



September 18, 2017

The Honorable Felicia Marcus, Chair  
and Members of the State Water Resources Control Board  
c/o Jeanine Townsend, Clerk to the Board  
State Water Resources Control Board  
1001 I Street, 24th Floor  
Sacramento, CA 95814

**Re: Statewide Procedures for Discharge of Dredged or Fill Material into Waters of the State**

Dear Chair Marcus:

Thank you for the opportunity to comment on the revised draft State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State (Definition and Procedures), as well as the Draft Staff Report for the permitting program for discharges of dredged or fill material (Proposed Regulatory Program). Irvine Ranch Water District (IRWD) applauds the State Water Resources Control Board for both its concern in protecting remaining natural wetland areas and its consistent promotion over the years of artificially constructed wetlands and other facilities for the treatment of impaired surface waters, storm water, urban runoff, and non-point source pollution.

The intent of the Wetlands Jurisdictional Framework, as stated in the Draft Staff Report, is to exclude artificially constructed facilities that meet the technical definition of a wetland from regulation as wetland WOTS. IRWD is concerned that as drafted, the Framework would include virtually all artificial, Multi-Benefit Constructed Facilities<sup>1</sup> into the wetland Waters of the State (WOTS) designation. In addition, the Proposed Regulatory Program would impose additional permitting costs and delays that will impact IRWD's ability to restore, enhance, manage, operate and maintain Multi-Benefit Constructed Facilities, such as IRWD's San Joaquin Marsh and its Natural Treatment System (NTS) facilities. It will also deter investments into the creation of new Multi-Benefit Constructed Facilities.

IRWD is requesting that the State Board exempt Multi-Benefit Constructed Facilities from permitting under the Proposed Regulatory Program by excluding, for purposes of the Proposed Regulatory Program only, such facilities from jurisdictional Waters of the State.

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<sup>1</sup> Multi-Benefit Constructed Facilities term defined in IRWD's suggested redlined revisions to the Procedures, provided as Attachment 2 to this letter.

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IRWD's Interest in the Proposed Regulations:

IRWD provides high-quality drinking water, reliable wastewater collection and treatment, ground-breaking recycled water programs, and prevention and treatment of urban runoff for more than 390,000 residents in Central Orange County. As a water purveyor located in the coastal plain of Southern California, IRWD has an interest in both California's water supply reliability, and the protection of sensitive and environmentally significant WOTS. As a steward of regional water supplies, IRWD has long implemented state-of-the-art constructed, but natural and environmentally beneficial treatment facilities, such as the San Joaquin Marsh and the NTS, for the treatment of urban runoff, storm water, and removal of pollutants from San Diego Creek and the Upper Newport Bay.

a) IRWD's San Joaquin Marsh

The San Joaquin Marsh (Marsh) is a 274-acre marsh adjacent to San Diego Creek, and just upstream of the location where the creek outlets to the Upper Newport Bay. The Marsh was built by IRWD in 1997, and is a series of constructed water quality treatment facilities that use natural processes to receive and treat flows from the San Diego Creek before reaching environmentally sensitive waters. The Marsh reduces nutrients and other pollutants as a part of the San Diego Creek and Upper Newport Bay Total Maximum Daily Load (TMDL) implementation programs for nutrients, sediment, toxics, metals, and pathogens. Environmental water quality and habitat benefits associated with the Marsh include:

- Treatment of over 1 billion gallons of urban runoff annually;
- 85% removal of nitrogen; 100% removal of phosphorus loads into the Newport Bay State Ecological Reserve;
- 99% reduction of coliform bacteria;
- 79% reduction of selenium; 59% reduction of copper loads into Newport Bay State Ecological Reserve; and
- Creation of major riparian and wetland habitat which supports over 282 species of migratory birds, including several state and federally listed species.

To operate and maintain the Marsh in a manner that continues to provide these benefits, the following types of operation and maintenance activities must be conducted periodically:

- Pond berm and pump station maintenance and repair, which includes, but is not limited to, vegetation control, fill activities to maintain berms and weir structures, and leak repair as needed, and vegetation removal;
- Invasive weed control of exotic species and pond and stream emergent vegetation using physical and approved chemical control methods;

- Irrigation system repair and maintenance as needed to maintain delivery of water to various parts of the San Joaquin Marsh, including minor vegetation removal, trenching, and backfilling;
- Dewatering of portions of Marsh as necessary to minimize vector control problems, and to provide access for vegetation maintenance, structure repair, and shorebird habitat; and
- Periodic removal of accumulated sediment in ponds and streams to ensure they continue to operate at design flows.

b) IRWD's Natural Treatment System

The success of the San Joaquin Marsh led IRWD to develop a region-wide NTS. The NTS is a network of artificial constructed water quality treatment facilities that benefit the San Diego Creek watershed by enhancing water quality and providing additional neighborhood open space and wildlife habitat. The NTS facilities are designed to treat storm water and urban runoff utilizing processes that occur in natural wetlands. The natural ecosystems created in the NTS facilities remove sediment, nutrients, pathogens, and other contaminants from urban runoff and storm flows and prevents these contaminants from reaching sensitive receiving waters such as the Upper Newport Bay. Each individual NTS facility – whether constructed as a part of a Water Quality Management Plan for new development prepared and approved pursuant to the regional municipal separate storm sewer system (MS4) National Pollutant Discharge Elimination System (NPDES) Permit, or constructed to serve existing development as a treatment best management practice – is a component of a larger regional system to address non-point source and storm water pollutants. NTS basins are constructed either as “offline” facilities or within existing public flood control facilities, as described below:

- “Offline” facilities treat flows prior to entering the public storm drain system, or after discharge from the storm drain system but prior to discharge into a Water of the U.S. For example, urban runoff and first flush storm flows from the City of Irvine’s Quail Hill residential and commercial development are piped to the Quail Hill NTS basin, which is three acres in size, where they are treated via vegetative filtering and partial infiltration prior to being discharged into San Diego Creek.
- Other NTS facilities are constructed within existing storm water detention basins. For example, the Marshburn NTS basin, which is 15 acres in size, was constructed within the Serrano Creek storm water detention basin and treats urban runoff and first flush storm flows tributary to that basin via vegetative filtering and partial infiltration prior to their conveyance downstream.

Environmental benefits of the NTS facilities include:

- Improved storm water quality within the San Diego Creek watershed and other watersheds that lie within IRWD boundaries;

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- Reductions in TMDLs of various sediment, nutrients, bacteria, metals, and toxics various other pollutants, which address water quality impairments and improve the quality of surface waters within the San Diego Creek and Upper Newport Bay watersheds; and
- Distributed areas of riparian and wetland habitat throughout the San Diego Creek and Upper Newport Bay watersheds benefitting species that include the listed least Bell's vireo, California least tern, and orange-throated whiptail.

To operate and maintain the NTS in a manner that continues to provide these benefits and preserve design treatment capacity, the following types of operation and maintenance activities must be implemented periodically:

- Maintain and repair concrete and graded earthen structure, inlet, outlet, berm, embankment and weir structures, via fill and/or patching;
- Remove sediment and debris from constructed wetlands and related conveyances and other structures;
- Remove non-native vegetation, and harvest and replace wetlands and riparian species of plants necessary for maximizing pollutant treatment through natural processes;
- Maintain and repair rodent damage to slopes and banks;
- Maintain and replace irrigation system components, including removal of vegetation and excavation and replacement of piping; and
- Emergency response, including major erosion and sedimentation as a result of heavy rainfall.

#### Comments on the Proposed Definitions, Procedures and Regulatory Program:

IRWD is concerned that, as proposed, the Definitions, Procedures and Proposed Regulatory Program will significantly impact the creation, restoration, enhancement, management, operations, and maintenance of Multi-Benefit Constructed Facilities.

As discussed below, Multi-Benefit Constructed Facilities are encouraged by a number of state polices, and the State should continue to incentivize their continued operation and expansion. The increased costs and delays associated with the permitting requirements Proposed Regulatory Program would affect IRWD's ability to cost-effectively operate and maintain its existing facilities and would discourage construction of new ones. It would not provide a demonstrable incremental benefit to water quality or the environment since these facilities are already protected by existing resource regulations.

#### 1. Multi-Benefit Constructed Facilities Should be Encouraged

Multi-Benefit Constructed Facilities are encouraged by a variety of State Board, the United States Environmental Protection Agency (U.S. EPA), and California Department of Water Resources (DWR) policy statements and reports. The California Water Action Plan establishes

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the following three broad objectives developed to advance California toward more sustainable water management:

- Development of more reliable water supplies;
- Development of more resilient, sustainably managed, multi-benefit water resource systems, including water supply and water quality facilities that better enhance the environment, and better withstand inevitable and unforeseen pressures; and
- Restoration of important species and habitat.

The Water Action Plan also includes several measures to encourage multi-benefit projects to attain sustainable and reliable water supplies using a multi-pronged approach to water supply development and management, including the following water supply development and management strategies:

- Full utilization of existing surface reservoir capacity;
- Increased groundwater recharge to improve management and water quality in groundwater basins; and
- Urban storm water capture and natural treatment, including both larger-scale and incidental infiltration to groundwater basins.

Multi-Benefit Constructed Facilities such as artificial wetlands and in-channel water recharge and percolation facilities increase the quantity and improve the quality of local groundwater supplies through water infiltration, while also providing wildlife habitat, parks, and open space. With respect to water quality, both the California *STORMS: Strategy to Optimize Resource Management of Storm Water* and DWR's *Urban Stormwater Runoff Management: A Resource Management Strategy of the California Water Plan* encourage and emphasize that capture, natural treatment, and infiltration of runoff and storm water are integral to treating surface waters, runoff, and storm water. Treatment facilities and surface water diversion and treatment facilities that mimic natural bio-filtration and wetland treatment processes reduce surface water pollution while improving flood protection, increasing wetland, riparian and other habitat and vegetation, and increasing long term water supply reliability through capture and infiltration.

## 2. Proposed Regulatory Program Should be Modified

The Proposed Regulatory Program mandates that the State Board and the Regional Water Quality Control Boards implement a new expanded permitting program for discharges of dredge or fill material to WOTS. From IRWD's "on-the-ground" perspective, the scope of the Proposed Regulatory Program's new permitting requirements and the stringency of the new permit application analysis requirements, will add unnecessary costs and delays to the development, operation and maintenance of IRWD's Multi-Benefit Constructed Facilities. The Proposed Regulatory Program's permit application and analysis are not required under currently applicable federal or State laws. In many cases the new permitting requirements would mandate waste

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discharge requirements for the operation and maintenance of Multi-Benefit Constructed Facilities. The State's regulatory role plays an important part in shaping the economic and technical constraints that we take into consideration when deciding whether to undertake, prioritize, or continue maintenance of a particular Multi-Benefit Constructed Facilities project. The additional regulatory requirements will discourage construction of new Multi-Benefit Constructed Facilities, which can provide significant environmental, water supply and economic benefits to the state.

3. Environmental Benefits of Multi-Benefit Constructed Facilities Are Already Protected through Other Resource Regulations

Although the Proposed Regulatory Program new permit requirements would add costs and delays, they would not be offset by an incremental environmental benefit due to the significant degree to which the new permitting program duplicates regulation of resources already protected under section 404 of the Clean Water Act (CWA) by the U.S. Army Corps of Engineers and the U.S. EPA, and section 1600 of the California Fish and Game Code by the California Department of Fish and Wildlife. The Proposed Regulatory Program would impose new and supplemental permitting requirements, all of which are different than, and in some cases conflict with, existing federal and State requirements as summarized in Attachment 1.

In order to preserve and expand the benefits to the State from Multi-Benefit Constructed Facilities, we request that the State Board revise the Proposed Regulatory Program to exclude Multi-Benefit Constructed Facilities from the proposed permitting requirements by excluding them from designation as wetland WOTS for purposes of the Proposed Regulatory Program. Proposed revisions to the procedures are provided in Attachment 2.

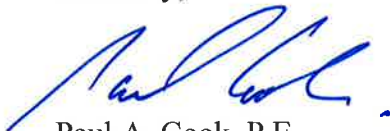
Conclusion:

It is critical that the State Board continue to protect natural, historic wetlands while simultaneously encouraging and supporting the construction of artificially constructed Multi-Benefit Constructed Facilities that are designed to improve water quality and water supply throughout the state. The Proposed Regulatory Program should consider and address the fact that Multi-Benefit Constructed Facilities are different from naturally occurring WOTS. Regulating managed artificially constructed treatment wetlands, and other Multi-Benefit Constructed Facilities as though they are natural can greatly discourage their continued and future expanded use. The high level of protection needed for natural wetlands, when applied to Multi-Benefit Constructed Facilities, leads to unnecessary cost and restriction of critical maintenance activities. These costs and restrictions are not offset by any additional environmental benefit from the Proposed Regulatory Program due to the degree to which the new permitting program duplicates regulation of protected resources. Therefore, we request that the State Board revise the Proposed Regulatory Program to exclude/exempt Multi-Benefit Constructed Facilities from the requirements of the new permitting program.

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Addressing the specific comments in this letter, and incorporating the recommended revised language provided in Attachment 2 will ensure that Multi-Benefit Constructed Facilities continue to provide the state with significant environmental benefits, while protecting natural, historic wetlands and other Waters of the State. Please do not hesitate to contact me at (949) 453-5590 or [cook@irwd.com](mailto:cook@irwd.com) should you have any questions, or if we can be of assistance to you or your staff.

Sincerely,

A handwritten signature in blue ink, appearing to read "Paul A. Cook".

Paul A. Cook, P.E.  
General Manager

Attachments:

Attachment 1: Summary of New/Supplemental Permitting Requirements  
Attachment 2: Proposed Revisions to the Procedures

## ATTACHMENT 1

### Summary of New/Supplemental Permitting Requirements

New/Supplemental Permitting Requirement	New/Increased Regulatory Burden	Consistent with USACE and CDFW regulation?
Delineation Report for wetland and non-wetland WOTS	<p><i>For wetland WOTS:</i> New definition and new Wetlands Jurisdictional Framework substantially increases the number of Multi-benefit Constructed Facilities deemed jurisdictional wetland WOTS compared to existing regulation</p> <p><i>For non-wetland WOTS:</i> no guidance regarding features that are jurisdictional, leaving it to each Water Board's discretion, and resulting in inconsistent application across regions</p>	<p>No</p> <p>No</p>
Prepare and submit application, including an alternatives analysis	<p>Includes O&amp;M, which by definition cannot be conducted in another location</p> <p>Includes activities that under current rules would be performed pursuant to a Nationwide Permit and CWA section 401 water quality certification</p> <p>Potential conflicts between USACE's and Water Boards' Least Environmentally Damaging Practicable Alternative (LEDPA) determinations</p>	<p>No</p> <p>No</p>
Analyze and provide compensatory mitigation	<p>Use of watershed profiles, which do not now exist and encompass all lands within a watershed, including those privately owned and not publicly accessible</p> <p>Prioritizes in-watershed mitigation, which is different from USACE prioritization of mitigation banks, and results in different compensatory mitigation requirements</p> <p>Unspecified, but different methodology for calculating mitigation obligations: declines to adopt USACE's California Rapid Assessment Method and Standard Operating Procedure, used to determine compensatory mitigation requirements, but does not propose an alternative</p> <p>With a broader, more inclusive definition of "wetlands," a corresponding increase in compensatory mitigation obligation</p> <p>Requires compensatory mitigation necessary to address permanent, net loss of aquatic resources for temporal impacts that are addressed by restoration, particularly if restoration effort takes more than 1 year</p>	<p>No</p> <p>No</p> <p>No</p> <p>No</p>



**ATTACHMENT 2**  
**Requested Revisions shown in blue font text**



# **PRELIMINARY DRAFT**

## **State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State**

**[Proposed for Inclusion in the Water Quality Control  
Plans for Inland Surface Waters and Enclosed Bays  
and Estuaries and Ocean Waters of California]**

**STATE WATER RESOURCES CONTROL BOARD**

**July 21, 2017**

**Final Draft**

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**PRELIMINARY DRAFT**

**Procedures for Discharges of Dredged or Fill Materials into Waters of the State**

**1 I. Introduction**

2 The mission of the State Water Resources Control Board and the Regional Water Quality  
3 Control Boards (Water Boards) includes the preservation, enhancement, and restoration of the  
4 quality of California's water resources for the protection of the environment and all beneficial  
5 uses for the benefit of present and future generations. In accordance with the Porter-Cologne  
6 Water Quality Control Act (Water Code, § 13000 et seq.), the Water Boards are authorized to  
7 regulate discharges of waste that may affect the quality of waters of the state. As described  
8 below, waters of the state include some, but not all, features that are defined as wetlands, as  
9 well as other features, including the ocean, lakes, and rivers, but, for purposes of these  
10 Procedures for the Discharges of Dredged or Fill Materials to Waters of the State, do not include  
11 features defined as Multi-benefit Constructed Facilities. These wetlands provide environmental  
12 and economic benefits to the people of this state, including flood and storm water control,  
13 surface and ground water supply, fish and wildlife habitat, erosion control, pollution treatment,  
14 nutrient cycling, and public enjoyment. Wetlands ameliorate the effects of global climate  
15 change by providing floodwater storage, sequestering carbon, and maintaining vulnerable plant  
16 and animal communities. Many of these invaluable areas statewide have been lost to fill and  
17 development. Presently, wetlands are threatened by impacts from increasing population  
18 growth, land development, sea level rise, and climate change. These Procedures for the  
19 Discharges of Dredged or Fill Materials to Waters of the State (Procedures) conform to  
20 Executive Order W-59-93, commonly referred to as California's "no net loss" policy for wetlands.  
21 In accordance with Executive Order W-59-93, the Procedures ensure that the Water Boards'  
22 regulation of dredged or fill activities will be conducted in a manner "to ensure no overall net  
23 loss and long-term net gain in the quantity, quality, and permanence of wetlands acreage and  
24 values..." The Water Boards are committed to increasing the quantity, quality, and diversity of  
25 wetlands that qualify as waters of the state.

