



PRELIMINARY DRAFT

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

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

STATE WATER RESOURCES CONTROL BOARD

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

I. Introduction

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

21
22 These Procedures contain a wetland definition in section II and wetland delineation procedures in
23 section III, both of which apply to all Water Board programs. The wetland definition encompasses the
24 full range of wetland types commonly recognized in California, including some features not protected
25 under federal law, and reflects current scientific understanding of the formation and functioning of
26 wetlands. The wetland definition is not intended to be jurisdictional – not all features that qualify as
27 wetlands are waters of the state. These Procedures also include procedures for the review and
28 approval of activities that could result in the discharge of dredged or fill material to any waters of the
29 state in section IV. The dredged or fill procedures include elements of the Clean Water Act Section
30 404(b)(1) Guidelines, thereby bringing uniformity to Water Boards' regulation of discharges of dredged
31 or fill material to all waters of the state.

II. Wetland Definition

32
33 The following definition of wetlands is intended to inform the public about the types of features that
34 qualify as wetlands, and therefore may also warrant protection as waters of the state. It is important to
35 note that the definition of wetlands includes some features that may not be protected as waters of the
36 state. The Water Code defines "waters of the state" broadly to include "any surface water or
37 groundwater, including saline waters, within the boundaries of the state." All features that are protected
38 as "waters of the United States" under federal law are necessarily also waters of the state, but the
39 Water Boards have not developed a complete list or categorical descriptions of all other features that
40 qualify as waters of the state. Therefore, in some cases, the Water Boards must determine whether a
41 particular feature is a water of the state on a case-by-case basis. The Water Boards will continue to
42 determine, on a case-by-case basis, whether a particular feature that meets the definition of wetlands
43 also qualifies as a water of the state. The definition of wetland does not modify or expand the
44 jurisdiction or otherwise affect the statutory or regulatory authorities of the Water Boards. The Water
45 Boards define an area as wetland as follows:

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

50 The Water Boards may consider a wetland, as defined above, to be a water of the state on a case-by-
51 case basis. If uncertain whether a wetland as defined above is a water of the state, project proponents
52 are strongly encouraged to contact the Water Boards for assistance prior to submitting an application
53 for dredged or fill projects.

54 **III. Wetland Delineation**

55 The permitting authority shall rely on any wetland area delineation approved by the United States Army
56 Corps of Engineers (Corps) for the purposes of determining the extent of waters of the U.S. A
57 delineation of non-federal wetland areas potentially impacted by the project shall be performed using
58 the methods described in the three federal documents listed below (collectively referred to as "1987
59 Manual and Supplements") to determine whether the area meets the state definition of a wetland as
60 defined above. As described in the 1987 Manual Supplements, an area "lacks vegetation" if it has less
61 than 5 percent areal coverage of plants at the peak of the growing season. The methods shall be
62 modified only to allow for the fact that the lack of vegetation does not preclude the determination of
63 such an area that meets the definition of wetland. Terms as defined in these Procedures shall be used
64 if there is conflict with terms in the 1987 Manual and Supplements.

- 65 • Environmental Laboratory. 1987. U.S. Army Corps of Engineers Wetlands Delineation Manual.
66 Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- 67 • U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland
68 Delineation Manual: Arid West Region (Version 2.0). ed. J. S. Wakeley, R. W. Lichvar, and C.
69 V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and
70 Development Center
- 71 • U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland
72 Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0). ed. J. S.
73 Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army
74 Engineer Research and Development Center)

75 **IV. Procedures for Regulation of Discharges of Dredged or Fill Material to** 76 **Waters of the State**

77 The purpose of this section is to establish application procedures for discharges of dredged or fill
78 material to waters of the state, which includes both waters of the U.S. and non-federal waters of the
79 state. This section supplements existing state requirements for discharges of dredged or fill material to
80 waters of the U.S.¹ These Procedures include Appendix A, which contains relevant portions of the
81 U.S. EPA's Section 404(b)(1) "Guidelines for Specification of Disposal Sites for Dredge or Fill Material"²
82 (Guidelines), 1980, with minor modifications to make them applicable to the state dredged or fill

¹ California Code of Regulations, title 23, sections 3830-3869 (state's Clean Water Act (CWA) section 401 (33 USC § 1341) water quality certification program)

² 40 C.F.R. § 230.

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83 program (hereafter State Supplemental Dredged or Fill Guidelines).³ This section applies to all
84 applications for discharges of dredged or fill material to waters of the state submitted after [insert the
85 effective date of the Plan Amendment].

86 **Project Application Submittal for Individual Orders**

87 Applicants must file an application to the Water Boards for any activity that could result in the discharge
88 of dredged or fill material to waters of the state in accordance with California Code of Regulations, title
89 23, section 3855. The applicant may consult with the Water Boards to determine whether a project
90 could result in impacts to waters of the state.⁴

91 **A. Project Application Submittal**

92 Applicants must submit the items listed in subsection 1 to the permitting authority. In addition,
93 applicants shall consult with the permitting authority about the items listed in subsection 2. Within
94 30 days of receiving the items listed in subsection 1, the permitting authority may require the applicant
95 to submit one or more of the items in subsection 2 for a complete application. Within 30 days of
96 receiving all of the required items the permitting authority shall determine whether the application is
97 complete and notify the applicant accordingly. If the applicant’s federal license or permit application
98 includes any of the information required in subsections 1 or 2 below, the applicant may submit the
99 federal application materials to satisfy the corresponding state application information. If federal
100 application materials are submitted as part of the state application, the applicant shall indicate where
101 the corresponding state application information can be found in the federal application materials.

102 **1. Items Required for a Complete Application**

- 103 a. All items listed in California Code of Regulations, title 23, section 3856 “Contents of a Complete
104 Application.”⁵
- 105 b. If wetlands that are waters of the state are present, a delineation of those wetlands as described
106 in section III. In addition, if waters of the U.S. are present, any preliminary or final wetland
107 delineation report that was submitted to the Corps.
- 108 c. The date or dates upon which the overall project activity will begin and end; and, if known, the
109 date or dates upon which the discharge will take place.
- 110 d. Map(s) with a scale of at least 1:24000 (1” = 2000’) and of sufficient detail to accurately show
111 (1) the boundaries of the lands owned or to be utilized by the applicant in carrying out the
112 proposed activity, including the location, dimensions and type of any structures erected or to be
113 erected on the plotted lands for use in connection with the activity and the location, and (2) all

³ The State Supplemental Dredge and Fill Guidelines are included as Appendix A. Because Appendix A is derived directly from the 404(b)(1) guidelines, it uses slightly different terms than terms used in sections I through V of these Procedures. Appendix A will be applied in a manner consistent with sections I through V of these Procedures.

⁴ 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 and fill material to waters of the state.

⁵ 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 and fill material to waters of the state.

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- 114 aquatic resources that may qualify as waters of the state, within the boundaries of the project,
115 and all aquatic resources that may qualify as waters of the state outside of the boundary of the
116 project that could be affected by the project. A map submitted for a Corps' preliminary
117 jurisdictional determination may satisfy this requirement if it includes all potential waters of the
118 state. The Permitting Authority may require that the map(s) be submitted in electronic format
119 (e.g., GIS shapefiles).
- 120 e. A description of the waters proposed to receive a discharge of dredged or fill material, including
121 the beneficial uses as listed in the applicable water quality control plan. The description should
122 also include: a description of discharge at each individual impact location, quantity of impact at
123 each location in rounded to the nearest tenth of an acre, linear foot, and cubic yard (as
124 applicable), assessment of potential direct and indirect impacts to listed beneficial uses and
125 potential mitigation measures for those potential impacts to beneficial uses, identification of
126 existing water quality impairment(s); the source of water quality impairment(s), if known; and the
127 presence of threatened or endangered aquatic species resource habitat.
- 128 2. Additional Information Required for a Complete Application
- 129 a. If required by the permitting authority on a case-by-case basis, if the wetland area delineations
130 were conducted in the dry season, supplemental field data from the wet season to substantiate
131 dry season delineations.
- 132 b. If required by the permitting authority on a case-by-case basis, an assessment of the potential
133 impacts associated with climate change related to the proposed project and any proposed
134 compensation, and any measures to avoid or minimize those potential impacts.
- 135 c. If required by the permitting authority on a case-by-case basis, if no exemptions apply, an
136 alternatives analysis in accordance with section IV.B.3 and, any supporting documentation.
- 137 d. If compensatory mitigation is required by the permitting authority on a case-by-case basis, an
138 assessment of the overall condition of aquatic resources proposed to receive a discharge of
139 dredged or fill material and their likely stressors, using an assessment method approved by the
140 permitting authority and a draft compensatory mitigation plan developed using a watershed
141 approach containing the items below. Compensatory mitigation plans are not required for
142 Ecological Restoration and Enhancement Projects. Draft compensatory mitigation plans shall
143 comport with the State Supplemental Dredged or Fill Guidelines, Subpart J, and include the
144 elements listed below.
- 145 i. A watershed profile for the project evaluation area for both the proposed dredged or fill
146 project and the proposed compensatory mitigation project. The scope and detail of the
147 watershed profile shall be commensurate with the magnitude of impact associated with the
148 proposed project, and shall describe the overall abundance, diversity, and condition of
149 aquatic resources in the project evaluation area. The watershed profile shall include a
150 map and report characterizing the location, abundance, and diversity of aquatic resources
151 in the project evaluation area, and a report characterizing the condition of aquatic
152 resources in the project evaluation area and the environmental stress factors affecting
153 condition. In some cases, field data may need to be collected in the project evaluation
154 area to confirm the reported condition. Some or all of the information may be obtained
155 from a watershed plan.
- 156 ii. A description of how the compensatory mitigation plan, whether located inside or outside
157 the project watershed area, does not cause a net loss of the overall abundance, diversity,

