



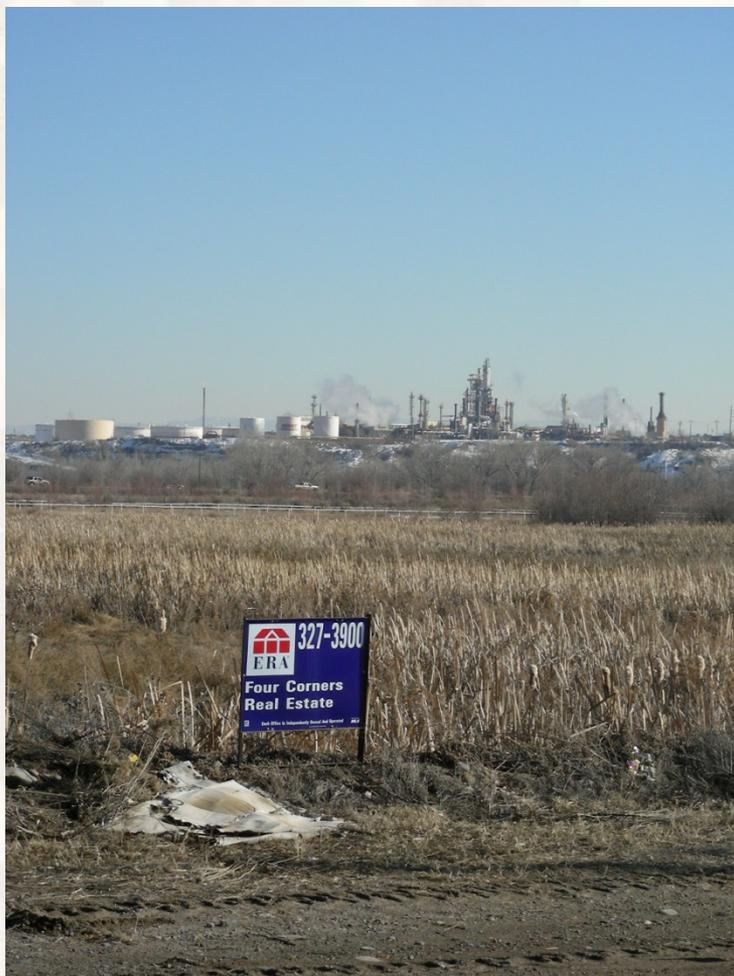
# Apply to all of South Pacific Division



The boundaries for the SPD Regulatory Program within the four districts encompass the states of Arizona, California, Nevada, Utah, New Mexico, as well as parts of Colorado and Texas.



# Timeline



- Draft Guidelines circulated for public comment August 23, 2013.
- Final Guidelines effective January 12, 2015.

Photo: Neal Schaeffer



# Available On-line

The screenshot displays the website interface for the South Pacific Division of the US Army Corps of Engineers. At the top, the logo and name "US Army Corps of Engineers" are visible, along with a search bar and navigation menu. The main content area is divided into two columns. The left column, titled "References", lists several documents under the heading "QMS Processes". The right column, titled "Public Notices", contains two sections. The top section provides a general overview of public notices. The bottom section, which is highlighted with a red border, features a specific public notice titled "FINAL REGIONAL COMPENSATORY MITIGATION AND MONITORING GUIDELINES - 12/31/2014". This notice includes details about the guidelines and their expiration date.

**References**

**QMS Processes**

These are internal process documents which will affect how permit applicants and their representatives will work with SPD subordinate districts. These documents are for "Information Only." The controlled versions reside on the SPD QMS SharePoint Portal. Please verify that the version of any document is the current one prior to proceeding.

- 12501-SPD Standard Operating Procedure for Determination of Mitigation Ratios
- 12502-SPD Regulatory Program Emergency Procedures
- 12503-SPD Regulatory Administrative Appeal Process
- 12504-SPD Essential Fish Habitat Procedures
- 12505-SPD Uniform Performance Standards for Compensatory Mitigation Requirements

**Public Notices**

Under the Corps' Regulatory Program, a public notice is the primary method for advising all interested parties of a proposed activity for which a permit is sought. Public notices are also published to inform the public about new or proposed regulations, policies, guidance or permit procedures.

Public Notices published by the South Pacific Division (SPD) under the Regulatory Program are posted on this page. SPD public notices are primarily published to inform the public about new or proposed guidance, templates, procedures, and regional general permits, which are applicable to more than one of SPD's subordinate districts. Once a public notice is available on-line, notification of the SPD Public Notice is sent to individuals on the mailing lists of the appropriate districts by each of the affected districts .

**Public Notices**

**FINAL REGIONAL COMPENSATORY MITIGATION AND MONITORING GUIDELINES - 12/31/2014:** The South Pacific Division has published a notice announcing FINAL Regional Compensatory Mitigation and Monitoring Guidelines to be followed in South Pacific Division's subordinate districts (Albuquerque, San Francisco, Sacramento, and Los Angeles districts) regarding procedures for compensatory mitigation as required for processing of Department of the Army (DA) permits under Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and Section 103 of the Marine Protection, Research, and Sanctuaries Act.