26 These Procedures contain a wetland definition in section II and wetland delineation procedures  
27 in section III, both of which apply to all Water Board programs. The wetland definition  
28 encompasses the full range of wetland types commonly recognized in California, including some  
29 features not protected under federal law, and reflects current scientific understanding of the  
30 formation and functioning of wetlands. These Procedures also include procedures for the  
31 review and approval of activities that could result in the discharge of dredged or fill material to  
32 any waters of the state in section IV. However, for purposes of these Procedures, features  
33 defined as Constructed Water Supply/Water Quality Treatment Facilities are not considered  
34 waters of the state under section II or section IV. The Procedures include elements of the Clean  
35 Water Act Section 404(b)(1) Guidelines, thereby bringing uniformity to Water Boards' regulation  
36 of discharges of dredged or fill material to all waters of the state.

**37 II. Wetland Definition**

38 The Water Boards define an area as wetland as follows:

39 *An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent*  
40 *saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2)*

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41 *the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate;*  
42 *and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.*

43 The Water Code defines "waters of the state" broadly to include "any surface water or  
44 groundwater, including saline waters, within the boundaries of the state." The following  
45 wetlands are waters of the state unless they are Multi-benefit Constructed Facilities, in which  
46 case they are excluded as waters of the state for purposes of these Procedures:

- 47 1. Natural wetlands,
- 48 2. Wetlands created by modification of a water of the state,<sup>1</sup>
- 49 3. Wetlands that meet current or historic definitions of "waters of the United  
50 States,"<sup>2</sup> and
- 51 4. Artificial wetlands<sup>3</sup> that meet any of the following criteria:
  - 52 a. Approved by an agency as mitigation for impacts to other waters of the  
53 state, except where the approving agency explicitly identifies the  
54 mitigation as being of limited duration;
  - 55 5. Artificial wetlands<sup>3</sup> that are greater than or equal to one acre in size
    - 56 a. Specifically identified in a water quality control plan as a wetland or other  
57 water of the state;
    - 58 b. Resulted from historic human activity and has become a relatively  
59 permanent part of the natural landscape;
    - 60 e. Unless the artificial wetland was constructed and is currently used and  
61 maintained primarily for one or more of the following purposes (i.e., the  
62 following artificial wetlands are not waters of the state unless they also  
63 satisfy another one of the above criteria):
      - 64 i. Industrial or municipal wastewater treatment or disposal,
      - 65 ii. Settling of sediment,
      - 66 iii. Storm water detention, infiltration, or treatment,
      - 67 iv. Agricultural crop irrigation or stock watering,

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<sup>1</sup> "Created by modification of a water of the state" means that the wetland that is being evaluated must have been directly converted from a water of the state, and does not include a situation where the water of the state was completely eliminated.

<sup>2</sup> This includes features that have been determined by the U.S. Environmental Protection Agency or the U.S. Army Corps of Engineers to be "waters of the U.S." in an approved jurisdictional determination; "waters of the U.S." identified in a preliminary jurisdictional determination upon which a permitting decision was based; and features that are consistent with any current or historic final judicial interpretation of "waters of the U.S." or any current or historic federal regulation defining "waters of the U.S."

<sup>3</sup> Artificial wetlands are wetlands that result from human activity.

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- 68 v. Fire suppression,
- 69 vi. Cooling water,
- 70 vii. Active surface mining – even if the site is managed for interim  
71 wetlands functions and values, or
- 72 viii. Log storage.

73 **III. Wetland Delineation**

74 The permitting authority shall rely on any wetland area delineation from a final aquatic resource  
75 report with a preliminary or approved jurisdictional determination issued by the United States  
76 Army Corps of Engineers (Corps) for the purposes of determining the extent of wetland waters  
77 of the U.S. A delineation of non-federal wetland areas potentially impacted by the project shall  
78 be performed using the methods described in the three federal documents listed below  
79 (collectively referred to as “1987 Manual and Supplements”) to determine whether the area  
80 meets the state definition of a wetland as defined above. As described in the 1987 Manual and  
81 Supplements, “lacks vegetation” if it has less than 5 percent areal coverage of plants at the  
82 peak of the growing season. The methods shall be modified only to allow for the fact that the  
83 lack of vegetation does not preclude the determination of such an area that meets the definition  
84 of wetland. Terms as defined in these Procedures shall be used if there is conflict with terms in  
85 the 1987 Manual and Supplements.

- 86 • Environmental Laboratory. 1987. U.S. Army Corps of Engineers Wetlands Delineation  
87 Manual. Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment  
88 Station, Vicksburg, MS.
- 89 • U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers  
90 Wetland Delineation Manual: Arid West Region (Version 2.0). ed. J. S. Wakeley, R. W.  
91 Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer  
92 Research and Development Center.
- 93 • U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers  
94 Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version  
95 2.0). ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3.  
96 Vicksburg, MS: U.S. Army Engineer Research and Development Center.

97 **IV. Procedures for Regulation of Discharges of Dredged or Fill Material to Waters of**  
98 **the State**

99 The purpose of this section is to establish application procedures for discharges of dredged or  
100 fill material to waters of the state, which includes both waters of the U.S. and non-federal waters  
101 of the state, except for purposes of these Procedures, Multi-benefit Constructed Facilities are  
102 not considered waters of the state. This section supplements existing state requirements for  
103 discharges of dredged or fill material to waters of the U.S.<sup>4</sup> These Procedures include Appendix  
104 A, which contains relevant portions of the U.S. EPA’s Section 404(b)(1) “Guidelines for

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<sup>4</sup> 4 California Code of Regulations, title 23, sections 3830-3869 (state’s Clean Water Act (CWA) section 401 (33 USC § 1341) water quality certification program)

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105 Specification of Disposal Sites for Dredge or Fill Material”<sup>5</sup> (Guidelines), 1980, with minor  
106 modifications to make them applicable to the state dredged or fill program (hereafter State  
107 Supplemental Dredge or Fill Guidelines).<sup>6</sup> This section applies to all applications for discharges  
108 of dredged or fill material to waters of the state submitted after [insert the effective date of the  
109 Plan Amendment].

110 **Project Application Submittal for Individual Orders**

111 Unless excluded by Section IV.D, applicants must file an application to the Water Boards for any  
112 activity that could result in the discharge of dredged or fill material to waters of the state in  
113 accordance with California Code of Regulations, title 23, section 3855.<sup>7</sup> The applicant may  
114 consult with the Water Boards to determine whether a project could result in impacts to waters  
115 of the state and/or discuss submittals that would meet the application requirements listed below.

116 **A. Project Application Submittal**

117 Applicants must submit the items listed in subsection 1 to the permitting authority. In addition,  
118 applicants shall consult with the permitting authority about the items listed in subsection 2.  
119 Within 30 days of receiving the items listed in subsection 1, the permitting authority may require  
120 the applicant to submit one or more of the items in subsection 2 for a complete application.  
121 Within 30 days of receiving all of the required items, the permitting authority shall determine  
122 whether the application is complete and notify the applicant accordingly. If the applicant’s  
123 federal license or permit application includes any of the information required in subsections 1 or  
124 2 below, the applicant may submit the federal application materials to satisfy the corresponding  
125 state application information. If federal application materials are submitted as part of the state  
126 application, the applicant shall indicate where the corresponding state application information  
127 can be found in the federal application materials.

128 1. Items Required for a Complete Application

129 a. All items listed in California Code of Regulations, title 23, section 3856  
130 “Contents of a Complete Application.”<sup>8</sup>

131 b. If waters of the U.S. are present, a final aquatic resource delineation  
132 report, with a preliminary or approved jurisdictional issued by the Corps.

133 c. If waters of the state outside of federal jurisdiction are present, a  
134 delineation of those waters, including wetlands delineated as described in  
135 section III.

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<sup>5</sup> 40 C.F.R. § 230.

<sup>6</sup> The State Supplemental Dredge and Fill Guidelines are included as Appendix A. Because Appendix A is derived directly from the 404(b)(1) guidelines, it uses slightly different terms than terms used in sections I through V of these Procedures. Appendix A will be applied in a manner consistent with sections I through V of these Procedures.

<sup>7</sup> Note that California Code of Regulations, title 23, section 3855 applies only to individual water quality certifications, but these Procedures extend the application of section 3855 to individual waste discharge requirements for discharges of dredged or fill material to waters of the state.

<sup>8</sup> Note that California Code of Regulations, title 23, section 3856 applies only to individual water quality certifications, but these Procedures extend the application of section 3856 to individual waste discharge requirements for discharges of dredged or fill material to waters of the state.

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- 136 d. The dates upon which the overall project activity will begin and end; and,  
137 if known, the date(s) upon which the discharge(s) will take place.
- 138 e. Map(s) with a scale of at least 1:24000 (1" = 2000') and of sufficient detail  
139 to accurately show (1) the boundaries of the lands owned or to be utilized  
140 by the applicant in carrying out the proposed activity, including the  
141 grading limits, proposed land uses, and the location, dimensions and type  
142 of any structures erected (if known) or to be erected and (2) all aquatic  
143 resources that may qualify as waters of the state, within the boundaries of  
144 the project, and all aquatic resources that may qualify as waters of the  
145 state outside of the boundary of the project that could be affected by the  
146 project. A map submitted for a Corps' preliminary jurisdictional  
147 determination may satisfy this requirement if it includes all potential  
148 waters of the state. The permitting authority may require that the map(s)  
149 be submitted in electronic format (e.g., GIS shapefiles).
- 150 f. A description of the waters proposed to receive a discharge of dredged or  
151 fill material, including the beneficial uses as listed in the applicable water  
152 quality control plan. The description should also include: a description of  
153 discharge at each individual impact location; quantity of impact at each  
154 location rounded to the nearest one-thousandth (0.001) of an acre,  
155 nearest linear foot, and nearest cubic yard (as applicable); assessment of  
156 potential direct and indirect impacts to listed beneficial uses and potential  
157 mitigation measures for those potential impacts to beneficial uses,  
158 identification of existing water quality impairment(s); the source of water  
159 quality impairment(s), if known; and the presence of rare, threatened or  
160 endangered species habitat.
- 161 g. An alternatives analysis,<sup>9</sup> unless any of the following exemptions apply.
- 162 i. The project includes discharges to waters of the state outside of  
163 federal jurisdiction, but the project would meet the terms and  
164 conditions of one or more Water Board certified Corps' General  
165 Permits, if all discharges were to waters of the U.S. The  
166 permitting authority will verify that the project would meet the  
167 terms and conditions of the Corps' General Permit(s) if all  
168 discharges were to waters of the U.S. based on information  
169 supplied by the applicant.
- 170 ii. The project would be conducted in accordance with a watershed  
171 plan that has been approved by the permitting authority and  
172 analyzed in an environmental document that includes an an  
173 alternatives analysis, monitoring provisions, and guidance on  
174 compensatory mitigation opportunities.

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<sup>9</sup> "Alternatives analysis" as used in these Procedures refer to the analysis required by Section IV.A.(h) and Appendix A, State Supplement Dredged or Fill Guidelines, section 230.10(a). An alternatives analysis also may be required in order to comply with other statutory or regulatory requirements, such as CEQA. The exemptions and the tiers set forth below do not affect any alternatives analysis conducted pursuant to another statutory or regulatory requirement. To the extent that the permitting authority is acting as the lead agency under CEQA, it may be necessary for the permitting authority to conduct further analysis to comply with CEQA.

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- iii. The project is an Ecological Restoration and Enhancement Project.
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- iv. The project has no permanent impacts to aquatic resources and no impacts to any bog, fen, playa, seep, wetland, vernal pool, headwater creek, eelgrass bed, anadromous fish habitat, or habitat for rare, threatened or endangered species, and all implementation actions in the restoration plan can reasonably be concluded within one year.
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- h. If none of the above exemptions apply, the applicant must submit an alternatives analysis consistent with the requirements of 230.10 of the State Supplemental Dredge or Fill Guidelines that allows the permitting authority to determine whether the proposed project is the Least Environmentally Damaging Practicable Alternative (LEDPA). If the applicant submitted a draft alternatives analysis to the Corps, the applicant shall provide a copy to the permitting authority. Such alternatives analyses may satisfy some or all of the following requirements in accordance with Section IV.B.3. Alternatives analyses shall be completed in accordance with the following tiers, unless the permitting authority determines that a lesser level of analysis is appropriate. The level of effort required for an alternatives analysis within each tier shall be commensurate with the significance of the project's potential threats to water quality and beneficial uses<sup>10</sup>.
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- i. Tier 3 projects include any project that directly impacts more than two-tenths (0.2-0.5) of an acre or 300 linear feet of waters of the state, or directly impacts a bog, fen, playa, seep wetland, vernal pool, headwater creek, eelgrass bed, anadromous fish habitat, or habitat for rare, threatened or endangered species; and is not a project that inherently cannot be located at an alternate location. Tier 3 projects shall provide an analysis of off-site and on-site alternatives.
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- ii. Tier 2 projects include any project that directly impacts more than one tenth (0.1) and less than or equal to two five-tenths (0.2) of an acre or more than 100 and less than or equal to 300 linear feet of waters of the state, or any project that inherently cannot be located at an alternate location (unless it meets the size requirements set forth in Tier 1). Tier 2 projects shall provide an analysis of only on-site alternatives.
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- iii. Tier 1 projects include any project that directly impacts less than or equal to one tenth (0.1) of an acre or less than or equal to 100 linear feet of waters of the state. Tier 1 projects shall provide a description of any steps that have been or will be taken to avoid and minimize loss of, or significant adverse impacts to, beneficial uses of waters of the state.

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<sup>10</sup> As used below, "impacts" include both permanent and temporary impacts.



