



State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State

**[Also for Inclusion in the Water Quality Control Plan for
Ocean Waters of California, and the Water Quality Control
Plan for Inland Surface Waters and Enclosed Bays and
Estuaries for Waters of the United States]**

STATE WATER RESOURCES CONTROL BOARD

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Procedures for Discharges of Dredged or Fill Material to Waters of the State

I. Introduction¹

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

These Procedures contain a wetland definition in section II and wetland delineation procedures in section III, both of which apply to all Water Board programs. The wetland definition encompasses the full range of wetland types commonly recognized in California, including some features not protected under federal law, and reflects current scientific understanding of the formation and functioning of wetlands. These Procedures also include procedures for the submission, review and approval of applications for activities that could result in the discharge of dredged or fill material to any waters of the state in section IV. The Procedures include elements of the Clean Water Act Section 404(b)(1) Guidelines, thereby bringing uniformity to Water Boards' regulation of discharges of dredged or fill material to all waters of the state. The effective date of these Procedures shall be May 28, 2020.

II. Wetland Definition

The Water Boards define an area as wetland as follows:

An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

¹ [NOTE: These Procedures will be incorporated into the Water Quality Control Plans for (1) Inland Surface Waters Enclosed Bays and Estuaries for waters for which water quality standards are required by the Federal Water Pollution Control Act and acts amendatory thereof or supplementary thereto and (2) Ocean Waters of California. Future incorporation of the Procedures, as adopted, into the water quality control plans will be considered non-substantive amendments. At that time, formatting and other organizational edits necessary for incorporation into the water quality control plans will be addressed.]

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39 The Water Code defines “waters of the state” broadly to include “any surface water or groundwater,
40 including saline waters, within the boundaries of the state.” “Waters of the state” includes all “waters of
41 the U.S.”² The following wetlands are waters of the state:

- 42 1. Natural wetlands,
- 43 2. Wetlands created by modification of a surface water of the state,³ and
- 44 3. Artificial wetlands⁴ that meet any of the following criteria:
 - 45 a. Approved by an agency as compensatory mitigation for impacts to other waters of the state,
46 except where the approving agency explicitly identifies the mitigation as being of limited
47 duration;
 - 48 b. Specifically identified in a water quality control plan as a wetland or other water of the state;
 - 49 c. Resulted from historic human activity, is not subject to ongoing operation and maintenance,
50 and has become a relatively permanent part of the natural landscape; or
 - 51 d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and
52 is currently used and maintained, primarily for one or more of the following purposes (i.e.,
53 the following artificial wetlands are not waters of the state unless they also satisfy the criteria
54 set forth in 2, 3a, or 3b):
 - 55 i. Industrial or municipal wastewater treatment or disposal,
 - 56 ii. Settling of sediment,
 - 57 iii. Detention, retention, infiltration, or treatment of stormwater runoff and other
58 pollutants or runoff subject to regulation under a municipal, construction, or industrial
59 stormwater permitting program,
 - 60 iv. Treatment of surface waters,
 - 61 v. Agricultural crop irrigation or stock watering,
 - 62 vi. Fire suppression,
 - 63 vii. Industrial processing or cooling,
 - 64 viii. Active surface mining – even if the site is managed for interim wetlands functions
65 and values,

² Therefore, wetlands that meet the current definition, or any historic definition, of waters of the U.S. are waters of the state. In 2000, the State Water Resources Control Board determined that all waters of the U.S. are also waters of the state by regulation, prior to any regulatory or judicial limitations on the federal definition of waters of the U.S. (California Code of Regulations title 23, section 3831(w).) This regulation has remained in effect despite subsequent changes to the federal definition. Therefore, waters of the state includes features that have been determined by the U.S. Environmental Protection Agency (U.S. EPA) or the U.S. Army Corps of Engineers (Corps) to be “waters of the U.S.” in an approved jurisdictional determination; “waters of the U.S.” identified in an aquatic resource report verified by the Corps 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.” under the federal Clean Water Act.

³ “Created by modification of a surface water of the state” means that the wetland that is being evaluated was created by modifying an area that was a surface water of the state at the time of such modification. It does not include a wetland that is created in a location where a water of the state had existed historically, but had already been completely eliminated at some time prior to the creation of the wetland. The wetland being evaluated does not become a water of the state due solely to a diversion of water from a different water of the state.

⁴ Artificial wetlands are wetlands that result from human activity.

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- 66 ix. Log storage,
67 x. Treatment, storage, or distribution of recycled water, or
68 xi. Maximizing groundwater recharge (this does not include wetlands that have
69 incidental groundwater recharge benefits); or
70 xii. Fields flooded for rice growing.⁵

71 All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a,
72 3.b, or 3.c are not waters of the state. If an aquatic feature meets the wetland definition, the burden is
73 on the applicant to demonstrate that the wetland is not a water of the state.

74 III. Wetland Delineation

75 The permitting authority shall rely on any wetland area delineation from a final aquatic resource report
76 verified by the U.S. Army Corps of Engineers (Corps) for the purposes of determining the extent of
77 wetland waters of the U.S. A delineation of any wetland areas potentially impacted by the project that
78 are not delineated in a final aquatic resource report verified by the Corps shall be performed using the
79 methods described in the three federal documents listed below (collectively referred to as “1987 Manual
80 and Supplements”) to determine whether the area meets the state definition of a wetland as defined
81 above. As described in the 1987 Manual and Supplements, an area “lacks vegetation” if it has less
82 than 5 percent areal coverage of plants at the peak of the growing season. The methods shall be
83 modified only to allow for the fact that the lack of vegetation does not preclude the determination of
84 such an area that meets the definition of wetland. Terms as defined in these Procedures shall be used
85 if there is conflict with terms in 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 Station,
88 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 Research
92 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 2.0).
95 ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S.
96 Army Engineer Research and Development Center.

⁵ Fields used for the cultivation of rice (including wild rice) that have not been abandoned due to five consecutive years of non-use for the cultivation of rice (including wild rice) that are determined to be a water of the state in accordance with these Procedures shall not have beneficial use designations applied to them through the Water Quality Control Plan for the Sacramento and San Joaquin River Basins, except as otherwise required by federal law for fields that are considered to be waters of the United States. Further, agricultural inputs legally applied to fields used for the cultivation of rice (including wild rice) shall not constitute a discharge of waste to a water of the state. Agricultural inputs that migrate to a surface water or groundwater may be considered a discharge of waste and are subject to waste discharge requirements or waivers of such requirements pursuant to the Water Board's authority to issue or waive waste discharge requirements or take other actions as applicable.

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

99 The purpose of this section is to establish application procedures for discharges of dredged or fill
100 material to waters of the state, which includes both waters of the U.S. and non-federal waters of the
101 state. This section supplements existing state requirements for discharges of dredged or fill material to
102 waters of the U.S.⁶ These Procedures include Appendix A, which contains relevant portions of the
103 U.S. EPA's Section 404(b)(1) "Guidelines for Specification of Disposal Sites for Dredge or Fill
104 Material"⁷ (Guidelines), with minor modifications to make them applicable to the state dredged or fill
105 program (hereafter State Supplemental Dredge or Fill Guidelines).⁸ This section applies to all
106 applications for discharges of dredged or fill material to waters of the state submitted after [insert date
107 that is nine months after approval by the Office of Administrative Law].⁹ The Procedures do not apply
108 to applications that are submitted prior to [insert date that is nine months after approval by the Office of
109 Administrative Law].

110 Unless excluded by section IV.D, applicants must file an application with the Water Boards for any
111 activity that could result in the discharge of dredged or fill material to waters of the state in accordance
112 with California Code of Regulations, title 23, section 3855.¹⁰ This application requirement applies to
113 new discharges, proposed material changes in the character, location, or volume of existing
114 discharges, and upon renewal of existing Orders for existing discharges. The permitting authority may
115 amend an existing Order solely for the purpose of extending the expiration date without requiring a new
116 application.

117 The applicant may consult with the Water Boards to determine whether a project could result in a
118 discharge of dredged or fill material to waters of the state and/or discuss submittals that would meet the
119 application requirements listed below. Discharges of dredged or fill material or other waste material to

⁶ California Code of Regulations, title 23, sections 3830-3869 (state's Clean Water Act (CWA) section 401 (33 USC § 1341) water quality certification program)

⁷ 40 C.F.R. § 230.

⁸ The State Supplemental Dredge or Fill Guidelines are included as Appendix A. Because the State Supplemental Dredge or Fill Guidelines are derived directly from the U.S. EPA's 404(b)(1) Guidelines, it uses slightly different terms than terms used in sections I through V of these Procedures. The State Supplemental Dredge or Fill Guidelines will be applied in a manner consistent with sections I through V of these Procedures.

⁹ In cases where the applicant is a state agency and is acting as the CEQA lead agency for one or more projects otherwise subject to this section, and that state agency is a party to an existing written agreement (e.g., memorandum of understanding) with the State Water Board that sets out alternative procedures and requirements regarding the submission, review, or approval of project applications, the permitting authority shall apply the terms and conditions of the agreement in lieu of the terms and conditions of this section. After adoption of these Procedures, the State Water Board may also enter into such written agreements after consideration at a public meeting; such an agreement may include, for example, early consultation regarding potential project applications, early identification and analysis of project alternatives and mitigation measures, and dispute resolution. Any written agreements, whether existing or entered into after the adoption of these Procedures, may be amended in writing at any time by joint agreement of the parties, and such amended agreements shall govern in lieu of the terms and conditions of this section. All other applicable laws, including requirements for public notice and comment, apply to the permitting authorities' approval of projects under such an agreement.

¹⁰ 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 and waivers thereof.

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120 areas that are not waters of the state, but that could affect the quality of waters of the state, may be
121 addressed under other Water Board regulatory programs.

122 **A. Project Application Submittal for Individual Orders**

123 The requirements set forth in sections IV.A and IV.B apply only to individual orders. Applicants must
124 submit the items listed in subsection 1 to the permitting authority. In addition, applicants shall consult
125 with the permitting authority about the items listed in subsection 2. Within 30 days of receiving the
126 items listed in subsection 1, the permitting authority may require the applicant to submit one or more of
127 the items in subsection 2 for a complete application. Applicants are encouraged to consult with the
128 permitting authority to determine the appropriate level of detail for the items in subsections 1 (and 2, if
129 applicable). Within 30 days of receiving all of the required items, the permitting authority shall determine
130 whether the application is complete and notify the applicant accordingly. If the applicant's federal
131 license or permit application includes any of the information required in subsections 1 or 2 below, the
132 applicant may submit the federal application materials to satisfy the corresponding state application
133 information. If federal application materials are submitted as part of the state application, the applicant
134 shall indicate where the corresponding state application information can be found in the federal
135 application materials.

136 1. Items Required for a Complete Application

- 137 a. All items listed in California Code of Regulations, title 23, section 3856 "Contents of a Complete
138 Application."¹¹
- 139 b. If the Corps requires an aquatic resource delineation report, a copy of the report verified by the
140 Corps.
- 141 c. A delineation of any waters that are not delineated in an aquatic resource delineation report
142 verified by the Corps. If such waters include wetlands, the wetlands must be delineated as
143 described in section III.
- 144 d. The dates upon which the overall project activity will begin and end, and, if known, the date(s)
145 upon which the discharge(s) will take place.
- 146 e. Map(s) with a scale of at least 1:24000 (1" = 2000') and of sufficient detail to accurately show
147 (1) the boundaries of the lands owned or to be utilized by the applicant in carrying out the
148 proposed activity, including the grading limits, proposed land uses, and the location, dimensions
149 and type of any structures erected (if known) or to be erected and (2) all aquatic resources that
150 may qualify as waters of the state, within the boundaries of the project, and all aquatic
151 resources that may qualify as waters of the state outside of the boundary of the project that
152 could be impacted by the project. A map verified by the Corps may satisfy this requirement if it
153 includes all potential waters of the state. The permitting authority may require that the map(s)
154 be submitted in electronic format (e.g., GIS shapefiles).
- 155 f. A description of the waters proposed to be impacted by the dredge or fill activity. The
156 description should include the beneficial uses as listed in the applicable water quality control
157 plan; a description of the activity at each individual discharge or dredge location; quantity of
158 impacts to waters proposed to receive a discharge of dredged or fill material at each location
159 rounded to at least the nearest one-hundredth (0.01) of an acre, nearest linear foot, and quantity

¹¹ 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 and waivers thereof.

