



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P. O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

Regulatory Division

PUBLIC NOTICE MAY 26 2004

MITIGATION and MONITORING GUIDELINES

Background

As a result of the National Academy of Sciences' findings and the ensuing National Mitigation Action Plan (MAP), the U.S. Army Corps of Engineers (Corps) has commenced several national initiatives to improve the success of compensatory mitigation overall and in the context of a regional watershed approach.

In October 1998, the Jacksonville District published an operational draft document titled "Joint State/Federal Mitigation Bank Review Team Process for Florida," aka the "Green Book." The contents of this document primarily address mitigation banking issues. Chapter 5 of this document describes the District's currently preferred wetland assessment methodology for determining the appropriate amount of mitigation for projects requiring compensation, and is used to evaluate all applications for individual permits, not just mitigation banks.

However, the determination of the appropriate amount of mitigation is just one component of a comprehensive mitigation plan. Therefore, in accordance with the MAP, all the Corps' Districts are being requested to incorporate a Corps' Headquarters-generated mitigation plan checklist and the guidance supplement to the mitigation plan checklist into their mitigation guidelines. The main purposes for this are to assist applicants in the preparation of compensatory mitigation and monitoring plans associated with projects requiring Department of the Army permits, and to assist Corps staff in the evaluation of these compensatory mitigation and monitoring plans. We envision adding a chapter to the "Green Book" containing the mitigation plan checklist and the guidance supplement to the mitigation plan checklist. As we continue to receive additional guidance and/or

clarification, we will add those as appropriate. These will also be posted to our Regulatory Home page at <http://www.saj.usace.army.mil/permit>

This guidance is established in accordance with the following statutes, regulations, and policies. It is intended to clarify provisions within these existing authorities and does not establish any new requirements.

- a. Clean Water Act Section 404 (33 USC 1344).
- b. Rivers and Harbors Act of 1899 Section 10 (33 USC 403 et seq.).
- c. Environmental Protection Agency, Section 404(b)(1) Guidelines (40 CFR part 230). Guidelines for Specification of Disposal Sites for Dredged or Fill Material.
- d. Department of the Army, Regulatory Programs of the Corps of Engineers (33 CFR parts 320-330). Policies for evaluating permit applications.
- e. 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).
- f. Title XII Food Security Act of 1985 as amended (16 USC 3801 et seq.).
- g. National Environmental Policy Act (42 USC 4321 et seq.), including the Council on Environmental Quality's implementing regulations (40 CFR parts 1500-1508).
- h. Fish and Wildlife Coordination Act (16 USC 661 et seq.).
- i. Fish and Wildlife Service Mitigation Policy (46 FR 7644-7663, 1981).
- j. Magnuson-Stevens Fishery Conservation and Management Act (16 USC 1801 et seq.).
- k. National Marine Fisheries Service Habitat Conservation Policy (48 FR 53142-53147, 1983).

On December 12, 2003, the Jacksonville District issued a Public Notice announcing our intention to develop a standard list of mitigation requirements and to solicit comments on this initiative. The public notice was sent to all interested parties including appropriate State and Federal agencies. A 30 day response period was specified in the public notice. After consideration of the comments, the Jacksonville District has modified the checklist slightly. The final version is attached to this public notice and we will be implementing it and the associated guidance supplement effective July 1, 2004. Please ensure that all mitigation plans address the items specified in the checklist, as appropriate.

Discussion of Public Comments

I. Overview

In response to the December 12, 2003, Public Notice, we received comments from four entities, none of which expressed opposition to the proposed Mitigation Checklist. All comments received in have been reviewed and are discussed in more detail below. One was a simple affirmation for the checklist and no need exists to discuss this comment further, two requested we consider the addition of several parameters to the checklist, and one noted that mitigation is difficult at best, and suggested the Corps maintain reference sources for applicants.