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- 218            2.    Additional Information Required for a Complete Application.
- 219            a.    If required by the permitting authority on a case-by-case basis, if the  
220            wetland area delineations were conducted in the dry season,  
221            supplemental field data from the wet season to substantiate dry season  
222            delineations.
- 223            b.    If required by the permitting authority on a case-by-case basis, an  
224            assessment of the potential impacts associated with climate change  
225            related to the proposed project and any proposed compensatory  
226            mitigation, and any measures to avoid or minimize those potential  
227            impacts.
- 228            c.    If compensatory mitigation is required by the permitting authority on a  
229            case-by-case basis, an assessment of the overall condition of aquatic  
230            resources proposed to receive a discharge of dredged or fill material and  
231            their likely stressors, using an assessment method approved by the  
232            permitting authority and a draft compensatory mitigation plan developed  
233            using a watershed approach containing the items below. Compensatory  
234            mitigation not required for Ecological Restoration and Enhancement  
235            Projects. For permittees who intend to fulfill their compensatory  
236            mitigation obligations by securing credits from approved mitigation banks  
237            or in-lieu fee programs, their mitigation plans need include only the items i  
238            and ii, as described below, as well as information required in Appendix A,  
239            section 230.94 (c)(5) and (c)(6), and the name of the specific mitigation  
240            bank or in-lieu fee program proposed to be used.
- 241                       Draft compensatory mitigation plans shall comport with the State  
242            Supplemental Dredge or Fill Guidelines, Subpart J, and include the  
243            elements listed below.
- 244            i.    A watershed profile for the project evaluation area for both the  
245            proposed dredged or fill project and the proposed compensatory  
246            mitigation project.
- 247            ii.   A description of how the project impacts and compensatory  
248            mitigation would not cause a net loss of the overall abundance,  
249            diversity, and condition of aquatic resources, based on the  
250            watershed profile. If the compensatory mitigation is located in the  
251            same watershed as the project, no net loss will be determined on  
252            a watershed basis. If the compensatory mitigation and project  
253            impacts are located in multiple watersheds, no net loss will be  
254            determined considering all affected watersheds. The level of  
255            detail in the plan shall be sufficient to accurately evaluate whether  
256            compensatory mitigation offsets the adverse impacts attributed to  
257            a project.
- 258            iii.   Preliminary information about ecological performance standards,  
259            monitoring, and long-term protection and management, as  
260            described in State Supplemental Dredge or Fill Guidelines.

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- 261 iv. A timetable for implementing the compensatory mitigation plan.
- 262 v. If the compensatory mitigation plan includes buffers, design  
263 criteria and monitoring requirements for those buffers.
- 264 vi. If the compensatory mitigation involves restoration or  
265 establishment as the form of mitigation, applicants shall notify  
266 state and federal land management agencies, airport land use  
267 commission, fire control districts, flood control districts, local  
268 mosquito-vector control district(s), and any other interested local  
269 entities prior to initial site selection. These entities should be  
270 notified as early as possible during the initial compensatory  
271 mitigation project design stage.
- 272 d. If required by the permitting authority on a case-by-case basis, if project  
273 activities include in-water work or water diversions, a proposed water  
274 quality monitoring plan to monitor compliance with water quality  
275 objectives of the applicable water quality control plan. At a minimum, the  
276 plan should include type and frequency of sampling for each applicable  
277 parameter.
- 278 e. In all cases where temporary impacts are proposed, a draft restoration  
279 plan that outlines design, implementation, assessment, and maintenance  
280 for restoring areas of temporary impact to pre-project conditions. The  
281 design components shall include the objectives of the restoration plan;  
282 grading plan of disturbed areas to pre-project contours; a planting palette  
283 with plant species native to the area; seed collection locations; and an  
284 invasive species management plan. The implementation component  
285 shall include all proposed actions to implement the plan (e.g., re-  
286 contouring, initial planting, site stabilization, removal of temporary  
287 structures) and a schedule for completing those actions. The  
288 maintenance and assessment components shall include a description of  
289 performance standards used to evaluate attainment of objectives; the  
290 timeframe for determining attainment of performance standards; and  
291 maintenance requirements (e.g., watering, weeding, replanting and  
292 invasive species control). The level of detail in the restoration plan shall  
293 be sufficient to accurately evaluate whether the restoration offsets the  
294 adverse impacts attributed to a project.
- 295 Prior to issuance of the Order, the applicant shall submit a final  
296 restoration plan that describes the restoration of all temporarily disturbed  
297 areas to pre-project conditions.
- 298 f. For all Ecological Restoration and Enhancement Projects, a draft  
299 assessment plan including the following: project objectives; description of  
300 performance standards used to evaluate attainment of objectives;  
301 protocols for condition assessment; the timeframe and responsible party  
302 for performing condition assessment; and assessment schedule. A draft  
303 assessment plan shall provide for at least one assessment of the overall  
304 condition of aquatic resources and their likely stressors, using an  
305 appropriate assessment method approved by the permitting authority,

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306 prior to restoration and/or enhancement and two years following  
307 restoration and/or enhancement to determine success of the restoration  
308 and/or enhancement.

309 **B. Permitting Authority Review and Approval of Applications for Individual**  
310 **Orders**

311 1. The permitting authority will evaluate the potential impacts on the aquatic  
312 environment from the proposed project and determine whether the proposed  
313 project complies with the Procedures. The permitting authority has the  
314 discretion to approve a project only if the applicant has demonstrated the  
315 following:

316 a. A sequence of actions has been taken to first avoid, then to minimize, and  
317 lastly compensate for adverse impacts to waters of the state;

318 b. The potential impacts will not contribute to a net loss of the overall  
319 abundance, diversity, and condition of aquatic resources in a watershed;

320 c. The discharge of dredged or fill material will not violate water quality  
321 standards and will be consistent with all applicable water quality control  
322 plans and policies for water quality control; and

323 d. The discharge of dredged or fill material will not cause or contribute to  
324 significant degradation of the waters of the state.

325 2. The permitting authority shall rely on any final aquatic resource report with a  
326 preliminary or approved jurisdictional determination issued by the Corps to  
327 determine boundaries of waters of the U.S. For all other wetland area  
328 delineations, the permitting authority shall review and approve delineations that  
329 are performed using the methods described in Section III.

330 3. Alternatives Analysis Review Requirements:

331 a. The purpose of the alternatives analysis is to identify the LEDPA. The  
332 permitting authority will be responsible for determining the sufficiency of  
333 an alternatives analysis except as described in 3(b) below. In all cases,  
334 the alternatives analysis must establish that the proposed project  
335 alternative is the LEDPA in light of all potential direct, secondary  
336 (indirect), and cumulative impacts on the physical, chemical, and  
337 biological elements of the aquatic ecosystem.

338 b. Discharges to waters of the U.S.

339 In reviewing and approving the alternatives analysis for discharges of  
340 dredged or fill material that impact waters of the U.S., the permitting  
341 authority shall defer to the Corps' determinations on the adequacy of the  
342 alternatives analysis, or rely on a draft alternatives analysis if no final  
343 determination has been made, unless the Executive Officer or Executive  
344 Director determines that (1) the permitting authority was not provided an  
345 adequate opportunity to collaborate in the development of the alternatives

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346 analysis, (2) the alternatives analysis does not adequately address issues  
347 identified in writing by the Executive Officer or Executive Director to the  
348 Corps during the development of the alternatives analysis, or (3) the  
349 proposed project and all of the identified alternatives would not comply  
350 with water quality standards.

351 If the project also includes discharges to waters of the state outside of  
352 federal jurisdiction, the permitting authority shall require the applicant to  
353 supplement the alternatives analysis to include waters of the state outside  
354 of federal jurisdiction. If an alternatives analysis is not required by the  
355 Corps for waters of the U.S. impacted by the discharge of dredged or fill  
356 material, the permitting authority shall require an alternatives analysis for  
357 the entire project in accordance with the State Supplemental Dredge or  
358 Fill Guidelines.

359 4. Prior to issuance of the Order aquatic resources, the permitting authority will  
360 review and approve the final restoration plan for temporary impacts.

361 5. Compensatory Mitigation

362 a. Compensatory mitigation, in accordance with the State Supplemental  
363 Dredge or Fill Guidelines, Subpart J, may be required to ensure that an  
364 activity complies with these Procedures.

365 b. Where feasible, the permitting authority will consult and coordinate with  
366 any other public agencies that have concurrent mitigation requirements in  
367 order to achieve multiple environmental benefits with a single mitigation  
368 project, thereby reducing the cost of compliance to the applicant.

369 c. Amount: The amount of compensatory mitigation will be determined on a  
370 project-by-project basis in accordance with State Supplemental Dredge or  
371 Fill Guidelines, section 230.93(f). The permitting authority may take into  
372 account recent anthropogenic degradation to the aquatic resource and  
373 the potential and existing functions and conditions of the aquatic  
374 resource. A minimum of one-to-one acreage or length of stream reach  
375 replacement is necessary to compensate for wetland or stream losses  
376 unless an appropriate function or condition assessment method clearly  
377 demonstrates, on an exceptional basis, that a lesser amount is sufficient.  
378 A reduction in the mitigation ratio for compensatory mitigation will be  
379 considered by the permitting authority if buffer areas adjacent to the  
380 compensatory mitigation are also required to be maintained as part of the  
381 compensatory mitigation management plan. The amount of  
382 compensatory mitigation required by the permitting authority will vary  
383 depending on which of the following strategies the applicant uses to  
384 locate the mitigation site within a watershed.

385 Strategy 1: Applicant locates compensatory mitigation using a watershed  
386 approach based on a watershed profile developed from a watershed plan  
387 that has been approved by the permitting authority and analyzed in an  
388 environmental document, includes monitoring provisions, and includes  
389 guidance on compensatory mitigation opportunities;

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390 Strategy 2: Applicant locates compensatory mitigation using a watershed  
391 approach based on a watershed profile developed for a project evaluation  
392 area, and demonstrates that the mitigation project will contribute to the  
393 sustainability of watershed functions and the overall health of the  
394 watershed area's aquatic resources.

395 Generally, the amount of compensatory mitigation required under  
396 Strategy 1 will be less than the amount of compensatory mitigation  
397 required under Strategy 2 since the level of certainty that a compensatory  
398 mitigation project will meet its performance standards increases if the  
399 compensatory mitigation project complies with a watershed plan as  
400 described above. Certainty increases when there is a corresponding  
401 increase in understanding of watershed conditions, which is increased  
402 when using a watershed plan as described above to determine  
403 compensatory mitigation requirements.

404 d. Type and Location: The permitting authority will evaluate the applicant's  
405 proposed mitigation type and location based on the applicant's use of a  
406 watershed approach based on a watershed profile. The permitting  
407 authority will determine the appropriate type and location of  
408 compensatory mitigation based on watershed conditions, impact size,  
409 location and spacing, aquatic resource values, relevant watershed plans,  
410 and other considerations.

411 In general, the required compensatory mitigation should be located within  
412 the same watershed as the impact site, but the permitting authority may  
413 approve compensatory mitigation in a different watershed. For example,  
414 if a proposed project may affect more than one watershed, then the  
415 permitting authority may determine that locating all required project  
416 mitigation in one area is ecologically preferable to requiring mitigation  
417 within each watershed.

418 e. Final Compensatory Mitigation Plan: The permitting authority will review  
419 and approve the final compensatory mitigation plan submitted by the  
420 applicant to ensure mitigation comports with the State Supplemental  
421 Dredge or Fill Guidelines, Water Code requirements, applicable water  
422 quality standards, and other appropriate requirements of state law. The  
423 level of detail in the final plan shall be sufficient to accurately evaluate  
424 whether compensatory mitigation offsets the adverse impacts attributed to  
425 a project considering the overall size and scope of impact. The  
426 compensatory mitigation plan shall be sufficient to provide the permitting  
427 authority with a reasonable assurance that replacement of the full range  
428 of lost aquatic resource(s) and/or functions will be provided in perpetuity.

429 The permitting authority may include as a condition of an Order-that the  
430 applicant receive approval of a final mitigation plan prior to discharging  
431 dredged or fill materials to waters of the state. In this case, the permitting  
432 authority will approve the final mitigation plan by amending the Order.

433 f. Financial Security: Where deemed necessary by the permitting authority,  
434 provision of a financial security (e.g., letter of credit or performance bond)

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435 shall be a condition of the Order. In this case, the permitting authority will  
436 approve the financial security to ensure compliance with compensatory  
437 mitigation plan requirements.

438 g. Term of Mitigation Obligation: The permitting authority may specify in the  
439 Order the conditions that must be met in order for the permitting authority  
440 to release the permittee from the mitigation obligation, including  
441 compensatory mitigation performance standards and long-term  
442 management funding obligations.

443 6. The permitting authority shall provide public notice in accordance with Water  
444 Code section 13167.5 for waste discharge requirements. The permitting  
445 authority shall provide public notice of an application for water quality  
446 certification in accordance with California Code of Regulations, title 23, section  
447 3858. If the permitting authority receives comments on the application or there  
448 is substantial public interest in the project, the permitting authority shall also  
449 provide public notice of the draft Order, or draft amendment of the Order, unless  
450 circumstances warrant a shorter notice period.

451 7. The permitting authority will review and approve the final monitoring and  
452 reporting requirements for all projects. Monitoring and reporting may be  
453 required to demonstrate compliance with the terms of the Order.

454 **C. General Orders**

455 The permitting authority may issue general orders for specific classes of dredged or fill  
456 discharge activities that are similar; involve the same or similar types of discharges and possible  
457 adverse impacts requiring the same or similar conditions or limitations in order to alleviate  
458 potential adverse impacts to water quality; and are determined by the permitting authority to  
459 more appropriately be regulated under a general order rather than under an individual Order.

460 General orders shall be reviewed, noticed, and issued in accordance with the applicable  
461 requirements of division 7 of the Water Code and the California Code of Regulations, division 3  
462 of title 23.

463 Applicants applying to enroll under a general order shall follow the instructions specified in the  
464 general order for obtaining coverage.

465 **D. Activities and Areas Excluded from the Application Procedures for**  
466 **Regulation of Discharges of Dredged or Fill Material to Waters of the State**

467 The application procedures specified in sections IV.A and IV.B do not apply to proposed  
468 discharges of dredged or fill material to waters of the state from the following activities, or to the  
469 following areas. These exclusions do not, however, affect the Water Board's authority to issue  
470 or waive waste discharge requirements (WDRs) or take other actions for the following activities  
471 or areas to the extent authorized by the Water Code.

472 1. Activities excluded from application procedures in sections IV.A and IV.B:

473 a. Activities that are exempt under CWA section 404(f) (33 USC § 1344(f)).  
474 The following federal regulations (Table 1), guidance letters (Table 2),

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475 and memoranda (Table 3), that have been adopted pursuant to CWA  
 476 section 404(f) or that are used to interpret or implement section 404(f)  
 477 shall be used when determining whether certain activities are excluded  
 478 from these procedures. These documents are hereby incorporated by  
 479 reference and shall apply to all waters of the state. Consistent with CWA  
 480 section 404(f)(2) and 40 CFR section 232.3, any discharge of dredged or  
 481 fill material to a water of the state incidental to any of these activities is  
 482 not exempt under CWA section 404(f) and shall be subject to the  
 483 application procedures sections IV.A and IV.B, if (1) the purpose of the  
 484 activity is bringing a water of the state into a use to which it was not  
 485 previously subject, where the flow or circulation of water of the state may  
 486 be impaired or the reach of such waters be reduced, or (2) the discharge  
 487 contains any toxic pollutant listed in CWA section 307.

488 b. **Table 1: CFR References<sup>11</sup>**

Title	Section	Name
33 CFR	323.4	Discharges not requiring permits (1986)
40 CFR	232.3	Activities not requiring permits (1988)

489 **Table 2: Applicable U.S. Army Corps of Engineers (Corps)**  
 490 **Regulatory Guidance Letters (RGLs)<sup>12</sup>**

RGL	Title
82-03	Irrigation Exemption in Section 404(F)(1)(C) of the Clean Water Act
84-01	Regulatory Jurisdiction Over Vegetative Operations
84-05	Fifth Circuit Decision in <i>Avoyelles vs. Marsh</i>
85-04	Agricultural Conversion
86-01	Exemptions to Clean Water Act - Plowing
86-03	Exemption of Farm and Forest Roads
87-07	Exemption for Drainage Ditch Maintenance
87-09	Exemption for Construction or Maintenance of Farm or Stock Ponds
92-02	Water Dependency and Cranberry Production
93-03	Rescission of RGL's 90-5 and 90-8
96-02	Applicability of Exemptions under Section 404(f) to "Deep Ripping" Activities in Wetlands

<sup>11</sup> The documents in Table 1 are available at the U.S. Government Printing Office, Code of Federal Regulations webpage: <http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=C.F.R.>

<sup>12</sup> The documents in Table 2 are available at the U.S. Army Corps of Engineers, Regulatory Program and Permits, Related Resources, Regulatory Guidance Letters webpage: <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/GuidanceLetters.aspx>

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07-02	Exemptions for Construction or Maintenance of Irrigation Ditches and Maintenance of Drainage Ditches Under Section 404 of Clean Water Act
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**Table 3: Memoranda<sup>13</sup>**

Memorandum for the Field: Clean Water Act Section 404 Regulatory Program and Agricultural Activities (1990)
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- c. Suction dredge mining activities for mineral recovery regulated under CWA section 402.