*Expiration date:*

<http://www.spd.usace.army.mil/Missions/Regulatory/PublicNoticesandReferences.aspx>



# Major Sections

- 1. INTRODUCTION AND PURPOSE
- 2. DEFINITIONS
- 3. GENERAL COMPENSATORY MITIGATION REQUIREMENTS
- 4. PLANNING AND DOCUMENTATION
- 5. ECOLOGICAL PERFORMANCE STANDARDS
- 6. MONITORING
- 7. MANAGEMENT
- 8. MITIGATION BANKS AND IN-LIEU FEE PROGRAMS
- 9. SPECIAL AREA MANAGEMENT PLAN CONSIDERATIONS
- 10. DOCUMENT FORMATTING REQUIREMENTS
- 11. APPLICABILITY AND EFFECTIVE DATE
- 12. REFERENCES
- APPENDICES



# INTRODUCTION AND PURPOSE

- Guidelines intended to supplement and inform implementation of 2008 Corps-EPA mitigation regulations (33 CFR Part 332), a.k.a., “the Mitigation Rule.”
- Organized similarly to the rule (33 C.F.R. § 332.1 through 332.8).
- Provide guidance for the regulated public in selecting appropriate compensatory mitigation sites and in preparing mitigation plans to compensate for unavoidable impacts to waters of the United States for authorized activities.
- Intended to standardize compensatory mitigation procedures throughout SPD region.
- Intended to assist the regulated public in preparing mitigation plans and in implementing successful compensatory mitigation projects using a watershed-based approach.
- Unless otherwise noted, each part of the Guidelines applies to mitigation banks, in-lieu fee programs, and permittee-responsible mitigation.



# Selected (key) information from Guidelines:



Photo: Deanna L. Cummings

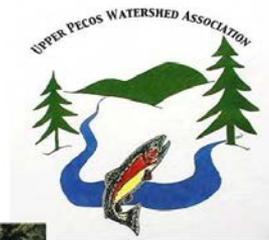


# 3.2 Watershed Approach

- 3.2.2 Considerations in using watershed approach: In some cases, it may be appropriate to locate compensatory mitigation for habitat loss away from the impact site (off-site) while compensating for impacts to water quality and water storage functions at the impact site (on-site).
- 3.2.6 Conclusions:
  - (1) If a watershed plan exists and has been determined to be appropriate by the Corps because it provides information that can be used to select compensatory mitigation sites that will be ecologically successful and sustainable, it should be used in determining the type and location of compensatory mitigation.
  - (2) If an appropriate watershed plan is not available, compensatory mitigation proposals should be selected using the watershed approach and any available information.
  - (3) Compensatory mitigation may be located on-site, off-site, or both.
  - (4) On a case-specific basis, different functions may be compensated for at a single or multiple locations, provided the overall plan compensates for the full suite of impacted functions.



# Upper Pecos Watershed Protection and Restoration Plan



Submitted to the New  
Mexico Environment  
Department

by

The Upper Pecos  
Watershed  
Association

June 2012



## 3.2 Watershed Approach



**BUILDING STRONG®**  
*on the Cornerstone of the Southwest*

## 3.4 Amount of compensatory mitigation

- Final compensatory mitigation ratios, as applicable to DA permits, are determined by the Corps districts in SPD using the Corps Quality Management System (QMS) Document 12501: [SPD Standard Operating Procedure for Determination of Mitigation Ratios](#). While not required, applicants may use this procedure as a planning tool to estimate Corps compensatory mitigation requirements early in the project design process.



Photo: Deanna L. Cummings



# 3.4 Amount of compensatory mitigation

- 3.4.1 Use of functional/condition assessments: These guidelines recommend the use of an appropriate functional/condition assessment for all projects which will result in an impact greater than 0.5 acre or greater than 300 linear feet of waters of the U.S.
- 3.4.2 Variables to consider:
  - Comparison of the functional loss at impact site and the functional gain at compensatory mitigation site
  - Compensatory mitigation site location
  - Aquatic resource area
  - Type conversion
  - Risk and uncertainty of compensatory mitigation success
  - Temporal loss
  - Indirect impacts



## 3.5. Financial assurances

- Considering whether financial assurance is required is contingent on various variables including the risk and uncertainty associated with a specific compensatory mitigation project and the performance of an applicant's past compensatory mitigation projects, if any.



