ALBUQUERQUE DISTRICT
MITIGATION AND MONITORING GUIDELINES

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ALBUQUERQUE DISTRICT
MITIGATION AND MONITORING GUIDELINES

PREAMBLE

A. Summary. On December 15, 2003, the U.S. Army Corps of Engineers, Albuquerque District (Corps), published a public notice to interested parties and on the web page www.spa.usace.army.mil/reg/ regarding a proposal to establish Mitigation and Monitoring Guidelines for Projects Regulated under Section 404 of the Clean Water Act (33 USC 1344) and Section 10 of the Rivers and Harbors Act of 1899 in the Albuquerque District. The public notice was published concurrently with other Corps districts announcing proposed or revised Mitigation and Monitoring Guidelines. The comment period expired on January 14, 2004. The Corps evaluated and addressed the issues raised in comments submitted in response to the proposed Mitigation and Monitoring Guidelines.

These Final Mitigation and Monitoring Guidelines for projects regulated under Section 404 of the Clean Water Act (33 USC 1344) and Section 10 of the Rivers and Harbors Act of 1899 (Guidelines) are issued by the Albuquerque District on June 28, 2004, effective that date.

The Guidelines provide guidance and requirements to applicants for mitigation of unavoidable project impacts in waters of the United States, including wetlands, for activities regulated under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act. The Guidelines include procedural Checklists to assist applicants when preparing mitigation and monitoring plans required by issued permits.

B. Background. The draft Mitigation and Monitoring Guidelines were developed pursuant to the December 24, 2002, National Wetlands Mitigation Action Plan (Action Plan). The Action Plan outlined a series of actions to improve mitigation under the Clean Water Act and related programs. The actions outlined in the Action Plan will help ensure effective restoration and protection of the functions and values of our Nation's waters and wetlands, consistent with the national policy on clean water. Additional information regarding the Action Plan is available at www.mitigationactionplan.gov.

The Action Plan discusses that a fundamental objective of the Clean Water Act Section 404 program is to offset authorized losses of wetlands and other waters by restoring, enhancing, or creating wetlands or other waters that replace those lost acres, functions and values. Importantly, the regulatory program provides that first, all appropriate and practicable steps be taken to avoid impacts to wetlands and other waters, and then that remaining impacts be minimized, before determining necessary compensatory mitigation to offset unavoidable impacts.

As described in our December 15, 2003, public notice, the U.S. Army Corps of Engineers (Corps) and U.S. Environmental Protection Agency (EPA) regulations (33 CFR 320-331 and 40 CFR 230) authorize the Corps to require compensatory mitigation for unavoidable impacts to wetlands and other jurisdictional waters of the United States. The Corps is aware that not all past compensatory mitigation sites were fully successful and is committed to improving the success of future compensatory mitigation projects. These Mitigation and Monitoring Guidelines are designed to assist the regulated public with all aspects of the mitigation process. The guidelines provide information to ensure future compensatory mitigation sites successfully replace all lost functions and values associated with regulated impacts to waters of the U.S.

This issued mitigation guidance clarifies planning and performance standards for mitigation and monitoring plans in the Albuquerque District. The mitigation guidance includes a mitigation plan checklist for permit applicants and incorporates guidance adopting the National Academy of Sciences National Research Council's recommended guidelines for creating or restoring self-sustaining wetlands.

C. Future Revisions. As we gain experience in the implementation of these guidelines, we will propose modifications through a public comment process. The interested public is encouraged to submit recommendations for change for consideration during our next review.

D. Document Organization. The Final Mitigation and Monitoring Guidelines incorporate this Preamble and three Parts: (I) Albuquerque District Mitigation and Monitoring Guidelines; (II) a Compensatory Mitigation Plan Checklist and Detailed Outline; and (III) an Outline for Monitoring Reports. Two appendices are incorporated by

reference: (1) Appendix A - a document Incorporating the National Research Council's Mitigation Guidelines into the Clean Water Act Section 404 Program; and (2) Appendix B - Regulatory Guidance Letter 02-2, Guidance on Compensatory Mitigation Projects for Aquatic Resources Impacts under the Corps Regulatory Program Pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. Paragraphs are numbered with page number reference provided in the Table of Contents.

E. Applicability and Use of Guidelines. The Albuquerque District Mitigation and Monitoring Guidelines are applicable to mitigation activities required by Section 404 or Section 10 permits within the Albuquerque District boundary. The Albuquerque District includes southeastern Colorado, the state of New Mexico, and western Texas. A map showing the Albuquerque District boundary by state is available on our web page at www.spa.usace.army.mil/reg/.

Any applicant for an individual, regional, or nationwide permit for discharging dredged or fill material into waters of the United States (Section 404 of the Clean Water Act), or constructing a project with impacts to navigation or anchorage (Section 10 of the Rivers and Harbors Act) within the Albuquerque District should use these guidelines for mitigating unavoidable losses of waters of the United States.

To use the Guidelines, review Part I for a discussion of the Albuquerque District mitigation policy and procedures. If your proposed project includes unavoidable losses of waters of the United States, including wetlands, submit (at a minimum) a completed draft Mitigation Guidelines Checklist (Part II) and Monitoring Checklist (Part III) with your application and mitigation proposal. During the Corps of Engineers' evaluation of your application and proposed mitigation, modifications to your proposed mitigation and monitoring plan may be developed. We recommend a pre-application meeting prior to application submittal to discuss unavoidable project impacts and appropriate mitigation.

F. Discussion of Comments Received and Final Guidelines Decisions. In response to the December 15, 2003, public notice, we received 8 comment letters. After reviewing and considering all comments received in response to that notice, we made several changes to the Mitigation and Monitoring Guidelines. These changes are discussed in this preamble (italics). The preamble addresses comments in the sequence of the Mitigation and Monitoring Guidelines document. Each comment or topic number corresponds to the Guidelines section to which it applies, and is followed by the Corps' response. Minor changes for formatting and clarity have also been incorporated into the document.

General Comments

One commenter stated that the Guidelines proposed by several southwestern Corps districts vary in content and scope. The commenter opined that the Guidelines raise Corps-wide issues that are worthy of guidance from Corps Division or Headquarters (HQ). The commenter further stated that, given the burden the Guidelines may impose on the regulated community, a nationwide review should be done before implementing any individual District Guidelines.

The Mitigation Checklist was developed and distributed by Corps HQ for use in all Corps Districts to promote consistency in mitigation requirements and improve the success of mitigation. Mitigation policy and guidance is being developed by each District to address regional differences in aquatic resources and issues.

Implementation

One commenter requested another opportunity to review changes made before the final Albuquerque District Guidelines are drafted.

We appreciate all comments made on the initial draft. The guidelines will be reviewed periodically to incorporate continuing suggestions. Additional opportunities for public review of these Guidelines will be provided through future public notice comment periods.

We received one comment that the Guidelines should provide an adequate framework for mitigation activities. If effectively implemented, the Guidelines should help meet the stated purpose to develop long-term self-sustaining wetlands and other aquatic resources.

We appreciate the support for the District's mitigation and monitoring guidelines policy. Our goal is to achieve successful, self-sustaining compensatory mitigation for aquatic resources.

A. Purpose of these Guidelines

Two commenters suggested that the Checklist should become the Guidelines, with each District adding appropriate District comments, amplifications, or requirements throughout the existing language. The Corps and the regulated community would benefit from nationwide consistency.

The Mitigation Checklist was developed and distributed by Corps HQ for use in all Corps Districts to promote consistency in mitigation requirements and improve the success of mitigation. Mitigation policy and guidance is being developed by each District to address regional differences in aquatic resources and issues.

A.3. Document Organization

One commenter stated that other appendices or enclosures are solely background material. They should simply be referenced.

We concur and have moved Part IV, Incorporating The National Research Council's Mitigation Guidelines into the Clean Water Act Section 404 Program, to Appendix A and Part V, RGL 02-2 to Appendix B.

One commenter stated that much of the draft is a recitation of principles and practices already clearly covered in RGL 02-2. It should be omitted.

Each Corps district is developing specific guidelines based on existing national guidance. We believe it is appropriate to address Albuquerque District's specific policies in its own Guidelines document. We concur that RGL 02-2 should be eliminated from the Albuquerque District Guidelines. RGL 02-2 is now an appendix for background reference.

B. Policy

One commenter provided a specific recommendation regarding Part I, Mitigation and Monitoring Guidelines, Policy, page 1, paragraph 6, sentence 2; noting that one sentence states that applicants are strongly recommended to use the Checklist and in another sentence states that they must use the Checklist. Recommend that the sentence read, "applicants must use" the Checklist.