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- 2. Areas excluded from application procedures in sections IV.A and IV.B:

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- a. Discharges of dredged or fill material that occur within wetland areas that have been certified as prior converted cropland (PCC) by the Natural Resources Conservation Service. The PCC exclusion will no longer apply if: (1) the PCC changes to a non-agricultural use, or (2) the PCC is abandoned, meaning it is not planted to an agricultural commodity for more than five consecutive years and wetland characteristics return, and the land was not left idle in accordance with a USDA program.

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- i. For purposes of D.2.(a), agricultural commodity means any crop planted and produced by annual tilling of the soil, including tiling by one-trip planters, or sugarcane.<sup>14</sup>

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- ii. For purposes of D.2.(a), agricultural use means open land planted to an agricultural crop, used for the production of (1) food or fiber, (2) used for haying or grazing, (3) left idle per a USDA program, or (4) diverted from crop production to an approved cultural practice by NRCS that prevents erosion or other degradation.<sup>15</sup>

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- b. Discharges of dredged or fill material that are associated with routine maintenance of storm water facilities regulated under another Water Board Order, such as sedimentation/storm water detention basins.

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For activities associated with (1) an appropriation of water subject to Part 2 (commencing with section 1200) of Division 2 of the Water Code, (2) a hydroelectric facility where the proposed activity requires a Federal Energy Regulatory Commission (FERC) license or amendment to a FERC license, or (3) any other diversion of water for beneficial use, the Division of Water Rights will inform the applicant whether the application procedures in sections IV.A and IV.B will apply to the application.

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<sup>13</sup> These documents are available at the U.S. Army Corps of Engineers Regulatory Program and Permits, Related Resources, Memoranda of Understanding/Agreement webpage: <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/MOUMOAs.aspx>

<sup>14</sup> Joint Guidance from the Natural Resources Conservation Service and the Army Corps of Engineers Concerning Wetland Determinations for the Clean Water Act and the Food Security Act of 1985, February 25, 2005.

<sup>15</sup> Joint Guidance from the Natural Resources Conservation Service and the Army Corps of Engineers Concerning Wetland Determinations for the Clean Water Act and the Food Security Act of 1985, February 25, 2005



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519 **V. Definitions**

520 The following definitions apply to these Procedures, including the State Supplemental Dredge or  
521 Fill Guidelines. Unless otherwise indicated, any term that is not defined in these Procedures  
522 shall have the same meaning as defined in Water Code section 13050, and title 23, section  
523 3831 of the California Code of Regulations.

524 **Abundance** means an estimate of the amount of aquatic resources by type in a watershed  
525 area, and what types of aquatic resources are most and least prevalent.

526 **Alternatives Analysis** is the process of analyzing project alternatives, including the proposed  
527 project, to determine the alternative that is both practicable and the least environmentally  
528 damaging.

529 **Application** means a written request, including a report of waste discharge or request for water  
530 quality certification, for authorization of any activity that may result in the discharge of dredged  
531 or fill material and is subject to these Procedures.

532 **Multi-benefit Constructed Facilities** means artificial, man-made, or improved facilities that are  
533 operated to provide water supply/quantity, water storage, water conveyance, water quality  
534 treatment, and/or storm water, runoff or flood control functions, while also providing other  
535 environmental benefits, such as: groundwater recharge; natural beds, banks, soils, or  
536 substrates; wetland, riparian, or other habitat and vegetation, including, without limitation,  
537 naturalized surface water, runoff, or storm water quality treatment facilities or structural best  
538 management practices; naturalized surface water, runoff, storm water, or flood management  
539 swales, conveyance channels, or basins; naturalized percolation ponds and percolation  
540 channels; bio-filtration and bio-retention basins, ponds, and wetlands; and naturalized  
541 groundwater and surface water storage facilities.

542 **Wetland Delineation** means the application of a technical and procedural method to identify the  
543 boundary of a wetland area within a specified study site by identifying the presence or absence  
544 of wetland indicators at multiple points at the site and by establishing boundaries that group  
545 together sets of points that share the same status as wetland versus non-wetland.

546 **Discharge of Dredged Material** means addition of dredged material, material that is excavated  
547 or dredged from waters of the state, including redeposit of dredged material other than  
548 incidental fallback within, to the waters of state.

549 **Diversity** means the relative proportion of aquatic resource types, classification, connectivity,  
550 and spatial distribution in a watershed area.

551 **Discharge of Fill Material** means the addition of fill material where the material has the effect  
552 of replacing any portion of a water of the state with dry land or changing the bottom elevation of  
553 any portion of a water of the state.

554 **Ecological Restoration and Enhancement Project** means the project is voluntarily  
555 undertaken for the purpose of assisting or controlling the recovery of an aquatic ecosystem that  
556 has been degraded, damaged or destroyed to restore some measure of its natural condition and  
557 to enhance the beneficial uses, including potential beneficial uses of water. Such projects are  
558 undertaken: 1) in accordance with the terms and conditions of a binding stream or wetland  
559 enhancement or restoration agreement, or a wetland establishment agreement, between the

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560 landowner and the U.S. Fish and Wildlife Service, Natural Resources Conservation Service,  
561 Farm Service Agency, National Marine Fisheries Service, National Oceanic and Atmospheric  
562 Administration, U.S. Forest Service, U.S. Bureau of Land Management, California Department  
563 of Fish and Wildlife, California Wildlife Conservation Board, California Coastal Conservancy, or  
564 other federal or state resource agency or non-governmental conservation organization; or 2) by  
565 a state or federal agency. These projects do not include the conversion of a stream or natural  
566 wetland to uplands or stream channelization. It is recognized that ecological restoration and  
567 enhancement projects may require filling gullied stream channels and similar rehabilitative  
568 activities to re-establish stream and meadow hydrology. Changes in wetland plant communities  
569 that occur when wetland hydrology is more fully restored during rehabilitation activities are not  
570 considered a conversion to another aquatic habitat type. These projects also do not include  
571 actions required under a Water Board order (e.g., WDRs, waivers of WDRs, or water quality  
572 certification) for mitigation, actions to service required mitigation, or actions undertaken for the  
573 primary purpose of land development.

574 **Environmental Document** means a document prepared for compliance with the California  
575 Environmental Quality Act or the National Environmental Policy Act.

576 **Hydrophyte** means any macrophyte that grows in water or on a substrate that is at least  
577 periodically deficient in oxygen as a result of excessive water content; plants typically found in  
578 wet habitats.

579 **LEDPA** means the least environmentally damaging practicable alternative. The determination  
580 of practicable alternatives shall be consistent with the State Supplemental Guidelines, section  
581 230.10(a).

582 **Normal Circumstances** is the soil and hydrologic conditions that are normally present, without  
583 regard to whether the vegetation has been removed. The determination of whether normal  
584 circumstances exist in a disturbed area involves an evaluation of the extent and relative  
585 permanence of the physical alteration of wetlands hydrology and hydrophytic vegetation and  
586 consideration of the purpose and cause of the physical alterations to hydrology and vegetation.

587 **Order** means Waste Discharge Requirements, waivers of Waste Discharge Requirements, or  
588 water quality certification.

589 **Permitting Authority** means the entity or person issuing the Order (i.e., the applicable Water  
590 Board, Executive Director or Executive Officer, or his or her designee).

591 **Project Evaluation Area** means an area that includes the project impact site, and/or the  
592 compensatory mitigation site, and is sufficiently large to evaluate the effects of the project  
593 and/or the compensatory mitigation on the abundance, diversity, and condition of aquatic  
594 resources in an ecologically meaningful unit of the watershed. The size and location of the  
595 ecologically meaningful unit shall be based on a reasonable rationale.

596 **Water Boards** mean any of the nine Regional Water Quality Control Boards, the State Water  
597 Resources Control Board, or all of them collectively.

598 **Watershed** means a land area that drains to a common waterway, such as a stream, lake,  
599 estuary, wetland, or ultimately the ocean.

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600 **Watershed Approach** means an analytical process for evaluating the environmental effects of  
601 a proposed project and making decisions that support the sustainability or improvement of  
602 aquatic resources in a watershed. The watershed approach recognizes that the abundance,  
603 diversity, and condition of aquatic resources in a watershed support beneficial uses. Diversity of  
604 aquatic resources includes both the types of aquatic resources and the locations of those  
605 aquatic resources in a watershed. Consideration is also given to understanding historic and  
606 potential aquatic resource conditions, past and projected aquatic resource impacts in the  
607 watershed, and terrestrial connections between aquatic resources. The watershed approach  
608 can be used to evaluate avoidance and minimization of direct, indirect, secondary, and  
609 cumulative project impacts. It also can be used in determining compensatory mitigation  
610 requirements.

611 **Watershed Plan** means a document developed in consultation with relevant stakeholders, for  
612 the specific goal of aquatic resource restoration, establishment, enhancement, and preservation  
613 within a watershed. A watershed plan addresses aquatic resource conditions in the watershed,  
614 multiple stakeholder interests, and land uses. Watershed plans should include information  
615 about implementing the watershed plan. Watershed plans may also identify priority sites for  
616 aquatic resource restoration and protection. Examples of watershed plans include special area  
617 management plans, advance identification programs, and wetland management plans. The  
618 permitting authority may approve the use of HCPs and NCCPs as watershed plans.

619 **Watershed Profile** means a compilation of data or information on the abundance, diversity, and  
620 condition of aquatic resources in a project evaluation area. The watershed profile shall include  
621 a map and a report characterizing the location, abundance and diversity of aquatic resources in  
622 the project evaluation area, assessing the condition of aquatic resources in the project  
623 evaluation area, and describing the environmental stress factors affecting that condition.

624 The watershed profile shall include information sufficient to evaluate direct, secondary, and  
625 cumulative impacts of project and factors that may favor or hinder the success of compensatory  
626 mitigation projects, and help define watershed goals. It may include such things as current  
627 trends in habitat loss or conservation, cumulative impacts of past development activities, current  
628 development trends, the presence and need of sensitive species, and chronic environmental  
629 problems or site conditions such as flooding or poor water quality.

630 The scope and detail of the watershed profile shall be commensurate with the magnitude of  
631 impact associated with the proposed project. Information sources include online searches,  
632 maps, watershed plans, and possibly some fieldwork if necessary. In some cases, field data  
633 may need to be collected in the project evaluation area to confirm the reported condition. Some  
634 or all of the information may be obtained from a watershed plan. Watershed profiles for  
635 subsequent projects in a watershed can be used to track the cumulative effectiveness of the  
636 permitting authority's decisions.  
637

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**638 Appendix A: State Supplemental Dredge or Fill Guidelines**

639 It is the intent of the Water Boards to be consistent with the EPA's 404(b)(1) Guidelines where  
640 feasible. Due to jurisdictional and procedural differences, some modifications to the EPA's  
641 Guidelines were necessary. Generally, these changes or deletions were made to reduce  
642 redundancy (especially where sufficiently described elsewhere in these Procedures) and to  
643 account for other state requirements. Note that the numbering scheme of the EPA's 404(b)(1)  
644 Guidelines has been retained in these State Supplemental Dredge or Fill Guidelines for the  
645 benefit of practitioners who are familiar with the federal Guidelines. The State Supplemental  
646 Dredge or Fill Guidelines describe how the Water Boards will implement the 404(b)(1)  
647 Guidelines under these Procedures. The definitions contained herein apply to these  
648 Procedures, including the State Supplemental Dredge or Fill Guidelines.

**649 Subpart A – General<sup>16</sup>**

**650 § 230.3 Definitions.**

651 For purposes of these Procedures, the following terms shall have the meanings indicated:

652 (c) The terms aquatic environment and aquatic ecosystem mean waters of the state,  
653 including wetlands, that serve as habitat for interrelated and interacting communities and  
654 populations of plants and animals.

655 (h) The term discharge point means the point within the disposal site at which the  
656 dredged or fill material is released.

657 (i) The term disposal site means that portion of the "waters of the state" where the  
658 discharge of dredged or fill material is permitted and involves a bottom surface area and  
659 any overlying volume of water. In the case of wetlands or ephemeral streams on which  
660 surface water is not present, the disposal site consists of the wetland or ephemeral  
661 stream surface area.

662 (k) The term extraction site means the place from which the dredged or fill material  
663 proposed for discharge is to be removed.

664 (n) The term permitting authority means as defined above in the main text of these  
665 Procedures.

666 (q) The term practicable means available and capable of being done after taking into  
667 consideration cost, existing technology, and logistics in light of overall project purposes.

668 (q1) Special aquatic sites are geographic areas, large or small, possessing special  
669 ecological characteristics of productivity, habitat, wildlife protection, or other important  
670 and easily disrupted ecological values. These areas are generally recognized as  
671 significantly influencing or positively contributing to the general overall environmental  
672 health or vitality of the entire ecosystem of a region. (See § 230.10 (a)(3))

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<sup>16</sup> Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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673 § 230.6 Adaptability<sup>17</sup>

674 (a) The manner in which these Guidelines are used depends on the physical, biological, and  
675 chemical nature of the proposed extraction site, the material to be discharged, and the  
676 candidate disposal site, including any other important components of the ecosystem being  
677 evaluated. Documentation to demonstrate knowledge about the extraction site, materials to  
678 be extracted, and the candidate disposal site is an essential component of guideline  
679 application. These Guidelines allow evaluation and documentation for a variety of activities,  
680 ranging from those with large, complex impacts on the aquatic environment to those for  
681 which the impact is likely to be innocuous. It is unlikely that the Guidelines will apply in their  
682 entirety to any one activity, no matter how complex. It is anticipated that substantial  
683 numbers of applications will be for minor, routine activities that have little, if any, potential for  
684 significant degradation of the aquatic environment. It generally is not intended or expected  
685 that extensive testing, evaluation or analysis will be needed to make findings of compliance  
686 in such routine cases. (b) The Guidelines user, including the agency or agencies responsible  
687 for implementing the Guidelines, must recognize the different levels of effort that should be  
688 associated with varying degrees of impact and require or prepare commensurate  
689 documentation. The level of documentation should reflect the significance and complexity of  
690 the discharge activity.

691 (c) An essential part of the evaluation process involves making determinations as to the  
692 relevance of any portion(s) of the Guidelines and conducting further evaluation only as  
693 needed. However, where portions of the Guidelines review procedure are “short form”  
694 evaluations, there still must be sufficient information (including consideration of both  
695 individual and cumulative impacts) to support the decision of whether to specify the site for  
696 disposal of dredged or fill material and to support the decision to curtail or abbreviate the  
697 evaluation process. The presumption against the discharge in [§ 230.1](#) applies to this  
698 decision-making.

699 **Subpart B – Compliance with Guidelines<sup>18</sup>**

700 § 230.10 Restrictions on Discharge

701 (a) No discharge of dredged or fill material shall be permitted if there is a practicable  
702 alternative to the proposed discharge which would have less adverse impact on the aquatic  
703 ecosystem, so long as the alternative does not have other significant adverse environmental  
704 consequences.

705 (1) For the purpose of this requirement, practicable alternatives include, but are not  
706 limited to:

707 (i) Activities which do not involve a discharge of dredged or fill material to waters of  
708 the state or ocean waters;

709 (ii) Discharges of dredged or fill material at other locations in waters of the state or  
710 ocean waters;

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<sup>17</sup> Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

<sup>18</sup> Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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711 (2) An alternative is practicable if it is available and capable of being done after taking  
712 into consideration cost, existing technology, and logistics in light of overall project  
713 purposes. If it is otherwise a practicable alternative, an area not presently owned by the  
714 applicant which could reasonably be obtained, utilized, expanded or managed in order to  
715 fulfill the basic purpose of the proposed activity may be considered.

716 (3) Where activity associated with a discharge which is proposed for a special aquatic  
717 site (as defined in subpart E) does not require access or proximity to or siting within the  
718 special aquatic site in question to fulfill its basic purpose (i.e., is not "water dependent"),  
719 practicable alternatives that do not involve special aquatic sites are presumed to be  
720 available, unless clearly demonstrated otherwise. In addition, where a discharge is  
721 proposed for a special aquatic site, all practicable alternatives to the proposed discharge  
722 which do not involve a discharge into a special aquatic site are presumed to have less  
723 adverse impact on the aquatic ecosystem, unless clearly demonstrated otherwise.