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- 158 and condition of aquatic resources, based on the watershed profile. The level of detail in
159 the plan shall be sufficient to accurately evaluate whether compensatory mitigation offsets
160 the adverse impacts attributed to a project.
- 161 iii. Preliminary information about ecological performance standards, monitoring, and long-term
162 protection and management, as described in State Supplemental Dredged or Fill
163 Guidelines.
- 164 iv. A timetable for implementing the compensatory mitigation plan.
- 165 v. If the compensatory mitigation plan includes buffers, design criteria and monitoring
166 requirements for those buffers.
- 167 vi. If the compensatory mitigation involves restoration or establishment as the form of
168 mitigation, applicants shall consult with state and federal land management agencies, fire
169 control districts, flood control districts, local mosquito-vector control district(s), and any
170 other interested local entities prior to initial site selection. Appropriate mosquito and vector
171 control measures, including maintenance specifications, shall be developed in coordination
172 with local mosquito-vector control district(s) or other responsible public agency(ies) during
173 the initial compensatory mitigation project design stage.
- 174 vii. If the compensatory mitigation involves restoration or establishment on a site(s) within five
175 miles of any airport, applicants shall consult the applicable airport land use commission or
176 other appropriate responsible public agency to determine whether the proposed
177 compensatory mitigation project may pose a danger to air traffic safety, and submit proof of
178 consultation. These entities should be consulted as early as possible during the initial
179 compensatory mitigation project design stage.
- 180 e. If required by the permitting authority on a case-by-case basis, if project activities include in-
181 water work or water diversions, a proposed water quality monitoring plan to monitor compliance
182 with water quality objectives of the applicable water quality control plan. At a minimum, the plan
183 should include type and frequency of sampling for each applicable parameter.
- 184 f. In all cases where temporary impacts are proposed, a draft restoration plan for restoring areas
185 of temporary impact to pre-project conditions including, at a minimum, the following: the
186 objectives of the restoration plan; a work schedule; plans for grading of disturbed areas to pre-
187 project contours; a planting palette with plant species native to the area; seed collection
188 locations; an invasive species management plan; a description of performance standards used
189 to evaluate attainment of objectives; the timeframe for determining attainment of performance
190 standards; and maintenance requirements (e.g. watering, weeding, and replanting). The level
191 of detail in the restoration plan shall be sufficient to accurately evaluate whether the restoration
192 offsets the adverse impacts attributed to a project.
- 193 Prior to issuance of the Order, the applicant shall submit a final restoration plan that describes
194 the restoration of all temporarily disturbed areas to pre-project conditions.
- 195 g. For all Ecological Restoration and Enhancement Projects, a draft monitoring plan including, at a
196 minimum, the following: project objectives; description of performance standards used to
197 evaluate attainment of objectives; protocols for monitoring and data assessment; the timeframe
198 and responsible party for determining attainment of performance standards; and monitoring
199 schedule. For Ecological Restoration and Enhancement projects, monitoring shall consist of at
200 least one assessment of the overall condition of aquatic resources and their likely stressors,

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201 using an appropriate assessment method subject to the approval of the permitting authority,
202 prior to restoration and/or enhancement and two years following restoration and/or
203 enhancement to determine success of the restoration and/or enhancement.

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

205 1. The permitting authority will evaluate the potential impacts on the aquatic environment from the
206 proposed project and determine whether the proposed project complies with these Procedures.
207 The permitting authority has the discretion to approve a project only if the applicant has
208 demonstrated the following:

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

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

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

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

218 2. The permitting authority shall rely on any Corps-approved wetland area delineation within the
219 boundaries of waters of the U.S. For all other wetland area delineations, the permitting authority
220 shall review and approve delineations that are performed using the methods described in Section
221 III.

222 3. Alternatives Analysis Submission and Review Requirements:

223 a. The purpose of the alternatives analysis is to identify the least environmentally damaging
224 practicable alternative (LEDPA).

225 b. Discharges to waters of U.S.

226 In reviewing and approving the alternatives analysis for discharges of dredged or fill material
227 that impact waters of the U.S., the permitting authority shall defer to the Corps and EPA
228 determinations on the adequacy of the alternatives analysis, unless the Executive Officer or
229 Executive Director determines that (1) the permitting authority was not provided an adequate
230 opportunity to consult during the development of the Corps' alternatives analysis, (2) the Corps'
231 alternatives analysis does not adequately address issues identified by the permitting authority
232 during consultation, (3) additional analysis is required to comply with CEQA, water quality
233 standards, or other requirements or (4) the project and all of the identified alternatives would not
234 comply with water quality standards.

235 If the project also includes discharges to waters of the state outside of federal jurisdiction, the
236 permitting authority may require the applicant to supplement the alternatives analysis to include
237 waters of the state outside of federal jurisdiction. If an alternatives analysis is not required by
238 the Corps for waters of the U.S. impacted by the discharge of dredged or fill material, the
239 permitting authority may require an alternatives analysis for the entire project in accordance with
240 the State Supplemental Dredged or Fill Guidelines, unless the project is exempt under
241 subsection (d) below.

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- 242 c. Discharges solely to waters of the state outside of federal jurisdiction
- 243 The permitting authority may require an alternatives analysis in accordance with the State
244 Supplemental Dredged or Fill Guidelines, unless the project is exempt under subsection (d)
245 below.
- 246 d. Exemptions from Alternatives Analysis
- 247 Unless the permitting authority is required to analyze alternatives to a proposed project in order
248 to comply with CEQA, water quality standards, or other requirements the permitting authority
249 shall not require an alternatives analysis if any of the following exemptions apply.
- 250 i. The project includes discharges to waters of U.S. only, and the project meets the terms
251 and conditions of one or more Corps' General Permits that has been previously certified by
252 the Water Boards. The permitting authority will verify that the project meets the terms and
253 conditions of the Corps' General Permit based on information supplied by the applicant.
- 254 ii. The project includes discharges to waters of the state outside of federal jurisdiction, and
255 the project would meet the terms and conditions of one or more Corps' General Permits
256 that has been previously certified by the Water Boards, if all the discharges were to waters
257 of the U.S. The permitting authority will verify that the project would meet the terms and
258 conditions of the Corps' General Permit(s) if all discharges were to waters of the U.S.
259 based on information supplied by the applicant.
- 260 iii. The project inherently cannot be located in an alternate location (e.g., bank stabilization
261 projects). The permitting authority may, however, require an analysis of on-site
262 alternatives that would minimize impacts to waters of the state.
- 263 iv. The project would be conducted in accordance with a watershed plan that has been
264 approved by the permitting authority and analyzed in an environmental document that
265 includes a sufficient alternatives analysis, monitoring provisions, and guidance on
266 compensatory mitigation opportunities.
- 267 v. The project is an Ecological Restoration and Enhancement Project.
- 268 e. The permitting authority will be responsible for determining the sufficiency of an alternatives
269 analysis that is required under their discretion (see 3b, 3.c and 3.d above). The alternatives
270 analysis must establish that the proposed project alternative is the LEDPA in light of all potential
271 direct, secondary (indirect), and cumulative adverse impacts on the physical, chemical, and
272 biological elements of the aquatic ecosystem.
- 273 f. If an alternatives analysis is required by these Procedures, the final alternatives analysis shall
274 be submitted prior to the issuance of the Order.
- 275 4. Prior to issuance of the Order, the permitting authority will review and approve the final restoration
276 plan for temporary impacts.
- 277 5. Compensatory Mitigation
- 278 a. Compensatory mitigation, in accordance with the State Supplemental Dredged or Fill
279 Guidelines, Subpart J, may be required to ensure that an activity complies with these
280 Procedures.
- 281 b. Where feasible, the permitting authority will consult and coordinate with any other public
282 agencies that have concurrent mitigation requirements in order to achieve multiple

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283 environmental benefits with a single mitigation project, thereby reducing the cost of compliance
284 to the applicant.

285 c. Amount: The amount of compensatory mitigation will be determined on a project-by-project
286 basis in accordance with State Supplemental Dredged or Fill Guidelines, section 230.93(f). The
287 permitting authority may take into account recent anthropogenic degradation to the aquatic
288 resource and the potential and existing functions and conditions of the aquatic resource. A
289 minimum of one-to-one acreage or length of stream reach replacement is necessary to
290 compensate for wetland or stream losses unless an appropriate function or condition
291 assessment method clearly demonstrates, on an exceptional basis, that a lesser amount is
292 sufficient. A reduction in the mitigation ratio for compensatory mitigation will be considered by
293 the permitting authority if buffer areas adjacent to the compensatory mitigation are also required
294 to be maintained as part of the compensatory mitigation management plan. The amount of
295 compensatory mitigation required by the permitting authority will vary depending on which of the
296 following strategies the applicant uses to locate the mitigation site within a watershed.

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

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

305 Generally, the amount of compensatory mitigation required under Strategy 1 will be less than
306 the amount of compensatory mitigation required under Strategy 2 since the level of certainty
307 that a compensatory mitigation project will meet its performance standards increases if the
308 compensatory mitigation project complies with a watershed plan as described above. Certainty
309 increases when there is a corresponding increase in understanding of watershed conditions,
310 which is increased when using a watershed plan as described above to determine
311 compensatory mitigation requirements.

312 d. Type and Location: The permitting authority will evaluate the applicant's proposed mitigation
313 type and location based on the applicant's use of a watershed approach based on a watershed
314 profile. If a proposed project may affect more than one watershed, then the permitting authority
315 may determine that locating all required project mitigation in one area is ecologically preferable
316 to requiring mitigation within each watershed, based on watershed conditions, impact size,
317 location and spacing, aquatic resource values, relevant watershed plans and other
318 considerations.

319 e. Final Compensatory Mitigation Plan: The permitting authority will review and approve the final
320 compensatory mitigation plan submitted by the applicant to ensure mitigation comports with the
321 State Supplemental Dredged or Fill Guidelines, Water Code requirements, applicable water
322 quality standards, and other appropriate requirements of state law. The level of detail in the
323 final plan shall be sufficient to accurately evaluate whether compensatory mitigation offsets the
324 adverse impacts attributed to a project considering the overall size and scope of impact. The
325 compensatory mitigation plan shall be sufficient to provide the permitting authority with a
326 reasonable assurance that replacement of the full range of lost aquatic resource(s) and/or
327 functions will be provided in perpetuity.

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- 328 The permitting authority may include as a condition of an Order that the applicant receive
329 approval of a final mitigation plan prior to discharging dredged or fill materials to waters of the
330 state. In this case, the permitting authority will approve the final mitigation plan by amending the
331 Order.
- 332 f. Financial Security: Where deemed necessary by the permitting authority, provision of a
333 financial security (e.g., letter of credit or performance bond) shall be a condition of the Order. In
334 this case, the permitting authority will approve the financial security to ensure compliance with
335 compensatory mitigation plan requirements.
- 336 g. Term of Mitigation Obligation: The permitting authority may specify in the Order the conditions
337 that must be met in order for the permitting authority to release the permittee from the mitigation
338 obligation, including compensatory mitigation performance standards and long term
339 management funding obligations.
- 340 6. The permitting authority shall provide public notice in accordance with Water Code section 13167.5
341 for waste discharge requirements. The permitting authority shall provide public notice of an
342 application for water quality certification in accordance with California Code of Regulations, title 23,
343 section 3858. If the permitting authority receives comments on the application or there is
344 substantial public interest in the project, the permitting authority shall also provide public notice of
345 the draft Order, or draft amendment of the Order, unless circumstances warrant a shorter notice
346 period.
- 347 7. The permitting authority will review and approve the final monitoring and reporting requirements for
348 all projects. Monitoring and reporting may be required to demonstrate compliance with the terms of
349 the Order.

