

## **Federal Guidance on Protection and Mitigation of Difficult To Replace Aquatic Resources Under Section 404 of the Clean Water Act**

### **I. Purpose**

This document provides interagency guidance on the special emphasis given to protection of wetlands and other aquatic resources (hereafter collectively referred to as aquatic resources) for which compensatory mitigation through restoration or creation is not feasible or scientifically viable. These are termed difficult to replace (DTR) aquatic resources.<sup>1</sup> Additionally, this document provides guidance on compensatory mitigation for DTR aquatic resources when necessary to meet permit requirements under Section 404 of the Clean Water Act. The 404 permit program requires appropriate and practicable compensatory mitigation to offset unavoidable impacts to aquatic resources by replacing functions lost as a result of activities authorized by the U.S. Army Corps of Engineers (Corps).

### **II. Existing Regulations, Policy and Guidance**

The following documents provide national guidance relevant to the protection and mitigation of DTR aquatic resources:

1. Clean Water Act Section 404(b)(1) Guidelines: Regulations contained in 40 CFR Part 230 (Guidelines)
2. The 1990 Memorandum of Agreement concerning the Determination of Mitigation under the Clean Water Act Section 404(b)(1) Guidelines between the Environmental Protection Agency (EPA) and the Department of Army (1990 MOA)

The Guidelines identify wetlands and other aquatic resources (sanctuaries and refuges, mud flats, vegetated shallows, coral reefs, and riffle and pool complexes) as ‘special aquatic sites.’ Activities that could affect special aquatic sites are subject to a more stringent level of review by the Corps, as determined by provisions of the Guidelines and the 1990 MOA. Corps regulations (33 CFR §320.4(a)) require that for an activity to be authorized it must comply with the Guidelines and not be contrary to the public interest. The Guidelines contain the rebuttable presumption that where an activity which is proposed for a special aquatic site is not water dependent, practicable alternatives are available that do not involve special aquatic sites. In addition, all practicable alternatives to the proposed discharge which do not involve a discharge into a special aquatic site are presumed to have less adverse impact on the aquatic ecosystem, unless clearly demonstrated otherwise (40 CFR §230.10 (a)(3)). The Guidelines also prohibit the authorization of impacts that would result in significant environmental degradation of the waters of the United States (40 CFR §230.10(c)).

In addition, the National Academy of Sciences National Research Council released a report in 2001 entitled "Compensating for Wetland Losses Under the Clean Water Act." This report contains some recommendations related to DTR aquatic resources. In response to this report, six

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<sup>1</sup> Emphasizing the protection of DTR aquatic resources is not meant to imply that other types of aquatic resources are easy to restore/establish/enhance, or are less deserving of protection.

Federal agencies (the Corps, EPA, the Departments of Agriculture, Commerce, Interior, and Transportation ("the agencies")) released the 2002 Mitigation Action Plan, under which this guidance and others are being developed.

### **III. Additional Recommendations**

#### **A. Characteristics and Identification of DTR Aquatic Resources**

The term 'DTR aquatic resources' is not synonymous with 'high value aquatic resources.' DTR aquatic resources are not necessarily rare or high value aquatic resources, likewise rare or high value aquatic resources are not necessarily DTR aquatic resources. DTR aquatic resources are simply those for which compensatory mitigation through restoration or creation is not feasible or scientifically viable, regardless of rarity or value.

Many characteristics can make an aquatic resource difficult to replace. Complex hydrology, such as that found in hillside seeps, is very difficult to replicate. Some aquatic resources, such as fens, require extremely long periods of time (hundreds or thousands of years) to reach maturity. Certain aquatic resources, such as karstic wetlands in southern Florida, have unique underlying geology that cannot be replicated. Others, such as bogs have low tolerance for small changes in water level, nutrient, and soil chemistry parameters. Aquatic resources with high native biodiversity or unique species are often difficult to replace because of their ecological complexity. Aquatic resources may also be difficult to replace simply because of a lack of scientific knowledge on how to restore or create specific ecological functions and environmental conditions. Aquatic resources, such as springs, may be among the most difficult resources to replace, and may also be an important part of the hydrology for an associated wetland (i.e. springs and fens).

