, and practicability of the compensatory mitigation project.

§ 332.5 Ecological performance standards.

(a) The approved mitigation plan must contain performance standards that will be used to assess whether the project is achieving its objectives. Performance standards should relate to the objectives of the compensatory mitigation project, so that the project can be objectively evaluated to determine if it is developing into the desired resource type, providing the expected functions, and attaining any other applicable metrics (e.g., acres).

(b) Performance standards must be based on attributes that are objective and verifiable. Ecological performance standards must be based on the best available science that can be measured or assessed in a practicable manner. Performance standards may be based on variables or measures of functional capacity described in functional assessment methodologies, measurements of hydrology or other aquatic resource characteristics, and/or comparisons to reference aquatic resources of similar type and landscape position. The use of reference aquatic resources to establish performance standards will help ensure that those performance standards are reasonably achievable, by reflecting the range of variability exhibited by the regional class of aquatic resources as a result of natural processes and anthropogenic disturbances. Performance standards based on measurements of hydrology should take into consideration the hydrologic variability exhibited by reference aquatic resources, especially wetlands. Where practicable, performance standards should take into account the expected stages of the aquatic resource development process, in order to allow early identification of potential problems and appropriate adaptive management.

§ 332.6 Monitoring.

(a) *General.* (1) Monitoring the compensatory mitigation project site is necessary to determine if the project is meeting its performance standards, and to determine if measures are necessary to ensure that the compensatory mitigation project is accomplishing its objectives. The submission of monitoring reports to assess the development and condition of the compensatory mitigation project is required, but the content and level of detail for those monitoring reports must be commensurate with the scale and scope of the compensatory mitigation

project, as well as the compensatory mitigation project type. The mitigation plan must address the monitoring requirements for the compensatory mitigation project, including the parameters to be monitored, the length of the monitoring period, the party responsible for conducting the monitoring, the frequency for submitting monitoring reports to the district engineer, and the party responsible for submitting those monitoring reports to the district engineer.

(2) The district engineer may conduct site inspections on a regular basis (e.g., annually) during the monitoring period to evaluate mitigation site performance.

(b) *Monitoring period.* The mitigation plan must provide for a monitoring period that is sufficient to demonstrate that the compensatory mitigation project has met performance standards, but not less than five years. A longer monitoring period must be required for aquatic resources with slow development rates (e.g., forested wetlands, bogs). Following project implementation, the district engineer may reduce or waive the remaining monitoring requirements upon a determination that the compensatory mitigation project has achieved its performance standards. Conversely the district engineer may extend the original monitoring period upon a determination that performance standards have not been met or the compensatory mitigation project is not on track to meet them. The district engineer may also revise monitoring requirements when remediation and/or adaptive management is required.

(c) *Monitoring reports.* (1) The district engineer must determine the information to be included in monitoring reports. This information must be sufficient for the district engineer to determine how the compensatory mitigation project is progressing towards meeting its performance standards, and may include plans (such as as-built plans), maps, and photographs to illustrate site conditions. Monitoring reports may also include the results of functional, condition, or other assessments used to provide quantitative or qualitative measures of the functions provided by the compensatory mitigation project site.

(2) The permittee or sponsor is responsible for submitting monitoring reports in accordance with the special conditions of the DA permit or the terms of the instrument. Failure to submit monitoring reports in a timely manner may result in compliance action by the district engineer.

(3) Monitoring reports must be provided by the district engineer to interested federal, tribal, state, and local resource agencies, and the public, upon request.

§ 332.7 Management.

(a) *Site protection.* (1) The aquatic habitats, riparian areas, buffers, and uplands that comprise the overall compensatory mitigation project must be provided long-term protection through real estate instruments or other available mechanisms, as appropriate. Long-term protection may be provided through real estate instruments such as conservation easements held by entities such as federal, tribal, state, or local resource agencies, non-profit conservation organizations, or private land managers; the transfer of title to such entities; or by restrictive covenants. For government property, long-term protection may be provided through federal facility management plans or integrated natural resources management plans. When approving a method for long-term protection of non-government property other than transfer of title, the district engineer shall consider relevant legal constraints on the use of conservation easements and/or restrictive covenants in determining whether such mechanisms provide sufficient site protection. To provide sufficient site protection, a conservation easement or restrictive covenant should, where practicable, establish in an appropriate third party (e.g., governmental or non-profit resource management agency) the right to enforce site protections and provide the third party the resources necessary to monitor and enforce these site protections.

(2) The real estate instrument, management plan, or other mechanism providing long-term protection of the compensatory mitigation site must, to the extent appropriate and practicable, prohibit incompatible uses (e.g., clear cutting or mineral extraction) that might otherwise jeopardize the objectives of the compensatory mitigation project. Where appropriate, multiple instruments recognizing compatible uses (e.g., fishing or grazing rights) may be used.

(3) The real estate instrument, management plan, or other long-term protection mechanism must contain a provision requiring 60-day advance notification to the district engineer before any action is taken to void or modify the instrument, management plan, or long-term protection mechanism, including transfer of title to, or establishment of any other legal claims over, the compensatory mitigation site.

(4) For compensatory mitigation projects on public lands, where federal facility management plans or integrated natural resources management plans are used to provide long-term protection, and changes in statute, regulation, or agency needs or mission results in an incompatible use on public lands originally set aside for compensatory mitigation, the public agency authorizing the incompatible use is responsible for providing alternative compensatory mitigation that is acceptable to the district engineer for any loss in functions resulting from the incompatible use.

(5) A real estate instrument, management plan, or other long-term protection mechanism used for site protection of permittee-responsible mitigation must be approved by the district engineer in advance of, or concurrent with, the activity causing the authorized impacts.

(b) *Sustainability.* Compensatory mitigation projects shall be designed, to the maximum extent practicable, to be self-sustaining once performance standards have been achieved. This includes minimization of active engineering features (e.g., pumps) and appropriate siting to ensure that natural hydrology and landscape context will support long-term sustainability. Where active long-term management and maintenance are necessary to ensure long-term sustainability (e.g., prescribed burning, invasive species control, maintenance of water control structures, easement enforcement), the responsible party must provide for such management and maintenance. This includes the provision of long-term financing mechanisms where necessary. Where needed, the acquisition and protection of water rights must be secured and documented in the permit conditions or instrument.

(c) *Adaptive management.* (1) If the compensatory mitigation project cannot be constructed in accordance with the approved mitigation plans, the permittee or sponsor must notify the district engineer. A significant modification of the compensatory mitigation project requires approval from the district engineer.

(2) If monitoring or other information indicates that the compensatory mitigation project is not progressing towards meeting its performance standards as anticipated, the responsible party must notify the district engineer as soon as possible. The district engineer will evaluate and pursue measures to address deficiencies in the compensatory mitigation project. The district engineer will consider whether the compensatory mitigation project is

providing ecological benefits comparable to the original objectives of the compensatory mitigation project.

(3) The district engineer, in consultation with the responsible party (and other federal, tribal, state, and local agencies, as appropriate), will determine the appropriate measures. The measures may include site modifications, design changes, revisions to maintenance requirements, and revised monitoring requirements. The measures must be designed to ensure that the modified compensatory mitigation project provides aquatic resource functions comparable to those described in the mitigation plan objectives.

(4) Performance standards may be revised in accordance with adaptive management to account for measures taken to address deficiencies in the compensatory mitigation project. Performance standards may also be revised to reflect changes in management strategies and objectives if the new standards provide for ecological benefits that are comparable or superior to the approved compensatory mitigation project. No other revisions to performance standards will be allowed except in the case of natural disasters.

(d) *Long-term management.* (1) The permit conditions or instrument must identify the party responsible for ownership and all long-term management of the compensatory mitigation project. The permit conditions or instrument may contain provisions allowing the permittee or sponsor to transfer the long-term management responsibilities of the compensatory mitigation project site to a land stewardship entity, such as a public agency, non-governmental organization, or private land manager, after review and approval by the district engineer. The land stewardship entity need not be identified in the original permit or instrument, as long as the future transfer of long-term management responsibility is approved by the district engineer.

(2) A long-term management plan should include a description of long-term management needs, annual cost estimates for these needs, and identify the funding mechanism that will be used to meet those needs.

(3) Any provisions necessary for long-term financing must be addressed in the original permit or instrument. The district engineer may require provisions to address inflationary adjustments and other contingencies, as appropriate. Appropriate long-term financing mechanisms include non-wasting endowments, trusts, contractual arrangements with future responsible parties, and other appropriate financial

instruments. In cases where the long-term management entity is a public authority or government agency, that entity must provide a plan for the long-term financing of the site.

(4) For permittee-responsible mitigation, any long-term financing mechanisms must be approved in advance of the activity causing the authorized impacts.

§ 332.8 Mitigation banks and in-lieu fee programs.

(a) *General considerations.* (1) All mitigation banks and in-lieu fee programs must have an approved instrument signed by the sponsor and the district engineer prior to being used to provide compensatory mitigation for DA permits.

(2) To the maximum extent practicable, mitigation banks and in-lieu fee project sites must be planned and designed to be self-sustaining over time, but some active management and maintenance may be required to ensure their long-term viability and sustainability. Examples of acceptable management activities include maintaining fire-dependent habitat communities in the absence of natural fire and controlling invasive exotic plant species.

(3) All mitigation banks and in-lieu fee programs must comply with the standards in this part, if they are to be used to provide compensatory mitigation for activities authorized by DA permits, regardless of whether they are sited on public or private lands and whether the sponsor is a governmental or private entity.

(b) *Interagency Review Team.* (1) The district engineer will establish an Interagency Review Team (IRT) to review documentation for the establishment and management of mitigation banks and in-lieu fee programs. The district engineer or his designated representative serves as Chair of the IRT. In cases where a mitigation bank or in-lieu fee program is proposed to satisfy the requirements of another federal, tribal, state, or local program, in addition to compensatory mitigation requirements of DA permits, it may be appropriate for the administering agency to serve as co-Chair of the IRT.

(2) In addition to the Corps, representatives from the U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, NOAA Fisheries, the Natural Resources Conservation Service, and other federal agencies, as appropriate, may participate in the IRT. The IRT may also include representatives from tribal, state, and local regulatory and resource

agencies, where such agencies have authorities and/or mandates directly affecting, or affected by, the establishment, operation, or use of the mitigation bank or in-lieu fee program. The district engineer will seek to include all public agencies with a substantive interest in the establishment of the mitigation bank or in-lieu fee program on the IRT, but retains final authority over its composition.

(3) The primary role of the IRT is to facilitate the establishment of mitigation banks or in-lieu fee programs through the development of mitigation banking or in-lieu fee program instruments. The IRT will review the prospectus, instrument, and other appropriate documents and provide comments to the district engineer. The district engineer and the IRT should use a watershed approach to the extent practicable in reviewing proposed mitigation banks and in-lieu fee programs. Members of the IRT may also sign the instrument, if they so choose. By signing the instrument, the IRT members indicate their agreement with the terms of the instrument. As an alternative, a member of the IRT may submit a letter expressing concurrence with the instrument. The IRT will also advise the district engineer in assessing monitoring reports, recommending remedial or adaptive management measures, approving credit releases, and approving modifications to an instrument. In order to ensure timely processing of instruments and other documentation, comments from IRT members must be received by the district engineer within the time limits specified in this section. Comments received after these deadlines will only be considered at the discretion of the district engineer to the extent that doing so does not jeopardize the deadlines for district engineer action.

(4) The district engineer will give full consideration to any timely comments and advice of the IRT. The district engineer alone retains final authority for approval of the instrument in cases where the mitigation bank or in-lieu fee program is used to satisfy compensatory mitigation requirements of DA permits.

(5) *MOAs with other agencies.* The district engineer and members of the IRT may enter into a memorandum of agreement (MOA) with any other federal, state or local government agency to perform all or some of the IRT review functions described in this section. Such MOAs must include provisions for appropriate federal oversight of the review process. The district engineer retains sole authority for final approval of instruments and

other documentation required under this section.

(c) *Compensation planning framework for in-lieu fee programs.* (1) The approved instrument for an in-lieu fee program must include a compensation planning framework that will be used to select, secure, and implement aquatic resource restoration, establishment, enhancement, and/or preservation activities. The compensation planning framework must support a watershed approach to compensatory mitigation. All specific projects used to provide compensation for DA permits must be consistent with the approved compensation planning framework. Modifications to the framework must be approved as a significant modification to the instrument by the district engineer, after consultation with the IRT.

(2) The compensation planning framework must contain the following elements:

(i) The geographic service area(s), including a watershed-based rationale for the delineation of each service area;

(ii) A description of the threats to aquatic resources in the service area(s), including how the in-lieu fee program will help offset impacts resulting from those threats;

(iii) An analysis of historic aquatic resource loss in the service area(s);

(iv) An analysis of current aquatic resource conditions in the service area(s), supported by an appropriate level of field documentation;

(v) A statement of aquatic resource goals and objectives for each service area, including a description of the general amounts, types and locations of aquatic resources the program will seek to provide;

(vi) A prioritization strategy for selecting and implementing compensatory mitigation activities;

(vii) An explanation of how any preservation objectives identified in paragraph (c)(2)(v) of this section and addressed in the prioritization strategy in paragraph (c)(2)(vi) satisfy the criteria for use of preservation in § 332.3(h);

(viii) A description of any public and private stakeholder involvement in plan development and implementation, including, where appropriate, coordination with federal, state, tribal and local aquatic resource management and regulatory authorities;

(ix) A description of the long-term protection and management strategies for activities conducted by the in-lieu fee program sponsor;

(x) A strategy for periodic evaluation and reporting on the progress of the program in achieving the goals and objectives in paragraph (c)(2)(v) of this

section, including a process for revising the planning framework as necessary; and

(xi) Any other information deemed necessary for effective compensation planning by the district engineer.

(3) The level of detail necessary for the compensation planning framework is at the discretion of the district engineer, and will take into account the characteristics of the service area(s) and the scope of the program. As part of the in-lieu fee program instrument, the compensation planning framework will be reviewed by the IRT, and will be a major factor in the district engineer's decision on whether to approve the instrument.

(d) *Review process.* (1) The sponsor is responsible for preparing all documentation associated with establishment of the mitigation bank or in-lieu fee program, including the prospectus, instrument, and other appropriate documents, such as mitigation plans for a mitigation bank. The prospectus provides an overview of the proposed mitigation bank or in-lieu fee program and serves as the basis for public and initial IRT comment. For a mitigation bank, the mitigation plan, as described in § 332.4(c), provides detailed plans and specifications for the mitigation bank site. For in-lieu fee programs, mitigation plans will be prepared as in-lieu fee project sites are identified after the instrument has been approved and the in-lieu fee program becomes operational. The instrument provides the authorization for the mitigation bank or in-lieu fee program to provide credits to be used as compensatory mitigation for DA permits.

(2) *Prospectus.* The prospectus must provide a summary of the information regarding the proposed mitigation bank or in-lieu fee program, at a sufficient level of detail to support informed public and IRT comment. The review process begins when the sponsor submits a complete prospectus to the district engineer. For modifications of approved instruments, submittal of a new prospectus is not required; instead, the sponsor must submit a written request for an instrument modification accompanied by appropriate documentation. The district engineer must notify the sponsor within 30 days whether or not a submitted prospectus is complete. A complete prospectus includes the following information:

(i) The objectives of the proposed mitigation bank or in-lieu fee program.

(ii) How the mitigation bank or in-lieu fee program will be established and operated.

(iii) The proposed service area.

(iv) The general need for and technical feasibility of the proposed mitigation bank or in-lieu fee program.

(v) The proposed ownership arrangements and long-term management strategy for the mitigation bank or in-lieu fee project sites.

(vi) The qualifications of the sponsor to successfully complete the type(s) of mitigation project(s) proposed, including information describing any past such activities by the sponsor.

(vii) For a proposed mitigation bank, the prospectus must also address:

(A) The ecological suitability of the site to achieve the objectives of the proposed mitigation bank, including the physical, chemical, and biological characteristics of the bank site and how that site will support the planned types of aquatic resources and functions; and

(B) Assurance of sufficient water rights to support the long-term sustainability of the mitigation bank.

(viii) For a proposed in-lieu fee program, the prospectus must also include:

(A) The compensation planning framework (see paragraph (c) of this section); and

(B) A description of the in-lieu fee program account required by paragraph (i) of this section.

(3) *Preliminary review of prospectus.* Prior to submitting a prospectus, the sponsor may elect to submit a draft prospectus to the district engineer for comment and consultation. The district engineer will provide copies of the draft prospectus to the IRT and will provide comments back to the sponsor within 30 days. Any comments from IRT members will also be forwarded to the sponsor. This preliminary review is optional but is strongly recommended. It is intended to identify potential issues early so that the sponsor may attempt to address those issues prior to the start of the formal review process.

(4) *Public review and comment.* Within 30 days of receipt of a complete prospectus or an instrument modification request that will be processed in accordance with paragraph (g)(1) of this section, the district engineer will provide public notice of the proposed mitigation bank or in-lieu fee program, in accordance with the public notice procedures at 33 CFR 325.3. The public notice must, at a minimum, include a summary of the prospectus and indicate that the full prospectus is available to the public for review upon request. For modifications of approved instruments, the public notice must instead summarize, and make available to the public upon request, whatever documentation is appropriate for the modification (e.g., a

new or revised mitigation plan). The comment period for public notice will be 30 days, unless the district engineer determines that a longer comment period is appropriate. The district engineer will notify the sponsor if the comment period is extended beyond 30 days, including an explanation of why the longer comment period is necessary. Copies of all comments received in response to the public notice must be distributed to the other IRT members and to the sponsor within 15 days of the close of the public comment period. The district engineer and IRT members may also provide comments to the sponsor at this time, and copies of any such comments will also be distributed to all IRT members. If the construction of a mitigation bank or an in-lieu fee program project requires a DA permit, the public notice requirement may be satisfied through the public notice provisions of the permit processing procedures, provided all of the relevant information is provided.

(5) *Initial evaluation.* (i) After the end of the comment period, the district engineer will review the comments received in response to the public notice, and make a written initial evaluation as to the potential of the proposed mitigation bank or in-lieu fee program to provide compensatory mitigation for activities authorized by DA permits. This initial evaluation letter must be provided to the sponsor within 30 days of the end of the public notice comment period.

(ii) If the district engineer determines that the proposed mitigation bank or in-lieu fee program has potential for providing appropriate compensatory mitigation for activities authorized by DA permits, the initial evaluation letter will inform the sponsor that he/she may proceed with preparation of the draft instrument (see paragraph (d)(6) of this section).

(iii) If the district engineer determines that the proposed mitigation bank or in-lieu fee program does not have potential for providing appropriate compensatory mitigation for DA permits, the initial evaluation letter must discuss the reasons for that determination. The sponsor may revise the prospectus to address the district engineer's concerns, and submit the revised prospectus to the district engineer. If the sponsor submits a revised prospectus, a revised public notice will be issued in accordance with paragraph (d)(4) of this section.

(iv) This initial evaluation procedure does not apply to proposed modifications of approved instruments.

(6) *Draft instrument.* (i) After considering comments from the district engineer, the IRT, and the public, if the

sponsor chooses to proceed with establishment of the mitigation bank or in-lieu fee program, he must prepare a draft instrument and submit it to the district engineer. In the case of an instrument modification, the sponsor must prepare a draft amendment (e.g., a specific instrument provision, a new or modified mitigation plan), and submit it to the district engineer. The district engineer must notify the sponsor within 30 days of receipt, whether the draft instrument or amendment is complete. If the draft instrument or amendment is incomplete, the district engineer will request from the sponsor the information necessary to make the draft instrument or amendment complete. Once any additional information is submitted, the district engineer must notify the sponsor as soon as he determines that the draft instrument or amendment is complete. The draft instrument must be based on the prospectus and must describe in detail the physical and legal characteristics of the mitigation bank or in-lieu fee program and how it will be established and operated.

(ii) For mitigation banks and in-lieu fee programs, the draft instrument must include the following information:

(A) A description of the proposed geographic service area of the mitigation bank or in-lieu fee program. The service area is the watershed, ecoregion, physiographic province, and/or other geographic area within which the mitigation bank or in-lieu fee program is authorized to provide compensatory mitigation required by DA permits. The service area must be appropriately sized to ensure that the aquatic resources provided will effectively compensate for adverse environmental impacts across the entire service area. For example, in urban areas, a U.S. Geological Survey 8-digit hydrologic unit code (HUC) watershed or a smaller watershed may be an appropriate service area. In rural areas, several contiguous 8-digit HUCs or a 6-digit HUC watershed may be an appropriate service area. Delineation of the service area must also consider any locally-developed standards and criteria that may be applicable. The economic viability of the mitigation bank or in-lieu fee program may also be considered in determining the size of the service area. The basis for the proposed service area must be documented in the instrument. An in-lieu fee program or umbrella mitigation banking instrument may have multiple service areas governed by its instrument (e.g., each watershed within a state or Corps district may be a separate service area under the instrument); however, all

impacts and compensatory mitigation must be accounted for by service area;

(B) Accounting procedures;

(C) A provision stating that legal responsibility for providing the compensatory mitigation lies with the sponsor once a permittee secures credits from the sponsor;

(D) Default and closure provisions;

(E) Reporting protocols; and

(F) Any other information deemed necessary by the district engineer.

(iii) For a mitigation bank, a complete draft instrument must include the following additional information:

(A) Mitigation plans that include all applicable items listed in § 332.4(c)(2) through (14); and

(B) A credit release schedule, which is tied to achievement of specific milestones. All credit releases must be approved by the district engineer, in consultation with the IRT, based on a determination that required milestones have been achieved. The district engineer, in consultation with the IRT, may modify the credit release schedule, including reducing the number of available credits or suspending credit sales or transfers altogether, where necessary to ensure that all credit sales or transfers remain tied to compensatory mitigation projects with a high likelihood of meeting performance standards;

(iv) For an in-lieu fee program, a complete draft instrument must include the following additional information:

(A) The compensation planning framework (see paragraph (c) of this section);

(B) Specification of the initial allocation of advance credits (see paragraph (n) of this section) and a draft fee schedule for these credits, by service area, including an explanation of the basis for the allocation and draft fee schedule;

(C) A methodology for determining future project-specific credits and fees; and

(D) A description of the in-lieu fee program account required by paragraph (i) of this section.

(7) *IRT review.* Upon receipt of notification by the district engineer that the draft instrument or amendment is complete, the sponsor must provide the district engineer with a sufficient number of copies of the draft instrument or amendment to distribute to the IRT members. The district engineer will promptly distribute copies of the draft instrument or amendment to the IRT members for a 30-day comment period. The 30-day comment period begins 5 days after the district engineer distributes the copies of the draft instrument or amendment to the IRT.

Following the comment period, the district engineer will discuss any comments with the appropriate agencies and with the sponsor. The district engineer will seek to resolve issues using a consensus based approach, to the extent practicable, while still meeting the decision-making time frames specified in this section. Within 90 days of receipt of the complete draft instrument or amendment by the IRT members, the district engineer must notify the sponsor of the status of the IRT review. Specifically, the district engineer must indicate to the sponsor if the draft instrument or amendment is generally acceptable and what changes, if any, are needed. If there are significant unresolved concerns that may lead to a formal objection from one or more IRT members to the final instrument or amendment, the district engineer will indicate the nature of those concerns.

(8) *Final instrument.* The sponsor must submit a final instrument to the district engineer for approval, with supporting documentation that explains how the final instrument addresses the comments provided by the IRT. For modifications of approved instruments, the sponsor must submit a final amendment to the district engineer for approval, with supporting documentation that explains how the final amendment addresses the comments provided by the IRT. The final instrument or amendment must be provided directly by the sponsor to all members of the IRT. Within 30 days of receipt of the final instrument or amendment, the district engineer will notify the IRT members whether or not he intends to approve the instrument or amendment. If no IRT member objects, by initiating the dispute resolution process in paragraph (e) of this section within 45 days of receipt of the final instrument or amendment, the district engineer will notify the sponsor of his final decision and, if the instrument or amendment is approved, arrange for it to be signed by the appropriate parties. If any IRT member initiates the dispute resolution process, the district engineer will notify the sponsor. Following conclusion of the dispute resolution process, the district engineer will notify the sponsor of his final decision, and if the instrument or amendment is approved, arrange for it to be signed by the appropriate parties. For mitigation banks, the final instrument must contain the information items listed in paragraphs (d)(6)(ii), and (iii) of this section. For in-lieu fee programs, the final instrument must contain the information items listed in paragraphs

(d)(6)(ii) and (iv) of this section. For the modification of an approved instrument, the amendment must contain appropriate information, as determined by the district engineer. The final instrument or amendment must be made available to the public upon request.

(e) *Dispute resolution process.* (1) Within 15 days of receipt of the district engineer's notification of intent to approve an instrument or amendment, the Regional Administrator of the U.S. EPA, the Regional Director of the U.S. Fish and Wildlife Service, the Regional Director of the National Marine Fisheries Service, and/or other senior officials of agencies represented on the IRT may notify the district engineer and other IRT members by letter if they object to the approval of the proposed final instrument or amendment. This letter must include an explanation of the basis for the objection and, where feasible, offer recommendations for resolving the objections. If the district engineer does not receive any objections within this time period, he may proceed to final action on the instrument or amendment.

(2) The district engineer must respond to the objection within 30 days of receipt of the letter. The district engineer's response may indicate an intent to disapprove the instrument or amendment as a result of the objection, an intent to approve the instrument or amendment despite the objection, or may provide a modified instrument or amendment that attempts to address the objection. The district engineer's response must be provided to all IRT members.

(3) Within 15 days of receipt of the district engineer's response, if the Regional Administrator or Regional Director is not satisfied with the response he may forward the issue to the Assistant Administrator for Water of the U.S. EPA, the Assistant Secretary for Fish and Wildlife and Parks of the U.S. FWS, or the Undersecretary for Oceans and Atmosphere of NOAA, as appropriate, for review and must notify the district engineer by letter via electronic mail or facsimile machine (with copies to all IRT members) that the issue has been forwarded for Headquarters review. This step is available only to the IRT members representing these three federal agencies, however other IRT members who do not agree with the district engineer's final decision do not have to sign the instrument or amendment or recognize the mitigation bank or in-lieu fee program for purposes of their own programs and authorities. If an IRT member other than the one filing the original objection has a new objection

based on the district engineer's response, he may use the first step in this procedure (paragraph (e)(1) of this section) to provide that objection to the district engineer.

(4) If the issue has not been forwarded to the objecting agency's Headquarters, then the district engineer may proceed with final action on the instrument or amendment. If the issue has been forwarded to the objecting agency's Headquarters, the district engineer must hold in abeyance the final action on the instrument or amendment, pending Headquarters level review described below.

(5) Within 20 days from the date of the letter requesting Headquarters level review, the Assistant Administrator for Water, the Assistant Secretary for Fish and Wildlife and Parks, or the Undersecretary for Oceans and Atmosphere must either notify the Assistant Secretary of the Army (Civil Works) (ASA(CW)) that further review will not be requested, or request that the ASA(CW) review the final instrument or amendment.

(6) Within 30 days of receipt of the letter from the objecting agency's Headquarters request for ASA(CW)'s review of the final instrument, the ASA(CW), through the Director of Civil Works, must review the draft instrument or amendment and advise the district engineer on how to proceed with final action on that instrument or amendment. The ASA(CW) must immediately notify the Assistant Administrator for Water, the Assistant Secretary for Fish and Wildlife and Parks, and/or the Undersecretary for Oceans and Atmosphere of the final decision.

(7) In cases where the dispute resolution procedure is used, the district engineer must notify the sponsor of his final decision within 150 days of receipt of the final instrument or amendment.

(f) *Extension of deadlines.* (1) The deadlines in paragraphs (d) and (e) of this section may be extended by the district engineer at his sole discretion in cases where:

(i) Compliance with other applicable laws, such as consultation under section 7 of the Endangered Species Act or section 106 of the National Historic Preservation Act, is required;

(ii) It is necessary to conduct government-to-government consultation with Indian tribes;

(iii) Timely submittal of information necessary for the review of the proposed mitigation bank or in-lieu fee program or the proposed modification of an approved instrument is not accomplished by the sponsor; or

(iv) Information that is essential to the district engineer's decision cannot be reasonably obtained within the specified time frame.

(2) In such cases, the district engineer must promptly notify the sponsor in writing of the extension and the reason for it. Such extensions shall be for the minimum time necessary to resolve the issue necessitating the extension.

(g) *Modification of instruments.* (1) *Approval of an amendment to an approved instrument.* Modification of an approved instrument, including the addition and approval of umbrella mitigation bank sites or in-lieu fee project sites or expansions of previously approved mitigation bank or in-lieu fee project sites, must follow the appropriate procedures in paragraph (d) of this section, unless the district engineer determines that the streamlined review process described in paragraph (g)(2) of this section is warranted.

(2) *Streamlined review process.* The streamlined modification review process may be used for the following modifications of instruments: changes reflecting adaptive management of the mitigation bank or in-lieu fee program, credit releases, changes in credit releases and credit release schedules, and changes that the district engineer determines are not significant. If the district engineer determines that the streamlined review process is warranted, he must notify the IRT members and the sponsor of this determination and provide them with copies of the proposed modification. IRT members and the sponsor have 30 days to notify the district engineer if they have concerns with the proposed modification. If IRT members or the sponsor notify the district engineer of such concerns, the district engineer shall attempt to resolve those concerns. Within 60 days of providing the proposed modification to the IRT, the district engineer must notify the IRT members of his intent to approve or disapprove the proposed modification. If no IRT member objects, by initiating the dispute resolution process in paragraph (e) of this section, within 15 days of receipt of this notification, the district engineer will notify the sponsor of his final decision and, if the modification is approved, arrange for it to be signed by the appropriate parties. If any IRT member initiates the dispute resolution process, the district engineer will so notify the sponsor. Following conclusion of the dispute resolution process, the district engineer will notify the sponsor of his final decision, and if the modification is approved, arrange

for it to be signed by the appropriate parties.

(h) *Umbrella mitigation banking instruments.* A single mitigation banking instrument may provide for future authorization of additional mitigation bank sites. As additional sites are selected, they must be included in the mitigation banking instrument as modifications, using the procedures in paragraph (g)(1) of this section. Credit withdrawal from the additional bank sites shall be consistent with paragraph (m) of this section.

(i) *In-lieu fee program account.* (1) The in-lieu fee program sponsor must establish a program account after the instrument is approved by the district engineer, prior to accepting any fees from permittees. If the sponsor accepts funds from entities other than permittees, those funds must be kept in separate accounts. The program account must be established at a financial institution that is a member of the Federal Deposit Insurance Corporation. All interests and earnings accruing to the program account must remain in that account for use by the in-lieu fee program for the purposes of providing compensatory mitigation for DA permits. The program account may only be used for the selection, design, acquisition, implementation, and management of in-lieu fee compensatory mitigation projects, except for a small percentage (as determined by the district engineer in consultation with the IRT and specified in the instrument) that can be used for administrative costs.

(2) The sponsor must submit proposed in-lieu fee projects to the district engineer for funding approval. Disbursements from the program account may only be made upon receipt of written authorization from the district engineer, after the district engineer has consulted with the IRT. The terms of the program account must specify that the district engineer has the authority to direct those funds to alternative compensatory mitigation projects in cases where the sponsor does not provide compensatory mitigation in accordance with the time frame specified in paragraph (n)(4) of this section.

(3) The sponsor must provide annual reports to the district engineer and the IRT. The annual reports must include the following information:

(i) All income received, disbursements, and interest earned by the program account;

(ii) A list of all permits for which in-lieu fee program funds were accepted. This list shall include: The Corps permit number (or the state permit number if

there is no corresponding Corps permit number, in cases of state programmatic general permits or other regional general permits), the service area in which the authorized impacts are located, the amount of authorized impacts, the amount of required compensatory mitigation, the amount paid to the in-lieu fee program, and the date the funds were received from the permittee;

(iii) A description of in-lieu fee program expenditures from the account, such as the costs of land acquisition, planning, construction, monitoring, maintenance, contingencies, adaptive management, and administration;

(iv) The balance of advance credits and released credits at the end of the report period for each service area; and

(v) Any other information required by the district engineer.

(4) The district engineer may audit the records pertaining to the program account. All books, accounts, reports, files, and other records relating to the in-lieu fee program account shall be available at reasonable times for inspection and audit by the district engineer.

(j) *In-lieu fee project approval.* (1) As in-lieu fee project sites are identified and secured, the sponsor must submit mitigation plans to the district engineer that include all applicable items listed in § 332.4(c)(2) through (14). The mitigation plan must also include a credit release schedule consistent with paragraph (o)(8) of this section that is tied to achievement of specific performance standards. The review and approval of in-lieu fee projects will be conducted in accordance with the procedures in paragraph (g)(1) of this section, as modifications of the in-lieu fee program instrument. This includes compensatory mitigation projects conducted by another party on behalf of the sponsor through requests for proposals and awarding of contracts.

(2) If a DA permit is required for an in-lieu fee project, the permit should not be issued until all relevant provisions of the mitigation plan have been substantively determined, to ensure that the DA permit accurately reflects all relevant provisions of the approved mitigation plan, such as performance standards.

(k) *Coordination of mitigation banking instruments and DA permit issuance.* In cases where initial establishment of the mitigation bank, or the development of a new project site under an umbrella banking instrument, involves activities requiring DA authorization, the permit should not be issued until all relevant provisions of the mitigation plan have been substantively determined. This is to

ensure that the DA permit accurately reflects all relevant provisions of the final instrument, such as performance standards.

(1) *Project implementation.* (1) The sponsor must have an approved instrument prior to collecting funds from permittees to satisfy compensatory mitigation requirements for DA permits.

(2) Authorization to sell credits to satisfy compensatory mitigation requirements in DA permits is contingent on compliance with all of the terms of the instrument. This includes constructing a mitigation bank or in-lieu fee project in accordance with the mitigation plan approved by the district engineer and incorporated by reference in the instrument. If the aquatic resource restoration, establishment, enhancement, and/or preservation activities cannot be implemented in accordance with the approved mitigation plan, the district engineer must consult with the sponsor and the IRT to consider modifications to the instrument, including adaptive management, revisions to the credit release schedule, and alternatives for providing compensatory mitigation to satisfy any credits that have already been sold.

(3) An in-lieu fee program sponsor is responsible for the implementation, long-term management, and any required remediation of the restoration, establishment, enhancement, and/or preservation activities, even though those activities may be conducted by other parties through requests for proposals or other contracting mechanisms.

(m) *Credit withdrawal from mitigation banks.* The mitigation banking instrument may allow for an initial debiting of a percentage of the total credits projected at mitigation bank maturity, provided the following conditions are satisfied: the mitigation banking instrument and mitigation plan have been approved, the mitigation bank site has been secured, appropriate financial assurances have been established, and any other requirements determined to be necessary by the district engineer have been fulfilled. The mitigation banking instrument must provide a schedule for additional credit releases as appropriate milestones are achieved (see paragraph (o)(8) of this section). Implementation of the approved mitigation plan shall be initiated no later than the first full growing season after the date of the first credit transaction.

(n) *Advance credits for in-lieu fee programs.* (1) The in-lieu fee program instrument may make a limited number of advance credits available to

permittees when the instrument is approved. The number of advance credits will be determined by the district engineer, in consultation with the IRT, and will be specified for each service area in the instrument. The number of advance credits will be based on the following considerations:

(i) The compensation planning framework;

(ii) The sponsor's past performance for implementing aquatic resource restoration, establishment, enhancement, and/or preservation activities in the proposed service area or other areas; and

(iii) The projected financing necessary to begin planning and implementation of in-lieu fee projects.

(2) To determine the appropriate number of advance credits for a particular service area, the district engineer may require the sponsor to provide confidential supporting information that will not be made available to the general public. Examples of confidential supporting information may include prospective in-lieu fee project sites.

(3) As released credits are produced by in-lieu fee projects, they must be used to fulfill any advance credits that have already been provided within the project service area before any remaining released credits can be sold or transferred to permittees. Once previously provided advance credits have been fulfilled, an equal number of advance credits is re-allocated to the sponsor for sale or transfer to fulfill new mitigation requirements, consistent with the terms of the instrument. The number of advance credits available to the sponsor at any given time to sell or transfer to permittees in a given service area is equal to the number of advance credits specified in the instrument, minus any that have already been provided but not yet fulfilled.

(4) Land acquisition and initial physical and biological improvements must be completed by the third full growing season after the first advance credit in that service area is secured by a permittee, unless the district engineer determines that more or less time is needed to plan and implement an in-lieu fee project. If the district engineer determines that there is a compensatory mitigation deficit in a specific service area by the third growing season after the first advance credit in that service area is sold, and determines that it would not be in the public interest to allow the sponsor additional time to plan and implement an in-lieu fee project, the district engineer must direct the sponsor to disburse funds from the in-lieu fee program account to provide

alternative compensatory mitigation to fulfill those compensation obligations.

(5) The sponsor is responsible for complying with the terms of the in-lieu fee program instrument. If the district engineer determines, as a result of review of annual reports on the operation of the in-lieu fee program (see paragraphs (p)(2) and (q)(1) of this section), that it is not performing in compliance with its instrument, the district engineer will take appropriate action, which may include suspension of credit sales, to ensure compliance with the in-lieu fee program instrument (see paragraph (o)(10) of this section). Permittees that secured credits from the in-lieu fee program are not responsible for in-lieu fee program compliance.

(o) *Determining credits.* (1) *Units of measure.* The principal units for credits and debits are acres, linear feet, functional assessment units, or other suitable metrics of particular resource types. Functional assessment units or other suitable metrics may be linked to acres or linear feet.

(2) *Assessment.* Where practicable, an appropriate assessment method (e.g., hydrogeomorphic approach to wetlands functional assessment, index of biological integrity) or other suitable metric must be used to assess and describe the aquatic resource types that will be restored, established, enhanced and/or preserved by the mitigation bank or in-lieu fee project.

(3) *Credit production.* The number of credits must reflect the difference between pre- and post-compensatory mitigation project site conditions, as determined by a functional or condition assessment or other suitable metric.

(4) *Credit value.* Once a credit is debited (sold or transferred to a permittee), its value cannot change.

(5) *Credit costs.* (i) The cost of compensatory mitigation credits provided by a mitigation bank or in-lieu fee program is determined by the sponsor.

(ii) For in-lieu fee programs, the cost per unit of credit must include the expected costs associated with the restoration, establishment, enhancement, and/or preservation of aquatic resources in that service area. These costs must be based on full cost accounting, and include, as appropriate, expenses such as land acquisition, project planning and design, construction, plant materials, labor, legal fees, monitoring, and remediation or adaptive management activities, as well as administration of the in-lieu fee program. The cost per unit credit must also take into account contingency costs appropriate to the stage of project planning, including uncertainties in

construction and real estate expenses. The cost per unit of credit must also take into account the resources necessary for the long-term management and protection of the in-lieu fee project. In addition, the cost per unit credit must include financial assurances that are necessary to ensure successful completion of in-lieu fee projects.

(6) *Credits provided by preservation.* These credits should be specified as acres, linear feet, or other suitable metrics of preservation of a particular resource type. In determining the compensatory mitigation requirements for DA permits using mitigation banks or in-lieu fee programs, the district engineer should apply a higher mitigation ratio if the requirements are to be met through the use of preservation credits. In determining this higher ratio, the district engineer must consider the relative importance of both the impacted and the preserved aquatic resources in sustaining watershed functions.

(7) *Credits provided by riparian areas, buffers, and uplands.* These credits should be specified as acres, linear feet, or other suitable metrics of riparian area, buffer, and uplands, respectively. Non-aquatic resources can only be used as compensatory mitigation for impacts to aquatic resources authorized by DA permits when those resources are essential to maintaining the ecological viability of adjoining aquatic resources. In determining the compensatory mitigation requirements for DA permits using mitigation banks and in-lieu fee programs, the district engineer may authorize the use of riparian area, buffer, and/or upland credits if he determines that these areas are essential to sustaining aquatic resource functions in the watershed and are the most appropriate compensation for the authorized impacts.

(8) *Credit release schedule.* (i) *General considerations.* Release of credits must be tied to performance-based milestones (e.g., construction, planting, establishment of specified plant and animal communities). The credit release schedule should reserve a significant share of the total credits for release only after full achievement of ecological performance standards. When determining the credit release schedule, factors to be considered may include, but are not limited to: The method of providing compensatory mitigation credits (e.g., restoration), the likelihood of success, the nature and amount of work needed to generate the credits, and the aquatic resource type(s) and function(s) to be provided by the mitigation bank or in-lieu fee project. The district engineer will determine the

credit release schedule, including the share to be released only after full achievement of performance standards, after consulting with the IRT. Once released, credits may only be used to satisfy compensatory mitigation requirements of a DA permit if the use of credits for a specific permit has been approved by the district engineer.

(ii) For single-site mitigation banks, the terms of the credit release schedule must be specified in the mitigation banking instrument. The credit release schedule may provide for an initial debiting of a limited number of credits once the instrument is approved and other appropriate milestones are achieved (see paragraph (m) of this section).

(iii) For in-lieu fee projects and umbrella mitigation bank sites, the terms of the credit release schedule must be specified in the approved mitigation plan. When an in-lieu fee project or umbrella mitigation bank site is implemented and is achieving the performance-based milestones specified in the credit release schedule, credits are generated in accordance with the credit release schedule for the approved mitigation plan. If the in-lieu fee project or umbrella mitigation bank site does not achieve those performance-based milestones, the district engineer may modify the credit release schedule, including reducing the number of credits.

(9) *Credit release approval.* Credit releases for mitigation banks and in-lieu fee projects must be approved by the district engineer. In order for credits to be released, the sponsor must submit documentation to the district engineer demonstrating that the appropriate milestones for credit release have been achieved and requesting the release. The district engineer will provide copies of this documentation to the IRT members for review. IRT members must provide any comments to the district engineer within 15 days of receiving this documentation. However, if the district engineer determines that a site visit is necessary, IRT members must provide any comments to the district engineer within 15 days of the site visit. The district engineer must schedule the site visit so that it occurs as soon as it is practicable, but the site visit may be delayed by seasonal considerations that affect the ability of the district engineer and the IRT to assess whether the applicable credit release milestones have been achieved. After full consideration of any comments received, the district engineer will determine whether the milestones have been achieved and the credits can be released. The district engineer shall

make a decision within 30 days of the end of that comment period, and notify the sponsor and the IRT.

(10) *Suspension and termination.* If the district engineer determines that the mitigation bank or in-lieu fee program is not meeting performance standards or complying with the terms of the instrument, appropriate action will be taken. Such actions may include, but are not limited to, suspending credit sales, adaptive management, decreasing available credits, utilizing financial assurances, and terminating the instrument.

(p) *Accounting procedures.* (1) For mitigation banks, the instrument must contain a provision requiring the sponsor to establish and maintain a ledger to account for all credit transactions. Each time an approved credit transaction occurs, the sponsor must notify the district engineer.

(2) For in-lieu fee programs, the instrument must contain a provision requiring the sponsor to establish and maintain an annual report ledger in accordance with paragraph (i)(3) of this section, as well as individual ledgers that track the production of released credits for each in-lieu fee project.

(q) *Reporting.* (1) *Ledger account.* The sponsor must compile an annual ledger report showing the beginning and ending balance of available credits and permitted impacts for each resource type, all additions and subtractions of credits, and any other changes in credit availability (e.g., additional credits released, credit sales suspended). The ledger report must be submitted to the district engineer, who will distribute copies to the IRT members. The ledger report is part of the administrative record for the mitigation bank or in-lieu fee program. The district engineer will make the ledger report available to the public upon request.

(2) *Monitoring reports.* The sponsor is responsible for monitoring the mitigation bank site or the in-lieu fee project site in accordance with the approved monitoring requirements to determine the level of success and identify problems requiring remedial action or adaptive management measures. Monitoring must be conducted in accordance with the requirements in § 332.6, and at time intervals appropriate for the particular project type and until such time that the district engineer, in consultation with the IRT, has determined that the performance standards have been attained. The instrument must include requirements for periodic monitoring reports to be submitted to the district engineer, who will provide copies to other IRT members.

(3) *Financial assurance and long-term management funding report.* The district engineer may require the sponsor to provide an annual report showing beginning and ending balances, including deposits into and any withdrawals from, the accounts providing funds for financial assurances and long-term management activities. The report should also include information on the amount of required financial assurances and the status of those assurances, including their potential expiration.

(r) *Use of credits.* Except as provided below, all activities authorized by DA permits are eligible, at the discretion of the district engineer, to use mitigation banks or in-lieu fee programs to fulfill compensatory mitigation requirements for DA permits. The district engineer will determine the number and type(s) of credits required to compensate for the authorized impacts. Permit applicants may propose to use a particular mitigation bank or in-lieu fee program to provide the required compensatory mitigation. In such cases, the sponsor must provide the permit applicant with a statement of credit availability. The district engineer must review the permit applicant's compensatory mitigation proposal, and notify the applicant of his determination regarding the acceptability of using that mitigation bank or in-lieu fee program.