This change has been made. Applicants who provide mitigation plans will be required to use the Checklist.

Three commenters stated that the Guidelines provide additional direction for mitigation by containing both guidance and requirements. The requirements will result in improved mitigation success. The document should be an effective guide for applicants to design and implement mitigation plans, and should result in a more efficient permit process

Concur. By providing mitigation guidelines to permit applicants, consistency and success of mitigation, as well as efficiency of the permit process, will be improved.

One commenter recommended that the Guidelines include a trigger such as "loss of aquatic environment."

We believe that the Guidelines are sufficiently clear that mitigation is required to replace loss of aquatic resource functions.

C. Incorporating the Mitigation Plan into the Permit Procedure

One commenter expressed appreciation for the flexibility of Albuquerque District's Guidelines.

In developing the Albuquerque District Guidelines, we have attempted to maintain necessary flexibility while improving mitigation consistency and success within the District.

Conversely, another commenter questioned the flexibility of the Guidelines application. For example, mitigation property acquisition may take multiple years.

We have maintained flexibility in the application of the mitigation guidelines, while still meeting the national directive to improve mitigation consistency and success. Entities should conduct advanced planning for projects to incorporate avoidance and minimization measures that will reduce mitigation requirements. Advanced planning for property acquisition for mitigation may be needed.

Two commenters expressed concern regarding the level of information to be provided. Preparation of a mitigation plan document covering all the items in the Checklist will be a significant effort for the applicant. Nationwide permits (NWPs) are for projects that should cause little damage to the aquatic environment. The requirements for preparing and documenting a mitigation plan should reflect this expected low level of impact. The Checklist items most applicable to NWPs should be identified and the Guidelines clearly state that only those items need be routinely addressed.

We discuss in Part I, Mitigation Guidelines, Level of Detail, that the level of documentation will be commensurate with project impacts. The Corps will work with the applicant to determine the appropriate level of documentation required on a project-specific basis. For successful, self-sustaining mitigation, the checklist factors are helpful in most cases.

One commenter stated that certain fast-track projects might not have sufficient lead-in time to meet mitigation requirements.

Applicants should make full use of pre-application consultations and site visits with the Corps for known upcoming projects. The Corps encourages applicants to explore alternatives to discharges in waters of the U.S., especially avoidance and minimization of impacts.

One commenter expressed concern about timing of mitigation and asked if the Corps would accept "pre-sites" for mitigation (mitigation site locations determined and constructed prior to any known projects in the area).

The Corps may accept pre-selected mitigation sites in certain instances. Early coordination with the Corps and resource agencies regarding site selection and potential mitigation bank service area is recommended.

C.1. Pre-Application Coordination

One commenter requested a better working relationship with the Corps. The commenter wants a more consistent method of working with the regulatory program.

Policies such as these Guidelines will assist applicants to consistently understand the Corps' regulatory program requirements. The Corps is available to meet with applicants and resource agencies on a project-by-project or periodic basis (e.g., quarterly meetings).

One commenter recommended a revision to Part I, Mitigation and Monitoring Guidelines, Incorporating the Mitigation Plan into the Permit Procedure, page 2, paragraph 2, Pre-Application Coordination, sentence 1. The commenter recommended that the early coordination regarding impact avoidance, minimization, and mitigation (which should be done prior to submitting a nationwide permit application) should occur for individual permits as well.

We concur that early coordination is always encouraged. The section entitled Incorporating the Mitigation Plan into the Permit Procedure has been modified.

One commenter recommended a revision to Part I, Mitigation and Monitoring Guidelines, Incorporating the Mitigation Plan into the Permit Procedure, page 2, paragraph 4, that the first sentence be reworded to state: "If the applicant is proposing mitigation, then a preliminary mitigation and monitoring plan should be submitted with the application.

We encourage submittal of a preliminary mitigation plan with applications. The wording has been changed to describe this flexibility.

Another comment on the same paragraph (page 2, 4th paragraph) stated that the Corps should require mitigation plans in the public notice or during the comment period (not after, as proposed). The commenter stated that the 404(b)(1) Guidelines specify that permits cannot be issued if the project does not include all appropriate and practicable measures to minimize harm and/or there is insufficient information to make a 404(b)(1) compliance decision.

The Albuquerque District encourages submittal of preliminary mitigation plans with the permit application, and requires the preliminary plan prior to permit issuance. Projects are often modified in response to comments. Mitigation should be for the approved project rather than a proposed project. A final mitigation plan is required prior to commencing construction in waters of the U.S... We believe that this approach, combined with compliance with the 404(b)(1) guidelines, assures that the mitigation will replace functions impacted as a result of the permitted activity.

C.2. Section 404(b)(1) Guidelines Review

One commenter requested better communication to the applicant that the 404(b)(1) Guidelines require that less damaging, practicable alternatives must be thoroughly evaluated and considered before a permit can be issued. The language in Page 2, Mitigation and Monitoring Guidelines, Individual Permit, underscores the importance of clearly documenting and evaluating practicable alternatives to prevent the need for costly mitigation. The same commenter expressed concerns about the alternatives analysis and permit process. The commenter recommended that the cost/benefit of avoidance and mitigation requirements should be highlighted in Page 2, Mitigation and Monitoring Guidelines, Individual Permit. Another commenter stated that, since avoiding and minimizing impacts play such a crucial role in the 404 permit process, these two steps should be displayed more prominently in the Guidelines, and possibly be incorporated into the Compensatory Mitigation Plan Checklist and Detailed Outline as a prerequisite.

The mitigation/monitoring guidelines are applicable to projects where avoidance and minimization have already been applied to the maximum extent practicable. We have expanded Section C.2., Incorporating the

Mitigation Plan into the Permit Procedure, Section 404(b)(1) Guidelines Review, to further clarify the 404(b)(1) guidelines alternatives analysis and mitigation sequence.

One commenter recommended that more avoidance and mitigation compliance burden be placed on the applicant by requiring more critical alternatives analysis through better understanding of cost analysis. Also, that more avoidance and mitigation compliance burden should be placed on the applicant by increased mitigation site baseline information requirements with enhancement projects.

As discussed in 40 CFR 230.10, the Corps evaluates practicable alternatives, including consideration of cost, logistics and existing technology, in light of overall project purpose. The Corps discusses and requires avoidance and minimization in accordance with the 404(b)(1) guidelines. Part II, Comprehensive Mitigation Plan Detailed Outline, paragraph 5, requires extensive and adequate baseline information in mitigation plans. We have expanded the discussion under Incorporating the Mitigation Plan into the Permit Procedure, Section 404(b)(1) Guidelines Review, to further clarify the 404(b)(1) guidelines sequencing.

C.3. Individual Permits

Two commenters requested an opportunity to review and comment on an applicant's final mitigation plan (Part I, Mitigation and Monitoring Guidelines, Incorporating the Mitigation Plan into the Permit Procedure, page 2, paragraph 4, sentence 3). One of the commenters asked if there would be a standardized format for providing this information.

The applicant's proposed mitigation concept will be summarized in the Corps' Public Notice when it is provided with an initial individual permit application submittal. Local agency agreements to share information will apply. The application file is available for review at the Corps' office pursuant to the Freedom of Information Act.

C.5. Submittal of Mitigation and Monitoring Plan

One commenter recommended that the Guidelines contain or have attached specific encouragement for use of available mitigation banks and "in-lieu-fee" mitigation programs as discussed in the July 11, 2003, joint memorandum among the EPA, USACE and FHWA. Details of the circumstances under which a District proposes to allow mitigation using local banks and programs should be incorporated. "In-lieu-fee" mitigation payments into unspecified future projects of recognized conservancy organizations should be encouraged.

At this time, the Albuquerque District has one restricted-use mitigation bank in Colorado and one in-lieu-fee arrangement within the South Pacific Division. An applicant may propose the use of an in-lieu-fee program at any time. The Guidelines section D.3., Mitigation Guidelines-Location of Mitigation / Watershed Approach has been modified to include mitigation banks and in-lieu-fee programs.

D. Mitigation Guidelines

D.1. Mitigation Plan Checklist

One commenter expressed support for Part I, Mitigation and Monitoring Guidelines, page 3, paragraph 1, requiring applicants to complete all items on the Checklist with an explanation as to why an item is not appropriate to include. This requirement will expedite the review and permitting process.