350 **C. General Orders**

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

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

358 Applicants applying to enroll under a general order shall file a Notice of Intent with the permitting
359 authority in accordance with the instructions specified in the general order.

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

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

- 367 1. Activities excluded from application procedures in sections IV.A and IV.B:
- 368 a. Activities that are exempt under CWA section 404(f) (33 USC § 1344(f)). The following federal
369 regulations (Table 1), guidance letters (Table 2), and memoranda (Table 3), that have been

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370 adopted pursuant to CWA section 404(f) or that are used to interpret or implement section
371 404(f) shall be used when determining whether certain activities are excluded from these
372 procedures. These documents are hereby incorporated by reference and shall apply to all
373 waters of the state. Consistent with CWA section 404(f)(2) and 40 CFR section 232.3, any
374 discharge of dredged or fill material to a water of the state incidental to any of these activities is
375 not exempt under CWA section 404(f) and shall be subject to the application procedures
376 sections IV.A and IV.B, if (1) the purpose of the activity is bringing a water of the state into a use
377 to which it was not previously subject, where the flow or circulation of water of the state may be
378 impaired or the reach of such waters be reduced, or (2) the discharge contains any toxic
379 pollutant listed in CWA section 307.

380
381 **Table 1: CFR References⁶**

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

382
383 **Table 2: Applicable U.S. Army Corps of Engineers (Corps) Regulatory Guidance Letters**
384 **(RGLs)⁷**

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

⁶ The documents in Table 1 are available at the U.S. Government Printing Office, Code of Federal Regulations webpage:
<http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=C.F.R.>

⁷ The documents in Table 2 are available at the U.S. Army Corps of Engineers, Regulatory Program and Permits, Related Resources,
Regulatory Guidance Letters webpage: <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/GuidanceLetters.aspx>

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96-02	Applicability of Exemptions under Section 404(f) to “Deep Ripping” Activities in Wetlands
07-02	Exemptions for Construction or Maintenance of Irrigation Ditches and Maintenance of Drainage Ditches Under Section 404 of Clean Water Act

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Table 3: Memoranda⁸

Memorandum for the Field: Clean Water Act Section 404 Regulatory Program and Agricultural Activities (1990)

387

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

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

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

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i. For purposes of D.2.(a), agricultural commodity means any crop planted and produced by annual tilling of the soil, including tilling by one-trip planters, or sugarcane.⁹

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ii. For purposes of D.2.(a), agricultural use means open land planted to an agricultural crop, used for the production of (1) food or fiber, (2) used for haying or grazing, (3) left idle per a USDA program, or (4) diverted from crop production to an approved cultural practice by NRCS that prevents erosion or other degradation.¹⁰

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b. Discharges of dredged or fill material for the purpose of creating or maintaining constructed treatment wetlands, as long as the constructed treatment wetland is located in an area that did not historically support wetland areas or other aquatic resources, and the treatment wetlands were not constructed as mitigation for discharges of dredged or fill material to other wetlands.

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

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For activities associated with (1) an appropriation of water subject to Part 2 (commencing with section 1200) of Division 2 of the Water Code, (2) a hydroelectric facility where the proposed activity requires a

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⁸ These documents are available at the U.S. Army Corps of Engineers Regulatory Program and Permits, Related Resources, Memoranda of Understanding/Agreement webpage: <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/MOUMOAs.aspx>

⁹ Joint Guidance from the Natural Resources Conservation Service and the Army Corps of Engineers Concerning Wetland Determinations for the Clean Water Act and the Food Security Act of 1985, February 25, 2005.

¹⁰ Joint Guidance from the Natural Resources Conservation Service and the Army Corps of Engineers Concerning Wetland Determinations for the Clean Water Act and the Food Security Act of 1985, February 25, 2005

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411 Federal Energy Regulatory Commission (FERC) license or amendment to a FERC license, or (3) any
412 other diversion of water for beneficial use, the Division of Water Rights will inform the applicant whether
413 the application procedures in sections IV.A and IV.B will apply to the application.

414 **V. Definitions**

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

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

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

423 **Application** means a written request, including a report of waste discharge or request for water quality
424 certification, for authorization of any activity that may result in the discharge of dredged or fill material
425 and is subject to this Policy.

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

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

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

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

438 **Ecological Restoration and Enhancement Project** means projects undertaken for the sole purpose
439 of assisting or controlling the recovery of an aquatic ecosystem that has been degraded, damaged or
440 destroyed to restore some measure of its natural condition and to enhance the beneficial uses or
441 potential beneficial uses of water. Such projects are undertaken voluntarily in accordance with the
442 terms and conditions of a binding stream or wetland enhancement or restoration agreement, or a
443 wetland establishment agreement, between the landowner and the U.S. Fish and Wildlife Service,
444 Natural Resources Conservation Service, Farm Service Agency, National Marine Fisheries Service,
445 National Oceanic and Atmospheric Administration, U.S. Forest Service, U.S. Bureau of Land
446 Management, California Department of Fish and Wildlife, California Wildlife Conservation Board or
447 other federal or state resource agency or non-governmental conservation organization. These projects
448 do not include the conversion of a stream or natural wetland to another aquatic habitat type or uplands;
449 stream channelization; or relocation of tidal waters or the conversion of tidal waters, including tidal
450 wetlands, to other aquatic uses, such as the conversion of tidal wetlands into open water
451 impoundments. It is recognized that ecological restoration and enhancement projects may require
452 filling gullied stream channels and similar rehabilitative activities to re-establish stream and meadow

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453 hydrology. Changes in wetland plant communities that occur when wetland hydrology is more fully
454 restored during rehabilitation activities are not considered a conversion to another aquatic habitat type.
455 These projects also do not include actions required under a Water Board order (e.g., WDRs, waivers of
456 WDRs, or water quality certification) for mitigation, actions to service required mitigation, or actions
457 undertaken for the primary purpose of land development, agricultural production, property protection, or
458 flood management.

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

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

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

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

470 **Order** means Waste Discharge Requirements, waivers of Waste Discharge Requirements, or water
471 quality certification.

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

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

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

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

483 **Watershed Approach** means an analytical process for evaluating the environmental effects of a
484 proposed project and making decisions that support the sustainability or improvement of aquatic
485 resources in a watershed. The watershed approach recognizes that the abundance, diversity, and
486 condition of aquatic resources in a watershed support beneficial uses. Diversity of aquatic resources
487 includes both the types of aquatic resources and the locations of those aquatic resources in a
488 watershed. Consideration is also given to understanding historic and potential aquatic resource
489 conditions, past and projected aquatic resource impacts in the watershed, and terrestrial connections
490 between aquatic resources. The watershed approach can be used to evaluate avoidance and
491 minimization of direct, indirect, secondary, and cumulative project impacts. It also can be used in
492 determining compensatory mitigation requirements.

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493 **Watershed Plan** means a document that provides assessment and management information for a
494 geographically defined watershed, including the analyses, actions, participants, and resources related
495 to development and implementation of the plan.

496 **Watershed Profile** means a compilation of data or information on the abundance, types, and condition
497 of aquatic resources in a project evaluation area sufficient to provide information to evaluate direct,
498 secondary, and cumulative impacts of project and compensatory mitigation alternatives, and to help
499 define watershed goals. Information sources include online searches, maps, watershed plans, and
500 possibly some fieldwork if necessary. Watershed profiles for subsequent projects in a watershed can
501 be used to track the cumulative effectiveness of the permitting authority's decisions.

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502 Appendix A: State Supplemental Dredged or Fill Guidelines

503 It is the intent of the Water Boards to be consistent with the Corps' 404(b)(1) Guidelines where feasible.
504 Due to jurisdictional and procedural differences some modifications to the Corps' Guidelines were
505 necessary. Generally, these changes or deletions were made to reduce redundancy (especially where
506 sufficiently described elsewhere in these Procedures) and to account for other state requirements.
507 Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained in these State
508 Supplemental Dredged or Fill Guidelines for the benefit of practitioners who are familiar with the Corps'
509 Guidelines.

510 The State Supplemental Dredged or Fill Guidelines describe how the Water Boards will implement the
511 404(b)(1) Guidelines, 40 CFR under these Procedures. In cases of conflict, Parts I through V take
512 precedence over these State Supplemental Dredged or Fill Guidelines.

513 Subpart A –General¹¹

514 § 230.3 Definitions.

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

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

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

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

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

527 (n) The term permitting authority means as defined above in the main text of this Policy.

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

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

535 § 230.6 Adaptability¹²

¹¹ Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

¹² Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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536 (a) The manner in which these Guidelines are used depends on the physical, biological, and
537 chemical nature of the proposed extraction site, the material to be discharged, and the candidate
538 disposal site, including any other important components of the ecosystem being evaluated.
539 Documentation to demonstrate knowledge about the extraction site, materials to be extracted, and
540 the candidate disposal site is an essential component of guideline application. These Guidelines
541 allow evaluation and documentation for a variety of activities, ranging from those with large,
542 complex impacts on the aquatic environment to those for which the impact is likely to be innocuous.
543 It is unlikely that the Guidelines will apply in their entirety to any one activity, no matter how
544 complex. It is anticipated that substantial numbers of permit applications will be for minor, routine
545 activities that have little, if any, potential for significant degradation of the aquatic environment. It
546 generally is not intended or expected that extensive testing, evaluation or analysis will be needed to
547 make findings of compliance in such routine cases.

548 Where the conditions for General permits are met, and where numerous applications for similar
549 activities are likely, the use of General permits will eliminate repetitive evaluation and
550 documentation for individual discharges.

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

555 (c) An essential part of the evaluation process involves making determinations as to the relevance
556 of any portion(s) of the Guidelines and conducting further evaluation only as needed. However,
557 where portions of the Guidelines review procedure are “short form” evaluations, there still must be
558 sufficient information (including consideration of both individual and cumulative impacts) to support
559 the decision of whether to specify the site for disposal of dredged or fill material and to support the
560 decision to curtail or abbreviate the evaluation process. The presumption against the discharge in [§](#)
561 [230.1](#) applies to this decision-making.