724 (b) No discharge of dredged or fill material shall be permitted if it:

725 (1) Causes or contributes, after consideration of disposal site dilution and dispersion, to  
726 violations of any applicable State water quality standard;

727 (2) Violates any applicable toxic effluent standard or prohibition under section 307 of the  
728 Clean Water Act;

729 (c) No discharge of dredged or fill material shall be permitted which will cause or contribute  
730 to significant degradation of the waters of the state. Under these Guidelines, effects  
731 contributing to significant degradation considered individually or collectively, include:

732 (1) Significantly adverse effects of the discharge of pollutants on human health or  
733 welfare, including but not limited to effects on municipal water supplies, plankton, fish,  
734 shellfish, wildlife, and special aquatic sites;

735 (2) Significantly adverse effects of the discharge of pollutants on life stages of aquatic  
736 life and other wildlife dependent on aquatic ecosystems, including the transfer,  
737 concentration, and spread of pollutants or their byproducts outside of the disposal site  
738 through biological, physical, and chemical processes.

739 (3) Significantly adverse effects of the discharge of pollutants on aquatic ecosystem  
740 diversity, productivity, and stability. Such effects may include, but are not limited to, loss  
741 of fish and wildlife habitat or loss of the capacity of a wetland to assimilate nutrients,  
742 purify water, or reduce wave energy; or

743 (4) Significantly adverse effects of the discharge of pollutants on recreational, aesthetic,  
744 and economic values.

745 (d) No discharge of dredged or fill material shall be permitted unless appropriate and  
746 practicable steps have been taken which will minimize potential adverse impacts of the  
747 discharge on the aquatic ecosystem. Subpart H identifies such possible steps.

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**748 Subpart E – Potential Impacts on Special Aquatic Sites**

749 § 230.40 Sanctuaries and refuges<sup>19</sup>

750 (a) Sanctuaries and refuges consist of areas designated under State and Federal laws or  
751 local ordinances to be managed principally for the preservation and use of fish and wildlife  
752 resources.

753 § 230.41 Wetlands.

754 (a)(1) Wetlands are as defined above in the main text of these Procedures.

755 § 230.42 Mud Flats.

756 (a) Mud flats are broad flat areas along the sea coast and in coastal rivers to the head of  
757 tidal influence and inland lakes, ponds, and riverine systems. When mud flats are  
758 inundated, wind and wave action may resuspend bottom sediments. Coastal mud flats are  
759 exposed at extremely low tides and inundated at high tides with the water table at or near  
760 the surface of the substrate. The substrate of mud flats contains organic material and  
761 particles smaller in size than sand. They are either unvegetated or vegetated only by algal  
762 mats.

763 § 230.43 Vegetated shallows.

764 (a) Vegetated shallows are permanently inundated areas that under normal circumstances  
765 support communities of rooted aquatic vegetation, such as turtle grass and eel grass in  
766 estuarine or marine systems as well as a number of freshwater species in rivers and lakes.

767 § 230.45 Riffle and Pool Complexes.

768 (a) Steep gradient sections of streams are sometimes characterized by riffle and pool  
769 complexes. Such stream sections are recognizable by their hydraulic characteristics. The  
770 rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent  
771 surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated  
772 with riffles. Pools are characterized by a slower stream velocity, a streaming flow, a smooth  
773 surface, and a finer substrate. Riffle and pool complexes are particularly valuable habitat for  
774 fish and wildlife.

**775 Subpart H – Actions to Minimize Adverse Effects**

776 Note: There are many actions which can be undertaken in response to 230.10(d) to  
777 minimize the adverse effects of discharges of dredged or fill material. Some of these,  
778 grouped by type of activity, are listed in this subpart. Additional criteria for compensation  
779 measures are provided in subpart J of these procedures.

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<sup>19</sup> Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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780 § 230.70 Actions concerning the location of the discharge.

781 The effects of the discharge can be minimized by the choice of the disposal site. Some of  
782 the ways to accomplish this are by:

783 (a) Locating and confining the discharge to minimize smothering of organisms;

784 (b) Designing the discharge to avoid a disruption of periodic water inundation patterns;

785 (c) Selecting a disposal site that has been used previously for dredged material  
786 discharge;

787 (d) Selecting a disposal site at which the substrate is composed of material similar to  
788 that being discharged, such as discharging sand on sand or mud on mud;

789 (e) Selecting a disposal site, the discharge point, and the method of discharge to  
790 minimize the extent of any plume;

791 (f) Designing the discharge of dredged or fill material to minimize or prevent the creation  
792 of standing bodies of water in areas of normally fluctuating water levels, and minimize or  
793 prevent the drainage of areas subject to such fluctuations.

794 § 230.71 Actions concerning the material to be discharged<sup>20</sup>

795 The effects of a discharge can be minimized by treatment of, or limitations on the material  
796 itself, such as:

797 (a) Disposal of dredged material in such a manner that physiochemical conditions are  
798 maintained and the potency and availability of pollutants are reduced.

799 (b) Limiting the solid, liquid, and gaseous components of material to be discharged at a  
800 particular site;

801 (c) Adding treatment substances to the discharge material;

802 (d) Utilizing chemical flocculants to enhance the deposition of suspended particulates in  
803 diked disposal areas.

804 § 230.72 Actions controlling the material after discharge.

805 The effects of the dredged or fill material after discharge may be controlled by:

806 (a) Selecting discharge methods and disposal sites where the potential for erosion,  
807 slumping or leaching of materials into the surrounding aquatic ecosystem will be  
808 reduced. These sites or methods include, but are not limited to:

809 (1) Using containment levees, sediment basins, and cover crops to reduce erosions:

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<sup>20</sup> Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.



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- 810 (2) Using lined containment areas to reduce leaching where leaching of chemical  
811 constituents from the discharged material is expected to be a problem;
- 812 (b) Capping in-place contaminated material with clean material or selectively discharging  
813 the most contaminated material first to be capped with the remaining material;
- 814 (c) Maintaining and containing discharged material properly to prevent point and  
815 nonpoint sources of pollution;
- 816 (d) Timing the discharge to minimize impact, for instance during periods of unusual high  
817 water flows, wind, wave, and tidal actions.

818 § 230.73 Actions affecting the method of dispersion.

819 The effects of a discharge can be minimized by the manner in which it is dispersed, such as:

- 820 (a) Where environmentally desirable, distributing the dredged material widely in a thin  
821 layer at the disposal site maintain natural substrate contours and elevation;
- 822 (b) Orienting a dredged or fill material mound to minimize undesirable obstruction to the  
823 water current or circulation pattern, and utilizing natural bottom contours to minimize the  
824 size of the mound;
- 825 (c) Using silt screens or other appropriate methods to confine suspended  
826 particulate/turbidity to a small area where settling or removal can occur;
- 827 (d) Making use of currents and circulation patterns to mix, disperse and dilute the  
828 discharge;
- 829 (e) Minimizing water column turbidity by using a submerged diffuser system. A similar  
830 effect can be accomplished by submerging pipeline discharges or otherwise releasing  
831 materials near the bottom;
- 832 (f) Selecting sites or managing discharges to confine and minimize the release of  
833 suspended particulates to give decreased turbidity levels and to maintain light  
834 penetration for organisms;
- 835 (g) Setting limitations on the amount of material to be discharged per unit of time or  
836 volume of receiving water.

837 § 230.74 Actions related to technology.

838 Discharge technology should be adapted to the needs of each site. In determining whether  
839 the discharge operation sufficiently minimizes adverse environmental impacts, the applicant  
840 should consider:

- 841 (a) Using appropriate equipment or machinery, including protective devices, and the use  
842 of such equipment or machinery in activities related to the discharge of dredged or fill  
843 material;
- 844 (b) Employing appropriate maintenance and operation on equipment or machinery,  
845 including adequate training, staffing, and working procedures;

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846 (c) Using machinery and techniques that are especially designed to reduce damage to  
847 wetlands. This may include machines equipped with devices that scatter rather than  
848 mound excavated materials, machines with specially designed wheels or tracks, and the  
849 use of mats under heavy machines to reduce wetland surface compaction and rutting;

850 (d) Designing access roads and channels spanning structures using culverts, open  
851 channels, and diversions that will pass both low and high water flows, accommodate  
852 fluctuating water levels, and maintain circulation and faunal movement;

853 (e) Employing appropriate machinery and methods of transport of the material for  
854 discharge.

855 § 230.75 Actions affecting plant and animal populations.<sup>21</sup>

856 Minimization of adverse effects on populations of plant and animals can be achieved by:

857 (a) Avoiding changes in water current and circulation patterns which would interfere with  
858 the movement of animals;

859 (b) Selecting sites or managing discharges to prevent or avoid creating habitat  
860 conducive to the development of undesirable predators or species which have a  
861 competitive edge ecologically over indigenous plants or animals;

862 (c) Avoiding sites having unique habitat or other value, including habitat of threatened or  
863 endangered species;

864 (d) Using planning and construction practices to institute habitat development and  
865 restoration to produce a new or modified environmental state of higher ecological value  
866 by displacement of some or all of the existing environmental characteristics. Habitat  
867 development and restoration techniques can be used to minimize adverse impacts and  
868 to compensate for destroyed habitat. Additional criteria for compensation measures are  
869 provided in subpart J of this part. Use techniques that have been demonstrated to be  
870 effective in circumstances similar to those under consideration wherever possible.  
871 Where proposed development and restoration techniques have not yet advanced to the  
872 pilot demonstration stage, initiate their use on a small scale to allow corrective action if  
873 unanticipated adverse impacts occur;

874 (e) Timing discharge to avoid spawning or migration seasons and other biologically  
875 critical time periods;

876 (f) Avoiding the destruction of remnant natural sites within areas already affected by  
877 development.

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<sup>21</sup> Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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878 § 230.76 Actions affecting human use.

879 Minimization of adverse effects on human use potential may be achieved by:

880 (a) Selecting discharge sites and following discharge procedures to prevent or minimize  
881 any potential damage to the aesthetically pleasing features of the aquatic site (e.g.  
882 viewsapes), particularly with respect to water quality;

883 (b) Selecting disposal sites which are not valuable as natural aquatic areas;

884 (c) Timing the discharge to avoid the seasons or periods when human recreational  
885 activity associated with the aquatic site is most important;

886 (d) Following discharge procedures which avoid or minimize the disturbance of aesthetic  
887 features on an aquatic site or ecosystem;

888 (e) Selecting sites that will not be detrimental or increase incompatible human activity, or  
889 require the need for frequent dredge or fill maintenance activity in remote fish and  
890 wildlife areas;

891 (f) Locating the disposal site outside of the vicinity of a public water supply intake.

892 § 230.77 Other actions.

893 (a) In the case of fills, controlling runoff and other discharges from activities to be conducted  
894 on the fill;

895 (b) In the case of dams, designing water releases to accommodate the needs of fish and  
896 wildlife;

897 (c) In dredging projects funded by Federal agencies other than the Corps of Engineers,  
898 maintain desired water quality of the return discharge through agreement with the Federal  
899 funding authority on scientifically defensible pollutant concentration levels in addition to any  
900 applicable water quality standards;

901 (d) When a significant ecological change in the aquatic environment is proposed by the  
902 discharge of dredged or fill material, the permitting authority should consider the ecosystem  
903 that will be lost as well as the environmental benefits of the new system.

904 **Subpart J – Compensatory Mitigation for Losses of Aquatic Resources<sup>22</sup>**

905 § 230.91 Purpose and general considerations.

906 (a) Purpose.

907 (1) The purpose of this subpart is to establish standards and criteria for the use of all  
908 types of compensatory mitigation, including on-site and off-site permittee-responsible

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<sup>22</sup> Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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909 mitigation, mitigation banks, and in-lieu fee mitigation to offset unavoidable impacts to  
910 waters of the state authorized through the issuance of Orders.

911 (d) Accounting for regional variations. Where appropriate, the permitting authority shall  
912 account for regional characteristics of aquatic resource types, functions and services when  
913 determining performance standards and monitoring requirements for compensatory  
914 mitigation projects.

915 § 230.92 Definitions.<sup>23</sup>

916 For the purposes of this subpart, the following terms are defined:

917 Adaptive management means the development of a management strategy that anticipates  
918 likely challenges associated with compensatory mitigation projects and provides for the  
919 implementation of actions to address those challenges, as well as unforeseen changes to  
920 those projects. It requires consideration of the risk, uncertainty, and dynamic nature of  
921 compensatory mitigation projects and guides modification of those projects to optimize  
922 performance. It includes the selection of appropriate measures that will ensure that the  
923 aquatic resource functions are provided and involves analysis of monitoring results to  
924 identify potential problems of a compensatory mitigation project and the identification and  
925 implementation of measures to rectify those problems.

926 Buffer means an upland, wetland, and/or riparian area that protects and/or enhances  
927 aquatic resource functions associated with waters of the state from disturbances associated  
928 with adjacent land uses.

929 Compensatory mitigation means the restoration (re-establishment or rehabilitation),  
930 establishment (creation), enhancement, and/or in certain circumstances preservation of  
931 aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain  
932 after all appropriate and practicable avoidance and minimization has been achieved.

933 Compensatory mitigation project means compensatory mitigation implemented by the  
934 permittee as a requirement of an Order (i.e., permittee-responsible mitigation), or by a  
935 mitigation bank or an in-lieu fee program.

936 Condition means the relative ability of an aquatic resource to support and maintain a  
937 community of organisms having a species composition, diversity, and functional  
938 organization comparable to reference aquatic resources in the region.

939 Credit means a unit of measure (e.g., a functional or areal measure or other suitable metric)  
940 representing the accrual or attainment of aquatic functions at a compensatory mitigation  
941 site. The measure of aquatic functions is based on the resources restored, established,  
942 enhanced, or preserved.

943 Days means calendar days.

944 Debit means a unit of measure (e.g., a functional or areal measure or other suitable metric)  
945 representing the loss of aquatic functions at an impact or project site. The measure of  
946 aquatic functions is based on the resources impacted by the authorized activity.

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947 Enhancement means the manipulation of the physical, chemical, or biological characteristics  
948 of an aquatic resource to heighten, intensify, or improve a specific aquatic resource  
949 function(s). Enhancement results in the gain of selected aquatic resource function(s), but  
950 may also lead to a decline in other aquatic resource function(s). Enhancement does not  
951 result in a gain in aquatic resource area.<sup>24</sup>

952 Establishment (creation) means the manipulation of the physical, chemical, or biological  
953 characteristics present to develop an aquatic resource that did not previously exist at an  
954 upland site. Establishment results in a gain in aquatic resource area and functions.

955 Functional capacity means the degree to which an area of aquatic resource performs a  
956 specific function.

957 Functions means the physical, chemical, and biological processes that occur in ecosystems.

958 Impact means adverse effect.

959 In-kind means a resource of a similar structural and functional type to the impacted  
960 resource.

961 In-lieu fee program means a program involving the restoration, establishment,  
962 enhancement, and/or preservation of aquatic resources through funds paid to a  
963 governmental or non-profit natural resources management entity to satisfy compensatory  
964 mitigation requirements for Orders. Similar to a mitigation bank, an in-lieu fee program sells  
965 compensatory mitigation credits to permittees whose obligation to provide compensatory  
966 mitigation is then transferred to the in-lieu program sponsor. However, the rules governing  
967 the operation and use of in-lieu fee programs are somewhat different from the rules  
968 governing operation and use of mitigation banks. The operation and use of an in-lieu fee  
969 program are governed by an in-lieu fee program instrument.

970 In-lieu fee program instrument means the legal document for the establishment, operation,  
971 and use of an in-lieu fee program.

972 Instrument means mitigation banking instrument or in-lieu fee program instrument.

973 Mitigation bank means a site, or suite of sites, where resources (e.g., wetlands, streams,  
974 riparian areas) are restored, established, enhanced, and/or preserved for the purpose of  
975 providing compensatory mitigation for impacts authorized by Orders. In general, a mitigation  
976 bank sells compensatory mitigation credits to permittees whose obligation to provide  
977 compensatory mitigation is then transferred to the mitigation bank sponsor. The operation  
978 and use of a mitigation bank are governed by a mitigation banking instrument.