One commenter recommended modification of Part I, Mitigation and Monitoring Guidelines, Mitigation Guidelines, page 3, paragraph 2, sentences 1 and 3, to strike the words "In general" in sentence 1, and strike the word "and" after (Part V) in sentence 3.

Changes have been made to clarify the guidance and to correct a grammatical error.

D.2. Level of Detail

One comment stated that preparing a mitigation plan document covering all the items in the Checklist would be a significant effort for the permittee.

As discussed in the Mitigation Guidelines-Level of Detail section, the required level of documentation will be commensurate with project impacts. We encourage avoiding and minimizing impacts to aquatic resources to reduce the time and effort involved in preparation of a compensatory mitigation plan.

D.3. Location of Mitigation / Watershed Approach

One commenter recommended that the Albuquerque District encourage the use of available mitigation banks and "in-lieu fee" mitigation programs. Details of the circumstances under which the District proposes to allow mitigation using available banks and programs should be included. In-lieu-fee mitigation payments into unspecified future projects of recognized conservancy organizations should be encouraged.

At this time, Albuquerque District has one restricted-use mitigation bank in Colorado and one in-lieu-fee arrangement in the South Pacific Division. An applicant may propose the use of a mitigation bank or in-lieu-fee program at any time. The section entitled Mitigation Guidelines-Location of Mitigation / Watershed Approach has been modified to include mitigation banks (as developed) and in-lieu-fee programs.

One commenter recommended that mitigation plans describe how the mitigation project will contribute to the specific aquatic resource needs of the impacted watershed. Care must be taken to prevent the degradation of smaller watersheds within a Hydrologic Unit Code (HUC) watershed by moving the mitigation to another watershed within the same HUC. On-site water quality functions should be maintained at the project site even if habitat functions are mitigated elsewhere. Functions may include stormwater retention/detention systems, filtration systems and/or other Best Management Practices.

We concur with these comments. Section 6 of the Mitigation Plan Checklist and Outline requires replacement of impacted functions. Using best professional judgment, the Corps works to balance what is best for the aquatic environment with the project purpose and need.

One commenter prefers not to do mitigation in a road right-of-way for safety and assurance reasons. Maintenance may eliminate mitigation in a right-of-way.

As discussed in D.3., Mitigation Guidelines, Watershed Approach, we recognize that on-site mitigation is not always practicable or best for functional replacement. We will work with applicants to assess alternative mitigation locations.

One commenter recommended clarification of Part I, Mitigation and Monitoring Guidelines, Mitigation Guidelines, page 3, paragraph 3, sentence 3. More information should be provided regarding the scale of HUC's that will be used (i.e., watershed vs. subwatershed). Another commenter requested that "same watershed" be better defined, and suggested wording such as "Cross-watershed mitigation may be considered on a case-by-case basis."

This paragraph has been revised to clarify that watersheds will generally be identified to the 8-digit Accounting Unit HUC level, with flexibility to work within a subregional watershed level as necessary to mitigate for impacted aquatic functions.

D.4. Functional Assessment

One commenter expressed support for using best professional judgment to evaluate functions and values of mitigation projects (Part I, Mitigation and Monitoring Guidelines, page 3, 3rd paragraph). This will streamline the permit process in avoiding needless debate over functional assessment methodologies.

The Corps concurs with this comment.

One commenter noted that the Guidelines emphasize function and value over acreage.

The Corps concurs with this comment. The Guidelines emphasize replacement of aquatic functions that will be lost at the impact area, and applicants are encouraged to provide a summary of aquatic functions based on the best information available. As discussed in RGL 02-2, a minimum one-to-one acreage replacement may be used as a reasonable surrogate for no net loss of functions.

One commenter stated that the Guidelines lack detail on assessing wetland functionality. The Corps as a whole (or at least the districts within one state) should agree on parameters for assessing functionality and attach them to each District's Guidelines. If a hydrogeomorphic (HGM) methodology is chosen, the Guidelines should have an appendix covering how the District wants the functionality assessments to be done under local conditions.

Utilizing the best professional judgment of both Corps regulatory project managers and qualified professional consultants, and the most objective information available, will remain the Albuquerque District standard for functional assessment until a specific national or workable regional methodology is adopted.

One commenter requested that lots not permitted or "avoided" in a subdivision (or wetlands within developable lots) be evaluated for indirect impacts to wetland hydrology and that mitigation be required (Part I, Mitigation and Monitoring Guidelines, page 3, 6th paragraph).

The existing policy maintains the Corps' ability to evaluate this issue on a case-by-case basis.

D.5. Wetland Protection

One commenter recommended that more avoidance and mitigation compliance burden should be placed on the applicant by removing fens and springs from nationwide permit (NWP) authorization.

Within New Mexico and Colorado, all NWPs are revoked within 100 feet of the water source of natural springs, pursuant to the NWP Regional Conditions. In Colorado, certain NWPs are revoked for activities in fens. In all cases, the Corps has discretionary authority to require an individual permit if project impacts are more than minimal.

The commenter further recommended that more avoidance and mitigation compliance burden be placed on the applicant by additional revegetation requirements at higher elevations and with forested wetlands.

Specific requirements regarding ecozones and revegetation will be developed during each plan review.

One commenter referenced Part IV, Incorporating the National Research Council's Mitigation Guidelines Into the Clean Water Act Section 404 Program, Mitigation Site Selection, B, 2. Adopt a Dynamic Landscape Perspective, page 7, paragraph 1, noting the national guidance addresses the need for buffers. The commenter recommended that buffers should be included in the District's Guidelines.

We concur with this comment and have expanded the discussion of riparian and upland buffers in Section D.5., Mitigation Guidelines-Wetland Protection.

A commenter recommended that signage of mitigation areas (or avoided wetland lots, if applicable) within subdivisions should be durable and required to be maintained (Part I, Mitigation and Monitoring Guidelines, page 3, 6th paragraph).

Paragraph wording has been revised to describe sign permanence and maintenance.

One commenter stated that wetlands within subdivisions should not be included in lot lines and any lots avoided in the short term should be included in the mitigation plan since long-term preservation is unlikely due to surface or ground water modifications (Part I, Mitigation and Monitoring Guidelines, page 3, 6th paragraph).

If the potential exists for wetland loss or impact, mitigation will be required in accordance with the mitigation guidelines. Deed restrictions may be required as a condition to any permit as part of impact avoidance and minimization. The Corps will continue to evaluate permit applications and condition permits as necessary to mitigate potential hydrologic modifications of proposed projects.

Another commenter also addressed Part I, Mitigation and Monitoring Guidelines, Mitigation Guidelines, page 3, paragraph 6. The commenter understands this to mean that the Corps could require mitigation for potential future unauthorized fill when residential subdivisions include wetlands on individual house lots. If this is the case, it should be more clearly stated.

Section D.5., Mitigation Guidelines, Wetland Protection, has been expanded to clarify this issue.

D.7. Timing of Mitigation

A commenter recommended deletion of the word "normally" in sentence 1, Part I, Mitigation and Monitoring Guidelines, Mitigation Guidelines, page 4, paragraph 2. The pertinent compensatory mitigation language in RGL 02-2, paragraph 2.n. should be included here so that this can be a stand-alone reference.

We have deleted the word "normally" from the referenced sentence. RGL 02-2 language has been incorporated (RGL 02-2 is now an Appendix.).

E. Performance Standards and Monitoring

Two commenters stated that monitoring requirements should be standard across all Corps Districts. A Corps-wide version should be attached as an appendix to Guidelines.

An outline for monitoring plans has not been provided by Corps Headquarters at this time. Additionally, national standards for monitoring requirements may not reflect regional differences. The Outline for Monitoring Reports (Part III) included in the District guidelines will improve consistency within the District for monitoring requirements, and is the standard for the Albuquerque District at this time.

One commenter recommended that the Corps should write enforceable permit conditions for realistic implementation and follow up.

As required by 33 CFR 325.4, we condition individual permits with realistic, enforceable conditions. Use of the Mitigation Checklist will improve consistency in mitigation requirements and enforceability.

E.1. Performance Standards

One commenter recommended that more avoidance and mitigation compliance burden should be placed on the applicant by pre- and post-photo documentation requirements.

We have added a recommendation for pre- and post-construction photos to the Performance Standards and Monitoring Section of the guidelines, and the requirement is included in Part III-Monitoring Reports Outline.

One comment applauded the Corps' efforts to improve ecological performance of mitigation projects by incorporating the National Academy of Sciences National Research Council's (NRC) guidelines.