562 (d) In the case of activities covered by General permits for dredge and fill activities issued by the
563 permitting authority, the analysis and documentation required by the Guidelines will be performed at
564 the time of General permit for dredge and fill activities issuance by the permitting authority and will
565 not be repeated when activities are conducted under a General permit for dredge and fill activities
566 issued by the permitting authority. These Guidelines do not require reporting or formal written
567 communication at the time individual activities are initiated under a General permit for dredge and
568 fill activities issued by the permitting authority. However, a particular General permit for dredge and
569 fill activities issued by the permitting authority may require appropriate reporting.

570 **Subpart B – Compliance with Guidelines**¹³

571 § 230.10 Restrictions on Discharge

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

¹³Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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- 575 (1) For the purpose of this requirement, practicable alternatives include, but are not limited to:
- 576 (i) Activities which do not involve a discharge of dredged or fill material to waters of the state
577 or ocean waters;
- 578 (ii) Discharges of dredged or fill material at other locations in waters of the state or ocean
579 waters;
- 580 (2) An alternative is practicable if it is available and capable of being done after taking into
581 consideration cost, existing technology, and logistics in light of overall project purposes. If it is
582 otherwise a practicable alternative, an area nor presently owned by the applicant which could
583 reasonably be obtained, utilized, expanded or managed in order to fulfill the basic purpose of
584 the proposed activity may be considered.
- 585 (3) Where activity associated with a discharge which is proposed for a special aquatic site does
586 not require access or proximity to or sitting within the special aquatic site in question to fulfill its
587 basic purpose (i.e., in not “water dependent”), practicable alternatives that do not involve special
588 aquatic sites are presumed to be available, unless clearly demonstrated otherwise. In addition,
589 where a discharge is proposed for a special aquatic site, all practicable alternatives to the
590 proposed discharge which do not involve a discharge into a special aquatic site are presumed to
591 have less adverse impact on the aquatic ecosystem, unless clearly demonstrated otherwise.
- 592 (b) No discharge of dredged or fill material shall be permitted if it:
- 593 (1) Causes or contributes, after consideration of disposal site dilution and dispersion, to
594 violations of any applicable State water quality standard;
- 595 (2) Violates any applicable toxic effluent standard or prohibition under section 307 of the Clean
596 Water Act;
- 597 (c) No discharge of dredged or fill material shall be permitted which will cause or contribute to
598 significant degradation of the waters of the state. Under these Guidelines, effects contributing to
599 significant degradation considered individually or collectively, include:
- 600 (1) Significantly adverse effects of the discharge of pollutants on human health or welfare,
601 including but not limited to effects on municipal water supplies, plankton, fish, shellfish, wildlife,
602 and special aquatic sites;
- 603 (2) Significantly adverse effects of the discharge of pollutants on life stages of aquatic life and
604 other wildlife dependent on aquatic ecosystems, including the transfer, concentration, and
605 spread of pollutants or their byproducts outside of the disposal site through biological, physical,
606 and chemical processes.
- 607 (3) Significantly adverse effects of the discharge of pollutants on aquatic ecosystem diversity,
608 productivity, and stability. Such effects may include, but are not limited to, loss of fish and
609 wildlife habitat or loss of the capacity of a wetland to assimilate nutrients, purify water, or reduce
610 wave energy; or
- 611 (4) Significantly adverse effects of the discharge of pollutants on recreational, aesthetic, and
612 economic values.
- 613 (d) No discharge of dredged or fill material shall be permitted unless appropriate and practicable
614 steps have been taken which will minimize potential adverse impacts of the discharge on the
615 aquatic ecosystem. Subpart H identifies such possible steps.

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616 **Subpart E-Potential Impacts on Special Aquatic Sites**

617 § 230.40 Sanctuaries and refuges¹⁴

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

620 § 230.41 Wetlands.

621 (a)(1) Wetlands consist of areas that are inundated or saturated by surface or groundwater at a
622 frequency and duration sufficient to support, and under normal circumstances do support, a prevalence
623 of vegetation typically adapted for life in saturated soil conditions.

624 § 230.42 Mud Flats.

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

631 § 230.43 Vegetated shallows.

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

635 § 230.45 Riffle and Pool Complexes.

636 (a) Steep gradient sections of streams are sometime characterized by riffle and pool complexes.
637 Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water
638 over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen
639 levels in the water. Pools are deeper areas associated with riffles. Pools are characterized by a slower
640 stream velocity, a streaming flow, a smooth surface, and a finer substrate. Riffle and pool complexes
641 are particularly valuable habitat for fish and wildlife.

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

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

647 § 230.70 Actions concerning the location of the discharge.

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

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

¹⁴ Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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- 651 (b) Designing the discharge to avoid a disruption of periodic water inundation patterns;
- 652 (c) Selecting a disposal site that has been used previously for dredged material discharge;
- 653 (d) Selecting a disposal site at which the substrate is composed of material similar to that being
654 discharged, such as discharging sand on sand or mud on mud;
- 655 (e) Selecting a disposal site, the discharge point, and the method of discharge to minimize the
656 extent of any plume;
- 657 (f) Designing the discharge of dredged or fill material to minimize or prevent the creation of standing
658 bodies of water in areas of normally fluctuating water levels, and minimize or prevent the drainage
659 of areas subject to such fluctuations.
- 660 § 230.71 Actions concerning the material to be discharged¹⁵
- 661 The effects of a discharge can be minimized by treatment of, or limitations on the material itself, such
662 as:
- 663 (a) Disposal of dredged material in such a manner that physiochemical conditions are maintained
664 and the potency and availability of pollutants are reduced.
- 665 (b) Limiting the solid, liquid, and gaseous components of material to be discharged at a particular
666 site;
- 667 (c) Adding treatment substances to the discharge material;
- 668 (d) Utilizing chemical flocculants to enhance the deposition of suspended particulates in diked
669 disposal areas.
- 670 § 230.72 Actions controlling the material after discharge.
- 671 The effects of the dredged or fill material after discharge may be controlled by:
- 672 (a) Selecting discharge methods and disposal sites where the potential for erosion, slumping or
673 leaching of materials into the surrounding aquatic ecosystem will be reduced. These sites or
674 methods include, but are not limited to:
- 675 (1) Using containment levees, sediment basins, and cover crops to reduce erosions:
- 676 (2) Using lined containment areas to reduce leaching where leaching of chemical constituents
677 from the discharged material is expected to be a problem;
- 678 (b) Capping in-place contaminated material with clean material or selectively discharging the most
679 contaminated material first to be capped with the remaining material;
- 680 (c) Maintaining and containing discharged material properly to prevent point and nonpoint sources
681 of pollution;
- 682 (d) Timing the discharge to minimize impact, for instance during periods of unusual high water
683 flows, wind, wave, and tidal actions.
- 684 § 230.73 Actions affecting the method of dispersion.

¹⁵ Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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- 685 The effects of a discharge can be minimized by the manner in which it is dispersed, such as:
- 686 (a) Where environmentally desirable, distributing the dredged material widely in a thin layer at the
687 disposal site maintain natural substrate contours and elevation;
- 688 (b) Orienting a dredged or fill material mound to minimize undesirable obstruction to the water
689 current or circulation pattern, and utilizing natural bottom contours to minimize the size of the
690 mound;
- 691 (c) Using silt screens or other appropriate methods to confine suspended particulate/turbidity to a
692 small area where settling or removal can occur;
- 693 (d) Making use of currents and circulation patterns to mix, disperse and dilute the discharge;
- 694 (e) Minimizing water column turbidity by using a submerged diffuser system. A similar effect can be
695 accomplished by submerging pipeline discharges or otherwise releasing materials near the bottom;
- 696 (f) Selecting sites or managing discharges to confine and minimize the release of suspended
697 particulates to give decreased turbidity levels and to maintain light penetration for organisms;
- 698 (g) Setting limitations on the amount of material to be discharged per unit of time or volume of
699 receiving water.
- 700 § 230.74 Actions related to technology.
- 701 Discharge technology should be adapted to the needs of each site. In determining whether the
702 discharge operation sufficiently minimizes adverse environmental impacts, the applicant should
703 consider:
- 704 (a) Using appropriate equipment or machinery, including protective devices, and the use of such
705 equipment or machinery in activities related to the discharge or dredged or fill material;
- 706 (b) Employing appropriate maintenance and operation on equipment or machinery, including
707 adequate training, staffing, and working procedures;
- 708 (c) Using machinery and techniques that are especially designed to reduce damage to wetlands.
709 This may include machines equipped with devices that scatter rather than mound excavated
710 materials, machines with specially designed wheels or tracks, and the use of mats under heavy
711 machines to reduce wetland surface compaction and rutting;
- 712 (d) Designing access roads and channels spanning structures using culverts, open channels, and
713 diversions that will pass both low and high water flows, accommodate fluctuating water levels, and
714 maintain circulation and faunal movement;
- 715 (e) Employing appropriate machinery and methods of transport of the material for discharge.
- 716 § 230.75 Actions affecting plant and animal populations.¹⁶
- 717 Minimization of adverse effects on populations of plant and animals can be achieved by:
- 718 (a) Avoiding changes in water current and circulation patterns which would interfere with the
719 movement of animals;