(s) *IRT concerns with use of credits.* If, in the view of a member of the IRT, an issued permit or series of issued permits raises concerns about how credits from a particular mitigation bank or in-lieu fee program are being used to satisfy compensatory mitigation requirements (including concerns about whether credit use is consistent with the terms of the instrument), the IRT member may notify the district engineer in writing of the concern. The district engineer shall promptly consult with the IRT to address the concern. Resolution of the concern is at the discretion of the district engineer, consistent with applicable statutes, regulations, and policies regarding compensatory mitigation requirements for DA permits. Nothing in this section limits the authorities designated to IRT agencies under existing statutes or regulations.

(t) *Site protection.* (1) For mitigation bank sites, real estate instruments, management plans, or other long-term mechanisms used for site protection must be finalized before any credits can be released.

(2) For in-lieu fee project sites, real estate instruments, management plans, or other long-term protection mechanisms used for site protection

must be finalized before advance credits can become released credits.

(u) *Long-term management.* (1) The legal mechanisms and the party responsible for the long-term management and the protection of the mitigation bank site must be documented in the instrument or, in the case of umbrella mitigation banking instruments and in-lieu fee programs, the approved mitigation plans. The responsible party should make adequate provisions for the operation, maintenance, and long-term management of the compensatory mitigation project site. The long-term management plan should include a description of long-term management needs and identify the funding mechanism that will be used to meet those needs.

(2) The instrument may contain provisions for the sponsor to transfer long-term management responsibilities to a land stewardship entity, such as a public agency, non-governmental organization, or private land manager.

(3) The instrument or approved mitigation plan must address the financial arrangements and timing of any necessary transfer of long-term management funds to the steward.

(4) Where needed, the acquisition and protection of water rights should be secured and documented in the instrument or, in the case of umbrella mitigation banking instruments and in-lieu fee programs, the approved mitigation site plan.

(v) *Grandfathering of existing instruments.* (1) *Mitigation banking instruments.* All mitigation banking instruments approved on or after July 9, 2008 must meet the requirements of this part. Mitigation banks approved prior to July 9, 2008 may continue to operate under the terms of their existing instruments. However, any modification to such a mitigation banking instrument on or after July 9, 2008, including authorization of additional sites under an umbrella mitigation banking instrument, expansion of an existing site, or addition of a different type of resource credits (e.g., stream credits to a wetland bank) must be consistent with the terms of this part.

(2) *In-lieu fee program instruments.* All in-lieu fee program instruments approved on or after July 9, 2008 must meet the requirements of this part. In-lieu fee programs operating under instruments approved prior to July 9, 2008 may continue to operate under those instruments for two years after the effective date of this rule, after which time they must meet the requirements of this part, unless the district engineer determines that circumstances warrant

an extension of up to three additional years. The district engineer must consult with the IRT before approving such extensions. Any revisions made to the in-lieu fee program instrument on or after July 9, 2008 must be consistent with the terms of this part. Any approved project for which construction was completed under the terms of a previously approved instrument may continue to operate indefinitely under those terms if the district engineer determines that the project is providing appropriate mitigation substantially consistent with the terms of this part.

Dated: March 28, 2008.

John Paul Woodley, Jr.,
*Assistant Secretary of the Army, (Civil Works),
Department of the Army.*

Environmental Protection Agency 40 CFR Chapter I

■ For the reasons stated in the preamble, the Environmental Protection Agency amends 40 CFR part 230 as set forth below:

PART 230—SECTION 404(b)(1) GUIDELINES FOR SPECIFICATION OF DISPOSAL SITES FOR DREDGED OR FILL MATERIAL

■ 1. The authority citation for part 230 continues to read as follows:

Authority: Secs. 404(b) and 501(a) of the Clean Water Act of 1977 (33 U.S.C. 1344(b) and 1361(a)).

§ 230.12 [Amended]

■ 2. In § 230.12(a)(2) remove the reference “subpart H” and add in its place the reference “subparts H and J”.

Subpart H—[Amended]

■ 3. In subpart H the Note following the subpart heading is amended by adding a sentence to the end to read as follows:

Subpart H—Actions To Minimize Adverse Effects

Note: * * * Additional criteria for compensation measures are provided in subpart J of this part.

■ 4. In § 230.75 add a new sentence after the second sentence in paragraph (d) to read as follows:

§ 230.75 Actions affecting plant and animal populations.

* * * * *

(d) * * * Additional criteria for compensation measures are provided in subpart J of this part. * * *

* * * * *

■ 5. Add Subpart J to part 230 to read as follows:

Subpart J—Compensatory Mitigation for Losses of Aquatic Resources

Sec.

- 230.91 Purpose and general considerations.
 230.92 Definitions.
 230.93 General compensatory mitigation requirements.
 230.94 Planning and documentation.
 230.95 Ecological performance standards.
 230.96 Monitoring.
 230.97 Management.
 230.98 Mitigation banks and in-lieu fee programs.

Subpart J—Compensatory Mitigation for Losses of Aquatic Resources**§ 230.91 Purpose and general considerations.**

(a) *Purpose.* (1) The purpose of this subpart is to establish standards and criteria for the use of all types of compensatory mitigation, including on-site and off-site permittee-responsible mitigation, mitigation banks, and in-lieu fee mitigation to offset unavoidable impacts to waters of the United States authorized through the issuance of permits by the U.S. Army Corps of Engineers (Corps) pursuant to section 404 of the Clean Water Act (33 U.S.C. 1344). This subpart implements section 314(b) of the 2004 National Defense Authorization Act (Pub. L. 108–136), which directs that the standards and criteria shall, to the maximum extent practicable, maximize available credits and opportunities for mitigation, provide for regional variations in wetland conditions, functions, and values, and apply equivalent standards and criteria to each type of compensatory mitigation. This subpart is intended to further clarify mitigation requirements established under the Corps and EPA regulations at 33 CFR part 320 and this part, respectively.

(2) This subpart has been jointly developed by the Secretary of the Army, acting through the Chief of Engineers, and the Administrator of the Environmental Protection Agency. From time to time guidance on interpreting and implementing this subpart may be prepared jointly by EPA and the Corps at the national or regional level. No modifications to the basic application, meaning, or intent of this subpart will be made without further joint rulemaking by the Secretary of the Army, acting through the Chief of Engineers and the Administrator of the Environmental Protection Agency, pursuant to the Administrative Procedure Act (5 U.S.C. 551 *et seq.*).

(b) *Applicability.* This subpart does not alter the circumstances under which compensatory mitigation is required or the definition of “waters of the United States,” which is provided at § 230.3(s).

Use of resources as compensatory mitigation that are not otherwise subject to regulation under section 404 of the Clean Water Act does not in and of itself make them subject to such regulation.

(c) *Sequencing.* (1) Nothing in this section affects the requirement that all DA permits subject to section 404 of the Clean Water Act comply with applicable provisions of this part.

(2) Pursuant to these requirements, the district engineer will issue an individual section 404 permit only upon a determination that the proposed discharge complies with applicable provisions of 40 CFR part 230, including those which require the permit applicant to take all appropriate and practicable steps to avoid and minimize adverse impacts to waters of the United States. Practicable means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. Compensatory mitigation for unavoidable impacts may be required to ensure that an activity requiring a section 404 permit complies with the Section 404(b)(1) Guidelines.

(3) Compensatory mitigation for unavoidable impacts may be required to ensure that an activity requiring a section 404 permit complies with the Section 404(b)(1) Guidelines. During the 404(b)(1) Guidelines compliance analysis, the district engineer may determine that a DA permit for the proposed activity cannot be issued because of the lack of appropriate and practicable compensatory mitigation options.

(d) *Accounting for regional variations.* Where appropriate, district engineers shall account for regional characteristics of aquatic resource types, functions and services when determining performance standards and monitoring requirements for compensatory mitigation projects.

(e) *Relationship to other guidance documents.* (1) This subpart applies instead of the “Federal Guidance for the Establishment, Use, and Operation of Mitigation Banks,” which was issued on November 28, 1995, the “Federal Guidance on the Use of In-Lieu Fee Arrangements for Compensatory Mitigation Under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act,” which was issued on November 7, 2000, and Regulatory Guidance Letter 02–02, “Guidance on Compensatory Mitigation Projects for Aquatic Resource Impacts Under the Corps Regulatory Program Pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899” which was issued on December 24, 2002. These guidance documents are no longer to be

used as compensatory mitigation policy in the Corps Regulatory Program.

(2) In addition, this subpart also applies instead of the provisions relating to the amount, type, and location of compensatory mitigation projects, including the use of preservation, in the February 6, 1990, Memorandum of Agreement (MOA) between the Department of the Army and the Environmental Protection Agency on the Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines. All other provisions of this MOA remain in effect.

§ 230.92 Definitions.

For the purposes of this subpart, the following terms are defined:

Adaptive management means 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.

Advance credits means any credits of an approved in-lieu fee program that are available for sale prior to being fulfilled in accordance with an approved mitigation project plan. Advance credit sales require an approved in-lieu fee program instrument that meets all applicable requirements including a specific allocation of advance credits, by service area where applicable. The instrument must also contain a schedule for fulfillment of advance credit sales.

Buffer means an upland, wetland, and/or riparian area that protects and/or enhances aquatic resource functions associated with wetlands, rivers, streams, lakes, marine, and estuarine systems from disturbances associated with adjacent land uses.

Compensatory mitigation means the restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and

practicable avoidance and minimization has been achieved.

Compensatory mitigation project means compensatory mitigation implemented by the permittee as a requirement of a DA permit (i.e., permittee-responsible mitigation), or by a mitigation bank or an in-lieu fee program.

Condition means the relative ability of an aquatic resource to support and maintain a community of organisms having a species composition, diversity, and functional organization comparable to reference aquatic resources in the region.

Credit means a unit of measure (e.g., a functional or areal measure or other suitable metric) representing the accrual or attainment of aquatic functions at a compensatory mitigation site. The measure of aquatic functions is based on the resources restored, established, enhanced, or preserved.

DA means Department of the Army.

Days means calendar days.

Debit means a unit of measure (e.g., a functional or areal measure or other suitable metric) representing the loss of aquatic functions at an impact or project site. The measure of aquatic functions is based on the resources impacted by the authorized activity.

Enhancement means the manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment (creation) means the manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area and functions.

Fulfillment of advance credit sales of an in-lieu fee program means application of credits released in accordance with a credit release schedule in an approved mitigation project plan to satisfy the mitigation requirements represented by the advance credits. Only after any advance credit sales within a service area have been fulfilled through the application of released credits from an in-lieu fee project (in accordance with the credit release schedule for an approved mitigation project plan), may additional released credits from that project be sold or transferred to permittees. When advance credits are fulfilled, an equal number of new advance credits is

restored to the program sponsor for sale or transfer to permit applicants.

Functional capacity means the degree to which an area of aquatic resource performs a specific function.

Functions means the physical, chemical, and biological processes that occur in ecosystems.

Impact means adverse effect.

In-kind means a resource of a similar structural and functional type to the impacted resource.

In-lieu fee program means a program involving the restoration, establishment, enhancement, and/or preservation of aquatic resources through funds paid to a governmental or non-profit natural resources management entity to satisfy compensatory mitigation requirements for DA permits. Similar to a mitigation bank, an in-lieu fee 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 in-lieu fee programs are somewhat different from the rules governing operation and use of mitigation banks. The operation and use of an in-lieu fee program are governed by an in-lieu fee program instrument.

In-lieu fee program instrument means the legal document for the establishment, operation, and use of an in-lieu fee program.

Instrument means mitigation banking instrument or in-lieu fee program instrument.

Interagency Review Team (IRT) means an interagency group of federal, tribal, state, and/or local regulatory and resource agency representatives that reviews documentation for, and advises the district engineer on, the establishment and management of a mitigation bank or an in-lieu fee program.

Mitigation bank means a site, or suite of sites, where resources (e.g., wetlands, streams, riparian areas) are restored, established, enhanced, and/or preserved for the purpose of providing compensatory mitigation for impacts authorized by DA permits. In general, a mitigation bank sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the mitigation bank sponsor. The operation and use of a mitigation bank are governed by a mitigation banking instrument.

Mitigation banking instrument means the legal document for the establishment, operation, and use of a mitigation bank.

Off-site means an area that is neither located on the same parcel of land as the

impact site, nor on a parcel of land contiguous to the parcel containing the impact site.

On-site means an area located on the same parcel of land as the impact site, or on a parcel of land contiguous to the impact site.

Out-of-kind means a resource of a different structural and functional type from the impacted resource.

Performance standards are observable or measurable physical (including hydrological), chemical and/or biological attributes that are used to determine if a compensatory mitigation project meets its objectives.

Permittee-responsible mitigation means an aquatic resource restoration, establishment, enhancement, and/or preservation activity undertaken by the permittee (or an authorized agent or contractor) to provide compensatory mitigation for which the permittee retains full responsibility.

Preservation means the removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Reference aquatic resources are a set of aquatic resources that represent the full range of variability exhibited by a regional class of aquatic resources as a result of natural processes and anthropogenic disturbances.

Rehabilitation means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Release of credits means a determination by the district engineer, in consultation with the IRT, that credits associated with an approved mitigation plan are available for sale or transfer, or in the case of an in-lieu fee program, for fulfillment of advance credit sales. A proportion of projected credits for a specific mitigation bank or in-lieu fee project may be released upon

approval of the mitigation plan, with additional credits released as milestones specified in the credit release schedule are achieved.

Restoration means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riparian areas are lands adjacent to streams, rivers, lakes, and estuarine-marine shorelines. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality.

Service area means the geographic area within which impacts can be mitigated at a specific mitigation bank or an in-lieu fee program, as designated in its instrument.

Services mean the benefits that human populations receive from functions that occur in ecosystems.

Sponsor means any public or private entity responsible for establishing, and in most circumstances, operating a mitigation bank or in-lieu fee program.

Standard permit means a standard, individual permit issued under the authority of section 404 of the Clean Water Act.

Temporal loss is the time lag between the loss of aquatic resource functions caused by the permitted impacts and the replacement of aquatic resource functions at the compensatory mitigation site. Higher compensation ratios may be required to compensate for temporal loss. When the compensatory mitigation project is initiated prior to, or concurrent with, the permitted impacts, the district engineer may determine that compensation for temporal loss is not necessary, unless the resource has a long development time.

Watershed means a land area that drains to a common waterway, such as a stream, lake, estuary, wetland, or ultimately the ocean.

Watershed approach means 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 DA permits. The watershed approach may involve consideration of landscape scale, historic and potential aquatic resource conditions, past and projected aquatic resource impacts in the watershed, and terrestrial connections between aquatic resources when determining compensatory mitigation requirements for DA permits.

Watershed plan means a plan developed by federal, tribal, state, and/or local government agencies or appropriate non-governmental organizations, in consultation with relevant stakeholders, for the specific goal of aquatic resource restoration, establishment, enhancement, and preservation. A watershed plan addresses aquatic resource conditions in the watershed, multiple stakeholder interests, and land uses. Watershed plans may also identify priority sites for aquatic resource restoration and protection. Examples of watershed plans include special area management plans, advance identification programs, and wetland management plans.

§ 230.93 General compensatory mitigation requirements.

(a) *General considerations.* (1) The fundamental objective of compensatory mitigation is to offset environmental losses resulting from unavoidable impacts to waters of the United States authorized by DA permits. The district engineer must determine the compensatory mitigation to be required in a DA permit, based on what is practicable and capable of compensating for the aquatic resource functions that will be lost as a result of the permitted activity. When evaluating compensatory mitigation options, the district engineer will consider what would be environmentally preferable. In making this determination, the district engineer must assess the likelihood for ecological success and sustainability, the location of the compensation site relative to the impact site and their significance within the watershed, and the costs of the compensatory mitigation project. In many cases, the environmentally preferable compensatory mitigation may be provided through mitigation banks or in-lieu fee programs because they usually involve consolidating compensatory mitigation projects where ecologically appropriate, consolidating resources, providing financial planning and scientific expertise (which often is not practical for permittee-responsible compensatory mitigation projects), reducing temporal losses of functions, and reducing uncertainty over project success. Compensatory mitigation requirements must be commensurate with the amount and type of impact that

is associated with a particular DA permit. Permit applicants are responsible for proposing an appropriate compensatory mitigation option to offset unavoidable impacts.

(2) Compensatory mitigation may be performed using the methods of restoration, enhancement, establishment, and in certain circumstances preservation. Restoration should generally be the first option considered because the likelihood of success is greater and the impacts to potentially ecologically important uplands are reduced compared to establishment, and the potential gains in terms of aquatic resource functions are greater, compared to enhancement and preservation.

(3) Compensatory mitigation projects may be sited on public or private lands. Credits for compensatory mitigation projects on public land must be based solely on aquatic resource functions provided by the compensatory mitigation project, over and above those provided by public programs already planned or in place. All compensatory mitigation projects must comply with the standards in this part, if they are to be used to provide compensatory mitigation for activities authorized by DA permits, regardless of whether they are sited on public or private lands and whether the sponsor is a governmental or private entity.

(b) *Type and location of compensatory mitigation.* (1) When considering options for successfully providing the required compensatory mitigation, the district engineer shall consider the type and location options in the order presented in paragraphs (b)(2) through (b)(6) of this section. In general, the required compensatory mitigation should be located within the same watershed as the impact site, and should be located where it is most likely to successfully replace lost functions and services, taking into account such watershed scale features as aquatic habitat diversity, habitat connectivity, relationships to hydrologic sources (including the availability of water rights), trends in land use, ecological benefits, and compatibility with adjacent land uses. When compensating for impacts to marine resources, the location of the compensatory mitigation site should be chosen to replace lost functions and services within the same marine ecological system (e.g., reef complex, littoral drift cell). Compensation for impacts to aquatic resources in coastal watersheds (watersheds that include a tidal water body) should also be located in a coastal watershed where practicable. Compensatory mitigation projects

should not be located where they will increase risks to aviation by attracting wildlife to areas where aircraft-wildlife strikes may occur (e.g., near airports).

(2) *Mitigation bank credits.* When permitted impacts are located within the service area of an approved mitigation bank, and the bank has the appropriate number and resource type of credits available, the permittee's compensatory mitigation requirements may be met by securing those credits from the sponsor. Since an approved instrument (including an approved mitigation plan and appropriate real estate and financial assurances) for a mitigation bank is required to be in place before its credits can begin to be used to compensate for authorized impacts, use of a mitigation bank can help reduce risk and uncertainty, as well as temporal loss of resource functions and services. Mitigation bank credits are not released for debiting until specific milestones associated with the mitigation bank site's protection and development are achieved, thus use of mitigation bank credits can also help reduce risk that mitigation will not be fully successful. Mitigation banks typically involve larger, more ecologically valuable parcels, and more rigorous scientific and technical analysis, planning and implementation than permittee-responsible mitigation. Also, development of a mitigation bank requires site identification in advance, project-specific planning, and significant investment of financial resources that is often not practicable for many in-lieu fee programs. For these reasons, the district engineer should give preference to the use of mitigation bank credits when these considerations are applicable. However, these same considerations may also be used to override this preference, where appropriate, as, for example, where an in-lieu fee program has released credits available from a specific approved in-lieu fee project, or a permittee-responsible project will restore an outstanding resource based on rigorous scientific and technical analysis.

(3) *In-lieu fee program credits.* Where permitted impacts are located within the service area of an approved in-lieu fee program, and the sponsor has the appropriate number and resource type of credits available, the permittee's compensatory mitigation requirements may be met by securing those credits from the sponsor. Where permitted impacts are not located in the service area of an approved mitigation bank, or the approved mitigation bank does not have the appropriate number and resource type of credits available to offset those impacts, in-lieu fee

mitigation, if available, is generally preferable to permittee-responsible mitigation. In-lieu fee projects typically involve larger, more ecologically valuable parcels, and more rigorous scientific and technical analysis, planning and implementation than permittee-responsible mitigation. They also devote significant resources to identifying and addressing high-priority resource needs on a watershed scale, as reflected in their compensation planning framework. For these reasons, the district engineer should give preference to in-lieu fee program credits over permittee-responsible mitigation, where these considerations are applicable. However, as with the preference for mitigation bank credits, these same considerations may be used to override this preference where appropriate. Additionally, in cases where permittee-responsible mitigation is likely to successfully meet performance standards before advance credits secured from an in-lieu fee program are fulfilled, the district engineer should also give consideration to this factor in deciding between in-lieu fee mitigation and permittee-responsible mitigation.

(4) *Permittee-responsible mitigation under a watershed approach.* Where permitted impacts are not in the service area of an approved mitigation bank or in-lieu fee program that has the appropriate number and resource type of credits available, permittee-responsible mitigation is the only option. Where practicable and likely to be successful and sustainable, the resource type and location for the required permittee-responsible compensatory mitigation should be determined using the principles of a watershed approach as outlined in paragraph (c) of this section.

(5) *Permittee-responsible mitigation through on-site and in-kind mitigation.* In cases where a watershed approach is not practicable, the district engineer should consider opportunities to offset anticipated aquatic resource impacts by requiring on-site and in-kind compensatory mitigation. The district engineer must also consider the practicability of on-site compensatory mitigation and its compatibility with the proposed project.

(6) *Permittee-responsible mitigation through off-site and/or out-of-kind mitigation.* If, after considering opportunities for on-site, in-kind compensatory mitigation as provided in paragraph (b)(5) of this section, the district engineer determines that these compensatory mitigation opportunities are not practicable, are unlikely to compensate for the permitted impacts,

or will be incompatible with the proposed project, and an alternative, practicable off-site and/or out-of-kind mitigation opportunity is identified that has a greater likelihood of offsetting the permitted impacts or is environmentally preferable to on-site or in-kind mitigation, the district engineer should require that this alternative compensatory mitigation be provided.

(c) *Watershed approach to compensatory mitigation.* (1) The district engineer must use a watershed approach to establish compensatory mitigation requirements in DA permits to the extent appropriate and practicable. Where a watershed plan is available, the district engineer will determine whether the plan is appropriate for use in the watershed approach for compensatory mitigation. In cases where the district engineer determines that an appropriate watershed plan is available, the watershed approach should be based on that plan. Where no such plan is available, the watershed approach should be based on information provided by the project sponsor or available from other sources. The ultimate goal of a watershed approach is to maintain and improve the quality and quantity of aquatic resources within watersheds through strategic selection of compensatory mitigation sites.

(2) *Considerations.* (i) A watershed approach to compensatory mitigation considers the importance of landscape position and resource type of compensatory mitigation projects for the sustainability of aquatic resource functions within the watershed. Such an approach considers how the types and locations of compensatory mitigation projects will provide the desired aquatic resource functions, and will continue to function over time in a changing landscape. It also considers the habitat requirements of important species, habitat loss or conversion trends, sources of watershed impairment, and current development trends, as well as the requirements of other regulatory and non-regulatory programs that affect the watershed, such as storm water management or habitat conservation programs. It includes the protection and maintenance of terrestrial resources, such as non-wetland riparian areas and uplands, when those resources contribute to or improve the overall ecological functioning of aquatic resources in the watershed.

Compensatory mitigation requirements determined through the watershed approach should not focus exclusively on specific functions (e.g., water quality or habitat for certain species), but should provide, where practicable, the

suite of functions typically provided by the affected aquatic resource.

(ii) Locational factors (e.g., hydrology, surrounding land use) are important to the success of compensatory mitigation for impacted habitat functions and may lead to siting of such mitigation away from the project area. However, consideration should also be given to functions and services (e.g., water quality, flood control, shoreline protection) that will likely need to be addressed at or near the areas impacted by the permitted impacts.

(iii) A watershed approach may include on-site compensatory mitigation, off-site compensatory mitigation (including mitigation banks or in-lieu fee programs), or a combination of on-site and off-site compensatory mitigation.

(iv) A watershed approach to compensatory mitigation should include, to the extent practicable, inventories of historic and existing aquatic resources, including identification of degraded aquatic resources, and identification of immediate and long-term aquatic resource needs within watersheds that can be met through permittee-responsible mitigation projects, mitigation banks, or in-lieu fee programs. Planning efforts should identify and prioritize aquatic resource restoration, establishment, and enhancement activities, and preservation of existing aquatic resources that are important for maintaining or improving ecological functions of the watershed. The identification and prioritization of resource needs should be as specific as possible, to enhance the usefulness of the approach in determining compensatory mitigation requirements.

(v) A watershed approach is not appropriate in areas where watershed boundaries do not exist, such as marine areas. In such cases, an appropriate spatial scale should be used to replace lost functions and services within the same ecological system (e.g., reef complex, littoral drift cell).

(3) *Information Needs.* (i) In the absence of a watershed plan determined by the district engineer under paragraph (c)(1) of this section to be appropriate for use in the watershed approach, the district engineer will use a watershed approach based on analysis of information regarding watershed conditions and needs, including potential sites for aquatic resource restoration activities and priorities for aquatic resource restoration and preservation. Such information includes: Current trends in habitat loss or conversion; cumulative impacts of

past development activities, current development trends, the presence and needs of sensitive species; site conditions that favor or hinder the success of compensatory mitigation projects; and chronic environmental problems such as flooding or poor water quality.

(ii) This information may be available from sources such as wetland maps; soil surveys; U.S. Geological Survey topographic and hydrologic maps; aerial photographs; information on rare, endangered and threatened species and critical habitat; local ecological reports or studies; and other information sources that could be used to identify locations for suitable compensatory mitigation projects in the watershed.

(iii) The level of information and analysis needed to support a watershed approach must be commensurate with the scope and scale of the proposed impacts requiring a DA permit, as well as the functions lost as a result of those impacts.

(4) *Watershed Scale.* The size of watershed addressed using a watershed approach should not be larger than is appropriate to ensure that the aquatic resources provided through compensation activities will effectively compensate for adverse environmental impacts resulting from activities authorized by DA permits. The district engineer should consider relevant environmental factors and appropriate locally-developed standards and criteria when determining the appropriate watershed scale in guiding compensation activities.

(d) *Site selection.* (1) The compensatory mitigation project site must be ecologically suitable for providing the desired aquatic resource functions. In determining the ecological suitability of the compensatory mitigation project site, the district engineer must consider, to the extent practicable, the following factors:

(i) Hydrological conditions, soil characteristics, and other physical and chemical characteristics;

(ii) Watershed-scale features, such as aquatic habitat diversity, habitat connectivity, and other landscape scale functions;

(iii) The size and location of the compensatory mitigation site relative to hydrologic sources (including the availability of water rights) and other ecological features;

(iv) Compatibility with adjacent land uses and watershed management plans;

(v) Reasonably foreseeable effects the compensatory mitigation project will have on ecologically important aquatic or terrestrial resources (e.g., shallow sub-tidal habitat, mature forests),

cultural sites, or habitat for federally- or state-listed threatened and endangered species; and

(vi) Other relevant factors including, but not limited to, development trends, anticipated land use changes, habitat status and trends, the relative locations of the impact and mitigation sites in the stream network, local or regional goals for the restoration or protection of particular habitat types or functions (e.g., re-establishment of habitat corridors or habitat for species of concern), water quality goals, floodplain management goals, and the relative potential for chemical contamination of the aquatic resources.

(2) District engineers may require on-site, off-site, or a combination of on-site and off-site compensatory mitigation to replace permitted losses of aquatic resource functions and services.

(3) Applicants should propose compensation sites adjacent to existing aquatic resources or where aquatic resources previously existed.

(e) *Mitigation type.* (1) In general, in-kind mitigation is preferable to out-of-kind mitigation because it is most likely to compensate for the functions and services lost at the impact site. For example, tidal wetland compensatory mitigation projects are most likely to compensate for unavoidable impacts to tidal wetlands, while perennial stream compensatory mitigation projects are most likely to compensate for unavoidable impacts to perennial streams. Thus, except as provided in paragraph (e)(2) of this section, the required compensatory mitigation shall be of a similar type to the affected aquatic resource.

(2) If the district engineer determines, using the watershed approach in accordance with paragraph (c) of this section that out-of-kind compensatory mitigation will serve the aquatic resource needs of the watershed, the district engineer may authorize the use of such out-of-kind compensatory mitigation. The basis for authorization of out-of-kind compensatory mitigation must be documented in the administrative record for the permit action.

(3) For difficult-to-replace resources (e.g., bogs, fens, springs, streams, Atlantic white cedar swamps) if further avoidance and minimization is not practicable, the required compensation should be provided, if practicable, through in-kind rehabilitation, enhancement, or preservation since there is greater certainty that these methods of compensation will successfully offset permitted impacts.

(f) *Amount of compensatory mitigation.* (1) If the district engineer

determines that compensatory mitigation is necessary to offset unavoidable impacts to aquatic resources, the amount of required compensatory mitigation must be, to the extent practicable, sufficient to replace lost aquatic resource functions. In cases where appropriate functional or condition assessment methods or other suitable metrics are available, these methods should be used where practicable to determine how much compensatory mitigation is required. If a functional or condition assessment or other suitable metric is not used, a minimum one-to-one acreage or linear foot compensation ratio must be used.

(2) The district engineer must require a mitigation ratio greater than one-to-one where necessary to account for the method of compensatory mitigation (e.g., preservation), the likelihood of success, differences between the functions lost at the impact site and the functions expected to be produced by the compensatory mitigation project, temporal losses of aquatic resource functions, the difficulty of restoring or establishing the desired aquatic resource type and functions, and/or the distance between the affected aquatic resource and the compensation site. The rationale for the required replacement ratio must be documented in the administrative record for the permit action.

(3) If an in-lieu fee program will be used to provide the required compensatory mitigation, and the appropriate number and resource type of released credits are not available, the district engineer must require sufficient compensation to account for the risk and uncertainty associated with in-lieu fee projects that have not been implemented before the permitted impacts have occurred.

(g) *Use of mitigation banks and in-lieu fee programs.* Mitigation banks and in-lieu fee programs may be used to compensate for impacts to aquatic resources authorized by general permits and individual permits, including after-the-fact permits, in accordance with the preference hierarchy in paragraph (b) of this section. Mitigation banks and in-lieu fee programs may also be used to satisfy requirements arising out of an enforcement action, such as supplemental environmental projects.

(h) *Preservation.* (1) Preservation may be used to provide compensatory mitigation for activities authorized by DA permits when all the following criteria are met:

(i) The resources to be preserved provide important physical, chemical, or biological functions for the watershed;

(ii) The resources to be preserved contribute significantly to the ecological sustainability of the watershed. In determining the contribution of those resources to the ecological sustainability of the watershed, the district engineer must use appropriate quantitative assessment tools, where available;

(iii) Preservation is determined by the district engineer to be appropriate and practicable;

(iv) The resources are under threat of destruction or adverse modifications; and

(v) The preserved site will be permanently protected through an appropriate real estate or other legal instrument (e.g., easement, title transfer to state resource agency or land trust).

(2) Where preservation is used to provide compensatory mitigation, to the extent appropriate and practicable the preservation shall be done in conjunction with aquatic resource restoration, establishment, and/or enhancement activities. This requirement may be waived by the district engineer where preservation has been identified as a high priority using a watershed approach described in paragraph (c) of this section, but compensation ratios shall be higher.

(i) *Buffers.* District engineers may require the restoration, establishment, enhancement, and preservation, as well as the maintenance, of riparian areas and/or buffers around aquatic resources where necessary to ensure the long-term viability of those resources. Buffers may also provide habitat or corridors necessary for the ecological functioning of aquatic resources. If buffers are required by the district engineer as part of the compensatory mitigation project, compensatory mitigation credit will be provided for those buffers.

(j) *Relationship to other federal, tribal, state, and local programs.* (1) Compensatory mitigation projects for DA permits may also be used to satisfy the environmental requirements of other programs, such as tribal, state, or local wetlands regulatory programs, other federal programs such as the Surface Mining Control and Reclamation Act, Corps civil works projects, and Department of Defense military construction projects, consistent with the terms and requirements of these programs and subject to the following considerations:

(i) The compensatory mitigation project must include appropriate compensation required by the DA permit for unavoidable impacts to aquatic resources authorized by that permit.

(ii) Under no circumstances may the same credits be used to provide

mitigation for more than one permitted activity. However, where appropriate, compensatory mitigation projects, including mitigation banks and in-lieu fee projects, may be designed to holistically address requirements under multiple programs and authorities for the same activity.

(2) Except for projects undertaken by federal agencies, or where federal funding is specifically authorized to provide compensatory mitigation, federally-funded aquatic resource restoration or conservation projects undertaken for purposes other than compensatory mitigation, such as the Wetlands Reserve Program, Conservation Reserve Program, and Partners for Wildlife Program activities, cannot be used for the purpose of generating compensatory mitigation credits for activities authorized by DA permits. However, compensatory mitigation credits may be generated by activities undertaken in conjunction with, but supplemental to, such programs in order to maximize the overall ecological benefits of the restoration or conservation project.

(3) Compensatory mitigation projects may also be used to provide compensatory mitigation under the Endangered Species Act or for Habitat Conservation Plans, as long as they comply with the requirements of paragraph (j)(1) of this section.

(k) *Permit conditions.* (1) The compensatory mitigation requirements for a DA permit, including the amount and type of compensatory mitigation, must be clearly stated in the special conditions of the individual permit or general permit verification (see 33 CFR 325.4 and 330.6(a)). The special conditions must be enforceable.

(2) For an individual permit that requires permittee-responsible mitigation, the special conditions must:

(i) Identify the party responsible for providing the compensatory mitigation;

(ii) Incorporate, by reference, the final mitigation plan approved by the district engineer;

(iii) State the objectives, performance standards, and monitoring required for the compensatory mitigation project, unless they are provided in the approved final mitigation plan; and

(iv) Describe any required financial assurances or long-term management provisions for the compensatory mitigation project, unless they are specified in the approved final mitigation plan.

(3) For a general permit activity that requires permittee-responsible compensatory mitigation, the special conditions must describe the compensatory mitigation proposal,

which may be either conceptual or detailed. The general permit verification must also include a special condition that states that the permittee cannot commence work in waters of the United States until the district engineer approves the final mitigation plan, unless the district engineer determines that such a special condition is not practicable and not necessary to ensure timely completion of the required compensatory mitigation. To the extent appropriate and practicable, special conditions of the general permit verification should also address the requirements of paragraph (k)(2) of this section.

(4) If a mitigation bank or in-lieu fee program is used to provide the required compensatory mitigation, the special conditions must indicate whether a mitigation bank or in-lieu fee program will be used, and specify the number and resource type of credits the permittee is required to secure. In the case of an individual permit, the special condition must also identify the specific mitigation bank or in-lieu fee program that will be used. For general permit verifications, the special conditions may either identify the specific mitigation bank or in-lieu fee program, or state that the specific mitigation bank or in-lieu fee program used to provide the required compensatory mitigation must be approved by the district engineer before the credits are secured.

(l) *Party responsible for compensatory mitigation.* (1) For permittee-responsible mitigation, the special conditions of the DA permit must clearly indicate the party or parties responsible for the implementation, performance, and long-term management of the compensatory mitigation project.

(2) For mitigation banks and in-lieu fee programs, the instrument must clearly indicate the party or parties responsible for the implementation, performance, and long-term management of the compensatory mitigation project(s). The instrument must also contain a provision expressing the sponsor's agreement to assume responsibility for a permittee's compensatory mitigation requirements, once that permittee has secured the appropriate number and resource type of credits from the sponsor and the district engineer has received the documentation described in paragraph (l)(3) of this section.

(3) If use of a mitigation bank or in-lieu fee program is approved by the district engineer to provide part or all of the required compensatory mitigation for a DA permit, the permittee retains responsibility for providing the compensatory mitigation until the

appropriate number and resource type of credits have been secured from a sponsor and the district engineer has received documentation that confirms that the sponsor has accepted the responsibility for providing the required compensatory mitigation. This documentation may consist of a letter or form signed by the sponsor, with the permit number and a statement indicating the number and resource type of credits that have been secured from the sponsor. Copies of this documentation will be retained in the administrative records for both the permit and the instrument. If the sponsor fails to provide the required compensatory mitigation, the district engineer may pursue measures against the sponsor to ensure compliance.

(m) *Timing.* 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. The district engineer shall require, to the extent appropriate and practicable, additional compensatory mitigation to offset temporal losses of aquatic functions that will result from the permitted activity.

(n) *Financial assurances.* (1) The district engineer shall require sufficient financial assurances to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with applicable performance standards. In cases where an alternate mechanism is available to ensure a high level of confidence that the compensatory mitigation will be provided and maintained (e.g., a formal, documented commitment from a government agency or public authority) the district engineer may determine that financial assurances are not necessary for that compensatory mitigation project.

(2) The amount of the required financial assurances must be determined by the district engineer, in consultation with the project sponsor, and must be based on the size and complexity of the compensatory mitigation project, the degree of completion of the project at the time of project approval, the likelihood of success, the past performance of the project sponsor, and any other factors the district engineer deems appropriate. Financial assurances may be in the form of performance bonds, escrow accounts, casualty insurance, letters of credit, legislative appropriations for government sponsored projects, or other appropriate instruments, subject to the approval of the district engineer. The rationale for determining the amount of the required financial assurances must

be documented in the administrative record for either the DA permit or the instrument. In determining the assurance amount, the district engineer shall consider the cost of providing replacement mitigation, including costs for land acquisition, planning and engineering, legal fees, mobilization, construction, and monitoring.

(3) If financial assurances are required, the DA permit must include a special condition requiring the financial assurances to be in place prior to commencing the permitted activity.

(4) Financial assurances shall be phased out once the compensatory mitigation project has been determined by the district engineer to be successful in accordance with its performance standards. The DA permit or instrument must clearly specify the conditions under which the financial assurances are to be released to the permittee, sponsor, and/or other financial assurance provider, including, as appropriate, linkage to achievement of performance standards, adaptive management, or compliance with special conditions.

(5) A financial assurance must be in a form that ensures that the district engineer will receive notification at least 120 days in advance of any termination or revocation. For third-party assurance providers, this may take the form of a contractual requirement for the assurance provider to notify the district engineer at least 120 days before the assurance is revoked or terminated.

(6) Financial assurances shall be payable at the direction of the district engineer to his designee or to a standby trust agreement. When a standby trust is used (e.g., with performance bonds or letters of credit) all amounts paid by the financial assurance provider shall be deposited directly into the standby trust fund for distribution by the trustee in accordance with the district engineer's instructions.

(o) *Compliance with applicable law.* The compensatory mitigation project must comply with all applicable federal, state, and local laws. The DA permit, mitigation banking instrument, or in-lieu fee program instrument must not require participation by the Corps or any other federal agency in project management, including receipt or management of financial assurances or long-term financing mechanisms, except as determined by the Corps or other agency to be consistent with its statutory authority, mission, and priorities.

§ 230.94 Planning and documentation.

(a) *Pre-application consultations.* Potential applicants for standard

permits are encouraged to participate in pre-application meetings with the Corps and appropriate agencies to discuss potential mitigation requirements and information needs.

(b) *Public review and comment.* (1) For an activity that requires a standard DA permit pursuant to section 404 of the Clean Water Act, the public notice for the proposed activity must contain a statement explaining how impacts associated with the proposed activity are to be avoided, minimized, and compensated for. This explanation shall address, to the extent that such information is provided in the mitigation statement required by 33 CFR 325.1(d)(7), the proposed avoidance and minimization and the amount, type, and location of any proposed compensatory mitigation, including any out-of-kind compensation, or indicate an intention to use an approved mitigation bank or in-lieu fee program. The level of detail provided in the public notice must be commensurate with the scope and scale of the impacts. The notice shall not include information that the district engineer and the permittee believe should be kept confidential for business purposes, such as the exact location of a proposed mitigation site that has not yet been secured. The permittee must clearly identify any information being claimed as confidential in the mitigation statement when submitted. In such cases, the notice must still provide enough information to enable the public to provide meaningful comment on the proposed mitigation.

(2) For individual permits, district engineers must consider any timely comments and recommendations from other federal agencies; tribal, state, or local governments; and the public.

(3) For activities authorized by letters of permission or general permits, the review and approval process for compensatory mitigation proposals and plans must be conducted in accordance with the terms and conditions of those permits and applicable regulations including the applicable provisions of this part.

(c) *Mitigation plan.* (1) *Preparation and Approval.* (i) For individual permits, the permittee must prepare a draft mitigation plan and submit it to the district engineer for review. After addressing any comments provided by the district engineer, the permittee must prepare a final mitigation plan, which must be approved by the district engineer prior to issuing the individual permit. The approved final mitigation plan must be incorporated into the individual permit by reference. The final mitigation plan must include the items described in paragraphs (c)(2)

through (c)(14) of this section, but the level of detail of the mitigation plan should be commensurate with the scale and scope of the impacts. As an alternative, the district engineer may determine that it would be more appropriate to address any of the items described in paragraphs (c)(2) through (c)(14) of this section as permit conditions, instead of components of a compensatory mitigation plan. For permittees who intend to fulfill their compensatory mitigation obligations by securing credits from approved mitigation banks or in-lieu fee programs, their mitigation plans need include only the items described in paragraphs (c)(5) and (c)(6) of this section, and the name of the specific mitigation bank or in-lieu fee program to be used.

(ii) For general permits, if compensatory mitigation is required, the district engineer may approve a conceptual or detailed compensatory mitigation plan to meet required time frames for general permit verifications, but a final mitigation plan incorporating the elements in paragraphs (c)(2) through (c)(14) of this section, at a level of detail commensurate with the scale and scope of the impacts, must be approved by the district engineer before the permittee commences work in waters of the United States. As an alternative, the district engineer may determine that it would be more appropriate to address any of the items described in paragraphs (c)(2) through (c)(14) of this section as permit conditions, instead of components of a compensatory mitigation plan. For permittees who intend to fulfill their compensatory mitigation obligations by securing credits from approved mitigation banks or in-lieu fee programs, their mitigation plans need include only the items described in paragraphs (c)(5) and (c)(6) of this section, and either the name of the specific mitigation bank or in-lieu fee program to be used or a statement indicating that a mitigation bank or in-lieu fee program will be used (contingent upon approval by the district engineer).

(iii) Mitigation banks and in-lieu fee programs must prepare a mitigation plan including the items in paragraphs (c)(2) through (c)(14) of this section for each separate compensatory mitigation project site. For mitigation banks and in-lieu fee programs, the preparation and approval process for mitigation plans is described in § 230.98.

(2) *Objectives.* A description of the resource type(s) and amount(s) that will be provided, the method of compensation (i.e., restoration, establishment, enhancement, and/or preservation), and the manner in which

the resource functions of the compensatory mitigation project will address the needs of the watershed, ecoregion, physiographic province, or other geographic area of interest.

(3) *Site selection.* A description of the factors considered during the site selection process. This should include consideration of watershed needs, on-site alternatives where applicable, and the practicability of accomplishing ecologically self-sustaining aquatic resource restoration, establishment, enhancement, and/or preservation at the compensatory mitigation project site. (See § 230.93(d).)

(4) *Site protection instrument.* A description of the legal arrangements and instrument, including site ownership, that will be used to ensure the long-term protection of the compensatory mitigation project site (see § 230.97(a)).

(5) *Baseline information.* A description of the ecological characteristics of the proposed compensatory mitigation project site and, in the case of an application for a DA permit, the impact site. This may include descriptions of historic and existing plant communities, historic and existing hydrology, soil conditions, a map showing the locations of the impact and mitigation site(s) or the geographic coordinates for those site(s), and other site characteristics appropriate to the type of resource proposed as compensation. The baseline information should also include a delineation of waters of the United States on the proposed compensatory mitigation project site. A prospective permittee planning to secure credits from an approved mitigation bank or in-lieu fee program only needs to provide baseline information about the impact site, not the mitigation bank or in-lieu fee project site.

(6) *Determination of credits.* A description of the number of credits to be provided, including a brief explanation of the rationale for this determination. (See § 230.93(f).)

(i) For permittee-responsible mitigation, this should include an explanation of how the compensatory mitigation project will provide the required compensation for unavoidable impacts to aquatic resources resulting from the permitted activity.

(ii) For permittees intending to secure credits from an approved mitigation bank or in-lieu fee program, it should include the number and resource type of credits to be secured and how these were determined.

(7) *Mitigation work plan.* Detailed written specifications and work descriptions for the compensatory

mitigation project, including, but not limited to, the geographic boundaries of the project; construction methods, timing, and sequence; source(s) of water, including connections to existing waters and uplands; methods for establishing the desired plant community; plans to control invasive plant species; the proposed grading plan, including elevations and slopes of the substrate; soil management; and erosion control measures. For stream compensatory mitigation projects, the mitigation work plan may also include other relevant information, such as planform geometry, channel form (e.g., typical channel cross-sections), watershed size, design discharge, and riparian area plantings.

(8) *Maintenance plan.* A description and schedule of maintenance requirements to ensure the continued viability of the resource once initial construction is completed.

(9) *Performance standards.* Ecologically-based standards that will be used to determine whether the compensatory mitigation project is achieving its objectives. (See § 230.95.)

(10) *Monitoring requirements.* A description of parameters to be monitored in order to determine if the compensatory mitigation project is on track to meet performance standards and if adaptive management is needed. A schedule for monitoring and reporting on monitoring results to the district engineer must be included. (See § 230.96.)