Incorporating the NRC guidelines, including adaptive management principles, into the development, review and implementation of mitigation projects will improve the success of mitigation efforts.

E.4. Monitoring Duration

We received two comments regarding Part I, Mitigation and Monitoring Guidelines, Performance Standards and Monitoring, page 4, paragraph 7, sentence 1. One recommended that the sentence should be changed to, "Monitoring will be required for 5 years or upon successful achievement of performance standards." Additionally, the Corps should use the monitoring requirements in the RGL 02-2, i.e., monitor for 5 to 10 years.

In Section E.4., Performance Standards and Monitoring, Monitoring Duration, we deleted the word "typically" from the five-year minimum monitoring time period, but retained the flexibility for three growing seasons if performance standards are met. RGL 02-2 provides for a time period of normally 5-10 years for monitoring. The District guidelines meet the RGL 02-2 recommendation, while maintaining the flexibility to relieve the monitoring requirement after three growing seasons if the performance standards have been achieved.

F. Remedial Actions

One comment was received on Part I, Mitigation and Monitoring Guidelines, page 5, 1st paragraph. The commenter recommends that remedial action should require a time frame in which the responsible party will report the need to develop and implement a remedial action. The applicant should be required to implement a remedial mitigation plan before the next growing season after the self-reported mitigation failure.

We modified Part I, Section F, Remedial Actions, and Part III, Outline for Monitoring Reports to describe a timeframe for reporting and for implementing a remedial action.

G. Site Protection and Maintenance

Two commenters expressed concern regarding Part I, Mitigation and Monitoring Guidelines, page 5, 2nd paragraph. One recommended that legal means for protecting and maintaining mitigation areas, including the supporting hydrology, should be required with all mitigation plans. The proposed language appears to leave it as an option. One commenter supports the Corps in requiring legal assurances and will work towards training and other opportunities to support these legal protection tools. A second commenter recommends that appropriate legal instruments be developed for each mitigation site, and recommended omitting or clarifying the "in most cases" qualifier.

At the Corps' discretion, certain entities (for example, government agencies such as highway departments) will not be required to provide financial assurance or legal instruments (such as deed restrictions or conservation easements) for protection of a mitigation site. Entities will be provided an opportunity to describe why financial assurance or legal instruments should not be required. Failure to create self-sustaining mitigation may result in a requirement for after-the-fact financial assurance.

One commenter objected to "in perpetuity" protection of mitigation sites. The commenter indicated that 20 years should be considered permanent, and provided a comment that other agencies such as the U.S. Forest Service (USFS) and Bureau of Land Management (BLM) may only allow up to 20 years for mitigation protection.

Because impacts are permanent, permanent protection of mitigation sites is required in most cases.

H. Compliance and Financial Assurances

One commenter recommended that financial assurances should be required, unless the Corps deems it unnecessary due to project or site-specific reasons (Part I, Mitigation and Monitoring Guidelines, page 5, 3rd paragraph). The current language gives too much latitude and does not change the Corps' present method of business.

At the Corps' discretion, certain entities (for example, government agencies such as highway departments) will not be required to provide financial assurance. Entities will be provided an opportunity to describe why financial assurance should not be required. Failure to create self-sustaining mitigation may result in after-the-fact financial assurance.

One commenter stated that it is unclear whether long-term maintenance (i.e., replacement planting, structure maintenance, invasive species control, etc.) is required after the success criteria have been met (Part I, Mitigation and Monitoring Guidelines, Compliance Assurances, page 5, paragraph 4, sentence 4). If impacts are permanent, then maintenance should be in perpetuity.

The goal of mitigation, and the purpose of these Guidelines, is to achieve self-sustaining mitigation sites. Therefore, in most cases perpetual maintenance will not be necessary. Long-term site protection is usually necessary. The Corps can require long-term maintenance if monitoring results warrant such action.

One commenter noted that the Corps has not required financial assurances of some entities up to this time. The commenter assumes the language, "an applicant may be required…" would only apply to applicants where the Corps has doubts as to the likelihood of the permittee performing successful mitigation (Part I, Mitigation and

Monitoring Guidelines, page 5, Compliance Assurances). Providing additional legal documentation and setting up escrow is another burden to permittees that will delay processes and result in higher project costs.

Wording has been added to Section H, Compliance and Financial Assurances providing flexibility for applicants to describe why they believe that financial assurance should not be required.

One commenter finds the 15% construction cost addition for Corps administration excessive. The commenter asks if there are legal means for the Corps to charge permittees extra for administrative costs. The commenter notes that the Corps is funded by taxpayer dollars and by permit fees. Additional money should not be held in escrow for these instances; rather, permit fees should be raised to cover the appropriate costs.

Wording has been added to Section H, Compliance and Financial Assurances, providing flexibility for applicants to describe whether they believe that financial assurance is necessary. Taxpayers should not be burdened with a permittee's responsibility to provide financial assurance and pay for required mitigation. For example, the Corps normally adds 5%-25% contingency and 10% supervision/administration to civil works contracts. Permit fees are fixed and cannot be unilaterally changed by the Corps.

Part II, Compensatory Mitigation Plan Checklist

One commenter recommended a modification of Part II, Compensatory Mitigation Plan, item 5, Baseline Information, sub-item i, Threatened/Endangered Species, page 5. Recommended wording be changed to, "If federally-listed species are found on site, and/or if suitable habitat is present (i.e., within the range of the species), then the Corps should be informed." Also, "Identify any federally-listed (including proposed) species found in the project areas or for which...."

This section has been modified as suggested.

One commenter questioned Part II, Compensatory Mitigation Plan, item 6, Mitigation Site Selection and Justification, sub-item i, USFWS, page 6. To require a clearance letter or Biological Opinion is premature at this point. The statement should be changed to "USFWS potential beneficial or negative impacts to federally listed species..."

Paragraph 6.i., Mitigation Plan Detailed Outline, has been revised to read, "USFWS letter regarding potential beneficial or negative impacts to federally listed species, or Biological Opinion".

One commenter recommends that more of the avoidance and mitigation compliance burden be placed on the applicant by requiring evaluation of more restoration mitigation opportunities through aerial photo interpretation.

Part II, Compensatory Mitigation Plan Detailed Outline, paragraph 6, requires the applicant to describe and justify mitigation. We encourage applicants to select sites using any and all appropriate means, which may include aerial photography. We have added photo interpretation to paragraph 6.c. of the mitigation plan detailed outline.

PART I
MITIGATION AND MONITORING GUIDELINES

A. PURPOSE OF THESE GUIDELINES

1. Compensatory Mitigation. Under existing law, the U.S. Army Corps of Engineers (Corps) may require compensatory mitigation to replace aquatic resource functions that are unavoidably lost or adversely affected by authorized activities. The purpose of compensatory mitigation is to develop long-term, self-sustaining wetlands and other aquatic resources that are not dependent on human intervention after the establishment period.

2. Mitigation Requirements. This document defines mitigation requirements and policy, and is for use by applicants in the preparation of compensatory mitigation and monitoring plans when the Corps determines that mitigation is appropriate and necessary for a particular project.

3. Document Organization. This document is in three parts, and incorporates the latest guidance and science from Corps Headquarters and the National Academy of Science. Part I discusses the policy and procedures for the Albuquerque District Regulatory Branch. Part II is a Compensatory Mitigation Plan Checklist and Detailed Outline to be used in the development of compensatory mitigation and monitoring plans. Part III is a recommended outline for Monitoring Reports. The Corps' summary of recommendations of the National Academy of Science report entitled *"Compensating for Wetland Losses Under the Clean Water Act"* is attached as Appendix A. The Corps' Regulatory Guidance Letter 02-2, entitled *"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"* is attached as Appendix B.

B. POLICY

The goal of the Clean Water Act and the 404(b)(1) Guidelines is to maintain, restore, and enhance the physical, chemical, and biological integrity of the Nation's waters. The Corps strives to avoid and minimize adverse impacts to waters of the United States, and to achieve the goal of no overall net loss of aquatic resources.

The 1990 Memorandum of Agreement between the Corps and the Environmental Protection Agency requires replacement of aquatic functions that are unavoidably lost to a permitted activity. This requirement was reinforced by Regulatory Guidance Letter (RGL) 02-2, entitled *"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"* (see Appendix B).

The Albuquerque District is committed to improving the success of compensatory mitigation. To attain this goal, applicants must use the **Compensatory Mitigation Plan Checklist and Detailed Outline (Part II)** to develop specific compensatory mitigation and monitoring plans. The **Outline for Monitoring Reports (Part III)** should be used to ensure that monitoring reports contain the information necessary to determine the progress of the mitigation.