Sometimes these characteristics are so limiting that an aquatic resource is not only difficult to replace, but impossible to replace given current scientific knowledge and technology. The types of aquatic resources that are considered DTR will continue to change with time as the scope of human impacts to aquatic resources increases, restoration techniques become more advanced, and mitigation successes and losses are analyzed.

After completion of the Mitigation Action Plan in 2005, Corps Districts should make regional determinations of DTR aquatic resources. Corps Districts should develop lists of DTR aquatic resources with input from federal, state, and local agencies and the general public through the public notice process to insure that the lists encompass the range of DTR aquatic resources within a region. The lists are intended to be living documents, evolving as the types of aquatic resources that are considered DTR change with time.

#### **B. Protection of DTR Aquatic Resources**

The best protection of DTR aquatic resources comes through a robust evaluation of alternatives. When reviewing 404 permit applications, special emphasis should be placed on avoiding impacts to DTR aquatic resources recognizing that compensatory mitigation is unlikely to be able to replace these aquatic resource types. The Guidelines already include the rebuttable presumptions

found at 40 CFR §230.10 (a)(3) and cited above in Section II. Additionally, when a proposal involves impacts to DTR aquatic resources, the review process should also include a sequential rebuttable presumption that alternatives exist that do not involve adverse effects on DTR aquatic resources, and these alternatives should be exhausted before considering impacts to DTR aquatic resources. This may include consideration of alternatives that impact other resources (aquatic or non-aquatic) in order to avoid impacts to DTR aquatic resources, so long as the alternative does not have other significant adverse environmental consequences (40 CFR §230.10 (a)).

The likelihood of restoration or creation success for unavoidable impacts should be one of the factors considered when conducting the alternatives analysis, including the alternative of not authorizing a proposed activity. An analysis commensurate with impacts to DTR aquatic resources should be comprehensive, recognizing the uncertainties associated with restoring DTR aquatic resources. For example, such an analysis may result in choosing an alternative that adversely affects a larger acreage of other aquatic resources over an alternative that adversely affects a smaller acreage of DTR aquatic resources. The analysis may result in a decision to not authorize a proposed project because the adverse effects would be contrary to the public interest (33 CFR 320.4(a)) or cause significant environmental degradation of the waters of the United States (40 CFR §230.10 (c)).

Corps Districts may wish to use programmatic tools to facilitate the protection of DTR aquatic resources. Some examples of these tools include Advanced Identification, Special Area Management Plans, and Regional Special Conditions. Corps Districts should also consider providing additional protection to DTR aquatic resources that could be affected by activities authorized under General Permits (GPs). Such steps might include asserting discretionary authority to require an individual permit for a specific activity affecting DTR aquatic resources, modifying GPs for specific activities by adding special conditions to protect DTR aquatic resources, preserving DTR wetlands as mitigation for GPs, adopting regional conditions to certain GPs, or suspending one or more GPs for activities within a region or state (33 CFR §330.4(e) and 330.5).

### **C. Compensatory Mitigation for DTR Aquatic Resources**

If impacts to DTR aquatic resources are unavoidable, compensatory mitigation generally will be more complex than for other aquatic resources. Planning and implementation should be conducted well in advance of the proposed impact. Mitigation should focus on both the spatial and temporal loss of aquatic resource functions associated with the project impacts. Combination compensation, where compensation occurs in multiple locations that may be on-site, off-site, in-kind, and/or out-of-kind,<sup>2</sup> may be the best option (see Guidance on the Use of Off-Site and Out-of-Kind Compensatory Mitigation).