(11) *Long-term management plan.* A description of how the compensatory mitigation project will be managed after performance standards have been achieved to ensure the long-term sustainability of the resource, including long-term financing mechanisms and the party responsible for long-term management. (See § 230.97(d).)

(12) *Adaptive management plan.* A management strategy to address unforeseen changes in site conditions or other components of the compensatory mitigation project, including the party or parties responsible for implementing adaptive management measures. The adaptive management plan will guide decisions for revising compensatory mitigation plans and implementing measures to address both foreseeable and unforeseen circumstances that adversely affect compensatory mitigation success. (See § 230.97(c).)

(13) *Financial assurances.* A description of financial assurances that will be provided and how they are sufficient to ensure a high level of confidence that the compensatory mitigation project will be successfully

completed, in accordance with its performance standards (see § 230.93(n)).

(14) *Other information.* The district engineer may require additional information as necessary to determine the appropriateness, feasibility, and practicability of the compensatory mitigation project.

§ 230.95 Ecological performance standards.

(a) The approved mitigation plan must contain performance standards that will be used to assess whether the project is achieving its objectives. Performance standards should relate to the objectives of the compensatory mitigation project, so that the project can be objectively evaluated to determine if it is developing into the desired resource type, providing the expected functions, and attaining any other applicable metrics (e.g., acres).

(b) Performance standards must be based on attributes that are objective and verifiable. Ecological performance standards must be based on the best available science that can be measured or assessed in a practicable manner. Performance standards may be based on variables or measures of functional capacity described in functional assessment methodologies, measurements of hydrology or other aquatic resource characteristics, and/or comparisons to reference aquatic resources of similar type and landscape position. The use of reference aquatic resources to establish performance standards will help ensure that those performance standards are reasonably achievable, by reflecting the range of variability exhibited by the regional class of aquatic resources as a result of natural processes and anthropogenic disturbances. Performance standards based on measurements of hydrology should take into consideration the hydrologic variability exhibited by reference aquatic resources, especially wetlands. Where practicable, performance standards should take into account the expected stages of the aquatic resource development process, in order to allow early identification of potential problems and appropriate adaptive management.

§ 230.96 Monitoring.

(a) *General.* (1) Monitoring the compensatory mitigation project site is necessary to determine if the project is meeting its performance standards, and to determine if measures are necessary to ensure that the compensatory mitigation project is accomplishing its objectives. The submission of monitoring reports to assess the development and condition of the

compensatory mitigation project is required, but the content and level of detail for those monitoring reports must be commensurate with the scale and scope of the compensatory mitigation project, as well as the compensatory mitigation project type. The mitigation plan must address the monitoring requirements for the compensatory mitigation project, including the parameters to be monitored, the length of the monitoring period, the party responsible for conducting the monitoring, the frequency for submitting monitoring reports to the district engineer, and the party responsible for submitting those monitoring reports to the district engineer.

(2) The district engineer may conduct site inspections on a regular basis (e.g., annually) during the monitoring period to evaluate mitigation site performance.

(b) *Monitoring period.* The mitigation plan must provide for a monitoring period that is sufficient to demonstrate that the compensatory mitigation project has met performance standards, but not less than five years. A longer monitoring period must be required for aquatic resources with slow development rates (e.g., forested wetlands, bogs). Following project implementation, the district engineer may reduce or waive the remaining monitoring requirements upon a determination that the compensatory mitigation project has achieved its performance standards. Conversely the district engineer may extend the original monitoring period upon a determination that performance standards have not been met or the compensatory mitigation project is not on track to meet them. The district engineer may also revise monitoring requirements when remediation and/or adaptive management is required.

(c) *Monitoring reports.* (1) The district engineer must determine the information to be included in monitoring reports. This information must be sufficient for the district engineer to determine how the compensatory mitigation project is progressing towards meeting its performance standards, and may include plans (such as as-built plans), maps, and photographs to illustrate site conditions. Monitoring reports may also include the results of functional, condition, or other assessments used to provide quantitative or qualitative measures of the functions provided by the compensatory mitigation project site.

(2) The permittee or sponsor is responsible for submitting monitoring reports in accordance with the special conditions of the DA permit or the terms

of the instrument. Failure to submit monitoring reports in a timely manner may result in compliance action by the district engineer.

(3) Monitoring reports must be provided by the district engineer to interested federal, tribal, state, and local resource agencies, and the public, upon request.

§ 230.97 Management.

(a) *Site protection.* (1) The aquatic habitats, riparian areas, buffers, and uplands that comprise the overall compensatory mitigation project must be provided long-term protection through real estate instruments or other available mechanisms, as appropriate. Long-term protection may be provided through real estate instruments such as conservation easements held by entities such as federal, tribal, state, or local resource agencies, non-profit conservation organizations, or private land managers; the transfer of title to such entities; or by restrictive covenants. For government property, long-term protection may be provided through federal facility management plans or integrated natural resources management plans. When approving a method for long-term protection of non-government property other than transfer of title, the district engineer shall consider relevant legal constraints on the use of conservation easements and/or restrictive covenants in determining whether such mechanisms provide sufficient site protection. To provide sufficient site protection, a conservation easement or restrictive covenant should, where practicable, establish in an appropriate third party (e.g., governmental or non-profit resource management agency) the right to enforce site protections and provide the third party the resources necessary to monitor and enforce these site protections.

(2) The real estate instrument, management plan, or other mechanism providing long-term protection of the compensatory mitigation site must, to the extent appropriate and practicable, prohibit incompatible uses (e.g., clear cutting or mineral extraction) that might otherwise jeopardize the objectives of the compensatory mitigation project. Where appropriate, multiple instruments recognizing compatible uses (e.g., fishing or grazing rights) may be used.

(3) The real estate instrument, management plan, or other long-term protection mechanism must contain a provision requiring 60-day advance notification to the district engineer before any action is taken to void or modify the instrument, management plan, or long-term protection

mechanism, including transfer of title to, or establishment of any other legal claims over, the compensatory mitigation site.

(4) For compensatory mitigation projects on public lands, where Federal facility management plans or integrated natural resources management plans are used to provide long-term protection, and changes in statute, regulation, or agency needs or mission results in an incompatible use on public lands originally set aside for compensatory mitigation, the public agency authorizing the incompatible use is responsible for providing alternative compensatory mitigation that is acceptable to the district engineer for any loss in functions resulting from the incompatible use.

(5) A real estate instrument, management plan, or other long-term protection mechanism used for site protection of permittee-responsible mitigation must be approved by the district engineer in advance of, or concurrent with, the activity causing the authorized impacts.

(b) *Sustainability.* Compensatory mitigation projects shall be designed, to the maximum extent practicable, to be self-sustaining once performance standards have been achieved. This includes minimization of active engineering features (e.g., pumps) and appropriate siting to ensure that natural hydrology and landscape context will support long-term sustainability. Where active long-term management and maintenance are necessary to ensure long-term sustainability (e.g., prescribed burning, invasive species control, maintenance of water control structures, easement enforcement), the responsible party must provide for such management and maintenance. This includes the provision of long-term financing mechanisms where necessary. Where needed, the acquisition and protection of water rights must be secured and documented in the permit conditions or instrument.

(c) *Adaptive management.* (1) If the compensatory mitigation project cannot be constructed in accordance with the approved mitigation plans, the permittee or sponsor must notify the district engineer. A significant modification of the compensatory mitigation project requires approval from the district engineer.

(2) If monitoring or other information indicates that the compensatory mitigation project is not progressing towards meeting its performance standards as anticipated, the responsible party must notify the district engineer as soon as possible. The district engineer will evaluate and pursue measures to

address deficiencies in the compensatory mitigation project. The district engineer will consider whether the compensatory mitigation project is providing ecological benefits comparable to the original objectives of the compensatory mitigation project.

(3) The district engineer, in consultation with the responsible party (and other federal, tribal, state, and local agencies, as appropriate), will determine the appropriate measures. The measures may include site modifications, design changes, revisions to maintenance requirements, and revised monitoring requirements. The measures must be designed to ensure that the modified compensatory mitigation project provides aquatic resource functions comparable to those described in the mitigation plan objectives.

(4) Performance standards may be revised in accordance with adaptive management to account for measures taken to address deficiencies in the compensatory mitigation project. Performance standards may also be revised to reflect changes in management strategies and objectives if the new standards provide for ecological benefits that are comparable or superior to the approved compensatory mitigation project. No other revisions to performance standards will be allowed except in the case of natural disasters.

(d) *Long-term management.* (1) The permit conditions or instrument must identify the party responsible for ownership and all long-term management of the compensatory mitigation project. The permit conditions or instrument may contain provisions allowing the permittee or sponsor to transfer the long-term management responsibilities of the compensatory mitigation project site to a land stewardship entity, such as a public agency, non-governmental organization, or private land manager, after review and approval by the district engineer. The land stewardship entity need not be identified in the original permit or instrument, as long as the future transfer of long-term management responsibility is approved by the district engineer.

(2) A long-term management plan should include a description of long-term management needs, annual cost estimates for these needs, and identify the funding mechanism that will be used to meet those needs.

(3) Any provisions necessary for long-term financing must be addressed in the original permit or instrument. The district engineer may require provisions to address inflationary adjustments and other contingencies, as appropriate. Appropriate long-term financing

mechanisms include non-wasting endowments, trusts, contractual arrangements with future responsible parties, and other appropriate financial instruments. In cases where the long-term management entity is a public authority or government agency, that entity must provide a plan for the long-term financing of the site.

(4) For permittee-responsible mitigation, any long-term financing mechanisms must be approved in advance of the activity causing the authorized impacts.

§ 230.98 Mitigation banks and in-lieu fee programs.

(a) *General considerations.* (1) All mitigation banks and in-lieu fee programs must have an approved instrument signed by the sponsor and the district engineer prior to being used to provide compensatory mitigation for DA permits.

(2) To the maximum extent practicable, mitigation banks and in-lieu fee project sites must be planned and designed to be self-sustaining over time, but some active management and maintenance may be required to ensure their long-term viability and sustainability. Examples of acceptable management activities include maintaining fire dependent habitat communities in the absence of natural fire and controlling invasive exotic plant species.

(3) All mitigation banks and in-lieu fee programs must comply with the standards in this part, if they are to be used to provide compensatory mitigation for activities authorized by DA permits, regardless of whether they are sited on public or private lands and whether the sponsor is a governmental or private entity.

(b) *Interagency Review Team.* (1) The district engineer will establish an Interagency Review Team (IRT) to review documentation for the establishment and management of mitigation banks and in-lieu fee programs. The district engineer or his designated representative serves as Chair of the IRT. In cases where a mitigation bank or in-lieu fee program is proposed to satisfy the requirements of another federal, tribal, state, or local program, in addition to compensatory mitigation requirements of DA permits, it may be appropriate for the administering agency to serve as co-Chair of the IRT.

(2) In addition to the Corps, representatives from the U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, NOAA Fisheries, the Natural Resources Conservation Service, and other federal

agencies, as appropriate, may participate in the IRT. The IRT may also include representatives from tribal, state, and local regulatory and resource agencies, where such agencies have authorities and/or mandates directly affecting, or affected by, the establishment, operation, or use of the mitigation bank or in-lieu fee program. The district engineer will seek to include all public agencies with a substantive interest in the establishment of the mitigation bank or in-lieu fee program on the IRT, but retains final authority over its composition.

(3) The primary role of the IRT is to facilitate the establishment of mitigation banks or in-lieu fee programs through the development of mitigation banking or in-lieu fee program instruments. The IRT will review the prospectus, instrument, and other appropriate documents and provide comments to the district engineer. The district engineer and the IRT should use a watershed approach to the extent practicable in reviewing proposed mitigation banks and in-lieu fee programs. Members of the IRT may also sign the instrument, if they so choose. By signing the instrument, the IRT members indicate their agreement with the terms of the instrument. As an alternative, a member of the IRT may submit a letter expressing concurrence with the instrument. The IRT will also advise the district engineer in assessing monitoring reports, recommending remedial or adaptive management measures, approving credit releases, and approving modifications to an instrument. In order to ensure timely processing of instruments and other documentation, comments from IRT members must be received by the district engineer within the time limits specified in this section. Comments received after these deadlines will only be considered at the discretion of the district engineer to the extent that doing so does not jeopardize the deadlines for district engineer action.

(4) The district engineer will give full consideration to any timely comments and advice of the IRT. The district engineer alone retains final authority for approval of the instrument in cases where the mitigation bank or in-lieu fee program is used to satisfy compensatory mitigation requirements of DA permits.

(5) *MOAs with other agencies.* The district engineer and members of the IRT may enter into a memorandum of agreement (MOA) with any other federal, state or local government agency to perform all or some of the IRT review functions described in this section. Such MOAs must include provisions for appropriate federal

oversight of the review process. The district engineer retains sole authority for final approval of instruments and other documentation required under this section.

(c) *Compensation planning framework for in-lieu fee programs.* (1) The approved instrument for an in-lieu fee program must include a compensation planning framework that will be used to select, secure, and implement aquatic resource restoration, establishment, enhancement, and/or preservation activities. The compensation planning framework must support a watershed approach to compensatory mitigation. All specific projects used to provide compensation for DA permits must be consistent with the approved compensation planning framework. Modifications to the framework must be approved as a significant modification to the instrument by the district engineer, after consultation with the IRT.

(2) The compensation planning framework must contain the following elements:

(i) The geographic service area(s), including a watershed-based rationale for the delineation of each service area;

(ii) A description of the threats to aquatic resources in the service area(s), including how the in-lieu fee program will help offset impacts resulting from those threats;

(iii) An analysis of historic aquatic resource loss in the service area(s);

(iv) An analysis of current aquatic resource conditions in the service area(s), supported by an appropriate level of field documentation;

(v) A statement of aquatic resource goals and objectives for each service area, including a description of the general amounts, types and locations of aquatic resources the program will seek to provide;

(vi) A prioritization strategy for selecting and implementing compensatory mitigation activities;

(vii) An explanation of how any preservation objectives identified in paragraph (c)(2)(v) of this section and addressed in the prioritization strategy in paragraph (c)(2)(vi) satisfy the criteria for use of preservation in § 230.93(h);

(viii) A description of any public and private stakeholder involvement in plan development and implementation, including, where appropriate, coordination with federal, state, tribal and local aquatic resource management and regulatory authorities;

(ix) A description of the long-term protection and management strategies for activities conducted by the in-lieu fee program sponsor;

(x) A strategy for periodic evaluation and reporting on the progress of the program in achieving the goals and objectives in paragraph (c)(2)(v) of this section, including a process for revising the planning framework as necessary; and

(xi) Any other information deemed necessary for effective compensation planning by the district engineer.

(3) The level of detail necessary for the compensation planning framework is at the discretion of the district engineer, and will take into account the characteristics of the service area(s) and the scope of the program. As part of the in-lieu fee program instrument, the compensation planning framework will be reviewed by the IRT, and will be a major factor in the district engineer's decision on whether to approve the instrument.

(d) *Review process.* (1) The sponsor is responsible for preparing all documentation associated with establishment of the mitigation bank or in-lieu fee program, including the prospectus, instrument, and other appropriate documents, such as mitigation plans for a mitigation bank. The prospectus provides an overview of the proposed mitigation bank or in-lieu fee program and serves as the basis for public and initial IRT comment. For a mitigation bank, the mitigation plan, as described in § 230.94(c), provides detailed plans and specifications for the mitigation bank site. For in-lieu fee programs, mitigation plans will be prepared as in-lieu fee project sites are identified after the instrument has been approved and the in-lieu fee program becomes operational. The instrument provides the authorization for the mitigation bank or in-lieu fee program to provide credits to be used as compensatory mitigation for DA permits.

(2) *Prospectus.* The prospectus must provide a summary of the information regarding the proposed mitigation bank or in-lieu fee program, at a sufficient level of detail to support informed public and IRT comment. The review process begins when the sponsor submits a complete prospectus to the district engineer. For modifications of approved instruments, submittal of a new prospectus is not required; instead, the sponsor must submit a written request for an instrument modification accompanied by appropriate documentation. The district engineer must notify the sponsor within 30 days whether or not a submitted prospectus is complete. A complete prospectus includes the following information:

(i) The objectives of the proposed mitigation bank or in-lieu fee program.

(ii) How the mitigation bank or in-lieu fee program will be established and operated.

(iii) The proposed service area.

(iv) The general need for and technical feasibility of the proposed mitigation bank or in-lieu fee program.

(v) The proposed ownership arrangements and long-term management strategy for the mitigation bank or in-lieu fee project sites.

(vi) The qualifications of the sponsor to successfully complete the type(s) of mitigation project(s) proposed, including information describing any past such activities by the sponsor.

(vii) For a proposed mitigation bank, the prospectus must also address:

(A) The ecological suitability of the site to achieve the objectives of the proposed mitigation bank, including the physical, chemical, and biological characteristics of the bank site and how that site will support the planned types of aquatic resources and functions; and

(B) Assurance of sufficient water rights to support the long-term sustainability of the mitigation bank.

(viii) For a proposed in-lieu fee program, the prospectus must also include:

(A) The compensation planning framework (see paragraph (c) of this section); and

(B) A description of the in-lieu fee program account required by paragraph (i) of this section.

(3) *Preliminary review of prospectus.* Prior to submitting a prospectus, the sponsor may elect to submit a draft prospectus to the district engineer for comment and consultation. The district engineer will provide copies of the draft prospectus to the IRT and will provide comments back to the sponsor within 30 days. Any comments from IRT members will also be forwarded to the sponsor. This preliminary review is optional but is strongly recommended. It is intended to identify potential issues early so that the sponsor may attempt to address those issues prior to the start of the formal review process.

(4) *Public review and comment.* Within 30 days of receipt of a complete prospectus or an instrument modification request that will be processed in accordance with paragraph (g)(1) of this section, the district engineer will provide public notice of the proposed mitigation bank or in-lieu fee program, in accordance with the public notice procedures at 33 CFR 325.3. The public notice must, at a minimum, include a summary of the prospectus and indicate that the full prospectus is available to the public for review upon request. For modifications of approved instruments, the public

notice must instead summarize, and make available to the public upon request, whatever documentation is appropriate for the modification (e.g., a new or revised mitigation plan). The comment period for public notice will be 30 days, unless the district engineer determines that a longer comment period is appropriate. The district engineer will notify the sponsor if the comment period is extended beyond 30 days, including an explanation of why the longer comment period is necessary. Copies of all comments received in response to the public notice must be distributed to the other IRT members and to the sponsor within 15 days of the close of the public comment period. The district engineer and IRT members may also provide comments to the sponsor at this time, and copies of any such comments will also be distributed to all IRT members. If the construction of a mitigation bank or an in-lieu fee program project requires a DA permit, the public notice requirement may be satisfied through the public notice provisions of the permit processing procedures, provided all of the relevant information is provided.

(5) *Initial evaluation.* (i) After the end of the comment period, the district engineer will review the comments received in response to the public notice, and make a written initial evaluation as to the potential of the proposed mitigation bank or in-lieu fee program to provide compensatory mitigation for activities authorized by DA permits. This initial evaluation letter must be provided to the sponsor within 30 days of the end of the public notice comment period.

(ii) If the district engineer determines that the proposed mitigation bank or in-lieu fee program has potential for providing appropriate compensatory mitigation for activities authorized by DA permits, the initial evaluation letter will inform the sponsor that he/she may proceed with preparation of the draft instrument (see paragraph (d)(6) of this section).

(iii) If the district engineer determines that the proposed mitigation bank or in-lieu fee program does not have potential for providing appropriate compensatory mitigation for DA permits, the initial evaluation letter must discuss the reasons for that determination. The sponsor may revise the prospectus to address the district engineer's concerns, and submit the revised prospectus to the district engineer. If the sponsor submits a revised prospectus, a revised public notice will be issued in accordance with paragraph (d)(4) of this section.

(iv) This initial evaluation procedure does not apply to proposed modifications of approved instruments.

(6) *Draft instrument.* (i) After considering comments from the district engineer, the IRT, and the public, if the sponsor chooses to proceed with establishment of the mitigation bank or in-lieu fee program, he must prepare a draft instrument and submit it to the district engineer. In the case of an instrument modification, the sponsor must prepare a draft amendment (e.g., a specific instrument provision, a new or modified mitigation plan), and submit it to the district engineer. The district engineer must notify the sponsor within 30 days of receipt, whether the draft instrument or amendment is complete. If the draft instrument or amendment is incomplete, the district engineer will request from the sponsor the information necessary to make the draft instrument or amendment complete. Once any additional information is submitted, the district engineer must notify the sponsor as soon as he determines that the draft instrument or amendment is complete. The draft instrument must be based on the prospectus and must describe in detail the physical and legal characteristics of the mitigation bank or in-lieu fee program and how it will be established and operated.

(ii) For mitigation banks and in-lieu fee programs, the draft instrument must include the following information:

(A) A description of the proposed geographic service area of the mitigation bank or in-lieu fee program. The service area is the watershed, ecoregion, physiographic province, and/or other geographic area within which the mitigation bank or in-lieu fee program is authorized to provide compensatory mitigation required by DA permits. The service area must be appropriately sized to ensure that the aquatic resources provided will effectively compensate for adverse environmental impacts across the entire service area. For example, in urban areas, a U.S. Geological Survey 8-digit hydrologic unit code (HUC) watershed or a smaller watershed may be an appropriate service area. In rural areas, several contiguous 8-digit HUCs or a 6-digit HUC watershed may be an appropriate service area. Delineation of the service area must also consider any locally-developed standards and criteria that may be applicable. The economic viability of the mitigation bank or in-lieu fee program may also be considered in determining the size of the service area. The basis for the proposed service area must be documented in the instrument. An in-lieu fee program or umbrella mitigation banking instrument

may have multiple service areas governed by its instrument (e.g., each watershed within a State or Corps district may be a separate service area under the instrument); however, all impacts and compensatory mitigation must be accounted for by service area;

(B) Accounting procedures;

(C) A provision stating that legal responsibility for providing the compensatory mitigation lies with the sponsor once a permittee secures credits from the sponsor;

(D) Default and closure provisions;

(E) Reporting protocols; and

(F) Any other information deemed necessary by the district engineer.

(iii) For a mitigation bank, a complete draft instrument must include the following additional information:

(A) Mitigation plans that include all applicable items listed in § 230.94(c)(2) through (14); and

(B) A credit release schedule, which is tied to achievement of specific milestones. All credit releases must be approved by the district engineer, in consultation with the IRT, based on a determination that required milestones have been achieved. The district engineer, in consultation with the IRT, may modify the credit release schedule, including reducing the number of available credits or suspending credit sales or transfers altogether, where necessary to ensure that all credits sales or transfers remain tied to compensatory mitigation projects with a high likelihood of meeting performance standards;

(iv) For an in-lieu fee program, a complete draft instrument must include the following additional information:

(A) The compensation planning framework (see paragraph (c) of this section);

(B) Specification of the initial allocation of advance credits (see paragraph (n) of this section) and a draft fee schedule for these credits, by service area, including an explanation of the basis for the allocation and draft fee schedule;

(C) A methodology for determining future project-specific credits and fees; and

(D) A description of the in-lieu fee program account required by paragraph (i) of this section.

(7) *IRT review.* Upon receipt of notification by the district engineer that the draft instrument or amendment is complete, the sponsor must provide the district engineer with a sufficient number of copies of the draft instrument or amendment to distribute to the IRT members. The district engineer will promptly distribute copies of the draft instrument or amendment to the IRT

members for a 30 day comment period. The 30-day comment period begins 5 days after the district engineer distributes the copies of the draft instrument or amendment to the IRT. Following the comment period, the district engineer will discuss any comments with the appropriate agencies and with the sponsor. The district engineer will seek to resolve issues using a consensus based approach, to the extent practicable, while still meeting the decision-making time frames specified in this section. Within 90 days of receipt of the complete draft instrument or amendment by the IRT members, the district engineer must notify the sponsor of the status of the IRT review. Specifically, the district engineer must indicate to the sponsor if the draft instrument or amendment is generally acceptable and what changes, if any, are needed. If there are significant unresolved concerns that may lead to a formal objection from one or more IRT members to the final instrument or amendment, the district engineer will indicate the nature of those concerns.

(8) *Final instrument.* The sponsor must submit a final instrument to the district engineer for approval, with supporting documentation that explains how the final instrument addresses the comments provided by the IRT. For modifications of approved instruments, the sponsor must submit a final amendment to the district engineer for approval, with supporting documentation that explains how the final amendment addresses the comments provided by the IRT. The final instrument or amendment must be provided directly by the sponsor to all members of the IRT. Within 30 days of receipt of the final instrument or amendment, the district engineer will notify the IRT members whether or not he intends to approve the instrument or amendment. If no IRT member objects, by initiating the dispute resolution process in paragraph (e) of this section within 45 days of receipt of the final instrument or amendment, the district engineer will notify the sponsor of his final decision and, if the instrument or amendment is approved, arrange for it to be signed by the appropriate parties. If any IRT member initiates the dispute resolution process, the district engineer will notify the sponsor. Following conclusion of the dispute resolution process, the district engineer will notify the sponsor of his final decision, and if the instrument or amendment is approved, arrange for it to be signed by the appropriate parties. For mitigation banks, the final instrument must contain

the information items listed in paragraphs (d)(6)(ii), and (iii) of this section. For in-lieu fee programs, the final instrument must contain the information items listed in paragraphs (d)(6)(ii) and (iv) of this section. For the modification of an approved instrument, the amendment must contain appropriate information, as determined by the district engineer. The final instrument or amendment must be made available to the public upon request.

(e) *Dispute resolution process.* (1) Within 15 days of receipt of the district engineer's notification of intent to approve an instrument or amendment, the Regional Administrator of the U.S. EPA, the Regional Director of the U.S. Fish and Wildlife Service, the Regional Director of the National Marine Fisheries Service, and/or other senior officials of agencies represented on the IRT may notify the district engineer and other IRT members by letter if they object to the approval of the proposed final instrument or amendment. This letter must include an explanation of the basis for the objection and, where feasible, offer recommendations for resolving the objections. If the district engineer does not receive any objections within this time period, he may proceed to final action on the instrument or amendment.

(2) The district engineer must respond to the objection within 30 days of receipt of the letter. The district engineer's response may indicate an intent to disapprove the instrument or amendment as a result of the objection, an intent to approve the instrument or amendment despite the objection, or may provide a modified instrument or amendment that attempts to address the objection. The district engineer's response must be provided to all IRT members.

(3) Within 15 days of receipt of the district engineer's response, if the Regional Administrator or Regional Director is not satisfied with the response he may forward the issue to the Assistant Administrator for Water of the U.S. EPA, the Assistant Secretary for Fish and Wildlife and Parks of the U.S. FWS, or the Undersecretary for Oceans and Atmosphere of NOAA, as appropriate, for review and must notify the district engineer by letter via electronic mail or facsimile machine (with copies to all IRT members) that the issue has been forwarded for Headquarters review. This step is available only to the IRT members representing these three federal agencies, however, other IRT members who do not agree with the district engineer's final decision do not have to sign the instrument or amendment or

recognize the mitigation bank or in-lieu fee program for purposes of their own programs and authorities. If an IRT member other than the one filing the original objection has a new objection based on the district engineer's response, he may use the first step in this procedure (paragraph (e)(1) of this section) to provide that objection to the district engineer.

(4) If the issue has not been forwarded to the objecting agency's Headquarters, then the district engineer may proceed with final action on the instrument or amendment. If the issue has been forwarded to the objecting agency's Headquarters, the district engineer must hold in abeyance the final action on the instrument or amendment, pending Headquarters level review described below.

(5) Within 20 days from the date of the letter requesting Headquarters level review, the Assistant Administrator for Water, the Assistant Secretary for Fish and Wildlife and Parks, or the Undersecretary for Oceans and Atmosphere must either notify the Assistant Secretary of the Army (Civil Works) (ASA(CW)) that further review will not be requested, or request that the ASA(CW) review the final instrument or amendment.

(6) Within 30 days of receipt of the letter from the objecting agency's Headquarters request for ASA(CW)'s review of the final instrument, the ASA(CW), through the Director of Civil Works, must review the draft instrument or amendment and advise the district engineer on how to proceed with final action on that instrument or amendment. The ASA(CW) must immediately notify the Assistant Administrator for Water, the Assistant Secretary for Fish and Wildlife and Parks, and/or the Undersecretary for Oceans and Atmosphere of the final decision.

(7) In cases where the dispute resolution procedure is used, the district engineer must notify the sponsor of his final decision within 150 days of receipt of the final instrument or amendment.

(f) *Extension of deadlines.* (1) The deadlines in paragraphs (d) and (e) of this section may be extended by the district engineer at his sole discretion in cases where:

(i) Compliance with other applicable laws, such as consultation under section 7 of the Endangered Species Act or section 106 of the National Historic Preservation Act, is required;

(ii) It is necessary to conduct government-to-government consultation with Indian tribes;

(iii) Timely submittal of information necessary for the review of the proposed

mitigation bank or in-lieu fee program or the proposed modification of an approved instrument is not accomplished by the sponsor; or

(iv) Information that is essential to the district engineer's decision cannot be reasonably obtained within the specified time frame.

(2) In such cases, the district engineer must promptly notify the sponsor in writing of the extension and the reason for it. Such extensions shall be for the minimum time necessary to resolve the issue necessitating the extension.

(g) *Modification of instruments.* (1) *Approval of an amendment to an approved instrument.* Modification of an approved instrument, including the addition and approval of umbrella mitigation bank sites or in-lieu fee project sites or expansions of previously approved mitigation bank or in-lieu fee project sites, must follow the appropriate procedures in paragraph (d) of this section, unless the district engineer determines that the streamlined review process described in paragraph (g)(2) of this section is warranted.

(2) *Streamlined review process.* The streamlined modification review process may be used for the following modifications of instruments: changes reflecting adaptive management of the mitigation bank or in-lieu fee program, credit releases, changes in credit releases and credit release schedules, and changes that the district engineer determines are not significant. If the district engineer determines that the streamlined review process is warranted, he must notify the IRT members and the sponsor of this determination and provide them with copies of the proposed modification. IRT members and the sponsor have 30 days to notify the district engineer if they have concerns with the proposed modification. If IRT members or the sponsor notify the district engineer of such concerns, the district engineer shall attempt to resolve those concerns. Within 60 days of providing the proposed modification to the IRT, the district engineer must notify the IRT members of his intent to approve or disapprove the proposed modification. If no IRT member objects, by initiating the dispute resolution process in paragraph (e) of this section, within 15 days of receipt of this notification, the district engineer will notify the sponsor of his final decision and, if the modification is approved, arrange for it to be signed by the appropriate parties. If any IRT member initiates the dispute resolution process, the district engineer will so notify the sponsor. Following conclusion of the dispute resolution

process, the district engineer will notify the sponsor of his final decision, and if the modification is approved, arrange for it to be signed by the appropriate parties.

(h) *Umbrella mitigation banking instruments.* A single mitigation banking instrument may provide for future authorization of additional mitigation bank sites. As additional sites are selected, they must be included in the mitigation banking instrument as modifications, using the procedures in paragraph (g)(1) of this section. Credit withdrawal from the additional bank sites shall be consistent with paragraph (m) of this section.

(i) *In-lieu fee program account.* (1) The in-lieu fee program sponsor must establish a program account after the instrument is approved by the district engineer, prior to accepting any fees from permittees. If the sponsor accepts funds from entities other than permittees, those funds must be kept in separate accounts. The program account must be established at a financial institution that is a member of the Federal Deposit Insurance Corporation. All interests and earnings accruing to the program account must remain in that account for use by the in-lieu fee program for the purposes of providing compensatory mitigation for DA permits. The program account may only be used for the selection, design, acquisition, implementation, and management of in-lieu fee compensatory mitigation projects, except for a small percentage (as determined by the district engineer in consultation with the IRT and specified in the instrument) that can be used for administrative costs.

(2) The sponsor must submit proposed in-lieu fee projects to the district engineer for funding approval. Disbursements from the program account may only be made upon receipt of written authorization from the district engineer, after the district engineer has consulted with the IRT. The terms of the program account must specify that the district engineer has the authority to direct those funds to alternative compensatory mitigation projects in cases where the sponsor does not provide compensatory mitigation in accordance with the time frame specified in paragraph (n)(4) of this section.

(3) The sponsor must provide annual reports to the district engineer and the IRT. The annual reports must include the following information:

(i) All income received, disbursements, and interest earned by the program account;

(ii) A list of all permits for which in-lieu fee program funds were accepted. This list shall include: the Corps permit number (or the state permit number if there is no corresponding Corps permit number, in cases of state programmatic general permits or other regional general permits), the service area in which the authorized impacts are located, the amount of authorized impacts, the amount of required compensatory mitigation, the amount paid to the in-lieu fee program, and the date the funds were received from the permittee;

(iii) A description of in-lieu fee program expenditures from the account, such as the costs of land acquisition, planning, construction, monitoring, maintenance, contingencies, adaptive management, and administration;

(iv) The balance of advance credits and released credits at the end of the report period for each service area; and

(v) Any other information required by the district engineer.

(4) The district engineer may audit the records pertaining to the program account. All books, accounts, reports, files, and other records relating to the in-lieu fee program account shall be available at reasonable times for inspection and audit by the district engineer.

(j) *In-lieu fee project approval.* (1) As in-lieu fee project sites are identified and secured, the sponsor must submit mitigation plans to the district engineer that include all applicable items listed in § 230.94(c)(2) through (14). The mitigation plan must also include a credit release schedule consistent with paragraph (o)(8) of this section that is tied to achievement of specific performance standards. The review and approval of in-lieu fee projects will be conducted in accordance with the procedures in paragraph (g)(1) of this section, as modifications of the in-lieu fee program instrument. This includes compensatory mitigation projects conducted by another party on behalf of the sponsor through requests for proposals and awarding of contracts.

(2) If a DA permit is required for an in-lieu fee project, the permit should not be issued until all relevant provisions of the mitigation plan have been substantively determined, to ensure that the DA permit accurately reflects all relevant provisions of the approved mitigation plan, such as performance standards.

(k) *Coordination of mitigation banking instruments and DA permit issuance.* In cases where initial establishment of the mitigation bank, or the development of a new project site under an umbrella banking instrument, involves activities requiring DA

authorization, the permit should not be issued until all relevant provisions of the mitigation plan have been substantively determined. This is to ensure that the DA permit accurately reflects all relevant provisions of the final instrument, such as performance standards.

(l) *Project implementation.* (1) The sponsor must have an approved instrument prior to collecting funds from permittees to satisfy compensatory mitigation requirements for DA permits.

(2) Authorization to sell credits to satisfy compensatory mitigation requirements in DA permits is contingent on compliance with all of the terms of the instrument. This includes constructing a mitigation bank or in-lieu fee project in accordance with the mitigation plan approved by the district engineer and incorporated by reference in the instrument. If the aquatic resource restoration, establishment, enhancement, and/or preservation activities cannot be implemented in accordance with the approved mitigation plan, the district engineer must consult with the sponsor and the IRT to consider modifications to the instrument, including adaptive management, revisions to the credit release schedule, and alternatives for providing compensatory mitigation to satisfy any credits that have already been sold.

(3) An in-lieu fee program sponsor is responsible for the implementation, long-term management, and any required remediation of the restoration, establishment, enhancement, and/or preservation activities, even though those activities may be conducted by other parties through requests for proposals or other contracting mechanisms.

(m) *Credit withdrawal from mitigation banks.* The mitigation banking instrument may allow for an initial debiting of a percentage of the total credits projected at mitigation bank maturity, provided the following conditions are satisfied: the mitigation banking instrument and mitigation plan have been approved, the mitigation bank site has been secured, appropriate financial assurances have been established, and any other requirements determined to be necessary by the district engineer have been fulfilled. The mitigation banking instrument must provide a schedule for additional credit releases as appropriate milestones are achieved (see paragraph (o)(8) of this section). Implementation of the approved mitigation plan shall be initiated no later than the first full growing season after the date of the first credit transaction.

(n) *Advance credits for in-lieu fee programs.* (1) The in-lieu fee program instrument may make a limited number of advance credits available to permittees when the instrument is approved. The number of advance credits will be determined by the district engineer, in consultation with the IRT, and will be specified for each service area in the instrument. The number of advance credits will be based on the following considerations:

(i) The compensation planning framework;

(ii) The sponsor's past performance for implementing aquatic resource restoration, establishment, enhancement, and/or preservation activities in the proposed service area or other areas; and

(iii) The projected financing necessary to begin planning and implementation of in-lieu fee projects.

(2) To determine the appropriate number of advance credits for a particular service area, the district engineer may require the sponsor to provide confidential supporting information that will not be made available to the general public. Examples of confidential supporting information may include prospective in-lieu fee project sites.

(3) As released credits are produced by in-lieu fee projects, they must be used to fulfill any advance credits that have already been provided within the project service area before any remaining released credits can be sold or transferred to permittees. Once previously provided advance credits have been fulfilled, an equal number of advance credits is re-allocated to the sponsor for sale or transfer to fulfill new mitigation requirements, consistent with the terms of the instrument. The number of advance credits available to the sponsor at any given time to sell or transfer to permittees in a given service area is equal to the number of advance credits specified in the instrument, minus any that have already been provided but not yet fulfilled.

(4) Land acquisition and initial physical and biological improvements must be completed by the third full growing season after the first advance credit in that service area is secured by a permittee, unless the district engineer determines that more or less time is needed to plan and implement an in-lieu fee project. If the district engineer determines that there is a compensatory mitigation deficit in a specific service area by the third growing season after the first advance credit in that service area is sold, and determines that it would not be in the public interest to allow the sponsor additional time to

plan and implement an in-lieu fee project, the district engineer must direct the sponsor to disburse funds from the in-lieu fee program account to provide alternative compensatory mitigation to fulfill those compensation obligations.

(5) The sponsor is responsible for complying with the terms of the in-lieu fee program instrument. If the district engineer determines, as a result of review of annual reports on the operation of the in-lieu fee program (see paragraphs (p)(2) and (q)(1) of this section), that it is not performing in compliance with its instrument, the district engineer will take appropriate action, which may include suspension of credit sales, to ensure compliance with the in-lieu fee program instrument (see paragraph (o)(10) of this section). Permittees that secured credits from the in-lieu fee program are not responsible for in-lieu fee program compliance.

(o) *Determining credits.* (1) *Units of measure.* The principal units for credits and debits are acres, linear feet, functional assessment units, or other suitable metrics of particular resource types. Functional assessment units or other suitable metrics may be linked to acres or linear feet.

(2) *Assessment.* Where practicable, an appropriate assessment method (e.g., hydrogeomorphic approach to wetlands functional assessment, index of biological integrity) or other suitable metric must be used to assess and describe the aquatic resource types that will be restored, established, enhanced and/or preserved by the mitigation bank or in-lieu fee project.

(3) *Credit production.* The number of credits must reflect the difference between pre- and post-compensatory mitigation project site conditions, as determined by a functional or condition assessment or other suitable metric.

(4) *Credit value.* Once a credit is debited (sold or transferred to a permittee), its value cannot change.

(5) *Credit costs.* (i) The cost of compensatory mitigation credits provided by a mitigation bank or in-lieu fee program is determined by the sponsor.

(ii) For in-lieu fee programs, the cost per unit of credit must include the expected costs associated with the restoration, establishment, enhancement, and/or preservation of aquatic resources in that service area. These costs must be based on full cost accounting, and include, as appropriate, expenses such as land acquisition, project planning and design, construction, plant materials, labor, legal fees, monitoring, and remediation or adaptive management activities, as well as administration of the in-lieu fee

program. The cost per unit credit must also take into account contingency costs appropriate to the stage of project planning, including uncertainties in construction and real estate expenses. The cost per unit of credit must also take into account the resources necessary for the long-term management and protection of the in-lieu fee project. In addition, the cost per unit credit must include financial assurances that are necessary to ensure successful completion of in-lieu fee projects.

(6) *Credits provided by preservation.* These credits should be specified as acres, linear feet, or other suitable metrics of preservation of a particular resource type. In determining the compensatory mitigation requirements for DA permits using mitigation banks or in-lieu fee programs, the district engineer should apply a higher mitigation ratio if the requirements are to be met through the use of preservation credits. In determining this higher ratio, the district engineer must consider the relative importance of both the impacted and the preserved aquatic resources in sustaining watershed functions.

(7) *Credits provided by riparian areas, buffers, and uplands.* These credits should be specified as acres, linear feet, or other suitable metrics of riparian area, buffer, and uplands respectively. Non-aquatic resources can only be used as compensatory mitigation for impacts to aquatic resources authorized by DA permits when those resources are essential to maintaining the ecological viability of adjoining aquatic resources. In determining the compensatory mitigation requirements for DA permits using mitigation banks and in-lieu fee programs, the district engineer may authorize the use of riparian area, buffer, and/or upland credits if he determines that these areas are essential to sustaining aquatic resource functions in the watershed and are the most appropriate compensation for the authorized impacts.

(8) *Credit release schedule.* (i) *General considerations.* Release of credits must be tied to performance based milestones (e.g., construction, planting, establishment of specified plant and animal communities). The credit release schedule should reserve a significant share of the total credits for release only after full achievement of ecological performance standards. When determining the credit release schedule, factors to be considered may include, but are not limited to: The method of providing compensatory mitigation credits (e.g., restoration), the likelihood of success, the nature and amount of work needed to generate the credits, and

the aquatic resource type(s) and function(s) to be provided by the mitigation bank or in-lieu fee project. The district engineer will determine the credit release schedule, including the share to be released only after full achievement of performance standards, after consulting with the IRT. Once released, credits may only be used to satisfy compensatory mitigation requirements of a DA permit if the use of credits for a specific permit has been approved by the district engineer.

(ii) For single-site mitigation banks, the terms of the credit release schedule must be specified in the mitigation banking instrument. The credit release schedule may provide for an initial debiting of a limited number of credits once the instrument is approved and other appropriate milestones are achieved (see paragraph (m) of this section).

(iii) For in-lieu fee projects and umbrella mitigation bank sites, the terms of the credit release schedule must be specified in the approved mitigation plan. When an in-lieu fee project or umbrella mitigation bank site is implemented and is achieving the performance-based milestones specified in the credit release schedule, credits are generated in accordance with the credit release schedule for the approved mitigation plan. If the in-lieu fee project or umbrella mitigation bank site does not achieve those performance-based milestones, the district engineer may modify the credit release schedule, including reducing the number of credits.

(9) *Credit release approval.* Credit releases for mitigation banks and in-lieu fee projects must be approved by the district engineer. In order for credits to be released, the sponsor must submit documentation to the district engineer demonstrating that the appropriate milestones for credit release have been achieved and requesting the release. The district engineer will provide copies of this documentation to the IRT members for review. IRT members must provide any comments to the district engineer within 15 days of receiving this documentation. However, if the district engineer determines that a site visit is necessary, IRT members must provide any comments to the district engineer within 15 days of the site visit. The district engineer must schedule the site visit so that it occurs as soon as it is practicable, but the site visit may be delayed by seasonal considerations that affect the ability of the district engineer and the IRT to assess whether the applicable credit release milestones have been achieved. After full consideration of any comments

received, the district engineer will determine whether the milestones have been achieved and the credits can be released. The district engineer shall make a decision within 30 days of the end of that comment period, and notify the sponsor and the IRT.

(10) *Suspension and termination.* If the district engineer determines that the mitigation bank or in-lieu fee program is not meeting performance standards or complying with the terms of the instrument, appropriate action will be taken. Such actions may include, but are not limited to, suspending credit sales, adaptive management, decreasing available credits, utilizing financial assurances, and terminating the instrument.

(p) *Accounting procedures.* (1) For mitigation banks, the instrument must contain a provision requiring the sponsor to establish and maintain a ledger to account for all credit transactions. Each time an approved credit transaction occurs, the sponsor must notify the district engineer.

(2) For in-lieu fee programs, the instrument must contain a provision requiring the sponsor to establish and maintain an annual report ledger in accordance with paragraph (i)(3) of this section, as well as individual ledgers that track the production of released credits for each in-lieu fee project.

(q) *Reporting.* (1) *Ledger account.* The sponsor must compile an annual ledger report showing the beginning and ending balance of available credits and permitted impacts for each resource type, all additions and subtractions of credits, and any other changes in credit availability (e.g., additional credits released, credit sales suspended). The ledger report must be submitted to the district engineer, who will distribute copies to the IRT members. The ledger report is part of the administrative record for the mitigation bank or in-lieu fee program. The district engineer will make the ledger report available to the public upon request.

(2) *Monitoring reports.* The sponsor is responsible for monitoring the mitigation bank site or the in-lieu fee project site in accordance with the approved monitoring requirements to determine the level of success and identify problems requiring remedial action or adaptive management measures. Monitoring must be conducted in accordance with the requirements in § 230.96, and at time intervals appropriate for the particular project type and until such time that the district engineer, in consultation with the IRT, has determined that the performance standards have been attained. The instrument must include

requirements for periodic monitoring reports to be submitted to the district engineer, who will provide copies to other IRT members.