We also recommend that the guidelines summarizing the National Research Council (NRC) report entitled, *"Compensating for Wetland Losses Under the Clean Water Act"* (Appendix A) and the guidance contained in RGL 02-2 (Appendix B) be applied to assist in planning and implementing successful, ecologically self-sustaining wetland and stream mitigation projects. These documents can be viewed on our website at: www.spa.usace.army.mil/reg.

C. INCORPORATING THE MITIGATION PLAN INTO THE PERMIT PROCEDURE

1. Pre-Application Coordination. Early coordination regarding impact avoidance, minimization, and mitigation should be done prior to submitting an application or request for nationwide permit verification. Applicants should contact the Corps prior to initiation of site selection and mitigation plan development, as mitigation requirements will be based on project impacts.

2. Section 404(b)(1) Guidelines Review. The Section 404(b)(1) Guidelines limit the issuance of a permit to the least environmentally damaging, practicable alternative that is not contrary to the public interest. In other words, no discharge of fill material will be permitted if there is a practicable alternative that would have less adverse impact on the aquatic ecosystem, if the alternative does not have other significant adverse environmental consequences, and is practicable in light of cost, logistics, and existing technology. For individual permit applications, the applicant should include an alternatives analysis with the permit application that clearly documents compliance with the Guidelines, i.e., first evaluating alternatives that avoid impacts; then taking appropriate and practicable steps to minimize adverse impacts to the maximum extent practicable; and, finally, proposing compensatory mitigation for unavoidable impacts.

3. Individual Permits. In addition to a Section 404(b)(1) alternatives analysis, applicants proposing mitigation should submit a preliminary mitigation and monitoring plan and checklist with the application. A detailed preliminary mitigation plan should generally not be completed until jurisdictional maps of the project area and proposed mitigation area have been accepted by the Corps, and the area of fill to be mitigated has been identified. The final mitigation plan will usually be submitted following the public comment period and Corps review of the preliminary plan.

4. Nationwide / Regional General Permit Program. Along with a request for verification that a project is authorized under a nationwide or general permit, the permittee should include a discussion of how aquatic resource impacts were avoided and minimized. In addition, a detailed mitigation and monitoring plan should generally be submitted with the request for verification.

5. Submittal of Mitigation and Monitoring Plan. The Compensatory Mitigation Plan Checklist (Part II) must be included with the preliminary and final mitigation and monitoring plan package. Refer to the Compensatory Mitigation Plan Checklist and Detailed Outline for document format information.

The final submittal of a compensatory mitigation and monitoring plan should be in a single document. It should contain up-to-date versions of all materials, even if other versions were submitted earlier in the application process.

D. MITIGATION GUIDELINES

1. Mitigation Plan Checklist. The Compensatory Mitigation Plan Checklist and Detailed Outline (Part II) describes the primary considerations to be taken into account when developing wetland or stream mitigation and monitoring plans. **All items on the Checklist should be included in the mitigation and monitoring plan, or there should be an explanation as to why the item is not appropriate to include.**

2. Level of Detail. The level of information provided in the mitigation plan should be commensurate with the potential impact to aquatic resources. The Corps will work with the applicant to determine the appropriate amount and type of mitigation and the level of documentation required for each project. The applicant should also apply the recommendations and concepts contained in the NRC guidelines summary (Appendix A) and RGL 02-2 (Appendix B) to the planning and implementation of mitigation projects.

3. Location of Mitigation / Watershed Approach. The Corps recognizes that on-site compensatory mitigation is not always practicable or best for the aquatic resources, and is striving to transition to a system-oriented or watershed approach to mitigation decisions. If there is no practicable opportunity for on-site mitigation, or when off-site mitigation provides more watershed benefit than on-site mitigation, applicants may propose the use of off-site mitigation, mitigation banks, or in-lieu fee arrangements. Mitigation plans should describe how the mitigation project will contribute to the specific aquatic resource needs of the impacted watershed. Watersheds will be identified using the U.S. Geologic Survey's Hydrologic Unit Codes (HUC) to the 8-digit accounting unit HUC level. Mitigation may be allowed within a sub-regional watershed level if appropriate and necessary to mitigate for impacted aquatic functions

4. Functional Assessment. The applicant should consider the aquatic functions lost at the impact area when addressing compensatory mitigation requirements. At this time, there is no approved protocol for assessing aquatic functions in the Albuquerque District. Until such time that methodologies have been developed, tested and approved, the Regulatory Branch will continue to make mitigation decisions utilizing the most objective information available, and the best professional judgment of its project managers and the resource agencies. To assist in our evaluation, the applicant may engage a qualified environmental sciences professional with expertise in aquatic systems to provide a summary of the functions and values of waters of the U.S.

Replacement acreage will be determined based on functions and values of the aquatic resources that will be eliminated or degraded, the temporal loss that will occur to those functions, the functions and values of the proposed mitigation site, and the expected degree of success of the proposed mitigation. To achieve the goal of no net loss of aquatic resources and to compensate for temporal lags, replacement acreage may be greater than the acreage lost.

5. Wetland Protection. To the extent practicable, wetlands that are not authorized for fill activities will be excluded from building lots in order to prevent predictable, unauthorized impacts. If the Corps determines that it is not practicable to revise lot layouts to exclude

wetlands, then compensatory mitigation may be required to replace the aquatic functions and values that will be lost as a result of the development and/or unauthorized fill activities.

Buffers enhance or provide a variety of aquatic habitat functions, including wildlife habitat, runoff filtration, water temperature moderation, and detritus for aquatic food webs. Establishment, preservation, and maintenance of buffers may be required to ensure that the overall mitigation project performs as expected.

At the option of the Corps, placement and maintenance of permanent signs around the mitigation area boundaries may be required to identify the site as a mitigation or conservation area.

6. Responsibility for Mitigation. The mitigation plan will identify the party(ies) responsible for accomplishing, maintaining, and monitoring the mitigation site. It is the sole responsibility of the permittee to ensure that the mitigation site is appropriately designed, constructed, maintained and monitored in accordance with the approved mitigation and monitoring plan, unless a third party formally agrees to undertake that responsibility.

7. Timing of Mitigation. When feasible, compensation for impacts to waters of the U.S. should be completed in advance of, and no later than concurrently with, the impact to aquatic resources. Initial physical and biological improvements described in the mitigation plan generally should be completed no later than the first full growing season following the impacts from authorized activities. If it is not practicable to complete the mitigation within that timeframe, then other measures that mitigate for the temporal loss of functions should be included in the mitigation plan (see Appendix B - RGL 02-2, paragraph 2.n.).

E. PERFORMANCE STANDARDS AND MONITORING

1. Performance Standards. It is essential that mitigation and monitoring plans contain written performance standards for assessing whether mitigation is achieving planned goals and functions. Performance standards for a specific project are measurable, external attributes that are related to the specific target functions being replaced, e.g., water quality improvement, wildlife habitat, shoreline stabilization, flood attenuation and abatement, etc. Target functions and corresponding performance standards are determined on a case-by-case basis, and are influenced by the extent of impacts at the project site and what the mitigation site can support. Pre- and post-construction photographs of the project site should be provided to the Corps to document construction impacts.

2. Adaptive Management. The mitigation plan should include a thorough monitoring plan as part of an adaptive management program that provides early indication of potential problems and direction for corrective actions. The NRC report entitled, *Compensating for Wetland Losses Under the Clean Water Act* (2001) (Appendix A), states:

> The monitoring of wetland structure, processes, and function from the onset of wetland restoration or creation can indicate potential problems. Process monitoring (e.g., water-level fluctuations, sediment accretion and erosion, plant

flowering, and bird nesting) is particularly important because it will likely identify the source of a problem and how it can be remedied. Monitoring and control of nonindigenous species should be a part of any effective adaptive management program. . . . Simply documenting the structure (vegetation, sediments, fauna, and nutrients) will not provide the knowledge and guidance required to make adaptive "corrections" when adverse conditions are discovered.

3. Monitoring Reports. The mitigation and monitoring plan will identify how the performance standards will be measured and reported to the Corps on an annual or periodic basis. Monitoring reports should include a discussion of biotic and abiotic processes; measures of hydrology, vegetation (including nonindigenous species), soils, fauna, and nutrients; photographs from fixed locations; and recommended remedial measures to achieve the performance standards. **The recommended Outline for Monitoring Reports is contained in Part III.**

4. Monitoring Duration. Monitoring will be required for five years, or upon successful achievement of the performance standards, whichever occurs first. Monitoring will not be less than three growing seasons. Success of the mitigation area, without human intervention, should be demonstrated for two consecutive years, once the success criteria have been met.