Photo: Stephan Bork



## 3.5. Financial assurances

- For compensatory mitigation projects proposed by **government agencies such as cities and counties**, in making a determination on whether or not to require a financial assurance or some other alternate mechanism, an important consideration is whether the district engineer can have a high level of confidence that the compensatory mitigation project will be successfully completed in accordance with applicable performance standards. The applicant should provide information to support such an alternate mechanism (e.g., a formal, documented commitment from a government agency or public authority). Examples include:
  - Identification of past compensatory mitigation projects successfully completed by applicant,
  - Documentation of availability of funds for proposed mitigation project
  - Funding contingency plan.



# Amount and release of financial assurance

- 3.5.1 Amount of financial assurance
  - Mitigation plans should include an itemized budget ( should address all the items listed in 33 CFR §332.3(n)(2)).
  - In some cases, where the compensatory mitigation site has a high likelihood of success, and through use of a long-term protection document (e.g., a conservation easement) providing legal access to a compensatory mitigation site property for a third party specified by the Corps, it may not be necessary to include land acquisition costs in the required financial assurance amount.
  - A 20 percent (%) contingency generally should be included.
- 3.5.3 Financial assurance release process: The Department of the Army permit or instrument must clearly specify the conditions under which the financial assurances are to be released to the permittee, sponsor, and/or other financial assurance provider, including, as appropriate, linkage to achievement of performance standards, adaptive management, or compliance with special conditions.



# 3.6 Aquatic resource description

- All compensatory mitigation proposals and plans should provide a detailed description of aquatic resource sites in table format (see example tables B-1 and B-2 in Appendix B)
- Both for “pre-construction” conditions (baseline conditions before impacts and implementation of the compensatory mitigation) and proposed “post-construction” conditions (after impacts and implementation of the compensatory mitigation).



# 3.6 Aquatic resource description

Table B-1: Impact Site Description

Pre-Construction Site Conditions							Post-Construction Site Conditions			
Site No. <sup>1</sup>	Habitat Types <sup>2</sup>	Vegetation Communities <sup>3</sup>	Cowardin <sup>4</sup>	HGM <sup>5</sup>	Hydrology	FCAM <sup>6</sup> CRAM <small>(if used)</small>	Activity	Permanent Loss <sup>7</sup>	Temporary Loss <sup>7</sup>	Lin. Ft
<i>Wetland Waters of the U.S.</i>										
1	Alkali meadow	Saltgrass series	PUB	Slope	saturated	wet meadow	road crossing	0.3	N/A	N/A
2	Freshwater marsh	Bulrush-cattail series	R2UB	Depressional	seasonally flooded	depression	building pads	2.1	N/A	N/A
Total:								2.4	N/A	N/A
<i>Non-Wetland Waters of the U.S.</i>										
3	Mulefat	Mulefat series	R4SB	Riverine	intermittent	riverine	utility line	N/A	0.27	673
4	Riparian scrub	Arroyo willow series	R4SB	Riverine	intermittent	riverine	building pads	0.7	N/A	1202
Total:								0.7	0.27	1875
<i>Upland Habitats</i>										
5	Native grassland	Purple needlegrass series	N/A	N/A	N/A	N/A	grading	N/A	1.2	N/A
6	Sage scrub	California encelia series	N/A	N/A	N/A	N/A		4.5	N/A	N/A
Total:								4.5	1.2	N/A



# 3.6 Aquatic resource description

Table B-2: Mitigation Site Description

Site No.	Pre-Construction Site Conditions	Post-Construction Site Conditions								
		Habitat Types <sup>1</sup>	Vegetation <sup>2</sup>	Hydrology	Mitigation Method	Acres	Lin. Ft	Cowardin <sup>3</sup>	HGM <sup>4</sup>	FCAM <sup>5</sup> CRAM (if used)
<i>Wetland Waters of the U.S.</i>										
1	Alkali meadow	Alkali meadow	Saltgrass series	saturated	EN	3.0	N/A	PUB	Slope	wet meadow
2	Freshwater marsh	Freshwater marsh	Bulrush-cattail series	seasonally flooded	EN	1.0	N/A	R2UB	Depressional	depression
3	Annual grassland	Riparian forest	Black willow series	seasonally flooded	ES	1.0	500	PEM	Riverine	riverine
						Total:	500			
<i>Non-Wetland Waters of the U.S.</i>										
4	Annual grassland	Mulefat	Mulefat series	intermittent	ES	1.2	100	R4SB	Riverine	riverine
5	Disturbed riparian scrub	Riparian scrub	Arroyo willow series	intermittent	ES	1.0	2,400	R4SB	Riverine	riverine
6	Tamarisk scrub	Riparian scrub	Arroyo willow series	intermittent	RH	1.6	1,401	R4SB	Riverine	riverine
						Total:	3,8	3,901		
<i>Buffer Habitats</i>										
7	Annual grassland	Native grassland	Purple needlegrass series	upland	RE	1.38	2,400	N/A	N/A	N/A
8	Annual grassland	Native grassland	Purple needlegrass series	upland	RE	1.38	2,400	N/A	N/A	N/A
9	Ruderal habitat	Sage scrub	CA encelia series	upland	RE	4.5	N/A	N/A	N/A	N/A
10	Sage scrub	Sage scrub	CA buckwheat-white sage series	upland	EN	0.5	N/A	N/A	N/A	N/A
						Total:	7.6			
<i>Non-Aquatic Mitigation Excluding Buffer Areas<sup>6</sup></i>										
11	Annual grassland	Native grassland	Purple needlegrass series	upland	restoration	5	N/A	N/A	N/A	N/A
12	Ruderal habitat	Sage scrub	CA buckwheat-white sage series	upland	restoration	5	N/A	N/A	N/A	N/A
13	Chaparral	Chaparral	Chamise series	upland	preservation	13	N/A	N/A	N/A	N/A
						Total:	23			