II. Specific Comments

A. One commenter suggested we consider the following:

1. All mitigation documentation should provide drawings that include the approved jurisdiction determination lines, and limits of the wetland areas by type. The permit instrument should also include these drawings and clearly specify the type of mitigation by habitat, and which parts are restoration, enhancement, or creation.

We agree with this comment in general, and similar requirements are currently in place in the Jacksonville District. However, we want to emphasize that not all mitigation projects will require the same level of documentation and the amount of required documentation will be determined on a case-by-case basis depending on the complexity of the proposed mitigation project. In addition, in many instances, mitigation is performed through a mitigation bank or Regional Offsite Mitigation Area (ROMA). In those instances, this information will be contained in the conditions of the inter-agency approved Mitigation Banking Instrument or the issued permit for the ROMA, rather than in the issued permit for the project.

2. If it is not already included in the "Green Book," there should be a mitigation ratio adjustment factor based on time lag for restoring the functions of the particular wetland type.

The Jacksonville District in Florida has been incorporating the time lag factor into all major mitigation projects and mitigation banks. We intend to implement a similar methodology in the Antilles in the near future. Our methodology is described in Chapter 5 of the current version (Operational Draft 1998) of the "Green Book."

3. The commenter also noted that the mitigation plan checklist and the guidance supplement to the mitigation plan checklist are primarily directed toward wetland mitigation but they may, in practice, also be utilized to mitigate for shallow subtidal aquatic sites. They further caution that techniques developed for terrestrial systems should not be applied to seagrass beds or coral reef systems without careful evaluation.

We agree with this comment and while we are not currently aware of anyone in the Jacksonville District employing wetland mitigation techniques to coral reef systems, we will continue to closely monitor projects proposing to mitigate for impacts to seagrass beds and/or coral reef systems.

B. One commenter noted that additional language may be needed to ascertain ownership of the potential mitigation site. They recommended the following items be addressed during the formative stages of a mitigation plan:

1. Indicate who presently owns the mitigation site. If different from the permit applicant(s), what is the availability of the property? Does the property carry any encumbrances on the title? If on public land, what arrangements, if any, have been discussed with the managing agency?

2. Indicate the expected ownership of the mitigation area following completion of the mitigation project. Who will be responsible for long-term management and protection of the area? If an entity other than the applicant will assume management responsibilities following completion of the mitigation project, is there an executed written agreement with the entity to manage the area in conformance with the goals of the mitigation? Include copies of any agreements. Include copies of all applicable deed restrictions.

3. Indicate what entity, if any, controls water flow to and/or from the site. Who maintains the water control structures? What arrangements have been made to guarantee appropriate water flow in the mitigation area during and after the establishment of the mitigation project?

4. Indicate who the point of contact is for permission to gain access to the mitigation site, or include a statement giving the Corps access to the mitigation site subsequent to the issuance of a Department of the Army permit.

5. Deed restrictions will be required that maintain on-site and off-site mitigation and preservation areas as wetland preserve and wildlife habitat in perpetuity. Copies of the proposed language will have to be submitted to the Corps of Engineers for

approval prior to recordation. Copies of the recorded documents must be provided to the Corps no later than 30 days subsequent to recordation. Recordation must occur at least 15 days prior to the start of project construction.

While some of these points are generally included in the existing checklist, we feel the issues of ownership and current or future encumbrances needing to be addressed prior to approval of a mitigation site are valid points and we have added them or a variant of them to the Jacksonville District Mitigation Guidelines.

C. One commenter noted that designing mitigation is very difficult, and they recommended that the Corps publish a list of web sites and publications that might aid anyone attempting to design a mitigation site.

WE feel that this is a legitimate concern and we will investigate the feasibility of compiling such a reference base as time and resources permit.