F. REMEDIAL ACTIONS

Remedial measures may be required if all or any portion of the annual performance criteria are not met in any year, or if the final performance standards are not met. The responsible party shall prepare an analysis of the cause(s) of failure and, if determined necessary by the Corps, propose remedial actions and an implementation schedule for approval. The responsible party will be required to complete the remedial action as soon as practicable, as identified in the implementation schedule. If the mitigation site has not met the performance criteria, the responsible party's maintenance and monitoring obligations continue until the Corps gives final project confirmation. In the alternative, the Corps may require that a new mitigation site be identified and/or mitigation plan developed.

G. SITE PROTECTION AND MAINTENANCE

The goal of mitigation is to achieve self-sustaining mitigation sites. Mitigation plans should include a written description of the legal means for protecting and maintaining the mitigation area(s). All components of the mitigation, including wetlands, uplands, riparian areas, or other aquatic resources should be permanently protected, in most cases, with appropriate legal instruments, e.g., conservation easements, deed restrictions, transfer of title to Federal or state resource agencies or non-profit conservation organizations. In no case will the real estate instrument require a Corps official's signature.

H. COMPLIANCE AND FINANCIAL ASSURANCES

Mitigation plans will identify the party responsible for providing and managing any financial assurances and contingency funds set aside for remedial measures to ensure mitigation success.

An applicant may be required to provide financial assurances to ensure attainment of the final mitigation performance standards. At the Corps' discretion, certain entities (for example, government agencies such as highway departments) will not be required to provide financial assurances. Financial assurances may not be required if an applicant provides rationale, and the Corps concurs, that financial assurance is not necessary to ensure mitigation success. Financial assurances may be in the form of letters of credit, performance bonds, escrow accounts, irrevocable trusts, or other appropriate legal documents.

The monetary value of the financial guarantee will be determined by the Corps, based on the applicant's estimate of the total cost of the proposed mitigation, maintenance and monitoring. The estimate shall include, at a minimum, the costs associated with site acquisition and preparation, vegetation establishment, operation and maintenance, contingency measures, and the generation of monitoring reports. To cover Corps supervisory and administrative costs that may be incurred, the financial assurance should include an additional 15% minimum of the estimated cost of construction. The financial assurance for the maintenance phase should equal not less than 30% of the estimated cost of construction.

I. PERSONS TO CONTACT WITH QUESTIONS

For answers to questions regarding the interpretation of these guidelines or acceptable mitigation for a specific project, contact a project manager within the Regulatory Branch of the Albuquerque District. Contact information and information on the regulatory program can be found on our website at www.spa.usace.army.mil/reg.

J. USEFUL REFERENCES

Kusler, Jon, Ph.D. Institute for Wetland Science and Public Policy, The Association of State Wetland Managers, Inc. *Draft*. Reconciling Wetland Assessment Techniques. October 2003. 85 pp. Available at http://www.aswm.org/propub/pubs/aswm/reconciling.pdf

National Research Council. Compensating for Wetland Losses Under the Clean Water Act. 2001. National Academy Press. Washington, D.C. 348 pp.

Somerville, D.E. and B.A. Pruitt. *Draft*. Physical Stream Assessment: A Review of Selected Protocols. March 2004, Prepared for the U.S. Environmental Protection Agency, Office of Wetlands, Oceans, and Watersheds, Wetlands Division (Order No. 3W-0503-NATX). Washington, D.C. 207 pp. Available at http://www.mitigationactionplan.gov/stream%20comp%20page.htm

USACE, et al. *Draft*. Federal Guidance on the Use of Off-Site and Out-of-Kind Compensatory Mitigation Under Section 404 of the Clean Water Act. April 2004. Available at http://www.mitigationactionplan.gov/040407SiteKindGuidance.html

USACE. Regulatory Guidance Letter 02-2. 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. December 2002. Available at http://www.usace.army.mil/inet/functions/cw/cecwo/reg/RGL2-02.pdf

USACE. Corps of Engineers Wetlands Delineation Manual. January 1987. Department of the Army Environmental Laboratory. Technical Report Y-87-1.

USACE Engineer Research and Development Center. Installing Monitoring Wells / Piezometers in Wetlands. July 2000. ERDC TN-WRAP-00-02. Available at: http://www.wes.army.mil/el/wrap/pdf/tnwrap00-2.pdf

USDA. Stream Corridor Restoration Principles, Processes, and Practices. October 1998. Federal Interagency Stream Corridor Restoration Working Group. Available at http://www.usda.gov/stream_restoration/newgra.html

In addition, the USACE Engineer Research and Development Center website at http://www.erdc.usace.army.mil/ contains numerous publications and technical papers on wetlands and streams.

PART II
COMPENSATORY MITIGATION PLAN CHECKLIST[1]

- ❑ **1. Summary**

- ❑ **2. Responsible Parties**
  a. Applicant/Permittee
  b. Entity(ies) having financial responsibility for mitigation
  c. Applicant's designated agent (if any)
  d. Preparer(s) of the proposal/plan

- ❑ **3. Project Requiring Mitigation**
  a. Location
  b. Brief summary of overall project

- ❑ **4. Mitigation Goals and Objectives**
  a. Impact Site
  b. Mitigation Site

- ❑ **5. Baseline Information for Impact and Proposed Mitigation Sites**
  a. Location
  b. Classification
  c. Quantify wetland or stream resources
  d. Assessment method used to quantify impacts
  e. Existing hydrology/topology
  f. Existing vegetation
  g. Existing soils
  h. Existing wildlife habitat/use
  i. Threatened/Endangered species
  j. Historic and current land use
  k. Current owner(s)
  l. Watershed context/surrounding land use

- ❑ **6. Mitigation Site Selection and Justification**
  a. Site-specific objectives
  b. Watershed/regional objectives.
  c. Describe mitigation project contributions to aquatic resource functions
  d. Describe likely future adjacent land uses
  e. Site selection practicability
  f. Practicability of on-site or in-kind options
  g. Mitigation site deed restrictions, easements, rights-of-way
  h. Sustainable and self-maintaining mitigation design
  i. USFWS clearance
  j. Cultural resources clearance

- ❑ **7. Mitigation Work Plan**
  a. Site boundary maps

[1] Refer to "Compensatory Mitigation Plan Detailed Outline" for further explanation of specific checklist items.

b. Timing of mitigation
c. Grading plan
d. Construction methods
e. Construction schedule
f. Planned hydrology
g. Planned vegetation
h. Pest plant removal
i. Planned soils
j. Planned habitat features
k. Planned buffers
l. Other planned features
m. Construction monitor

- ❑ **8. Performance Standards**
  a. Identify success criteria
  b. Set target ranges for identified parameters

- ❑ **9. Site Protection and Maintenance**
  a. Long-term legal protection instrument
  b. Responsible parties
  c. Maintenance plan and schedule
  d. Invasive species/noxious weed control plan

- ❑ **10. Monitoring Plan**
  a. Responsible parties
  b. Data to be collected and reported
  c. Assessment tools and methodologies
  d. Format for reporting monitoring data (see Part III of these Guidelines)
  e. Provide monitoring schedule

- ❑ **11. Adaptive Management Plan**
  a. Identify party (ies) and responsibilities
  b. Discuss design relative to potential challenges
  c. Potential remedial measures
  d. Performance standard modification procedures

- ❑ **12. Financial Assurances**
  a. Identify party (ies) responsible for, and contents of, each assurance
  b. Specify types of assurances
  c. Assurance review schedule

- ❑ **13. Format**
  a. Reports/Proposals
  b. Figures
  c. List of tables, schedules, and maps to be submitted

Attachment A
Natural Resources Conservation Service (NRCS) Program Requirements

COMPENSATORY MITIGATION PLAN
DETAILED OUTLINE

This document is intended as a technical guide for Clean Water Act (CWA) Section 404 and Section 10 permit applicants[2] preparing compensatory mitigation plans. Compensatory mitigation is required to offset impacts that cannot be avoided and minimized to the extent practicable. The purpose of this document is to identify the types and extent of information that agency personnel need to assess the likelihood of success of a mitigation proposal. Success is generally defined as: a healthy sustainable wetland/water that – to the extent practicable – compensates for the lost functions of the impacted water in an appropriate landscape/watershed position. This checklist provides a basic framework that will improve predictability and consistency in the development of mitigation plans for permit applicants. Although every mitigation plan may not need to include each specific item, applicants should address as many as possible and indicate, when appropriate, why a particular item was not included (For example, permit applicants who will be using a mitigation bank would not be expected to include detailed information regarding the proposed mitigation bank site since that information is included in the bank's enabling instrument).