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- 160 of impacts to waters proposed to be dredged at each dredging location to the nearest cubic yard
161 (as applicable); assessment of potential direct and indirect impacts resulting from the discharge
162 or dredging activity and potential mitigation measures for those potential impacts, identification
163 of existing water quality impairment(s); the source of water quality impairment(s), if known; and
164 the presence of rare, threatened or endangered species¹² habitat.
- 165 g. An alternatives analysis,¹³ unless any of the following exemptions apply. The exemption from
166 the alternatives analysis requirement does not preclude a permitting authority from requiring the
167 applicant to demonstrate in its application that the project complies with section IV.B.1.a.
- 168 i. The project includes discharges to waters of the state outside of federal jurisdiction, but the
169 entire project would meet the terms and conditions of one or more Water Board-certified
170 Corps' General Permits, including any Corps District's regional terms and conditions, if all
171 discharges were to waters of the U.S. The permitting authority will verify that the entire
172 project would meet the terms and conditions of the Corps' General Permit(s) if all
173 discharges, including discharges to waters of the state outside of federal jurisdiction, were
174 to waters of the U.S. based on information supplied by the applicant.
- 175 ii. The project includes only discharges to waters of the U.S. and meets the terms and
176 conditions for coverage under an uncertified Corps' General Permit, including any Corps
177 District's regional terms and conditions. This exemption does not apply if the discharge of
178 dredged or fill material will directly impact:
- 179 a) more than two-tenths (0.2) of an acre or 300 linear feet of waters of the state;
180 b) rare, threatened, or endangered species habitat in waters of the state;
181 c) wetlands or eel grass beds; or
182 d) Outstanding National Resource Waters or Areas of Special Biological
183 Significance.
- 184 iii. The project would be conducted in accordance with a watershed plan that has been
185 approved for use by the permitting authority and analyzed in an environmental document
186 that includes a sufficient alternatives analysis, monitoring provisions, and guidance on
187 compensatory mitigation opportunities.
- 188 iv. The project is an Ecological Restoration and Enhancement Project.
- 189 v. The project has no permanent impacts to aquatic resources and no impacts to rare,
190 threatened or endangered species habitat in waters of the state, wetlands or eel grass
191 beds, Outstanding National Resource Waters or Areas of Special Biological Significance,

¹² "Rare, threatened, or endangered species" as used in the Procedures refers to plant and animal species listed as rare, threatened, or endangered pursuant to the California Endangered Species Act of 1984 (Fish & Game Code, § 2050 et seq.), the Native Plant Protection Act of 1977 (Fish & Game Code, § 1900 et seq.), or the Federal Endangered Species Act of 1973 (16 U.S.C. § 1531 et seq.).

¹³ "Alternatives analysis" as used in these Procedures refer to the analysis required by section IV.A.1.h and is a means to comply with the State Supplemental Dredge 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 or a Regional Board water quality control plan discharge prohibition. 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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192 and all implementation actions in the restoration plan can reasonably be concluded within
193 one year.

- 194 h. If none of the above exemptions apply, the applicant must submit an alternatives analysis
195 consistent with the requirements of section 230.10 of the State Supplemental Dredge or Fill
196 Guidelines that allows the permitting authority to determine whether the proposed project is the
197 Least Environmentally Damaging Practicable Alternative (LEDPA). If the applicant submitted
198 information to the Corps to support an alternatives analysis, the applicant shall provide that
199 information to the permitting authority. Such information may satisfy some or all of the following
200 requirements in accordance with section IV.B.3. Alternatives analyses shall be completed in
201 accordance with the following tiers. The level of effort required for an alternatives analysis
202 within each of the three tiers shall be commensurate with the significance of the impacts
203 resulting from the discharge.¹⁴
- 204 i. Tier 3 projects include any discharge of dredged or fill material that directly impacts more
205 than two-tenths (0.2) of an acre or 300 linear feet of waters of the state, rare, threatened or
206 endangered species habitat in waters of the state, wetlands or eel grass beds, or
207 Outstanding National Resource Waters or Areas of Special Biological Significance, and is
208 not a project that inherently cannot be located at an alternate location. Tier 3 projects shall
209 provide an analysis of off-site and on-site alternatives.
- 210 ii. Tier 2 projects include any discharge of dredged or fill material that directly impacts more
211 than one tenth (0.1) and less than or equal to two tenths (0.2) of an acre or more than 100
212 and less than or equal to 300 linear feet of waters of the state unless it meets the criteria
213 for a Tier 3 project, or any project that inherently cannot be located at an alternate location
214 (unless it meets the size requirements set forth in Tier 1). Tier 2 projects shall provide an
215 analysis of only on-site alternatives. For routine operation and maintenance of existing
216 facilities, analysis of on-site alternatives is limited to operation and maintenance
217 alternatives for the facility.
- 218 iii. Tier 1 projects include any discharge of dredged or fill material that directly impacts less
219 than or equal to one tenth (0.1) of an acre or less than or equal to 100 linear feet of waters
220 of the state, unless it meets the criteria for a Tier 3 project. Tier 1 projects shall provide a
221 description of any steps that have been or will be taken to avoid and minimize loss of, or
222 significant adverse impacts to, beneficial uses of waters of the state.

223 2. Additional Information Required for a Complete Application

- 224 a. If required by the permitting authority on a case-by-case basis, supplemental field data from the
225 wet season to substantiate dry season delineations, as is consistent with the 1987 Manual and
226 Supplements.
- 227 b. If compensatory mitigation is required by the permitting authority, on a case-by-case basis, a
228 draft compensatory mitigation plan developed using a watershed approach containing the items
229 listed below. Compensatory mitigation plans are not required for Ecological Restoration and
230 Enhancement Projects. For permittees who intend to fulfill their compensatory mitigation

¹⁴ As used below, "impacts" include both permanent and temporary impacts.

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- 231 obligations by securing credits from approved mitigation banks or in-lieu fee programs, their
232 mitigation plans need include only items i, ii, and iii, as described below, as well as information
233 required in the State Supplemental Dredge or Fill Guidelines, section 230.94 (c)(5) and (c)(6),
234 and the name of the specific mitigation bank or in-lieu fee program proposed to be used.
- 235 Draft compensatory mitigation plans shall comport with the State Supplemental Dredge or Fill
236 Guidelines, Subpart J, and include the items listed below.
- 237 i. A watershed profile for the project evaluation area for both the proposed dredged or fill
238 project and the proposed compensatory mitigation project.
 - 239 ii. An assessment of the overall condition of aquatic resources proposed to be impacted by
240 the project and their likely stressors, using an assessment method approved by the
241 permitting authority.
 - 242 iii. A description of how the project impacts and compensatory mitigation would not cause a
243 net loss of the overall abundance, diversity, and condition of aquatic resources, based on
244 the watershed profile. If the compensatory mitigation is located in the same watershed as
245 the project, no net loss will be determined on a watershed basis. If the compensatory
246 mitigation and project impacts are located in multiple watersheds, no net loss will be
247 determined considering all affected watersheds collectively. The level of detail in the plan
248 shall be sufficient to accurately evaluate whether compensatory mitigation offsets the
249 adverse impacts attributed to a project.
 - 250 iv. Preliminary information about ecological performance standards, monitoring, and long-term
251 protection and management, as described in the State Supplemental Dredge or Fill
252 Guidelines.
 - 253 v. A timetable for implementing the compensatory mitigation plan.
 - 254 vi. If the compensatory mitigation plan includes buffers, design criteria and monitoring
255 requirements for those buffers.
 - 256 vii. If the compensatory mitigation involves restoration or establishment as the form of
257 mitigation, applicants shall notify, as applicable, state and federal land management
258 agencies, airport land use commission, fire control districts, flood control districts, local
259 mosquito-vector control district(s), and any other interested local entities prior to initial site
260 selection. These entities should be notified as early as possible during the initial
261 compensatory mitigation project design stage.
 - 262 viii. If required by the permitting authority, an assessment of reasonably foreseeable impacts to
263 the compensatory mitigation associated with climate change, and any measures to avoid
264 or minimize those potential impacts.
- 265 c. If required by the permitting authority on a case-by-case basis, if project activities include in-
266 water work or water diversions, a proposed water quality monitoring plan to monitor compliance
267 with water quality objectives of the applicable water quality control plan. At a minimum, the plan
268 should include type and frequency of sampling for each applicable parameter.
 - 269 d. In all cases where temporary impacts are proposed, a draft restoration plan that outlines design,
270 implementation, assessment, and maintenance for restoring areas of temporary impact to pre-
271 project conditions. The design components shall include the objectives of the restoration plan;
272 grading plan of disturbed areas to pre-project contours; a planting palette with plant species

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273 native to the area; seed collection locations; and an invasive species management plan. The
274 implementation component shall include all proposed actions to implement the plan (e.g., re-
275 contouring, initial planting, site stabilization, removal of temporary structures) and a schedule for
276 completing those actions. The maintenance and assessment components shall include a
277 description of performance standards used to evaluate attainment of objectives; the timeframe
278 for determining attainment of performance standards; and maintenance requirements (e.g.,
279 watering, weeding, replanting and invasive species control). If temporary impacts are proposed
280 to be restored through passive restoration, the draft restoration plan shall include an explanation
281 of how passive restoration will restore the area to pre-project conditions, assessment
282 components, and an estimated date for expected restoration. The level of detail in the
283 restoration plan shall be sufficient to accurately evaluate whether the restoration addresses the
284 adverse temporary impacts attributed to a project. The applicant shall submit a final restoration
285 plan that describes the restoration of all temporarily disturbed areas to pre-project conditions,
286 consistent with section IV.B.4.

287 For Ecological Restoration and Enhancement Projects, a restoration plan for temporary impacts
288 provided as part of the binding stream or wetland enhancement or restoration agreement or
289 wetland establishment agreement may satisfy this requirement.

290 e. For all Ecological Restoration and Enhancement Projects, a draft assessment plan including the
291 following: project objectives; description of performance standards used to evaluate attainment
292 of objectives; protocols for condition assessment; the timeframe and responsible party for
293 performing condition assessment; and assessment schedule. A draft assessment plan shall
294 provide for at least one assessment of the overall condition of aquatic resources and their likely
295 stressors, using an appropriate assessment method approved by the permitting authority, prior
296 to restoration and/or enhancement and two years following restoration and/or enhancement to
297 determine success of the restoration and/or enhancement. An assessment plan approved by a
298 federal or state resource agency, or a local agency with the primary function of managing land
299 or water for wetland habitat purposes in accordance with a binding stream or wetland
300 enhancement agreement, restoration agreement, or establishment agreement, will satisfy these
301 requirements. An assessment plan approved by a non-governmental conservation organization
302 or a state or federal agency that is statutorily tasked with natural resource management may
303 satisfy some or all of these requirements.

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

- 305 1. The permitting authority will evaluate the potential impacts on the aquatic environment from the
306 proposed project and determine whether the proposed project complies with these Procedures.
307 The permitting authority has the discretion to approve a project only if the applicant has
308 demonstrated the following:
- 309 a. A sequence of actions has been taken to first avoid, then to minimize, and lastly compensate for
310 adverse impacts that cannot be practicably avoided or minimized to waters of the state;
 - 311 b. The potential impacts will not contribute to a net loss of the overall abundance, diversity, and
312 condition of aquatic resources in a watershed (or multiple watersheds when compensatory
313 mitigation is permitted in another watershed as set forth in section IV.B.5(d));
 - 314 c. The discharge of dredged or fill material will not violate water quality standards and will be
315 consistent with all applicable water quality control plans and policies for water quality control;
316 and
 - 317 d. The discharge of dredged or fill material will not cause or contribute to significant degradation of

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318 the waters of the state.

319 2. The permitting authority shall rely on any final aquatic resource report verified by the Corps to
320 determine boundaries of waters of the U.S. For all other wetland area delineations, the permitting
321 authority shall review and approve delineations that are performed using the methods described in
322 section III.

323 3. Alternatives Analysis Review Requirements:

324 a. The purpose of the alternatives analysis is to identify the LEDPA. The permitting authority will
325 be responsible for determining the sufficiency of an alternatives analysis except as described in
326 3(b) below. In all cases, the alternatives analysis must establish that the proposed project
327 alternative is the LEDPA in light of all potential direct, secondary (indirect), and cumulative
328 impacts on the physical, chemical, and biological elements of the aquatic ecosystem.

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

330 In reviewing and approving the alternatives analysis for discharges of dredged or fill material
331 that impact waters of the U.S., the permitting authority shall defer to the Corps' determinations
332 on the adequacy of the alternatives analysis, or rely on a draft alternatives analysis if no final
333 determination has been made, unless the Executive Officer or Executive Director determines
334 that (1) the permitting authority was not provided an adequate opportunity to collaborate in the
335 development of the alternatives analysis, (2) the alternatives analysis does not adequately
336 address aquatic resource issues identified in writing by the Executive Officer or Executive
337 Director to the Corps during the development of the alternatives analysis, or (3) the proposed
338 project and all of the identified alternatives would not comply with water quality standards.