979 Mitigation banking instrument means the legal document for the establishment, operation,  
980 and use of an in-lieu fee program.

981 Off-site means an area that is neither located on the same parcel of land as the impact site,  
982 nor on a parcel of land contiguous to the parcel containing the impact site.

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- 983 On-site means an area located on the same parcel of land as the impact site, or on a parcel  
984 of land contiguous to the impact site.
- 985 Out-of-kind means a resource of a different structural and functional type from the impacted  
986 resource.
- 987 Performance standards are observable or measurable physical (including hydrological),  
988 chemical and/or biological attributes that are used to determine if a compensatory mitigation  
989 project meets its objectives.<sup>25</sup>
- 990 Permittee-responsible mitigation means an aquatic resource restoration, establishment,  
991 enhancement, and/or preservation activity undertaken by the permittee (or an authorized  
992 agent or contractor) to provide compensatory mitigation for which the permittee retains full  
993 responsibility.
- 994 Preservation means the removal of a threat to, or preventing the decline of, aquatic  
995 resources by an action in or near those aquatic resources. This term includes activities  
996 commonly associated with the protection and maintenance of aquatic resources through the  
997 implementation of appropriate legal and physical mechanisms. Preservation does not result  
998 in a gain of aquatic resource area or functions.
- 999 Re-establishment means the manipulation of the physical, chemical, or biological  
1000 characteristics of a site with the goal of returning natural/historic functions to a former  
1001 aquatic resource. Re-establishment results in rebuilding a former aquatic resource and  
1002 results in a gain in aquatic resource area and functions.
- 1003 Reference aquatic resources are a set of aquatic resources that represent the full range of  
1004 variability exhibited by a regional class of aquatic resources as a result of natural processes  
1005 and anthropogenic disturbances.
- 1006 Rehabilitation means the manipulation of the physical, chemical, or biological characteristics  
1007 of a site with the goal of repairing natural/historic functions to a degraded aquatic resource.  
1008 Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in  
1009 aquatic resource area.
- 1010 Restoration means the manipulation of the physical, chemical, or biological characteristics of  
1011 a site with the goal of returning natural/historic functions to a former or degraded aquatic  
1012 resource. For the purpose of tracking net gains in aquatic resource area, restoration is  
1013 divided into two categories: reestablishment and rehabilitation.
- 1014 Riparian areas are lands adjacent to waters of the state. Riparian areas provide a variety of  
1015 ecological functions and services and help improve or maintain local water quality.
- 1016 Service area means the geographic area within which impacts can be mitigated at a specific  
1017 mitigation bank or an in-lieu fee program, as designated in its instrument.
- 1018 Services mean the benefits that human populations receive from functions that occur in  
1019 ecosystems.

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- 1020 Sponsor means any public or private entity responsible for establishing, and in most  
1021 circumstances, operating a mitigation bank or in-lieu fee program.
- 1022 Temporal loss is the time lag between the loss of aquatic resource functions caused by the  
1023 permitted impacts and the replacement of aquatic resource functions at the compensatory  
1024 mitigation site. Higher compensation ratios may be required to compensate for temporal  
1025 loss. When the compensatory mitigation project is initiated prior to, or concurrent with, the  
1026 permitted impacts, the permitting authority may determine that compensation for temporal  
1027 loss is not necessary, unless the resource has a long development time.
- 1028 Watershed means a land area that drains to a common waterway, such as a stream, lake,  
1029 estuary, wetland, or ultimately the ocean.<sup>26</sup>
- 1030 Watershed approach is defined above in the main text of these Procedures.
- 1031 Watershed plan is defined above in the main text of these Procedures.
- 1032 § 230.93 General compensatory mitigation requirements.
- 1033 (a) General Considerations.
- 1034 (1) The fundamental objective of compensatory mitigation is to offset environmental  
1035 losses resulting from unavoidable impacts to waters of the state authorized by Orders.  
1036 The permitting authority must determine the compensatory mitigation to be required in  
1037 an Order, based on what would be environmentally preferable. In making this  
1038 determination, the permitting authority must assess the likelihood for ecological success  
1039 and sustainability, and the location of the compensation site relative to the impact site  
1040 and their significance within the watershed, and the costs of the compensatory mitigation  
1041 project. In many cases, the environmentally preferable compensatory mitigation may be  
1042 provided through mitigation banks or in-lieu fee programs because they usually involve  
1043 consolidating compensatory mitigation projects where ecologically appropriate,  
1044 consolidating resources, providing financial planning and scientific expertise (which often  
1045 is not practical for permittee-responsible compensatory mitigation projects), reducing  
1046 temporal losses of functions, and reducing uncertainty over project success.  
1047 Compensatory mitigation requirements must be commensurate with the amount and  
1048 type of impact that is associated with a particular Order. Applicants are responsible for  
1049 proposing an appropriate compensatory mitigation option to offset unavoidable impacts.
- 1050 (2) Compensatory mitigation may be performed using methods or restoration,  
1051 enhancement, establishment, and in certain circumstances preservation. Restoration  
1052 should generally be the first option considered because the likelihood of success is  
1053 greater and the impacts to potentially ecologically important uplands are reduced  
1054 compared to establishment, and the potential gains in terms of aquatic resource  
1055 functions are greater, compared to enhancement and preservation.
- 1056 (3) Compensatory mitigation projects may be sited on public or private lands. Credits for  
1057 compensatory mitigation projects on public land must be based solely on aquatic  
1058 resource functions provided by the compensatory mitigation project, over and above

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1059 those provided by public programs already planned or in place. All compensatory  
1060 mitigation projects must comply with the standards in section IV of these Procedures, if  
1061 they are to be used to provide compensatory mitigation for activities authorized by  
1062 Orders, regardless of whether they are sited on public or private lands and whether the  
1063 sponsor is a governmental or private entity.

1064 (b) Type and location of compensatory mitigation.<sup>27</sup>

1065 (1) In general, the required compensatory mitigation should be located within the same  
1066 watershed as the impact site, and should be located where it is most likely to  
1067 successfully replace lost functions and services, taking into account such watershed  
1068 scale features as aquatic habitat diversity, habitat connectivity, relationships to  
1069 hydrologic sources (including the availability of water rights), trends in land use,  
1070 ecological benefits, and compatibility with adjacent land uses. When compensating for  
1071 impacts to marine resources, the location of the compensatory mitigation site should be  
1072 chosen to replace lost functions and services within the same marine ecological system  
1073 (e.g., reef complex, littoral drift cell). Compensation for impacts to aquatic resources in  
1074 coastal watersheds (watersheds that include a tidal water body) should also be located  
1075 in a coastal watershed where practicable. Compensatory mitigation projects should not  
1076 be located where they will increase risks to aviation by attracting wildlife to areas where  
1077 aircraft-wildlife strikes may occur (e.g., near airports).

1078 (2) Mitigation bank credits. When permitted impacts are located within the service area  
1079 of an approved mitigation bank, and the bank has the appropriate number and resource  
1080 type of credits available, the permittee's compensatory mitigation requirements may be  
1081 met by securing those credits from the sponsor. Since an approved instrument  
1082 (including an approved mitigation plan and appropriate real estate and financial  
1083 assurances) for a mitigation bank is required to be in place before its credits can begin to  
1084 be used to compensate for authorized impacts, use of a mitigation bank can help reduce  
1085 risk and uncertainty, as well as temporal loss of resource functions and services.  
1086 Mitigation bank credits are not released for debiting until specific milestones associated  
1087 with the mitigation bank site's protection and development are achieved, thus use of  
1088 mitigation bank credits can also help reduce risk that mitigation will not be fully  
1089 successful. Mitigation banks typically involve larger, more ecologically valuable parcels,  
1090 and more rigorous scientific and technical analysis, planning and implementation than  
1091 permittee-responsible mitigation. Also, development of a mitigation bank requires site  
1092 identification in advance, project-specific planning, and significant investment of financial  
1093 resources that is often not practicable for many in-lieu fee programs. For these reasons,  
1094 the permitting authority should give preference to the use of mitigation bank credits when  
1095 these considerations are applicable. However, these same considerations may also be  
1096 used to override this preference, where appropriate, as, for example, where an in-lieu  
1097 fee program has released credits available from a specific approved in-lieu fee project,  
1098 or a permittee-responsible project will restore an outstanding resource based on rigorous  
1099 scientific and technical analysis.

1100 (3) In-lieu fee program credits. Where permitted impacts are located within the service  
1101 area of an approved in-lieu fee program, and the sponsor has the appropriate number  
1102 and resource type of credits available, the permittee's compensatory mitigation

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1103 requirements may be met by securing those credits from the sponsor. Where permitted  
1104 impacts are not located in the service area of an approved mitigation bank, or the  
1105 approved mitigation bank does not have the appropriate number and resource type of  
1106 credits available to offset those impacts, in-lieu fee mitigation, if available, is generally  
1107 preferable to permittee-responsible mitigation. In-lieu fee projects typically involve  
1108 larger, more ecologically valuable parcels, and more rigorous scientific and technical  
1109 analysis, planning and implementation than permittee-responsible mitigation. They also  
1110 devote significant resources to identifying and addressing high-priority resource needs  
1111 on a watershed scale, as reflected in their compensation planning framework. For these  
1112 reasons, the permitting authority should give preference to in-lieu fee program credits  
1113 over permittee-responsible mitigation, where these considerations are applicable.  
1114 However, as with the preference for mitigation bank credits, these same considerations  
1115 may be used to override this preference where appropriate. Additionally, in cases where  
1116 permittee-responsible mitigation is likely to successfully meet performance standards  
1117 before advance credits secured from an in-lieu fee program are fulfilled, the permitting  
1118 authority should also give consideration to this factor in deciding between in-lieu fee  
1119 mitigation and permittee-responsible mitigation.

1120 (4) Permittee-responsible mitigation under a watershed approach. Where permitted  
1121 impacts are not in the service area of an approved mitigation bank or in-lieu fee program  
1122 that has the appropriate number and resource type of credits available, permittee-  
1123 responsible mitigation is the only option. Where practicable and likely to be successful  
1124 and sustainable, the resource type and location for the required permittee-responsible  
1125 compensatory mitigation should be determined using the principles of a watershed  
1126 approach as outlined in paragraph (c) of this section.

1127 (5) Permittee-responsible mitigation through on-site and in-kind mitigation. In cases  
1128 where a watershed approach is not practicable, the permitting authority should consider  
1129 opportunities to offset anticipated aquatic resource impacts by requiring on-site and in-  
1130 kind compensatory mitigation. The permitting authority must also consider the  
1131 practicability of on-site compensatory mitigation and its compatibility with the proposed  
1132 project.

1133 (6) Permittee-responsible mitigation through off-site and/or out-of-kind mitigation. If,  
1134 after considering opportunities for on-site, in-kind compensatory mitigation as provided in  
1135 paragraph (b)(5) of this section, the permitting authority determines that these  
1136 compensatory mitigation opportunities are not practicable, are unlikely to compensate for  
1137 the permitted impacts, or will be incompatible with the proposed project, and an  
1138 alternative, practicable off-site and/or out-of-kind mitigation opportunity is identified that  
1139 has a greater likelihood of offsetting the permitted impacts or is environmentally  
1140 preferable to on-site or in-kind mitigation, the permitting authority should require that this  
1141 alternative compensatory mitigation be provided.

1142 (c) Watershed approach to compensatory mitigation.<sup>28</sup>

1143 (1) The permitting authority must use a watershed approach to establish compensatory  
1144 mitigation requirements in Orders as described in the main text of the Procedures.  
1145 Where a watershed plan is available, the permitting authority will determine whether the

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1146 plan meets the definition of watershed plan in the Procedures and therefore is  
1147 appropriate for use in the watershed approach for compensatory mitigation. In cases  
1148 where the permitting authority determines that an appropriate watershed plan is  
1149 available, the watershed approach should be based on that plan. Where no such plan is  
1150 available, the watershed approach should be based on information provided by the  
1151 project sponsor or available from other sources. The ultimate goal of a watershed  
1152 approach is to maintain and improve the abundance, diversity, and condition of aquatic  
1153 resources within watersheds through strategic selection of compensatory mitigation  
1154 sites.

1155 (2) Considerations.

1156 (i) A watershed approach to compensatory mitigation considers the importance of  
1157 condition, landscape position and resource type of compensatory mitigation projects  
1158 for the sustainability of aquatic resource functions within the watershed. Such an  
1159 approach considers how the condition, types, and locations of compensatory  
1160 mitigation projects will provide the desired aquatic resource functions, and will  
1161 continue to function over time in a changing landscape. It also considers the habitat  
1162 requirements of important species, habitat loss or conversion trends, sources of  
1163 watershed impairment, and current development trends, as well as the requirements  
1164 of other regulatory and non-regulatory programs that affect the watershed, such as  
1165 storm water management or habitat conservation programs. It includes the  
1166 protection and maintenance of terrestrial resources, such as non-wetland riparian  
1167 areas and uplands, when those resources contribute to or improve the overall  
1168 ecological functioning of aquatic resources in the watershed. Compensatory  
1169 mitigation requirements determined through the watershed approach should not  
1170 focus exclusively on specific functions (e.g., water quality or habitat for certain  
1171 species), but should provide, where practicable, the suite of functions typically  
1172 provided by the affected aquatic resource.

1173 (ii) Locational factors (e.g., hydrology, surrounding land use) are important to the  
1174 success of compensatory mitigation for impacted habitat functions and may lead to  
1175 siting of such mitigation away from the project area. However, consideration should  
1176 also be given to functions and services (e.g., water quality, flood control, shoreline  
1177 protection) that will likely need to be addressed at or near the areas impacted by the  
1178 permitted impacts.<sup>29</sup>

1179 (iii) A watershed approach may include on-site compensatory mitigation, off-site  
1180 compensatory mitigation (including mitigation banks or in-lieu fee programs), or a  
1181 combination of on-site and off-site compensatory mitigation.

1182 (iv) A watershed approach to compensatory mitigation should include, to the extent  
1183 practicable, inventories of historic and existing aquatic resources, including  
1184 identification of degraded aquatic resources, and identification of immediate and  
1185 long-term aquatic resource needs within watersheds that can be met through  
1186 permittee-responsible mitigation projects, mitigation banks, or in-lieu fee programs.  
1187 Planning efforts should identify and prioritize aquatic resource restoration,  
1188 establishment, and enhancement activities, and preservation of existing aquatic

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1189 resources that are important for maintaining or improving ecological functions of the  
1190 watershed. The identification and prioritization of resource needs should be as  
1191 specific as possible, to enhance the usefulness of the approach in determining  
1192 compensatory mitigation requirements.

1193 (v) A watershed approach is not appropriate in areas where watershed boundaries  
1194 do not exist, such as marine areas. In such cases, an appropriate spatial scale  
1195 should be used to replace lost functions and services within the same ecological  
1196 system (e.g., reef complex, littoral drift cell).

1197 (3) Information Needs.

1198 (i) In the absence of a watershed plan determined by the permitting authority under  
1199 paragraph (c)(1) of this section to be appropriate for use in the watershed approach,  
1200 the permitting authority will use a watershed approach based on analysis of  
1201 information regarding watershed conditions (as identified in the watershed profile)  
1202 and needs, including potential sites for aquatic resource restoration activities and  
1203 priorities for aquatic resource restoration and preservation. Such information  
1204 includes: Current trends in habitat loss or conversion; cumulative impacts of past  
1205 development activities, current development trends, the presence and needs of  
1206 sensitive species; site conditions that favor or hinder the success of compensatory  
1207 mitigation projects; and chronic environmental problems such as flooding or poor  
1208 water quality.

1209 (ii) This information may be available from sources such as wetland maps; soil  
1210 surveys; U.S. Geological Survey topographic and hydrologic maps; aerial  
1211 photographs; information on rare, endangered and threatened species and critical  
1212 habitat; local ecological reports or studies; and other information sources that could  
1213 be used to identify locations for suitable compensatory mitigation projects in the  
1214 watershed.

1215 (iii) The level of information and analysis needed to support a watershed approach  
1216 must be commensurate with the scope and scale of the proposed impacts requiring  
1217 an Order, as well as the functions lost as a result of those impacts.