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

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- 720 (b) Selecting sites or managing discharges to prevent or avoid creating habitat conducive to the
721 development of undesirable predators or species which have a competitive edge ecologically over
722 indigenous plants or animals;
- 723 (c) Avoiding sites having unique habitat or other value, including habitat of threatened or
724 endangered species;
- 725 (d) Using planning and construction practices to institute habitat development and restoration to
726 produce a new or modified environmental state of higher ecological value by displacement of some
727 or all of the existing environmental characteristics. Habitat development and restoration techniques
728 can be used to minimize adverse impacts and to compensate for destroyed habitat. Additional
729 criteria for compensation measures are provided in subpart J of this part. Use techniques that have
730 been demonstrated to be effective in circumstances similar to those under consideration wherever
731 possible. Where proposed development and restoration techniques have not yet advanced to the
732 pilot demonstration stage, initiate their use on a small scale to allow corrective action if
733 unanticipated adverse impacts occur;
- 734 (e) Timing discharge to avoid spawning or migration seasons and other biologically critical time
735 periods;
- 736 (f) Avoiding the destruction of remnant natural sites within areas already affected by development.
- 737 § 230.76 Actions affecting human use.
- 738 Minimization of adverse effects on human use potential may be achieved by:
- 739 (a) Selecting discharge sites and following discharge procedures to prevent or minimize any
740 potential damage to the aesthetically pleasing features of the aquatic site (e.g. viewscales),
741 particularly with respect to water quality;
- 742 (b) Selecting disposal sites which are not valuable as natural aquatic areas;
- 743 (c) Timing the discharge to avoid the seasons or periods when human recreational activity
744 associated with the aquatic site is most important;
- 745 (d) Following discharge procedures which avoid or minimize the disturbance of aesthetic features
746 on an aquatic site or ecosystem;
- 747 (e) Selecting sites that will not be detrimental or increase incompatible human activity, or require the
748 need for frequent dredge or fill maintenance activity in remote fish and wildlife areas;
- 749 (f) Locating the disposal site outside of the vicinity of a public water supply intake.
- 750 § 230.77 Other actions.
- 751 (a) In the case of fills, controlling runoff and other discharges from activities to be conducted on the
752 fill;
- 753 (b) In the case of dams, designing water releases to accommodate the needs of fish and wildlife;
- 754 (c) In dredging projects funded by Federal agencies other than the Corps of Engineers, maintain
755 desired water quality of the return discharge through agreement with the Federal funding authority
756 on scientifically defensible pollutant concentration levels in addition to any applicable water quality
757 standards;

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

761 **Subpart J – Compensatory Mitigation for Losses of Aquatic Resources¹⁷**

762 § 230.91 Purpose and general considerations.

763 (a) Purpose.

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

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

771 § 230.92 Definitions.¹⁸

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

773 Adaptive management means the development of a management strategy that anticipates likely
774 challenges associated with compensatory mitigation projects and provides for the implementation of
775 actions to address those challenges, as well as unforeseen changes to those projects. It requires
776 consideration of the risk, uncertainty, and dynamic nature of compensatory mitigation projects and
777 guides modification of those projects to optimize performance. It includes the selection of appropriate
778 measures that will ensure that the aquatic resource functions are provided and involves analysis of
779 monitoring results to identify potential problems of a compensatory mitigation project and the
780 identification and implementation of measures to rectify those problems.

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

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

788 Compensatory mitigation project means compensatory mitigation implemented by the permittee as a
789 requirement of a permit (i.e., permittee-responsible mitigation), or by a mitigation bank or an in-lieu
790 fee program.

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

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

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- 794 Credit means a unit of measure (e.g., a functional or areal measure or other suitable metric)
795 representing the accrual or attainment of aquatic functions at a compensatory mitigation site. The
796 measure of aquatic functions is based on the resources restored, established, enhanced, or
797 preserved.
- 798 Days means calendar days.
- 799 Enhancement means the manipulation of the physical, chemical, or biological characteristics of an
800 aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s).
801 Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a
802 decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic
803 resource area.¹⁹
- 804 Establishment (creation) means the manipulation of the physical, chemical, or biological
805 characteristics present to develop an aquatic resource that did not previously exist at an upland site.
806 Establishment results in a gain in aquatic resource area and functions.
- 807 Functional capacity means the degree to which an area of aquatic resource performs a specific
808 function.
- 809 Functions means the physical, chemical, and biological processes that occur in ecosystems.
- 810 Impact means adverse effect.
- 811 In-lieu fee program means a program involving the restoration, establishment, enhancement, and/or
812 preservation of aquatic resources through funds paid to a governmental or non-profit natural
813 resources management entity to satisfy compensatory mitigation requirements for permits. Similar to
814 a mitigation bank, an in-lieu fee program sells compensatory mitigation credits to permittees whose
815 obligation to provide compensatory mitigation is then transferred to the in-lieu program sponsor.
816 However, the rules governing the operation and use of in-lieu fee programs are somewhat different
817 from the rules governing operation and use of mitigation banks. The operation and use of an in-lieu
818 fee program are governed by an in-lieu fee program instrument.
- 819 In-lieu fee program instrument means the legal document for the establishment, operation, and use of
820 an in-lieu fee program.
- 821 Instrument means mitigation banking instrument or in-lieu fee program instrument.
- 822 Mitigation bank means a site, or suite of sites, where resources (e.g., wetlands, streams, riparian
823 areas) are restored, established, enhanced, and/or preserved for the purpose of providing
824 compensatory mitigation for impacts authorized by permits. In general, a mitigation bank sells
825 compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is
826 then transferred to the mitigation bank sponsor. The operation and use of a mitigation bank are
827 governed by a mitigation banking instrument.
- 828 Off-site means an area that is neither located on the same parcel of land as the impact site, nor on a
829 parcel of land contiguous to the parcel containing the impact site.

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

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- 830 On-site means an area located on the same parcel of land as the impact site, or on a parcel of land
831 contiguous to the impact site.
- 832 Out-of-kind means a resource of a different structural and functional type from the impacted resource.
- 833 Performance standards are observable or measurable physical (including hydrological), chemical
834 and/or biological attributes that are used to determine if a compensatory mitigation project meets its
835 objectives.²⁰
- 836 Permittee-responsible mitigation means an aquatic resource restoration, establishment,
837 enhancement, and/or preservation activity undertaken by the permittee (or an authorized agent or
838 contractor) to provide compensatory mitigation for which the permittee retains full responsibility.
- 839 Preservation means the removal of a threat to, or preventing the decline of, aquatic resources by an
840 action in or near those aquatic resources. This term includes activities commonly associated with the
841 protection and maintenance of aquatic resources through the implementation of appropriate legal and
842 physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.
- 843 Re-establishment means the manipulation of the physical, chemical, or biological characteristics of a
844 site with the goal of returning natural/historic functions to a former aquatic resource. Re-
845 establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource
846 area and functions.
- 847 Reference aquatic resources are a set of aquatic resources that represent the full range of variability
848 exhibited by a regional class of aquatic resources as a result of natural processes and anthropogenic
849 disturbances.
- 850 Rehabilitation means the manipulation of the physical, chemical, or biological characteristics of a site
851 with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation
852 results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.
- 853 Restoration means the manipulation of the physical, chemical, or biological characteristics of a site
854 with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the
855 purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-
856 establishment and rehabilitation.
- 857 Riparian areas are lands adjacent to waters of the state. Riparian areas provide a variety of
858 ecological functions and services and help improve or maintain local water quality.
- 859 Service area means the geographic area within which impacts can be mitigated at a specific
860 mitigation bank or an in-lieu fee program, as designated in its instrument.
- 861 Services mean the benefits that human populations receive from functions that occur in ecosystems.
- 862 Sponsor means any public or private entity responsible for establishing, and in most circumstances,
863 operating a mitigation bank or in-lieu fee program.
- 864 Temporal loss is the time lag between the loss of aquatic resource functions caused by the permitted
865 impacts and the replacement of aquatic resource functions at the compensatory mitigation site.
866 Higher compensation ratios may be required to compensate for temporal loss. When the

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867 compensatory mitigation project is initiated prior to, or concurrent with, the permitted impacts, the
868 permitting authority may determine that compensation for temporal loss is not necessary, unless the
869 resource has a long development time.

870 Watershed means a land area that drains to a common waterway, such as a stream, lake, estuary,
871 wetland, or ultimately the ocean.²¹

872 Watershed approach is defined above in the main text of the Policy.

873 Watershed plan means a plan developed by federal, tribal, state, and/or local government agencies
874 or appropriate non-governmental organizations, in consultation with relevant stakeholders, for the
875 specific goal of aquatic resource restoration, establishment, enhancement, and preservation. A
876 watershed plan addresses aquatic resource conditions in the watershed, multiple stakeholder
877 interests, and land uses. Watershed plans may also identify priority sites for aquatic resource
878 restoration and protection. Examples of watershed plans include special area management plans,
879 advance identification programs, and wetland management plans.

880 § 230.93 General compensatory mitigation requirements.

881 (a) General Considerations.

882 (1) The fundamental objective of compensatory mitigation is to offset environmental losses
883 resulting from unavoidable impacts to waters of the state authorized by permits. The permitting
884 authority must determine the compensatory mitigation to be required in a permit, based on what
885 would be environmentally preferable. In making this determination, the permitting authority
886 must assess the likelihood for ecological success and sustainability, and the location of the
887 compensation site relative to the impact site and their significance within the watershed, and the
888 costs of the compensatory mitigation project. In many cases, the environmentally preferable
889 compensatory mitigation may be provided through mitigation banks or in-lieu fee programs
890 because they usually involve consolidating compensatory mitigation projects where ecologically
891 appropriate, consolidating resources, providing financial planning and scientific expertise (which
892 often is not practical for permittee-responsible compensatory mitigation projects), reducing
893 temporal losses of functions, and reducing uncertainty over project success. Compensatory
894 mitigation requirements must be commensurate with the amount and type of impact that is
895 associated with a particular permit. Permit applicants are responsible for proposing an
896 appropriate compensatory mitigation option to offset unavoidable impacts.

897 (2) Compensatory mitigation may be performed using methods or restoration, enhancement,
898 establishment, and in certain circumstances preservation. Restoration should generally be the
899 first option considered because the likelihood of success is greater and the impacts to
900 potentially ecologically important uplands are reduced compared to establishment, and the
901 potential gains in terms of aquatic resource functions are greater, compared to enhancement
902 and preservation.

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

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903 (3) Compensatory mitigation projects may be sited on public or private lands. Credits for
904 compensatory mitigation projects on public land must be based solely on aquatic resource
905 functions provided by the compensatory mitigation project, over and above those provided by
906 public programs already planned or in place. All compensatory mitigation projects must comply
907 with the standards in section IV of this Policy, if they are to be used to provide compensatory
908 mitigation for activities authorized by permits, regardless of whether they are sited on public or
909 private lands and whether the sponsor is a governmental or private entity.