# 3.8 Functional or Condition Assessment Methods (FCAM)

- In general, an FCAM should be developed and calibrated for the aquatic resource type(s) and geographic area within which it is being applied.
- Appropriate FCAMs must be aquatic resource-based, repeatable, standardized, comparable from site to site, based on sound science, and must receive prior project-specific approval from the Corps.
- In addition, the Corps encourages peer review of proposed FCAM and prefers such methods to be used when available and when it is practicable to use those methods.
- In general, an FCAM should be used, where available and appropriate, for larger, more complex projects (generally those having permanent impacts greater than 0.5 acre of waters of the United States and/or greater than 300 linear feet of jurisdictional stream bed).



# Recommended FCAM:

- California: The California Rapid Assessment Method (CRAM)
- New Mexico: The New Mexico Rapid Assessment Method (NMRAM) – Regulatory Module coming soon
- Utah: UDOT Wetland Functional Assessment Method
- Colorado:
  - The Grand Mesa Wetland Function and Value Assessment (Grand Mesa Method)
  - The Functional Assessment of Colorado Wetlands (FACWet) Method
- See Guidelines for more information and links to method webpages



# 4. PLANNING AND DOCUMENTATION

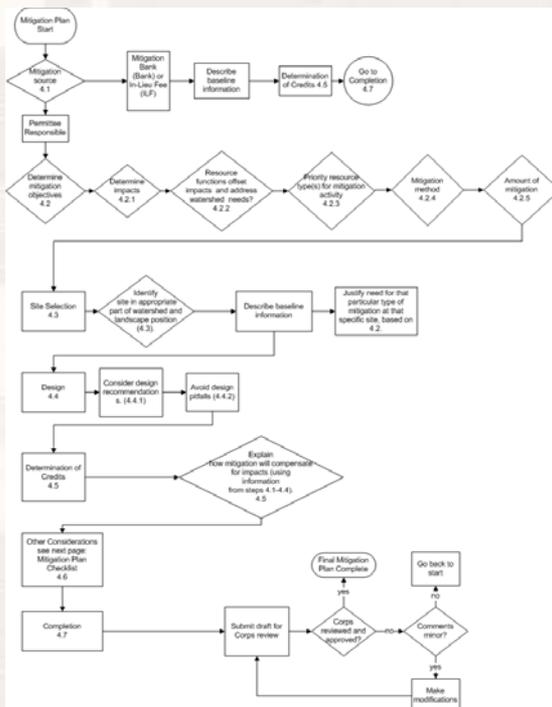
- Overall, the process of developing a mitigation plan can be described as having the following stages:
  - Determination of compensatory mitigation source(s),
  - Determination of objectives,
  - Site selection,
  - Design,
  - Determination of credits,
  - Other considerations (including development of performance standards and monitoring protocols), and
  - Completion



Photo: Mollie Walton

# 4. PLANNING AND DOCUMENTATION

- Flowchart and checklist included in Guidelines (Appendix C)



Mitigation Plan Checklist

Section	Required content	Completed
4.6.1	Title Page	
4.6.2	Contributor Page	
4.6.3	Distribution Page	
4.6.4	Table of Contents	
4.6.5	Brief description of overall project	
4.6.6	Objectives 33 CFR §332.4(c)(2)	
4.6.7	Determination of Credit 33 CFR §332.3(f) and 332.4(c)(5)	
4.6.8	Description of site selection criteria §332.3(d) and 332.74(c)(5)	
4.6.9	Baseline information §332.4(c)(5)	
4.6.10	Mitigation work plan §332.4(c)(7)	
4.6.11	Description of site protection instrument §332.4(c)(4) and 332.7(a)	
4.6.12	Maintenance plan §332.4(c)(8)	
4.6.13	Ecological performance standards §332.4(c)(9) and 332.5	
4.6.14	Monitoring requirements §332.4(c)(4)(10) and 332.6	
4.6.15	Long-term management plan §332.4(c)(11) and 332.7(d)	
4.6.16	Long-term funding (endowments)	
4.6.17	Adaptive management plan §332.4(c)(12) and 332.7(c)	
4.6.18	Financial assurance(s) §332.4(c)(13)	
4.6.19	Other information required by district engineer	



## 4.4.1.1 General design recommendations for compensatory mitigation

- Ensure an adequate buffer subject to minimal or no human disturbance is established and protected adjacent to any aquatic resources in the compensatory mitigation site.
- Integrate macro- and micro-topographic features to create a diversity of hydrologic and geomorphic conditions, plant communities, and animal habitat.
- Design the compensatory mitigation project to mimic a local reference site of similar class and landscape position that provides the desired habitat features and functionality.
- Incorporate mitigation plantings of species native to the local area.
- Avoid or minimize impacts to special-status species and other biological resources.