339 If the project also includes discharges to waters of the state outside of federal jurisdiction, the
340 permitting authority shall require the applicant to supplement the alternatives analysis to include
341 waters of the state outside of federal jurisdiction unless the applicant has consulted with the
342 permitting authority and the alternatives analysis addresses all issues identified by the
343 permitting authority during the consultation process. If an alternatives analysis is not required
344 by the Corps for discharges of dredged or fill material to waters of the U.S., the permitting
345 authority shall require an alternatives analysis for the entire project in accordance with the State
346 Supplemental Dredge or Fill Guidelines, unless the project is exempt under section IV.A.1(g)
347 above.

348 The permitting authority shall not apply the presumption set forth in the State Supplemental
349 Dredge or Fill Guidelines, section 230.10(a)(3) to any non-vegetated waters of the U.S. that the
350 Corps does not classify as a special aquatic site (as defined in subpart E of U.S. EPA's section
351 404(b)(1) Guidelines).

352 4. Prior to or concurrent with issuance of the Order, the permitting authority will approve the final
353 restoration plan for temporary impacts. Generally, the permitting authority will approve the final
354 restoration plan when it issues the Order. The permitting authority may approve the final restoration
355 plan after it issues the Order. In such cases the permitting authority shall include as a condition of
356 the Order that the applicant receive approval of the final restoration plan prior to initiating the
357 temporary impacts and shall specify a process for approving the final restoration plan.

358 5. Compensatory Mitigation

359 a. Compensatory mitigation, in accordance with the State Supplemental Dredge or Fill Guidelines,
360 Subpart J, may be required to ensure that an activity complies with these Procedures.
361 Consistent with section 230.93(a)(2) of the State Supplemental Guidelines, subject to the

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- 362 permitting authority's approval, compensatory mitigation may be performed using methods of
363 restoration, enhancement, establishment, and in certain circumstances preservation.
364 Restoration should generally be the first option considered because the likelihood of success is
365 greater and the impacts to potentially ecologically important uplands are reduced compared to
366 establishment, and the potential gains in terms of aquatic resource functions are greater,
367 compared to enhancement and preservation.
- 368 b. Where feasible, the permitting authority will consult and coordinate with any other public
369 agencies that have concurrent mitigation requirements in order to achieve multiple
370 environmental benefits with a single mitigation project, thereby reducing the cost of compliance
371 to the applicant.
- 372 c. Amount: The amount of compensatory mitigation will be determined on a project-by-project
373 basis in accordance with State Supplemental Dredge or Fill Guidelines, section 230.93(f). The
374 permitting authority may take into account recent anthropogenic degradation to the aquatic
375 resource and the potential and existing functions and conditions of the aquatic resource. The
376 permitting authority may reduce the amount of compensatory mitigation if buffer areas adjacent
377 to the compensatory mitigation are also required to be maintained as part of the compensatory
378 mitigation management plan. The amount of compensatory mitigation required by the
379 permitting authority will vary depending on which of the following strategies the applicant uses to
380 locate the mitigation site within a watershed.
- 381 Strategy 1: Applicant locates compensatory mitigation using a watershed approach based on a
382 watershed profile developed from a watershed plan that: (1) has been approved for use by the
383 permitting authority and analyzed in an environmental document, (2) includes monitoring
384 provisions, and (3) includes guidance on compensatory mitigation opportunities.
- 385 Strategy 2: Applicant locates compensatory mitigation using a watershed approach based on a
386 watershed profile developed for a project evaluation area, and demonstrates that the mitigation
387 project will contribute to the sustainability of watershed functions and the overall health of the
388 watershed area's aquatic resources.
- 389 Generally, the amount of compensatory mitigation required under Strategy 1 will be less than
390 the amount of compensatory mitigation required under Strategy 2 since the level of certainty
391 that a compensatory mitigation project will meet its performance standards increases if the
392 compensatory mitigation project complies with a watershed plan as described above. Certainty
393 increases when there is a corresponding increase in understanding of watershed conditions,
394 which is increased when using a watershed plan as described above to determine
395 compensatory mitigation requirements.
- 396 A minimum of one-to-one mitigation ratio,¹⁵ measured as area or length, is required to
397 compensate for wetland or stream losses when compensatory mitigation is required. Subject to
398 the permitting authority's approval, the ratio may be satisfied using any of the methods identified
399 in section IV.B.5(a). A higher overall mitigation ratio shall be used where necessary to ensure
400 replacement of lost aquatic resource functions, as described in the State Supplemental Dredge
401 or Fill Guidelines, section 230.93(f). Where temporary impacts will be restored to pre-project
402 conditions, the permitting authority may require compensatory mitigation for temporal loss from
403 the temporary impacts.

¹⁵ For temporary impacts, the minimum one-to-one mitigation ratio for wetland or stream losses is not applicable for temporal losses for impacts that are fully restored to pre-project conditions.

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- 404 d. Type and Location: The permitting authority will evaluate the applicant's proposed mitigation
405 type and location based on the applicant's use of a watershed approach based on a watershed
406 profile. The permitting authority will determine the appropriate type and location of
407 compensatory mitigation based on watershed conditions, impact size, location and spacing,
408 aquatic resource values, relevant watershed plans, and other considerations.
- 409 In general, the required compensatory mitigation should be located within the same watershed
410 as the impact site, but the permitting authority may approve compensatory mitigation in a
411 different watershed. For example, if a proposed project may affect more than one watershed,
412 then the permitting authority may determine that locating all required project mitigation in one
413 area is ecologically preferable to requiring mitigation within each watershed.
- 414 e. Final Compensatory Mitigation Plan: The permitting authority will review and approve the final
415 compensatory mitigation plan submitted by the applicant to ensure mitigation comports with the
416 State Supplemental Dredge or Fill Guidelines, Water Code requirements, applicable water
417 quality standards, and other appropriate requirements of state law. The level of detail in the
418 final plan shall be sufficient to accurately evaluate whether compensatory mitigation offsets the
419 adverse impacts attributed to a project considering the overall size and scope of impact. The
420 compensatory mitigation plan shall be sufficient to provide the permitting authority with a
421 reasonable assurance that replacement of the full range of lost aquatic resource(s) and/or
422 functions will be provided in perpetuity.
- 423 Generally, the permitting authority will approve the final compensatory mitigation plan when it
424 issues the Order. Where compliant with CEQA, the permitting authority may approve the final
425 compensatory mitigation plan after it issues the Order. In such cases the permitting authority
426 shall include as a condition of the Order that the applicant receive approval of the final mitigation
427 plan prior to discharging dredged or fill material to waters of the state and shall specify a
428 process for approving the final mitigation plan.
- 429 f. Financial Security: Where deemed necessary by the permitting authority, provision of a
430 financial security (e.g., letter of credit or performance bond) shall be a condition of the Order. In
431 this case, the permitting authority will approve the financial security to ensure compliance with
432 compensatory mitigation plan requirements. The financial security shall be in a form consistent
433 with the California Constitution and state law.
- 434 g. Term of Mitigation Obligation: The permitting authority may specify in the Order the conditions
435 that must be met in order for the permitting authority to release the permittee from the mitigation
436 obligation, including compensatory mitigation performance standards and long-term
437 management funding obligations.
- 438 6. The permitting authority shall provide public notice in accordance with Water Code section 13167.5
439 for waste discharge requirements. The permitting authority shall provide public notice of an
440 application for water quality certification in accordance with California Code of Regulations, title 23,
441 section 3858. If the permitting authority receives comments on the application or there is
442 substantial public interest in the project, the permitting authority shall also provide public notice of
443 the draft Order, or draft amendment of the Order, unless circumstances warrant otherwise.
- 444 7. The permitting authority will review and approve the final monitoring and reporting requirements for
445 all projects. Monitoring and reporting may be required to demonstrate compliance with the terms of
446 the Order.

447 C. General Orders

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448 Discharges of dredged or fill material to waters of the state that are regulated under a general order are
449 not subject to the requirements set forth in sections IV.A and IV.B. Applicants applying to enroll under a
450 general order shall follow the instructions specified in the general order for obtaining coverage.

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

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

458 **D. Activities and Areas Excluded from the Application Procedures for Regulation of** 459 **Discharges of Dredged or Fill Material to Waters of the State**

460 The application procedures specified in sections IV.A and IV.B do not apply to proposed discharges of
461 dredged or fill material to waters of the state from the following activities¹⁶ or to the following areas.
462 These exclusions do not, however, affect the Water Board's authority to issue or waive waste discharge
463 requirements (WDRs) or take other actions for the following activities or areas to the extent authorized
464 by the Water Code.

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

466 a. Activities that are exempt under CWA section 404(f) (33 USC § 1344(f)).¹⁷ The permitting
467 authority shall use 33 CFR 323.4 (1986) and 40 CFR 232.3 (1988) to determine whether certain
468 activities are exempt under CWA section 404(f). These regulations are hereby incorporated by
469 reference and shall apply to all waters of the state. Consistent with CWA section 404(f)(2) and
470 40 CFR section 232.3, any discharge of dredged or fill material to a water of the state incidental
471 to any of these activities is not exempt under CWA section 404(f) and shall be subject to the
472 application procedures set forth in sections IV.A and IV.B, if (1) the purpose of the activity is
473 bringing a water of the state into a use to which it was not previously subject, where the flow or
474 circulation of water of the state may be impaired or the reach of such waters be reduced, or (2)
475 the discharge contains any toxic pollutant listed in CWA section 307.

476 b. Suction dredge mining activities for mineral recovery regulated under CWA section 402.

477 c. Routine and emergency operation and maintenance activities conducted by public agencies,
478 water utilities, or special districts that result in discharge of dredged or fill material to artificial,
479 existing waters of the state:

480 i. currently used and maintained primarily for one or more of the purposes listed in section
481 II.3.d. (ii), (iii), (iv), (x), or (xi); or

482 ii. for the purpose of preserving the line, grade, volumetric or flow capacity within the
483 existing footprint of a flood control or stormwater conveyance facility.

484 This exclusion does not relieve public agencies, water utilities or special districts of their

¹⁶ Note that not all activities identified in this section necessarily result in discharges of dredged or fill material to waters of the state.

¹⁷ Unless otherwise specified, all federal statutes and regulations that are incorporated by reference into these Procedures are the versions of those federal statutes and regulations that are in effect as of April 2, 2019.

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485 obligation to submit an application for a water quality certification consistent with California
486 Code of Regulations, title 23, section 3856 or waste discharge requirements consistent with
487 Water Code section 13260, whichever is applicable, to the permitting authority for these
488 activities; or their responsibility to avoid and minimize adverse impacts to aquatic resources and
489 beneficial uses from these activities. The permitting authority has full discretion to determine
490 whether an activity described above qualifies for this exclusion based on the application
491 submitted and other relevant information. If the permitting authority determines that an activity
492 qualifies for this exclusion, the permitting authority retains full authority and discretion under the
493 Porter-Cologne Water Quality Control Act to determine how to regulate the discharge of
494 dredged or fill material. Where a permitting authority has already determined it appropriate to
495 regulate these types of activities in specific instances, this exclusion in no way disturbs or limits
496 the permitting authority's current regulation of these types of activities. This exclusion does not
497 apply to the discharge of dredged or fill material to a water of the state approved by an agency
498 as compensatory mitigation.

499 d. Routine operation and maintenance activities that result in discharge of dredged or fill material
500 to artificially-created waters currently used and maintained primarily for one or more of the
501 purposes listed in section II.3.d. (i), (ii), (iii), (vi), (vii), (x), or (xi). This exclusion does not apply
502 to the discharge of dredged or fill material to (a) a water of the U.S., (b) a water specifically
503 identified in a water quality control plan, (c) a water created by modification of a water of the
504 state, or (d) a water approved by an agency as compensatory mitigation.

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

506 a. Wetland areas that qualify as prior converted cropland (PCC) within the meaning of 33 CFR
507 section 328.3(b)(2). The applicant may establish that the area is PCC by providing relevant
508 documentary evidence that the area qualifies as PCC and has not been abandoned due to five
509 consecutive years of non-use for agricultural purposes, or by providing a current PCC
510 certification by the Natural Resources Conservation Service, the Corps, or the U.S. EPA to the
511 permitting authority.

512 b. Wetlands that are, or have been, in rice cultivation (including wild rice) within the last five years
513 as of April 2, 2019 and have not been abandoned due to five consecutive years of non-use in
514 rice production.

515 c. The following features used for agricultural purposes:

516 i. Ditches with ephemeral flow that are not a relocated water of the state or excavated in a
517 water of the state;

518 ii. Ditches with intermittent flow that are not a relocated water of the state or excavated in a
519 water of the state, or that do not drain wetlands other than any wetlands described in
520 sections (iv) or (v);

521 iii. Ditches that do not flow, either directly or through another water, into another water of
522 the state;

523 iv. Artificially irrigated areas that would revert to dry land should application of waters to that
524 area cease; or

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525 v. Artificial, constructed lakes and ponds created in dry land such as farm and stock
526 watering ponds, irrigation ponds, and settling basins.