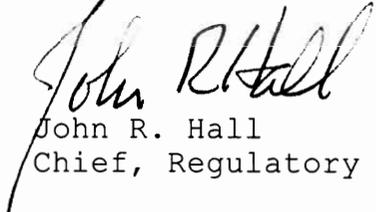
Other Jacksonville District Mitigation Initiatives

Currently the Jacksonville District is utilizing the Wetland Rapid Assessment Procedure (WRAP) to assess wetland functions and hence, the appropriate compensatory mitigation for adverse impacts to those wetland functions. The Jacksonville District is also currently evaluating the "Uniform Mitigation Assessment Method (UMAM), a functional assessment tool adopted by the State of Florida on February 2, 2004. The State now uses UMAM to determine mitigation necessary to offset impacts to wetlands and other surface waters. The Jacksonville District recognizes the value of utilizing the same functional assessment method as the State, however we feel that we would be acting prematurely if we implemented UMAM prior to our calibrating it. To this end, the Jacksonville District is calibrating the UMAM by applying it to various regions and wetland subclasses (we are not entertaining its use to assess the functions of surface waters other than wetlands) within the State. The data will be compiled and analyzed, and utilized to generate a draft guidance manual that will assist in standardizing the application and methodology among Jacksonville District staff.

Multi-Agency Compensatory Mitigation Plan Checklist and Guidance Supplement

Based on the National initiative and the comments received in response to the public notice, effective July 1, 2004, the Jacksonville District will begin to implement the attached

Mitigation Plan Checklist and Guidance Supplement in their review of applications for Department of the Army individual permits. Please ensure that mitigation plans submitted in support of an application for an individual permit address the items in the checklist and guidance supplement.


John R. Hall
Chief, Regulatory Division

MULTI-AGENCY COMPENSATORY MITIGATION PLAN CHECKLIST¹

- Mitigation Goals and Objectives
 - Describe functions lost at impact site
 - Describe functions to be gained at mitigation site
 - Describe overall watershed improvements to be gained
- Baseline Information for Impact and Proposed Mitigation Sites
 - Provide data on physical attributes of sites (soils, vegetation, hydrology)
 - Describe historic and existing land uses and resources impacted
 - Describe reference site attributes if available
- Mitigation Site Selection and Justification
 - Describe process of selecting proposed site
 - Likelihood of success, future land use compatibility, etc.
- Mitigation Work Plan
 - Location
 - Construction Plan
 - Describe planned hydrology, vegetation, soils, buffers, etc.
 - Indicate what entity, if any, controls water flow to and/or from the site.
 - Who maintains the water control structures?
 - What arrangements have been made to guarantee appropriate water flow in the mitigation area during and after the establishment of the mitigation project?
- Performance Standards
 - Identify success criteria
 - Compare functions lost and gained at impact and mitigation sites
 - Describe soils, vegetation and hydrology parameter changes
- Site Protection and Maintenance
 - List parties and responsibilities
 - Indicate who presently owns the mitigation site.
 - If different from the permit applicant(s), what is the availability of the property?
 - Does the property carry any encumbrances on the title?
 - If on public land, what arrangements, if any, have been discussed with the managing agency?
 - Provide evidence of legal protective measures

¹ Refer to "Supplement: Compensatory Mitigation Plan Checklist" for further explanation of specific checklist items.

- Indicate the expected ownership of the mitigation area following completion of the mitigation project.
 - Who will be responsible for long-term management and protection of the area?
 - If an entity other than the applicant will assume management responsibilities following completion of the mitigation project, is there an executed written agreement with the entity to manage the area in conformance with the goals of the mitigation?
 - Maintenance plan and schedule
 - Include a statement giving the Corps access to the mitigation site subsequent to the issuance of a Department of the Army permit.
- Monitoring Plan
- Provide monitoring schedule, identify party (ies) and responsibilities
 - Specify data to be collected, including assessment tools and methodologies
- Adaptive Management Plan
- Identify party (ies) and responsibilities
 - Remedial measures (financial assurances, management plan, etc.)
- Financial Assurances
- Identify party (ies) responsible for assurances
 - Specify type of assurance, contents and schedule
 - Copies of all proposed legal documentation shall be submitted to the Corps of Engineers for approval prior to recordation.
 - Copies of the recorded documents must be provided to the Corps no later than 30 days subsequent to recordation.

