Mitigation Requirements for Corps Civil Works Projects and Clean Water Act Permits

Army Corps of Engineers (Corps) civil works projects must comply with two sets of mitigation standards. The Corps must meet the statutory mitigation requirements established specifically for Corps projects in the Water Resources Development Acts, and the Corps must meet the mitigation requirements of the Clean Water Act Section 404 program, including those established in 33 C.F.R. Part 332.

These standards address both the substantive mitigation requirements (amount, type, timing, and monitoring) and the mitigation plan requirements (specific components of each mitigation plan).

Substantive Mitigation Requirements Amount, Type, Timing, Monitoring

Substantive Mitigation Requirements Specific to Corps Civil Works Projects

The Water Resources Development Acts establish specific mitigation requirements for Corps civil works projects. Harm to bottomland hardwood forests from Corps civil works project must be mitigated in-kind, and harm to other habitat types must be mitigated "to not less than in-kind conditions, to the extent possible." 33 U.S.C. § 2283(d).

Mitigation lands for Corps civil works projects must be purchased before any construction begins. 33 USC § 2283(a). Any physical construction required for purposes of mitigation should also be undertaken prior to project construction but must, at the latest, be undertaken "concurrently with the physical construction of such project." *Id*.

Corps mitigation must be monitored until the monitoring demonstrates that the ecological success criteria established in the mitigation plan have been met. The Corps is also required to consult yearly on each project with the appropriate Federal agencies and the states on the status of the mitigation efforts.[1] The consultation must address the status of ecological success on the date of the consultation, the likelihood that the ecological success criteria will be met, the projected timeline for achieving that success, and any recommendations for improving the likelihood of success. 33 U.S.C. § 2283(d).

The mitigation plan requirements for Corps civil works projects are discussed below.

Substantive Mitigation Requirements Established Under the Clean Water Act

Specific compensatory mitigation requirements under the Clean Water Act are set forth at 33 C.F.R. Part 332. These rules impose the following **additional** mitigation requirements for Corps civil works projects; and impose the following requirements on Clean Water Act section 404 permits:

[1] The Corps' annual mitigation status reports can be accessed at: http://www.usace.army.mil/Missions/CivilWorks/ProjectPlanning/Products/MitigationStatus.aspx.

1. Mitigation must compensate for the aquatic resource functions that will be lost to the project, and "must be commensurate with the amount and type of impact" caused by the project. 33 C.F.R. § 332.3(a). Mitigation also "should provide, where practicable, the suite of functions typically provided by the affected aquatic resource." 33 C.F.R. § 332.3(c).
2. The mitigation "project site must be ecologically suitable for providing the desired aquatic resource functions." In determining the ecological suitability of the compensatory mitigation site, the Corps "must consider, to the extent practicable": the hydrological conditions, soil characteristics, and other physical and chemical characteristics; watershed-scale features including aquatic habitat diversity and habitat connectivity; and the size and location of the compensatory mitigation site relative to hydrologic sources (including the availability of water rights) and other ecological features. 33 C.F.R. § 332.3(d).
3. Mitigation should be in kind if possible and where out of kind mitigation is utilized, the record must explain why. 33 C.F.R. § 332.3(e).
4. The Corps "must require a mitigation ratio greater than one-to-one where necessary to account for the method of compensatory mitigation (e.g., preservation), the likelihood of success, differences between the functions lost at the impact site and the functions expected to be produced by the compensatory mitigation project, temporal losses of aquatic resource functions, the difficulty of restoring or establishing the desired aquatic resource type and functions, and/or the distance between the affected aquatic resource and the compensation site. The rationale for the required replacement ratio must be documented in the administrative record for the permit action." 33 C.F.R. § 332.3(f).
5. Preservation can only be used to provide compensatory mitigation when all the following criteria are met: "(i) The resources to be preserved provide important physical, chemical, or biological functions for the watershed; (ii) The resources to be preserved contribute significantly to the ecological sustainability of the watershed. In determining the contribution of those resources to the ecological sustainability of the watershed, the district engineer must use appropriate quantitative assessment tools, where available; (iii) Preservation is determined by the district engineer to be appropriate and practicable; (iv) The resources are under threat of destruction or adverse modifications; and (v) The preserved site will be permanently protected through an appropriate real estate or other legal instrument (e.g., easement, title transfer to state resource agency or land trust). 33 C.F.R. § 332.3(h).
6. "The aquatic habitats, riparian areas, buffers, and uplands that comprise the overall compensatory mitigation project must be provided long-term protection through real estate instruments or other available mechanisms, as appropriate." 33 C.F.R. § 332.7(a).
7. The compensatory mitigation requirements must be clearly stated and include special conditions that "must be enforceable." The special conditions must: "(i) Identify the party responsible for providing the compensatory mitigation; (ii) Incorporate, by reference, the final mitigation plan approved by the district engineer; (iii) State the objectives, performance standards, and monitoring required for the compensatory mitigation project, unless they are provided in the approved final mitigation plan; and (iv) Describe any required financial assurances or long-term management provisions for the compensatory mitigation project, unless they are specified in the approved final mitigation plan…." 33 C.F.R. § 332.3(k). "The special conditions must clearly indicate the party or parties responsible for the implementation, performance, and longterm management of the compensatory mitigation project." 33 C.F.R. § 332.3(l).
8. To the maximum extent practicable, compensatory mitigation must be implemented "in advance of or concurrent with the activity" causing the impacts. "The district engineer shall require, to the extent appropriate and practicable, additional compensatory mitigation to offset

temporal losses of aquatic functions that will result from the permitted activity." 33 C.F.R. § 332.3(m).