527 The exclusions in section IV.D.2 do not apply to discharges of dredged or fill material that convert
528 wetland areas to a non-agricultural use.

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

536 V. Definitions

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

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

543 **Active Surface Mining** means operations that, in accordance with Division 2, Chapter 9 of the Surface
544 Mining and Reclamation Act of 1975, have an approved reclamation plan, and for which reclamation
545 has not been certified as complete by the local lead agency with the concurrence of the Department of
546 Conservation.

547 **Alternatives Analysis** is the process of analyzing project alternatives, including the proposed project,
548 to determine the alternative that is the least environmentally damaging practicable alternative (LEDPA).

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

552 **Discharge of Dredged or Fill Material** shall have the same meanings as they are used in the federal
553 Clean Water Act and 40 CFR section 232.2, but (1) shall include discharges to waters of the state that
554 are not waters of the U.S. and (2) any demonstrations described in 40 CFR section 232.2(3)(i) shall be
555 made to the permitting authority instead of the Corps or U.S. EPA. Placement of dredged or fill material
556 in a manner that could not affect the quality of waters of the state is not considered a discharge of
557 dredged or fill material.

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

560 **Ecological Restoration and Enhancement Project** means the project is voluntarily undertaken for the
561 purpose of assisting or controlling the recovery of an aquatic ecosystem that has been degraded,
562 damaged or destroyed to restore some measure of its natural condition and to enhance the beneficial
563 uses, including potential beneficial uses of water.

564 Such projects are undertaken:

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565 1) in accordance with the terms and conditions of a binding stream or wetland enhancement or
566 restoration agreement, or a wetland establishment agreement, between the real property
567 interest owner or the entity conducting the habitat restoration or enhancement work and:

568 a. a federal or state resource agency, including, but not limited to, the U.S. Fish and
569 Wildlife Service, Natural Resources Conservation Service, Farm Service Agency,
570 National Marine Fisheries Service, National Oceanic and Atmospheric Administration,
571 U.S. Forest Service, U.S. Bureau of Land Management, California Department of Fish
572 and Wildlife, California Wildlife Conservation Board, California Coastal Conservancy or
573 the Delta Conservancy;

574 b. a local agency with the primary function of managing land or water for wetland habitat
575 purposes; or

576 c. a non-governmental conservation organization; or

577 2) by a state or federal agency that is statutorily tasked with natural resource management.

578 These projects do not include the conversion of a stream or natural wetland to uplands or stream
579 channelization. It is recognized that Ecological Restoration and Enhancement Projects may require
580 ongoing maintenance or management to maximize fish, wildlife, habitat, or other ecological benefits, or
581 filling gullied stream channels and similar rehabilitative activities to re-establish stream and meadow
582 hydrology. Changes in wetland plant communities that occur when wetland hydrology is more fully
583 restored during rehabilitation activities are not considered a conversion to another aquatic habitat type.
584 These projects also do not include actions required under a Water Board Order for mitigation, actions to
585 service required mitigation, or actions undertaken for the primary purpose of land development.

586 **Environmental Document** means a document prepared for compliance with the California
587 Environmental Quality Act (CEQA) or the National Environmental Policy Act (NEPA).

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

590 **LEDPA** means the least environmentally damaging practicable alternative. The determination of
591 practicable alternatives shall be consistent with the State Supplemental Dredge or Fill Guidelines,
592 section 230.10(a).

593 **Normal Circumstances** is the soil and hydrologic conditions that are normally present, without regard
594 to whether the vegetation has been removed. The determination of whether normal circumstances
595 exist in a disturbed area involves an evaluation of the extent and relative permanence of the physical
596 alteration of wetland hydrology and hydrophytic vegetation, and consideration of the purpose and cause
597 of the physical alterations to hydrology and vegetation.

598 **Order** means waste discharge requirements, waivers of waste discharge requirements, or water quality
599 certification.

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

602 **Project** means the whole of an action that includes a discharge of dredged or fill material to waters of
603 the state.

604 **Project Evaluation Area** means an area that includes the project impact site, and/or the compensatory
605 mitigation site, and is sufficiently large to evaluate the effects of the project and/or the compensatory

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606 mitigation on the abundance, diversity, and condition of aquatic resources in an ecologically meaningful
607 unit of the watershed. The size and location of the ecologically meaningful unit shall be based on a
608 reasonable rationale.

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

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

613 **Watershed Approach** means an analytical process for evaluating the environmental effects of a
614 proposed project and making decisions that support the sustainability or improvement of aquatic
615 resources in a watershed. The watershed approach recognizes that the abundance, diversity, and
616 condition of aquatic resources in a watershed support beneficial uses. Diversity of aquatic resources
617 includes both the types of aquatic resources and the locations of those aquatic resources in a
618 watershed. Consideration is also given to understanding historic and potential aquatic resource
619 conditions, past and projected aquatic resource impacts in the watershed, and terrestrial connections
620 between aquatic resources. The watershed approach can be used to evaluate avoidance and
621 minimization of direct, secondary (indirect), and cumulative project impacts. It also can be used in
622 determining compensatory mitigation requirements.

623 **Watershed Plan** means a document, or a set of documents, developed in consultation with relevant
624 stakeholders, a specific goal of which is aquatic resource restoration, establishment, enhancement, and
625 preservation within a watershed. A watershed plan addresses aquatic resource conditions in the
626 watershed, multiple stakeholder interests, and land uses. Watershed plans should include information
627 about implementing the watershed plan. Watershed plans may also identify priority sites for aquatic
628 resource restoration and protection. Examples of watershed plans include special area management
629 plans, advance identification programs, and wetland management plans. The permitting authority may
630 approve the use of other plans, including for example, Habitat Conservation Plans (HCPs), Natural
631 Community Conservation Plans (NCCPs), or municipal stormwater permit watershed management
632 programs as watershed plans, if they substantially meet the stated above. Any NCCP approved by the
633 California Department of Fish and Wildlife before December 31, 2020, and any regional HCP approved
634 by the United States Fish and Wildlife Service before December 31, 2020, which includes biological
635 goals for aquatic resources, shall be used by the permitting authority as a watershed plan for such
636 aquatic resources, unless the permitting authority determines in writing that the HCP or NCCP does not
637 substantially meet the definition of a watershed plan for such aquatic resources.

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

643 The watershed profile shall include information sufficient to evaluate direct, secondary (indirect), and
644 cumulative impacts of project and factors that may favor or hinder the success of compensatory
645 mitigation projects and help define watershed goals. It may include such things as current trends in
646 habitat loss or conservation, cumulative impacts of past development activities, current development
647 trends, the presence and need of sensitive species, and chronic environmental problems or site
648 conditions such as flooding or poor water quality.

649 The scope and detail of the watershed profile shall be commensurate with the magnitude of impact
650 associated with the proposed project. Information sources include online searches, maps, watershed

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651 plans, and possibly some fieldwork if necessary. In some cases, field data may need to be collected in
652 the project evaluation area to confirm the reported condition. Some or all of the information may be
653 obtained from a watershed plan. Watershed profiles for subsequent projects in a watershed can be
654 used to track the cumulative effectiveness of the permitting authority's decisions.

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

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

660 It is the intent of the Water Boards to be consistent with the U.S. EPA's 404(b)(1) Guidelines where
661 feasible. Due to jurisdictional and procedural differences, some modifications to the U.S. EPA's
662 404(b)(1) Guidelines were necessary. Generally, these changes or deletions were made to reduce
663 redundancy (especially where sufficiently described elsewhere in these Procedures) and to account for
664 other state requirements. Note that the numbering scheme of the U.S. EPA's 404(b)(1) Guidelines has
665 been retained in these State Supplemental Dredge or Fill Guidelines for the benefit of practitioners who
666 are familiar with the U.S. EPA's 404(b)(1) Guidelines. The State Supplemental Dredge or Fill
667 Guidelines describe how the Water Boards will implement the U.S. EPA's 404(b)(1) Guidelines under
668 these Procedures. The definitions contained herein apply to these Procedures, including the State
669 Supplemental Dredge or Fill Guidelines.

670 **Subpart A – General**

671 § 230.3 Definitions.

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

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

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

678 (i) The term disposal site means that portion of the “waters of the state” where the discharge of
679 dredged or fill material is permitted and involves a bottom surface area and any overlying volume of
680 water. In the case of wetlands or ephemeral streams on which surface water is not present, the
681 disposal site consists of the wetland or ephemeral stream surface area.

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

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

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

687 (q1) Special aquatic sites means those sites identified in subpart E. Special aquatic sites are
688 geographic areas, large or small, possessing special ecological characteristics of productivity,
689 habitat, wildlife protection, or other important and easily disrupted ecological values. These areas
690 are generally recognized as significantly influencing or positively contributing to the general overall
691 environmental health or vitality of the entire ecosystem of a region. (See § 230.10 (a)(3))

692 § 230.6 Adaptability

693 (a) The manner in which these Guidelines are used depends on the physical, biological, and
694 chemical nature of the proposed extraction site, the material to be discharged, and the candidate
695 disposal site, including any other important components of the ecosystem being evaluated.
696 Documentation to demonstrate knowledge about the extraction site, materials to be extracted, and
697 the candidate disposal site is an essential component of guideline application. These Guidelines
698 allow evaluation and documentation for a variety of activities, ranging from those with large,
699 complex impacts on the aquatic environment to those for which the impact is likely to be innocuous.

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700 It is unlikely that the Guidelines will apply in their entirety to any one activity, no matter how
701 complex. It is anticipated that substantial numbers of applications will be for minor, routine activities
702 that have little, if any, potential for significant degradation of the aquatic environment. It generally is
703 not intended or expected that extensive testing, evaluation or analysis will be needed to make
704 findings of compliance in such routine cases.

705 (b) The Guidelines user, including the agency or agencies responsible for implementing the
706 Guidelines, must recognize the different levels of effort that should be associated with varying
707 degrees of impact and require or prepare commensurate documentation. The level of
708 documentation should reflect the significance and complexity of the discharge activity.

709 (c) An essential part of the evaluation process involves making determinations as to the relevance
710 of any portion(s) of the Guidelines and conducting further evaluation only as needed. However,
711 where portions of the Guidelines review procedure are “short form” evaluations, there still must be
712 sufficient information (including consideration of both individual and cumulative impacts) to support
713 the decision of whether to specify the site for disposal of dredged or fill material and to support the
714 decision to curtail or abbreviate the evaluation process. The presumption against the discharge in
715 [§ 230.10](#) applies to this decision-making.

716 **Subpart B – Compliance with Guidelines**

717 § 230.10 Restrictions on Discharge

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

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

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

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

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

731 (3) Where activity associated with a discharge which is proposed for a special aquatic site (as
732 defined in subpart E) does not require access or proximity to or siting within the special aquatic
733 site in question to fulfill its basic purpose (i.e., is not “water dependent”), practicable alternatives
734 that do not involve special aquatic sites are presumed to be available, unless clearly
735 demonstrated otherwise. In addition, where a discharge is proposed for a special aquatic site,
736 all practicable alternatives to the proposed discharge which do not involve a discharge into a
737 special aquatic site are presumed to have less adverse impact on the aquatic ecosystem,
738 unless clearly demonstrated otherwise.

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

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

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

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

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

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

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

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

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

763 **Subpart E –Special Aquatic Sites**

764 § 230.40 Sanctuaries and refuges

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

767 § 230.41 Wetlands.

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

769 § 230.42 Mud Flats.

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

776 § 230.43 Vegetated shallows.

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

780 § 230.45 Riffle and Pool Complexes.

781 (a) Steep gradient sections of streams are sometimes characterized by riffle and pool complexes. Such
782 stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over

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783 a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen
784 levels in the water. Pools are deeper areas associated with riffles. Pools are characterized by a slower
785 stream velocity, a streaming flow, a smooth surface, and a finer substrate. Riffle and pool complexes
786 are particularly valuable habitat for fish and wildlife.

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

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

792 § 230.70 Actions concerning the location of the discharge.

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

- 795 (a) Locating and confining the discharge to minimize smothering of organisms;
- 796 (b) Designing the discharge to avoid a disruption of periodic water inundation patterns;
- 797 (c) Selecting a disposal site that has been used previously for dredged material discharge;
- 798 (d) Selecting a disposal site at which the substrate is composed of material similar to that being
799 discharged, such as discharging sand on sand or mud on mud;
- 800 (e) Selecting a disposal site, the discharge point, and the method of discharge to minimize the
801 extent of any plume;
- 802 (f) Designing the discharge of dredged or fill material to minimize or prevent the creation of standing
803 bodies of water in areas of normally fluctuating water levels, and minimize or prevent the drainage
804 of areas subject to such fluctuations.