(3) *Financial assurance and long-term management funding report.* The district engineer may require the sponsor to provide an annual report showing beginning and ending balances, including deposits into and any withdrawals from, the accounts providing funds for financial assurances and long-term management activities. The report should also include information on the amount of required financial assurances and the status of those assurances, including their potential expiration.

(r) *Use of credits.* Except as provided below, all activities authorized by DA permits are eligible, at the discretion of the district engineer, to use mitigation banks or in-lieu fee programs to fulfill compensatory mitigation requirements for DA permits. The district engineer will determine the number and type(s) of credits required to compensate for the authorized impacts. Permit applicants may propose to use a particular mitigation bank or in-lieu fee program to provide the required compensatory mitigation. In such cases, the sponsor must provide the permit applicant with a statement of credit availability. The district engineer must review the permit applicant's compensatory mitigation proposal, and notify the applicant of his determination regarding the acceptability of using that mitigation bank or in-lieu fee program.

(s) *IRT concerns with use of credits.* If, in the view of a member of the IRT, an issued permit or series of issued permits raises concerns about how credits from a particular mitigation bank or in-lieu fee program are being used to satisfy compensatory mitigation requirements (including concerns about whether credit use is consistent with the terms of the instrument), the IRT member may notify the district engineer in writing of the concern. The district engineer shall promptly consult with the IRT to address the concern. Resolution of the concern is at the discretion of the district engineer, consistent with applicable statutes, regulations, and policies regarding compensatory mitigation requirements for DA permits. Nothing in this section limits the authorities designated to IRT agencies under existing statutes or regulations.

(t) *Site protection.* (1) For mitigation bank sites, real estate instruments, management plans, or other long-term mechanisms used for site protection must be finalized before any credits can be released.

(2) For in-lieu fee project sites, real estate instruments, management plans, or other long-term protection mechanisms used for site protection must be finalized before advance credits can become released credits.

(u) *Long-term management.* (1) The legal mechanisms and the party responsible for the long-term management and the protection of the mitigation bank site must be documented in the instrument or, in the case of umbrella mitigation banking instruments and in-lieu fee programs, the approved mitigation plans. The responsible party should make adequate provisions for the operation, maintenance, and long-term management of the compensatory mitigation project site. The long-term management plan should include a description of long-term management needs and identify the funding mechanism that will be used to meet those needs.

(2) The instrument may contain provisions for the sponsor to transfer long-term management responsibilities to a land stewardship entity, such as a public agency, non-governmental organization, or private land manager.

(3) The instrument or approved mitigation plan must address the financial arrangements and timing of any necessary transfer of long-term management funds to the steward.

(4) Where needed, the acquisition and protection of water rights should be secured and documented in the instrument or, in the case of umbrella mitigation banking instruments and in-lieu fee programs, the approved mitigation site plan.

(v) *Grandfathering of existing instruments.* (1) *Mitigation banking instruments.* All mitigation banking instruments approved on or after July 9, 2008 must meet the requirements of this part. Mitigation banks approved prior to July 9, 2008 may continue to operate under the terms of their existing instruments. However, any modification to such a mitigation banking instrument on or after July 9, 2008, including authorization of additional sites under an umbrella mitigation banking instrument, expansion of an existing site, or addition of a different type of resource credits (e.g., stream credits to a wetland bank) must be consistent with the terms of this part.

(2) *In-lieu fee program instruments.* All in-lieu fee program instruments

approved on or after July 9, 2008 must meet the requirements of this part. In-lieu fee programs operating under instruments approved prior to July 9, 2008 may continue to operate under those instruments for two years after the effective date of this rule, after which time they must meet the requirements of this part, unless the district engineer determines that circumstances warrant an extension of up to three additional years. The district engineer must consult with the IRT before approving such extensions. Any revisions made to the in-lieu-fee program instrument on or after July 9, 2008 must be consistent with the terms of this part. Any approved project for which construction was completed under the terms of a previously approved instrument may continue to operate indefinitely under those terms if the district engineer determines that the project is providing appropriate mitigation substantially consistent with the terms of this part.

Dated: March 28, 2008.

Stephen L. Johnson,
Administrator, U.S. Environmental Protection Agency.

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APPENDIX 1.3

RGL 05-01.

GUIDANCE ON THE USE OF
FINANCIAL ASSURANCES, AND
SUGGESTED LANGUAGE FOR
SPECIAL CONDITIONS FOR DA
PERMITS REQUIRING
PERFORMANCE BONDS
DATED
FEBRUARY 14, 2005



US Army Corps
of Engineers®

REGULATORY GUIDANCE LETTER

No. 05-1

Date: 14 February 2005

SUBJECT: Guidance on the Use of Financial Assurances, and Suggested Language for Special Conditions for Department of the Army Permits Requiring Performance Bonds.

1. Purpose and applicability

a. Purpose. The U.S. Army Corps of Engineers (Corps) has the authority to issue permits under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. These permits may require compensatory mitigation to ensure that issued permits and resolution of unauthorized activities result in a no-net loss of aquatic resource functions. The purposes of this guidance are: 1) to provide general guidance on the use of letters of credit, performance bonds and other financial assurances, and 2) to provide specific guidance for the use of performance bonds to ensure the completion of compensatory mitigation projects.

b. Applicability. This guidance applies to Department of the Army (DA) permits that are conditioned to include any type of financial assurance to ensure that required compensatory mitigation is completed. It may also be used when financial assurances are required for mitigation and/or restoration for unauthorized activities.

2. General Considerations for Financial Assurances.

a. The Purpose of Requiring Financial Assurances. The overall success of compensatory mitigation, including establishment (i.e., creation), restoration, and enhancement of natural ecosystems is subject to many variables. Site-specific factors such as local droughts, fires or floods, pest infestations, diseases or illegal entrance by off-road vehicles may negatively affect a compensatory mitigation project before it has achieved the specified performance standards, and thus may require additional effort or remediation to ensure functional success. Detailed, well-written special conditions and compliance requirements without the requirement of financial assurances are usually sufficient for DA permits to ensure that relatively simple compensatory mitigation activities are completed and provide for desired aquatic resource functions. However, for some DA permits, district engineers may require financial assurances on a permit-by-permit basis to ensure the initiation and successful completion of required compensatory mitigation. For example, district engineers may determine that financial assurances are necessary to ensure that multiple-year plantings occur, invasive species are controlled, and adequate water is supplied after the initial physical phases of landscape construction (e.g., soil amendments, grading, plantings, seeding) are completed.

b. Considerations for Requiring Financial Assurances. Because the circumstances of each permit case are unique, the decision to require financial assurances should be made on a permit-by-permit basis. The analysis used to determine that an additional financial assurance is required for a particular permit must be documented on a case-specific basis and included as part of the administrative record for that permit. At their discretion, district engineers may choose to require financial assurances on a case-by-case basis for many reasons, some of which may include the length of monitoring required for the compensatory mitigation project, whether the mitigation is for an after-the-fact permit or constructed in advance of impacts, the type of mitigation (establishment, restoration or enhancement), experience with the permittee and/or consultant, and whether it requires new technology or includes proven techniques, whether the permit is for a project that impacts aquatic resources that provide high or low quality functions, and the likelihood of mitigation site sustainability. Funding for many long-term management activities such as prescribed burning, invasive species control, and maintenance of water control structures may also require financial assurances. These are among the many factors that should be taken into account when deciding whether or not to require additional financial assurances.

c. Types of Financial Assurances. Examples of financial assurances include performance bonds, irrevocable trusts, escrow accounts, casualty insurance, letters of credit, legislatively enacted dedicated funds for government-operated banks or other approved instruments.

d. Amount of Financial Assurance. The dollar amount of any financial assurance, including the penal sum of a performance bond, is determined by the district engineer. Any required financial assurances should be sufficient to cover contingency actions such as default by the permittee or failure to meet performance standards. In addition, the amount of the financial assurances should be based on the size and complexity of the proposed compensatory mitigation project, the estimated amount required to construct and remediate the proposed compensatory mitigation project and monitoring of the compensatory mitigation site. The financial assurances may also include a reasonable amount to cover contingency costs or other amount determined to be appropriate to the level of the uncertainty for completion of a successful compensatory mitigation project. In some cases, the financial assurance may be increased to provide funds for the real estate costs associated with the purchase of another compensatory mitigation site if the current site cannot support the desired aquatic resource because of insufficient hydrology (e.g., possible reduction of groundwater in a highly urbanizing setting or change in surface water rights) or other factors that could affect compensatory mitigation project success. District engineers must document the analysis used to determine the amount of the financial assurance, and must include this analysis in the administrative records for their permits.

e. Use and Release of Financial Assurances. Financial assurances may be phased out or reduced once the project has been demonstrated to be functionally assured and self-sustaining in accordance with performance standards/success criteria. District engineers should clearly specify the conditions under which financial assurances are used to ensure mitigation, and the conditions under which the financial assurances are to be released to the permit applicant and/or provider of

the financial assurance. Special conditions should provide the permit applicant and/or financial assurance provider with an adequate chance to correct deficiencies with the compensatory mitigation project. In some cases, release of the financial assurance can be keyed to stages demonstrated with achievement of mitigation project performance standards or other special conditions. As discussed in section 3(a) of this Guidance, district engineers should not position themselves to accept directly, retain, or draw on financial assurance funds in the event of default of the permittee, unless specifically authorized by Federal statute.

3. Specific Considerations for Performance Bonds. This section provides guidance specific to the use of performance bonds.

a. Legal Considerations Applicable to Performance Bonds. Unlike some other Federal agencies, the Corps lacks statutory authority to accept directly, retain, and draw upon performance bonds to ensure compliance with permit conditions. If the Corps were to receive the sum of a performance bond directly, the sum would be categorized as a “miscellaneous receipt” under the Miscellaneous Receipts Statute, 31 U.S.C. §3302(b), and would be deposited in the U.S. Treasury without being used to ensure permit compliance. This situation applies to the use of other financial assurances as well. However, along with its authority to deny permit authorizations, the Corps has the authority to issue its permits with conditions. District engineers have the discretion to condition the approval of a permit to require the posting and execution of a performance bond by a permittee, as long as the Corps is not positioned to accept directly, retain, or draw upon bond monies in the event of a default. If and when they are used, such bonds should be executed with the signatures of an additional governmental or non-governmental environmental management entity or entities as a bond “surety” or “sureties,” who agree to ensure performance if the Corps should determine that the permittee, as the bond “principal,” has defaulted on any of its responsibilities. The permit should also specify that the Corps stands as a third-party “obligee” to the principal and surety(ies) of the bond, possessing the full and final authority to determine the penal sum amount, and to determine whether the principal and the surety(ies) have specifically performed some or all of the obligations, covenants, terms, conditions, and agreements of the bond. Finally, the bond should specify that if both the principal and the surety(ies) default in their responsibilities, the Corps retains the full and final discretionary authority to identify new parties as additional surety(ies) to the bond.

b. Suggested Permit Language if Performance Bond is Used. If a district engineer determines that a performance bond is necessary to ensure the completion of a compensatory mitigation project, the permit should list the posting and execution of the bond as a special condition. The following is suggested language for a special permit condition involving a performance bond:

“The Permittee has executed a Performance Bond dated **[insert date bond executed]** in the amount of **[insert amount determined by district engineer]**, attached to this permit as **[insert Attachment Number or Letter]** and made a part

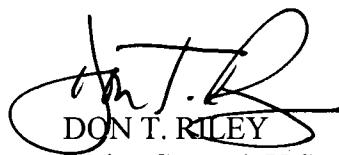
hereof, to provide financial assurance for the performance of all of the obligations, covenants, terms, conditions, and agreements required of the Permittee under this permit. The bond shall be posted before construction authorized by this permit commences.”

c. Model Performance Bond. The appendix to this guidance is a Model Performance Bond, which is provided as a suggested template for district engineers that choose, on a permit-by-permit basis, to use performance bonds as special conditions to DA permits. This Model Performance Bond may be modified at the discretion of district engineers on a permit-by-permit basis.

4. Duration. This guidance remains effective unless revised or rescinded.

FOR THE COMMANDER:

Encl


DON T. RILEY
Major General, U.S. Army
Director of Civil Works

MODEL PERFORMANCE BOND

DATE BOND EXECUTED (Must be same or earlier than date of permit.)
OBLIGEE: [Insert District Name], United States Army Corps of Engineers [Insert Address]

PRINCIPAL (Legal name and business address)
TYPE OF ORGANIZATION ("X"ONE)
<input type="checkbox"/> Individual <input type="checkbox"/> Partnership <input type="checkbox"/> Joint Venture <input type="checkbox"/> Corporation
STATE OF INCORPORATION

Surety(ies) (Legal name(s) and business address(es))			
PENAL SUM OF BOND, amount determined solely by Obligee			
Million(s)	Thousand(s)	Hundred(s)	Cent(s)
PERMIT DATE		PERMIT NO.	

OBLIGATION:

We, the Principal and Surety(ies) hereto, are firmly bound as Obligors to the U.S Army Corps of Engineers (hereinafter called the Obligee) in the above penal sum, an amount determined solely by the Obligee. For the payment of the penal sum, we bind ourselves, our heirs, executors, administrators, assigns, and successors, jointly and severally. However, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us. For all other purposes, each Surety binds itself, jointly and severally with the Principal, for the payment of the sum shown below the name of the Surety. The limit of liability shall be the full amount of the penal sum.

CONDITIONS:

The Principal received the permit identified above.

THEREFORE:

The above obligation is void if the Principal –

- (a) Specifically performs and fulfills all of the obligations, covenants, terms, conditions and agreements of the permit during the original term of the permit and any extensions thereof that may be granted by the Obligee, with or without notice to the Surety(ies), and during the life of any guaranty required under the permit, and -
- (b) Also specifically performs and fulfills all of the obligations, covenants, terms, conditions, and agreements of any and all duly authorized modifications of the permit that may hereafter be made. Notice of those modifications to the Surety(ies) are waived.

IT IS FURTHER EXPRESSLY PROVIDED THAT:

The Obligee shall have the full and final authority to determine whether the Principal and Surety(ies) have specifically performed and fulfilled some or all of the obligations, covenants, terms, conditions and agreements of the permit.

Within thirty (30) business days of receiving notice from the Obligee that the Principal has defaulted on some or all of the obligations, covenants, terms, conditions and agreements of the permit, the Surety(ies) shall either -

- (a) Remedy the default of the Principal to the full satisfaction of the Obligee by a certain date determined by the Obligee, or -
- (b) Immediately tender to a party or parties identified by the Obligee the portion of the penal sum that the Obligee determines is due and owing and necessary to remedy the default. In no circumstance shall such a sum be tendered to the Obligee. Any new party or parties identified by the Obligee under this section shall immediately become a Surety or Sureties to this bond. If the Obligee determines that it is unable to identify such a party or parties, the Surety(ies) shall remedy the default of the Principal under (a) of this section.

In the event that the Surety(ies) fail(s) to respond within thirty (30) business days to the Obligee's notice of default, or to honor commitments to the full satisfaction of the Obligee under (a) or (b) above of this section, the full penal sum may, at the election of the Obligee, immediately become due and owing and paid to a party or parties identified by the Obligee. In no circumstance shall the full penal sum be tendered to the Obligee. Any new party or parties identified by the Obligee under this paragraph shall immediately become a Surety or Sureties to this bond.

WITNESS:

The Obligee, Principal and Surety(ies) have executed this performance bond and have affixed their seals on the date set forth above.

PRINCIPAL		
Signature 1 <div style="text-align: right;">(Seal)</div>	Signature 2 <div style="text-align: right;">(Seal)</div>	Corporate Seal
Name, title 1 (typed)	Name, title 2 (typed)	
INDIVIDUAL SURETY(IES)		
Signature 1 <div style="text-align: right;">(Seal)</div>	Signature 2 <div style="text-align: right;">(Seal)</div>	
Name, title 1 (typed)	Name, title 2 (typed)	
COPORATE SURETY(IES)		
Surety A		
Name & address	State of Incorporation	Liability limit
Signature 1 <div style="text-align: right;">(Seal)</div>	Signature 2 <div style="text-align: right;">(Seal)</div>	
Name, title 1 (typed)	Name, title 2 (typed)	
Surety B		
Name & address	State of Incorporation	Liability limit
Signature 1 <div style="text-align: right;">(Seal)</div>	Signature 2 <div style="text-align: right;">(Seal)</div>	
Name, title 1 (typed)	Name, title 2 (typed)	
Surety C		
Name & address	State of Incorporation	Liability limit
Signature 1 <div style="text-align: right;">(Seal)</div>	Signature 2 <div style="text-align: right;">(Seal)</div>	
Name, title 1 (typed)	Name, title 2 (typed)	

Name, title 1 (typed)	Name, title 2 (typed)
-----------------------	-----------------------

Bond Premium	Rate Per Thou. (\$)	Total (\$)

INSTRUCTIONS

1. Insert the full legal name and business address of the Principal in the space designated "Principal" on the face of the form. An authorized person shall sign the bond. Any person signing in a representative capacity (e.g., an attorney-in-fact) must furnish evidence of authority if that representative is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved.

2. (a) Corporations executing the bond as sureties must appear on the Department of the Treasury's list of approved sureties and must act within the limitation listed therein. Where more than one corporate surety is involved, their names and addresses shall appear in the spaces (Surety A, Surety B, etc.) headed "CORPORATE SURET(IES)." In the space designated

"SURETY(IES)" on the face of the form, insert only the letter identification of the sureties.

(b) Where individual sureties are involved, a completed Affidavit of Individual Surety for each individual surety shall accompany the bond. The Government may require the surety to furnish additional substantiating information concerning their financial capability.

3. Corporations executing the bond shall affix their corporate seals. Individuals shall execute the bond opposite the word "Corporate Seal", and shall affix an adhesive seal if executed in Maine, New Hampshire, or any other jurisdiction requiring adhesive seals.

APPENDIX 1.4

MEMORANDUM FOR
REGULATORY DIVISION,
SAVANNAH DISTRICT, DATED
APRIL 24, 2008. PERFORMANCE
BONDS AND OTHER FINANCIAL
ASSURANCES AND
REQUIREMENTS OF RGL 05-01

MEMORANDUM FOR RD (Magwood)

SUBJECT: Performance Bonds and Other Financial Assurances and Requirements of RGL 05-1

1. I refer to Regulatory Guidance Letter (RGL) 05-1, dated February 14, 2005, and recent work by a Project Delivery Team (PDT) consisting of Richard Morgan, Rebecca Rowden, Bill Fonferek and Jason O'Kane to investigate requirements of the RGL and possible uses of financial assurances within Savannah District.

2. Information was collected and reviewed by the PDT including coordination with Assistant Division Chief, David Crosby, phone calls and e-mails with Regulatory personnel in Mobile, Charleston and Sacramento Districts, as well as various searches on the Regulatory Information Exchange (RIX) system. Based on this information and discussions, the PDT has concluded the following;

a. Financial assurances could include Letters of Credit, Escrow Accounts, Performance Bonds, irrevocable trusts, casualty insurance, legislatively enacted dedicated funds, etc.

b. At their discretion, District Engineers may choose to require financial assurances, however, detailed, well-written special conditions and compliance requirements are usually sufficient for Department of the Army permits.

c. For mitigation banks, credits are incrementally released over the seven-year monitoring period, and only after success criteria or milestones are met. At least twenty percent of a bank's potential credits are withheld until the end of the monitoring period and are only released after all success criteria are met. To date, withholding credits has proved an acceptable method for assuring compliance with the terms of Banking Instruments. Therefore, it does not appear that banking is in need of financial assurances.


d. For project specific mitigation and on a case-by-case basis, financial assurances could be a helpful tool to assure permit compliance. An example would be Hickory Log Creek, 200006560, a large reservoir project with a complex mitigation plan.

e. In the event a decision is made to use a financial assurance, it is important that the USACE be the beneficiary obligee and not the principal or surety.

f. The proposed mitigation rules, *Federal Register*, March 28, 2006, would not change these conclusions.

3. Based on these findings, while the use of financial assurances would be rare, there could be occasional projects where financial assurances would continue to be a helpful tool.

4. If financial assurances are considered for a particular action, the attached "Financial Requirements Decision Process" should be used.



Mirian J. Magwood
Chief, Regulatory Division

FINANCIAL ASSURANCE REQUIREMENT DECISION PROCESS

A. REFERENCES

1. RGL 05-01 – Guidance on the Use of Financial Assurances, and Suggested Language for Special Conditions for Departments of the Army Permits Requiring Performance Bonds.
2. In house policy memorandum dated November 28, 2007, addressing financial assurances.

B. CONDITIONS WHERE FINANCIAL ASSURANCES (FA) SHOULD BE CONSIDERED

1. It is suspected that applicant is unable or unwilling to fund the mitigation or implementation of any contingency plan in the event of mitigation failure.
2. Monitoring is required for a long duration or for multiple non-preservation sites.
3. Mitigation is for an after-the-fact permit.
4. Project impacts will occur in advance of mitigation being completed.
5. Applicant or consultant has past history of mitigation failure.
6. Mitigation has low or unknown probability of success. (Example: new technology being used)

C. ALTERNATIVES THAT SHOULD BE CONSIDERED PRIOR TO USING FINANCIAL ASSURANCE

1. For mitigation banks, withholding credits until the mitigation/restoration work is completed or success criteria have been met.
2. For permits and settlement agreements, condition/s requiring the mitigation/restoration work is completed or success criteria be met, prior to impacts occurring.
3. For violations, recording a Notice of Violation against the subject property or withholding “violation resolved” letter until the mitigation/restoration work is completed or success criteria have been met.

D. STEPS TO FOLLOW IN RARE CASES WHERE FA IS REQUIRED

1. Decision paper must be prepared and routed through supervisor and OC and signed by Division Chief. Once signed, the paper must be made part of the administrative record for the project file. The paper must contain:

- a. An alternatives analysis that shows why a FA should be required.
- b. The type of FA proposed. Types to be considered include letters of credit, escrow accounts, performance bonds, irrevocable trusts, casualty insurance, legislatively enacted dedicated funds, or other approved instruments. A model performance bond is included in RGL 05-01.

APPENDIX 1.5

RGL 06-03.

MINIMUM MONITORING
REQUIREMENTS FOR COMPENSATORY
MITIGATION PROJECTS INVOLVING
THE CREATION, RESTORATION, AND/OR
ENHANCEMENT OF AQUATIC
RESOURCES
DATED
AUGUST 3, 2006



**US Army Corps
of Engineers®**

REGULATORY GUIDANCE LETTER

No. 06-03

Date: August 3, 2006

SUBJECT: Minimum Monitoring Requirements for Compensatory Mitigation Projects Involving the Creation, Restoration, and/or Enhancement of Aquatic Resources.

1. Purpose and Applicability

a. Purpose. To provide the Districts and regulated public guidance on minimum monitoring requirements for compensatory mitigation projects including the required content for monitoring reports.

b. Applicability. The District Engineer (DE) must require the submission of monitoring reports to assess the development and condition of compensatory mitigation projects, unless the DE determines that monitoring is not practicable for that compensatory mitigation project. This guidance applies to all Department of the Army (DA) permit authorizations under Section 404 of the Clean Water Act and Sections 9 and 10 of the Rivers and Harbors Act, including Nationwide Permit (NWP) verifications, which require monitoring of compensatory mitigation involving the creation, restoration, and/or enhancement of aquatic resources as a special condition.

2. Background

Recent studies by the Government Accountability Office (GAO) and National Research Council (NRC) indicated that the U.S. Army Corps of Engineers (Corps) was not providing adequate oversight to ensure that compensatory mitigation projects were successfully replacing the aquatic resource functions and services lost as a result of permitted activities. For example, the GAO study determined that many project files requiring mitigation lacked monitoring reports despite the fact that such reports were required as a condition of the permit. Similarly, the NRC study documented that a lack of clearly stated objectives and performance standards in approved compensatory mitigation proposals made it difficult to ascertain whether the goal of no net loss of wetland resources was achieved.

On March 28, 2006, the Corps and Environmental Protection Agency published a proposed rule (Mitigation Rule) to revise regulations governing compensatory mitigation for activities authorized by permits issued by the Department of the Army (33 CFR Parts 325 and 332). This Regulatory Guidance Letter (RGL) was formulated to compliment and be consistent with the proposed Mitigation Rule. Subsequently, this RGL may be revised if the guidance stated herein is not consistent with the final Mitigation Rule.

3. Discussion

Inconsistent approaches to monitoring compensatory mitigation projects are one of many factors that have affected the ability of project managers (PM) to adequately enforce the required performance standards of Corps approved mitigation plans. Standardizing monitoring requirements will aid PMs when evaluating compensatory mitigation sites, thereby allowing DEs to effectively assess the status and success of compensatory mitigation projects.

This RGL addresses the reports and requirements associated with monitoring mitigation projects and for determining the information necessary to conduct compensatory mitigation site assessments. Monitoring requirements are typically based on the performance standards for a particular project and may vary from one compensatory mitigation project to another.

Monitoring reports are documents intended to provide the DE with information to determine if a compensatory mitigation project site is successfully meeting its performance standards. Remedial actions for correcting deficiencies in mitigation outcomes must be based on information provided in the monitoring reports and subsequent site inspections.

4. Guidance

a. Monitoring guidelines for compensatory mitigation.

i. Performance Standards. Performance standards, as defined in 33 CFR 332.2, must be consistent with the objectives of the compensatory mitigation project. The goal of these standards is to ensure that the project can be objectively evaluated to determine if it is developing into the desired resource type and providing the expected functions. Mitigation projects compensating for wetland impacts must include special conditions that clearly state that all wetlands within the mitigation site which are counted towards compensation must meet performance standards for and be monitored for the three parameters defined in the 1987 Corps of Engineers Wetland Delineation Manual and any associated guidance (i.e., hydrophytic vegetation, hydric soils, and the appropriate hydrology). Additional performance standards based on functional assessment methods and/or criteria may be incorporated into the special conditions as a basis for determining if the site is achieving the desired functional capacity. Compensatory mitigation projects also are conducted to offset impacts to other aquatic resources, such as riverine and estuarine habitats. Special conditions of the DA permits must clearly state performance standards specific to the type and function of the ecosystem in relation to the objectives of the compensatory mitigation project. Alternatively, the special conditions can refer to the performance standards documented in the Corps approved mitigation plan.

ii. Monitoring Timeframe. The monitoring period must be sufficient to demonstrate that the compensatory mitigation project has met performance standards, but not less than five years. Special conditions of the permit must support the five-year monitoring requirement and include deadlines for submittal of reports. Increased monitoring timeframes are usually needed for mitigation sites that take longer to develop and reach a level of stability. For example, a site at which a forested wetland is being restored may take longer than five years to develop into a fully functioning wetland. Certain compensatory mitigation projects may require

monitoring more often than annually during the early stages of development. This additional monitoring will allow project managers to quickly address problems and/or concerns associated with the mitigation site. Annual monitoring can resume once the site has stabilized and begun to develop in accordance with the approved performance standards. Monitoring may be conducted on a less frequent timeframe (such as every other year) in cases where monitoring is required for longer than five years. Yearly monitoring must occur for the first few years, however, to ensure the area is becoming established as a successful mitigation site. Off-year monitoring must include some form of assessment such as driving by the mitigation site, telephone conversations regarding condition of the mitigation site, etc. The special conditions of the DA permit (or the mitigation plan as referenced in the special conditions) must specify the length of monitoring required. Onsite conditions, the complexity of the approved mitigation plan, and unforeseen circumstances will ultimately determine whether the length and amount of mitigation monitoring required should be extended beyond the five-year time frame for a particular project. Complex and/or ecologically significant compensatory mitigation projects should have higher priority for site visits.

The DE may waive any remaining monitoring requirements upon a determination that the compensatory mitigation project has achieved its performance standards. For example, restoring open water habitat that was temporarily drained may not require a five-year monitoring period. Conversely, the DE may extend the original monitoring period upon a determination that performance standards have not been met or the compensatory mitigation project is not on track to meet them (e.g., high mortality rate of vegetation). The DE may also revise monitoring requirements when remediation is required.

iii. Monitoring Reports. Monitoring reports are required for all compensatory mitigation projects unless the DE determines that monitoring is not practicable for that compensatory mitigation project. The content of the monitoring reports must be specified in the special conditions of the DA permit so that the requirements are clearly identified for the permittee. In addition, the monitoring reports must comply with the timeframes specified in the special conditions of the DA permit. Monitoring reports should not be used as a substitute for onsite compliance inspections. Rather, monitoring reports must provide the PM with sufficient information to assess progress towards meeting the specified performance standards and to prioritize site inspections based on the findings documented in the report. The standard monitoring report format presented here is designed to provide the PM with sufficient information on the permitted work, the mitigation site, and whether a compliance visit is warranted. This new format will allow the permittee to electronically submit the reports and photos for review. Electronic submittals should be strongly encouraged by the Corps districts. Site visits to mitigation sites should be documented in the administrative record and will count toward district performance goals. DEs should consider taking enforcement action if the responsible party fails to submit complete and timely monitoring reports.

b. Contents of Monitoring Reports. Monitoring reports provide the PM with a convenient mechanism for assessing the status of required compensatory mitigation projects. They also allow the PM to prioritize inspections of compensatory mitigation projects so that the Corps can ensure effective use of limited resources and maximize replacement of the most valuable impacted aquatic resources within an ecosystem. The PM should schedule a site visit

and determine potential remedial actions if problems with the compensatory mitigation project are identified in a monitoring report.

DEs should discourage the submittal of large bulky reports that provide general information. While often helpful as background, reiteration of the mitigation and monitoring plan content, lengthy discussions of site progress, and extensive paraphrasing of quantified data are unnecessary. Monitoring reports must be concise and effectively provide the information necessary to assess the status of the compensatory mitigation project. Reports must provide information necessary to describe the site conditions and whether the compensatory mitigation project is meeting the performance standards.

Annual monitoring reports must follow a 10-page maximum report format for assessing mitigation sites, as follows:

i. Project Overview (1 page)

- (1) Corps Permit Number
- (2) Name and contact information of permittee and consultant
- (3) Name of party responsible for conducting the monitoring and the date(s) the inspection was conducted.
- (4) A summary paragraph defining the purpose of the approved project, acreage and type of aquatic resources impacted, and mitigation acreage and type of aquatic resources authorized to compensate for the aquatic impacts.
- (5) Written description on the location and any identifiable landmarks of the compensatory mitigation project including information to locate the site perimeter(s).
- (6) Directions to the mitigation site
- (7) Dates compensatory mitigation commenced and/or was completed.
- (8) Short statement on whether the performance standards are being met
- (9) Dates of any recent corrective or maintenance activities conducted since the previous report submission.
- (10) Specific recommendations for any additional corrective or remedial actions.

ii. Requirements (1 page)

List the monitoring requirements and performance standards, as specified in the approved mitigation plan and special conditions of the permit, and evaluate whether the compensatory mitigation project site is successfully achieving the approved performance standards or trending towards success. A table is one option for comparing the performance standards to the conditions and status of the developing mitigation site.

iii. Summary Data (maximum of 4 pages)

Summary data must be provided to substantiate the success and/or potential challenges associated with the compensatory mitigation project. Photo documentation may be provided to support the findings and recommendations referenced in the monitoring report and to assist the PM in assessing whether the compensatory mitigation project is successful for the monitoring period. Submitted photos must fit on a standard 8 ½ X 11” piece of paper, dated, and clearly labeled with the direction from which the photo was taken. The photo sites must also be identified on the appropriate maps.

iv. Maps (maximum of 3 pages)

Maps must be provided to show the location of the compensatory mitigation site relative to other landscape features, habitat types, locations of photographic reference points, transects, sampling data points, and/or other features pertinent to the mitigation plan. In addition, the submitted maps must clearly delineate the mitigation site perimeter(s), which will assist PMs in locating the mitigation area(s) during subsequent site inspections. Each map or diagram must fit on a standard 8 ½ X 11” piece of paper and include a legend and the location of any photos submitted for review.

v. Conclusions (1 page)

A general statement must be included describing the conditions of the compensatory mitigation project. If performance standards are not being met, a brief explanation of the difficulties and potential remedial actions proposed by the permittee, including a timetable, must be provided. The DE will ultimately determine if the mitigation site is successful for a given monitoring period.

c. Completion of Compensatory Mitigation Requirements. Compensatory mitigation requirements will not be considered fulfilled until the permittee has received written concurrence from the DE that the compensatory mitigation project has met its objectives and no additional monitoring reports are required. PMs will review the final monitoring reports to make this determination. A final field visit should be conducted to verify that onsite conditions are consistent with information documented in the mitigation reports.

d. Special Condition. The following condition must be added to all DA permits that require compensatory mitigation:

Your responsibility to complete the required compensatory mitigation as set forth in Special Condition X will not be considered fulfilled until you have demonstrated mitigation success and have received written verification from the U.S. Army Corps of Engineers.

5. Duration

This guidance remains in effect unless revised or rescinded.

A handwritten signature in black ink, appearing to read "Don T. Riley", is positioned above the printed name.

DON T. RILEY
Major General, US Army
Director of Civil Works

APPENDIX 1.6

RGL 08-03.

MINIMUM MONITORING
REQUIREMENTS FOR COMPENSATORY
MITIGATION PROJECTS INVOLVING
THE RESTORATION, ESTABLISHMENT,
AND/OR ENHANCEMENT OF AQUATIC
RESOURCES
DATED
OCTOBER 10, 2008



US Army Corps
of Engineers®

REGULATORY GUIDANCE LETTER

No. 08-03

Date: 10 October 2008

SUBJECT: Minimum Monitoring Requirements for Compensatory Mitigation Projects Involving the Restoration, Establishment, and/or Enhancement of Aquatic Resources.

1. Purpose and Applicability

a. Purpose. This Regulatory Guidance Letter (RGL) provides the Districts and regulated public guidance on minimum monitoring requirements for compensatory mitigation projects, including the required minimum content for monitoring reports. This RGL replaces RGL 06-03.

b. Applicability. The final Mitigation Rule published on April 10, 2008, states that the submission of monitoring reports to assess the development and condition of compensatory mitigation projects is required, but the content and level of detail for those reports must be commensurate with the scale and scope of the compensatory mitigation projects as well as the compensatory mitigation project type (see 33 CFR 332.6(a)(1)).

This RGL applies to all Department of the Army (DA) permit authorizations under Section 404 of the Clean Water Act and Sections 9 and 10 of the Rivers and Harbors Act that contain special conditions requiring compensatory mitigation provided through aquatic resource restoration, establishment and/or enhancement. This guidance also applies to monitoring reports that are prepared for mitigation bank sites and in-lieu-fee project sites.

This RGL supports the Program Analysis and Review Tool (PART) program goals for the Regulatory Program. Specifically, this RGL supports the PART performance measures for mitigation site compliance and mitigation bank/ in-lieu-fee compliance. These measures apply to active mitigation sites, mitigation banks, and in-lieu-fee project sites that still require monitoring.

2. Background

Recent studies by the Government Accountability Office (GAO) and National Research Council (NRC) indicated that the U.S. Army Corps of Engineers (Corps) was not providing adequate oversight to ensure that compensatory mitigation projects were successfully replacing the aquatic resource functions lost as a result of permitted activities. For example, the GAO study determined that many project files requiring

mitigation lacked monitoring reports despite the fact that such reports were required as a condition of the permit. Similarly, the NRC study documented that a lack of clearly stated objectives and performance standards in the approved compensatory mitigation proposals made it difficult to ascertain whether the goal of no net loss of wetland resources was achieved.

On April 10, 2008, the Corps and Environmental Protection Agency published the “Compensatory Mitigation for Losses of Aquatic Resources: Final Rule” (Mitigation Rule) which governs compensatory mitigation for activities authorized by permits issued by the Department of the Army (33 CFR Parts 325 and 332). This RGL complements and is consistent with the final Mitigation Rule.

3. Discussion

Inconsistent approaches to monitoring compensatory mitigation projects are one of several factors that have affected the ability of Corps project managers (PMs) to adequately assess achievement of the performance standards of Corps-approved mitigation plans. Standardized monitoring requirements will aid PMs when reviewing compensatory mitigation sites, thereby allowing the Corps to effectively assess the status and success of compensatory mitigation projects.

This RGL addresses the minimum information needed for monitoring reports that are used to evaluate compensatory mitigation sites. Monitoring requirements are typically based on the performance standards for a particular compensatory mitigation project and may vary from one project to another.

Monitoring reports are documents intended to provide the Corps with information to determine if a compensatory mitigation project site is successfully meeting its performance standards. Remediation and/or adaptive management used to correct deficiencies in compensatory mitigation project outcomes should be based on information provided in the monitoring reports and site inspections.

4. Guidance

a. Monitoring guidelines for compensatory mitigation.

i. Performance Standards. Performance standards, as defined in 33 CFR 332.2, and discussed in more detail at 33 CFR 332.5, will be consistent with the objectives of the compensatory mitigation project. These standards ensure that the compensatory mitigation project is objectively evaluated to determine if it is developing into the desired resource type and providing the expected functions. The objectives, performance standards, and monitoring requirements for compensatory mitigation projects required to offset unavoidable impacts to waters of the United States must be provided as special conditions of the DA permit or specified in the approved final mitigation plan (see 33 CFR 332.3(k)(2)). Performance standards may be based on functional, conditional, or other suitable assessment methods and/or criteria and may be incorporated into the

special conditions to determine if the site is achieving the desired functional capacity. Compensatory mitigation projects offset the impacts to diverse types of aquatic resources, including riverine and estuarine habitats. Special conditions of the DA permits will clearly state performance standards specific to the type and function of the ecosystem in relation to the objectives of the compensatory mitigation project.

ii. Monitoring Timeframe. The special conditions of the DA permit (or the mitigation plan as referenced in the special conditions) must specify the length of the monitoring period (see 33 CFR 332.6(a)(1)). For mitigation banks, the length of the monitoring period will be specified in either the DA permit, mitigation banking instrument, or approved mitigation plan. For in-lieu fee projects, the length of the monitoring period will be specified in either the DA permit or the approved in-lieu fee project plan.

The monitoring period must be sufficient to demonstrate that the compensatory mitigation project has met performance standards, but not less than five years (see 33 CFR 332.6(b)). The District determines how frequently monitoring reports are submitted, the monitoring period length, and report content. If a compensatory mitigation project has met its performance standards in less than five years, the monitoring period length can be reduced, if there are at least two consecutive monitoring reports that demonstrate that success. Permit conditions will support the specified monitoring requirement and include deadlines for monitoring report submittal. Longer monitoring timeframes are necessary for compensatory mitigation projects that take longer to develop (see 33 CFR 332.6(b)). For example, forested wetland restoration may take longer than five years to meet performance standards.

Annual monitoring and reporting to the Corps is appropriate for most types of compensatory mitigation projects, though the project sponsor may have to monitor progress more often during the project's early stages. Certain compensatory mitigation projects may require more frequent monitoring and reporting during the early stages of development to allow project managers to quickly address problems and/or concerns. Annual monitoring can resume once the project develops in accordance with the approved performance standards. In cases where monitoring is required for longer than five years, monitoring may be conducted on a less than annual timeframe (such as every other year), though yearly monitoring is recommended until the project becomes established as a successful mitigation project. In this case, off-year monitoring should include some form of screening assessment such as driving by the mitigation site, telephone conversations regarding condition of the mitigation site, etc. On-site conditions, the complexity of the approved mitigation plan, and unforeseen circumstances will ultimately determine whether the monitoring period should be extended beyond the specified monitoring time frame for a particular project. Complex and/or ecologically significant compensatory mitigation projects should have higher priority for site visits.

As discussed above, the remaining monitoring requirements may be waived upon a determination that the compensatory mitigation project has achieved its performance standards. The original monitoring period may be extended upon a determination that

performance standards have not been met or the compensatory mitigation project is not on track to meet them (e.g., high mortality rate of vegetation). Monitoring requirements may also be revised in cases where adaptive management or remediation is required.

iii. Monitoring Reports. Monitoring requirements, including the frequency for providing monitoring reports to the District Commander and the Interagency Review Team (IRT), will be determined on a case-by-case basis and specified in either the DA permit, mitigation banking instrument, or approved mitigation plan. The content of the monitoring reports will be specified in the special conditions of the DA permit so that the requirements are clearly identified for the permittee or third-party mitigation sponsor. In addition, the monitoring reports should comply with the timeframes specified in the special conditions of the DA permit. Monitoring reports will not be used as a substitute for on site compliance inspections. The monitoring report will provide the PM with sufficient information on the compensatory mitigation project to assess whether it is meeting performance standards, and to determine whether a compliance visit is warranted. The party responsible for monitoring can electronically submit the monitoring reports and photos for review.

Visits to mitigation sites will be documented in the administrative record and will count toward District performance goals. An enforcement action may be taken if the responsible party fails to submit complete and timely monitoring reports.

b. Contents of Monitoring Reports. Monitoring reports provide the PM with a convenient mechanism for assessing the status of required compensatory mitigation projects. The PM should schedule a site visit and determine potential remedial actions if problems with the compensatory mitigation project are identified in a monitoring report.

The submittal of large bulky reports that provide mostly general information should be discouraged. While often helpful as background, reiteration of the mitigation and monitoring plan content, lengthy discussions of site progress, and extensive paraphrasing of quantified data are unnecessary. Monitoring reports should be concise and effectively provide the information necessary to assess the status of the compensatory mitigation project. Reports should provide information necessary to describe the site conditions and whether the compensatory mitigation project is meeting its performance standards.

Monitoring reports will include a Monitoring Report Narrative that provides an overview of site conditions and functions. This Monitoring Report Narrative should be concise and generally less than 10 pages, but may be longer for compensatory mitigation projects with complex monitoring requirements. Monitoring Report Narratives may be posted on each District's Regulatory web site.

Monitoring reports will also include appropriate supporting data to assist District Commanders and other reviewers in determining how the compensatory mitigation project is progressing towards meeting its performance standards. Such supporting data may include plans (such as as-built plans), maps, and photographs to illustrate site

conditions, as well as the results of functional, condition, or other assessments used to provide quantitative or qualitative measures of the functions provided by the compensatory mitigation project site.

c. Monitoring Report Narrative:

i. Project Overview (1 page)

(1) Corps Permit Number or Name of the Mitigation Bank or In-Lieu Fee Project
(2) Name of party responsible for conducting the monitoring and the date(s) the inspection was conducted.

(3) A brief paragraph describing the purpose of the approved project, acreage and type of aquatic resources impacted, and mitigation acreage and type of aquatic resources authorized to compensate for the aquatic impacts.

(4) Written description of the location, any identifiable landmarks of the compensatory mitigation project including information to locate the site perimeter(s), and coordinates of the mitigation site (expressed as latitude, longitudes, UTM's, state plane coordinate system, etc.).

(5) Dates the compensatory mitigation project commenced and/or was completed.

(6) Short statement on whether the performance standards are being met.

(7) Dates of any recent corrective or maintenance activities conducted since the previous report submission.

(8) Specific recommendations for any additional corrective or remedial actions.

ii. Requirements (1 page)

List the monitoring requirements and performance standards, as specified in the approved mitigation plan, mitigation banking instrument, or special conditions of the DA permit, and evaluate whether the compensatory mitigation project site is successfully achieving the approved performance standards or trending towards success. A table is a recommended option for comparing the performance standards to the conditions and status of the developing mitigation site.

iii. Summary Data (maximum of 4 pages)

Summary data should be provided to substantiate the success and/or potential challenges associated with the compensatory mitigation project. Photo documentation may be provided to support the findings and recommendations referenced in the monitoring report and to assist the PM in assessing whether the compensatory mitigation project is meeting applicable performance standards for that monitoring period. Submitted photos should be formatted to print on a standard 8 ½" x 11" piece of paper, dated, and clearly labeled with the direction from which the photo was taken. The photo location points should also be identified on the appropriate maps.

iv. Maps and Plans (maximum of 3 pages)

Maps should be provided to show the location of the compensatory mitigation site relative to other landscape features, habitat types, locations of photographic reference points, transects, sampling data points, and/or other features pertinent to the mitigation plan. In addition, the submitted maps and plans should clearly delineate the mitigation site perimeter(s), which will assist PMs in locating the mitigation area(s) during subsequent site inspections. Each map or diagram should be formatted to print on a standard 8 1/2" x 11" piece of paper and include a legend and the location of any photos submitted for review. As-built plans may be included.

v. Conclusions (1 page)

A general statement should be included that describes the conditions of the compensatory mitigation project. If performance standards are not being met, a brief explanation of the difficulties and potential remedial actions proposed by the permittee or sponsor, including a timetable, should be provided. The District Commander will ultimately determine if the mitigation site is successful for a given monitoring period.