9. The district engineer shall require sufficient financial assurances to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with applicable performance standards." 33 C.F.R. § 332.3(n).
10. "For compensatory mitigation projects on public lands, where federal facility management plans or integrated natural resources management plans are used to provide long-term protection, and changes in statute, regulation, or agency needs or mission results in an incompatible use on public lands originally set aside for compensatory mitigation, the public agency authorizing the incompatible use is responsible for providing alternative compensatory mitigation that is acceptable to the district engineer for any loss in functions resulting from the incompatible use." 33 C.F.R. § 332.7(a).

Importantly, these mitigation requirements also state that compensatory mitigation should be designed to be self-sustaining and should minimize the use of pumps and other active engineering features:

> "Compensatory mitigation projects shall be designed, to the maximum extent practicable, to be self-sustaining once performance standards have been achieved. This includes minimization of active engineering features (e.g., pumps) and appropriate siting to ensure that natural hydrology and landscape context will support long-term sustainability. Where active long-term management and maintenance are necessary to ensure long-term sustainability (e.g., prescribed burning, invasive species control, maintenance of water control structures, easement enforcement), the responsible party must provide for such management and maintenance. This includes the provision of long-term financing mechanisms where necessary…." 33 C.F.R. § 332.7(b).

The mitigation plan requirements established under the Clean Water Act are discussed below.

Mitigation Plan Requirements
Specific Components Required for Each Mitigation Plan

In addition to meeting the mitigation requirements discussed above, the Corps must also comply with the mitigation plan requirements established by the Water Resources Development Acts and the mitigation plan requirements of the Clean Water Act, including those established in 33 C.F.R. Part 332.

Mitigation Plan Requirements Specific to Corps Civil Works Projects

Environmental impact statements and environmental assessments for Corps civil works projects must include a "specific plan to mitigate fish and wildlife losses created." 33 U.S.C. § 2283(d). That specific plan must include the following information:

1. The type, amount, and characteristics of the habitat being restored, a description of the physical actions to be taken to carry out the restoration, and the functions and values that will be achieved;
2. The ecological success criteria, based on replacement of lost functions and values, that will be evaluated and used to determine mitigation success;

3. A description of the lands and interest in lands to be acquired for mitigation, and the basis for determining that those lands will be available;
4. A mitigation monitoring plan that includes the cost and duration of monitoring, and identifies the entities responsible for monitoring if it is practicable to do so (if the responsible entity is not identified in the monitoring plan it must be identified in the project partnership agreement that is required for all Corps projects). Corps mitigation must be monitored until the monitoring demonstrates that the ecological success criteria established in the mitigation plan have been met; and
5. A contingency plan for taking corrective action in cases where monitoring shows that mitigation is not achieving ecological success as defined in the plan. 33 U.S.C. § 2283(d)(3).

Mitigation Plan Requirements Established by Clean Water Act Section 404

Pursuant to the Clean Water Act regulatory requirements of 33 C.F.R. Part 332, Section 404 permits must include the following plan elements. Corps civil works mitigation plans must also include the following plan elements **in addition to** the requirements discussed above.

To satisfy the Clean Water Act, mitigation plans must provide a level of detail "commensurate with the scale and scope of the impacts" (33 C.F.R. 332.4(c)) and include the following information:

1. "A description of the resource type(s) and amount(s) that will be provided, the method of ecoregion, physiographic province, or other geographic area of interest." 33 C.F.R. § 332.4(c)(2).
2. "A description of the factors considered during the site selection process. This should include consideration of watershed needs, onsite alternatives where applicable, and the practicability of accomplishing ecologically self-sustaining aquatic resource restoration, establishment, enhancement, and/or preservation at the compensatory mitigation project site." 33 C.F.R. § 332.4(c)(3).
3. "A description of the legal arrangements and instrument, including site ownership, that will be used to ensure the long-term protection of the compensatory mitigation project site." 33 C.F.R. § 332.4(c)(4).
4. "A description of the ecological characteristics of the proposed compensatory mitigation project site . . . . This may include descriptions of historic and existing plant communities, historic and existing hydrology, soil conditions, a map showing the locations of the impact and mitigation site(s) or the geographic coordinates for those site(s), and other site characteristics appropriate to the type of resource proposed as compensation. The baseline information should also include a delineation of waters of the United States on the proposed compensatory mitigation project site." 33 C.F.R. § 332.4(c)(5).
5. "A description of the number of credits to be provided, including a brief explanation of the rationale for this determination," including "an explanation of how the compensatory mitigation project will provide the required compensation for unavoidable impacts to aquatic resources resulting from the permitted activity." 33 C.F.R. § 332.4(c)(6).
6. "Detailed written specifications and work descriptions for the compensatory mitigation project, including, but not limited to**,** the geographic boundaries of the project; construction methods, timing, and sequence; source(s) of water, including connections to existing waters and uplands; methods for establishing the desired plant community; plans to control invasive plant species; the proposed grading plan, including elevations and slopes of the substrate; soil management; and erosion control measures." 33 C.F.R. § 332.4(c)(7).
7. "A description and schedule of maintenance requirements to ensure the continued viability of the resource once initial construction is completed." 33 C.F.R. § 332.4(c)(8).