GUIDANCE SUPPLEMENT: COMPENSATORY MITIGATION PLAN CHECKLIST

This document is intended as a technical guide for Clean Water Act (CWA) Section 404 permit applicants² 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). This checklist can be adapted to account for specific environmental conditions in different regions of the U.S.

1. Mitigation Goals and Objectives

Impact Site

- a. 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.
- b. 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.

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.

Mitigation Site

- c. Describe and quantify the aquatic resource type and functions for which the mitigation project is intended to compensate.
- d. Describe the contribution to overall watershed/regional functions that the mitigation site(s) is intended to provide.

2. Baseline Information - for proposed impact site, proposed mitigation site & if applicable, proposed reference site(s).

a. Location

1. Coordinates (preferably using DGPS) & written location description (including block, lot, township, county, Hydrologic Unit Code (HUC) number, as appropriate and pertinent).
2. Maps (e.g., site map with delineation (verified by the Corps), map of vicinity, map identifying location within the watershed, NWI map, NRCS soils map, zoning or planning maps; indicate area of proposed fill on site map).
3. Aerial/Satellite photos.

b. Classification – Hydrogeomorphic as well as 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 impact and mitigation sites.

e. Existing hydrology

1. Water budget. Include water source(s) (precipitation, surface runoff, groundwater, stream) and losses(s). 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

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 matter, structure, texture, permeability.

h. Existing wildlife usage (indicate possible threatened and endangered species habitat).

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

j. Current owner(s)

k. 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 ag, 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).

3. Mitigation Site Selection & 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 1(c).

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

- 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 1(d). How will the planned mitigation project contribute to landscape connectivity?
- 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 options⁴ 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 hydrology. Provide evidence that a legally defensible, adequate and reliable source of water exists.
- i. USFWS and/or NOAA Fisheries Listed Species Clearance Letter or Biological Opinion.
- j. SHPO Cultural Resource Clearance Letter.

4. 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 microtopography. Reference wetland(s) can provide design templates.
- d. Description of construction methods (e.g., equipment to be used)
- 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 6(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, % cover, community structure (e.g., canopy stratification).
 - 5. Expected natural regeneration from existing seed bank, plantings, and natural recruitment.
- h. 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.
- i. Planned habitat features (identify large woody debris, rock mounds, etc. on map).
- j. Planned buffer (identify on map).
 - 1. Evaluation of the buffer's expected contribution to aquatic resource functions.

⁴ See Federal Guidance on the Use of Off-Site and Out-of-Kind Compensatory Mitigation under Section 404 of the CWA.

2. Physical characteristics (location, dimensions, native plant composition, spatial and vertical structure.
- k. Other planned features, such as interpretive signs, trails, fence(s), etc.

5. 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 3(b) and 3(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).

6. 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 control plan (plant and animal).

7. 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 monitoring the progress towards attainment of performance standard targets.
- d. Format for reporting monitoring data and assessing mitigation status.
- e. Monitoring schedule

8. 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.

9. 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
 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.

**ATTACHMENT A
NATURAL RESOURCES CONSERVATION SERVICE (NRCS)
PROGRAM REQUIREMENTS⁵**

- NRCS conservation practice standards and specifications
- NRCS Environmental Evaluation
- Mitigation agreement
- Federal/State/Local required permits
- Compatible use statement:
 - o Allowable uses (e.g. hunting, fishing)
 - o Prohibited uses (e.g. grazing, silviculture)
 - o 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 Warranty Deed from landowner's attorney (no encumbrances, if so list)
- Copy of certified wetland determination:
 - o NRCS-CPA-026 Highly Erodible Land and Wetland Conservation Certification
 - o 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.