805 § 230.71 Actions concerning the material to be discharged

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

- 808 (a) Disposal of dredged material in such a manner that physiochemical conditions are maintained,
809 and the potency and availability of pollutants are reduced.
- 810 (b) Limiting the solid, liquid, and gaseous components of material to be discharged at a particular
811 site;
- 812 (c) Adding treatment substances to the discharge material;
- 813 (d) Utilizing chemical flocculants to enhance the deposition of suspended particulates in diked
814 disposal areas.

815 § 230.72 Actions controlling the material after discharge.

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

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

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

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- 821 (2) Using lined containment areas to reduce leaching where leaching of chemical constituents
822 from the discharged material is expected to be a problem;
- 823 (b) Capping in-place contaminated material with clean material or selectively discharging the most
824 contaminated material first to be capped with the remaining material;
- 825 (c) Maintaining and containing discharged material properly to prevent point and nonpoint sources
826 of pollution;
- 827 (d) Timing the discharge to minimize impact, for instance during periods of unusual high-water
828 flows, wind, wave, and tidal actions.
- 829 § 230.73 Actions affecting the method of dispersion.
- 830 The effects of a discharge can be minimized by the manner in which it is dispersed, such as:
- 831 (a) Where environmentally desirable, distributing the dredged material widely in a thin layer at the
832 disposal site maintain natural substrate contours and elevation;
- 833 (b) Orienting a dredged or fill material mound to minimize undesirable obstruction to the water
834 current or circulation pattern, and utilizing natural bottom contours to minimize the size of the
835 mound;
- 836 (c) Using silt screens or other appropriate methods to confine suspended particulate/turbidity to a
837 small area where settling or removal can occur;
- 838 (d) Making use of currents and circulation patterns to mix, disperse and dilute the discharge;
- 839 (e) Minimizing water column turbidity by using a submerged diffuser system. A similar effect can be
840 accomplished by submerging pipeline discharges or otherwise releasing materials near the bottom;
- 841 (f) Selecting sites or managing discharges to confine and minimize the release of suspended
842 particulates to give decreased turbidity levels and to maintain light penetration for organisms;
- 843 (g) Setting limitations on the amount of material to be discharged per unit of time or volume of
844 receiving water.
- 845 § 230.74 Actions related to technology.
- 846 Discharge technology should be adapted to the needs of each site. In determining whether the
847 discharge operation sufficiently minimizes adverse environmental impacts, the applicant should
848 consider:
- 849 (a) Using appropriate equipment or machinery, including protective devices, and the use of such
850 equipment or machinery in activities related to the discharge of dredged or fill material;
- 851 (b) Employing appropriate maintenance and operation on equipment or machinery, including
852 adequate training, staffing, and working procedures;
- 853 (c) Using machinery and techniques that are especially designed to reduce damage to wetlands.
854 This may include machines equipped with devices that scatter rather than mound excavated
855 materials, machines with specially designed wheels or tracks, and the use of mats under heavy
856 machines to reduce wetland surface compaction and rutting;
- 857 (d) Designing access roads and channels spanning structures using culverts, open channels, and
858 diversions that will pass both low and high-water flows, accommodate fluctuating water levels, and
859 maintain circulation and faunal movement;
- 860 (e) Employing appropriate machinery and methods of transport of the material for discharge.

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861 § 230.75 Actions affecting plant and animal populations.

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

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

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

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

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

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

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

882 § 230.76 Actions affecting human use.

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

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

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

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

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

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

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

895 § 230.77 Other actions.

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

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

899 (c) In dredging projects funded by Federal agencies other than the Corps of Engineers, maintain
900 desired water quality of the return discharge through agreement with the Federal funding authority

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901 on scientifically defensible pollutant concentration levels in addition to any applicable water quality
902 standards;

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

906 **Subpart J – Compensatory Mitigation for Losses of Aquatic Resources**

907 § 230.91 Purpose and general considerations.

908 (a) Purpose.

909 (1) The purpose of this subpart is to establish standards and criteria for the use of all types of
910 compensatory mitigation, including on-site and off-site permittee-responsible mitigation,
911 mitigation banks, and in-lieu fee mitigation to offset unavoidable impacts to waters of the state
912 authorized through the issuance of Orders.

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

916 § 230.92 Definitions.

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

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

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

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

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

936 Condition means the relative ability of an aquatic resource to support and maintain a community of
937 organisms having a species composition, diversity, and functional organization comparable to
938 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 site. The
941 measure of aquatic functions is based on the resources restored, established, enhanced, or
942 preserved.

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- 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 aquatic
946 functions is based on the resources impacted by the authorized activity.
- 947 Enhancement means the manipulation of the physical, chemical, or biological characteristics of an
948 aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s).
949 Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a
950 decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic
951 resource area.
- 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 upland site.
954 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 specific
956 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 resource.
- 960 In-lieu fee program means a program involving the restoration, establishment, enhancement, and/or
961 preservation of aquatic resources through funds paid to a governmental or non-profit natural
962 resources management entity to satisfy compensatory mitigation requirements for Orders. Similar to
963 a mitigation bank, an in-lieu fee program sells compensatory mitigation credits to permittees whose
964 obligation to provide compensatory mitigation is then transferred to the in-lieu program sponsor.
965 However, the rules governing the operation and use of in-lieu fee programs are somewhat different
966 from the rules governing operation and use of mitigation banks. The operation and use of an in-lieu
967 fee program are governed by an in-lieu fee program instrument.
- 968 In-lieu fee program instrument means the legal document for the establishment, operation, and use of
969 an in-lieu fee program.
- 970 Instrument means mitigation banking instrument or in-lieu fee program instrument.
- 971 Mitigation bank means a site, or suite of sites, where resources (e.g., wetlands, streams, riparian
972 areas) are restored, established, enhanced, and/or preserved for the purpose of providing
973 compensatory mitigation for impacts authorized by Orders. In general, a mitigation bank sells
974 compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is
975 then transferred to the mitigation bank sponsor. The operation and use of a mitigation bank are
976 governed by a mitigation banking instrument.
- 977 Mitigation banking instrument means the legal document for the establishment, operation, and use of
978 an in-lieu fee program.
- 979 Off-site means an area that is neither located on the same parcel of land as the impact site, nor on a
980 parcel of land contiguous to the parcel containing the impact site.
- 981 On-site means an area located on the same parcel of land as the impact site, or on a parcel of land
982 contiguous to the impact site.
- 983 Out-of-kind means a resource of a different structural and functional type from the impacted resource.

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984 Performance standards are observable or measurable physical (including hydrological), chemical
985 and/or biological attributes that are used to determine if a compensatory mitigation project meets its
986 objectives.

987 Permittee-responsible mitigation means an aquatic resource restoration, establishment,
988 enhancement, and/or preservation activity undertaken by the permittee (or an authorized agent or
989 contractor) to provide compensatory mitigation for which the permittee retains full responsibility.

990 Preservation means the removal of a threat to, or preventing the decline of, aquatic resources by an
991 action in or near those aquatic resources. This term includes activities commonly associated with the
992 protection and maintenance of aquatic resources through the implementation of appropriate legal and
993 physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

994 Re-establishment means the manipulation of the physical, chemical, or biological characteristics of a
995 site with the goal of returning natural/historic functions to a former aquatic resource. Re-
996 establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource
997 area and functions.

998 Reference aquatic resources are a set of aquatic resources that represent the full range of variability
999 exhibited by a regional class of aquatic resources as a result of natural processes and anthropogenic
1000 disturbances.

1001 Rehabilitation means the manipulation of the physical, chemical, or biological characteristics of a site
1002 with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation
1003 results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

1004 Restoration means the manipulation of the physical, chemical, or biological characteristics of a site
1005 with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the
1006 purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-
1007 establishment and rehabilitation.

1008 Service area means the geographic area within which impacts can be mitigated at a specific
1009 mitigation bank or an in-lieu fee program, as designated in its instrument.

1010 Services mean the benefits that human populations receive from functions that occur in ecosystems.

1011 Sponsor means any public or private entity responsible for establishing, and in most circumstances,
1012 operating a mitigation bank or in-lieu fee program.

1013 Temporal loss is the time lag between the loss of aquatic resource functions caused by the permitted
1014 impacts and the replacement of aquatic resource functions at the compensatory mitigation site.

1015 Higher compensation ratios may be required to compensate for temporal loss. When the
1016 compensatory mitigation project is initiated prior to, or concurrent with, the permitted impacts, the
1017 permitting authority may determine that compensation for temporal loss is not necessary, unless the
1018 resource has a long development time.

1019 Watershed means a land area that drains to a common waterway, such as a stream, lake, estuary,
1020 wetland, or ultimately the ocean.

1021 Watershed approach is defined above in the main text of these Procedures.

1022 Watershed plan is defined above in the main text of these Procedures.

1023 § 230.93 General compensatory mitigation requirements.

1024 (a) General Considerations.

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1025 (1) The fundamental objective of compensatory mitigation is to offset environmental losses
1026 resulting from unavoidable impacts to waters of the state authorized by Orders. The permitting
1027 authority must determine the compensatory mitigation to be required in an Order, based on
1028 what would be environmentally preferable. In making this determination, the permitting authority
1029 must assess the likelihood for ecological success and sustainability, and the location of the
1030 compensation site relative to the impact site and their significance within the watershed, and the
1031 costs of the compensatory mitigation project. In many cases, the environmentally preferable
1032 compensatory mitigation may be provided through mitigation banks or in-lieu fee programs
1033 because they usually involve consolidating compensatory mitigation projects where ecologically
1034 appropriate, consolidating resources, providing financial planning and scientific expertise (which
1035 often is not practical for permittee-responsible compensatory mitigation projects), reducing
1036 temporal losses of functions, and reducing uncertainty over project success. Compensatory
1037 mitigation requirements must be commensurate with the amount and type of impact that is
1038 associated with a particular Order. Applicants are responsible for proposing an appropriate
1039 compensatory mitigation option to offset unavoidable impacts.

1040 (2) Compensatory mitigation may be performed using methods of restoration, enhancement,
1041 establishment, and in certain circumstances preservation. Restoration should generally be the
1042 first option considered because the likelihood of success is greater and the impacts to
1043 potentially ecologically important uplands are reduced compared to establishment, and the
1044 potential gains in terms of aquatic resource functions are greater, compared to enhancement
1045 and preservation.

1046 (3) Compensatory mitigation projects may be sited on public or private lands. Credits for
1047 compensatory mitigation projects on public land must be based solely on aquatic resource
1048 functions provided by the compensatory mitigation project, over and above those provided by
1049 public programs already planned or in place. All compensatory mitigation projects must comply
1050 with the standards in section IV of these Procedures, if they are to be used to provide
1051 compensatory mitigation for activities authorized by Orders, regardless of whether they are sited
1052 on public or private lands and whether the sponsor is a governmental or private entity.

1053 (b) Type and location of compensatory mitigation.

1054 (1) In general, the required compensatory mitigation should be located within the same
1055 watershed as the impact site, and should be located where it is most likely to successfully
1056 replace lost functions and services, taking into account such watershed scale features as
1057 aquatic habitat diversity, habitat connectivity, relationships to hydrologic sources (including the
1058 availability of water rights), trends in land use, ecological benefits, and compatibility with
1059 adjacent land uses. When compensating for impacts to marine resources, the location of the
1060 compensatory mitigation site should be chosen to replace lost functions and services within the
1061 same marine ecological system (e.g., reef complex, littoral drift cell). Compensation for impacts
1062 to aquatic resources in coastal watersheds (watersheds that include a tidal water body) should
1063 also be located in a coastal watershed where practicable. Compensatory mitigation projects
1064 should not be located where they will increase risks to aviation by attracting wildlife to areas
1065 where aircraft-wildlife strikes may occur (e.g., near airports).

1066 (2) Mitigation bank credits. When permitted impacts are located within the service area of an
1067 approved mitigation bank, and the bank has the appropriate number and resource type of

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1068 credits available, the permittee's compensatory mitigation requirements may be met by securing
1069 those credits from the sponsor. Since an approved instrument (including an approved mitigation
1070 plan and appropriate real estate and financial assurances) for a mitigation bank is required to be
1071 in place before its credits can begin to be used to compensate for authorized impacts, use of a
1072 mitigation bank can help reduce risk and uncertainty, as well as temporal loss of resource
1073 functions and services. Mitigation bank credits are not released for debiting until specific
1074 milestones associated with the mitigation bank site's protection and development are achieved,
1075 thus use of mitigation bank credits can also help reduce risk that mitigation will not be fully
1076 successful. Mitigation banks typically involve larger, more ecologically valuable parcels, and
1077 more rigorous scientific and technical analysis, planning and implementation than permittee-
1078 responsible mitigation. Also, development of a mitigation bank requires site identification in
1079 advance, project-specific planning, and significant investment of financial resources that is often
1080 not practicable for many in-lieu fee programs. For these reasons, the permitting authority
1081 should give preference to the use of mitigation bank credits when these considerations are
1082 applicable. However, these same considerations may also be used to override this preference,
1083 where appropriate, as, for example, where an in-lieu fee program has released credits available
1084 from a specific approved in-lieu fee project, or a permittee-responsible project will restore an
1085 outstanding resource based on rigorous scientific and technical analysis.