# Design recommendations for wetland and stream compensatory mitigation

## 4.4.1.2 Design recommendations for wetland compensatory mitigation:

- Select compensatory mitigation sites with natural, self-sustaining sources of hydrology (surface water, groundwater, and precipitation).
- The use of engineered structures such as pumps, water control structures, or diversions is strongly discouraged.
- Securing water rights and/or understanding the risks of existing or future water diversions are critical elements.

Photo: Deanna L. Cummings



# Design recommendations for wetland and stream compensatory mitigation

## 4.4.1.3 Design recommendations for stream compensatory mitigation:

- Ensure the main channel through the compensatory mitigation site is free to migrate laterally over its active and terrace floodplain.
- Ensure channel geometry (plan, profile and cross-section) of the compensatory mitigation site is appropriate for the watershed location and physical/hydrological condition.
- Use local, native materials as fill material to the extent practicable.
- Use bioengineering techniques to the extent practicable.
- Establish/restore and protect riparian areas next to the stream channel.



Photo: Deanna L. Cummings



## 4.4.2 Design Pitfalls

- List of conflicts or questionable design features that should be avoided or may warrant seeking alternative sites to provide compensatory mitigation that will achieve the desired objectives:
  - Selection of a site unsuitable for fulfilling compensatory mitigation objectives: site should include existing water source(s) that can be used, and require minimal earthwork.
  - Insufficient soil characterization.
  - Insufficient connectivity with other aquatic resources, and/or a compensatory mitigation project sited where future land uses in the immediate area would have a large impact on the physical, chemical, or biological components of the wetland (increase in runoff, close proximity to future urban development, etc.).



# Design Pitfalls

- Presence of structures that require long-term maintenance and/or disrupt or replace natural hydrology, such as drop structures; high-flow bypass structures; gabions or levees; buried structures (e.g. riprap); artificial hydrology (permanent irrigation, pumped water sources); and engineered slopes.
- Presence of competing/conflicting uses (e.g., existing or proposed transportation, flood control structures, or planned flood control-related maintenance activities and easements, existing or proposed fuel modification areas).
- Insufficient buffers: insufficient buffer area to achieve plan objectives; buffers with mechanically or chemically manipulated fire breaks, i.e., disking, scraping, mowing, or spraying, buffers that are bypassed by pipes or other conveyances.



# Design Pitfalls

- Placement where surface water can be diverted in the future or groundwater table lowered due to future land uses upstream or upslope.
- Insufficient analysis of hydrology and soil interaction (see examples in Guidelines).
- Over-excavation to soils or subsoils unsuitable for the growth and reproduction of the desired plant species.
- Planting vegetation species in unsuitable locations without appropriate hydrologic regimes or soil types (texture and chemistry).



## 4.4.3 Wetland design goals from the 2001 National Research Council Report

- Restore or develop naturally variable hydrological conditions. Promote naturally variable hydrology, with emphasis on enabling fluctuations in water flow, level, duration and frequency of change that would be representative of other comparable wetlands in the same landscape setting. Preferably, natural hydrology should be allowed to become reestablished rather than facilitated through active engineering devices to mimic a natural hydroperiod. When restoration is not an option, favor the use of passive devices that would have a higher likelihood to sustain the desired hydroperiod over the long term. Try to avoid designing a system dependent on water control structures or other artificial infrastructure that must be maintained in perpetuity in order for wetland hydrology to meet the specified design. In situations where direct (in-kind) replacement is desired, candidate compensatory mitigation sites should have the same basic hydrological attributes as the impacted site.
- Avoid over-engineered (complex) structures in the wetland design. Design the system for minimal maintenance. Whenever possible, avoid manipulating wetland processes using approaches that require continual maintenance. Avoid hydraulic control structures and other engineered structures that are vulnerable to chronic failure and require maintenance and replacement. Set initial conditions and let the system develop. Natural systems should be planned to accommodate biological systems. The system of plants, animals, microbes, substrate, and water flows should be developed for self-maintenance and self-design. If necessary to include design structures, such as to prevent erosion until the wetland has developed soil stability, do so using natural features, such as large woody debris. Be aware that more specific habitat designs and planting will be required where rare and endangered species are among the specific restoration targets.