910 (b) Type and location of compensatory mitigation.²²

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

923 (2) Mitigation bank credits. When permitted impacts are located within the service area of an
924 approved mitigation bank, and the bank has the appropriate number and resource type of
925 credits available, the permittee's compensatory mitigation requirements may be met by securing
926 those credits from the sponsor. Since an approved instrument (including an approved mitigation
927 plan and appropriate real estate and financial assurances) for a mitigation bank is required to be
928 in place before its credits can begin to be used to compensate for authorized impacts, use of a
929 mitigation bank can help reduce risk and uncertainty, as well as temporal loss of resource
930 functions and services. Mitigation bank credits are not released for debiting until specific
931 milestones associated with the mitigation bank site's protection and development are achieved,
932 thus use of mitigation bank credits can also help reduce risk that mitigation will not be fully
933 successful. Mitigation banks typically involve larger, more ecologically valuable parcels, and
934 more rigorous scientific and technical analysis, planning and implementation than permittee-
935 responsible mitigation. Also, development of a mitigation bank requires site identification in
936 advance, project-specific planning, and significant investment of financial resources that is often
937 not practicable for many in-lieu fee programs. For these reasons, the permitting authority
938 should give preference to the use of mitigation bank credits when these considerations are
939 applicable. However, these same considerations may also be used to override this preference,
940 where appropriate, as, for example, where an in-lieu fee program has released credits available
941 from a specific approved in-lieu fee project, or a permittee-responsible project will restore an
942 outstanding resource based on rigorous scientific and technical analysis.

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

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943 (3) In-lieu fee program credits. Where permitted impacts are located within the service area of
944 an approved in-lieu fee program, and the sponsor has the appropriate number and resource
945 type of credits available, the permittee's compensatory mitigation requirements may be met by
946 securing those credits from the sponsor. Where permitted impacts are not located in the service
947 area of an approved mitigation bank, or the approved mitigation bank does not have the
948 appropriate number and resource type of credits available to offset those impacts, in-lieu fee
949 mitigation, if available, is generally preferable to permittee-responsible mitigation. In-lieu fee
950 projects typically involve larger, more ecologically valuable parcels, and more rigorous scientific
951 and technical analysis, planning and implementation than permittee-responsible mitigation.
952 They also devote significant resources to identifying and addressing high-priority resource
953 needs on a watershed scale, as reflected in their compensation planning framework. For these
954 reasons, the permitting authority should give preference to in-lieu fee program credits over
955 permittee-responsible mitigation, where these considerations are applicable. However, as with
956 the preference for mitigation bank credits, these same considerations may be used to override
957 this preference where appropriate. Additionally, in cases where permittee-responsible
958 mitigation is likely to successfully meet performance standards before advance credits secured
959 from an in-lieu fee program are fulfilled, the permitting authority should also give consideration
960 to this factor in deciding between in-lieu fee mitigation and permittee-responsible mitigation.

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

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

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

981 (c) Watershed approach to compensatory mitigation.²³

²³ Note that the numbering scheme of the Corps' 404(b)(1) Guidelines has been retained for the benefit of practitioners who are familiar with the Corps' 404(b)(1) Guidelines.

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982 (1) The permitting authority must use a watershed approach to establish compensatory
983 mitigation requirements in permits as described in the main text of the Policy. Where a
984 watershed plan is available, the permitting authority will determine whether the plan meets the
985 definition of watershed plan in the Policy and therefore is appropriate for use in the watershed
986 approach for compensatory mitigation. In cases where the permitting authority determines that
987 an appropriate watershed plan is available, the watershed approach should be based on that
988 plan. Where no such plan is available, the watershed approach should be based on information
989 provided by the project sponsor or available from other sources. The ultimate goal of a
990 watershed approach is to maintain and improve the abundance, diversity, and condition of
991 aquatic resources within watersheds through strategic selection of compensatory mitigation
992 sites.

993 (2) Considerations.

994 (i) A watershed approach to compensatory mitigation considers the importance of condition,
995 landscape position and resource type of compensatory mitigation projects for the
996 sustainability of aquatic resource functions within the watershed. Such an approach
997 considers how the condition, types, and locations of compensatory mitigation projects will
998 provide the desired aquatic resource functions, and will continue to function over time in a
999 changing landscape. It also considers the habitat requirements of important species, habitat
1000 loss or conversion trends, sources of watershed impairment, and current development
1001 trends, as well as the requirements of other regulatory and non-regulatory programs that
1002 affect the watershed, such as storm water management or habitat conservation programs. It
1003 includes the protection and maintenance of terrestrial resources, such as non-wetland
1004 riparian areas and uplands, when those resources contribute to or improve the overall
1005 ecological functioning of aquatic resources in the watershed. Compensatory mitigation
1006 requirements determined through the watershed approach should not focus exclusively on
1007 specific functions (e.g., water quality or habitat for certain species), but should provide, where
1008 practicable, the suite of functions typically provided by the affected aquatic resource.

1009 (ii) Locational factors (e.g., hydrology, surrounding land use) are important to the success of
1010 compensatory mitigation for impacted habitat functions and may lead to siting of such
1011 mitigation away from the project area. However, consideration should also be given to
1012 functions and services (e.g., water quality, flood control, shoreline protection) that will likely
1013 need to be addressed at or near the areas impacted by the permitted impacts.²⁴

1014 (iii) A watershed approach may include on-site compensatory mitigation, off-site
1015 compensatory mitigation (including mitigation banks or in-lieu fee programs), or a
1016 combination of on-site and off-site compensatory mitigation.

1017 (iv) A watershed approach to compensatory mitigation should include, to the extent
1018 practicable, inventories of historic and existing aquatic resources, including identification of

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1019 degraded aquatic resources, and identification of immediate and long-term aquatic resource
1020 needs within watersheds that can be met through permittee-responsible mitigation projects,
1021 mitigation banks, or in-lieu fee programs. Planning efforts should identify and prioritize
1022 aquatic resource restoration, establishment, and enhancement activities, and preservation of
1023 existing aquatic resources that are important for maintaining or improving ecological functions
1024 of the watershed. The identification and prioritization of resource needs should be as specific
1025 as possible, to enhance the usefulness of the approach in determining compensatory
1026 mitigation requirements.

1027 (v) A watershed approach is not appropriate in areas where watershed boundaries do not
1028 exist, such as marine areas. In such cases, an appropriate spatial scale should be used to
1029 replace lost functions and services within the same ecological system (e.g., reef complex,
1030 littoral drift cell).

1031 (3) Information Needs.

1032 (i) In the absence of a watershed plan determined by the permitting authority under
1033 paragraph (c)(1) of this section to be appropriate for use in the watershed approach, the
1034 permitting authority will use a watershed approach based on analysis of abundance,
1035 diversity, and condition of aquatic resources in a watershed, and information regarding
1036 watershed conditions and needs, including potential sites for aquatic resource restoration
1037 activities and priorities for aquatic resource restoration and preservation. Such information
1038 includes: Current trends in habitat loss or conversion; cumulative impacts of past
1039 development activities, current development trends, the presence and needs of sensitive
1040 species; site conditions that favor or hinder the success of compensatory mitigation projects;
1041 and chronic environmental problems such as flooding or poor water quality.

1042 (ii) This information may be available from sources such as wetland maps; soil surveys;
1043 U.S. Geological Survey topographic and hydrologic maps; aerial photographs; information on
1044 rare, endangered and threatened species and critical habitat; local ecological reports or
1045 studies; and other information sources that could be used to identify locations for suitable
1046 compensatory mitigation projects in the watershed.

1047 (iii) The level of information and analysis needed to support a watershed approach must be
1048 commensurate with the scope and scale of the proposed impacts requiring a permit, as well
1049 as the functions lost as a result of those impacts.

1050 (4) Watershed Scale. The size of watershed addressed using a watershed approach should not
1051 be larger than is appropriate to ensure that the aquatic resources provided through
1052 compensation activities will effectively compensate for adverse environmental impacts resulting
1053 from activities authorized by permits. The permitting authority should consider relevant
1054 environmental factors and appropriate locally-developed standards and criteria when
1055 determining the appropriate watershed scale in guiding compensation activities.

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1056

(d) Site selection.²⁵

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

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

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

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

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

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

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

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

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

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(e) Mitigation type.

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

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1087 compensate for unavoidable impacts to perennial streams. Thus, except as provided in
1088 paragraph (e)(2) of this section, the required compensatory mitigation shall be of a similar type
1089 to the affected aquatic resource.

1090 (2) If the permitting authority determines, using the watershed approach in accordance with
1091 paragraph (c) of this section that out-of-kind compensatory mitigation will serve the aquatic
1092 resource needs of the watershed, the permitting authority may authorize the use of such out-of-
1093 kind compensatory mitigation. The basis for authorization of out-of-kind compensatory
1094 mitigation must be documented in the administrative record for the permit action.

1095 (3) For difficult-to-replace resources (e.g., bogs, fens, springs, streams, vegetated seasonal
1096 wetlands, slope and seep wetlands, vernal pools, and wet meadows) if further avoidance and
1097 minimization is not practicable, the required compensation should be provided, if practicable,
1098 through in-kind rehabilitation, enhancement, or preservation since there is greater certainty that
1099 these methods of compensation will successfully offset permitted impacts.

1100 (f) Amount of compensatory mitigation.

1101 (1) If the permitting authority determines that compensatory mitigation is necessary to offset
1102 unavoidable impacts to aquatic resources, the amount of required compensatory mitigation
1103 must be, to the extent practicable, sufficient to replace lost aquatic resource functions. In cases
1104 where appropriate functional or condition assessment methods or other suitable metrics are
1105 available, these methods should be used where practicable to determine how much
1106 compensatory mitigation is required. If a functional or condition assessment or other suitable
1107 metric is not used, a minimum one-to-one acreage or linear foot compensation ratio must be
1108 used.

1109 (2) The permitting authority must require a mitigation ratio greater than one-to-one where
1110 necessary to account for the method of compensatory mitigation (e.g., preservation), the
1111 likelihood of success, differences between the functions lost at the impact site and the functions
1112 expected to be produced by the compensatory mitigation project, temporal losses of aquatic
1113 resource functions, the difficulty of restoring or establishing the desired aquatic resource type
1114 and functions, and/or the distance between the affected aquatic resource and the compensation
1115 site. The rationale for the required replacement ratio must be documented in the administrative
1116 record for the permit action.

1117 (3) If an in-lieu fee program will be used to provide the required compensatory mitigation, and
1118 the appropriate number and resource type of released credits are not available, the permitting
1119 authority must require sufficient compensation to account for the risk and uncertainty associated
1120 with in-lieu fee projects that have not been implemented before the permitted impacts have
1121 occurred.