1218 (4) Watershed Scale. The size of watershed addressed using a watershed approach  
1219 should not be larger than is appropriate to ensure that the aquatic resources provided  
1220 through compensation activities will effectively compensate for adverse environmental  
1221 impacts resulting from activities authorized by Orders. The permitting authority should  
1222 consider relevant environmental factors and appropriate locally-developed standards  
1223 and criteria when determining the appropriate watershed scale in guiding compensation  
1224 activities.

1225 (d) Site selection.<sup>30</sup>

1226 (1) The compensatory mitigation project site must be ecologically suitable for providing  
1227 the desired aquatic resource functions. In determining the ecological suitability of the

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- 1228 compensatory mitigation project site, the permitting authority must consider, to the extent  
1229 practicable, the following factors:
- 1230 (i) Hydrological conditions, soil characteristics, and other physical and chemical  
1231 characteristics;
- 1232 (ii) Watershed-scale features, such as aquatic habitat diversity, habitat connectivity,  
1233 and other landscape scale functions;
- 1234 (iii) The size and location of the compensatory mitigation site relative to hydrologic  
1235 sources (including the availability of water rights) and other ecological features;
- 1236 (iv) Compatibility with adjacent land uses and watershed management plans;
- 1237 (v) Reasonably foreseeable effects the compensatory mitigation project will have on  
1238 ecologically important aquatic or terrestrial resources (e.g., shallow sub-tidal habitat,  
1239 mature forests), cultural sites, or habitat for federally- or state-listed threatened and  
1240 endangered species; and
- 1241 (vi) Other relevant factors including, but not limited to, development trends,  
1242 anticipated land use changes, habitat status and trends, the relative locations of the  
1243 impact and mitigation sites in the stream network, local or regional goals for the  
1244 restoration or protection of particular habitat types or functions (e.g., re-  
1245 establishment of habitat corridors or habitat for species of concern), water quality  
1246 goals, floodplain management goals, and the relative potential for chemical  
1247 contamination of the aquatic resources.
- 1248 (2) Permitting authorities may require on-site, off-site, or a combination of on-site and  
1249 off-site compensatory mitigation to replace permitted losses of aquatic resource  
1250 functions and services.
- 1251 (3) Applicants should propose compensation sites adjacent to existing aquatic resources  
1252 or where aquatic resources previously existed.
- 1253 (e) Mitigation type.
- 1254 (1) In general, in-kind mitigation is preferable to out-of-kind mitigation because it is most  
1255 likely to compensate for the functions and services lost at the impact site. For example,  
1256 tidal wetland compensatory mitigation projects are most likely to compensate for  
1257 unavoidable impacts to tidal wetlands, while perennial stream compensatory mitigation  
1258 projects are most likely to compensate for unavoidable impacts to perennial streams.  
1259 Thus, except as provided in paragraph (e)(2) of this section, the required compensatory  
1260 mitigation shall be of a similar type to the affected aquatic resource.
- 1261 (2) If the permitting authority determines, using the watershed approach in accordance  
1262 with paragraph (c) of this section that out-of-kind compensatory mitigation will serve the  
1263 aquatic resource needs of the watershed, the permitting authority may authorize the use  
1264 of such out-of-kind compensatory mitigation. The basis for authorization of out-of-kind  
1265 compensatory mitigation must be documented in the administrative record for the Order  
1266 action.

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1267 (3) For difficult-to-replace resources (e.g., bogs, fens, springs, streams, vegetated  
1268 seasonal wetlands, slope and seep wetlands, vernal pools, and wet meadows) if further  
1269 avoidance and minimization is not practicable, the required compensation should be  
1270 provided, if practicable, through in-kind rehabilitation, enhancement, or preservation  
1271 since there is greater certainty that these methods of compensation will successfully  
1272 offset permitted impacts.

1273 (f) Amount of compensatory mitigation.

1274 (1) If the permitting authority determines that compensatory mitigation is necessary to  
1275 offset unavoidable impacts to aquatic resources, the amount of required compensatory  
1276 mitigation must be, to the extent practicable, sufficient to replace lost aquatic resource  
1277 functions. In cases where appropriate functional or condition assessment methods or  
1278 other suitable metrics are available, these methods should be used where practicable to  
1279 determine how much compensatory mitigation is required. If a functional or condition  
1280 assessment or other suitable metric is not used, a minimum one-to-one acreage or linear  
1281 foot compensation ratio must be used.

1282 (2) The permitting authority must require a mitigation ratio greater than one-to-one where  
1283 necessary to account for the method of compensatory mitigation (e.g., preservation), the  
1284 likelihood of success, differences between the functions lost at the impact site and the  
1285 functions expected to be produced by the compensatory mitigation project, temporal  
1286 losses of aquatic resource functions, the difficulty of restoring or establishing the desired  
1287 aquatic resource type and functions, and/or the distance between the affected aquatic  
1288 resource and the compensation site. The rationale for the required replacement ratio  
1289 must be documented in the administrative record for the Order action.

1290 (3) If an in-lieu fee program will be used to provide the required compensatory mitigation,  
1291 and the appropriate number and resource type of released credits are not available, the  
1292 permitting authority must require sufficient compensation to account for the risk and  
1293 uncertainty associated with in-lieu fee projects that have not been implemented before  
1294 the permitted impacts have occurred.

1295 (g) Use of mitigation banks and in-lieu fee programs. Mitigation banks and in-lieu fee  
1296 programs may be used to compensate for impacts to aquatic resources authorized by  
1297 general Orders and individual Orders in accordance with the preference hierarchy in  
1298 paragraph (b) of this section. Mitigation banks and in-lieu fee programs may also be used to  
1299 satisfy requirements arising out of an enforcement action, such as supplemental  
1300 environmental projects.

1301 (h) Preservation.<sup>31</sup>

1302 (1) Preservation may be used to provide compensatory mitigation for activities  
1303 authorized by Orders when all the following criteria are met:

1304 (i) The resources to be preserved provide important physical, chemical, or biological  
1305 functions for the watershed;

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1306 (ii) The resources to be preserved contribute significantly to the ecological  
1307 sustainability of the watershed. In determining the contribution of those resources to  
1308 the ecological sustainability of the watershed, the permitting authority must use  
1309 appropriate quantitative assessment tools where available;

1310 (iii) Preservation is determined by the permitting authority to be appropriate and  
1311 practicable;

1312 (iv) The resources are under threat of destruction or adverse modifications; and

1313 (v) The preserved site will be permanently protected through an appropriate real  
1314 estate or other legal instrument (e.g., easement, title transfer to state resource  
1315 agency or land trust).

1316 (2) Where preservation is used to provide compensatory mitigation, to the extent  
1317 appropriate and practicable the preservation shall be done in conjunction with aquatic  
1318 resource restoration, establishment, and/or enhancement activities. This requirement  
1319 may be waived by the permitting authority where preservation has been identified as a  
1320 high priority using a watershed approach described in paragraph (c) of this section, but  
1321 compensation ratios shall be higher.

1322 (i) Buffers. The permitting authority may require the restoration, establishment,  
1323 enhancement, and preservation, as well as the maintenance, of riparian areas and/or  
1324 buffers around aquatic resources where necessary to ensure the long-term viability  
1325 of those resources. Buffers may also provide habitat or corridors necessary for the  
1326 ecological functioning of aquatic resources. If buffers are required by the permitting  
1327 authority as part of the compensatory mitigation project, compensatory mitigation  
1328 credit will be provided for those buffers, as provided in section IV B.5 (c).

1329 (j) Relationship to other federal, tribal, state, and local programs.

1330 (1) Compensatory mitigation projects for Orders may also be used to satisfy the  
1331 environmental requirements of other programs, such as tribal, state, or local wetlands  
1332 regulatory programs, other federal programs such as the Surface Mining Control and  
1333 Reclamation Act, Corps civil works projects, and Department of Defense military  
1334 construction projects, consistent with the terms and requirements of these programs and  
1335 subject to the following considerations:

1336 (i) The compensatory mitigation project must include appropriate compensation  
1337 required by the Order for unavoidable impacts to aquatic resources authorized by  
1338 that Order.

1339 (ii) Under no circumstances may the same credits be used to provide mitigation for  
1340 more than one permitted activity. However, where appropriate, compensatory  
1341 mitigation projects, including mitigation banks and in-lieu fee projects, may be  
1342 designed to holistically address requirements under multiple programs and  
1343 authorities for the same activity.

1344 (2) Except for projects undertaken by federal agencies, or where federal funding is  
1345 specifically authorized to provide compensatory mitigation, federally-funded aquatic  
1346 resource restoration or conservation projects undertaken for purposes other than

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1347 compensatory mitigation, such as the Wetlands Reserve Program, Conservation  
1348 Reserve Program, and Partners for Wildlife Program activities, cannot be used for the  
1349 purpose of generating compensatory mitigation credits for activities authorized by  
1350 Orders. However, compensatory mitigation credits may be generated by activities  
1351 undertaken in conjunction with, but supplemental to, such programs in order to maximize  
1352 the overall ecological benefits of the restoration or conservation project.

1353 (3) Compensatory mitigation projects may also be used to provide compensatory  
1354 mitigation under the federal and state Endangered Species Act or for Natural Community  
1355 Conservation Plans and Habitat Conservation Plans, as long as they comply with the  
1356 requirements of paragraph (j)(1) of this section.

1357 (k) Order conditions.

1358 (1) The compensatory mitigation requirements for an Order, including the amount and  
1359 type of compensatory mitigation, must be clearly stated in the special conditions of the  
1360 individual Order or authorization to use the general Order. The special conditions must  
1361 be enforceable.<sup>32</sup>

1362 (2) For an Order that requires permittee-responsible mitigation, the special conditions  
1363 must:

1364 (i) Identify the party responsible for providing the compensatory mitigation;

1365 (ii) Incorporate, by reference, the final or draft mitigation plan approved by the  
1366 permitting authority;

1367 (iii) State the objectives, performance standards, and monitoring required for the  
1368 compensatory mitigation project, unless they are provided in the approved final  
1369 mitigation plan; and

1370 (iv) Describe any required financial assurances or long-term management provisions  
1371 for the compensatory mitigation project, unless they are specified in the approved  
1372 final mitigation plan.

1373 (4) If a mitigation bank or in-lieu fee program is used to provide the required  
1374 compensatory mitigation, the special conditions must indicate whether a mitigation bank  
1375 or in-lieu fee program will be used, and specify the number and resource type of credits  
1376 the permittee is required to secure. In the case of an individual Order, the special  
1377 condition must also identify the specific mitigation bank or in-lieu fee program that will be  
1378 used. For authorizations to use a general Order, the special conditions may either  
1379 identify the specific mitigation bank or in-lieu fee program, or state that the specific  
1380 mitigation bank or in-lieu fee program used to provide the required compensatory  
1381 mitigation must be approved by the permitting authority before the credits are secured.

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- 1382 (l) Party responsible for compensatory mitigation.
- 1383 (1) For permittee-responsible mitigation, the special conditions of the Order must clearly  
1384 indicate the party or parties responsible for the implementation, performance, and long-  
1385 term management of the compensatory mitigation project.
- 1386 (3) If use of a mitigation bank or in-lieu fee program is approved by the permitting  
1387 authority to provide part or all of the required compensatory mitigation for an Order, the  
1388 permittee retains responsibility for providing the compensatory mitigation until the  
1389 appropriate number and resource type of credits have been secured from a sponsor and  
1390 the permitting authority has received documentation that confirms that the sponsor has  
1391 accepted the responsibility for providing the required compensatory mitigation. This  
1392 documentation may consist of a letter or form signed by the sponsor, with the Order  
1393 number and a statement indicating the number and resource type of credits that have  
1394 been secured from the sponsor. Copies of this documentation will be retained in the  
1395 administrative records for both the Order and the instrument. If the sponsor fails to  
1396 provide the required compensatory mitigation, the permitting authority may pursue  
1397 measures against the sponsor to ensure compliance.<sup>33</sup>
- 1398 (m) Timing. Implementation of the compensatory mitigation project shall be, to the  
1399 maximum extent practicable, in advance of or concurrent with the activity causing the  
1400 authorized impacts. The permitting authority shall require, to the extent appropriate and  
1401 practicable, additional compensatory mitigation to offset temporal losses of aquatic functions  
1402 that will result from the permitted activity.
- 1403 (n) Financial assurances.
- 1404 (1) The permitting authority shall require sufficient financial assurances to ensure a high  
1405 level of confidence that the compensatory mitigation project will be successfully  
1406 completed, in accordance with applicable performance standards. In cases where an  
1407 alternate mechanism is available to ensure a high level of confidence that the  
1408 compensatory mitigation will be provided and maintained (e.g., a formal, documented  
1409 commitment from a government agency or public authority) the permitting authority may  
1410 determine that financial assurances are not necessary for that compensatory mitigation  
1411 project.
- 1412 (2) The amount of the required financial assurances must be determined by the  
1413 permitting authority, in consultation with the project sponsor, and must be based on the  
1414 size and complexity of the compensatory mitigation project, the degree of completion of  
1415 the project at the time of project approval, the likelihood of success, the past  
1416 performance of the project sponsor, and any other factors the permitting authority deems  
1417 appropriate. Financial assurances may be in the form of performance bonds, escrow  
1418 accounts, casualty insurance, letters of credit, legislative appropriations for government  
1419 sponsored projects, or other appropriate instruments, subject to the approval of the  
1420 permitting authority. The rationale for determining the amount of the required financial  
1421 assurances must be documented in the administrative record for either the Order or the  
1422 instrument. In determining the assurance amount, the permitting authority shall consider

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- 1423 the cost of providing replacement mitigation, including costs for land acquisition,  
1424 planning and engineering, legal fees, mobilization, construction, and monitoring.
- 1425 (3) If financial assurances are required, the Order must include a special condition  
1426 requiring the financial assurances to be in place prior to commencing the permitted  
1427 activity.<sup>34</sup>
- 1428 (4) Financial assurances shall be phased out once the compensatory mitigation project  
1429 has been determined by the permitting authority to be successful in accordance with its  
1430 performance standards. The Order or instrument must clearly specify the conditions  
1431 under which the financial assurances are to be released to the permittee, sponsor,  
1432 and/or other financial assurance provider, including, as appropriate, linkage to  
1433 achievement of performance standards, adaptive management, or compliance with  
1434 special conditions.
- 1435 (5) A financial assurance must be in a form that ensures that the permitting authority will  
1436 receive notification at least 120 days in advance of any termination or revocation. For  
1437 third-party assurance providers, this may take the form of a contractual requirement for  
1438 the assurance provider to notify the permitting authority at least 120 days before the  
1439 assurance is revoked or terminated.
- 1440 (6) Financial assurances shall be payable at the direction of the permitting authority to  
1441 his designee or to a standby trust agreement. When a standby trust is used (e.g., with  
1442 performance bonds or letters of credit) all amounts paid by the financial assurance  
1443 provider shall be deposited directly into the standby trust fund for distribution by the  
1444 trustee in accordance with the permitting authority's instructions.
- 1445 (o) Compliance with applicable law. The compensatory mitigation project must comply with  
1446 all applicable federal, state, and local laws. The Order, mitigation banking instrument, or in-  
1447 lieu fee program instrument must not require participation by the permitting authority in  
1448 project management, including receipt or management of financial assurances or long-term  
1449 financing mechanisms, except as determined by the permitting authority to be consistent  
1450 with its statutory authority, mission, and priorities.
- 1451 § 230.94 Planning and documentation.
- 1452 (a) Pre-application consultations. Potential applicants for Orders are encouraged to  
1453 participate in pre-application meetings with the permitting authority and appropriate  
1454 agencies to discuss potential mitigation requirements and information needs.
- 1455 (c) Mitigation plan.
- 1456 (1) Preparation and Approval.
- 1457 (i) For individual Orders, the permittee must prepare a draft mitigation plan and  
1458 submit it to the permitting authority for review prior to certification. After addressing  
1459 any comments provided by the permitting authority, the permittee must prepare a  
1460 final mitigation plan, which must be approved by the permitting authority prior to

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1461 commencing work in waters of the state. The approved final mitigation plan must be  
1462 incorporated into the individual Order either as an attachment or by reference. The  
1463 final mitigation plan must include the items described in paragraphs (c)(2) through  
1464 (c)(14) of this section, but the level of detail of the mitigation plan should be  
1465 commensurate with the scale and scope of the impacts. As an alternative, the  
1466 permitting authority may determine that it would be more appropriate to address any  
1467 of the items described in paragraphs (c)(2) through (c)(14) of this section as Order  
1468 conditions, instead of components of a compensatory mitigation plan. For permittees  
1469 who intend to fulfill their compensatory mitigation obligations by securing credits from  
1470 approved mitigation banks or in-lieu fee programs, their mitigation plans need include  
1471 only the items described in paragraphs (c)(5) and (c)(6) of this section, and the name  
1472 of the specific mitigation bank or in-lieu fee program to be used.<sup>35</sup>

1473 (ii) For general Orders, if compensatory mitigation is required, the permitting  
1474 authority may approve a conceptual or detailed compensatory mitigation plan to  
1475 meet required time frames for general Order enrollments, but a final mitigation plan  
1476 incorporating the elements in paragraphs (c)(2) through (c)(14) of this section, at a  
1477 level of detail commensurate with the scale and scope of the impacts, must be  
1478 approved by the permitting authority before the permittee commences work in waters  
1479 of the state. As an alternative, the permitting authority may determine that it would  
1480 be more appropriate to address any of the items described in paragraphs (c)(2)  
1481 through (c)(14) of this section as Order conditions, instead of components of a  
1482 compensatory mitigation plan. For permittees who intend to fulfill their compensatory  
1483 mitigation obligations by securing credits from approved mitigation banks or in-lieu  
1484 fee programs, their mitigation plans need include only the items described in  
1485 paragraphs (c)(5) and (c)(6) of this section, and either the name of the specific  
1486 mitigation bank or in-lieu fee program to be used or a statement indicating that a  
1487 mitigation bank or in-lieu fee program will be used (contingent upon approval by the  
1488 permitting authority).