Establishment (creation)<sup>3</sup> of DTR aquatic resources is rarely practicable, but opportunities for in-kind restoration and/or enhancement may be feasible. Disturbed DTR aquatic resources can be

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<sup>2</sup> On-Site: within project boundaries and/or areas adjacent or contiguous to impact area. In-Kind: same physical and functional type as that of the impact area (e.g., same Cowardin Subclass or hydrogeomorphic type). (RGL 02-2)

<sup>3</sup> Establishment (creation) is the manipulation of the physical, chemical, or biological characteristics present to develop a wetland on an upland or deepwater site, where a wetland did not previously exist (RGL 02-2).

restored or enhanced via many of the same methods used in restoring hydrology and vegetation characteristics for other aquatic resource systems including: ditch plugs, removal of fill material, noxious weed control, etc. While restoration or enhancement of disturbed DTR aquatic resources may not reestablish pre-disturbance conditions, it would replace some or many functions in-kind. Out-of-kind compensation fails to replace the specialized functions of DTR aquatic resources.

In deciding whether to attempt in-kind restoration, the risk of failure must be weighed against the need to replace that particular kind of habitat. Special attention should be paid to rigorous monitoring, contingency planning, adaptive management, and the use of best available science and technology. The restoration plan should include enforceable financial arrangements, such as performance bonds, that can be used to perform alternative compensation should the in-kind restoration fail. In recognition that restoration of DTR aquatic resources may not succeed, in-kind compensation for DTR aquatic resources may involve higher mitigation ratios than those required for other types of aquatic resources.

Out-of-kind restoration may be an appropriate compensation option, either in addition to or in place of in-kind compensation. When using out-of-kind mitigation, it is important to focus on lost aquatic resource functions, with the preference of using aquatic resource types (Cowardin subclass or hydrogeomorphic type) similar to that of the affected aquatic resource. Out-of-kind compensation may include using multiple compensation sites to mitigate for as many functions as possible regardless of aquatic resource type, combining on-site and off-site mitigation, and/or combining different kinds of aquatic resources by restoring aquatic resources of other particular classes that naturally occur in the watershed. It is not ideal to recreate an aquatic resource as a collection of independent features on a landscape, each representing a lost function. However, in situations when a single out-of-kind site cannot mitigate for all of the lost functions of the original site, it is important to account for those functions through multiple mitigation sites.

Preservation of DTR aquatic resources, with a high mitigation ratio may be a good option for in-kind compensation, for aquatic resources that are under demonstrable threat of loss or degradation, if it is determined that this approach would support the identified needs of the watershed (see Guidance on the Appropriate Use of Preservation as Compensatory Mitigation). Out-of-kind compensation may also be combined with in-kind preservation to achieve the broadest possible compensation for impacts to DTR aquatic resources.

Compensatory mitigation plans should include a written description of the legal means for protecting mitigation area(s). This information will be used to condition permits accordingly. When considering the legal means, the wetlands, uplands, riparian areas, or other aquatic resources in a mitigation project should be permanently protected, in most cases, with appropriate real estate instruments, e.g., conservation easements, deed restrictions, transfer of title to Federal or state resource agencies or non-profit conservation organizations.<sup>4</sup> Site protection is particularly important for DTR aquatic resources.

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<sup>4</sup> Corps 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

#### **D. Conclusions**

1. Special emphasis should be placed on avoidance of DTR aquatic resources in the alternatives analysis phase of the permit process. When a proposal involves impacts to DTR aquatic resources, the review process should include a sequential rebuttable presumption (in addition to the rebuttable presumptions already included in the Guidelines at 40 CFR §230.10 (a)(3) and discussed above) that alternatives exist that do not involve adverse effects on DTR aquatic resources. These alternatives, including not authorizing the proposed project, should be exhausted before considering impacts to DTR. It may be preferable to choose an alternative that adversely affects a larger acreage of other aquatic resources over an alternative that adversely affects a smaller acreage of DTR aquatic resources.
2. If impacts are unavoidable, in deciding whether to attempt in-kind or out-of-kind restoration, the risk of failure must be weighed against the need to replace that particular kind of habitat.
3. If in-kind compensation mitigation fails or is not practicable, out-of-kind compensation should be designed to replace as many lost functions as is possible, even if using multiple sites or aquatic resource types is required to represent the full suite of lost functions.
4. In-kind preservation may be appropriate if it targets DTR aquatic resources that are under demonstrable threat of loss or degradation, and if it is determined that this approach would support the identified needs of the watershed.
5. As with all compensatory mitigation, compensation for impacts to DTR aquatic resources should be considered in a watershed context. A combination of restoration and/or preservation projects (both in-kind and out-of-kind) may be the best approach to compensating for impacts to DTR aquatic resources.
6. Corps Districts, in consultation with EPA and other Federal and State Agencies, should work collaboratively to make a determination of DTR aquatic resources in their region.