1. Summary. Provide a brief (one page or so) summary of the project and mitigation proposal.

2. Responsible Parties. Provide names, titles, addresses, and phone numbers of responsible parties including contact persons.

a. Applicant/Permittee: (Note: the project proponent, not consultant, is to be identified here.

b. Entity(ies) having financial responsibility for mitigation: (i.e. for implementation of compensatory mitigation and attainment of success criteria, if different from "A,")

c. Applicant's designated agent (if any)

d. Preparer(s) of the proposal/plan

3. Project Requiring Mitigation

a. Location: Describe location and provide: a) road map with site location clearly shown, and b) USGS quad map with project site outlined. Entire watershed for impact site should be shown.

b. Brief summary of overall project: In a few paragraphs, describe the overall project for which a permit or authorization is required. Include type of development (or other work), project size, and a brief projected schedule of project construction.

4. Mitigation Goals and Objectives

a. Impact Site

(1) Describe and quantify the aquatic resource type and functions that will be impacted at the proposed impact site. Include temporary and permanent impacts to the aquatic environment.

[2] The checklist may be used in other federal or state programs as well; however, additional information may be needed to satisfy specific program requirements. For example, Attachment A indicates additional information needed by the Natural Resources Conservation Service (NRCS) to satisfy the Swampbuster provisions of the Food Security Act.

(2) Describe aquatic resource concerns in the watershed (e.g. flooding, water quality, habitat) and how the impact site contributes to overall watershed/regional functions. Identify watershed or other regional plans that describe aquatic resource objectives.

b. Mitigation Site

(1) Describe and quantify the aquatic resource type and functions for which the mitigation project is intended to compensate.

(2) Describe the contribution to overall watershed/regional functions that the mitigation site(s) is intended to provide.

5. Baseline Information: For both the proposed impact site and proposed mitigation site (and proposed reference sites, if applicable), **provide:**

a. Location

(1) Coordinates (preferably using digital geographic positioning system (DGPS)) and written location description (including block, lot, township, county, Hydrologic Unit Code (HUC) number, as appropriate and pertinent).

(2) Maps. Identify those jurisdictional areas to be directly or indirectly affected by the project. Provide appropriately sized topographic base map(s) with jurisdictional areas and impacts clearly shown (e.g., site map with delineation (verified by the Corps), vicinity map, map identifying location within the watershed, National Wetlands Inventory (NWI map), NRCS soils map, zoning or planning maps). Indicate area of proposed fill on site map.

(3) Aerial/Satellite photos.

b. Classification. Include waterbody classification information such as hydrogeomorphic (HGM) description, Cowardin classification, Rosgen stream type, NRCS classification, as appropriate.

c. Quantify wetland resources (acreage) or stream resources (linear feet) by type(s).

d. Assessment method(s) used to quantify impacts to aquatic resource functions (e.g., HGM, IBI, WRAP, etc.); explain findings. The same method should be used at both the impact and mitigation sites.

e. Existing hydrology/topology. Describe hydrology and topography, including slope ratios of wetlands and stream banks, and identify the source(s) of water for the site. Indicate groundwater level(s) if known and significant pollutants. Specifically, discuss

(1) Water budget. Include water source(s) (precipitation, surface runoff, groundwater, stream) and loss(es). Provide budgets for both wet and dry years.

(2) Hydroperiod (seasonal depth, duration, and timing of inundation and/or saturation), percent open water.

(3) Historical hydrology of mitigation site if different than present conditions

(4) Contributing drainage area (acres).

(5) Results of water quality analyses (e.g., data on surface water, groundwater, and tides for such attributes as pH, redox, nutrients, organic content, suspended matter, DO, heavy metals).

f. Existing vegetation. Describe plant communities on the impact site.

(1) List of species on site, indicating dominants.

(2) Species characteristics such as densities, general age and health, and native/non-native/invasive status.

(3) Percent vegetative cover; community structure (canopy stratification).

(4) Map showing location of plant communities.

g. Existing soils

(1) Soil profile description (e.g., soil survey classification and series) and/or stream substrate (locate soil samples on site map).

(2) Results of standard soils analyses, including percent organic content, structure (e.g., granular, compacted), texture, permeability.

h. Existing wildlife habitat/use. Describe observed/expected animal use and/or habitat values of the site.

i. Threatened/Endangered Species. Identify any federally-listed (including proposed) species found in the project area or for which suitable habitat is present, including whether the site is within designated critical habitat.

j. Historic and current land use; note prior converted cropland.

k. Current owner(s)

l. Watershed context/surrounding land use.

(1) Impairment status and impairment type (e.g., 303(d) list) of aquatic resources.

(2) Description of watershed land uses (percent agriculture, forested, wetland, developed).

(3) Size/Width of natural buffers (describe, show on map).

(4) Description of landscape connectivity: proximity and connectivity of existing aquatic resources and natural upland areas (show on map).

(5) Relative amount of aquatic resource area that the impact site represents for the watershed and/or region (i.e., by individual type and overall resources).

6. Mitigation Site Selection and Justification

a. Site-specific objectives: Description of mitigation type(s)[3], acreage(s) and proposed compensation ratios.

b. Watershed/regional objectives: Description of how the mitigation project will compensate for the functions identified in the Mitigation Goals section 4.b(1).

c. Description of how the mitigation project will contribute to aquatic resource functions within the watershed or region (or sustain/protect existing watershed functions) identified in the Mitigation Goals section above. How will the planned mitigation project contribute to landscape connectivity? Use aerial photography interpretation, as available, to evaluate opportunities for restoration mitigation.

d. Likely future adjacent land uses and compatibility (show on map or aerial photo).

e. Description of site selection practicability in terms of cost, existing technology, and logistics.

f. If the proposed mitigation is off-site and/or out-of-kind, explain why on-site or in-kind options[4] are not practicable or environmentally preferable.

g. Existing and proposed mitigation site deed restrictions, easements and rights-of-way. Demonstrate how the existence of any such restriction will be addressed, particularly in the context of incompatible uses.

h. Explanation of how the design is sustainable and self-maintaining. Show by means of a water budget that there is sufficient water available to sustain long-term wetland or stream

[3] That is, restoration, enhancement, creation or preservation: see Regulatory Guidance Letter (RGL) 02-2, Mitigation RGL, for definitions for these terms.

[4] See Federal Guidance on the Use of Off-Site and Out-of-Kind Compensatory Mitigation under Section 404 of the CWA. (to be published)

hydrology. Provide evidence that a legally defensible, adequate and reliable source of water exists.
i. USFWS letter regarding potential beneficial or negative impacts to federally listed species, or Biological Opinion.
j. SHPO Cultural Resources clearance letter.

7. Mitigation Work Plan

a. Maps marking boundaries of proposed mitigation types; include DGPS coordinates.
b. Timing of mitigation: before, concurrent or after authorized impacts; if mitigation is not in advance or concurrent with impacts, explain why it is not practicable and describe other measures to compensate for the consequences of temporal losses.
c. Grading plan
(1) Indicate existing and proposed elevations and slopes.
(2) Describe plans for establishing appropriate micro-topography. Reference wetland(s) can provide design templates.
d. Description of construction methods (e.g., equipment and procedures to be used, access paths, etc.)
e. Construction schedule (expected start and end dates of each construction phase, expected date for as-built plan).
f. Planned hydrology
(1) Source of water.
(2) Connection(s) to existing waters.
(3) Hydroperiod (seasonal depth, duration, and timing of inundation and saturation), percent open water, water velocity.
(4) Potential interaction with groundwater.
(5) Existing monitoring data, if applicable; indicate location of monitoring wells and stream gauges on site map.
(6) Stream or other open water geomorphic features (e.g., riffles, pools, bends, deflectors).
(7) Structures requiring maintenance (show on map) Explain structure maintenance in section 9.c.
g. Planned vegetation
(1) Native plant species composition (e.g., list of acceptable native hydrophytic vegetation).
(2) Source of native plant species (e.g. salvaged from impact site, local source, seed bank); stock type (bare root, potted, seed); and plant age(s)/size(s).
(3) Plant zonation/location map (refer to grading plan to ensure plants will have an acceptable hydrological environment).
(4) Plant spatial structure – quantities/densities, percent cover, community structure (e.g., canopy stratification).
(5) Expected natural regeneration from existing seed bank, plantings, and natural recruitment.
h. Pest plant removal. Describe method(s) to be used to remove any pest plants and/or noxious weeds from the site.
i. Planned soils
(1) Soil profile

(2) Source of soils (e.g., existing soil, imported impact site hydric soil), target soil characteristics (organic content, structure, texture, permeability), soil amendments (e.g., organic material or topsoil).