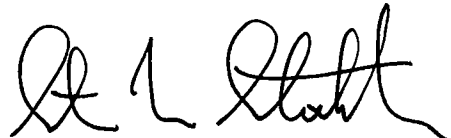
d. Completion of Compensatory Mitigation Requirements. For permittee-responsible mitigation projects, compensatory mitigation requirements will not be considered fulfilled until the permittee has received written concurrence from the District Commander that the compensatory mitigation project has met its objectives and no additional monitoring reports are required. PMs will review the final monitoring reports to make this determination. A final field visit should be conducted to verify that on-site conditions are consistent with information documented in the monitoring reports.

e. Special Condition. The following condition should be added to all DA permits that require permittee-responsible mitigation. This condition does not apply to mitigation banks or in-lieu-fee programs:

Your responsibility to complete the required compensatory mitigation as set forth in Special Condition X will not be considered fulfilled until you have demonstrated compensatory mitigation project success and have received written verification of that success from the U.S. Army Corps of Engineers.

5. Duration

This guidance remains in effect unless revised or rescinded.



STEVEN L. STOCKTON, P.E.
Director of Civil Works

APPENDIX 1.7

STANDARD OPERATING PROCEDURE,
COMPENSATORY MITIGATION
(WETLANDS, OPENWATER & STREAMS)
[MARCH 2004]

Department of the Army
Savannah District, Corps of Engineers
PO Box 889
Savannah, Georgia 31402-0889

**Standard Operating Procedure
Compensatory Mitigation
WETLANDS, OPENWATER & STREAMS**

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1. Applicability. This Standard Operating Procedure (SOP) is applicable to regulatory actions requiring compensatory mitigation for adverse impacts to 10 acres or less of wetland or other open waters, and/or 5000 linear feet or less of intermittent and/or perennial stream (Definitions, 65 FR Vol. 47, Page 12898). This SOP may be used as a guide in determining compensatory mitigation requirements for projects with impacts greater than the above wetland and stream limits, or for enforcement actions, however, higher than calculated credit requirements would likely be applicable to larger impacts. In instances where it is unclear whether the jurisdictional area proposed to be impacted is a wetland, a stream, or other waters, the US Army Corps of Engineers (USACE) will make the final determination. This SOP does not address mitigation for categories of effects other than ecological (e.g., historic, cultural, aesthetic). Types of mitigation other than compensation (e.g., avoidance, minimization, reduction) are not addressed by this SOP. As an alternative to proposing a site specific mitigation plan, you may consider purchasing the required mitigation credits from a wetland or stream mitigation bank. For impacts in areas not serviced by approved wetland or stream banks, wetland or stream in-lieu-fee banking, as appropriate, may be proposed.

When this SOP is used in the establishment of a Mitigation Bank, the USACE will consult with the Mitigation Bank Review Team (MBRT), with the goal of achieving a consensus of the MBRT regarding the factors, elements, and design of the Mitigation Bank Plan. Once a mitigation bank receives final approval using a dated version of this SOP, that version would remain valid for that bank unless the bank is amended or substantially modified. In other words, an approved bank cannot use a later version of this SOP to possibly generate more credit, unless the Banking Instrument (BI) for the approved bank is amended for use a later version of the SOP, and this amendment of the BI is approved by the MBRT.

Also, note that this document is subject to periodic review and modification, and consultation with the local USACE office is necessary to ensure utilization of the latest approved version. However, once a project is permitted using a dated version of this SOP, that version would remain applicable to the project, unless the project is substantially modified. With regard to approved mitigation banks, the version of the SOP used to calculate credits generated by the bank would remain applicable to that bank for the purpose of re-calculating credits associated with proposed minor modifications to the bank. If a substantial modification is proposed for an approved mitigation bank, the last approved version may be required for use in re-calculating credits. Regardless of which version of the SOP might have been used to calculate credits for an approved mitigation bank, permit applicants intending to purchase mitigation bank credits are required to use the latest approved version of the SOP when calculating credit requirements. All decisions on which version of this SOP are applicable to any given situation will be made by the USACE, and are final.

2. Purpose. The intent of this SOP is to provide a basic written framework, which will provides predictability and consistency for the development, review, and approval of compensatory mitigation

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plans. A key element of this SOP is the establishment of a method for calculating mitigation credits. While this method is not intended for use as project design criteria, appropriate application of the method should minimize uncertainty in the development and approval of mitigation plans and allow expeditious review of applications. However, nothing in this SOP should be interpreted as a promise or guarantee that a project which satisfies the criteria or guidelines given herein will be assured of a permit. The District Engineer (DE) has a responsibility to consider each project on a case by case basis and may determine in any specific situation that authorization should be denied, modified, suspended, or revoked. This SOP does not obviate or modify any requirements given in the 404(b)(1) Guidelines or other applicable documents regarding avoidance, sequencing, minimization, etc. Such requirements shall be evaluated during consideration of permit applications.

3. Other Guidance.

3.1. *Mitigation Thresholds.* Projects impacting less than 0.1 acre of wetland or open water and/or less than 100 linear feet of stream will be required to provide mitigation on a case-by-case basis. Projects impacting greater than 0.1 acre of wetlands or open water and/or more than 100 linear feet of stream will usually have to at least satisfy the requirements of this SOP.

3.2. *Minimal Impacts.* Permit applicants with projects impacting more than 0.1 and less than 1.0 acres of wetland and/or more than 100 and less than 300 linear feet of stream may choose to use the following abbreviated methodology for calculating mitigation credit requirements:

- Multiply the acres of impact by 8 to arrive at the required number of wetland mitigation credits (eg, 0.5 acres of wetland impact x 8 = 4 wetland credits).
- Multiply the linear feet of stream impact by 6.5 to arrive at the required number of stream mitigation credits (eg, 100 linear feet of stream x 6.5 = 650 stream credits).

3.3. *Regulatory Guidance Letter 02-02.* On December 24, 2002, the USACE issued Regulatory Guidance Letter 02-02 (RGL 02-02). Guidance provided in RGL 02-02 is applicable to all compensatory mitigation proposals associated with permit applications submitted for approval after its date of issuance. If a discrepancy is discovered between this SOP and RGL 02-02, or any other relevant guidance, the applicant should notify the USACE of the discrepancy and request clarification before incorporating any such guidance into a proposed mitigation plan.

3.4. *National Research Council's (NRC) Mitigation Guidelines.* In its comprehensive report entitled "Compensating for Wetland Losses Under the Clean Water Act," the National Research Council (NRC) provided ten guidelines to aid in planning and implementing successful mitigation projects ("Operational Guidelines for Creating or Restoring Wetlands that are Ecologically Self-Sustaining"; NRC, 2001). Please note that these guidelines also pertain to restoration and enhancement of other aquatic resource systems, such as streams. Each of the ten guidelines can generally be described as A) basic requirement for mitigation success, or B) guide for mitigation site selection. A copy of the NRC Mitigation Guidelines is enclosed. The NRC Guidelines are referenced throughout this document.

4. Mitigation Plans. The following information will typically be required for consideration of a mitigation proposal. Proposals will be reviewed and the applicant will be advised if additional

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information will be required to make the proposal adequate for consideration. See attached Mitigation Plan Checklist for more details.

- Plans and detailed information regarding the work for which the mitigation is required.
- Drawings in accordance with the requirements given in this SOP.
- A narrative discussion of the key elements of the proposed mitigation plan.
- A narrative description of any proposed functional assessment methodology (HGM, WRAP, etc.).
- A proposed monitoring plan and a plan for documenting baseline conditions of the mitigation site.
- Names, addresses, and phone numbers for all parties responsible for mitigation and monitoring.
- A description of the existing conditions of all areas to be affected by the proposed mitigation.
- A description of the existing vegetative communities to be affected by the proposed mitigation.
- Native vegetation proposed for planting and/or allowances for natural regeneration.
- Plans for control of exotic invasive vegetation.
- Elevation(s) and slope(s) of the proposed mitigation area to ensure they conform with required elevation and hydrologic requirements, if practicable, for target plant species.
- Source of water supply and connections to existing waters and proximity to uplands.
- Stream or other open water geomorphology and features such as riffles and pools, bends, etc.
- An erosion and sedimentation control plan.
- A schedule showing earliest start and latest completion dates for all significant activities.
- A listing of measurable success factors with quantifiable criteria for determining success.
- Definitions for all success factors and other significant terms used in the plan.
- Description of the equipment, materials, and methods required for execution of the plan.
- A management plan, if necessary, for any maintenance of the mitigation.
- A contingency plan, in the event that the mitigation fails to meet success factors.
- Copy of deed to property showing owner(s) of property.
- List of all easements and right-of-ways on the property.

5. General Guidelines. Mitigation must be designed in accordance with the following guidelines.

5.1. *Adverse Effects Area.* The area of adverse effects as used in this document includes aquatic areas impacted by filling, excavating, flooding, draining, clearing, or other adverse ecological effects. Impacts to wetlands and other open waters will be calculated in acres and impacts to streams will be calculated in linear feet as measured along the centerline of the channel. Other categories of effects such as aesthetic, cultural, historic, health, etc., are not addressed by this document. As explained in Attachments A and C, direct effects are caused by the action and occur at the same time and place; and indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.

5.2. *Mitigation Area.* In general, the adverse impacts and compensatory mitigation are geographically distinct areas. The aquatic area in which the adverse effects occur will generally not be given credits as part of the compensatory mitigation area. For example, if a pond is excavated in wetlands with a resulting wetland fringe, the wetland fringe is generally not considered compensation for the excavation impacts. Similarly, an impoundment of a riverine system with a resulting increase in open surface water area or wetland fringe is not considered compensatory mitigation for the adverse impacts to the impounded riverine system. Certain exceptions may be allowed on a case-by-case basis. For example, a temporary construction impact (e.g., cofferdams, access roads, staging areas) might be mitigated by restoration or preservation of the area, depending on the nature, severity, and duration of the impacts. A compensatory mitigation area may not be given credits under more than one mitigation category nor credited more than once under any category. However, it is acceptable to subdivide a given area into sub-areas and calculate credits for each sub-area separately. For example, a restored aquatic area donated to a

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conservancy organization may be credited as either restoration or preservation, but not both. An aquatic area that contains some restoration (e.g., plugging canals in a drained wetland) and some enhancement (e.g., plugging shallow ditches in an impaired wetland) could either be subdivided into a restoration area component and an enhancement area component, or the entire area could be lumped together and given one net enhancement/restoration credit calculation. Whether or not an area is subdivided or lumped for the purpose of credit calculations is a case-by-case decision based on what is reasonable and appropriate for the given mitigation proposal. All decisions on whether a proposed mitigation action would be considered restoration, enhancement or a combination of both, will be made by the USACE, and these decisions are final.

5.3 *Restrictive Covenants (RC)*. In most cases, mitigation sites must be perpetually protected by a Declaration of Covenants and Restrictions, whereby the owner of the property places permanent conservation restrictions on identified mitigation property. The restrictive covenant restricts development and requires that the land be managed for its conservation values. The draft model and instructions for use with the Declaration of Covenants and Restrictions is located on the USACE, Savannah District, web site located at www.sas.usace.army.mil. The web site should be viewed in order to assure that the latest version is used. Select the yellow box titled, "Permitting Info." Under the bold paragraph titled, "Savannah District Regulatory Publications," scroll down to find the Declaration of Covenants and Restrictions draft and instructions. The restrictive covenant is prepared by an attorney for the property owner in consultation with the environmental consultant. Property owners should make allowances for any foreseeable circumstances (e.g., utility lines, power lines, road crossings, ditch maintenance, etc.) that may conflict with recording a restrictive covenant on mitigation property. Once a property is protected by restrictive covenant, further impacts to that property are strongly discouraged by the USACE. The procedure for modifying a restrictive covenant is also located on the above web site.

5.4 *Conservation Easement (CE)*. In addition to the restrictive covenant requirement, additional credit may be obtained by the granting of a conservation easement by the owner of the property, to a qualified third party grantee. The grantee must be a holder as defined by the Georgia Uniform Conservation Easement Act, O.C.G.A. § 44-10-1 *et seq.* In addition, the conservation easement is required to have certain language and meet the standards set out in the guidance. The guidance on conservation easements accepted for credit is located on the Savannah District web site under the file titled, "Conservation Easements." The conservation easement is prepared by the attorney for the owner of the property in consultation with the grantee and reviewed by the USACE.

5.5 *Government/Public Protection (GPP)*. In addition to the restrictive covenant requirement, extra credit may be given if the property is conveyed to and/or held or managed by a governmental/public entity and the property is further protected for its conservation and environmental functions by legislation, resolution, environmental designation or zoning for the benefit of the public and the citizens of Georgia. The governmental entity may be an agency or department of the United States charged with protection and management of the environment; a state agency or department charged with protection and management of the environment such as the Department of Natural Resources; an authority created by the legislature such as a Greenway Authority; or property held by a county and/or municipality where the property qualifies for and is listed as a Community Greenspace Program property, or is designated for use by the public as a park or greenway and is used only for passive recreational/educational purposes; and property held by an accredited university in Georgia for the stated purpose of environmental management, education and training.

5.6 *Buffers*. In most circumstances, wetland, open water and stream mitigation areas must include the establishment and maintenance of buffers to ensure that the overall mitigation project performs as expected. Buffers are upland or riparian areas that separate aquatic resources from developed areas and

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agricultural lands. Buffers typically consist of native plant communities (i.e., indigenous species) that reflect the local landscape and ecology. Buffers enhance or provide a variety of aquatic habitat functions including habitat for wildlife and other organisms, runoff filtration, moderation of water temperature changes, and detritus for aquatic food webs.

5.6.1 Upland Buffer. Upland buffers serve to enhance aquatic functions and increases the overall ecological functioning of wetland and open water mitigation areas. Upland buffers are necessary for wetlands or open water mitigation areas that perform important physical, chemical, or biological functions, the protection and maintenance of which is important to the region where those aquatic resources are located; and are under demonstrable threat of loss or substantial degradation from human activities that might not otherwise be avoided. Therefore, unless it can be demonstrated that an upland buffer is not necessary or practicable, wetland and openwater mitigation plans must include a minimum 25' wide upland buffer on at least 95% of the jurisdictional boundary of the mitigation area (i.e., verified wetland/upland boundary on the mitigation area). Mitigation areas will generally not be considered acceptable if they do not include a minimum 25' upland buffer. This required 25' minimum width upland buffer receives no mitigation credit. Only the area of a proposed upland buffer in excess of the minimum 25', which meets the width required at *Attachment B*, "Minimum Upland Buffer Widths for Mitigation Credit," will receive consideration for mitigation credit. Portions of buffers may be excluded from calculation of credits if they have been compromised or are of questionable protection value due to shape, condition, location, excessive width, excessive proportion of the total mitigation area, or other factors. Wetlands or other aquatic areas cannot be used as buffers on wetlands or open waters. Wetland buffer credit can be calculated using the Upland Buffer Worksheet.

5.6.2 Riparian Buffer. Riparian Buffers serve to enhance aquatic functions and increases the overall ecological functioning of stream mitigation. Riparian Buffers are necessary for streams that: 1) perform important physical, chemical, or biological functions, the protection and maintenance of which is important to the region where those aquatic resources are located; and 2) are under demonstrable threat of loss or substantial degradation from human activities that might not otherwise be avoided. Therefore, in most cases stream restoration plans must include a vegetated buffer. Riparian buffers that do not meet the appropriate minimum width requirements cannot be included in calculating credits (*Attachment D*, Riparian Enhancement and Preservation). Wetlands or other aquatic areas used to generate wetland mitigation credits cannot be used to generate stream buffer credits (i.e., multiple mitigation cannot be generated from one area).

5.7. No Net Loss. To assist in meeting the national policies of "no net loss" of wetlands and/or aquatic function, at least 50% of the wetland mitigation credits required for an authorized project must be generated from mitigation activities that result in a net gain in acres and/or aquatic function (i.e., wetland restoration, enhancement or creation), and at least 50% of the stream mitigation credits required for an authorized project must be from stream and/or riparian restoration. Wetland and stream bank credits are considered functional replacement. Conversely, no more than 50% of the wetland mitigation credits required for an authorized project can be generated from wetland preservation and/or upland buffering, and no more that 50% of the stream mitigation credits required for an authorized project can be generated from riparian buffer and/or stream preservation. In-lieu-fee bank credits are considered preservation. On a case-by-case basis, 100% of the wetland and/or stream mitigation credits required for an authorized project may be in the form of in-lieu-fee banking, but only if no commercial mitigation bank services the project area and site specific mitigation would be impractical.

5.8. Goals and Objectives. Compensatory mitigation plans should discuss environmental goals and objectives, the aquatic resource type(s), e.g., hydrogeomorphic (HGM) regional wetland subclass, Rosgen stream type, Cowardin classification, and functions that will be impacted by the authorized work, and the aquatic resource type(s) and functions proposed at the compensatory mitigation site(s). For example, for

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impacts to tidal fringe wetlands the mitigation goal may be to replace lost finfish and shellfish habitat, lost estuarine habitat, or lost water quality functions associated with tidal backwater flooding. The objective statement should describe the amount, i.e., acres, linear feet, or functional changes, of aquatic habitat that the authorized work will impact and the amount of compensatory mitigation needed to offset those impacts, by aquatic resource type.

5.9. *Site Selection* (See NRC # B 1-5). Compensatory mitigation plans should describe the factors considered during the site selection process and plan formulation including, but not limited to:

5.9.1 *Location*. Mitigation is required to be, when practicable, in areas adjacent or contiguous to the discharge site (on-site compensatory mitigation). On-site mitigation generally compensates for locally important functions, e.g., local flood control functions or unusual wildlife habitat. However, off-site mitigation may be used when there is no practicable opportunity for on-site mitigation, or when off-site mitigation provides more watershed benefit than on-site mitigation, e.g., is of greater ecological importance to the region of impact. Off-site mitigation will be in the same geographic area, i.e., in close proximity to the authorized impacts and, to the extent practicable, in the same watershed. The following factors that should be considered when choosing between on-site or off-site compensatory mitigation: likelihood for success; ecological sustainability; practicability of long-term monitoring and maintenance or operation and maintenance; and relative costs of mitigation alternatives. See NRC # A 1-4.

5.9.2. *Watershed Considerations*. Mitigation plans should describe how the site chosen for a mitigation project contributes to the specific aquatic resource needs of the impacted watershed. A compensatory mitigation project generally should be located in the same "State of Georgia Hydrologic Map Cataloging Unit (i.e., 8-Digit Unit)" as the impact site. The further removed geographically that the mitigation is, the greater is the need to demonstrate that the proposed mitigation will reasonably offset authorized impacts. For guidance on service areas for mitigation banks, see *Attachment E "Mitigation Bank Service Areas."*

5.9.3. *Practicability*. The mitigation plan should describe site selection in terms of cost, existing technology, and logistics.

5.9.4. *Air Traffic*. Compensatory mitigation projects that have the potential to attract waterfowl and other bird species that might pose a threat to aircraft will be sited consistent with the Federal Aviation Administration Advisory Circular on Hazardous Wildlife Attractants on or near Airports (AC No: 150/5200-33, 5/1/97).

5.10. *Scheduling*. In most cases, mitigation should be completed concurrent with authorized impacts to the extent practicable. Advance or concurrent mitigation can reduce temporal losses of aquatic functions and facilitate compliance. However, it is recognized that because of equipment utilization it may be necessary to perform the mitigation concurrent with the overall project. This is usually acceptable provided the time lag between the impacts and mitigation is minimized and the mitigation is completed within one growing season following commencement of the adverse impacts. In general, when impacts to aquatic resources are authorized to proceed before an approved mitigation plan can be initiated, the permittee will be required to secure the mitigation site and record a restrictive covenant.

5.11. *Maintenance*. Mitigation plans which require perpetual or long-term human intervention will usually not be acceptable. Mitigation areas should be designed to be naturally sustaining following the completion of the mitigation. Hydrology must be adequately considered since plans requiring an energy subsidy (pumping, intensive management, etc.) will normally not be acceptable. The goal is to achieve a natural state that does not depend upon maintenance. Plans with maintenance will be discouraged. See NRC # A2 and 3.

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5.12. *Pre-project Consultation.* To minimize delays and objections during the permit review process, applicants are encouraged to seek the advice of resource and regulatory agencies during the planning and design of mitigation plans. For complex mitigation projects, such consultation may improve the likelihood of mitigation success and reduce permit processing time. Furthermore, developers should typically seek advice from consultants on complicated mitigation projects.

5.13. *Lakes, Ponds, and Impoundments.* Mitigation using lakes, ponds, and impoundments may be allowed as compensation for impacts to similar waterbodies. Mitigation using lakes, ponds, or impoundments will generally not be acceptable as compensatory mitigation for adverse impacts to wetlands. Additionally mitigation using wetlands, lakes, ponds, or impoundments will generally not be acceptable as compensatory mitigation for adverse impacts to riverine systems. It is understood that open surface waterbodies provide some valuable public interest factors such as storm water storage, fisheries habitat, or ground water recharge. Therefore, in recognition of this fact, the adverse effect factors for flooding and impounding have been adjusted relative to other factors.

6. Monitoring and Contingency Plans. The applicant will normally be required to monitor the mitigation area for success and to provide written reports describing the findings of the monitoring efforts. Such reports will normally involve photographic documentation, information on survival rates of planted vegetation, and information on the monitored hydrology. Because of the many variables involved, no specific standards are set forth as a part of this policy. Instead, a monitoring plan should be submitted as a part of the mitigation proposal for review. Monitoring efforts should usually include periodic reviews in the first year and annually thereafter (See NRC # A5). For major mitigation projects, the plan should include contingency measures specifying remediation procedures which will be followed should the success criteria or scheduled performance criteria not be fully satisfied. Monitoring and contingency plans typically address the following items, as applicable:

- A narrative discussion of the key elements of the proposed monitoring and contingencies plan.
- Names of party(s) responsible for the monitoring and contingencies plan.
- A description of the baseline conditions (e.g., soils, hydrology, vegetation, and wildlife).
- A schedule for monitoring activities and reporting.
- A listing of measurable success factors with quantifiable criteria for determining success.
- Definitions for success factors and other terms used in the plan.
- Descriptions of equipment, materials, and methods to be used.
- Proposed protective measures (e.g., restrictive covenants or conservation easements).
- Vegetation monitoring and contingency plan.
- Hydrological monitoring and contingency plan.
- Designation of reference site.
- For stream mitigation, monitoring of physical parameters.

7. Performance Standards. Compensatory mitigation plans will contain written performance standards for assessing whether mitigation is achieving planned goals. Performance standards will become part of individual permits as special conditions and be used for performance monitoring. Project performance evaluations will be performed by the USACE, as specified in the permits or special conditions, based upon monitoring reports. Adaptive management activities may be required to adjust to unforeseen or changing circumstances, and responsible parties may be required to adjust mitigation projects or rectify

Compensatory Mitigation STANDARD OPERATING PROCEDURE

deficiencies. The project performance evaluations will be used to determine whether the environmental benefits or "credit(s)" for the entire project equal or exceed the environmental impact(s) or "debit(s)" of authorized activities. Performance standards for compensatory mitigation sites will be based on quantitative or qualitative characteristics that can be practicably measured. The performance standards will be indicators that demonstrate that the mitigation is developing or has developed into the desired habitat. Performance standards will vary by geographic region and aquatic habitat type, and may be developed through interagency coordination at the regional level. Performance standards for wetlands can be derived from the criteria in the 1987 Corps of Engineers Wetlands Delineation Manual, such as the duration of soil saturation required to meet the wetland hydrology criterion, or variables and associated functional capacity indices in hydrogeomorphic assessment method regional guidebooks. Performance standards may also be based on reference sites.

8. Drawings. Mitigation plans should include drawings in conformance with the following.

a. Drawings must be provided on 8.5 x 11" paper. For larger mitigation projects, 11 x 17" or larger drawings should be submitted, in addition to 8.5 x 11" drawings. Generally, all drawings should have a scale no smaller than 1"=200'. Drawings must be clear, readable, and reproducible on standard, non-color office copiers. Each drawing sheet should include the following:

- An unused margin of no less than 1/2".
- An appropriate graphic scale (when reasonable).
- All significant dimensions clearly indicated and annotated.
- Title block with applicant's name, project title, site location, drawing date, and sheet number.
- A directional arrow indicating north.
- A clear, legible plan view indicating area sizes (e.g., square feet, acres) for all mitigation sites.

b. Location maps for the proposed activity must be included. Two maps are desired. A County road map and a US Geological Quadrangle map are preferred as sources. The location maps must show roads leading to the site and must include the name or number of these roads. The project latitude and longitude should be annotated on the maps. Each map should include a title block.

c. Plan views of the proposed mitigation must be included. These drawings must show the general and specific site location and character of all proposed activities, including the relationship of all proposed work to Waters of the United States in the vicinity of the project.

d. For ground-disturbing mitigation work, cross section views must be submitted depicting the existing ground contours and the proposed finished contours.

e. **All** aquatic areas within the project boundaries (avoided, impacted, or mitigated) must be shown.

f. Each restoration, enhancement, preservation, creation and upland buffer area must be shown.

g. A legend must be shown identifying cross-hatching, shading, or other marking techniques used.

h. A summary table with the quantity of each category of impact and mitigation must be provided.

i. Show the ordinary high water line of affected and adjacent non-tidal open surface waterbodies.

j. Show the mean high tide line and spring high tide line of affected and adjacent tidal waterbodies.

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k. For mitigation plans with more than ten acres of wetland restoration, enhancement, creation and upland buffer, or a combination thereof, certified topographic drawings showing the contours and elevations of the completed mitigation area may be required. The drawings should show types of plantings, locations of plantings, and all structures and work that are a significant part of the mitigation.

9. Mitigation Banking. Proposals to establish mitigation banks will be processed in accordance with "Guidelines on the Establishment and Operation of Wetland Mitigation Banks in Georgia." Proposals which include use of credits from a mitigation bank must normally comply with the requirements given in this SOP as well as any conditions or restrictions applicable to the bank. Guidance on the appropriate use of mitigation bank credits is contained in the document titled "Addendum 1 - Guidelines on the Establishment and Operation of Wetland Mitigation Banks in Georgia," dated January 16, 1996. This document is available on the Savannah District web site.

10. Point of Contact. Copies of this document are available at Savannah District's Regulatory Office. Questions regarding use of this policy for specific projects must be addressed to the Project Manager handling the action. Other inquiries or comments regarding this document should be addressed to:

Southern Section:

US Army Corps of Engineers, Savannah District
Regulatory Branch
Post Office Box 889
Savannah, Georgia 31402-0889
POC: Richard Morgan: 912-652-5139,
richard.w.morgan@sas02.usace.army.mil

Northern Section:

US Army Corps of Engineers, Savannah District
1590 Adamson Parkway, Suite 200
Morrow, Georgia 30260
POC: Alan Miller: 678-422-2729,
alan.miller@sas02.usace.army.mil

11. Authorizing Signature. By the signature given below, this draft SOP is authorized for use.

Mirian Magwood
Chief, Regulatory Branch

ATTACHMENTS:

- A. [Wetland Mitigation Definition of Factors](#)
- B. [Wetland/Openwater Mitigation Worksheets](#)
- C. [Stream Mitigation Definition of Factors](#)
- D. [Stream Mitigation Worksheets](#)
- E. [Draft Wetland and Stream Mitigation Bank Service Areas](#)
- F. [Incorporation of the National Research Council's Mitigation Guidelines into the CWA Section 404 Program](#)
- G. [Mitigation Plan Checklist and Supplement](#)

APPENDIX 1.8

FEDERAL AVIATION ADMINISTRATION
(FAA) ADVISORY CIRCULAR ON
HAZARDOUS WILDLIFE ATTRACTS ON
OR NEAR AIRPORTS
(AC No: 150/5200-33, 5/1/97)



U.S. Department
of Transportation

**Federal Aviation
Administration**

Advisory Circular

Subject: HAZARDOUS WILDLIFE ATTRACTANTS ON
OR NEAR AIRPORTS

Date: 5/1/97

Initiated by:

AAS-310 and APP-600

AC No: 150/5200-33

Change:

1. PURPOSE. This advisory circular (AC) provides guidance on locating certain land uses having the potential to attract hazardous wildlife to or in the vicinity of public-use airports. It also provides guidance concerning the placement of new airport development projects (including airport construction, expansion, and renovation) pertaining to aircraft movement in the vicinity of hazardous wildlife attractants. Appendix 1 provides definitions of terms used in this AC.

2. APPLICATION. The standards, practices, and suggestions contained in this AC are recommended by the Federal Aviation Administration (FAA) for use by the operators and sponsors of all public-use airports. In addition, the standards, practices, and suggestions contained in this AC are recommended by the FAA as guidance for land use planners, operators, and developers of projects, facilities, and activities on or near airports.

3. BACKGROUND. Populations of many species of wildlife have increased markedly in the

last few years. Some of these species are able to adapt to human-made environments, such as exist on and around airports. The increase in wildlife populations, the use of larger turbine engines, the increased use of twin-engine aircraft, and the increase in air-traffic, all combine to increase the risk, frequency, and potential severity of wildlife-aircraft collisions.

Most public-use airports have large tracts of open, unimproved land that are desirable for added margins of safety and noise mitigation. These areas can present potential hazards to aviation because they often attract hazardous wildlife. During the past century, wildlife-aircraft strikes have resulted in the loss of hundreds of lives world-wide, as well as billions of dollars worth of aircraft damage. Hazardous wildlife attractants near airports could jeopardize future airport expansion because of safety considerations.

DAVID L. BENNETT

Director, Office of Airport Safety and Standards

SECTION 1. HAZARDOUS WILDLIFE ATTRACTANTS ON OR NEAR AIRPORTS.

1-1. TYPES OF HAZARDOUS WILDLIFE ATTRACTANTS ON OR NEAR AIRPORTS.

Human-made or natural areas, such as poorly-drained areas, retention ponds, roosting habitats on buildings, landscaping, putrescible-waste disposal operations, wastewater treatment plants, agricultural or aquacultural activities, surface mining, or wetlands, may be used by wildlife for escape, feeding, loafing, or reproduction. Wildlife use of areas within an airport's approach or departure airspace, aircraft movement areas, loading ramps, or aircraft parking areas may cause conditions hazardous to aircraft safety.

All species of wildlife can pose a threat to aircraft safety. However, some species are more commonly involved in aircraft strikes than others. Table 1 lists the wildlife groups commonly reported as being involved in damaging strikes to U.S. aircraft from 1993 to 1995.

Table 1. Wildlife Groups Involved in Damaging Strikes to Civilian Aircraft, USA, 1993-1995.

Wildlife Groups	Percent involvement in reported damaging strikes
Gulls	28
Waterfowl	28
Raptors	11
Doves	6
Vultures	5
Blackbirds-	5
Starlings	
Corvids	3
Wading birds	3
Deer	11
Canids	1

1-2. LAND USE PRACTICES. Land use practices that attract or sustain hazardous wildlife populations on or near airports can significantly increase the potential for wildlife-aircraft collisions. FAA recommends against land use practices, within the siting criteria stated in 1-3, that attract or sustain populations of hazardous wildlife within the vicinity of airports or cause movement of hazardous wildlife onto, into, or across the approach or departure airspace, aircraft movement area, loading ramps, or aircraft parking area of airports.

Airport operators, sponsors, planners, and land use developers should consider whether proposed land uses, including new airport development projects, would increase the wildlife hazard. Caution should be exercised to ensure that land use practices on or near airports do not enhance the attractiveness of the area to hazardous wildlife.

1-3. SITING CRITERIA. FAA recommends separations when siting any of the wildlife attractants mentioned in Section 2 or when planning new airport development projects to accommodate aircraft movement. The distance between an airport's aircraft movement areas, loading ramps, or aircraft parking areas and the wildlife attractant should be as follows:

a. Airports serving piston-powered aircraft. A distance of 5,000 feet is recommended.

b. Airports serving turbine-powered aircraft. A distance of 10,000 feet is recommended.

c. Approach or Departure airspace. A distance of 5 statute miles is recommended, if the wildlife attractant may cause hazardous wildlife movement into or across the approach or departure airspace.

SECTION 2. LAND USES THAT ARE INCOMPATIBLE WITH SAFE AIRPORT OPERATIONS.

2-1. GENERAL. The wildlife species and the size of the populations attracted to the airport environment are highly variable and may depend on several factors, including land-use practices on or near the airport. It is important to identify those land use practices in the airport area that attract hazardous wildlife. This section discusses land use practices known to threaten aviation safety.

2-2. PUTRESCIBLE-WASTE DISPOSAL OPERATIONS. Putrescible-waste disposal operations are known to attract large numbers of wildlife that are hazardous to aircraft. Because of this, these operations, when located within the separations identified in the siting criteria in 1-3 are considered incompatible with safe airport operations.

FAA recommends against locating putrescible-waste disposal operations inside the separations identified in the siting criteria mentioned above. FAA also recommends against new airport development projects that would increase the number of aircraft operations or that would accommodate larger or faster aircraft, near putrescible-waste disposal operations located within the separations identified in the siting criteria in 1-3.

2-3. WASTEWATER TREATMENT FACILITIES. Wastewater treatment facilities and associated settling ponds often attract large numbers of wildlife that can pose a threat to aircraft safety when they are located on or near an airport.

a. New wastewater treatment facilities. FAA recommends against the construction of new wastewater treatment facilities or associated settling ponds within the separations identified in the siting criteria in 1-3. During the siting analysis for wastewater treatment facilities, the potential to attract hazardous wildlife should be considered if an airport is in the vicinity of a proposed site. Airport operators should voice their opposition to such sitings. In addition, they should consider the existence of wastewater treatment facilities when evaluating proposed sites for new airport development projects and avoid such sites when practicable.

b. Existing wastewater treatment facilities. FAA recommends correcting any wildlife hazards arising from existing wastewater treatment facilities located on or near airports without delay, using appropriate wildlife hazard mitigation techniques. Accordingly, measures to minimize hazardous wildlife attraction should be developed in consultation with a wildlife damage management biologist. FAA recommends that wastewater treatment facility operators incorporate appropriate wildlife hazard mitigation techniques into their operating practices. Airport operators also should encourage those operators to incorporate these mitigation techniques in their operating practices.

c. Artificial marshes. Waste-water treatment facilities may create artificial marshes and use submergent and emergent aquatic vegetation as natural filters. These artificial marshes may be used by some species of flocking birds, such as blackbirds and waterfowl, for breeding or roosting activities. FAA recommends against establishing artificial marshes within the separations identified in the siting criteria stated in 1-3.

d. Wastewater discharge and sludge disposal. FAA recommends against the discharge of wastewater or sludge on airport property. Regular spraying of wastewater or sludge disposal on unpaved areas may improve soil moisture and quality. The resultant turf growth requires more frequent mowing, which in turn may mutilate or flush insects or small animals and produce straw. The maimed or flushed organisms and the straw can attract hazardous wildlife and jeopardize aviation safety. In addition, the improved turf may attract grazing wildlife such as deer and geese.

Problems may also occur when discharges saturate unpaved airport areas. The resultant soft, muddy conditions can severely restrict or prevent emergency vehicles from reaching accident sites in a timely manner.

e. Underwater waste discharges. The underwater discharge of any food waste, e.g., fish processing offal, that could attract scavenging wildlife is not recommended within the separations identified in the siting criteria in 1-3.

2-4. WETLANDS.

a. Wetlands on or near Airports.

(1) Existing Airports. Normally, wetlands are attractive to many wildlife species. Airport operators with wetlands located on or nearby airport property should be alert to any wildlife use or habitat changes in these areas that could affect safe aircraft operations.

(2) Airport Development. When practicable, the FAA recommends siting new airports using the separations identified in the siting criteria in 1-3. Where alternative sites are not practicable or when expanding existing airports in or near wetlands, the wildlife hazards should be evaluated and minimized through a wildlife management plan prepared by a wildlife damage management biologist, in consultation with the U.S. Fish and Wildlife Service (USFWS) and the U.S. Army Corps of Engineers (COE).

NOTE: If questions exist as to whether or not an area would qualify as a wetland, contact the U.S. Army COE, the Natural Resource Conservation Service, or a wetland consultant certified to delineate wetlands.

b. Wetland mitigation. Mitigation may be necessary when unavoidable wetland disturbances result from new airport development projects. Wetland mitigation should be designed so it does not create a wildlife hazard.

(1) FAA recommends that wetland mitigation projects that may attract hazardous wildlife be sited outside of the separations

identified in the siting criteria in 1-3. Wetland mitigation banks meeting these siting criteria offer an ecologically sound approach to mitigation in these situations.

(2) Exceptions to locating mitigation activities outside the separations identified in the siting criteria in 1-3 may be considered if the affected wetlands provide unique ecological functions, such as critical habitat for threatened or endangered species or ground water recharge. Such mitigation must be compatible with safe airport operations. Enhancing such mitigation areas to attract hazardous wildlife should be avoided. On-site mitigation plans may be reviewed by the FAA to determine compatibility with safe airport operations.

(3) Wetland mitigation projects that are needed to protect unique wetland functions (see 2-4.b.(2)), and that must be located in the siting criteria in 1-3 should be identified and evaluated by a wildlife damage management biologist before implementing the mitigation. A wildlife damage management plan should be developed to reduce the wildlife hazards.

NOTE: AC 150/5000-3, *Address List for Regional Airports Division and Airports District/Field Offices*, provides information on the location of these offices.

2-5. DREDGE SPOIL CONTAINMENT AREAS.

FAA recommends against locating dredge spoil containment areas within the separations identified in the siting criteria in 1-3, if the spoil contains material that would attract hazardous wildlife.

SECTION 3. LAND USES THAT MAY BE COMPATIBLE WITH SAFE AIRPORT OPERATIONS.

3-1. GENERAL. Even though they may, under certain circumstances, attract hazardous wildlife, the land use practices discussed in this section have flexibility regarding their location or operation and may even be under the airport operator's or sponsor's control. In general, the FAA does not consider the activities discussed below as hazardous to aviation if there is no apparent attraction to hazardous wildlife, or wildlife hazard mitigation techniques are implemented to deal effectively with any wildlife hazard that may arise.

3-2. ENCLOSED WASTE FACILITIES. Enclosed trash transfer stations or enclosed waste handling facilities that receive garbage indoors; process it via compaction, incineration, or similar manner; and remove all residue by enclosed vehicles, generally would be compatible, from a wildlife perspective, with safe airport operations, provided they are not located on airport property or within the runway protection zone (RPZ). No putrescible-waste should be handled or stored outside at any time, for any reason, or in a partially enclosed structure accessible to hazardous wildlife.

Partially enclosed operations that accept putrescible-waste are considered to be incompatible with safe airport operations. FAA recommends these operations occur outside the separations identified in the siting criteria in 1-3.

3-3. RECYCLING CENTERS. Recycling centers that accept previously sorted, non-food items such as glass, newspaper, cardboard, or aluminum are, in most cases, not attractive to hazardous wildlife.

3-4. COMPOSTING OPERATIONS ON AIRPORTS. FAA recommends against locating composting operations on airports. However, when they are located on an airport, composting operations should not be located closer than the greater of the following distances: 1,200 feet from any aircraft movement area, loading ramp, or aircraft parking space; or the distance called for by airport design requirements. This spacing is intended to prevent material, personnel, or equipment from penetrating any Obstacle Free Area (OFA), Obstacle Free Zone (OFZ), Threshold Siting Surface (TSS), or Clearway (see AC 150/5300-13, *Airport Design*). On-airport disposal of compost by-products is not recommended for the reasons stated in 2-3.d.

a. Composition of material handled. Components of the compost should never include any municipal solid waste. Non-food waste such as leaves, lawn clippings, branches, and twigs generally are not considered a wildlife attractant. Sewage sludge, wood-chips, and similar material are not municipal solid wastes and may be used as compost bulking agents.

b. Monitoring on-airport composting operations. If composting operations are to be located on airport property, FAA recommends that the airport operator monitor composting operations to ensure that steam or thermal rise does not affect air traffic in any way. Discarded leaf disposal bags or other debris must not be allowed to blow onto any active airport area. Also, the airport operator should reserve the right to stop any operation that creates unsafe, undesirable, or incompatible conditions at the airport.

3-5. ASH DISPOSAL. Fly ash from resource recovery facilities that are fired by municipal solid waste, coal, or wood, is generally considered not to be a wildlife attractant because it contains no putrescible matter. FAA generally does not consider landfills accepting only fly ash to be wildlife attractants, if those landfills: are maintained in an orderly manner; admit no putrescible-waste of any kind; and are not co-located with other disposal operations.

Since varying degrees of waste consumption are associated with general incineration, FAA classifies the ash from general incinerators as a regular waste disposal by-product and, therefore, a hazardous wildlife attractant.

3-6. CONSTRUCTION AND DEMOLITION (C&D) DEBRIS LANDFILLS. C&D debris (Class IV) landfills have visual and operational characteristics similar to putrescible-waste disposal sites. When co-located with putrescible-waste disposal operations, the probability of hazardous wildlife attraction to C&D landfills increases because of the similarities between these disposal activities.

FAA generally does not consider C&D landfills to be hazardous wildlife attractants, if those landfills: are maintained in an orderly manner; admit no putrescible-waste of any kind; and are not co-located with other disposal operations.

3-7. WATER DETENTION OR RETENTION PONDS. The movement of storm water away from runways, taxiways, and aprons is a normal function on most airports and is necessary for safe aircraft operations. Detention ponds hold storm water for short periods, while retention ponds hold water indefinitely. Both types of ponds control runoff, protect water quality, and can attract hazardous wildlife. Retention ponds are more attractive to hazardous wildlife than detention ponds because they provide a more reliable water source.

To facilitate hazardous wildlife control, FAA recommends using steep-sided, narrow, linearly-shaped, rip-rap lined, water detention basins rather than retention basins. When possible, these ponds should be placed away from aircraft movement areas to minimize aircraft-wildlife interactions. All vegetation in or around detention or retention basins that provide food or cover for hazardous wildlife should be eliminated.

If soil conditions and other requirements allow, FAA encourages the use of underground storm water infiltration systems, such as French drains or buried rock fields, because they are less attractive to wildlife.

3-8. LANDSCAPING. Wildlife attraction to landscaping may vary by geographic location. FAA recommends that airport operators approach landscaping with caution and confine it to airport areas not associated with aircraft movements. All landscaping plans should be reviewed by a wildlife damage management biologist. Landscaped areas should be monitored on a continuing basis for the presence of hazardous wildlife. If hazardous wildlife is detected, corrective actions should be implemented immediately.

3-9. GOLF COURSES. Golf courses may be beneficial to airports because they provide open space that can be used for noise mitigation or by aircraft during an emergency. On-airport golf courses may also be a concurrent use that provides income to the airport.

Because of operational and monetary benefits, golf courses are often deemed compatible land uses on or near airports. However, waterfowl (especially Canada geese) and some species of gulls are attracted to the large, grassy areas and open water found on most golf courses. Because waterfowl and gulls occur throughout the U.S., FAA recommends that airport operators exercise caution and consult with a wildlife damage management biologist when considering proposals for golf

course construction or expansion on or near airports. Golf courses should be monitored on a continuing basis for the presence of hazardous wildlife. If hazardous wildlife is detected, corrective actions should be implemented immediately.

3-10. AGRICULTURAL CROPS. As noted above, airport operators often promote revenue-generating activities to supplement an airport's financial viability. A common concurrent use is agricultural crop production. Such use may create potential hazards to aircraft by attracting wildlife. Any proposed on-airport agricultural operations should be reviewed by a wildlife damage management biologist. FAA generally does not object to agricultural crop production on airports when: wildlife hazards are not predicted; the guidelines for the airport areas specified in 3-10.a-f. are observed; and the agricultural operation is closely monitored by the airport operator or sponsor to ensure that hazardous wildlife are not attracted.

NOTE: If wildlife becomes a problem due to on-airport agricultural operations, FAA recommends undertaking the remedial actions described in 3-10.f.

a. Agricultural activities adjacent to runways. To ensure safe, efficient aircraft operations, FAA recommends that no agricultural activities be conducted in the Runway Safety Area (RSA), OFA, and the OFZ (see AC 150/5300-13).

b. Agricultural activities in areas requiring minimum object clearances. Restricting agricultural operations to areas outside the RSA, OFA, OFZ, and Runway Visibility Zone (RVZ) (see AC 150/5300-13) will normally provide the minimum object clearances required by FAA's airport design standards. FAA recommends that farming operations not be permitted within areas critical to the proper operation of localizers, glide slope indicators, or other visual or electronic navigational aids. Determinations of minimal areas that must be kept free of farming operations should be made on a case-by-case basis. If navigational aids are present, farm leases for on-airport agricultural activities should be coordinated with FAA's Airway Facilities Division, in accordance with FAA Order 6750.16, *Siting Criteria for Instrument Landing Systems*.

NOTE: Crop restriction lines conforming to the dimensions set forth in Table 2 will normally provide the minimum object clearance required by

FAA airport design standards. The presence of navigational aids may require expansion of the restricted area.

c. Agricultural activities within an airport's approach areas. The RSA, OFA, and OFZ all extend beyond the runway shoulder and into the approach area by varying distances. The OFA normally extends the farthest and is usually the controlling surface. However, for some runways, the TSS (see AC 150/5300-13, Appendix 2) may be more controlling than the OFA. The TSS may not be penetrated by any object. The minimum distances shown in Table 2 are intended to prevent penetration of the OFA, OFZ, or TSS by crops or farm machinery.