# 4.6 Other considerations

- In states where water rights could affect the ability to provide the hydrology needed for the desired aquatic resource type, water rights must be addressed explicitly in the mitigation plan, to ensure that the necessary hydrology will be available for a self-sustaining compensatory mitigation project.
  - Note (from SPD QMS Procedure No. 12501-SOP for Determination of Mitigation Ratios): “Some states within SPD’s AOR contain over appropriated basins, which make it very difficult to obtain an adequate water right to secure site hydrology. In some SPD states the authority responsible for managing water rights may impose a 1:1 area-based limit on compensatory mitigation projects. In these situations the PM is still required to determine a compensation ratio using the mitigation checklist. If adequate water rights are not available to support an establishment or re-establishment ratio greater than a 1:1, the PM will consider options such as non-consumptive enhancement/rehabilitation projects, preservation, buffer establishment/restoration and protection, and restoration of floodplain connectivity, to obtain appropriate and practicable compensatory mitigation.”
- In addition, water and/or mineral rights or other potential easements that could adversely affect the long-term sustainability of the site must be disclosed and in many cases may need to be terminated or subordinated for the site to be used for compensatory mitigation. If such rights cannot be secured by the party responsible for the compensatory mitigation project, it may be necessary to find an alternative site for the compensatory mitigation project.



# 4.8 Mitigation plan outline

- 4.8.1 Title page
- 4.8.2 Contributor page
- 4.8.3 Distribution Page
- 4.8.4 Table of Contents
- 4.8.5 Brief description of proposed compensatory mitigation project and proposed source of compensatory mitigation
- 4.8.6 Objectives
- 4.8.7 Description of site selection criteria
  - 4.8.7.1 Watershed\* overview
  - 4.8.7.2 Landscape setting and position
  - 4.8.7.3 Site-specific information
- 4.8.8 Baseline information
  - 4.8.8.1 Hydrology
  - 4.8.8.2 Soil characteristics
  - 4.8.8.3 Other baseline information



# 4.8 Mitigation plan outline (cont'd)

- 4.8.9 Mitigation work plan with itemized budget including total estimated cost of proposed compensatory mitigation. The budget should include, at a minimum, costs for:
  - Land acquisition.
  - Planning and engineering.
  - Legal fees.
  - Mobilization.
  - Construction.
  - Monitoring.
- 4.8.10 Determination of credits
- 4.8.11 Description of site protection instrument
- 4.8.12 Maintenance plan
- 4.8.13 Ecological performance standards
- 4.8.14 Monitoring requirements
- 4.8.15 Long-term management plan
- 4.8.17 Adaptive management plan
- 4.8.18 Financial assurance(s)
- 4.8.19 Other information typically required by district engineer
  - Compensatory mitigation plans must comply with the SPD Map and Drawings Standard.
  - List of required maps/drawings (see Guidelines).



# 5. ECOLOGICAL PERFORMANCE STANDARDS

- 5.2 Recommended range and formulation of performance standards: In general, ecological performance standards for compensatory mitigation should measure a range of environmental variables to assess ecological functions or condition.



# 5. Ecological Performance Standards

Compensatory mitigation plans should include performance standards related to:

physical characteristics, hydrology, flora, fauna, and in certain cases water quality (within an ecological context).

While some of these ecological performance standard categories may not be applicable to all aquatic resource types and/or compensatory mitigation types, each category should be included unless it is clearly inapplicable.

For more information, see Corps QMS Document 12505: [SPD Uniform Performance Standards for Compensatory Mitigation Requirements](#).



# 5.3 Setting performance standards using reference sites

- Reference sites are a well-established tool to identifying reasonable targets for compensatory mitigation projects, in the context of the current regional environmental conditions.
- In the context of this guidance, the **reference standard** represents the highest level of aquatic resource functioning/condition observed within a watershed or region.
- In general and where appropriate, compensatory mitigation plans should utilize reference sites to help develop performance standards.
- The reference standard for that watershed (or ecoregion) should be considered in selecting reference sites to help establish performance standard targets.
- Where appropriate and practicable, multiple reference sites may be used rather than a single reference site.



# More on performance standards

- 5.4 Interim performance standards: Interim performance standards are crucial to ensuring compensatory mitigation performance follows a trajectory to attain final mitigation success.
- 
- 5.5 Performance standards format: Ecological performance standards should be listed in table format and clearly document the interim and final performance requirements of the compensatory mitigation site.
- 5.6 Functional/condition assessment data: For projects where a functional/condition assessment method is used to assess a mitigation project's "before" and "after" conditions, the projected "after" score shall be included as a performance standard, after accounting for the length of the monitoring period.



# 6. MONITORING

- 6.1 Monitoring methods:
- In general, compensatory mitigation monitoring methods should include quantitative sampling methods following established, scientific protocols (e.g., California Native Plant Society protocols) (Also see the 1987 Wetland Delineation Manual and applicable regional supplement.)
- Sampling documentation, as part of monitoring reports, should include maps showing locations of sampling points, transects, quadrants, etc.
- In addition, permanent photo stations should be established coincident with sampling locations.
- Additionally, where structures are placed in waters of the U.S., photo stations should be established that capture the structures and any consequent effect on channel morphology.