(3) Erosion and soil compaction control measures.

j. Planned habitat features (identify large woody debris, rock mounds, etc. on map).

k. Planned buffer (identify on map).

(1) Evaluation of the buffer's expected contribution to aquatic resource functions.

(2) Physical characteristics (location, dimensions, native plant composition, spatial and vertical structure.

l. Other planned features, such as interpretive signs, trails, fence(s), mitigation boundary signs, etc.

m. Construction monitor. As applicable, provide a statement that a person/firm familiar with the mitigation/monitoring plan will supervise site preparation. This person should have authority to direct equipment operators, and should submit a brief report to the Corps following completion of construction.

8. Performance Standards

a. Identify clear, precise, quantifiable parameters that can be used to evaluate the status of desired functions. These may include hydrological, vegetative, faunal and soil measures. (e.g., plant richness, percent exotic/invasive species, water inundation/saturation levels). Describe how performance standards will be used to verify that objectives identified in 6.b. and 6.c. have been attained.

b. Set target values or ranges for the parameters identified. Ideally, these targets should be set to mimic the trends and eventually approximate the values of a reference wetland(s).

9. Site Protection and Maintenance

a. Long-term legal protection instrument (e.g. conservation easement, deed restriction, transfer of title).

b. Party(ies) responsible and their role (e.g. site owner, easement owner, maintenance implementation). If more than one party, identify primary party.

c. Maintenance plan and schedule (e.g. measures to control predation/grazing of mitigation plantings, temporary irrigation for plant establishment, replacement planting, structure maintenance/repair, etc.).

d. Invasive species/noxious weed control plan (plant and animal).

10. Monitoring Plan

a. Party(ies) responsible for monitoring. If more than one, identify primary party.

b. Data to be collected and reported, how often and for what duration (identify proposed monitoring stations, including transect locations on map).

c. Assessment tools and/or methods to be used for data collection and monitoring the progress towards attainment of performance standard targets.

d. Format for reporting monitoring data and assessing mitigation status (see Part III of these Guidelines).

e. Monitoring schedule.

11. Adaptive Management Plan

a. Party(ies) responsible for adaptive management.

b. Identification of potential challenges (e.g., flooding, drought, invasive species, seriously degraded site, extensively developed landscape) that pose a risk to project success. Discuss how the design accommodates these challenges.

c. Discussion of potential remedial measures in the event mitigation does not meet performance standards in a timely manner.

d. Description of procedures to allow for modifications of performance standards if mitigation projects are meeting mitigation goals, but in unanticipated ways.

12. Financial Assurances

a. For each of the following, identify party(ies) responsible to establish and manage the financial assurance, the specific type of financial instrument, the method used to estimate assurance amount, the date of establishment, and the release and forfeiture conditions:

(1) Construction phase
(2) Maintenance
(3) Monitoring
(4) Remedial measures/adaptive management
(5) Project success

b. Types of assurances (e.g., performance bonds, irrevocable trusts, escrow accounts, casualty insurance, letters of credit, etc.).

c. Schedule by which financial assurance will be reviewed and adjusted to reflect current economic factors.

13. Format

a. Reports/Proposals

(1) Headings. **All** cover, title page, or letter headings must contain the **Corps File Number** and the **Date** of the document.

(2) Contributor Page. List all persons who prepared the plan and performed monitoring.

(3) Distribution Page. List names, titles, and companies/agencies of all persons receiving a copy of the report.

(4) Binding. Generally speaking, a mitigation plan should be a single, stand-alone, separately bound document. All materials submitted should be, or be folded to, 8 ½" x 11." Do not use three-ring binders.

b. Figure Format. Maps, drawings. All maps and plans submitted should be legible, complete, clear, and at the appropriate scale. Each should include the following:

(1) Title block.
(2) Date of preparation.
(3) Date(s) of any modifications.

(4) North arrow (plan views). The orientation of the map on the page (as it is read) should be the **same** for **all** maps submitted. By convention, North will normally be toward the top of the page.

(5) Scale. Base topographic maps should be full-sized (1 inch = 100 feet or less, 1 inch = 200 feet for very large projects).

(6) Datum. Reference elevation datum should be indicated on both plan and section views.

(7) Jurisdictional boundaries. Ordinary high water mark, wetland boundaries.

(8) Legend. Identify all symbols, patterns or screens used. If colors are used to indicate areas on the original map, color copies (or the original) should be included in the Corps submittal.

c. List of Tables, Schedules, and Maps to be submitted (Note: This is an overall list. It is only necessary to submit the items that apply to your project.)

(1) Tables

(a) Impact acreage

(b) Impact vs. Mitigation acreage

(c) Plant species

(d) Performance criteria/monitoring methods

(2) Schedules

(a) Implementation

(b) Monitoring/Reporting

(c) Maintenance

(3) Maps

(a) Overall Project: Road map; USGS map; jurisdictional area topographic map

(b) Mitigation Site (if different from project site): Road map; USGS map; topographic map; jurisdictional map (if applicable)

(c) Mitigation Design: Grading plan (including cross-sections and water control structures, if any); planting plan

(d) As-builts (if different from plan): Grading; planting

ATTACHMENT A
NATURAL RESOURCES CONSERVATION SERVICE (NRCS) PROGRAM REQUIREMENTS[5]

- ☐ NRCS conservation practice standards and specifications
- ☐ NRCS Environmental Evaluation
- ☐ Mitigation agreement
- ☐ Federal/State/Local required permits
- ☐ Compatible use statement:
  - Allowable uses (e.g. hunting, fishing)
  - Prohibited uses (e.g. grazing, silviculture)
  - Uses approved by compatible use permit
- ☐ Copy of recorded easement
- ☐ Subordination waiver on any existing liens on mitigation site
- ☐ Statement of landowner's tax liability
- ☐ Copy of Warrantee Deed from landowner's attorney (no encumbrances, if so list)
- ☐ Copy of certified wetland determination:
  - NRCS-CPA-026 Highly Erodible Land and Wetland Conservation Certification
  - Wetland label map
- ☐ Copy of FSA Good Faith Waiver
- ☐ Copy of easement(s) ingress/egress granted to USDA employees for gaining legal access to mitigation site
- ☐ Copy of NRCS-CPA-38 Request for Certified Wetland Determination/Delineation

[5] For a complete list of the program requirements needed by NRCS to satisfy the Swampbuster provisions of the Food Security Act see the National Food Security Act Manual.

PART III
OUTLINE FOR MONITORING REPORTS

1. Project Information
   a. Project name
   b. Applicant name, address, and phone number
   c. Consultant name, address, and phone number (if appropriate)
   d. Corps permit file number
   e. Acres of impact and type(s) of habitat impacted
   f. Date project construction commenced
   g. Indication of mitigation monitoring year (i.e. first, second, third, etc.)
   h. Amount and information on any required financial assurance, if any.

2. Compensatory Mitigation Site Information
   a. Location of the site (regional map may be appropriate)
   b. Specific purpose/goals for the compensatory mitigation site
   c. Date mitigation site construction and planting completed
   d. Dates summary of previous maintenance and monitoring visits
   e. Name, address, and contact number of responsible parties for the site
   f. Summary of remedial action

3. Map of the compensatory mitigation site. Diagram of the site (no larger than 11 x 17) including:
   a. Habitat types (as constructed)
   b. Locations of any photographic record stations
   c. Landmarks

4. List of Corps-approved success criteria

5. Tabulated results of the monitoring visits versus performance standards.

6. Photographic record of the site during most recent monitoring visit at record stations (at least four photos per page are preferred).

7. Summary of field data taken to determine compliance with performance standards and success criteria (at least one page, no more than two pages).

8. Problems noted and proposed remedial measures.

9. Original data sheets and technical appendices should not be submitted with this report; however they should be retained with the applicant and/or consultant until the Corps has signed off the mitigation. The permittee may need to make data sheets and technical appendices available to the Corps upon request.