1122 (g) Use of mitigation banks and in-lieu fee programs. Mitigation banks and in-lieu fee programs
1123 may be used to compensate for impacts to aquatic resources authorized by general permits and
1124 individual permits in accordance with the preference hierarchy in paragraph (b) of this section.
1125 Mitigation banks and in-lieu fee programs may also be used to satisfy requirements arising out of an
1126 enforcement action, such as supplemental environmental projects.

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- 1127 (h) Preservation.²⁶
- 1128 (1) Preservation may be used to provide compensatory mitigation for activities authorized by
1129 permits when all the following criteria are met:
- 1130 (i) The resources to be preserved provide important physical, chemical, or biological
1131 functions for the watershed;
- 1132 (ii) The resources to be preserved contribute significantly to the ecological sustainability of
1133 the watershed. In determining the contribution of those resources to the ecological
1134 sustainability of the watershed, the permitting authority must use appropriate quantitative
1135 assessment tools where available;
- 1136 (iii) Preservation is determined by the permitting authority to be appropriate and practicable;
- 1137 (iv) The resources are under threat of destruction or adverse modifications; and
- 1138 (v) The preserved site will be permanently protected through an appropriate real estate or
1139 other legal instrument (e.g., easement, title transfer to state resource agency or land trust).
- 1140 (2) Where preservation is used to provide compensatory mitigation, to the extent appropriate
1141 and practicable the preservation shall be done in conjunction with aquatic resource restoration,
1142 establishment, and/or enhancement activities. This requirement may be waived by the
1143 permitting authority where preservation has been identified as a high priority using a watershed
1144 approach described in paragraph (c) of this section, but compensation ratios shall be higher.
- 1145 (i) Buffers. The permitting authority may require the restoration, establishment, enhancement,
1146 and preservation, as well as the maintenance, of riparian areas and/or buffers around aquatic
1147 resources where necessary to ensure the long-term viability of those resources. Buffers may
1148 also provide habitat or corridors necessary for the ecological functioning of aquatic
1149 resources. If buffers are required by the permitting authority as part of the compensatory
1150 mitigation project, compensatory mitigation credit will be provided for those buffers, as
1151 provided in section IV B.7 (a).
- 1152 (j) Relationship to other federal, tribal, state, and local programs.
- 1153 (1) Compensatory mitigation projects for permits may also be used to satisfy the environmental
1154 requirements of other programs, such as tribal, state, or local wetlands regulatory programs,
1155 other federal programs such as the Surface Mining Control and Reclamation Act, Corps civil
1156 works projects, and Department of Defense military construction projects, consistent with the
1157 terms and requirements of these programs and subject to the following considerations:

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- 1158 (i) The compensatory mitigation project must include appropriate compensation required by
1159 the permit for unavoidable impacts to aquatic resources authorized by that permit.
- 1160 (ii) Under no circumstances may the same credits be used to provide mitigation for more than
1161 one permitted activity. However, where appropriate, compensatory mitigation projects,
1162 including mitigation banks and in-lieu fee projects, may be designed to holistically address
1163 requirements under multiple programs and authorities for the same activity.
- 1164 (2) Except for projects undertaken by federal agencies, or where federal funding is specifically
1165 authorized to provide compensatory mitigation, federally-funded aquatic resource restoration or
1166 conservation projects undertaken for purposes other than compensatory mitigation, such as the
1167 Wetlands Reserve Program, Conservation Reserve Program, and Partners for Wildlife Program
1168 activities, cannot be used for the purpose of generating compensatory mitigation credits for
1169 activities authorized by permits. However, compensatory mitigation credits may be generated
1170 by activities undertaken in conjunction with, but supplemental to, such programs in order to
1171 maximize the overall ecological benefits of the restoration or conservation project.
- 1172 (3) Compensatory mitigation projects may also be used to provide compensatory mitigation
1173 under the Endangered Species Act or for Habitat Conservation Plans, as long as they comply
1174 with the requirements of paragraph (j)(1) of this section.
- 1175 (k) Permit conditions.
- 1176 (1) The compensatory mitigation requirements for a permit, including the amount and type of
1177 compensatory mitigation, must be clearly stated in the special conditions of the individual permit
1178 or authorization to use the general permit. The special conditions must be enforceable.²⁷
- 1179 (2) For a permit that requires permittee-responsible mitigation, the special conditions must:
- 1180 (i) Identify the party responsible for providing the compensatory mitigation;
- 1181 (ii) Incorporate, by reference, the final mitigation plan approved by the permitting authority;
- 1182 (iii) State the objectives, performance standards, and monitoring required for the
1183 compensatory mitigation project, unless they are provided in the approved final mitigation
1184 plan; and
- 1185 (iv) Describe any required financial assurances or long-term management provisions for the
1186 compensatory mitigation project, unless they are specified in the approved final mitigation
1187 plan.

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1188 (4) If a mitigation bank or in-lieu fee program is used to provide the required compensatory
1189 mitigation, the special conditions must indicate whether a mitigation bank or in-lieu fee program
1190 will be used, and specify the number and resource type of credits the permittee is required to
1191 secure. In the case of an individual permit, the special condition must also identify the specific
1192 mitigation bank or in-lieu fee program that will be used. For authorizations to use a general
1193 permit, the special conditions may either identify the specific mitigation bank or in-lieu fee
1194 program, or state that the specific mitigation bank or in-lieu fee program used to provide the
1195 required compensatory mitigation must be approved by the permitting authority before the
1196 credits are secured.

1197 (l) Party responsible for compensatory mitigation.

1198 (1) For permittee-responsible mitigation, the special conditions of the permit must clearly
1199 indicate the party or parties responsible for the implementation, performance, and long-term
1200 management of the compensatory mitigation project.

1201 (2) For mitigation banks and in-lieu fee programs, the instrument must clearly indicate the party
1202 or parties responsible for the implementation, performance, and long-term management of the
1203 compensatory mitigation project(s). The instrument must also contain a provision expressing
1204 the sponsor's agreement to assume responsibility for a permittee's compensatory mitigation
1205 requirements, once that permittee has secured the appropriate number and resource type of
1206 credits from the sponsor and the permitting authority has received the documentation described
1207 in paragraph (l)(3) of this section.

1208 (3) If use of a mitigation bank or in-lieu fee program is approved by the permitting authority to
1209 provide part or all of the required compensatory mitigation for a permit, the permittee retains
1210 responsibility for providing the compensatory mitigation until the appropriate number and
1211 resource type of credits have been secured from a sponsor and the permitting authority has
1212 received documentation that confirms that the sponsor has accepted the responsibility for
1213 providing the required compensatory mitigation. This documentation may consist of a letter or
1214 form signed by the sponsor, with the permit number and a statement indicating the number and
1215 resource type of credits that have been secured from the sponsor. Copies of this
1216 documentation will be retained in the administrative records for both the permit and the
1217 instrument. If the sponsor fails to provide the required compensatory mitigation, the permitting
1218 authority may pursue measures against the sponsor to ensure compliance.²⁸

1219 (m) Timing. Implementation of the compensatory mitigation project shall be, to the maximum extent
1220 practicable, in advance of or concurrent with the activity causing the authorized impacts. The
1221 permitting authority shall require, to the extent appropriate and practicable, additional compensatory
1222 mitigation to offset temporal losses of aquatic functions that will result from the permitted activity.

1223 (n) Financial assurances.

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1224 (1) The permitting authority shall require sufficient financial assurances to ensure a high level of
1225 confidence that the compensatory mitigation project will be successfully completed, in
1226 accordance with applicable performance standards. In cases where an alternate mechanism is
1227 available to ensure a high level of confidence that the compensatory mitigation will be provided
1228 and maintained (e.g., a formal, documented commitment from a government agency or public
1229 authority) the permitting authority may determine that financial assurances are not necessary for
1230 that compensatory mitigation project.

1231 (2) The amount of the required financial assurances must be determined by the permitting
1232 authority, in consultation with the project sponsor, and must be based on the size and
1233 complexity of the compensatory mitigation project, the degree of completion of the project at the
1234 time of project approval, the likelihood of success, the past performance of the project sponsor,
1235 and any other factors the permitting authority deems appropriate. Financial assurances may be
1236 in the form of performance bonds, escrow accounts, casualty insurance, letters of credit,
1237 legislative appropriations for government sponsored projects, or other appropriate instruments,
1238 subject to the approval of the permitting authority. The rationale for determining the amount of
1239 the required financial assurances must be documented in the administrative record for either the
1240 permit or the instrument. In determining the assurance amount, the permitting authority shall
1241 consider the cost of providing replacement mitigation, including costs for land acquisition,
1242 planning and engineering, legal fees, mobilization, construction, and monitoring.

1243 (3) If financial assurances are required, the permit must include a special condition requiring the
1244 financial assurances to be in place prior to commencing the permitted activity.²⁹

1245 (4) Financial assurances shall be phased out once the compensatory mitigation project has
1246 been determined by the permitting authority to be successful in accordance with its performance
1247 standards. The permit or instrument must clearly specify the conditions under which the
1248 financial assurances are to be released to the permittee, sponsor, and/or other financial
1249 assurance provider, including, as appropriate, linkage to achievement of performance
1250 standards, adaptive management, or compliance with special conditions.

1251 (5) A financial assurance must be in a form that ensures that the permitting authority will receive
1252 notification at least 120 days in advance of any termination or revocation. For third-party
1253 assurance providers, this may take the form of a contractual requirement for the assurance
1254 provider to notify the permitting authority at least 120 days before the assurance is revoked or
1255 terminated.

1256 (6) Financial assurances shall be payable at the direction of the permitting authority to his
1257 designee or to a standby trust agreement. When a standby trust is used (e.g., with performance
1258 bonds or letters of credit) all amounts paid by the financial assurance provider shall be
1259 deposited directly into the standby trust fund for distribution by the trustee in accordance with
1260 the permitting authority's instructions.

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1261 (o) Compliance with applicable law. The compensatory mitigation project must comply with all
1262 applicable federal, state, and local laws. The permit, mitigation banking instrument, or in-lieu fee
1263 program instrument must not require participation by the permitting authority in project
1264 management, including receipt or management of financial assurances or long-term financing
1265 mechanisms, except as determined by the permitting authority to be consistent with its statutory
1266 authority, mission, and priorities.

1267 § 230.94 Planning and documentation.

1268 (a) Pre-application consultations. Potential applicants for permits are encouraged to participate in
1269 pre-application meetings with the permitting authority and appropriate agencies to discuss potential
1270 mitigation requirements and information needs.

1271 (c) Mitigation plan.

1272 (1) Preparation and Approval.