## 6.3.1 Longer monitoring periods for aquatic resources with slow development rates

- Monitoring periods of more than 5 years are warranted for aquatic resources with slow development rates. Examples of such aquatic resources within the South Pacific Division include:
  - vernal pools,
  - riparian forest, and
  - coastal salt marsh.
- Monitoring periods may also be extended if the compensatory mitigation project is not meeting its ecological performance standards and the district engineer determines more time is needed to assess success.
- As an option to make longer monitoring periods more practicable, monitoring periods exceeding the 5-year minimum may have longer periods between the required submission of monitoring reports (for example, every 2 years for a 10-year monitoring period). For the first 5 years, however, submission of monitoring reports should occur annually to demonstrate an initial trajectory toward meeting success criteria.



## 6.4.3 SPD monitoring report form

- To allow for greater efficiency by the Corps in reviewing monitoring reports, all monitoring reports must be submitted using the new SPD mitigation monitoring form. Supporting data must be attached to the form, including:
  - Vicinity map(s).
  - Compensatory Mitigation Site Map(s) (including the following information): Polygons by compensatory mitigation type as described in the approved mitigation plan; photo station locations; and annotated locations of sample points/transects/quadrants/soil pits/monitoring stations. Note: maps must comply with the [SPD Map and Drawings Standard](#).
  - Photographic record of the site during most recent monitoring visit at designated photo stations.
  - Results of functional/condition assessments if required to be used for the compensatory mitigation project.
  - Narrative report (optional).
  - Critical survey elevations, properly benchmarked (if applicable).
  - As-built drawing(s) (if any change from authorized design).
- See Guidelines Appendix D.
- Also available in editable Word version.





# MONITORING (cont'd)

- 6.5 Third-party monitoring: To obtain objective monitoring of compensatory mitigation projects, the Corps may require monitoring by approved third-party entities.
- 6.6 Monitoring and reference sites: In general and where appropriate and practicable, compensatory mitigation plans should incorporate reference sites as part of performance monitoring.
- Reference site comparisons may be made using:
  - Aquatic resource sites within the same watershed with similar habitat types and landscape position;
  - Similar sites up- or downstream along the same river, stream reach, or wetland complex; or
  - A comparison to multiple, similar reference sites within a reference network.
- 6.7 Attainment of compensatory mitigation success and release from monitoring requirements: The Corps ultimately determines if a compensatory mitigation project has achieved its objectives and performance standards and is successful.



# 7. MANAGEMENT

- 7.1 Long-term site protection: advantages & disadvantages of each option explained:
  - 7.1.1 Conservation easements
  - 7.1.2 Deed restrictions (restrictive or negative covenants)
  - 7.1.3 Transfer of title
  - 7.2 Government property
  - 7.3 Other available mechanisms
- 7.4 Required provisions
- 7.5 Approval process (see following slides)
- 7.6 Templates
- 7.7 Exhibits
- 7.8 Funding for long-term management
- 7.9 Long-term management
- 7.9 Protection of water and mineral rights



Photo: Deanna L. Cummings



# 7. MANAGEMENT (cont'd)

- 7.5 Approval process:
  - A real estate instrument, management plan, or other long-term protection mechanism used for site protection of permittee-responsible mitigation **must be approved by the district engineer in advance of or, or concurrent with, the activity causing the authorized impacts.**
  - All real estate instruments, management plans and other long-term protection mechanisms shall be reviewed and approved by the District Office of Counsel, in coordination with the District's Regulatory Division.
  - With any site real estate instrument, there has to be a review of the entity proposed for long-term ownership or oversight of the mitigation site to determine whether or not the proposed entity is appropriate. That review should include an evaluation of whether or not the entity has previously managed mitigation sites and their history for such management, their financial health, the experience and background of the individual(s) responsible for management, etc.



# 7. MANAGEMENT (cont'd)

- Approval of Deed Restrictions:
  - ✓ If deed restrictions are proposed, the proposal must discuss:
    - How any marketable record title issues will be addressed,
    - Suitability of the owner of the mitigation site for ensuring mitigation responsibilities are met,
    - History of the property owner in meeting mitigation responsibilities for other mitigation sites,
    - What mechanisms will ensure that long-term management requirements for the mitigation site are accomplished, and
    - What mechanism will ensure that required funding for the mitigation site will continue to be provided.
  - ✓ Where deed restrictions are determined to be appropriate, the permittee or the landowner of the mitigation will be required to report periodically on the status of the deed restriction to ensure restriction remains in the chain of title in perpetuity. Such reports would indicate:
    - Date recorded,
    - Date when the statutory period will expire,
    - Date deed restrictions will be re-recorded, and
    - Other pertinent information.