NOTE: Threshold Siting standards should not be confused with the approach areas described in Title 14, Code of Federal Regulations, Part 77, (14 CFR 77), *Objects Affecting Navigable Airspace*.

d. Agricultural activities between intersecting runways. FAA recommends that no agricultural activities be permitted within the RVZ. If the terrain is sufficiently below the runway elevation, some types of crops and equipment may be acceptable. Specific determinations of what is permissible in this area requires topographical data. For example, if the terrain within the RVZ is level with the runway ends, farm machinery or crops may interfere with a pilot's line-of-sight in the RVZ.

e. Agricultural activities in areas adjacent to taxiways and aprons. Farming activities should not be permitted within a taxiway's OFA. The outer portions of aprons are frequently used as a taxilane and farming operations should not be permitted within the OFA. Farming operations should not be permitted between runways and parallel taxiways.

f. Remedial actions for problematic agricultural activities. If a problem with hazardous wildlife develops, FAA recommends that a professional wildlife damage management biologist be contacted and an on-site inspection be conducted. The biologist should be requested to determine the source of the hazardous wildlife attraction and suggest remedial action. Regardless of the source of the attraction, prompt remedial actions to protect aviation safety are recommended. The remedial actions may range from choosing another crop or farming technique to complete termination of the agricultural operation.

Whenever on-airport agricultural operations are stopped due to wildlife hazards or annual harvest, FAA recommends plowing under all crop residue and harrowing the surface area smooth. This will reduce or eliminate the area's attractiveness to foraging wildlife. FAA recommends that this requirement be written into all on-airport farm use contracts and clearly understood by the lessee.

Table 2. Minimum Distances Between Certain Airport Features And Any On-Airport Agriculture Crops.

Aircraft Approach Category And Design Group ¹	Distance In Feet From Runway Centerline To Crop		Distance In Feet From Runway End To Crop		Distance In Feet From Centerline Of Taxiway To Crop	Distance In Feet From Edge Of Apron To Crop
	Visual & $\geq \frac{3}{4}$ mile	< $\frac{3}{4}$ mile	Visual & $\geq \frac{3}{4}$ mile	< $\frac{3}{4}$ mile		
Category A & B Aircraft						
Group I	200 ²	400	300 ³	600	45	40
Group II	250	400	400 ³	600	66	58
Group III	400	400	600	800	93	81
Group IV	400	400	1,000	1,000	130	113
Category C, D & E Aircraft						
Group I	530 ³	575 ³	1,000	1,000	45	40
Group II	530 ³	575 ³	1,000	1,000	66	58
Group III	530 ³	575 ³	1,000	1,000	93	81
Group IV	530 ³	575 ³	1,000	1,000	130	113
Group V	530 ³	575 ³	1,000	1,000	160	138
Group VI	530 ³	575 ³	1,000	1,000	193	167

1. Design Groups are based on wing span, and Category depends on approach speed of the aircraft.

Group I: Wing span up to 49 ft.

Group II: Wing span 49ft. up to 78 ft.

Group III: Wing span 79 ft. up to 117 ft.

Group IV: Wing span 118 ft. up to 170 ft.

Group V: Wing span 171 ft. up to 213 ft.

Group VI: Wing span 214 ft. up to 261 ft.

Category A: Speed less than 91 knots

Category B: Speed 91 knots up to 120 knots

Category C: Speed 121 knots up to 140 knots

Category D: Speed 141 knots up to 165 knots

Category E: Speed 166 knots or more

2. If the runway will only serve small airplanes (12,500 lb. and under) in Design Group I, this dimension may be reduced to 125 feet; however, this dimension should be increased where necessary to accommodate visual navigational aids that may be installed. For example farming operations should not be allowed within 25 feet of a Precision Approach Path Indicator (PAPI) light box.

3. These dimensions reflect the TSS as defined in AC 150/5300-13, Appendix 2. The TSS cannot be penetrated by any object. Under these conditions, the TSS is more restrictive than the OFA, and the dimensions shown here are to prevent penetration of the TSS by crops and farm machinery.

SECTION 4. NOTIFICATION OF FAA ABOUT HAZARDOUS WILDLIFE ATTRACTANTS ON OR NEAR AN AIRPORT.

4-1. GENERAL. Airport operators, land developers, and owners should notify the FAA in writing of known or reasonably foreseeable land use practices on or near airports that either attract or may attract hazardous wildlife. This section discusses those notification procedures.

4-2. NOTIFICATION REQUIREMENTS FOR WASTE DISPOSAL SITE OPERATIONS.

The Environmental Protection Agency (EPA) requires any operator proposing a new or expanded waste disposal operation within 5 statute miles of a runway end to notify the appropriate FAA Regional Airports Division Office and the airport operator of the proposal (40 CFR 258, *Criteria for Municipal Solid Waste Landfills*, section 258.10, *Airport Safety*). The EPA also requires owners or operators of new municipal solid waste landfill (MSWLF) units, or lateral expansions of existing MSWLF units that are located within 10,000 feet of any airport runway end used by turbojet aircraft or within 5,000 feet of any airport runway end used only by piston-type aircraft, to demonstrate successfully that such units are not hazards to aircraft.

a. Timing of Notification. When new or expanded MSWLFs are being proposed near airports, MSWLF operators should notify the airport operator and the FAA of this as early as possible pursuant to 40 CFR Part 258. Airport operators should encourage the MSWLF operators to provide notification as early as possible.

NOTE: AC 150/5000-3 provides information on these FAA offices.

b. Putrescible-Waste Facilities. In their effort to satisfy the EPA requirement, some putrescible-waste facility proponents may offer to undertake experimental measures to demonstrate that their proposed facility will not be a hazard to aircraft. To date, the ability to sustain a reduction in the numbers of hazardous wildlife to levels that existed before a putrescible-waste landfill began operating has not been successfully demonstrated. For this reason, demonstrations of experimental wildlife control measures should not be conducted in active aircraft operations areas.

c. Other Waste Facilities. To claim successfully that a waste handling facility sited within the separations identified in the siting criteria in 1-3

does not attract hazardous wildlife and does not threaten aviation, the developer must establish convincingly that the facility will not handle putrescible material other than that as outlined in 3-2. FAA requests that waste site developers provide a copy of an official permit request verifying that the facility will not handle putrescible material other than that as outlined in 3-2. FAA will use this information to determine if the facility will be a hazard to aviation.

4-3. NOTIFYING FAA ABOUT OTHER WILDLIFE ATTRACTANTS.

While U. S. EPA regulations require landfill owners to provide notification, no similar regulations require notifying FAA about changes in other land use practices that can create hazardous wildlife attractants. Although it is not required by regulation, FAA requests those proposing land use changes such as those discussed in 2-3, 2-4, and 2-5 to provide similar notice to the FAA as early in the development process as possible. Airport operators that become aware of such proposed development in the vicinity of their airports should also notify the FAA. The notification process gives the FAA an opportunity to evaluate the effect of a particular land use change on aviation safety.

The land use operator or project proponent may use FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, or other suitable documents to notify the appropriate FAA Regional Airports Division Office.

It is helpful if the notification includes a 15-minute quadrangle map of the area identifying the location of the proposed activity. The land use operator or project proponent should also forward specific details of the proposed land use change or operational change or expansion. In the case of solid waste landfills, the information should include the type of waste to be handled, how the waste will be processed, and final disposal methods.

4-5. FAA REVIEW OF PROPOSED LAND USE CHANGES.

a. The FAA discourages the development of facilities discussed in section 2 that will be located within the 5,000/10,000-foot criteria in 1-3.

b. For projects which are located outside the 5,000/10,000-foot criteria, but within 5 statute miles of the airport's aircraft movement areas, loading ramps, or aircraft parking areas, FAA may review development plans, proposed land use changes, operational changes, or wetland mitigation plans to determine if such changes present potential wildlife hazards to aircraft operations. Sensitive airport areas will be identified as those that lie under or next to approach or departure airspace. This brief examination should be sufficient to determine if further investigation is warranted.

c. Where further study has been conducted by a wildlife damage management biologist to evaluate a site's compatibility with airport operations, the FAA will use the study results to make its determination.

d. FAA will discourage the development of any excepted sites (see Section 3) within the criteria specified in 1-3 if a study shows that the area supports hazardous wildlife species.

4-6. AIRPORT OPERATORS. Airport operators should be aware of proposed land use changes, or modification of existing land uses, that could create hazardous wildlife attractants within the separations identified in the siting criteria in 1-3. Particular attention should be given to proposed land uses involving creation or expansion of waste water treatment facilities, development of wetland mitigation sites, or development or expansion of dredge spoil containment areas.

a. AIP-funded airports. FAA recommends that operators of AIP-funded airports, to the extent practicable, oppose off-airport land use changes or practices (within the separations identified in the siting criteria in 1-3) that may attract hazardous wildlife. Failure to do so could place the airport operator or sponsor in noncompliance with applicable grant assurances.

FAA recommends against the placement of airport development projects pertaining to aircraft movement in the vicinity of hazardous wildlife attractants. Airport operators, sponsors, and planners should identify wildlife attractants and any associated wildlife hazards during any planning process for new airport development projects.

b. Additional coordination. If, after the initial review by FAA, questions remain about the existence of a wildlife hazard near an airport, the airport operator or sponsor should consult a wildlife damage management biologist. Such questions may be triggered by a history of wildlife strikes at the airport or the proximity of the airport to a wildlife refuge, body of water, or similar feature known to attract wildlife.

c. Specialized assistance. If the services of a wildlife damage management biologist are required, FAA recommends that land use developers or the airport operator contact the appropriate state director of the United States Department of Agriculture/Animal Damage Control (USDA/ADC), or a consultant specializing in wildlife damage management. Telephone numbers for the respective USDA/ADC state offices may be obtained by contacting USDA/ADC's Operational Support Staff, 4700 River Road, Unit 87, Riverdale, MD, 20737-1234, Telephone (301) 734-7921, Fax (301) 734-5157. The ADC biologist or consultant should be requested to identify and quantify wildlife common to the area and evaluate the potential wildlife hazards.

d. Notifying airmen. If an existing land use practice creates a wildlife hazard, and the land use practice or wildlife hazard cannot be immediately eliminated, the airport operator should issue a Notice to Airmen (NOTAM) and encourage the land owner or manager to take steps to control the wildlife hazard and minimize further attraction.

APPENDIX 1. DEFINITIONS OF TERMS USED IN THIS ADVISORY CIRCULAR.

1. GENERAL. This appendix provides definitions of terms used throughout this AC.

a. Aircraft movement area. The runways, taxiways, and other areas of an airport which are used for taxiing or hover taxiing, air taxiing, takeoff, and landing of aircraft exclusive of loading ramps and aircraft parking areas.

b. Airport operator. The operator (private or public) or sponsor of a public use airport.

c. Approach or departure airspace. The airspace, within 5 statute miles of an airport, through which aircraft move during landing or takeoff.

d. Concurrent use. Aeronautical property used for compatible non-aviation purposes while at the same time serving the primary purpose for which it was acquired; and the use is clearly beneficial to the airport. The concurrent use should generate revenue to be used for airport purposes (see Order 5190.6A, *Airport Compliance Requirements*, sect. 5h).

e. Fly ash. The fine, sand-like residue resulting from the complete incineration of an organic fuel source. Fly ash typically results from the combustion of coal or waste used to operate a power generating plant.

f. Hazardous wildlife. Wildlife species that are commonly associated with wildlife-aircraft strike problems, are capable of causing structural damage to airport facilities, or act as attractants to other wildlife that pose a wildlife-aircraft strike hazard.

g. Piston-use airport. Any airport that would primarily serve FIXED-WING, piston-powered aircraft. Incidental use of the airport by turbine-powered, FIXED-WING aircraft would not affect this designation. However, such aircraft should not be based at the airport.

h. Public-use airport. Any publicly owned airport or a privately-owned airport used or intended to be used for public purposes.

i. Putrescible material. Rotting organic material.

j. Putrescible-waste disposal operation. Landfills, garbage dumps, underwater waste discharges, or similar facilities where activities include processing, burying, storing, or otherwise disposing of putrescible material, trash, and refuse.

k. Runway protection zone (RPZ). An area off the runway end to enhance the protection of people and property on the ground (see AC 150/5300-13). The dimensions of this zone vary with the design aircraft, type of operation, and visibility minimum.

l. Sewage sludge. The de-watered effluent resulting from secondary or tertiary treatment of municipal sewage and/or industrial wastes, including sewage sludge as referenced in U.S. EPA's *Effluent Guidelines and Standards*, 40 C.F.R. Part 401.

m. Shoulder. An area adjacent to the edge of paved runways, taxiways, or aprons providing a transition between the pavement and the adjacent surface, support for aircraft running off the pavement, enhanced drainage, and blast protection (see AC 150/5300-13).

n. Turbine-powered aircraft. Aircraft powered by turbine engines including turbojets and turboprops but excluding turbo-shaft rotary-wing aircraft.

o. Turbine-use airport. Any airport that ROUTINELY serves FIXED-WING turbine-powered aircraft.

p. Wastewater treatment facility. Any devices and/or systems used to store, treat, recycle, or reclaim municipal sewage or liquid industrial wastes, including Publicly Owned Treatment Works (POTW), as defined by Section 212 of the Federal Water Pollution Control Act (P.L. 92-500) as amended by the Clean Water Act of 1977 (P.L. 95-576) and the Water Quality Act of 1987 (P.L. 100-4). This definition includes any pretreatment involving the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a POTW. (See 40 C.F. R. Section 403.3 (o), (p), & (q)).

q. Wildlife. Any wild animal, including without limitation any wild mammal, bird, reptile, fish, amphibian, mollusk, crustacean, arthropod, coelenterate, or other invertebrate, including any part, product, egg, or offspring there of (50 CFR 10.12, *Taking, Possession, Transportation, Sale, Purchase, Barter, Exportation, and Importation of Wildlife and Plants*). As used in this AC, WILDLIFE includes feral animals and domestic animals while out of the control of their owners (14 CFR 139.3, *Certification and Operations: Land Airports Serving CAB-Certificated Scheduled Air Carriers Operating Large Aircraft (Other Than Helicopters)*).

r. Wildlife attractants. Any human-made structure, land use practice, or human-made or natural geographic feature, that can attract or sustain hazardous wildlife within the landing or departure airspace, aircraft movement area, loading ramps, or aircraft parking areas of an airport. These attractants can include but are not limited to architectural features, landscaping, waste disposal sites, wastewater treatment facilities, agricultural or aquacultural activities, surface mining, or wetlands.

s. Wildlife hazard. A potential for a damaging aircraft collision with wildlife on or near an airport (14 CFR 139.3).

2. RESERVED.

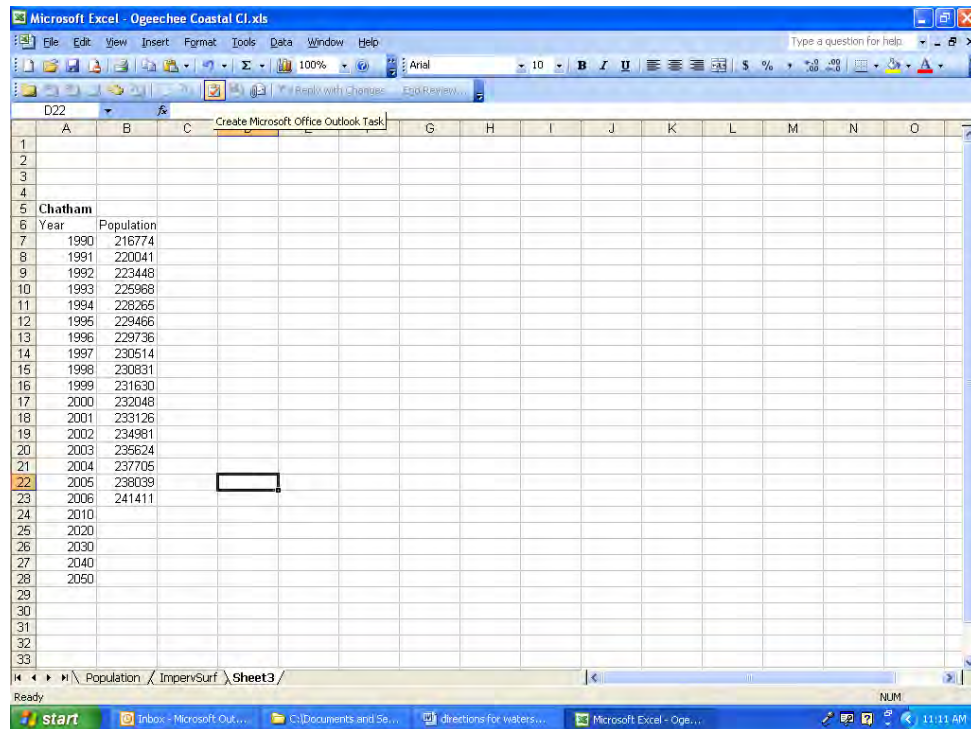
APPENDIX 2

STORM WATER RUNOFF CALCULATION

Calculating Impervious Surface Coverage for Georgia Counties

1. Once the county or counties that encapsulate the bank have been determined, go to the following website: <http://recenter.tamu.edu/data/popc/popcs13.html>. Click on the county or counties that contain the bank. If the bank is completely contained in one county, then only data for that county is required.
2. The next link provides the population data for that county. Highlight the dates and populations that are required. Ideally, it is beneficial to highlight population data from 1990 to present day (**NOTE**: All of the columns must be highlighted in order to obtain multiple years and populations). Right click (while still highlighted), and then click Copy.
3. Open a blank Excel sheet and paste the highlighted numbers into the sheet. Keep the first two columns (date and population) and delete the data in other columns. Label the year and population columns, and add the years 2010, 2020, 2030, 2040, and 2050 to the year data (Figure 1).

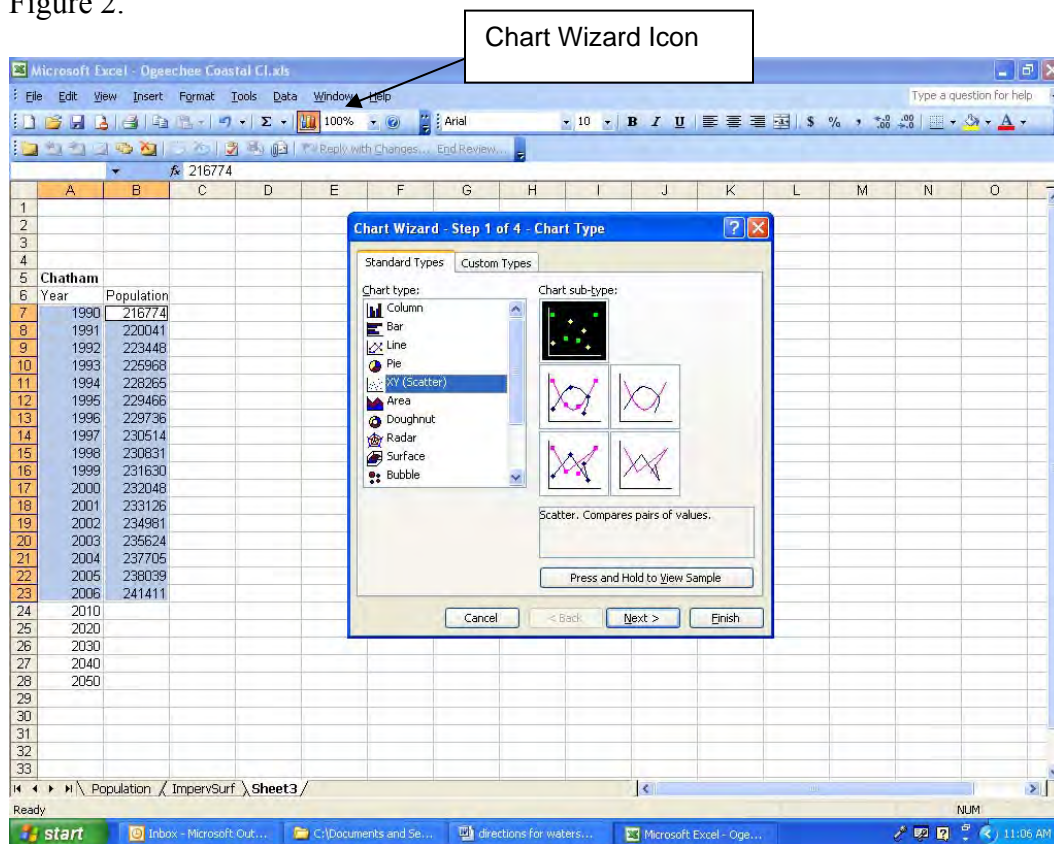
Figure 1.



4. Graph the population for that county by year (Figure 2). To do this:
 - a. Highlight the column “Year” first (using only the years you have population data for), then hold down the CTRL button, and highlight the column “Population.” (You can release the CTRL button once both column are highlighted)

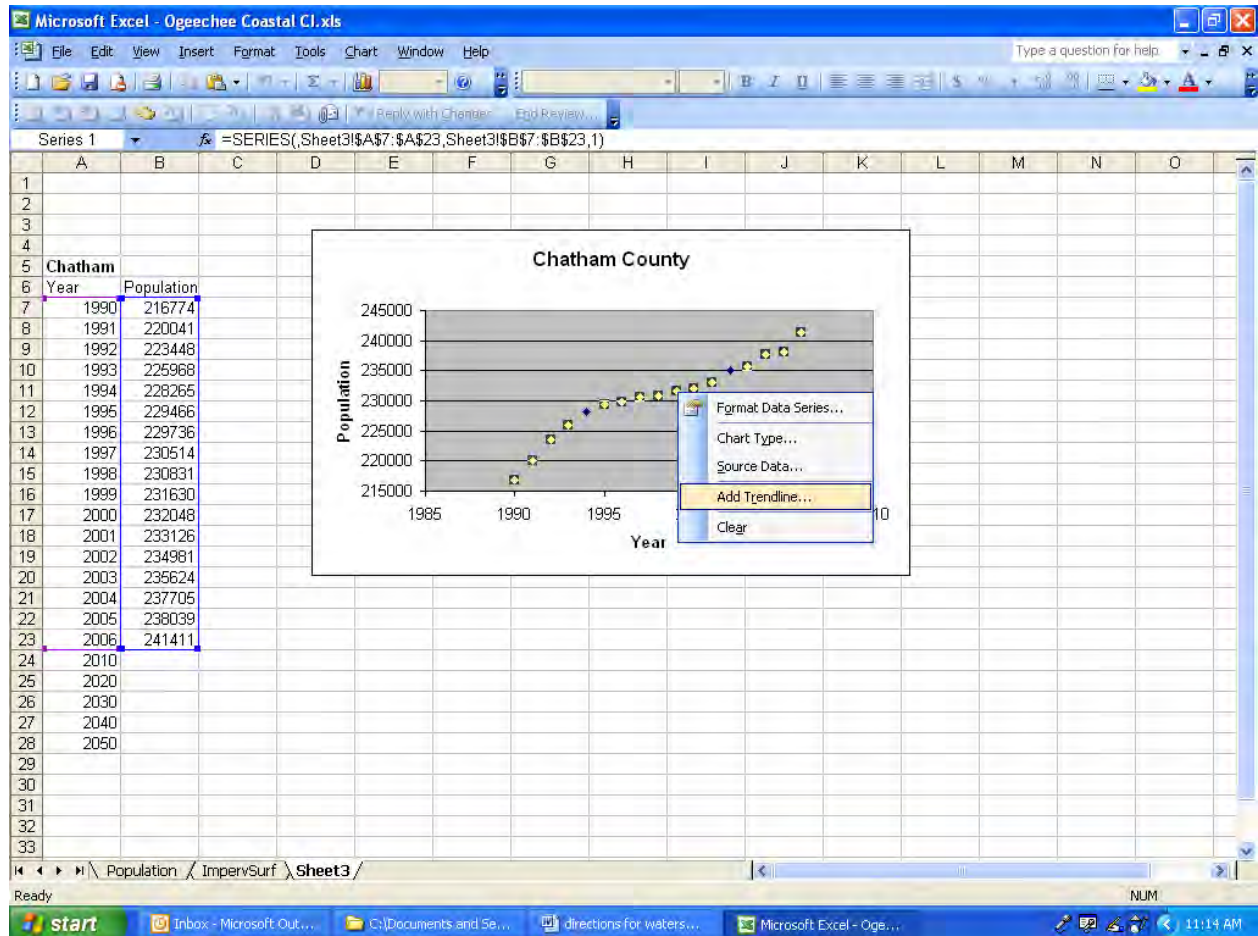
- b. Click on the Chart Wizard icon in the tool bar (looks like a tiny bar graph). Under Standard Types, click Scatter (the scatter graph without lines should be highlighted), then click Next.
- c. Click Next again in Step 2 in the Chart Wizard).
- d. Enter your Chart title (“County”), X and Y-axis titles (“Year” and “Population”, respectively), then click Next.
- e. Highlight the circle by “As object in:” and click Finish

Figure 2.



5. Once the graph is made, click on the series box and delete it.
6. Add a trendline to the graph by right clicking on one of points in the graph and then selecting “Add trendline...” Select the linear graph under the Type tab (Figure 3).

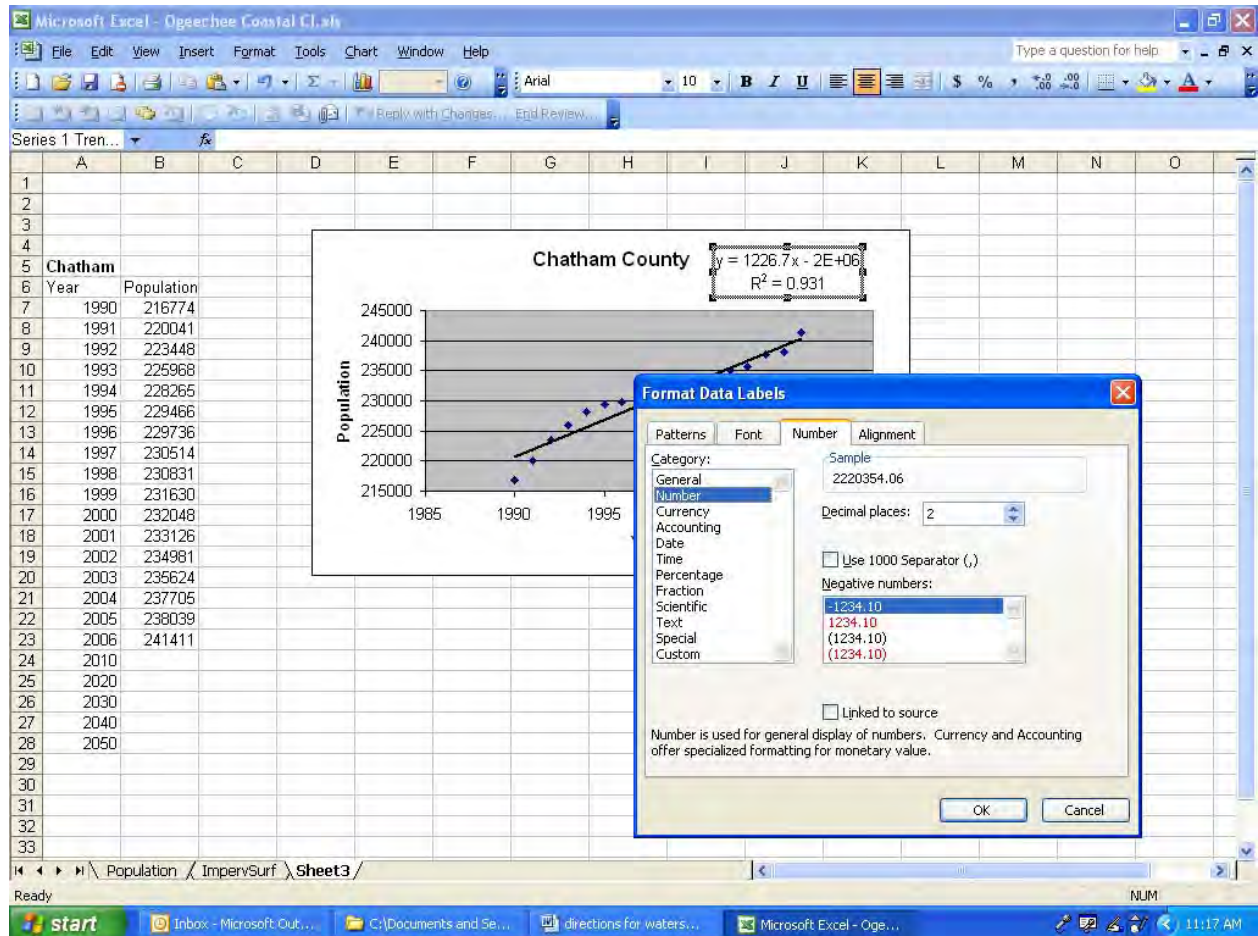
Figure 3.



7. Click on the Options tab in the “Add Trendline screen” and check the boxes next to “Display equation on chart” and “Display R-squared value on chart”. Then click Ok. Equation and r-squared should be displayed somewhere on the graph (Figure 4).

- a. **IMPORTANT:** The value after the +/- of the generated equation may be displayed in scientific notation (shown below). If this occurs, right click near the equation (the equation should then be outlined by a grey box). Next, click “Format Data Labels...”. Under the “Number” tab, click “Number” under Category. The full value will display in the box labeled “Sample” (in blue). Write this number down, just in case it remains in scientific notation. This number should be used when typing in the equation.

Figure 4.



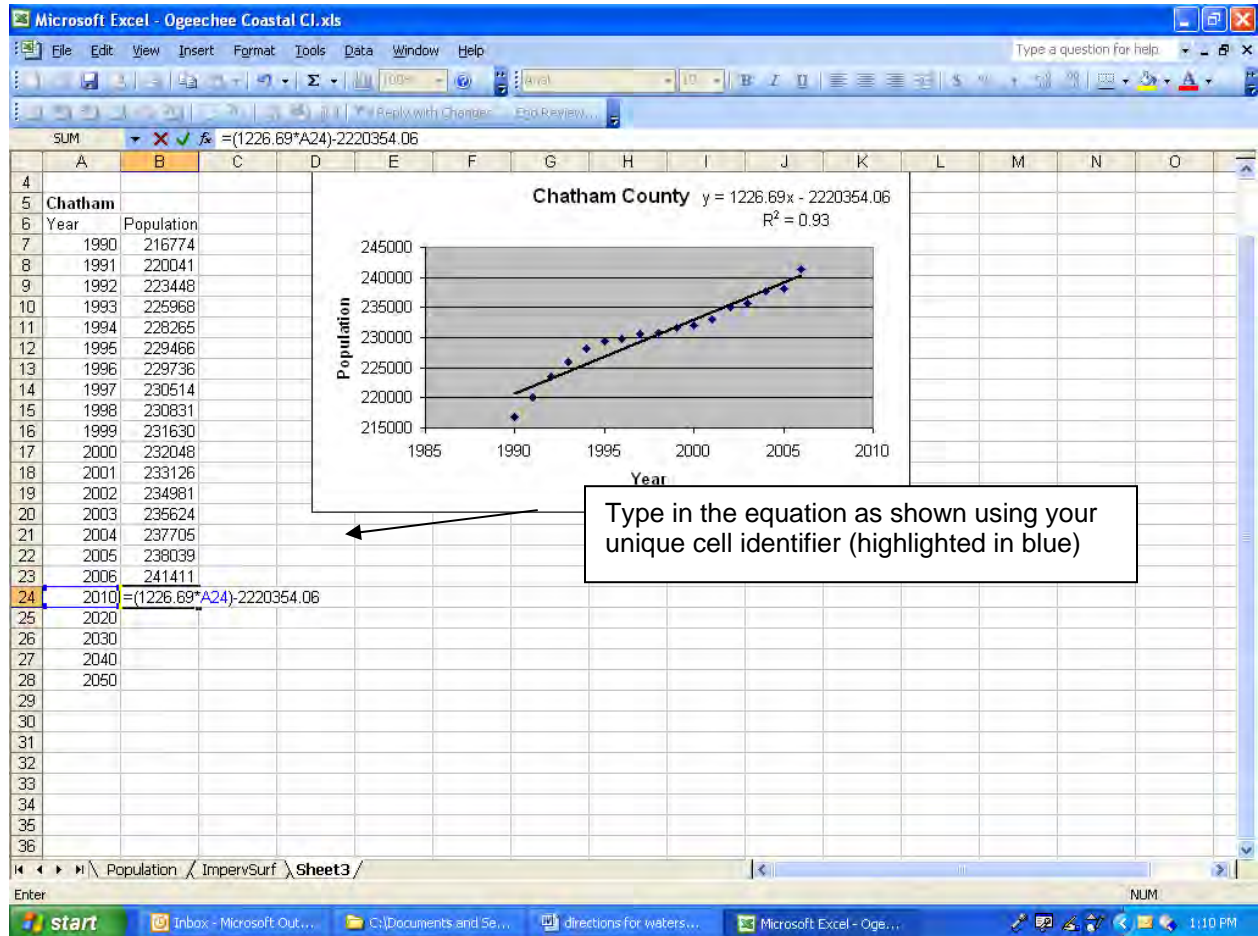
8. Click on the cell under population next to 2010. Type the equation from the chart into the cell, where x=the cell identifier for 2010 (Figure 5).
 - a. For example (refer to Figure 5), in the equation below the cell identifier for 2010 is "A24" (highlighted in blue). Type the following in the cell under population (including the equal sign):

$$= (1226.69 * A24) - 2220354.06$$

Click Enter to obtain the population value.

NOTE: Depending on how you set up the table, your cell identifier will not necessarily be A24.

Figure 5.

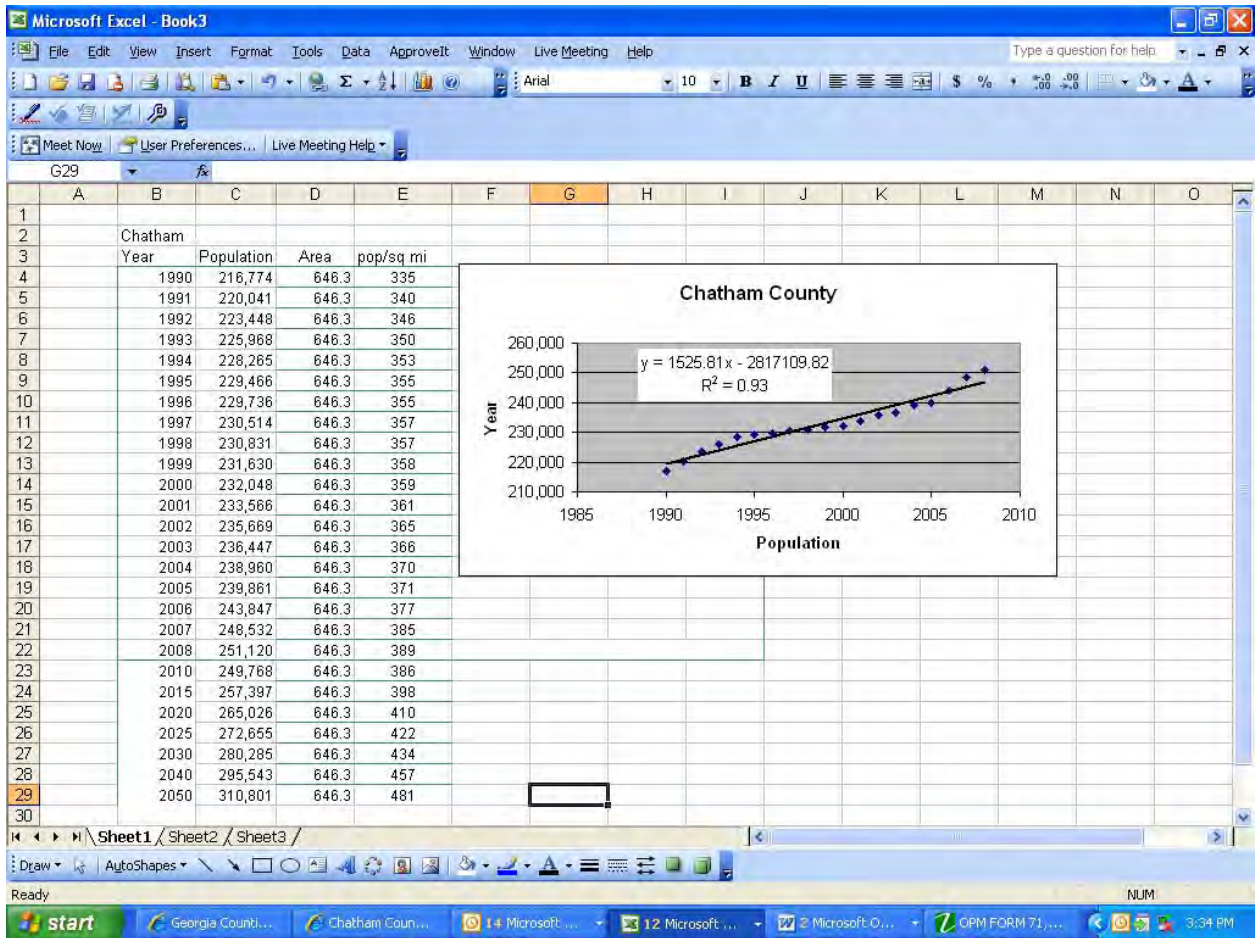


9. Highlight the box with the new population value. Place the cursor over the dot on the box (white cross, should turn into a skinny black cross). Hold down the left mouse button while dragging the cursor to 2050. The populations for the years 2020- 2050 should automatically be calculated.
 - a. **NOTE:** The newly calculated numbers may appear with decimals. To remove decimals, highlight the population column, and click on the “Decrease Decimal” icon in the toolbar (shown above) until all numbers after the decimal are gone.

10. Next, normalize the population data by the county area (i.e., square miles). To find the square miles associated with each county, go to the following website: <http://georgiainfo.galileo.usg.edu/gacountiesbyarea.htm>

11. In the Excel spreadsheet, enter the area of the county and generate population density (i.e., population/square mi) for each of the years. In the example below, population density is derived by taking the population values in Column C and dividing by the area values in Column D (Figure 6).

Figure 6.

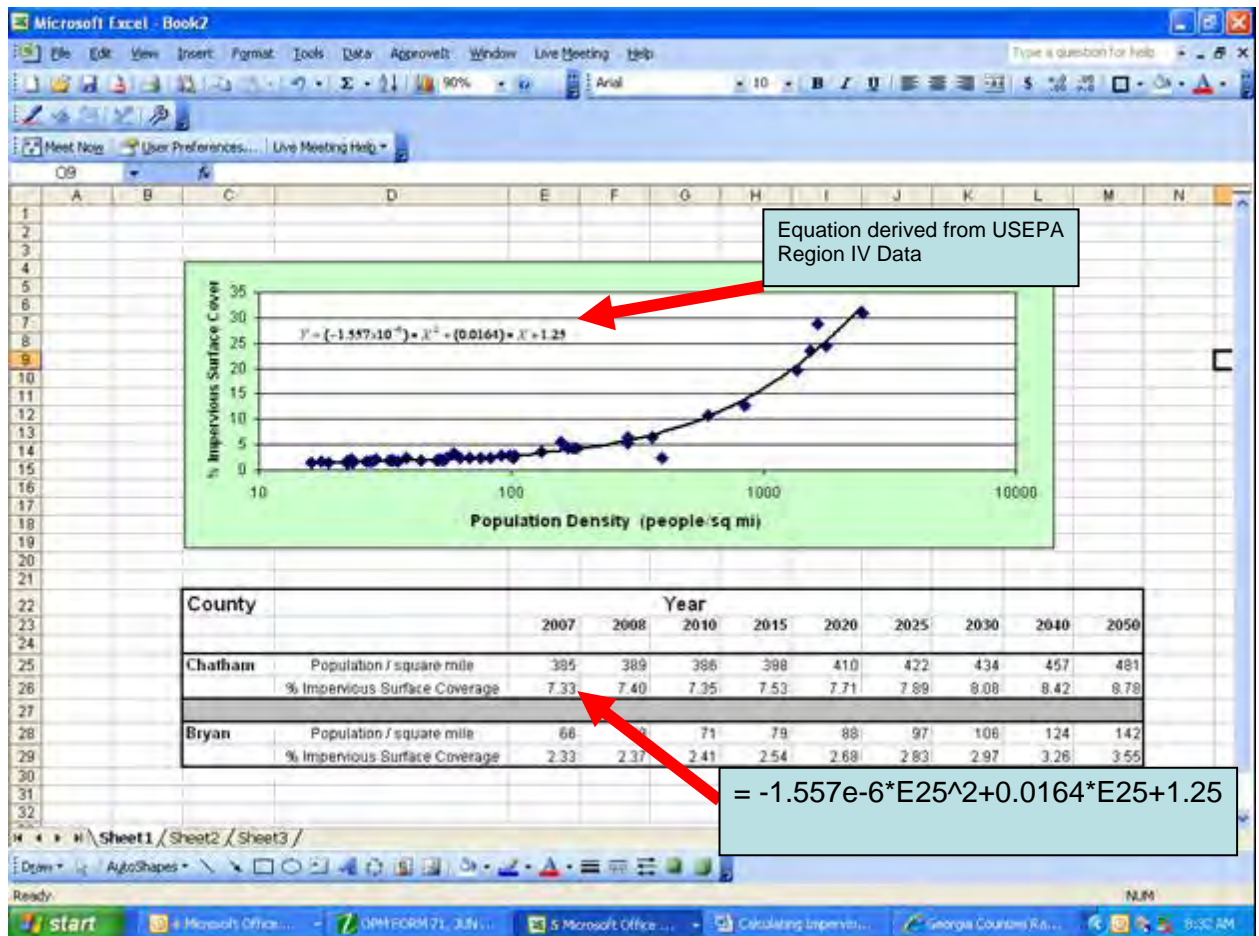


12. Next, create the following Excel spreadsheet for use in calculating % impervious surface coverage (Figure 7). The equation located on the green graph (see below) will be used to calculate projected % impervious surface coverage for the counties

over time. **NOTE:** This equation will never change; it is derived from EPA Region IV data.

13. Create a table as illustrated below the green graph (Figure 7). Copy and paste the populations for each county in the row labeled population under the correct year. Next, type the equation from the impervious surface graph in the row labeled “% Impervious Surface” where x= the cell identifier for each year (for example, type the equation provided to calculate % impervious surface coverage for the year 2007). Once the equation has been input into the appropriate cell, the % impervious surface value should be calculated automatically.

Figure 7.



14. In order to get the values for the remaining years, highlight the box with the value just calculated. Place the cursor over the dot on the box (white cross, should turn

into a skinny black cross), hold down the left mouse button and drag to the right until the entire column is outlined in grey. Values for 2008 and 2010-2050, should automatically calculate.

15. You do not have to retype the equation for each county. Highlight the box where the equation was typed and copy it. Right click on the empty cell for the year 2007 for the next county, select Paste Special, then select Formulas and enter. The value should appear in the cell. Automatically calculate the values for the remaining years by dragging as described in Step 14.
16. From the data that is generated, provide the USACE with an analysis of the future projected growth in the county as indicated by your analysis of % impervious surface coverage trends as a function of projected populations.

APPENDIX 3

SAMPLE PUBLIC NOTICE

SAMPLE PUBLIC NOTICE

Regulatory Division
XXXXXXXXXX

PUBLIC NOTICE

Savannah District

The District Engineer has received a Prospectus titled XXXXXXXXXXXX, dated XXXX XX, XXXX, describing the establishment and operation of a wetland *[and/or]* stream compensatory mitigation bank (XXXXXXXXXX Mitigation Bank) for Federal and State permits as described below:

Regulatory Division File Number: XXXXXXXXXXXX

Bank Sponsor: *[Name and Address]*

Agent: *[Name and Address]*

This public notice does not imply, on the parts of the US Army Corps of Engineers (USACE) or other agencies, either favorable or unfavorable opinion of the work to be performed, but is issued to solicit comments regarding the factors on which final decisions will be based.

Location of Mitigation Bank: The XXXXXXXXXXXX Mitigation Bank site is located approximately XX miles northeast of the City of XXXXXXXXXXXX, in XXXXXXXX County, Georgia. It is at latitude 33° XX' XX" north and longitude 83° XX' XX" west.

Description of Mitigation Bank: The bank sponsor proposes to establish, design, construct, and operate an approximately XXXX acre wetland *[and/or]* stream compensatory mitigation bank. *[Describe what the bank sponsor proposes to establish, e.g.]* The bank sponsor seeks to establish highly functioning wetlands, streams and forested buffers, to provide mitigation credits to replace functions of wetlands *[and/or]* streams anticipated to be adversely affected by development and road projects occurring within the primary and secondary geographic service areas. Specifically, the bank will focus on *[list the types of proposed work]*, the restoration of vegetative and hydrological enhancement (XXX acres), hydrological enhancement (XXX acres), vegetative restoration (XXX acres), wetland preservation (XXX acres), stream restoration (YYY linear feet), riparian buffer habitat improvement (YYY linear feet), and stream preservation (YYYY linear feet along the XXXX River), to create a stable functional condition of wetlands *[and/or]* streams within the mitigation bank site.