1086 (3) In-lieu fee program credits. Where permitted impacts are located within the service area of
1087 an approved in-lieu fee program, and the sponsor has the appropriate number and resource
1088 type of credits available, the permittee's compensatory mitigation requirements may be met by
1089 securing those credits from the sponsor. Where permitted impacts are not located in the service
1090 area of an approved mitigation bank, or the approved mitigation bank does not have the
1091 appropriate number and resource type of credits available to offset those impacts, in-lieu fee
1092 mitigation, if available, is generally preferable to permittee-responsible mitigation. In-lieu fee
1093 projects typically involve larger, more ecologically valuable parcels, and more rigorous scientific
1094 and technical analysis, planning and implementation than permittee-responsible mitigation.
1095 They also devote significant resources to identifying and addressing high-priority resource
1096 needs on a watershed scale, as reflected in their compensation planning framework. For these
1097 reasons, the permitting authority should give preference to in-lieu fee program credits over
1098 permittee-responsible mitigation, where these considerations are applicable. However, as with
1099 the preference for mitigation bank credits, these same considerations may be used to override
1100 this preference where appropriate. Additionally, in cases where permittee-responsible
1101 mitigation is likely to successfully meet performance standards before advance credits secured
1102 from an in-lieu fee program are fulfilled, the permitting authority should also give consideration
1103 to this factor in deciding between in-lieu fee mitigation and permittee-responsible mitigation.

1104 (4) Permittee-responsible mitigation under a watershed approach. Where permitted impacts
1105 are not in the service area of an approved mitigation bank or in-lieu fee program that has the
1106 appropriate number and resource type of credits available, permittee-responsible mitigation is
1107 the only option. Where practicable and likely to be successful and sustainable, the resource
1108 type and location for the required permittee-responsible compensatory mitigation should be
1109 determined using the principles of a watershed approach as outlined in paragraph (c) of this
1110 section.

1111 (5) Permittee-responsible mitigation through on-site and in-kind mitigation. In cases where a
1112 watershed approach is not practicable, the permitting authority should consider opportunities to

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1113 offset anticipated aquatic resource impacts by requiring on-site and in-kind compensatory
1114 mitigation. The permitting authority must also consider the practicability of on-site
1115 compensatory mitigation and its compatibility with the proposed project.

1116 (6) Permittee-responsible mitigation through off-site and/or out-of-kind mitigation. If, after
1117 considering opportunities for on-site, in-kind compensatory mitigation as provided in paragraph
1118 (b)(5) of this section, the permitting authority determines that these compensatory mitigation
1119 opportunities are not practicable, are unlikely to compensate for the permitted impacts, or will be
1120 incompatible with the proposed project, and an alternative, practicable off-site and/or out-of-kind
1121 mitigation opportunity is identified that has a greater likelihood of offsetting the permitted
1122 impacts or is environmentally preferable to on-site or in-kind mitigation, the permitting authority
1123 should require that this alternative compensatory mitigation be provided.

1124 (c) Watershed approach to compensatory mitigation.

1125 (1) The permitting authority must use a watershed approach to establish compensatory
1126 mitigation requirements in Orders as described in the main text of the Procedures. Where a
1127 watershed plan is available, the permitting authority will determine whether the plan meets the
1128 definition of watershed plan in the Procedures and therefore is appropriate for use in the
1129 watershed approach for compensatory mitigation. In cases where the permitting authority
1130 determines that an appropriate watershed plan is available, the watershed approach should be
1131 based on that plan. Where no such plan is available, the watershed approach should be based
1132 on information provided by the project sponsor or available from other sources. The ultimate
1133 goal of a watershed approach is to maintain and improve the abundance, diversity, and
1134 condition of aquatic resources within watersheds through strategic selection of compensatory
1135 mitigation sites.

1136 (2) Considerations.

1137 (i) A watershed approach to compensatory mitigation considers the importance of condition,
1138 landscape position and resource type of compensatory mitigation projects for the
1139 sustainability of aquatic resource functions within the watershed. Such an approach
1140 considers how the condition, types, and locations of compensatory mitigation projects will
1141 provide the desired aquatic resource functions, and will continue to function over time in a
1142 changing landscape. It also considers the habitat requirements of important species, habitat
1143 loss or conversion trends, sources of watershed impairment, and current development
1144 trends, as well as the requirements of other regulatory and non-regulatory programs that
1145 affect the watershed, such as storm water management or habitat conservation programs. It
1146 includes the protection and maintenance of terrestrial resources, such as non-wetland
1147 riparian areas and uplands, when those resources contribute to or improve the overall
1148 ecological functioning of aquatic resources in the watershed. Compensatory mitigation
1149 requirements determined through the watershed approach should not focus exclusively on
1150 specific functions (e.g., water quality or habitat for certain species), but should provide, where
1151 practicable, the suite of functions typically provided by the affected aquatic resource.

1152 (ii) Locational factors (e.g., hydrology, surrounding land use) are important to the success of
1153 compensatory mitigation for impacted habitat functions and may lead to siting of such
1154 mitigation away from the project area. However, consideration should also be given to

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1155 functions and services (e.g., water quality, flood control, shoreline protection) that will likely
1156 need to be addressed at or near the areas impacted by the permitted impacts.

1157 (iii) A watershed approach may include on-site compensatory mitigation, off-site
1158 compensatory mitigation (including mitigation banks or in-lieu fee programs), or a
1159 combination of on-site and off-site compensatory mitigation.

1160 (iv) A watershed approach to compensatory mitigation should include, to the extent
1161 practicable, inventories of historic and existing aquatic resources, including identification of
1162 degraded aquatic resources, and identification of immediate and long-term aquatic resource
1163 needs within watersheds that can be met through permittee-responsible mitigation projects,
1164 mitigation banks, or in-lieu fee programs. Planning efforts should identify and prioritize
1165 aquatic resource restoration, establishment, and enhancement activities, and preservation of
1166 existing aquatic resources that are important for maintaining or improving ecological functions
1167 of the watershed. The identification and prioritization of resource needs should be as specific
1168 as possible, to enhance the usefulness of the approach in determining compensatory
1169 mitigation requirements.

1170 (v) A watershed approach is not appropriate in areas where watershed boundaries do not
1171 exist, such as marine areas. In such cases, an appropriate spatial scale should be used to
1172 replace lost functions and services within the same ecological system (e.g., reef complex,
1173 littoral drift cell).

1174 (3) Information Needs.

1175 (i) In the absence of a watershed plan determined by the permitting authority under
1176 paragraph (c)(1) of this section to be appropriate for use in the watershed approach, the
1177 permitting authority will use a watershed approach based on analysis of information
1178 regarding watershed conditions (as identified in the watershed profile) and needs, including
1179 potential sites for aquatic resource restoration activities and priorities for aquatic resource
1180 restoration and preservation. Such information includes: Current trends in habitat loss or
1181 conversion; cumulative impacts of past development activities, current development trends,
1182 the presence and needs of sensitive species; site conditions that favor or hinder the success
1183 of compensatory mitigation projects; and chronic environmental problems such as flooding or
1184 poor water quality.

1185 (ii) This information may be available from sources such as wetland maps; soil surveys; U.S.
1186 Geological Survey topographic and hydrologic maps; aerial photographs; information on rare,
1187 endangered and threatened species and critical habitat; local ecological reports or studies;
1188 and other information sources that could be used to identify locations for suitable
1189 compensatory mitigation projects in the watershed.

1190 (iii) The level of information and analysis needed to support a watershed approach must be
1191 commensurate with the scope and scale of the proposed impacts requiring an Order, as well
1192 as the functions lost as a result of those impacts.

1193 (4) Watershed Scale. The size of watershed addressed using a watershed approach should not
1194 be larger than is appropriate to ensure that the aquatic resources provided through

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1195 compensation activities will effectively compensate for adverse environmental impacts resulting
1196 from activities authorized by Orders. The permitting authority should consider relevant
1197 environmental factors and appropriate locally-developed standards and criteria when
1198 determining the appropriate watershed scale in guiding compensation activities.

1199 (d) Site selection.

1200 (1) The compensatory mitigation project site must be ecologically suitable for providing the
1201 desired aquatic resource functions. In determining the ecological suitability of the compensatory
1202 mitigation project site, the permitting authority must consider, to the extent practicable, the
1203 following factors:

1204 (i) Hydrological conditions, soil characteristics, and other physical and chemical
1205 characteristics;

1206 (ii) Watershed-scale features, such as aquatic habitat diversity, habitat connectivity, and
1207 other landscape scale functions;

1208 (iii) The size and location of the compensatory mitigation site relative to hydrologic sources
1209 (including the availability of water rights) and other ecological features;

1210 (iv) Compatibility with adjacent land uses and watershed management plans;

1211 (v) Reasonably foreseeable effects the compensatory mitigation project will have on
1212 ecologically important aquatic or terrestrial resources (e.g., shallow sub-tidal habitat, mature
1213 forests), cultural sites, or habitat for federally- or state-listed threatened and endangered
1214 species; and

1215 (vi) Other relevant factors including, but not limited to, development trends, anticipated land
1216 use changes, habitat status and trends, the relative locations of the impact and mitigation
1217 sites in the stream network, local or regional goals for the restoration or protection of
1218 particular habitat types or functions (e.g., re-establishment of habitat corridors or habitat for
1219 species of concern), water quality goals, floodplain management goals, and the relative
1220 potential for chemical contamination of the aquatic resources.

1221 (2) Permitting authorities may require on-site, off-site, or a combination of on-site and off-site
1222 compensatory mitigation to replace permitted losses of aquatic resource functions and services.

1223 (3) Applicants should propose compensation sites adjacent to existing aquatic resources or
1224 where aquatic resources previously existed.

1225 (e) Mitigation type.

1226 (1) In general, in-kind mitigation is preferable to out-of-kind mitigation because it is most likely to
1227 compensate for the functions and services lost at the impact site. For example, tidal wetland
1228 compensatory mitigation projects are most likely to compensate for unavoidable impacts to tidal
1229 wetlands, while perennial stream compensatory mitigation projects are most likely to

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1230 compensate for unavoidable impacts to perennial streams. Thus, except as provided in
1231 paragraph (e)(2) of this section, the required compensatory mitigation shall be of a similar type
1232 to the affected aquatic resource.

1233 (2) If the permitting authority determines, using the watershed approach in accordance with
1234 paragraph (c) of this section that out-of-kind compensatory mitigation will serve the aquatic
1235 resource needs of the watershed, the permitting authority may authorize the use of such out-of-
1236 kind compensatory mitigation. The basis for authorization of out-of-kind compensatory
1237 mitigation must be documented in the administrative record for the Order action.

1238 (3) For difficult-to-replace resources (e.g., bogs, fens, springs, streams, vegetated seasonal
1239 wetlands, slope and seep wetlands, vernal pools, and wet meadows) if further avoidance and
1240 minimization is not practicable, the required compensation should be provided, if practicable,
1241 through in-kind rehabilitation, enhancement, or preservation since there is greater certainty that
1242 these methods of compensation will successfully offset permitted impacts.

1243 (f) Amount of compensatory mitigation.

1244 (1) If the permitting authority determines that compensatory mitigation is necessary to offset
1245 unavoidable impacts to aquatic resources, the amount of required compensatory mitigation
1246 must be, to the extent practicable, sufficient to replace lost aquatic resource functions. In cases
1247 where appropriate functional or condition assessment methods or other suitable metrics are
1248 available, these methods should be used where practicable to determine how much
1249 compensatory mitigation is required.

1250 (2) The permitting authority must require a mitigation ratio greater than one-to-one where
1251 necessary to account for the method of compensatory mitigation (e.g., preservation), the
1252 likelihood of success, differences between the functions lost at the impact site and the functions
1253 expected to be produced by the compensatory mitigation project, temporal losses of aquatic
1254 resource functions, the difficulty of restoring or establishing the desired aquatic resource type
1255 and functions, and/or the distance between the affected aquatic resource and the compensation
1256 site. The rationale for the required replacement ratio must be documented in the administrative
1257 record for the Order action.

1258 (3) If an in-lieu fee program will be used to provide the required compensatory mitigation, and
1259 the appropriate number and resource type of released credits are not available, the permitting
1260 authority must require sufficient compensation to account for the risk and uncertainty associated
1261 with in-lieu fee projects that have not been implemented before the permitted impacts have
1262 occurred.