# 8. MITIGATION BANKS AND IN-LIEU FEE PROGRAMS: Service Area

- Prospectus must include a map and a detailed narrative description of the geographic boundary(ies) and the criteria used to determine the proposed service area or service areas.
- At a minimum, the service area will be the 10-digit watershed containing the Site(s)
- Documentation and justification must be provided for expansion of the service area from the 10-digit watershed containing the Site. The level of documentation and justification the sponsor must provide increases in a step-wise progression with each additional 10-digit watershed, or portion thereof. Additions where all of the following are true require minimal justification:
  - a) areas abutting the 10-digit watershed in which the Site is located,
  - b) within the same 8-digit sub-basin as the Site and
  - c) within the same ecoregion as the Site. Depending upon the characteristics of the Sites and the needs of the watersheds in the area, it may be appropriate to add portions of adjacent 8-digit sub-basins within the same ecoregion rather than expanding the service area into adjacent ecoregions within the same 8-digit sub-basin.
- Considerable justification is required for any additions that are outside either the 8-digit sub-basin or ecoregion containing the Site.
- The burden for demonstrating and justifying service area expansion lies entirely with the Sponsor.
- This guidance does not support expansion of a service area into 6-digit basins other than the one in which the Site is located.
- 33 CFR 332 Preamble page 19606: “However, to ensure the benefits of third-party mitigation, economic factors should not supersede ecological considerations in the final service area determination.



# Secondary & Tertiary Service Areas

- 8.5.1 Secondary service areas: A secondary service area, if authorized by the Corps as part of a mitigation bank or ILF instrument, may be used if:
  - The impact site is not within the primary service area of an approved mitigation bank or ILF with available credits;
  - Permittee-responsible mitigation has been determined by the Corps to be impracticable and/or inconsistent with a watershed approach, and;
  - The number of credits to be purchased would be greater to account for the increased distance from the impact site to the mitigation bank or ILF project site.
- 8.5.2 Tertiary service areas: The use of tertiary service areas (any service area beyond a secondary service area) is generally discouraged for compensating impacts to waters of the U.S.; however, tertiary service areas may provide a mechanism for providing other types of compensatory mitigation (for example, for State species of concern).



# 8.6 Credit determination

- While an FCAM is not required in all cases when compensatory mitigation is required, it is required when an appropriate FCAM is available and practicable.
- **Generally, it is assumed that for large endeavors such as mitigation banks and ILF programs, use of an appropriate and available FCAM would be practicable.** Therefore, in order to determine the number of proposed credits available at a proposed mitigation bank or ILF Program, a sponsor should incorporate data from an FCAM to estimate the expected functional gain.
- If a functional/condition assessment is not incorporated in the draft instrument, the Corps may adopt a conservative approach in determining the number and type of credits.
- Estimated functional gain would be determined using the same FCAM as part of the mitigation bank or ILF project's performance standards.
- When practicable, in order to use a mitigation bank or ILF Program, permit applicants should estimate functional loss using the same FCAM as used by the mitigation bank or ILF Program. Similarly, if debits are calculated, this should be done using the same FCAM as used by the mitigation bank or ILF program, unless out-of-kind mitigation is being provided and the FCAM is not applicable to that out-of-kind mitigation.



# 8.6 Credit determination (cont'd)

- Regardless of the specific factors considered for any given credit determination proposal, the mitigation bank or ILF instrument should:
  - Include a **credit determination exhibit** stating the numbers and types of expected credits and explaining in detail how both were determined.
  - Any separate reports and/or analyses relied upon in determining credits should be attached to the instrument and cited in this exhibit.
  - If an FCAM is used in credit determination, the exhibit should clearly explain how FCAM data were incorporated and any assumptions relied upon in doing so (for example, the threshold of functional lift necessary to generate rehabilitation credits).



# 11. APPLICABILITY AND EFFECTIVE DATE

- Guidelines are effective January 12, 2015.
- Supersede all previous district-specific compensatory mitigation and monitoring guidelines issued within SPD.
- Applicable for all permit applications and mitigation bank/ILF prospectus submittals received after January 12, 2015.

AND

- Permit applications received prior to the effective date must also comply with these guidelines except for cases where compensatory mitigation has already been constructed or where the applicant can otherwise fully demonstrate substantial resources have been expended or committed in reliance on previous guidance governing compensatory mitigation for DA permits within SPD (for example, compensatory mitigation plans already approved by the Corps in writing).



# APPENDICES

- Appendix A: Compensatory Mitigation Methods
- Appendix B: Aquatic Resource Description Tables
- Appendix C: Process of Developing a Mitigation Plan
- Appendix D: Mitigation Monitoring Form
- Appendix E: IRT Review Timeline
- Appendix F: List of Acronyms



Photo: Deanna L. Cummings



# POC's and PDT members

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    - ✓ David Wickens
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# Questions?