[Describe past/current conditions, e.g.] The wetlands *[and/or]* streams within the bank have been impacted by historical land use. The past land use has been primarily

agricultural, with a focus on row crops and cattle production. Current land use is improved pasture or early succession forest.

We have completed an expanded preliminary jurisdictional determination for the proposed bank site pursuant to the March 4, 2009, Public Notice entitled, “Characterization of Jurisdictional Determinations: Purpose, Application and Documentation Requirements as Defined by the Savannah District, US Army Corps of Engineers”, by letter dated **XXXX XX, XXXX**. The wetlands/other waters on the subject property may be waters of the United States and therefore within the jurisdiction of Section 404 of the Clean Water Act (CWA) (33 United States Code 1344) [and/or] Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

[Identify the existing waters of US on the property, e.g.] The bank site contains a series of sloughs, oxbows lakes, **XXXX** Branch, **XXXX** Creek and one side of the **XXXX** River. The primary prescription will involve the reestablishment of the natural flooding regime as dictated by the **XXXX** River, **XXXX** Creek and **XXXXXX** Branch water elevations, and flows by breaching a levee system on the site in several locations. The restoration activities will also return **XXXXXX** acres of pine plantation to native hard mast producing tree species. *[Identify project goal, e.g.]* The goal of the restoration activities is to restore this red river swamp back to its historic condition with natural water flows and elevations and native tree species. Some preservation is proposed. The bank sponsor proposes to plant native trees and shrubs in the harvested areas.

The bank sponsor proposes to record a restrictive covenant that would protect the mitigation bank site in perpetuity from development activities.

Geographic Service Area: The Geographic Service Area (GSA) is the defined area within which this bank can reasonably be expected to provide appropriate compensation for impacts to wetlands and streams resources. The GSA for this bank will include the **XXXXXX XXXXXX** Hydrologic Unit Code **XXXXXXXXXX** as the Primary service area and the **XXXXXX XXXXXX** Hydrologic Unit Code **XXXXXXXXXX** as the Secondary service areas in Georgia. See the enclosed Service Area map.

Oversight: This mitigation bank may be considered one of a number of practicable alternatives available to applicants to compensate for unavoidable wetland [and/or] stream impacts associated with permits issued under the authority of Sections 404 and 401 of the Clean Water Act for projects located within the prescribed GSA.

Oversight of this wetland [and/or] stream compensatory mitigation bank will be by a group of Federal and State agency representatives collectively referred to as the Interagency Review Team (IRT). The IRT shall be chaired by the Savannah District, USACE and is comprised of representatives from the US Environmental Protection Agency, US Fish and Wildlife Service, National Marine Fisheries Service, and the Georgia Department of Natural Resources, Environmental Protection Division.

The actual approval of the use of this mitigation bank for a specific project is the decision

of the USACE pursuant to Section 10 of the Rivers and Harbors Act [and/or] Section 404 of the Clean Water Act. The USACE provides no guarantee that any particular individual or general permit will be granted authorization to use this wetland [and/or] stream compensatory mitigation bank to compensate for unavoidable wetland [and/or] stream impacts associated with a proposed permit, even though mitigation from this bank may be available.

Authority: A Public Notice regarding proposed mitigation banks is required pursuant to 33 CFR Parts 325 and 332 and 40 CFR Part 230 “Compensatory Mitigation for Losses of Aquatic Resources; Final Rule” (“Rule”) published in the Federal Register on April 10, 2008.

Consideration of Public Comments: The USACE is soliciting comments from the public; federal, state, and local agencies and officials; Native American Tribes; and other interested parties in order to consider and evaluate this proposed mitigation bank. The Prospectus can be seen in the US Army Corps of Engineers, Savannah District, Regulatory Division,

Piedmont Branch [or] Coastal Branch, XXX XXXXXX, XXXXXXXXX, Georgia XXXXX. Written comments received will be considered by the USACE in evaluating this proposal. Comments are used to assess impacts on endangered species, historic properties, conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards and flood plain values (in accordance with Executive Order 11988), land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

[Provide a minimum a statement pertaining to: threatened and endangered species; and cultural resources, e.g.] Preliminary review, provided by the bank’s sponsor, indicates that:

1. An environmental impact statement will not be required; 2. No species of fish, wildlife, or plant (or their critical habitat) listed as endangered or threatened under the Endangered Species Act of 1973 (PL 93-205) will be affected; and 3. No cultural or historic resources considered eligible or potentially eligible for listing on the National Register of Historic Places will be affected according to a web-site check. However, if it determined necessary, a Phase I Cultural Resource Survey will be provided and reviewed for all areas of the proposed mitigation bank site where any land disturbance activities will be performed. Additional information may change any of these preliminary findings.

Comment Period: Anyone wishing to comment on this proposed mitigation bank should submit comments in writing to the Commander, US Army Corps of Engineers, Savannah District, Regulatory Division, **XXXXXXXXXX Branch, XXX XXXXXXXXXXXX, XXXXXXXX, Georgia XXXXX**, no later than 30-days from the date of this Public Notice. Please refer to the mitigation bank name (**XXXXXXXX Mitigation Bank**) and the application number (**XXXXXXXXXX**).

If you have any further questions concerning this matter, please contact **XX. XXXX
XXXXX** at **(XXX) XXX-XXXX**.

X ENCL

APPENDIX 4

SAMPLE CONTRACTUAL AGREEMENT: BANKING INSTRUMENT APPROVAL LETTER AND AUTHORIZATION

BI Approval Letter

Regulatory Division
File Number

Bank Sponsor
Address
_____, Georgia _____

Dear Mr. _____:

I refer to the Banking Instrument (BI) entitled
“ _____ ” dated _____, and submitted on
_____. The document outlines the establishment, design, construction and
operation of a _____-acre mitigation bank that has the potential to generate a total of
_____ wetland and _____ stream mitigation credits. The bank site is located in
_____ County, Georgia, at latitude ____° ____' ____" North and longitude ____° ____' ____"
West. Please refer to the _____ Mitigation Bank and project number
_____ in all communication concerning this matter.

Pursuant to 33 Code of Federal Regulations (CFR) Part 332, 40 CFR Part 230, and in
accordance the requirements of the “Compensatory Mitigation for Losses of Aquatic
Resources; Final Rule” (Rule), published in the Federal Register, Volume 73, Number 70
(Rule), we have coordinated the BI with other members of the Interagency Review Team
(IRT) for this bank and solicited their comments and recommendations. The IRT for this
bank is chaired by a member of my staff, with participating members from the US
Environmental Protection Agency, the US Fish and Wildlife Service and the Georgia
Department of Natural Resources. On _____, we formally notified the other
members of the IRT that the Savannah District, US Army Corps of Engineers planned to
approve the BI. As of the date of this letter, which is more that 45 days from our receipt
of the subject BI, no member of the IRT has formally objected to approval of the BI
under the provisions outline in the Rule.

Based our review, we have determined that the approval of this bank is warranted. Please
sign both copies of the attached Bank Authorization and return them for validation.

If you have any questions concerning this matter, please feel free to contact Project
Manager, phone number.

Sincerely,

Russell L. Kaiser

Chief, Regulatory Division

Enclosure

Copies Furnished:

US Environmental Protection Agency
Wetlands Protection Section, Region IV
Attn: Bob Lord
61 Forsyth Street SW
Atlanta, Georgia 30303-8960

Georgia Department of Natural Resources
Environmental Protection Division
Attn: Keith Parsons
4220 International Parkway, Suite 101
Atlanta, Georgia 30334

US Fish and Wildlife Service
Attn: Deborah Harris
105 Westpark Drive, Suite D
Athens, Georgia 30606

Mitigation Bank Authorization

Bank: _____ Mitigation Bank

Permit Number: _____

Bank Sponsor: _____ (Name) _____
_____ (Address) _____

Location: The mitigation bank site is located _____
_____, _____ County, Georgia, latitude ____° ____' ____"
North and longitude ____° ____' ____" West.

Project Description: The mitigation bank site is a ____-acre tract that has the potential to generate a total of _____ wetland and _____ stream mitigation credits. The bank site includes _____ linear feet of _____ stream and _____ acre of wetlands. Measurable success criteria and a credit release schedule will have to be met over a 7-year monitoring period for stream credits to be approved and released by the US Army Corps of Engineers prior to any sales of credits by the bank. Long-term management/stewardship for this bank will be provided by a third party, non-profit conservation organization.

We have completed our review of the Banking Instrument (BI) and determined that work proposed in waters of the United States, necessary to accomplish mitigation restoration and enhancement at this bank site is authorized under Nationwide Permit (NWP) No. 27 as described in Part B (27) of our NWP Program, published in the March 12, 2007, Federal Register, Vol. 72, No. 47, Pages 11092-11198 (72 FR). The NWPs and Savannah District NWP Regional Conditions can be found on our Web Site at www.sas.usace.army.mil/permit.htm (See Nationwide Permits and Regional Conditions).

Your use of this NWP is valid only if it meets the terms and conditions below:

a. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by the NWP you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort, or if the site is eligible for listing in the National Register of Historic Places.

b. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary, to ensure that it is being or has been accomplished, in accordance with the terms and conditions of your BI.

c. The activity is conducted in accordance with the information submitted and meets the conditions applicable to the NWP, as described at Part C of the NWP Program and the Savannah District NWP Regional Conditions.

d. Prior to the commencement of work authorized under this NWP, the permittee shall perpetually protect the ____-acre mitigation bank with a recorded Declaration of

Covenants and Restrictions. An Attorney must prepare a draft Declaration of Covenants and Restrictions with exhibits for the permit holder and forward it to the US Army Corps of Engineers (USACE), Savannah District, Office of Counsel, for written approval. All restrictive covenants should be drafted utilizing the latest version of the USACE Savannah District's model document entitled, "Declaration of Covenants and Restrictions with Instructions." The model document is located on the Department of the Army, Savannah District, Corps of Engineers, website at www.sas.usace.army.mil/. Select "Obtaining A Permit", scroll down to Compensatory Mitigation, to the Model Declaration of Conservation Covenants and Restrictions, dated October 15, 2008. Upon written approval from the Office of Counsel, record the restrictive covenant in the Land Records Office, of the Clerk of the Superior Court, in _____ County. A copy of the recorded restrictive covenant, showing book and page numbers of its recorded location, shall be provided to Office of Counsel. When a copy of the recorded restrictive covenant, showing book and page numbers, and has been properly executed is received by Office of Counsel this shall complete the requirement for a restrictive covenant.

e. RIBITS is an internet-based system which will be used in the future for the purposes of tracking credit sales and bank information for Savannah District's mitigation banking program. Upon the Savannah District's total conversion to use of RIBITS, bank sponsors will be required to upload all credit transaction data for those banks under their responsibility. Each credit transaction will be entered within 24 hours of that transaction. If the bank sponsor does not accurately enter all credit transactions within the required timeframe, credit sales will be stopped from the bank until the information is corrected.

f. Limits of this Authorization.

(1) Approval of this BI does not obviate the need to obtain other Federal, State, or local authorizations required by law.

(2) Approval of this BI does not grant any property rights or exclusive privileges.

(3) Approval of this BI does not authorize any injury to the property or rights of others.

(4) Approval of this BI does not authorize interference with any existing or proposed federal projects.

g. Limits of Federal Liability. By approving this BI the Federal Government does not assume any liability for the following:

(1) Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

(2) Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

(3) Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

(4) Design or construction deficiencies associated with work necessary to accomplish wetland restoration and/or enhancement activities.

(5) Damage claims associated with any future modification, suspension, or revocation of this BI.

h. Reevaluation of BI Decision. This office may reevaluate its decision on this BI at any time the circumstances warrant. Circumstances that could require reevaluation include, but are not limited to, the following:

(1) You fail to comply with the terms and conditions of this BI.

(2) The information provided by you in support of your BI proves to have been false, incomplete, or inaccurate.

In accordance with Section 7 of the Endangered Species Act (ESA), we reviewed the NWP. Based on the information we have available, we determined that the project would have no effect on any threatened or endangered species, or any critical habitat for such species. Authorization of an activity by a NWP does not authorize the "take" of threatened or endangered species. In the absence of separate authorization, both lethal and non-lethal "takes" of protected species are in violation of the ESA. See Part (C) of 72 FR for more information.

The NWP verification for the BI will be valid for a period of 2-years from the date of this letter, or until the NWP's modified, reissued, or revoked, whichever occurs first. All NWPs will expire on March 18, 2012. It is incumbent upon you to remain informed of changes to the NWPs. Furthermore, if you commence or are under contract to commence this activity before the date the NWP's modified or revoked, you will have twelve (12) months from the date of the modification, or revocation to complete the activity under the present terms and conditions of this NWP.

Revisions to your proposal may invalidate this authorization. In the event changes to this BI are contemplated, I recommend that you coordinate with us prior to proceeding with the work.

IT SHALL NOT BE ACCEPTABLE TO DEVIATE FROM THE BANKING INSTRUMENT EITHER BEFORE OR AFTER COMPLETION OF THE WORK, unless a plan reflecting the modification has previously been submitted to and approved by this office.

Your signature below, as Bank Sponsor, indicates that you accept and agree to comply with the terms and conditions of this BI (Department of Army Permit No. _____). Therefore, as of the signature and date of this letter, the BI is approved and the mitigation bank is authorized to begin operating under the terms of this document.

(BANK SPONSOR)

(DATE)

This Bank Instrument becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

Russell L. Kaiser
Chief, Regulatory Division

(DATE)

APPENDIX 5

ITEMIZATION OF RECCOMENDED ELEMENTS

Recommened Table of Contents for Mitigation Banking Document Submittals

**Please note that all submittals must be on 8.5” x 11” paper, three-hole punched on the left side. The initial submission must be in a three-ring binder of sufficient size to accommodate all documents that will be required to achieve bank approval.

1. Draft Prospectus:
 - 1.1. Bank Sponsor
 - 1.2. Bank Co-Sponsor
 - 1.3. Agent, Consultant, and/or Representative
 - 1.4. Proposed Service Area
 - 1.5. Existing Site Conditions for All Banks
 - 1.5.1. Size, Position in Watershed
 - 1.5.2. Site Coordinates, HUC Designation
 - 1.5.3. Vegetation List, Past/Present/Potential
 - 1.5.4. How bank will contribute to SWAP
 - 1.5.5. Wildlife Utilization, Past/Present/Potential
 - 1.5.6. Literature Review Findings for Threatened and Endangered Species
 - 1.5.7. Literature Review Findings for Cultural Resources
 - 1.5.8. Compatibility with existing or proposed structures (i.e. pipe lines, power lines, roads) located adjacent to or near bank site
 - 1.5.9. Compatibility with existing or proposed uses of adjacent lands
 - 1.5.10. Compatibility with Current/30 Year Impervious Surface Projection
 - 1.5.11. Watershed-scale Features
 - 1.5.11.1. Water Quality
 - 1.5.11.2. Aquatic Habitat Diversity and Connectivity
 - 1.5.12. Flood Plain Management Goals
 - 1.6. Existing Site Conditions for Stream Banks
 - 1.6.1. Linear Feet of Streams by Type and Order
 - 1.6.2. Stream Geomorphology
 - 1.6.3. Existing Aquatic Function Impairments
 - 1.6.4. Chemical Baseline Data Collection Plan
 - 1.7. Existing Site Conditions for Wetland Banks
 - 1.7.1. Acreage of Wetlands by Type
 - 1.7.2. Soils, Current and Relic
 - 1.7.3. Hydrology, Current and Historic
 - 1.7.4. Existing Aquatic Function Impairment
 - 1.8. Stream Bank Objectives
 - 1.9. Wetland Bank Objectives
 - 1.10. Proposed Mitigation Plan
 - 1.10.1. Description of Resources to be Provided
 - 1.10.2. Method of Compensation
 - 1.10.3. Description of All Work to be Performed on Site
 - 1.10.4. Description of how preservation areas meet all 5 threshold criteria
 - 1.10.5. Completed Table 1
 - 1.10.6. Completed Table 2

- 1.11. Summarize probability of success
 - 1.11.1. Resource functions of the project in terms of the needs of the watershed
 - 1.11.2. Ecological suitability of the site to achieve the objectives
 - 1.11.3. Site benefits
- 1.12. Qualifications of Sponsor for Bank Success
 - 1.12.1. Documentation of All Banking Experience, including successes and failures
 - 1.12.2. Statement of Adequate Financing
 - 1.12.3. Potential of Site for Success
 - 1.12.4. Documentation of Sponsor's Consulting Firm's Experience/Success or Failure with Banking
 - 1.12.5. Statement of training/experience of team designing the project, contractors who will construct the project.
- 1.13. Maps, Figures, and Photographs
 - 1.13.1. Vicinity Map and Written Directions to Site
 - 1.13.2. County Road Map
 - 1.13.3. Property Plat
 - 1.13.4. 12-Digit HUC Map
 - 1.13.5. USGS Quadrangle Sheet
 - 1.13.6. Aerial Photograph
 - 1.13.7. Soil Map
 - 1.13.8. National Wetland Inventory Map
 - 1.13.9. Standard Service Area Map.
 - 1.13.10. Georgia State Wildlife Action Plan (SWAP) Map
- 1.14. Additional Required Maps, Figures, Photographs
 - 1.14.1. FAA-regulated Sites Within 5 Mile Radius of Project
 - 1.14.2. Map of known Threatened and Endangered Species Within 1 Mile Radius
 - 1.14.3. Map of Known Cultural Resources Within 1 Mile Radius
 - 1.14.4. Map of Proposed Restoration, Enhancement, Preservation, Creation, and Upland Buffer Areas
 - 1.14.5. Photographic Record of all Habitat Types Present
- 1.15. Real Property Requirements
 - 1.15.1. Results of Title Search
 - 1.15.2. Copy of Deed of Title
 - 1.15.3. Copies of all Deeds to Secure Debt
 - 1.15.4. Copies of all Recorded Easements, liens, rights-of-way, and most recent recorded platted survey
 - 1.15.5. Identify outstanding third party rights or leases
 - 1.15.6. Identify if property is presently protected by a conservation easement
 - 1.15.7. Identify if site is part of a commercial or residential development
 - 1.15.8. Identify any anticipated allowable public uses of the property
 - 1.15.9. Statement that access or right-of-way exists to bank site
 - 1.15.10. Statement that there is no litigation, zoning, or other legal impairment to proceeding with bank proposal

- 2. Prospectus
 - 2.1. Data to Support PN
 - 2.1.1. USACE-verified Delineation of Waters
 - 2.1.2. Statement of Potential Effects to Threatened and Endangered Species
 - 2.1.3. Statement of Potential Effects to Cultural Resources
 - 2.1.4. Baseline Data Collection Plan for Wetlands
 - 2.1.4.1. Soils
 - 2.1.4.2. Current Vegetation and Proposed
 - 2.1.4.3. Transect Locations
 - 2.1.4.4. Hydrologic Monitoring Plan
 - 2.1.4.4.1. Data Collection Method
 - 2.1.4.4.2. Proposed Well Locations On-site and at Reference Site
 - 2.1.4.4.3. Discussion of Adequacy
 - 2.1.4.4.4. Type of Wells Proposed, Frequency/Duration of Data Collection
 - 2.1.5. Baseline Data Collection Plan for Streams
 - 2.1.5.1. Method for Collecting Geomorphic Data
 - 2.1.5.2. Stream Flows
 - 2.1.5.3. Location of Stream Gauges
 - 2.1.5.4. Rosgen Classification
 - 2.1.5.5. Simon Channel Evolution Stage
 - 2.1.5.6. Geomorphic Conditions
 - 2.1.5.7. Fish and Benthos
 - 2.1.5.8. Location of Reference Stream
 - 2.1.5.9. Riparian Vegetation Sampling
 - 2.1.6. Conceptual Mitigation Work Plan Details
 - 2.1.6.1. Construction Methods
 - 2.1.6.2. Establishment of Desired Plant Community
 - 2.1.6.3. Invasive Plant Species Control
 - 2.1.6.4. Soil Management and Erosion Control
 - 2.1.6.5. For Streams, Plan Form Geometry, Channel Form and Design Discharge
 - 2.1.7. Summary of Chemical Baseline Data Collected for Streams
 - 2.1.8. Identify attorney who will prepare restrictive covenants
 - 2.1.9. Statements of Concurrence and Agreement to Provide Additional Information Consistent with Guideline Requirements
- 3. Draft Banking Instrument
 - 3.1. Baseline Study Findings
 - 3.2. Mitigation Work Plan
 - 3.2.1. 60% Design
 - 3.2.2. Construction Methods,
 - 3.2.3. Timing, and Sequence
 - 3.2.4. SOP-Required Drawings
 - 3.2.5. Source of Native Vegetation
 - 3.2.6. Plant Establishment Methods
 - 3.2.7. Invasive Plant Species Control

- 3.2.8. Nuisance Animal Control
- 3.2.9. Grading Plan
- 3.2.10. Soil Management and Erosion Control
- 3.3. Site Ownership and Protection required language from Section 8.1.3. in Guidelines
- 3.4. Financial Assurances
 - 3.4.1. Justification for Requirement or Not
 - 3.4.1.1. Plan for Eventual Phase Out
 - 3.4.1.2. Amount and Form
 - 3.4.1.3. Payable at the Direction of USACE
- 3.5. Adaptive Management and Contingency Plans
- 3.6. Long-Term Management Plan
- 3.7. Long-Term Maintenance Plan (i.e. signage, fencing, roads, trails)
- 3.8. Long-Term Management and Maintenance Funding
- 3.9. Bank Credit Methodology
- 3.10. Credit Release Schedule
- 3.11. Performance/Success Criteria
- 3.12. Monitoring Criteria
- 3.13. Reporting Protocols
- 3.14. Accounting Procedures
- 3.15. Default and Closure Provisions
- 3.16. Statement of Legal Responsibility

4. Final Banking Instrument

**The Final Banking Instrument shall be the compendium of all above topics after IRT review, comment, and associated changes, corrections, and additions.

APPENDIX 6

REPORTING PROTOCOL

Monitoring reports should comply with the timeframes specified in the BI. Monitoring reports will not be used as a substitute for on-site compliance inspections. The monitoring report will provide the PM with sufficient information on the compensatory mitigation project to assess whether it is meeting performance standards, and to determine whether a compliance visit is warranted. The party responsible for monitoring can electronically submit the monitoring reports and photos for review.

Non-compliance and default procedures may be taken if the bank sponsor fails to submit complete and timely monitoring reports.

b. Contents of Monitoring Reports. Monitoring reports provide the PM with a convenient mechanism for assessing the status of required compensatory mitigation projects. The PM should schedule a site visit and determine potential remedial actions if problems with the compensatory mitigation project are identified in a monitoring report.

Monitoring reports should be concise and effectively provide the information necessary to assess the status of the compensatory mitigation project. Reports should provide information necessary to describe the site conditions and whether the compensatory mitigation project is meeting its performance standards. The submittal of large bulky reports that provide mostly general information is discouraged. While often helpful as background, reiteration of the mitigation and monitoring plan content, lengthy discussions of site progress, and extensive paraphrasing of quantified data are unnecessary.

Monitoring reports will include a Monitoring Report Narrative that provides an overview of site conditions and functions. This Monitoring Report Narrative should be concise and generally less than 10 pages, but may be longer for compensatory mitigation banks with complex monitoring requirements. Monitoring Report Narratives may be posted on each District's Regulatory web site or RIBITS.

Monitoring reports will also include appropriate supporting data to assist reviewers in determining how the compensatory mitigation project is progressing towards meeting its performance standards. Such supporting data may include plans (such as as-built plans), maps, and photographs to illustrate site conditions, as well as the results of functional, condition, or other assessments used to provide quantitative or qualitative measures of the functions provided by the compensatory mitigation project site.

Monitoring Report Narrative:

Project Overview (1 page)

- (1) Corps Permit Number and Name of the Mitigation Bank or In-Lieu Fee Project
- (2) Name of party responsible for conducting the monitoring and the date(s) the inspection was conducted.

- (3) A brief paragraph describing the purpose of the approved project, acreage and type of aquatic resources impacted, and mitigation acreage and type of aquatic resources authorized to compensate for the aquatic impacts.
- (4) Written description of the location, any identifiable landmarks of the compensatory mitigation project including information to locate the site perimeter(s), and coordinates of the mitigation site (expressed as latitude, longitudes, UTM's, state plane coordinate system, etc.).
- (5) Dates the compensatory mitigation project commenced and/or was completed.
- (6) Short statement on whether the performance standards are being met.
- (7) Dates of any recent corrective or maintenance activities conducted since the previous report submission.
- (8) Specific recommendations for any additional corrective or remedial actions.

Requirements (1 page) List the monitoring requirements and performance standards, as specified in the approved mitigation plan, mitigation banking instrument, or special conditions of the DA permit, and evaluate whether the compensatory mitigation project site is successfully achieving the approved performance standards or trending towards success. A table is a recommended option for comparing the performance standards to the conditions and status of the developing mitigation site.

Summary Data (maximum of 4 pages) Summary data should be provided to substantiate the success and/or potential challenges associated with the compensatory mitigation project. Photo documentation may be provided to support the findings and recommendations referenced in the monitoring report and to assist the PM in assessing whether the compensatory mitigation project is meeting applicable performance standards for that monitoring period. Submitted photos should be formatted to print on standard 8 1/2" x 11" paper, dated, and clearly labeled with the direction from which the photo was taken. The photo location points should also be identified on the appropriate maps.

Maps and Plans (maximum of 3 pages) Maps should be provided to show the location of the compensatory mitigation site relative to other landscape features, habitat types, locations of photographic reference points, transects, sampling data points, and/or other features pertinent to the mitigation plan. In addition, the submitted maps and plans should clearly delineate the mitigation site perimeter(s), which will assist PMs in locating the mitigation area(s) during subsequent site inspections. Each map or diagram should be formatted to print on standard 8 1/2" x 11" paper and include a legend and the location of any photos submitted for review. As-built plans may be included.

Conclusions (1 page)
A general statement should be included which describes the conditions of the compensatory mitigation project. If performance standards are not being met, a brief explanation of the difficulties and potential remedial actions proposed by the permittee or sponsor, including a timetable, should be provided. The USACE will ultimately determine if the mitigation site is successful for a given monitoring period.

APPENDIX 7

CREDIT SALES REPORTING

Required Credit Sale Statement Format

Bank Name
Bank Address, City, State, Zip Code
Bank Contact Phone Number

Date

US Army Corps of Engineers, Savannah
Regulatory Division, Coastal Branch
Attention: (USACE Project Manager)
100 W. Oglethorpe Avenue
Savannah, Georgia 31402

Or

US Army Corps of Engineers, Savannah
Regulatory Division, Piedmont
Attention: (USACE Project Manager)
1590 Adamson Parkway, Suite 200

Dear Mr. /Ms. XXXXXXXX,

In accordance with the Savannah District’s instructions for reporting credit sales, we are providing the following to document a mitigation bank credit sale:

Date of Sale	
Dept. of the Army File Number	
Permittee	
County	...of Impact
Watershed	...of Impact
Type of Credits	Specify Wetland or Stream
Number of Credits Sold	
Project within Service area of bank	Specify Primary or Secondary
Impact meets sales restrictions on bank	Specify Yes or No

Please contact me with any questions.

Sincerely,

XXXXXXXX

Bank POC

Required Credit Sale Ledger Format

Bank Name
Bank Address, City, State, Zip Code
Bank Contact Phone Number

Total possible wetland credits after all releases: Assume best success
Total wetland credits released for bank sale to date:

Date of sale or release	Permit #	Permittee	County	# of credits sold	# of credits released	# of credits remaining

Total possible stream credits after all releases: Assume best success
Total stream credits released for bank sale to date:

Date of sale or release	Permit #	Permittee	County	# of credits sold	# of credits released	# of credits remaining

APPENDIX 8

BANK FACT SHEET

Fact Sheet and Required Information for Adding a Mitigation Bank to the
Regional Internet Bank Information Tracking System (RIBITS)

Name of Bank:
Bank POC:
Phone number:
Email address:
Mailing address:

USACE Project Manager:
USACE file #:

Bank Location Information:

County:
Lat/Long (in decimal degrees):
12 Digit HUC in which bank site is located: _____;
Name of main stream in 12 Digit HUC: _____;
Nearest named stream on USGS 7.5 minute series map: _____.
Attach copy of approved service area map.

Primary Service Area HUC: _____; Name of Primary Service Area: _____
Secondary Service Area HUC: _____; Name of Secondary Service Area: _____
Secondary Service Area HUC: _____; Name of Secondary Service Area: _____

Bank Type: Wetland, Stream or both:
Mode of Protection: _____
[e.g., restrictive covenant, conservation easement, both or other]

Site Description (please check all habitat types that occur at the mitigation bank site, and include a narrative description of habitat types that exists and/or will be enhanced/restored within the bank site, T&E species, cultural resources, etc.):

- | | | | |
|------------------------------------|-------------------------------------|----------------------------------|-------------------------------------|
| <input type="checkbox"/> Estuarine | <input type="checkbox"/> Lacustrine | <input type="checkbox"/> Marine | <input type="checkbox"/> Palustrine |
| <input type="checkbox"/> Riparian | <input type="checkbox"/> Riverine | <input type="checkbox"/> Uplands | |

Description:

If a wetland bank:

Total credits available after all releases (assume best success):
Credits released:
Acres of restoration (including enhancement):
Acres of preservation:
Acres of upland buffer:

If a stream bank:

Total credits available after all releases (assume best success):
Credits released:
Linear feet of restoration:
Linear feet of riparian buffer restoration:
Linear feet of preservation:

It will be necessary for this information, along with a Service Area Map, to be provided by the bank's USACE Project Manager to the Banking Project Manager, with verification that the subject bank has been approved and credits have been released.

APPENDIX 9

PROPERTY AND OWNERSHIP LEGAL ISSUES

PROPERTY OWNWESHIP LEGAL ISSUES

Subordination of Deed to Secure the Debt. If the mitigation bank property is encumbered with a deed to secure the debt, a "Consent and Subordination" document shall be prepared by the owner's attorney and the Lender shall be required to consent to the terms and conditions of the Declaration of Conservation Covenants and Restrictions which shall run with the land and agree that any foreclosure or any other remedy available to the Lender under the Security Deed will not render void or otherwise impair the validity of the Declaration. The model language for the "Consent and Subordination" is provided on the Savannah District web site as part of the instructions for the Model Declaration (<http://www.sas.usace.army.mil/Regulatory%201.htm>).

Bank Transfer and Notification. No credits shall be approved for sale after transfer of mitigation bank property/credits until such time as USACE has been notified and completed a compliance determination. The Savannah District shall be notified should ownership of the real property and/or credits available for sale be transferred, sold, conveyed, merged with another entity, become a subsidiary to a corporation, become part of a new partnership or business entity, be subject to foreclosure, bankruptcy or court proceeding, or transferred by any other means whatsoever. USACE may review the status and compliance of the bank and reserves the right to make the final determination as to compliance of a mitigation bank with the banking instrument, the real estate site protection documents and accounting of credits. Should the bank be in compliance, the new owner/transferee of the mitigation bank property and/or credits must provide USACE with written adoption of the terms and conditions of the mitigation banking instrument and provide acknowledgement of the terms and conditions of the recorded restrictive covenant.

Eminent Domain, Bankruptcy, Court Proceedings. The owner of the property shall provide the Savannah District with written notice 60 calendar days prior to any action taken to extinguish, modify or otherwise alter the Declaration of Conservation Covenants and Restrictions or ownership of credits. The policy and procedure for amendments to the Declaration of Conservation Covenants and Restrictions is located on the Savannah District web site (address above). If any part or all of the protected property subject to the mitigation banking instrument and the Declaration of Conservation Covenants and Restrictions is taken by exercise of the power of eminent domain, USACE shall be given notification for the purpose of providing the condemner with the credit calculation (cost) of replacing the values, services and functions of the wetlands, streams, buffer and habitat to be impacted with other property within the watershed that provide the same environmental values, services and functions of wetlands, streams, buffers and habitat pursuant to the Clean Water Act Section 404 (33 U.S.C. 1344) or Section 10 of the Rivers & Harbors Act of 1899 (33 U.S.C. 401). USACE reserves the right to withhold the processing of any Clean Water Act Section 404 or Section 10 permit associated with any application or action that is the subject of condemnation or bankruptcy until such time as the condemnation and/or bankruptcy action is resolved pursuant to the Clean Water Act and its implementing regulations.

Removal to U.S. Federal District Court. In any adverse legal proceeding in State or Superior Courts of Georgia affecting property that is protected by the requirements of the CWA Section 404 (33 U.S.C. 1344) or Section 10 of the Rivers & Harbors Act of 1899 (33 U.S.C. 401), the USACE reserves the right to request that the U.S. Department of Justice appear on behalf of the USACE and/or remove said action to the United States Federal District Court in the district where the land lies.

APPENDIX 10: MITIGATION METRICS AND PERFORMANCE STANDARDS

1. Introduction.

The following recommended monitoring metrics and performance standards have been developed to correlate with stream and wetland mitigation bank objectives. An illustrative list of potential mitigation bank objectives is presented in Sections 6.1.8 and 6.1.9. For each bank proposal, the sponsor with the support of the IRT shall identify specific bank objectives. These objectives will be used to further define the baseline surveys and monitoring variables. The results will be used below to determine overall success and support credit releases.

2. Monitoring Metrics and Performance Standards.

Each approved bank will have monitoring requirements, and these requirements will be based on the objectives. As displayed below, there are three overarching monitoring metrics for each resource category. For streams, metrics will assess physical, chemical and biological factors. For wetlands, metrics will assess buffer, abiotic, and biotic factors. Success for each variable will be measured based upon a pass/fail approach. The percentage of variables (of each factor) with a passing score will be used to determine if the mitigation bank has met the performance standards required for annual success credit releases.

In order to achieve a credit release for a stream or wetland mitigation bank, the cumulative score must minimally achieve a total mean score of 60% for the three factors. If this minimum score is not obtained in any one year, no credits will be released. If the total mean score is between 60 and 79%, the USACE may release 50% of the total credits scheduled for release during that monitoring period. Providing site adjustments are made and new performance metrics achieved, credits withheld from release may be available the following year. If the total mean score is between 80 and 100%, the USACE may release 100% of the total credits scheduled for release during that monitoring period.

For a mitigation bank that is comprised of both stream and wetland credits, if the total individual mean score for one or both (i.e., stream and/or wetland) achieves a credit release of 50%, then the total credits released for both stream and wetland would not be greater than 50%. If the total individual mean score for both (i.e., stream and wetland) achieve 80% respectively, then the total credit release for both stream and wetland would be 100%. If the total individual mean score for either one of both (i.e., stream and/or wetland) achieve less than 60%, then there would be no stream or wetland credit release for that monitoring period.

Monitoring station data will be used to determine if a variable receives a passing (+) or failing (-) grade. Each monitoring station for a variable will be used to represent a percentage of the total credits (stream or wetland) generated for the mitigation bank. The data from each monitoring station will be assessed collectively to determine success. In order to achieve a passing grade for a monitoring variable, data representing 80% of the total credits generated must pass the interim or final success criteria. Data assimilation and credit release examples are provided in Figures 1 through 6 (these figures can be found in Section 3 of this document).

2.1 Stream Monitoring Metrics.

For streams, metrics will assess physical, chemical and biological factors. Physical variables include: Channel Dimension; Channel Pattern and Profile; and, Streambank Stability and Nearbank Stress. For this factor (i.e. Physical), all variables must be passed to obtain a potential stream credit release. Chemical variables include: Temperature; Dissolved Oxygen or Biochemical Oxygen Demand; pH; and, Total Suspended Solids. Biological variables include: Riparian Vegetative Survival and Growth; Riparian Vegetative Structure; Fish Index of Biotic Integrity; Macro-invertebrate Site Index; and, Physical Habitat Assessment. Although the core variables that are recommended for monitoring along with their performance standards are presented in the following tables, the IRT shall determine on a case by case evaluation of the proposed bank objectives if all metric variables are appropriate. Additional supplementary variables may be applicable and used as appropriate. Examples are presented in the tables below.

STREAM METRICS: PHYSICAL			
Variables	Interim and Final Success Criteria	SCORE (+/-)	TOTAL (%)
Channel Dimension	<p><u>Priority 1, 2 & 3 Channel Restoration:</u> Geomorphic dimension exhibits max/min design range (in table below) as compared to the as-built survey, unless sponsor documents the reach has a stable dimension.</p> <p><u>Priority 4 Channel Restoration, Structure Removal, and Channel Preservation:</u> Geomorphic dimension remains within measured baseline or max/min design ranges (in table below), if applicable. Channel exhibits no headcuts or bank failures, and all vanes, revetments, root wads, and other bank stabilizing structures are intact and functioning.</p>		
Channel Pattern and Profile	<p><u>Priority 1, 2, and 3 Channel Restoration:</u> Channel pattern and profile survey exhibits appropriate max/min design ranges (in table below) as compared to the as-built survey, unless sponsor documents the reach has a stable pattern and profile.</p> <p><u>Priority 4 Channel Restoration, Structure Removal, and Channel Preservation:</u> A stable channel pattern and profile exist as compared to baseline.</p>		
Streambank Stability and Nearbank Stress	<p>Streambanks are stable, excluding normal underbank cutting.</p> <p>➤ As measured by Bank Erosion Hazard Index</p>		
TOTALS			
<i>In order to get ANY stream credit release, a (+) score must be achieved for all variables.</i>			

Table: Geomorphic Variables

Parameter	Restoration Type Required	Value			Units
		Design Parameters (Max/Min)	As-Built	Monitoring Year(s)	
Rosgen Stream Type	P1, P2, P3, P4				
Bankfull Width (W_{bkf})	P1, P2, P3, P4				Feet
Bankfull Mean Depth (d_{bkf})	P1, P2, P3, P4				Feet
Cross-Sectional Area (A_{bkf})	P1, P2, P3, P4				Square Feet
Width/Depth Ratio (W/D ratio)	P1, P2, P3, P4				
Bankfull Max Depth (d_{mbkf})	P1, P2, P3, P4				Feet
Floodprone Area Width (W_{fpa})	P1, P2, P3, P4				Feet
Bank Height Ratio (BHR)	P1, P2, P3, P4				
Entrenchment Ratio (ER)	P1, P2, P3, P4				
Max Pool Depth	P1, P2, P3, P4				Feet
Pool Width	P1, P2, P3				Feet
Pool to Pool spacing	P1, P2, P3				Feet
Channel Materials (Particle Size Index)	P1, P2, P3, P4				
d_{16}					mm
d_{35}					mm
d_{50}					mm
d_{84}					mm
d_{95}					mm
D_{100}					mm
Slope (S)	P1, P2, P3				Feet per foot
Channel Sinuosity (K)	P1, P2, P3				

Radius of Curvature	P1, P2, P3				
Note: Specific variables will be determined on a case by case evaluation with the IRT and the Bank Sponsor.					

STREAM METRICS: CHEMICAL			
Variables	Interim and Final Success Criteria	SCORE (+/-)	TOTAL (%)
Temperature	Temp: <ul style="list-style-type: none"> • < 90°F (32°C) for warm water streams • Anti-degradation of cold water (trout) streams <p>*If stream temperature exceeds the above success criteria, the applicant must demonstrate that the failure was attributed to changing conditions in the watershed outside of their control. The applicant would need to demonstrate that stream temperature was not greater than background (i.e., stream flow entering the mitigation bank) at any sampling point within the mitigation stream reach.</p>		
Dissolved Oxygen (DO) or Biochemical Oxygen Demand (BOD)	DO: <ul style="list-style-type: none"> • ≥ 4 mg/l for warm water streams (with the exception of some coastal plain streams, which naturally have lower DO conditions) • ≥ 5 mg/l for cold water (trout) streams BOD: <ul style="list-style-type: none"> • 1-4 mg/l 5-day carbonaceous BOD <p>*If stream DO or BOD exceeds the above success criteria, the applicant must demonstrate that the failure was attributed to changing conditions in the watershed outside of their control. The applicant would need to demonstrate that stream DO or BOD was not greater than background (i.e., stream flow entering the mitigation bank) at any sampling point within the mitigation stream reach.</p>		
pH	6.0-8.5 (with the exception of black water streams, which have more naturally occurring acidic conditions) <p>*If stream pH exceeds the above success criteria, the applicant must demonstrate that the failure was attributed to changing conditions in the watershed outside of their control. The applicant would need to demonstrate that stream pH was not greater than background (i.e., stream flow entering the mitigation bank) at any sampling point within the mitigation stream reach.</p>		
Total Suspended Solids (TSS)	TSS: <ul style="list-style-type: none"> • ≤ 10 NTU at baseflow sampling (above background) • ≤ 50 NTU at storm sampling (above background) 		

Supplementary Monitoring Variables	*Additional monitoring variables can be proposed to demonstrate stream chemical success (see the supplementary chemical variable list below). If an additional variable is proposed, the score of that variable will be weighted equally (50%) to the four core variables (50% collectively). If two additional variables are proposed, the scores of those variables will be weighted equally (33% each) to the four core variables (33% collectively).		
TOTALS			
<p><i>Baseflow and storm baseline sampling at the Prospectus stage of the stream mitigation bank is recommended. In addition to the four core chemical variables listed above, if warranted, the IRT may suggest additional chemical variables be included in the chemical baseline data collection plan at the Draft Prospectus IRT meeting. The addition of supplementary chemical variables would be based upon a reason to believe that the restoration reach(es) may be impaired due to known or potentially viable source of contamination. A review of the surrounding land use (i.e., past 50 years) of the mitigation bank site and existing watershed would be part of the determination for additional chemical variables. If all of the variables in the chemical baseline data collection plan (in both baseflow and storm sampling) fall within the acceptable ranges, then the above four core chemical variables are recommended for chemical data collection in baseflow conditions (i.e., no sampling within 5 days of a storm event) throughout the monitoring period. However, if any of the chemical variables fall outside of the acceptable ranges during baseline sampling, then both baseflow and storm sampling would be additionally recommended for those problem chemical variables throughout the monitoring period *The above standards have been developed in accordance with the State of Georgia Water Quality Standards. These standards may be modified during the development of the pending revision to the Standard Operating Procedure for Compensatory Mitigation.</i></p>			
<p>Supplementary Variables: Temperature, DO/BOD, and PH enhancements; Ortho-Phosphate; Dissolved Oxygen for Sensitive Species - ≥ 7 mg/l; Nitrates; Nitrites; Salinity; Ammonia; Fecal Coliform; Aluminum; Antimony; Arsenic; Barium; Beryllium; Cadmium; Chromium; Copper, HEM (Oil & Grease), Iron, Lead, Manganese, Mercury, Organic Carbon, Selenium, Silver, Semi-volatile Organic Compounds, Thallium, Zinc, Conductivity, Hardness, and/or other pollutants (i.e., pollutants on EPA's Priority Pollutant List)</p>			

STREAM METRICS: BIOLOGICAL				
Variables	Final Success Criteria	Interim Success Criteria	SCORE (+/-)	TOTAL (%)
Riparian Vegetation Survival and Growth	<p><u>Restoration:</u> 150 planted stems (bare root trees and shrubs) per acre.</p> <p><u>Growth:</u> Trees must have tripled in height and crown diameter compared to size at Year 0 (Based on planting density at Year 0 of 435 stems/acre). *Containerized planting growth requirements would be based upon a case by case basis. Volunteer stems can be counted toward targeted criteria if they (1) will produce seeds or fruit useful as wildlife food at maturity, (2) are of equitable size as planted stems at the time success is evaluated, and (3) coincide with desired native species composition.</p>	<p><u>Survival:</u> 350 stems/A @Year 1 310 stems/A @Year 2 270 stems/A @Year 3 240 stems/A @Year 4 210 stems/A @Year 5 180 stems/A @Year 6 or Maintain 150 stems/A through Years 1 – 6.</p> <p><u>Growth:</u> Trees must have doubled in height and crown diameter at Year 4.</p>		

	<p><u>Preservation</u>: Sustain IBI score in preservation reaches.</p> <ul style="list-style-type: none"> ➤ As measured by the Standard Operating Procedure for Conducting Monitoring on Fish Communities in Wadeable Streams in Georgia. ➤ The above methodology is not applicable for streams with known populations of federally listed threatened and endangered fish species. 	<p>over baseline for Years 3 and 5.</p> <p>Same as final criteria</p>		
<p>Macro-invertebrate Site Index</p> <p>* Applicable to all stream orders</p>	<p><u>Restoration</u>: For baseline Site Index scores falling in the Very Poor, Poor, and Fair Rankings, the Site Index score at Year 7 must be 15% over baseline.</p> <p>For baseline Site Index scores falling in the Good Ranking, the Site Index score at Year 7 must be 10% over baseline.</p> <p>For baseline Site Index scores falling in the Excellent Ranking, the Site Index score at Year 7 must increase over baseline.</p> <p><u>Preservation</u>: Sustain Site Index score in preservation reaches.</p> <ul style="list-style-type: none"> ➤ As measured by the Georgia Macro-invertebrate Biological 	<p>Yearly sampling is required</p> <p>For baseline Site Index scores falling in the Very Poor, Poor, or Fair Rankings, the Site Index score must increase over baseline:</p> <p>10% @ Year 1 5% @ Year 3 10% @ Year 5</p> <p>For baseline Site Index scores falling in the Good Ranking, the Site Index score must increase over baseline:</p> <p>5% @ Year 1 3% @ Year 3 5% @ Year 5</p> <p>For baseline Site Index scores falling in the Excellent Ranking, the Site Index score must increase over baseline for Years 1, 3, and 5.</p> <p>Same as final criteria</p>		

Physical Habitat Assessment	<p><u>Restoration</u>: Increase of the Physical Habitat score over baseline. *For streams designed to have a median substrate particle size of gravel or larger (e.g., Rosgen type C4 or E4), the embeddedness parameter within the Physical Habitat Assessment must achieve a score of suboptimal or higher.</p> <p><u>Preservation</u>: Sustain the Physical Habitat Assessment score (and embeddedness score, where appropriate) in preservation reaches.</p> <p>➤ As measured by the Physical Habitat Assessment Methodology outlined in the Georgia Macro-invertebrate Biological Assessment of Wadeable Streams in Georgia.</p>	Same as final criteria		
Supplementary Monitoring Variables	*Additional monitoring variables can be proposed to demonstrate stream biological success.			
TOTALS				
Supplementary Variables: GADNR Fish Index of Well Being (IWB), Federally Listed Threatened & Endangered Species Abundance, State Listed Rare & Endangered Species Abundance, Native Crayfish Abundance, Native Crayfish Diversity, Native Mollusk Abundance, Native Mollusk Diversity, Podostemum Coverage, Percent Canopy Cover of Riparian Vegetation, Percent Absolute Cover of Riparian Vegetation, Wildlife Utilization of Buffer				

STREAM PERFORMANCE STANDARDS SUMMARY	%
PHYSICAL SCORE	
CHEMICAL SCORE	
BIOLOGICAL SCORE	
TOTAL MEAN SCORE	
<p>In order to achieve a credit release, the cumulative score must minimally achieve a total mean score of 60%. If this minimum score is not obtained in any one year, no credits will be released. If the total mean score is between 60 and 79%, the USACE may release 50% of the total credits scheduled for release during that monitoring period. Providing site adjustments have been made and performance increases, credits withheld from release may be available the following year. If the total mean score is between 80 and 100%, the USACE may release 100% of the total credits scheduled for release during that monitoring period.</p>	

2.2 Wetland Monitoring Variables.

For wetlands, metrics will assess buffer, abiotic, and biotic factors. Buffer variables include: Buffer Vegetation and Survival Growth; Buffer Vegetative Structure; and, Percent Cover of Herbaceous Layer

and Litter. Abiotic variables include: Development of Hydric Soil Conditions; and, Hydrologic Regime. For this factor (i.e., Abiotic), all variables must be passed to obtain a potential wetland credit release. Biotic variables include: Wetland Vegetation and Survival Growth; Wetland Vegetative Structure; Development of Vascular Hydrophytic Vegetation; Functional Assessment; and, Native Amphibian Richness and Abundance. Although the core variables that are recommended for monitoring along with their performance standards as presented in the following tables, the IRT shall determine on a case by case evaluation of the proposed bank objectives if all metrics are appropriate. Additional supplementary variables may be applicable and used as appropriate. Examples are presented in the tables below.