#### **IV. Relationship of This Guidance to Other Mitigation Guidance under Development**

The best tool for planning compensatory mitigation is a holistic watershed plan<sup>5</sup> incorporating mitigation or restoration priorities. Without such a plan, there may be many diverging opinions about what is "best" for a watershed. In the absence of a holistic watershed plan, a watershed based approach to mitigation should be used to develop mitigation proposals. Such an approach takes into account a wide range of factors such as: site conditions that favor or hinder success; the needs of sensitive species; chronic environmental problems such as flooding or poor water quality; current trends in habitat loss or conversion; current development trends; and the long-

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<sup>5</sup> Holistic watershed plans are those that: 1) have been reviewed and approved by Federal and State agencies; 2) consider multiple stakeholder interests and competing land uses; and, 3) address issues of habitat, water quality, hydrology, cumulative impacts, and restoration priorities for a watershed. Holistic watershed plans could include, for example, the "comprehensive conservation and management plans" created as part of the National Estuary Program, a comprehensive state planning effort such as the Louisiana Coast 2050 plan or a basin plan such as the Water Resources Plan being developed for the Delaware River Basin.

term benefits of available options. As part of the Mitigation Action Plan released in December of 2002, the agencies plan to publish guidance regarding making compensatory mitigation decisions in a watershed context in 2005. The Watershed Context Guidance will likely incorporate the recommendations contained in this DTR Guidance, as well as other guidance documents that have been or will be issued.

## **V. General**

A. Current Food Security Act (FSA) legislation (also known as “Swampbuster”) limits the extent to which mitigation can be used for FSA purposes. Notwithstanding anything in this guidance, if a mitigation proposal is to be used for FSA purposes, it must meet the requirements of FSA.

This guidance does not alter or modify requirements of any Federal law or regulation, or modify any prior guidance. The signatory agencies will employ this guidance in concert with the 1990 MOA between the EPA and the Army, the 1995 Federal Guidance on Mitigation Banking, the 2000 Federal Guidance on In-Lieu-Fee Arrangements, and the 2002 Corps RGL on Compensatory Mitigation Projects.

B. The statutory provisions and regulations mentioned in this document contain legally binding requirements. However, this guidance does not substitute for those provisions or regulations, nor is it a regulation itself. This guidance does not impose legally binding requirements on the signatory agencies or any other party, and may not apply to a particular situation in certain circumstances. The signatory agencies retain the discretion to adopt approaches on a case-by-case basis that differ from this guidance when they determine that it is appropriate to do so. Such decisions will be based on the facts of a particular case and applicable legal requirements. Therefore, interested parties are free to raise questions and objections about the substance of this guidance and the appropriateness of its application to a particular situation.

C. This guidance does not and is not intended to alter any provisions of applicable state law or regulations. It is the responsibility of the applicant to comply with all applicable state laws and regulations.

D. As of the date of the last signature below, the agencies will take this guidance into account in their evaluation of compensatory mitigation proposals.

E. This guidance is based on evolving information and may be revised periodically without public notice. This document may be altered with the consent of all signatories. The signatory agencies welcome public comments on this guidance at any time and will consider those comments in any future revision of this guidance.

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