1489 (2) Objectives. A description of the resource type(s) and amount(s) that will be provided,  
1490 the method of compensation (i.e., restoration, establishment, enhancement, and/or  
1491 preservation), and the manner in which the resource functions of the compensatory  
1492 mitigation project will address the needs of the watershed, ecoregion, physiographic  
1493 province, or other geographic area of interest.

1494 (3) Site selection. A description of the factors considered during the site selection  
1495 process. This should include consideration of watershed needs, on-site alternatives  
1496 where applicable, and the practicability of accomplishing ecologically self-sustaining  
1497 aquatic resource restoration, establishment, enhancement, and/or preservation at the  
1498 compensatory mitigation project site. (See [§ 230.93\(d\)](#).)

1499 (4) Site protection instrument. A description of the legal arrangements and instrument,  
1500 including site ownership, that will be used to ensure the long-term protection of the  
1501 compensatory mitigation project site (see [§ 230.97\(a\)](#)).<sup>36</sup>

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- 1502 (5) Baseline information. A description of the ecological characteristics of the proposed  
1503 compensatory mitigation project site and, in the case of an application for an Order, the  
1504 impact site. This may include descriptions of historic and existing plant communities,  
1505 historic and existing hydrology, soil conditions, a map showing the locations of the  
1506 impact and mitigation site(s) or the geographic coordinates for those site(s), and other  
1507 site characteristics appropriate to the type of resource proposed as compensation. The  
1508 baseline information should also include a delineation of waters of the state on the  
1509 proposed compensatory mitigation project site. A prospective permittee planning to  
1510 secure credits from an approved mitigation bank or in-lieu fee program only needs to  
1511 provide baseline information about the impact site, not the mitigation bank or in-lieu fee  
1512 project site.
- 1513 (6) Determination of credits. A description of the number of credits to be provided,  
1514 including a brief explanation of the rationale for this determination. (See [§ 230.93\(f\).](#))
- 1515 (i) For permittee-responsible mitigation, this should include an explanation of how the  
1516 compensatory mitigation project will provide the required compensation for  
1517 unavoidable impacts to aquatic resources resulting from the permitted activity.
- 1518 (ii) For permittees intending to secure credits from an approved mitigation bank or in-  
1519 lieu fee program, it should include the number and resource type of credits to be  
1520 secured and how these were determined.
- 1521 (7) Mitigation work plan. Detailed written specifications and work descriptions for the  
1522 compensatory mitigation project, including, but not limited to, the geographic boundaries  
1523 of the project; construction methods, timing, and sequence; source(s) of water, including  
1524 connections to existing waters and uplands; methods for establishing the desired plant  
1525 community; plans to control invasive plant species; the proposed grading plan, including  
1526 elevations and slopes of the substrate; soil management; and erosion control measures.  
1527 For stream compensatory mitigation projects, the mitigation work plan may also include  
1528 other relevant information, such as planform geometry, channel form (e.g., typical  
1529 channel cross-sections), watershed size, design discharge, and riparian area plantings.
- 1530 (8) Maintenance plan. A description and schedule of maintenance requirements to  
1531 ensure the continued viability of the resource once initial construction is completed.
- 1532 (9) Performance standards. Ecologically-based standards that will be used to determine  
1533 whether the compensatory mitigation project is achieving its objectives. (See [§ 230.95.](#))
- 1534 (10) Monitoring requirements. A description of parameters to be monitored in order to  
1535 determine if the compensatory mitigation project is on track to meet performance  
1536 standards and if adaptive management is needed. A schedule for monitoring and  
1537 reporting on monitoring results to the permitting authority must be included. (See [§](#)  
1538 [230.96.](#))<sup>37</sup>
- 1539 (11) Long-term management plan. A description of how the compensatory mitigation  
1540 project will be managed after performance standards have been achieved to ensure the

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1541 long-term sustainability of the resource, including long-term financing mechanisms and  
1542 the party responsible for long-term management. (See [§ 230.97\(d\)](#).)

1543 (12) Adaptive management plan. A management strategy to address unforeseen  
1544 changes in site conditions or other components of the compensatory mitigation project,  
1545 including the party or parties responsible for implementing adaptive management  
1546 measures. The adaptive management plan will guide decisions for revising  
1547 compensatory mitigation plans and implementing measures to address both foreseeable  
1548 and unforeseen circumstances that adversely affect compensatory mitigation success.  
1549 (See [§ 230.97\(c\)](#).)

1550 (13) Financial assurances. A description of financial assurances that will be provided  
1551 and how they are sufficient to ensure a high level of confidence that the compensatory  
1552 mitigation project will be successfully completed, in accordance with its performance  
1553 standards (see [§ 230.93\(n\)](#)).

1554 (14) Other information. The permitting authority may require additional information as  
1555 necessary to determine the appropriateness, feasibility, and practicability of the  
1556 compensatory mitigation project.

1557 § 230.95 Ecological performance standards.

1558 (a) The approved mitigation plan must contain performance standards that will be used to  
1559 assess whether the project is achieving its objectives. Performance standards should relate  
1560 to the objectives of the compensatory mitigation project, so that the project can be  
1561 objectively evaluated to determine if it is developing into the desired resource type, providing  
1562 the expected condition or functions, and attaining any other applicable metrics (e.g., acres).

1563 (b) Performance standards must be based on attributes that are objective and verifiable.  
1564 Ecological performance standards must be based on the best available science that can be  
1565 measured or assessed in a practicable manner. Performance standards may be based on  
1566 variables or measures of functional capacity or condition as described in assessment  
1567 methodologies, measurements of hydrology or other aquatic resource characteristics, and/or  
1568 comparisons to reference aquatic resources of similar type and landscape position. The use  
1569 of reference aquatic resources to establish performance standards will help ensure that  
1570 those performance standards are reasonably achievable, by reflecting the range of  
1571 variability exhibited by the regional class of aquatic resources as a result of natural  
1572 processes and anthropogenic disturbances. Performance standards based on  
1573 measurements of hydrology should take into consideration the hydrologic variability  
1574 exhibited by reference aquatic resources, especially wetlands. Where practicable,  
1575 performance standards should take into account the expected stages of the aquatic  
1576 resource development process, in order to allow early identification of potential problems  
1577 and appropriate adaptive management.

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1578 § 230.96 Monitoring.<sup>38</sup>

1579 (a) General.

1580 (1) Monitoring the compensatory mitigation project site is necessary to determine if the  
1581 project is meeting its performance standards, and to determine if measures are  
1582 necessary to ensure that the compensatory mitigation project is accomplishing its  
1583 objectives. The submission of monitoring reports to assess the development and  
1584 condition of the compensatory mitigation project is required, but the content and level of  
1585 detail for those monitoring reports must be commensurate with the scale and scope of  
1586 the compensatory mitigation project, as well as the compensatory mitigation project type.  
1587 The mitigation plan must address the monitoring requirements for the compensatory  
1588 mitigation project, including the parameters to be monitored, the length of the monitoring  
1589 period, the party responsible for conducting the monitoring, the frequency for submitting  
1590 monitoring reports to the permitting authority, and the party responsible for submitting  
1591 those monitoring reports to the permitting authority.

1592 (2) The permitting authority may conduct site inspections on a regular basis (e.g.,  
1593 annually) during the monitoring period to evaluate mitigation site performance.

1594 (b) Monitoring period. The mitigation plan must provide for a monitoring period that is  
1595 sufficient to demonstrate that the compensatory mitigation project has met performance  
1596 standards, but not less than five years. A longer monitoring period must be required for  
1597 aquatic resources with slow development rates (e.g., forested wetlands, bogs). Following  
1598 project implementation, the permitting authority may reduce or waive the remaining  
1599 monitoring requirements upon a determination that the compensatory mitigation project has  
1600 achieved its performance standards. Conversely the permitting authority may extend the  
1601 original monitoring period upon a determination that performance standards have not been  
1602 met or the compensatory mitigation project is not on track to meet them. The permitting  
1603 authority may also revise monitoring requirements when remediation and/or adaptive  
1604 management is required.

1605 (c) Monitoring reports.

1606 (1) The permitting authority must determine the information to be included in monitoring  
1607 reports. This information must be sufficient for the permitting authority to determine how  
1608 the compensatory mitigation project is progressing towards meeting its performance  
1609 standards, and may include plans (such as as-built plans), maps, and photographs to  
1610 illustrate site conditions. Monitoring reports may also include the results of functional,  
1611 condition, or other assessments used to provide quantitative or qualitative measures of  
1612 the functions provided by the compensatory mitigation project site.

1613 (2) The permittee or sponsor is responsible for submitting monitoring reports in  
1614 accordance with the special conditions of the Order or the terms of the instrument.  
1615 Failure to submit monitoring reports in a timely manner may result in compliance action  
1616 by the permitting authority.

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1617 (3) Monitoring reports must be provided by the permitting authority to interested federal,  
1618 tribal, state, and local resource agencies, and the public, upon request.

1619 § 230.97 Management.<sup>39</sup>

1620 (a) Site protection.

1621 (1) The aquatic habitats, riparian areas, buffers, and uplands that comprise the overall  
1622 compensatory mitigation project must be provided long-term protection through real  
1623 estate instruments or other available mechanisms, as appropriate. Long-term protection  
1624 may be provided through real estate instruments such as conservation easements held  
1625 by entities such as federal, tribal, state, or local resource agencies, non-profit  
1626 conservation organizations, or private land managers; the transfer of title to such  
1627 entities; or by restrictive covenants. For government property, long-term protection may  
1628 be provided through state or federal facility management plans or integrated natural  
1629 resources management plans. When approving a method for long-term protection of  
1630 non-government property other than transfer of title, the permitting authority shall  
1631 consider relevant legal constraints on the use of conservation easements and/or  
1632 restrictive covenants in determining whether such mechanisms provide sufficient site  
1633 protection. To provide sufficient site protection, a conservation easement or restrictive  
1634 covenant should, where practicable, establish in an appropriate third party (e.g.,  
1635 governmental or non-profit resource management agency) the right to enforce site  
1636 protections and provide the third party the resources necessary to monitor and enforce  
1637 these site protections.

1638 (2) The real estate instrument, management plan, or other mechanism providing long-  
1639 term protection of the compensatory mitigation site must, to the extent appropriate and  
1640 practicable, prohibit incompatible uses (e.g., clear cutting or mineral extraction) that  
1641 might otherwise jeopardize the objectives of the compensatory mitigation project. Where  
1642 appropriate, multiple instruments recognizing compatible uses (e.g., fishing or grazing  
1643 rights) may be used.

1644 (3) The real estate instrument, management plan, or other long-term protection  
1645 mechanism must contain a provision requiring 60-day advance notification to the  
1646 permitting authority before any action is taken to void or modify the instrument,  
1647 management plan, or long-term protection mechanism, including transfer of title to, or  
1648 establishment of any other legal claims over, the compensatory mitigation site.

1649 (4) For compensatory mitigation projects on public lands, where state or Federal facility  
1650 management plans or integrated natural resources management plans are used to  
1651 provide long-term protection, and changes in statute, regulation, or agency needs or  
1652 mission results in an incompatible use on public lands originally set aside for  
1653 compensatory mitigation, the public agency authorizing the incompatible use is  
1654 responsible for providing alternative compensatory mitigation that is acceptable to the  
1655 permitting authority for any loss in functions resulting from the incompatible use.<sup>40</sup>

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1656 (5) A real estate instrument, management plan, or other long-term protection mechanism  
1657 used for site protection of permittee-responsible mitigation must be approved by the  
1658 permitting authority in advance of, or concurrent with, the activity causing the authorized  
1659 impacts.

1660 (b) Sustainability. Compensatory mitigation projects shall be designed, to the maximum  
1661 extent practicable, to be self-sustaining once performance standards have been achieved.  
1662 This includes minimization of active engineering features (e.g., pumps) and appropriate  
1663 siting to ensure that natural hydrology and landscape context will support long-term  
1664 sustainability. Where active long-term management and maintenance are necessary to  
1665 ensure long-term sustainability (e.g., prescribed burning, invasive species control,  
1666 maintenance of water control structures, easement enforcement), the responsible party must  
1667 provide for such management and maintenance. This includes the provision of long-term  
1668 financing mechanisms where necessary. Where needed, the acquisition and protection of  
1669 water rights must be secured and documented in the Order conditions or instrument.

1670 (c) Adaptive management.

1671 (1) If the compensatory mitigation project cannot be constructed in accordance with the  
1672 approved mitigation plans, the permittee or sponsor must notify the permitting authority.  
1673 A significant modification of the compensatory mitigation project requires approval from  
1674 the permitting authority.

1675 (2) If monitoring or other information indicates that the compensatory mitigation project is  
1676 not progressing towards meeting its performance standards as anticipated, the  
1677 responsible party must notify the permitting authority as soon as possible. The  
1678 permitting authority will evaluate and pursue measures to address deficiencies in the  
1679 compensatory mitigation project. The permitting authority will consider whether the  
1680 compensatory mitigation project is providing ecological benefits comparable to the  
1681 original objectives of the compensatory mitigation project.

1682 (3) The permitting authority, in consultation with the responsible party (and other federal,  
1683 tribal, state, and local agencies, as appropriate), will determine the appropriate  
1684 measures. The measures may include site modifications, design changes, revisions to  
1685 maintenance requirements, and revised monitoring requirements. The measures must  
1686 be designed to ensure that the modified compensatory mitigation project provides  
1687 aquatic resource functions comparable to those described in the mitigation plan  
1688 objectives.<sup>41</sup>

1689 (4) Performance standards may be revised in accordance with adaptive management to  
1690 account for measures taken to address deficiencies in the compensatory mitigation  
1691 project. Performance standards may also be revised to reflect changes in management  
1692 strategies and objectives if the new standards provide for ecological benefits that are  
1693 comparable or superior to the approved compensatory mitigation project. No other  
1694 revisions to performance standards will be allowed except in the case of natural  
1695 disasters.

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1696 (d) Long-term management.

1697 (1) The Order conditions or instrument must identify the party responsible for ownership  
1698 and all long-term management of the compensatory mitigation project. The Order  
1699 conditions or instrument may contain provisions allowing the permittee or sponsor to  
1700 transfer the long-term management responsibilities of the compensatory mitigation  
1701 project site to a land stewardship entity, such as a public agency, non-governmental  
1702 organization, or private land manager, after review and approval by the permitting  
1703 authority. The land stewardship entity need not be identified in the original Order or  
1704 instrument, as long as the future transfer of long-term management responsibility is  
1705 approved by the permitting authority.