1263 (g) Use of mitigation banks and in-lieu fee programs. Mitigation banks and in-lieu fee programs
1264 may be used to compensate for impacts to aquatic resources authorized by general Orders and
1265 individual Orders in accordance with the preference hierarchy in paragraph (b) of this section.
1266 Mitigation banks and in-lieu fee programs may also be used to satisfy requirements arising out of an
1267 enforcement action, such as supplemental environmental projects.

1268 (h) Preservation.

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1269 (1) Preservation may be used to provide compensatory mitigation for activities authorized by
1270 Orders when all the following criteria are met:

1271 (i) The resources to be preserved provide important physical, chemical, or biological
1272 functions for the watershed;

1273 (ii) The resources to be preserved contribute significantly to the ecological sustainability of
1274 the watershed. In determining the contribution of those resources to the ecological
1275 sustainability of the watershed, the permitting authority must use appropriate quantitative
1276 assessment tools where available;

1277 (iii) Preservation is determined by the permitting authority to be appropriate and practicable;

1278 (iv) The resources are under threat of destruction or adverse modifications; and

1279 (v) The preserved site will be permanently protected through an appropriate real estate or
1280 other legal instrument (e.g., easement, title transfer to state resource agency or land trust).

1281 (2) Where preservation is used to provide compensatory mitigation, to the extent appropriate
1282 and practicable the preservation shall be done in conjunction with aquatic resource restoration,
1283 establishment, and/or enhancement activities. This requirement may be waived by the
1284 permitting authority where preservation has been identified as a high priority using a watershed
1285 approach described in paragraph (c) of this section, but compensation ratios shall be higher.

1286 (i) Buffers. The permitting authority may require the restoration, establishment,
1287 enhancement, and preservation, as well as the maintenance, of riparian areas and/or buffers
1288 around aquatic resources where necessary to ensure the long-term viability of those
1289 resources. Buffers may also provide habitat or corridors necessary for the ecological
1290 functioning of aquatic resources. If buffers are required by the permitting authority as part of
1291 the compensatory mitigation project, compensatory mitigation credit will be provided for those
1292 buffers, as provided in section IV B.5 (c).

1293 (j) Relationship to other federal, tribal, state, and local programs.

1294 (1) Compensatory mitigation projects for Orders may also be used to satisfy the environmental
1295 requirements of other programs, such as tribal, state, or local wetlands regulatory programs,
1296 other federal programs such as the Surface Mining Control and Reclamation Act, Corps civil
1297 works projects, and Department of Defense military construction projects, consistent with the
1298 terms and requirements of these programs and subject to the following considerations:

1299 (i) The compensatory mitigation project must include appropriate compensation required by
1300 the Order for unavoidable impacts to aquatic resources authorized by that Order.

1301 (ii) Under no circumstances may the same credits be used to provide mitigation for more than
1302 one permitted activity. However, where appropriate, compensatory mitigation projects,
1303 including mitigation banks and in-lieu fee projects, may be designed to holistically address
1304 requirements under multiple programs and authorities for the same activity.

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1305 (2) Except for projects undertaken by federal agencies, or where federal funding is specifically
1306 authorized to provide compensatory mitigation, federally-funded aquatic resource restoration or
1307 conservation projects undertaken for purposes other than compensatory mitigation, such as the
1308 Wetlands Reserve Program, Conservation Reserve Program, and Partners for Wildlife Program
1309 activities, cannot be used for the purpose of generating compensatory mitigation credits for
1310 activities authorized by Orders. However, compensatory mitigation credits may be generated by
1311 activities undertaken in conjunction with, but supplemental to, such programs in order to
1312 maximize the overall ecological benefits of the restoration or conservation project.

1313 (3) Compensatory mitigation projects may also be used to provide compensatory mitigation
1314 under the federal and state Endangered Species Act or for Natural Community Conservation
1315 Plans and Habitat Conservation Plans, as long as they comply with the requirements of
1316 paragraph (j)(1) of this section.

1317 (k) Order conditions.

1318 (1) The compensatory mitigation requirements for an Order, including the amount and type of
1319 compensatory mitigation, must be clearly stated in the special conditions of the individual Order
1320 or authorization to use the general Order. The special conditions must be enforceable.

1321 (2) For an Order that requires permittee-responsible mitigation, the special conditions must:

1322 (i) Identify the party responsible for providing the compensatory mitigation;

1323 (ii) Incorporate, by reference, the final or draft mitigation plan approved by the permitting
1324 authority;

1325 (iii) State the objectives, performance standards, and monitoring required for the
1326 compensatory mitigation project, unless they are provided in the approved final mitigation
1327 plan; and

1328 (iv) Describe any required financial assurances or long-term management provisions for the
1329 compensatory mitigation project, unless they are specified in the approved final mitigation
1330 plan.

1331 (4) If a mitigation bank or in-lieu fee program is used to provide the required compensatory
1332 mitigation, the special conditions must indicate whether a mitigation bank or in-lieu fee program
1333 will be used, and specify the number and resource type of credits the permittee is required to
1334 secure. In the case of an individual Order, the special condition must also identify the specific
1335 mitigation bank or in-lieu fee program that will be used. For authorizations to use a general
1336 Order, the special conditions may either identify the specific mitigation bank or in-lieu fee
1337 program, or state that the specific mitigation bank or in-lieu fee program used to provide the
1338 required compensatory mitigation must be approved by the permitting authority before the
1339 credits are secured.

1340 (l) Party responsible for compensatory mitigation.

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1341 (1) For permittee-responsible mitigation, the special conditions of the Order must clearly
1342 indicate the party or parties responsible for the implementation, performance, and long-term
1343 management of the compensatory mitigation project.

1344 (3) If use of a mitigation bank or in-lieu fee program is approved by the permitting authority to
1345 provide part or all of the required compensatory mitigation for an Order, the permittee retains
1346 responsibility for providing the compensatory mitigation until the appropriate number and
1347 resource type of credits have been secured from a sponsor and the permitting authority has
1348 received documentation that confirms that the sponsor has accepted the responsibility for
1349 providing the required compensatory mitigation. This documentation may consist of a letter or
1350 form signed by the sponsor, with the Order number and a statement indicating the number and
1351 resource type of credits that have been secured from the sponsor. Copies of this
1352 documentation will be retained in the administrative records for both the Order and the
1353 instrument. If the sponsor fails to provide the required compensatory mitigation, the permitting
1354 authority may pursue measures against the sponsor to ensure compliance.

1355 (m) Timing. Implementation of the compensatory mitigation project shall be, to the maximum extent
1356 practicable, in advance of or concurrent with the activity causing the authorized impacts. The
1357 permitting authority shall require, to the extent appropriate and practicable, additional compensatory
1358 mitigation to offset temporal losses of aquatic functions that will result from the permitted activity.

1359 (n) Financial assurances.

1360 (1) The permitting authority shall require sufficient financial assurances to ensure a high level of
1361 confidence that the compensatory mitigation project will be successfully completed, in
1362 accordance with applicable performance standards. In cases where an alternate mechanism is
1363 available to ensure a high level of confidence that the compensatory mitigation will be provided
1364 and maintained (e.g., a formal, documented commitment from a government agency or public
1365 authority) the permitting authority may determine that financial assurances are not necessary for
1366 that compensatory mitigation project.

1367 (2) The amount of the required financial assurances must be determined by the permitting
1368 authority, in consultation with the project sponsor, and must be based on the size and
1369 complexity of the compensatory mitigation project, the degree of completion of the project at the
1370 time of project approval, the likelihood of success, the past performance of the project sponsor,
1371 and any other factors the permitting authority deems appropriate. Financial assurances may be
1372 in the form of performance bonds, escrow accounts, casualty insurance, letters of credit,
1373 legislative appropriations for government sponsored projects, or other appropriate instruments,
1374 subject to the approval of the permitting authority. The rationale for determining the amount of
1375 the required financial assurances must be documented in the administrative record for either the
1376 Order or the instrument. In determining the assurance amount, the permitting authority shall
1377 consider the cost of providing replacement mitigation, including costs for land acquisition,
1378 planning and engineering, legal fees, mobilization, construction, and monitoring.

1379 (3) If financial assurances are required, the Order must include a special condition requiring the
1380 financial assurances to be in place prior to commencing the permitted activity.

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1381 (4) Financial assurances shall be phased out once the compensatory mitigation project has
1382 been determined by the permitting authority to be successful in accordance with its performance
1383 standards. The Order or instrument must clearly specify the conditions under which the
1384 financial assurances are to be released to the permittee, sponsor, and/or other financial
1385 assurance provider, including, as appropriate, linkage to achievement of performance
1386 standards, adaptive management, or compliance with special conditions.

1387 (5) A financial assurance must be in a form that ensures that the permitting authority will receive
1388 notification at least 120 days in advance of any termination or revocation. For third-party
1389 assurance providers, this may take the form of a contractual requirement for the assurance
1390 provider to notify the permitting authority at least 120 days before the assurance is revoked or
1391 terminated.

1392 (6) Financial assurances shall be payable at the direction of the permitting authority to his
1393 designee or to a standby trust agreement. When a standby trust is used (e.g., with performance
1394 bonds or letters of credit) all amounts paid by the financial assurance provider shall be
1395 deposited directly into the standby trust fund for distribution by the trustee in accordance with
1396 the permitting authority's instructions.

1397 (o) Compliance with applicable law. The compensatory mitigation project must comply with all
1398 applicable federal, state, and local laws. The Order, mitigation banking instrument, or in-lieu fee
1399 program instrument must not require participation by the permitting authority in project
1400 management, including receipt or management of financial assurances or long-term financing
1401 mechanisms, except as determined by the permitting authority to be consistent with its statutory
1402 authority, mission, and priorities.

1403 § 230.94 Planning and documentation.

1404 (a) Pre-application consultations. Potential applicants for Orders are encouraged to participate in
1405 pre-application meetings with the permitting authority and appropriate agencies to discuss potential
1406 mitigation requirements and information needs.

1407 (c) Mitigation plan.

1408 (1) Preparation and Approval.

1409 (i) For individual Orders, the permittee must prepare a draft mitigation plan and submit it to
1410 the permitting authority for review prior to issuing the Order. After addressing any comments
1411 provided by the permitting authority, the permittee must prepare a final mitigation plan, which
1412 must be approved by the permitting authority prior to commencing work in waters of the state.
1413 The approved final mitigation plan must be incorporated into the individual Order either as an
1414 attachment or by reference. The final mitigation plan must include the items described in
1415 paragraphs (c)(2) through (c)(14) of this section, but the level of detail of the mitigation plan
1416 should be commensurate with the scale and scope of the impacts. As an alternative, the
1417 permitting authority may determine that it would be more appropriate to address any of the
1418 items described in paragraphs (c)(2) through (c)(14) of this section as Order conditions,
1419 instead of components of a compensatory mitigation plan. For permittees who intend to fulfill
1420 their compensatory mitigation obligations by securing credits from approved mitigation banks
1421 or in-lieu fee programs, their mitigation plans need include only the items described in
1422 paragraphs (c)(5) and (c)(6) of this section, and the name of the specific mitigation bank or
1423 in-lieu fee program to be used.

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1424 (2) Objectives. A description of the resource type(s) and amount(s) that will be provided, the
1425 method of compensation (i.e., restoration, establishment, enhancement, and/or preservation),
1426 and the manner in which the resource functions of the compensatory mitigation project will
1427 address the needs of the watershed, ecoregion, physiographic province, or other geographic
1428 area of interest.

1429 (3) Site selection. A description of the factors considered during the site selection process.
1430 This should include consideration of watershed needs, on-site alternatives where applicable,
1431 and the practicability of accomplishing ecologically self-sustaining aquatic resource restoration,
1432 establishment, enhancement, and/or preservation at the compensatory mitigation project site.
1433 (See [§ 230.93\(d\)](#).)

1434 (4) Site protection instrument. A description of the legal arrangements and instrument, including
1435 site ownership, that will be used to ensure the long-term protection of the compensatory
1436 mitigation project site (see [§ 230.97\(a\)](#)).

1437 (5) Baseline information. A description of the ecological characteristics of the proposed
1438 compensatory mitigation project site and, in the case of an application for an Order, the impact
1439 site. This may include descriptions of historic and existing plant communities, historic and
1440 existing hydrology, soil conditions, a map showing the locations of the impact and mitigation
1441 site(s) or the geographic coordinates for those site(s), and other site characteristics appropriate
1442 to the type of resource proposed as compensation. The baseline information should also
1443 include a delineation of waters of the state on the proposed compensatory mitigation project
1444 site. A prospective permittee planning to secure credits from an approved mitigation bank or in-
1445 lieu fee program only needs to provide baseline information about the impact site, not the
1446 mitigation bank or in-lieu fee project site.

1447 (6) Determination of credits. A description of the number of credits to be provided, including a
1448 brief explanation of the rationale for this determination. (See [§ 230.93\(f\)](#).)