WETLAND METRICS: BUFFER				
Variables	Final Success Criteria	Interim Success Criteria	SCORE (+/-)	TOTAL (%)
Buffer Vegetation and Survival Growth	<p><u>Restoration:</u> 150 planted stems (bare root trees and shrubs) per acre.</p> <p><u>Growth:</u> Trees must have tripled in height and crown diameter compared to size at Year 0 (Based on planting density at Year 0 of 435 stems/acre). *Containerized planting growth requirements would be based upon a case by case basis.</p> <p>Volunteer stems can be counted toward targeted criteria if they (1) will produce seeds or fruit useful as wildlife food at maturity, (2) are of equitable size as planted stems at the time success is evaluated, and (3) coincide with desired native species composition.</p> <p><u>Preservation:</u> Sustain the existing basal area within 90% of baseline of mature trees present at Year 0.</p>	<p><u>Survival:</u> 350 stems/A @Year 1 310 stems/A @Year 2 270 stems/A @Year 3 240 stems/A @Year 4 210 stems/A @Year 5 180 stems/A @Year 6 or Maintain 150 stems/A through Years 1 – 6.</p> <p><u>Growth:</u> Trees must have doubled in height and crown diameter at Year 4.</p> <p>Same as final criteria</p>		
Buffer Vegetation Structure	<p><u>Restoration:</u></p> <ol style="list-style-type: none"> 1. Diverse vegetation with no 2 dominant species (with the exception of special habitat types – e.g. Cypress buffers) 2. <5% of stems are non-native woody species (with the exception of Chinese privet, where the stem limits must not exceed 25% unless other conditions would justify further reduction) 3. >60% of stems produce hard or soft mast 	Same as final criteria		

	<p>4. 25-40% of stems are native shrub species</p> <p>Based on stems counted to evaluate survival/growth</p> <p><u>Preservation</u>: Sustain the existing riparian vegetative structure (i.e., dominant species, percent of non-native species, percent of hard and soft mast stems, and percent of native shrubs).</p>	Same as final criteria		
Percent Cover of Herbaceous Layer and Litter	<p><u>Restoration</u>: Increase the percent cover of the herbaceous layer and litter in buffer restoration areas, compared to percent cover of herbaceous layer and litter from baseline.</p> <p><u>Preservation</u>: Sustain $\geq 90\%$ of percent cover of the herbaceous layer and litter at baseline.</p>	Same as final criteria		
Supplementary Monitoring Variables	* Additional monitoring variables can be proposed to demonstrate wetland landscape context.			
TOTALS				
Supplementary Variables: Percent Canopy Cover of Buffer Vegetation, Percent Absolute Cover of Buffer Vegetation, Percent Cover of Non-Native Herbaceous Layer, Native Amphibian Richness, Native Amphibians Diversity, Native Reptilian Richness, Native Reptilian Diversity, Native Avian Richness, Native Avian Diversity, Wildlife Utilization				

WETLAND METRICS: ABIOTIC				
Variables	Final Success Criteria	Interim Success Criteria	SCORE (+/-)	TOTAL (%)
Development of Hydric Soil Conditions	<u>Restoration and Preservation</u> : Soils must meet hydric soils criterion outlined in the 1987 Wetland Delineation Manual and/or the appropriate Regional Supplement.	If hydric soils are not document during the baseline delineation, at minimum, the water table must be 12 inches or less from the surface, for 14 or more consecutive days during the growing season. If this condition occurs at least 50 percent of the time (i.e., 1 out of 2 years, or 4 out of 7 years) during the monitoring period, then hydric soil conditions are considered present.		
Hydrologic Regime	<u>Restoration</u> : Must be within 25% of reference hydrology conditions and/or	Same as final criteria		

	<p>design standards for duration, degree, and frequency.</p> <p>*Hydrology conditions may exceed the reference condition or design standards in wetland restoration, if there are no significant vegetative community changes. If wetter conditions exist, a surrogate variable to replace Increase Hydrology will be implemented (see the surrogate variable listed below).</p> <p><u>Preservation</u>: Sustain hydrology conditions as compared to baseline.</p> <p>➤ Hydrology must meet the minimal requirements outlined in the 1987 Wetland Delineation Manual and/or the appropriate Regional Supplement to pass this variable.</p>	Same as final criteria		
TOTALS				
Surrogate Hydrology Variable: Herbaceous Vegetative Community Change				
<i>In order to get ANY wetland credit release, a (+) score must be achieved for both variables.</i>				

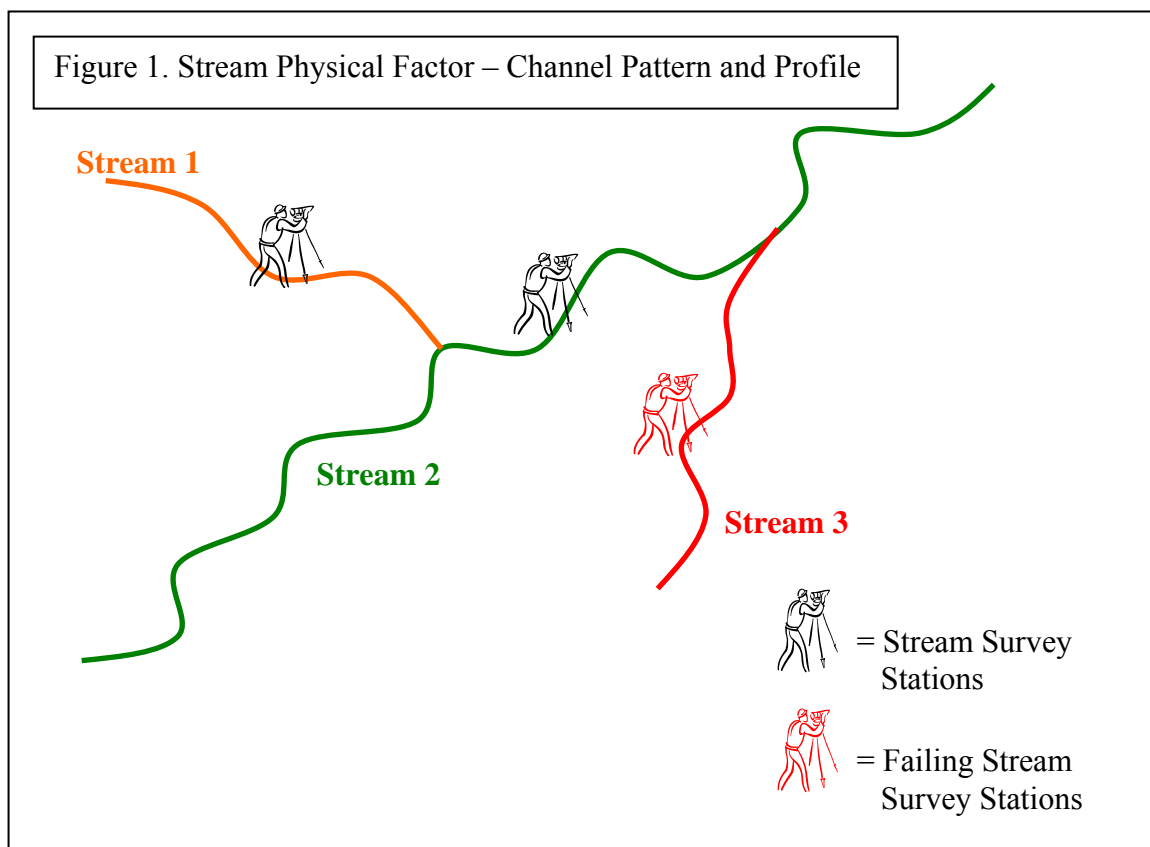
WETLAND METRICS: BIOTIC				
Factors	Final Success Criteria	Interim Success Criteria	SCORE (+/-)	TOTAL (%)
Wetland Vegetation Survival and Growth	<p><u>Restoration</u>: 150 planted stems (bare root trees and shrubs) per acre.</p> <p><u>Growth</u>: Trees must have tripled in height and crown diameter compared to size at Year 0 (Based on planting density at Year 0 of 435 stems/acre). *Containerized planting growth requirements would be based upon a case by case basis.</p> <p>Volunteer stems can be counted toward targeted criteria if they (1) will produce seeds or fruit useful as wildlife food at maturity, (2) are of equitable size as planted stems at the time success is evaluated, and (3) coincide with desired native species composition.</p> <p><u>Preservation</u>: Sustain existing basal area within 90% of baseline of mature trees present at Year 0.</p>	<p><u>Survival</u>: 350 stems/A @Year 1 310 stems/A @Year 2 270 stems/A @Year 3 240 stems/A @Year 4 210 stems/A @Year 5 180 stems/A @Year 6 or Maintain 150 stems/A through Years 1 – 6.</p> <p><u>Growth</u>: Trees must have doubled in height and crown diameter at Year 4.</p> <p>Same as final criteria</p>		

Wetland Vegetation Structure	<u>Restoration:</u> 1. Diverse vegetation with no 2 dominant species (with the exception of special habitat types – e.g. Cypress swamps) 2. <5% of stems are non-native woody species (with the exception of Chinese privet, where the stem limits must not exceed 25% unless other conditions would justify further reduction) 3. >60% of stems produce hard or soft mast 4. 25-40% of stems are native shrub species Based on stems counted to evaluate survival/growth <u>Preservation:</u> Sustain existing riparian vegetative structure (i.e., dominant species, percent of non-native species, percent of hard and soft mast stems, and percent of native shrubs).	Same as final criteria Same as final criteria		
Development of Vascular Hydrophytic Vegetation	Plant community meets the hydrophytic vegetation criterion outlined in the 1987 Wetland Delineation Manual and appropriate Regional Supplements.	Same as final criteria		
Functional Assessment	<u>Restoration:</u> Increase the functional assessment score over baseline. <u>Preservation:</u> Sustain the functional assessment score in preservation areas, compared to baseline.	Same as final criteria Same as final criteria		
Native Amphibian Richness and Abundance	<u>Restoration:</u> Increase the richness and abundance in restoration areas over baseline. <u>Preservation:</u> Sustain the richness and abundance in preservation areas, compared to baseline.	Same as final criteria Same as final criteria		
Supplementary Monitoring Variables	* Additional monitoring variables can be proposed to demonstrate wetland biological success.			
TOTALS				
Supplementary Variables: Percent Canopy Cover of Wetland Vegetation, Percent Absolute Cover of Wetland Vegetation, Percent Cover of Native Wetland Herbaceous Layer, Percent Cover of Non-Native Herbaceous Layer, Accumulation of Biomass/Litter Cover, Federally Listed Threatened & Endangered Species Abundance, State Listed Rare & Endangered Species Abundance, Native Reptilian Richness, Native Reptilian Diversity, Native Avian Richness, Native Avian Diversity				

WETLAND PERFORMANCE STANDARDS SUMMARY	%
BUFFER SCORE	
ABIOTIC SCORE	
BIOTIC SCORE	
TOTAL MEAN SCORE	
<p>In order to achieve a credit release, the cumulative score must minimally achieve a total mean score of 60%. If this minimum score is not obtained in any one year, no credits will be released. If the total mean score is between 60 and 79%, the USACE may release 50% of the total credits scheduled for release during that monitoring period. Providing site adjustments have been made and performance increases, credits withheld from release may be available the following year. If the total mean score is between 80 and 100%, the USACE may release 100% of the total credits scheduled for release during that monitoring period.</p>	

3. Data Assimilation and Credit Release Examples.

Example 1: Figures 1 through 3 are examples of stream data assimilation for individual stream variables. A Stream Performance Standards Summary for Example 1 can be found following Figure 3.



Description of Stream Credit Generation:

Stream 1 – This stream is scheduled to generate 2,000 stream credits (associated with both in-stream and riparian buffer activities).

Stream 2 – This stream is scheduled to generate 7,000 stream credits (associated with both in-stream and riparian buffer activities).

Stream 3 – This stream is scheduled to generate 1,000 stream credits (associated with both in-stream and riparian buffer activities).

Data Assimilation Example:

Based upon the total credits generated by **Stream 1**, it represents 20% of the total stream credits generated for the mitigation bank. In accordance with the success criteria (design parameters) set for Channel Pattern and Profile, the monitoring station within **Stream 1** met the performance standard.

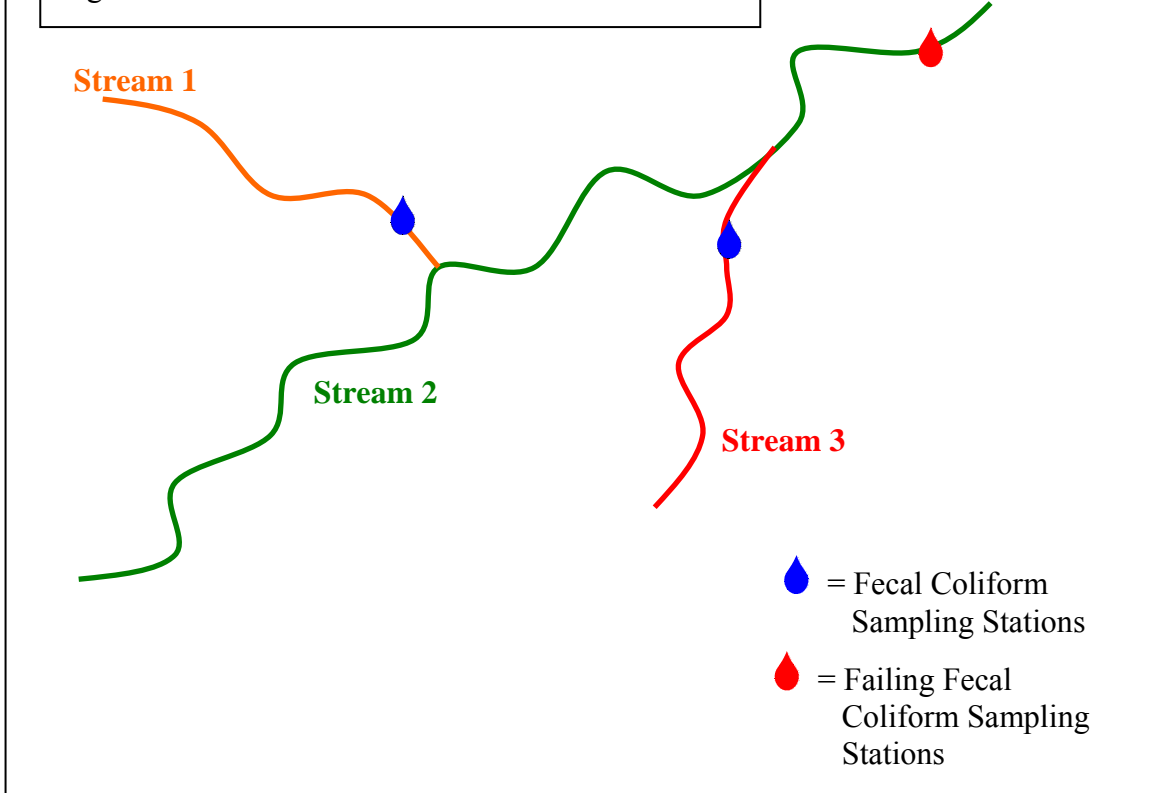
Based upon the total credits generated by **Stream 2**, it represents 70% of the total stream credits generated for the mitigation bank. In accordance with the success criteria (design parameters) set for Channel Pattern and Profile, the monitoring station within **Stream 2** met the performance standard.

Based upon the total credits generated by **Stream 3**, it represents 10% of the total stream credits generated for the mitigation bank. In accordance with the success criteria (design parameters) set for Channel Pattern and Profile, the monitoring station within **Stream 3** failed the performance standard.

Total Variable Score:

Based upon the above example, the Channel Pattern and Profile variable score is **90% (Stream 1 (20%) + Stream 2 (70%) + Stream 3 (0%) = 90%)**. The achievement of a total variable score of 80% to 100% would result in a passing score “+” for the variable.

Figure 2. Stream Chemical Factor – Fecal Coliform



Description of Stream Credit Generation:

Stream 1 – This stream is scheduled to generate 2,000 stream credits (associated with both in-stream and riparian buffer activities).

Stream 2 – This stream is scheduled to generate 7,000 stream credits (associated with both in-stream and riparian buffer activities).

Stream 3 – This stream is scheduled to generate 1,000 stream credits (associated with both in-stream and riparian buffer activities).

Data Assimilation Example:

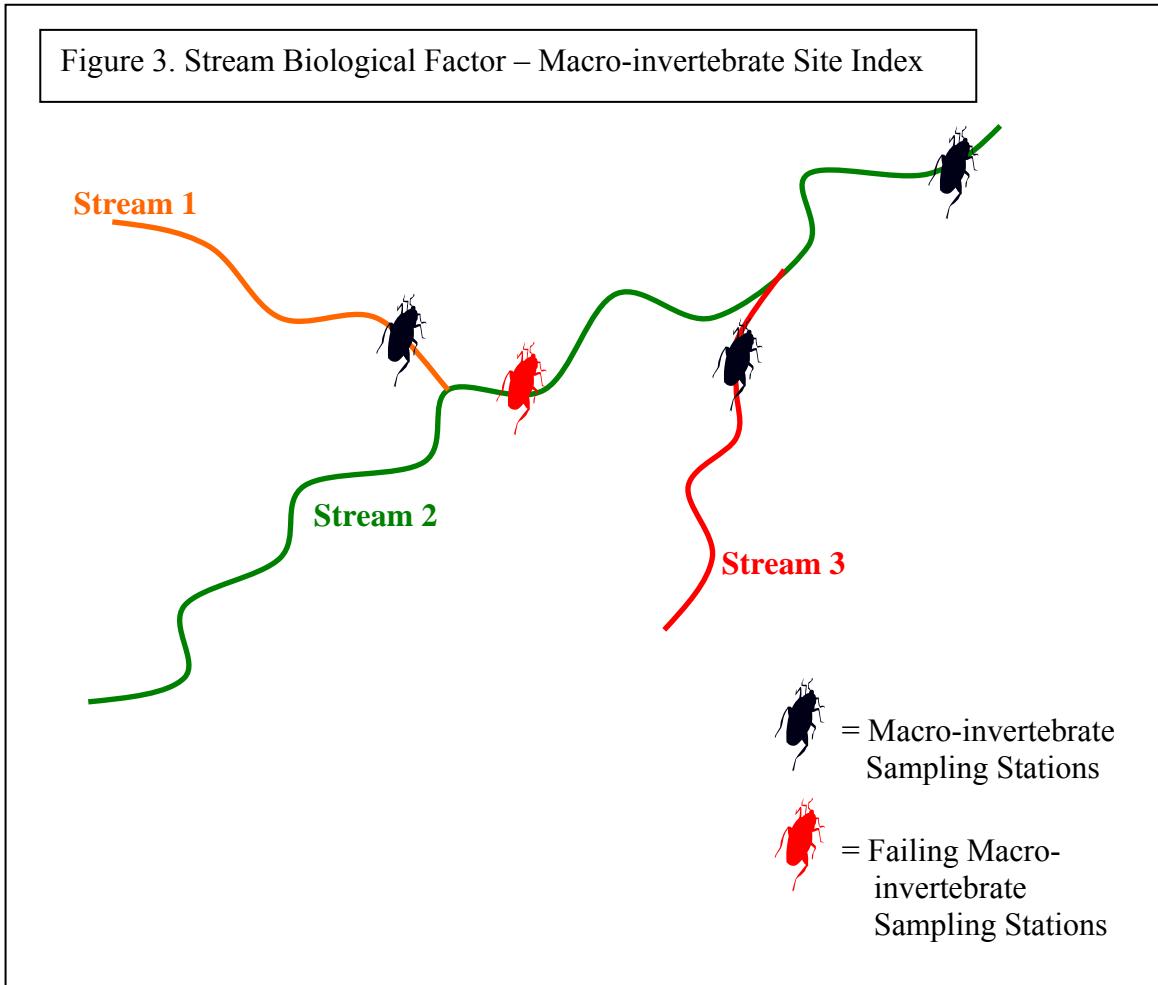
Based upon the total credits generated by **Stream 1**, it represents 20% of the total stream credits generated for the mitigation bank. In accordance with the success criteria (target levels) set for Fecal Coliform, the monitoring station within **Stream 1** met the performance standard.

Based upon the total credits generated by **Stream 2**, it represents 70% of the total stream credits generated for the mitigation bank. In accordance with the success criteria (target levels) set for Fecal Coliform, the monitoring station within **Stream 2** failed the performance standard.

Based upon the total credits generated by **Stream 3**, it represents 10% of the total stream credits generated for the mitigation bank. In accordance with the success criteria (target levels) set for Fecal Coliform, the monitoring station within **Stream 3** met the performance standard.

Total Variable Score:

Based upon the above example, the Fecal Coliform variable score is **30%** (**Stream 1 (20%) + Stream 2 (0%) + Stream 3 (10%) = 30%**). The achievement of a total variable score below 80% would result in a failing score “-” for the variable.



Description of Stream Credit Generation:

Stream 1 – This stream is scheduled to generate 2,000 stream credits (associated with both in-stream and riparian buffer activities).

Stream 2 – This stream is scheduled to generate 7,000 stream credits (associated with both in-stream and riparian buffer activities).

Stream 3 – This stream is scheduled to generate 1,000 stream credits (associated with both in-stream and riparian buffer activities).

Data Assimilation Example:

Based upon the total credits generated by **Stream 1**, it represents 20% of the total stream credits generated for the mitigation bank. In accordance with the success criteria set for the Macro-invertebrate Site Index, the monitoring station within **Stream 1** met the performance standard.

Based upon the total credits generated by **Stream 2**, it represents 70% of the total stream credits generated for the mitigation bank. **Stream 2** has two Macro-invertebrate sampling stations, which each represent approximately 3,500 stream credits (35% of the total stream credits). In accordance with the success criteria set for the Macro-invertebrate Site Index, one out of two monitoring stations within **Stream 2** met the performance standard.

Based upon the total credits generated by **Stream 3**, it represents 10% of the total stream credits generated for the mitigation bank. In accordance with the success criteria set for the Macro-invertebrate Site Index, the monitoring station within **Stream 3** met the performance standard.

Total Variable Score:

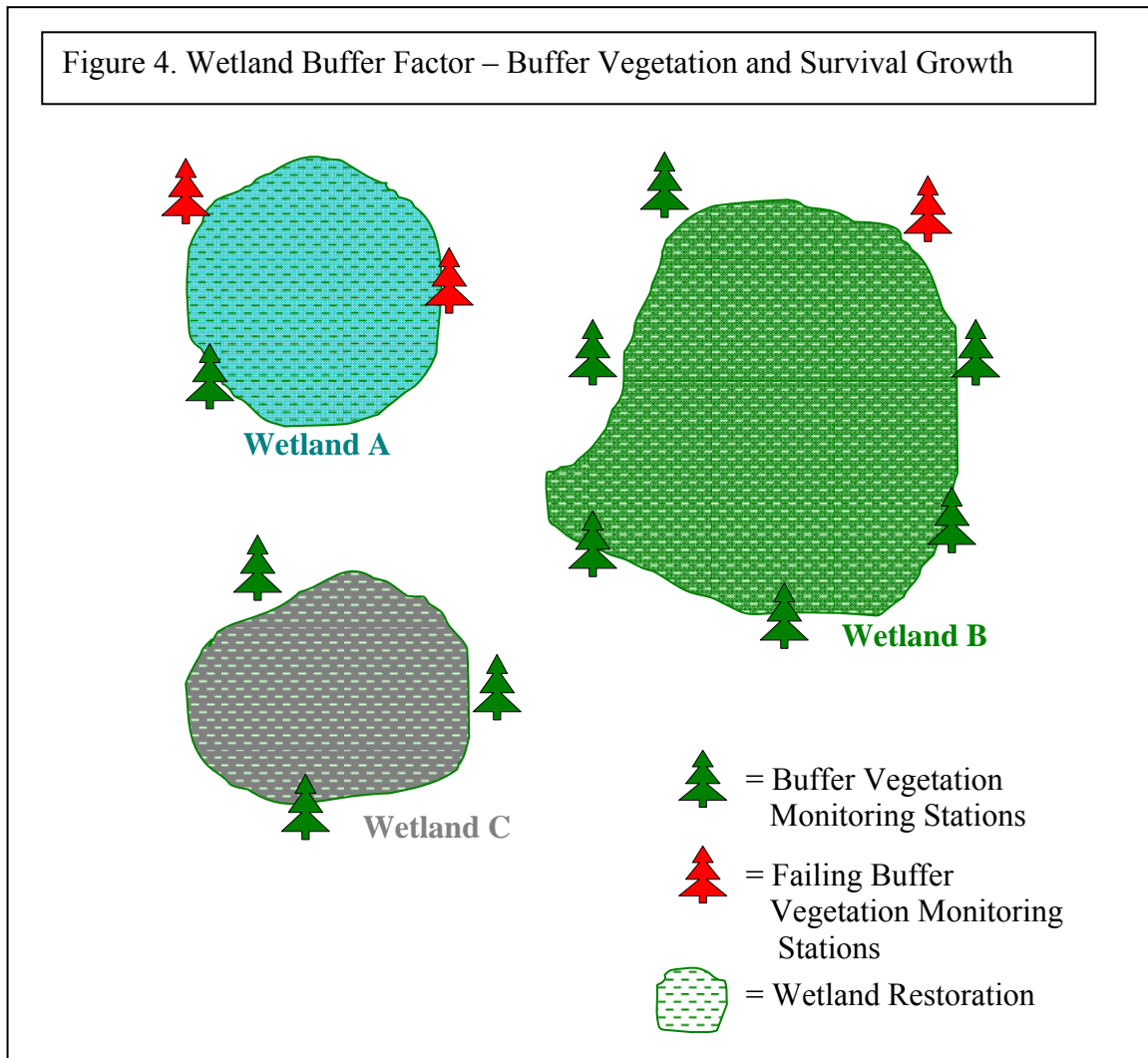
Based upon the above example, the Macro-invertebrate Site Index variable score is **65%** (**Stream 1 (20%) + Stream 2 (35%) + Stream 3 (10%) = 65%**). The achievement of a total variable score below 80% would result in a failing score “-” for the variable.

Example 1 - Stream Performance Standard Summary:

PHYSICAL VARIABLES	SCORE (+/-)	TOTAL (%)
Channel Dimension	+	33.33%
Channel Pattern and Profile	+	33.33%
Streambank Stability and Nearbank Stress	+	33.33%
TOTAL		100%*
<i>* In order to get ANY stream credit release, a (+) score must be achieved for all variables for this factor.</i>		
CHEMICAL VARIABLES	SCORE (+/-)	TOTAL (%)
Temperature	+	8.33%
Dissolved Oxygen or Biochemical Oxygen Demand	+	8.33%
pH	+	8.33%
Total Suspended Solids	+	8.33%
Fecal Coliform	-	0%
Nitrates	+	33.33%
TOTAL		66.66%
BIOLOGICAL VARIABLES	SCORE (+/-)	TOTAL (%)
Riparian Vegetation Survival and Growth	+	20%
Riparian Structure	+	20%
Fish Index of Biotic Integrity	+	20%
Macro-invertebrate Site Index	-	0%
Physical Habitat Assessment	+	20%
TOTAL		80%

STREAM PERFORMANCE STANDARDS SUMMARY	TOTAL (%)
PHYSICAL SCORE	100%
CHEMICAL SCORE	66.66%
BIOLOGICAL SCORE	80%
TOTAL MEAN SCORE	82.22%
In this example, the stream mitigation bank would achieve a release of 100% of the total credits scheduled for release during that monitoring period.	

Example 2: Figures 4 through 6 are examples of wetland data assimilation for individual wetland variables. A Wetland Performance Standards Summary for Example 2 can be found following Figure 6.



Description of Wetland Credit Generation:

Wetland A – This wetland is scheduled to generate 20 wetland credits (associated with wetland hydrological and vegetative restoration, and wetland buffer restoration activities).

Wetland B – This wetland is scheduled to generate 70 wetland credits (associated with wetland hydrological and vegetative restoration, and wetland buffer restoration activities).

Wetland C – This wetland generates 10 wetland credits (associated with wetland hydrological and vegetative restoration, and wetland buffer restoration activities).

Data Assimilation Example:

Based upon the total credits generated by **Wetland A**, it represents 20% of the total wetland credits generated for the mitigation bank. In accordance with the success criteria set for Buffer Vegetation and Survival Growth, one out of three monitoring stations (6.66%) within **Wetland A** met the performance standard.

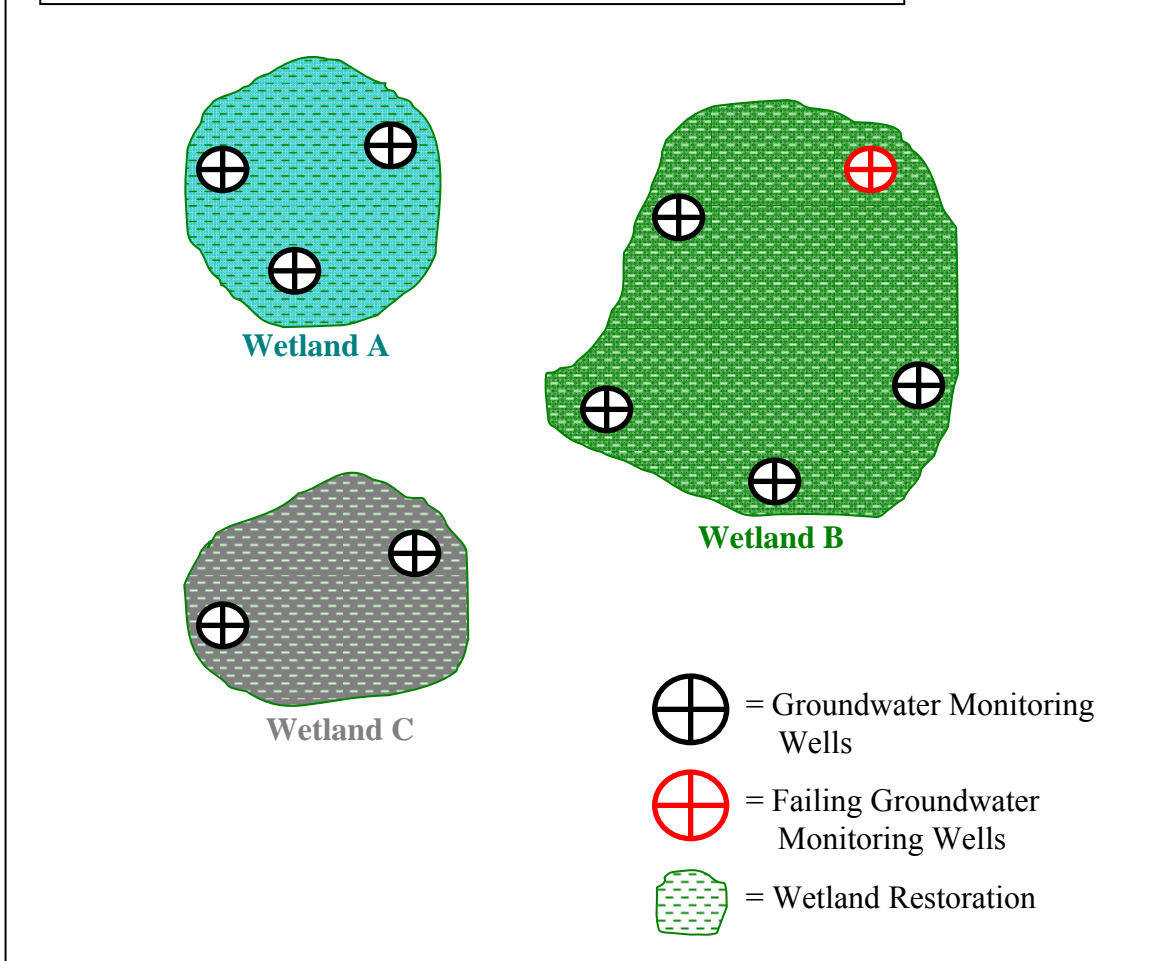
Based upon the total credits generated by **Wetland B**, it represents 70% of the total wetland credits generated for the mitigation bank. In accordance with the success criteria set for Buffer Vegetation and Survival Growth, six out of seven of the monitoring stations (60%) within **Wetland B** met the performance standard.

Based upon the total credits generated by **Wetland C**, it represents 10% of the total wetland credits generated for the mitigation bank. In accordance with the success criteria set for Buffer Vegetation and Survival Growth, all of the monitoring stations within **Wetland C** met the performance standard.

Total Variable Score:

Based upon the above example, the Buffer Vegetation and Survival Growth variable score is **76.66%** (**Wetland A (6.66%) + Wetland B (60%) + Wetland C (10%) = 76.66%**). The achievement of a total variable score below 80% would result in a failing score “-” for the variable.

Figure 5. Wetland Abiotic Factor –Hydrologic Regime



Description of Wetland Credit Generation:

Wetland A – This wetland is scheduled to generate 20 wetland credits (associated with wetland hydrological and vegetative restoration, and wetland buffer restoration activities).

Wetland B – This wetland is scheduled to generate 70 wetland credits (associated with wetland hydrological and vegetative restoration, and wetland buffer restoration activities).

Wetland C – This wetland is scheduled to generate 10 wetland credits (associated with wetland hydrological and vegetative restoration, and wetland buffer restoration activities).

Data Assimilation Example:

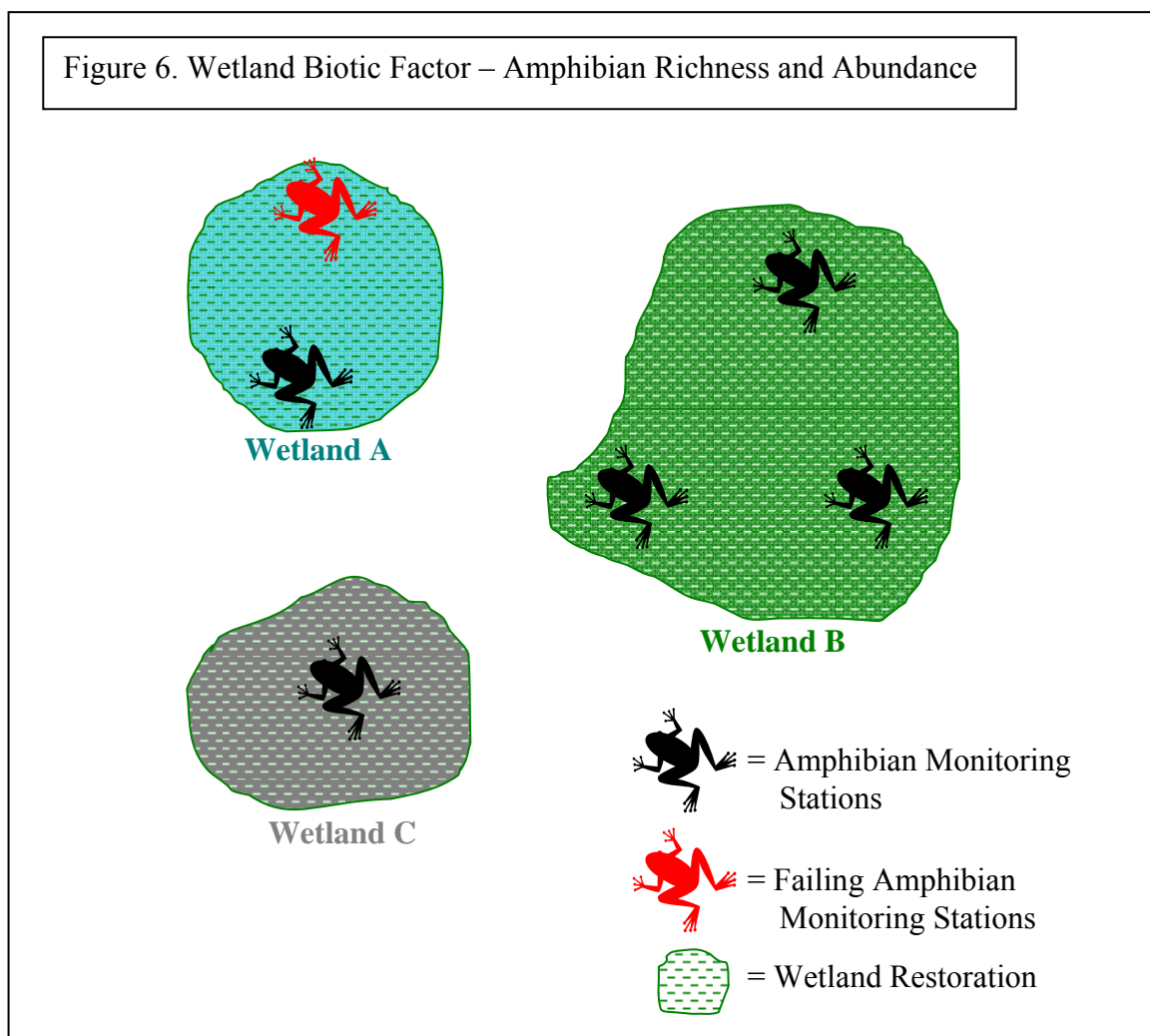
Based upon the total credits generated by **Wetland A**, it represents 20% of the total wetland credits generated for the mitigation bank. In accordance with the success criteria set for Hydrologic Regime, all monitoring stations within **Wetland A** met the performance standard.

Based upon the total credits generated by **Wetland B**, it represents 70% of the total wetland credits generated for the mitigation bank. In accordance with the success criteria set for Hydrologic Regime, four out of five of the monitoring stations (56%) within **Wetland B** met the performance standard.

Based upon the total credits generated by **Wetland C**, it represents 10% of the total wetland credits generated for the mitigation bank. In accordance with the success criteria set for Hydrologic Regime, the monitoring station within **Wetland C** met the performance standard.

Total Variable Score:

Based upon the above example, the Hydrologic Regime variable score is **86%** (**Wetland A (20%) + Wetland B (56%) + Wetland C (10%) = 86%**). The achievement of a total variable score between 80% and 100% would result in a passing score “+” for the variable.



Description of Wetland Credit Generation:

Wetland A – This segment is scheduled to generate 20 wetland credits (associated with wetland hydrological and vegetative restoration, and wetland buffer restoration activities).

Wetland B – This segment is scheduled to generate 70 wetland credits (associated with wetland hydrological and vegetative restoration, and wetland buffer restoration activities).

Wetland C – This wetland is scheduled to generate 10 wetland credits (associated with wetland hydrological and vegetative restoration, and wetland buffer restoration activities).

Data Assimilation Example:

Based upon the total credits generated by **Wetland A**, it represents 20% of the total wetland credits generated for the mitigation bank. In accordance with the success criteria set for Amphibian Richness and Abundance, one out of two monitoring stations (10 %) within **Wetland A** met the performance standard.

Based upon the total credits generated by **Wetland B**, it represents 70% of the total wetland credits generated for the mitigation bank. In accordance with the success criteria set for Amphibian Richness and Abundance, all monitoring stations within **Wetland B** met the performance standard.

Based upon the total credits generated by **Wetland C**, it represents 10% of the total wetland credits generated for the mitigation bank. In accordance with the success criteria set for Amphibian Richness and Abundance, the monitoring station within **Wetland C** met the performance standard.

Total Variable Score:

Based upon the above example, the Amphibian Richness and Abundance variable score is **90%** (**Wetland A (10%) + Wetland B (70%) + Wetland C (10%) = 90%**). The achievement of a total variable score between 80% and 100% would result in a passing score “+” for the variable.

Example 2 - Wetland Performance Standard Summary:

BUFFER VARIABLES	SCORE (+/-)	TOTAL (%)
Buffer Vegetation and Survival Growth	-	0%
Buffer Vegetation Structure	+	33.33%
Percent Cover of Herbaceous Layer and Litter	+	33.33%
TOTAL		66.66%
ABIOTIC VARIABLES	SCORE (+/-)	TOTAL (%)
Development of Hydric Soil Conditions	+	50%
Increase Surface Hydrology	+	50%
TOTAL		100%*
<i>* In order to get ANY wetland credit release, a (+) score must be achieved for all variables for this factor.</i>		
BIOTIC VARIABLES	SCORE (+/-)	TOTAL (%)
Wetland Vegetation Survival and Growth	-	0%
Wetland Structure	+	20%
Development of Vascular Hydrophytic Vegetation	+	20%
Functional Assessment	-	0%
Native Amphibian Richness and Abundance	+	20%
TOTAL		60%

WETLAND PERFORMANCE STANDARDS SUMMARY	
	TOTAL (%)
BUFFER SCORE	66.66%
ABIOTIC SCORE	100%
BIOTIC SCORE	60%
TOTAL MEAN SCORE	75.55%
In this example, the wetland mitigation bank would achieve a release of 50% of the total credits scheduled for release during that monitoring period.	

Example 3: In this example, the mitigation bank is comprised of both stream and wetland credits. Using the total mean scores from the Stream and Wetland Performance Standards Summaries in Examples 1 and 2, the mitigation bank would have achieved a stream credit release of 100% and wetland credit release of 50% of total credits scheduled for release during that monitoring period. However, for a mitigation bank that is comprised of both stream and wetland credits, if the total individual mean score for one or both (i.e., stream and/or wetland) achieve a credit release of 50%, then the total credits released for both stream and wetland would not be greater than 50%. (Note: If the total individual mean scores for both (i.e., stream and wetland) achieve 80% respectively, then the total credit release for both stream and wetland would be 100%. If the total individual mean score for either one of both (i.e., stream and/or wetland) achieve less than 60%, then there would be no stream or wetland credit release for that monitoring period.)