8. "Ecologically-based standards that will be used to determine whether the compensatory mitigation project is achieving its objectives." 33 C.F.R. § 332.4(c)(9).
9. "A description of parameters to be monitored in order to determine if the compensatory mitigation project is on track to meet performance standards and if adaptive management is needed. A schedule for monitoring and reporting on monitoring results to the district engineer must be included." 33 C.F.R. § 332.4(c)(10). The mitigation plan must provide for a monitoring period that is sufficient to demonstrate that the compensatory mitigation project has met performance standards, but not less than five years. A longer monitoring period must be required for aquatic resources with slow development rates (e.g., forested wetlands, bogs). 33 C.F.R. § 332.6.
10. "A description of how the compensatory mitigation project will be managed after performance standards have been achieved to ensure the long-term sustainability of the resource, including long-term financing mechanisms and the party responsible for long-term management." 33 C.F.R. § 332.4(c)(11).
11. "A management strategy to address unforeseen changes in site conditions or other components of the compensatory mitigation project, including the party or parties responsible for implementing adaptive management measures. The adaptive management plan will guide decisions for revising compensatory mitigation plans and implementing measures to address both foreseeable and unforeseen circumstances that adversely affect compensatory mitigation success." 33 C.F.R. § 332.4(c)(12).
12. "A description of financial assurances that will be provided and how they are sufficient to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with its performance standards." 33 C.F.R. § 332.4(c)(13).
13. The mitigation plan must provide for a monitoring period that is sufficient to demonstrate that the compensatory mitigation project has met performance standards, but not less than five years. A longer monitoring period must be required for aquatic resources with slow development rates (e.g., forested wetlands, bogs). 33 C.F.R. § 332.6.
14. The compensatory mitigation requirements must be clearly stated and include special conditions that "must be enforceable." The special conditions must: "(i) Identify the party responsible for providing the compensatory mitigation; (ii) Incorporate, by reference, the final mitigation plan approved by the district engineer; (iii) State the objectives, performance standards, and monitoring required for the compensatory mitigation project, unless they are provided in the approved final mitigation plan; and (iv) Describe any required financial assurances or long-term management provisions for the compensatory mitigation project, unless they are specified in the approved final mitigation plan…." 33 C.F.R. § 332.3(k). "The special conditions must clearly indicate the party or parties responsible for the implementation, performance, and longterm management of the compensatory mitigation project." 33 C.F.R. § 332.3(l).
15. "The real estate instrument, management plan, or other mechanism providing long-term protection of the compensatory mitigation site must, to the extent appropriate and practicable, prohibit incompatible uses (e.g., clear cutting or mineral extraction) that might otherwise jeopardize the objectives of the compensatory mitigation project." 33 C.F.R. § 332.7(a).

A key element of a legally adequate mitigation plan is the inclusion of ecological performance standards for assessing whether the mitigation is achieving its objectives:

> "Performance standards should relate to the objectives of the compensatory mitigation project, so that the project can be objectively evaluated to determine if it is developing into the desired

resource type, providing the expected functions, and attaining any other applicable metrics (e.g., acres)." 33 C.F.R. § 332.5(a).

"Performance standards must be based on attributes that are objective and verifiable. Ecological performance standards must be based on the best available science that can be measured or assessed in a practicable manner. Performance standards may be based on variables or measures of functional capacity described in functional assessment methodologies, measurements of hydrology or other aquatic resource characteristics, and/or comparisons to reference aquatic resources of similar type and landscape position. The use of reference aquatic resources to establish performance standards will help ensure that those performance standards are reasonably achievable, by reflecting the range of variability exhibited by the regional class of aquatic resources as a result of natural processes and anthropogenic disturbances. Performance standards based on measurements of hydrology should take into consideration the hydrologic variability exhibited by reference aquatic resources, especially wetlands. Where practicable, performance standards should take into account the expected stages of the aquatic resource development process, in order to allow early identification of potential problems and appropriate adaptive management." 33 C.F.R. § 332.5(b).

For more information, please contact the National Wildlife Federation
Melissa Samet, Senior Water Resources Counsel, 415-762-8264, sametm@nwf.org
Jan Goldman-Carter, Senior Manager, Wetlands and Water Resources, 202-797-6894, goldmancarterj@nwf.org