1449 (i) For permittee-responsible mitigation, this should include an explanation of how the
1450 compensatory mitigation project will provide the required compensation for unavoidable
1451 impacts to aquatic resources resulting from the permitted activity.

1452 (ii) For permittees intending to secure credits from an approved mitigation bank or in-lieu fee
1453 program, it should include the number and resource type of credits to be secured and how
1454 these were determined.

1455 (7) Mitigation work plan. Detailed written specifications and work descriptions for the
1456 compensatory mitigation project, including, but not limited to, the geographic boundaries of the
1457 project; construction methods, timing, and sequence; source(s) of water, including connections
1458 to existing waters and uplands; methods for establishing the desired plant community; plans to
1459 control invasive plant species; the proposed grading plan, including elevations and slopes of the
1460 substrate; soil management; and erosion control measures. For stream compensatory
1461 mitigation projects, the mitigation work plan may also include other relevant information, such as
1462 planform geometry, channel form (e.g., typical channel cross-sections), watershed size, design
1463 discharge, and riparian area plantings.

1464 (8) Maintenance plan. A description and schedule of maintenance requirements to ensure the
1465 continued viability of the resource once initial construction is completed.

1466 (9) Performance standards. Ecologically-based standards that will be used to determine
1467 whether the compensatory mitigation project is achieving its objectives. (See [§ 230.95](#).)

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1468 (10) Monitoring requirements. A description of parameters to be monitored in order to
1469 determine if the compensatory mitigation project is on track to meet performance standards and
1470 if adaptive management is needed. A schedule for monitoring and reporting on monitoring
1471 results to the permitting authority must be included. (See [§ 230.96](#).)

1472 (11) Long-term management plan. A description of how the compensatory mitigation project will
1473 be managed after performance standards have been achieved to ensure the long-term
1474 sustainability of the resource, including long-term financing mechanisms and the party
1475 responsible for long-term management. (See [§ 230.97\(d\)](#).)

1476 (12) Adaptive management plan. A management strategy to address unforeseen changes in
1477 site conditions or other components of the compensatory mitigation project, including the party
1478 or parties responsible for implementing adaptive management measures. The adaptive
1479 management plan will guide decisions for revising compensatory mitigation plans and
1480 implementing measures to address both foreseeable and unforeseen circumstances that
1481 adversely affect compensatory mitigation success. (See [§ 230.97\(c\)](#).)

1482 (13) Financial assurances. A description of financial assurances that will be provided and how
1483 they are sufficient to ensure a high level of confidence that the compensatory mitigation project
1484 will be successfully completed, in accordance with its performance standards (see [§ 230.93\(n\)](#)).

1485 (14) Other information. The permitting authority may require additional information as
1486 necessary to determine the appropriateness, feasibility, and practicability of the compensatory
1487 mitigation project.

1488 § 230.95 Ecological performance standards.

1489 (a) The approved mitigation plan must contain performance standards that will be used to assess
1490 whether the project is achieving its objectives. Performance standards should relate to the
1491 objectives of the compensatory mitigation project, so that the project can be objectively evaluated to
1492 determine if it is developing into the desired resource type, providing the expected condition or
1493 functions, and attaining any other applicable metrics (e.g., acres).

1494 (b) Performance standards must be based on attributes that are objective and verifiable. Ecological
1495 performance standards must be based on the best available science that can be measured or
1496 assessed in a practicable manner. Performance standards may be based on variables or
1497 measures of functional capacity or condition as described in assessment methodologies,
1498 measurements of hydrology or other aquatic resource characteristics, and/or comparisons to
1499 reference aquatic resources of similar type and landscape position. The use of reference aquatic
1500 resources to establish performance standards will help ensure that those performance standards
1501 are reasonably achievable, by reflecting the range of variability exhibited by the regional class of
1502 aquatic resources as a result of natural processes and anthropogenic disturbances. Performance
1503 standards based on measurements of hydrology should take into consideration the hydrologic
1504 variability exhibited by reference aquatic resources, especially wetlands. Where practicable,
1505 performance standards should take into account the expected stages of the aquatic resource
1506 development process, in order to allow early identification of potential problems and appropriate
1507 adaptive management.

1508 § 230.96 Monitoring.

1509 (a) General.

1510 (1) Monitoring the compensatory mitigation project site is necessary to determine if the project is
1511 meeting its performance standards, and to determine if measures are necessary to ensure that

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1512 the compensatory mitigation project is accomplishing its objectives. The submission of
1513 monitoring reports to assess the development and condition of the compensatory mitigation
1514 project is required, but the content and level of detail for those monitoring reports must be
1515 commensurate with the scale and scope of the compensatory mitigation project, as well as the
1516 compensatory mitigation project type. The mitigation plan must address the monitoring
1517 requirements for the compensatory mitigation project, including the parameters to be monitored,
1518 the length of the monitoring period, the party responsible for conducting the monitoring, the
1519 frequency for submitting monitoring reports to the permitting authority, and the party responsible
1520 for submitting those monitoring reports to the permitting authority.

1521 (2) The permitting authority may conduct site inspections on a regular basis (e.g., annually)
1522 during the monitoring period to evaluate mitigation site performance.

1523 (b) Monitoring period. The mitigation plan must provide for a monitoring period that is sufficient to
1524 demonstrate that the compensatory mitigation project has met performance standards, but not less
1525 than five years. A longer monitoring period must be required for aquatic resources with slow
1526 development rates (e.g., forested wetlands, bogs). Following project implementation, the permitting
1527 authority may reduce or waive the remaining monitoring requirements upon a determination that the
1528 compensatory mitigation project has achieved its performance standards. Conversely the
1529 permitting authority may extend the original monitoring period upon a determination that
1530 performance standards have not been met or the compensatory mitigation project is not on track to
1531 meet them. The permitting authority may also revise monitoring requirements when remediation
1532 and/or adaptive management is required.

1533 (c) Monitoring reports.

1534 (1) The permitting authority must determine the information to be included in monitoring reports.
1535 This information must be sufficient for the permitting authority to determine how the
1536 compensatory mitigation project is progressing towards meeting its performance standards, and
1537 may include plans (such as as-built plans), maps, and photographs to illustrate site conditions.
1538 Monitoring reports may also include the results of functional, condition, or other assessments
1539 used to provide quantitative or qualitative measures of the functions provided by the
1540 compensatory mitigation project site.

1541 (2) The permittee or sponsor is responsible for submitting monitoring reports in accordance with
1542 the special conditions of the Order or the terms of the instrument. Failure to submit monitoring
1543 reports in a timely manner may result in compliance action by the permitting authority.

1544 (3) Monitoring reports must be provided by the permitting authority to interested federal, tribal,
1545 state, and local resource agencies, and the public, upon request.

1546 § 230.97 Management.

1547 (a) Site protection.

1548 (1) The aquatic habitats, riparian areas, buffers, and uplands that comprise the overall
1549 compensatory mitigation project must be provided long-term protection through real estate
1550 instruments or other available mechanisms, as appropriate. Long-term protection may be
1551 provided through real estate instruments such as conservation easements held by entities such
1552 as federal, tribal, state, or local resource agencies, non-profit conservation organizations, or
1553 private land managers; the transfer of title to such entities; or by restrictive covenants. For
1554 government property, long-term protection may be provided through state or federal facility
1555 management plans or integrated natural resources management plans. When approving a
1556 method for long-term protection of non-government property other than transfer of title, the

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1557 permitting authority shall consider relevant legal constraints on the use of conservation
1558 easements and/or restrictive covenants in determining whether such mechanisms provide
1559 sufficient site protection. To provide sufficient site protection, a conservation easement or
1560 restrictive covenant should, where practicable, establish in an appropriate third party (e.g.,
1561 governmental or non-profit resource management agency) the right to enforce site protections
1562 and provide the third party the resources necessary to monitor and enforce these site
1563 protections.

1564 (2) The real estate instrument, management plan, or other mechanism providing long-term
1565 protection of the compensatory mitigation site must, to the extent appropriate and practicable,
1566 prohibit incompatible uses (e.g., clear cutting or mineral extraction) that might otherwise
1567 jeopardize the objectives of the compensatory mitigation project. Where appropriate, multiple
1568 instruments recognizing compatible uses (e.g., fishing or grazing rights) may be used.

1569 (3) The real estate instrument, management plan, or other long-term protection mechanism
1570 must contain a provision requiring 60-day advance notification to the permitting authority before
1571 any action is taken to void or modify the instrument, management plan, or long-term protection
1572 mechanism, including transfer of title to, or establishment of any other legal claims over, the
1573 compensatory mitigation site.

1574 (4) For compensatory mitigation projects on public lands, where state or Federal facility
1575 management plans or integrated natural resources management plans are used to provide long-
1576 term protection, and changes in statute, regulation, or agency needs or mission results in an
1577 incompatible use on public lands originally set aside for compensatory mitigation, the public
1578 agency authorizing the incompatible use is responsible for providing alternative compensatory
1579 mitigation that is acceptable to the permitting authority for any loss in functions resulting from
1580 the incompatible use.

1581 (5) A real estate instrument, management plan, or other long-term protection mechanism used
1582 for site protection of permittee-responsible mitigation must be approved by the permitting
1583 authority in advance of, or concurrent with, the activity causing the authorized impacts.

1584 (b) Sustainability. Compensatory mitigation projects shall be designed, to the maximum extent
1585 practicable, to be self-sustaining once performance standards have been achieved. This includes
1586 minimization of active engineering features (e.g., pumps) and appropriate siting to ensure that
1587 natural hydrology and landscape context will support long-term sustainability. Where active long-
1588 term management and maintenance are necessary to ensure long-term sustainability (e.g.,
1589 prescribed burning, invasive species control, maintenance of water control structures, easement
1590 enforcement), the responsible party must provide for such management and maintenance. This
1591 includes the provision of long-term financing mechanisms where necessary. Where needed, the
1592 acquisition and protection of water rights must be secured and documented in the Order conditions
1593 or instrument.

1594 (c) Adaptive management.

1595 (1) If the compensatory mitigation project cannot be constructed in accordance with the
1596 approved mitigation plans, the permittee or sponsor must notify the permitting authority. A
1597 significant modification of the compensatory mitigation project requires approval from the
1598 permitting authority.

1599 (2) If monitoring or other information indicates that the compensatory mitigation project is not
1600 progressing towards meeting its performance standards as anticipated, the responsible party
1601 must notify the permitting authority as soon as possible. The permitting authority will evaluate

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1602 and pursue measures to address deficiencies in the compensatory mitigation project. The
1603 permitting authority will consider whether the compensatory mitigation project is providing
1604 ecological benefits comparable to the original objectives of the compensatory mitigation project.

1605 (3) The permitting authority, in consultation with the responsible party (and other federal, tribal,
1606 state, and local agencies, as appropriate), will determine the appropriate measures. The
1607 measures may include site modifications, design changes, revisions to maintenance
1608 requirements, and revised monitoring requirements. The measures must be designed to ensure
1609 that the modified compensatory mitigation project provides aquatic resource functions
1610 comparable to those described in the mitigation plan objectives.

1611 (4) Performance standards may be revised in accordance with adaptive management to
1612 account for measures taken to address deficiencies in the compensatory mitigation project.
1613 Performance standards may also be revised to reflect changes in management strategies and
1614 objectives if the new standards provide for ecological benefits that are comparable or superior to
1615 the approved compensatory mitigation project. No other revisions to performance standards will
1616 be allowed except in the case of natural disasters.

1617 (d) Long-term management.

1618 (1) The Order conditions or instrument must identify the party responsible for ownership and all
1619 long-term management of the compensatory mitigation project. The Order conditions or
1620 instrument may contain provisions allowing the permittee or sponsor to transfer the long-term
1621 management responsibilities of the compensatory mitigation project site to a land stewardship
1622 entity, such as a public agency, non-governmental organization, or private land manager, after
1623 review and approval by the permitting authority. The land stewardship entity need not be
1624 identified in the original Order or instrument, as long as the future transfer of long-term
1625 management responsibility is approved by the permitting authority.

1626 (2) A long-term management plan should include a description of long-term management
1627 needs, annual cost estimates for these needs, and identify the funding mechanism that will be
1628 used to meet those needs.

1629 (3) Any provisions necessary for long-term financing must be addressed in the original Order or
1630 instrument. The permitting authority may require provisions to address inflationary adjustments
1631 and other contingencies, as appropriate. Appropriate long-term financing mechanisms include
1632 non-wasting endowments, trusts, contractual arrangements with future responsible parties, and
1633 other appropriate financial instruments. In cases where the long-term management entity is a
1634 public authority or government agency, that entity must provide a plan for the long-term
1635 financing of the site.

1636 (4) For permittee-responsible mitigation, any long-term financing mechanisms must be
1637 approved in advance of the activity causing the authorized impacts.