1273 (i) For individual permits, the permittee must prepare a draft mitigation plan and submit it to
1274 the permitting authority for review prior to certification. After addressing any comments
1275 provided by the permitting authority, the permittee must prepare a final mitigation plan, which
1276 must be approved by the permitting authority prior to commencing work in waters of the state.
1277 The approved final mitigation plan must be incorporated into the individual permit either as an
1278 attachment or by reference. The final mitigation plan must include the items described in
1279 paragraphs (c)(2) through (c)(14) of this section, but the level of detail of the mitigation plan
1280 should be commensurate with the scale and scope of the impacts. As an alternative, the
1281 permitting authority may determine that it would be more appropriate to address any of the
1282 items described in paragraphs (c)(2) through (c)(14) of this section as permit conditions,
1283 instead of components of a compensatory mitigation plan. For permittees who intend to fulfill
1284 their compensatory mitigation obligations by securing credits from approved mitigation banks
1285 or in-lieu fee programs, their mitigation plans need include only the items described in
1286 paragraphs (c)(5) and (c)(6) of this section, and the name of the specific mitigation bank or
1287 in-lieu fee program to be used.³⁰

1288 (ii) For general permits, if compensatory mitigation is required, the permitting authority may
1289 approve a conceptual or detailed compensatory mitigation plan to meet required time frames
1290 for general permit enrollments, but a final mitigation plan incorporating the elements in
1291 paragraphs (c)(2) through (c)(14) of this section, at a level of detail commensurate with the
1292 scale and scope of the impacts, must be approved by the permitting authority before the
1293 permittee commences work in waters of the state. As an alternative, the permitting authority
1294 may determine that it would be more appropriate to address any of the items described in
1295 paragraphs (c)(2) through (c)(14) of this section as permit conditions, instead of components
1296 of a compensatory mitigation plan. For permittees who intend to fulfill their compensatory
1297 mitigation obligations by securing credits from approved mitigation banks or in-lieu fee
1298 programs, their mitigation plans need include only the items described in paragraphs (c)(5)
1299 and (c)(6) of this section, and either the name of the specific mitigation bank or in-lieu fee

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1300 program to be used or a statement indicating that a mitigation bank or in-lieu fee program will
1301 be used (contingent upon approval by the permitting authority).

1302 (2) Objectives. A description of the resource type(s) and amount(s) that will be provided, the
1303 method of compensation (i.e., restoration, establishment, enhancement, and/or preservation),
1304 and the manner in which the resource functions of the compensatory mitigation project will
1305 address the needs of the watershed, ecoregion, physiographic province, or other geographic
1306 area of interest.

1307 (3) Site selection. A description of the factors considered during the site selection process. This
1308 should include consideration of watershed needs, on-site alternatives where applicable, and the
1309 practicability of accomplishing ecologically self-sustaining aquatic resource restoration,
1310 establishment, enhancement, and/or preservation at the compensatory mitigation project site.
1311 (See [§ 230.93\(d\)](#).)

1312 (4) Site protection instrument. A description of the legal arrangements and instrument, including
1313 site ownership, that will be used to ensure the long-term protection of the compensatory
1314 mitigation project site (see [§ 230.97\(a\)](#)).³¹

1315 (5) Baseline information. A description of the ecological characteristics of the proposed
1316 compensatory mitigation project site and, in the case of an application for a permit, the impact
1317 site. This may include descriptions of historic and existing plant communities, historic and
1318 existing hydrology, soil conditions, a map showing the locations of the impact and mitigation
1319 site(s) or the geographic coordinates for those site(s), and other site characteristics appropriate
1320 to the type of resource proposed as compensation. The baseline information should also
1321 include a delineation of waters of the state on the proposed compensatory mitigation project
1322 site. A prospective permittee planning to secure credits from an approved mitigation bank or in-
1323 lieu fee program only needs to provide baseline information about the impact site, not the
1324 mitigation bank or in-lieu fee project site.

1325 (6) Determination of credits. A description of the number of credits to be provided, including a
1326 brief explanation of the rationale for this determination. (See [§ 230.93\(f\)](#).)

1327 (i) For permittee-responsible mitigation, this should include an explanation of how the
1328 compensatory mitigation project will provide the required compensation for unavoidable
1329 impacts to aquatic resources resulting from the permitted activity.

1330 (ii) For permittees intending to secure credits from an approved mitigation bank or in-lieu fee
1331 program, it should include the number and resource type of credits to be secured and how
1332 these were determined.

1333 (7) Mitigation work plan. Detailed written specifications and work descriptions for the
1334 compensatory mitigation project, including, but not limited to, the geographic boundaries of the
1335 project; construction methods, timing, and sequence; source(s) of water, including connections
1336 to existing waters and uplands; methods for establishing the desired plant community; plans to
1337 control invasive plant species; the proposed grading plan, including elevations and slopes of the
1338 substrate; soil management; and erosion control measures. For stream compensatory

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1339 mitigation projects, the mitigation work plan may also include other relevant information, such as
1340 planform geometry, channel form (e.g., typical channel cross-sections), watershed size, design
1341 discharge, and riparian area plantings.

1342 (8) Maintenance plan. A description and schedule of maintenance requirements to ensure the
1343 continued viability of the resource once initial construction is completed.

1344 (9) Performance standards. Ecologically-based standards that will be used to determine
1345 whether the compensatory mitigation project is achieving its objectives. (See [§ 230.95.](#))

1346 (10) Monitoring requirements. A description of parameters to be monitored in order to determine
1347 if the compensatory mitigation project is on track to meet performance standards and if adaptive
1348 management is needed. A schedule for monitoring and reporting on monitoring results to the
1349 permitting authority must be included. (See [§ 230.96.](#))³²

1350 (11) Long-term management plan. A description of how the compensatory mitigation project will
1351 be managed after performance standards have been achieved to ensure the long-term
1352 sustainability of the resource, including long-term financing mechanisms and the party
1353 responsible for long-term management. (See [§ 230.97\(d\).](#))

1354 (12) Adaptive management plan. A management strategy to address unforeseen changes in
1355 site conditions or other components of the compensatory mitigation project, including the party
1356 or parties responsible for implementing adaptive management measures. The adaptive
1357 management plan will guide decisions for revising compensatory mitigation plans and
1358 implementing measures to address both foreseeable and unforeseen circumstances that
1359 adversely affect compensatory mitigation success. (See [§ 230.97\(c\).](#))

1360 (13) Financial assurances. A description of financial assurances that will be provided and how
1361 they are sufficient to ensure a high level of confidence that the compensatory mitigation project
1362 will be successfully completed, in accordance with its performance standards (see [§ 230.93\(n\).](#))

1363 (14) Other information. The permitting authority may require additional information as necessary
1364 to determine the appropriateness, feasibility, and practicability of the compensatory mitigation
1365 project.

1366 § 230.95 Ecological performance standards.

1367 (a) The approved mitigation plan must contain performance standards that will be used to assess
1368 whether the project is achieving its objectives. Performance standards should relate to the
1369 objectives of the compensatory mitigation project, so that the project can be objectively evaluated to
1370 determine if it is developing into the desired resource type, providing the expected condition or
1371 functions, and attaining any other applicable metrics (e.g., acres).

1372 (b) Performance standards must be based on attributes that are objective and verifiable. Ecological
1373 performance standards must be based on the best available science that can be measured or
1374 assessed in a practicable manner. Performance standards may be based on variables or
1375 measures of functional capacity or condition as described in assessment methodologies,
1376 measurements of hydrology or other aquatic resource characteristics, and/or comparisons to

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1377 reference aquatic resources of similar type and landscape position. The use of reference aquatic
1378 resources to establish performance standards will help ensure that those performance standards
1379 are reasonably achievable, by reflecting the range of variability exhibited by the regional class of
1380 aquatic resources as a result of natural processes and anthropogenic disturbances. Performance
1381 standards based on measurements of hydrology should take into consideration the hydrologic
1382 variability exhibited by reference aquatic resources, especially wetlands. Where practicable,
1383 performance standards should take into account the expected stages of the aquatic resource
1384 development process, in order to allow early identification of potential problems and appropriate
1385 adaptive management.

1386 § 230.96 Monitoring.³³

1387 (a) General.

1388 (1) Monitoring the compensatory mitigation project site is necessary to determine if the project is
1389 meeting its performance standards, and to determine if measures are necessary to ensure that
1390 the compensatory mitigation project is accomplishing its objectives. The submission of
1391 monitoring reports to assess the development and condition of the compensatory mitigation
1392 project is required, but the content and level of detail for those monitoring reports must be
1393 commensurate with the scale and scope of the compensatory mitigation project, as well as the
1394 compensatory mitigation project type. The mitigation plan must address the monitoring
1395 requirements for the compensatory mitigation project, including the parameters to be monitored,
1396 the length of the monitoring period, the party responsible for conducting the monitoring, the
1397 frequency for submitting monitoring reports to the permitting authority, and the party responsible
1398 for submitting those monitoring reports to the permitting authority.

1399 (2) The permitting authority may conduct site inspections on a regular basis (e.g., annually)
1400 during the monitoring period to evaluate mitigation site performance.

1401 (b) Monitoring period. The mitigation plan must provide for a monitoring period that is sufficient to
1402 demonstrate that the compensatory mitigation project has met performance standards, but not less
1403 than five years. A longer monitoring period must be required for aquatic resources with slow
1404 development rates (e.g., forested wetlands, bogs). Following project implementation, the permitting
1405 authority may reduce or waive the remaining monitoring requirements upon a determination that the
1406 compensatory mitigation project has achieved its performance standards. Conversely the
1407 permitting authority may extend the original monitoring period upon a determination that
1408 performance standards have not been met or the compensatory mitigation project is not on track to
1409 meet them. The permitting authority may also revise monitoring requirements when remediation
1410 and/or adaptive management is required.

1411 (c) Monitoring reports.

1412 (1) The permitting authority must determine the information to be included in monitoring reports.
1413 This information must be sufficient for the permitting authority to determine how the
1414 compensatory mitigation project is progressing towards meeting its performance standards, and
1415 may include plans (such as as-built plans), maps, and photographs to illustrate site conditions.
1416 Monitoring reports may also include the results of functional, condition, or other assessments

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1417 used to provide quantitative or qualitative measures of the functions provided by the
1418 compensatory mitigation project site.

1419 (2) The permittee or sponsor is responsible for submitting monitoring reports in accordance with
1420 the special conditions of the permit or the terms of the instrument. Failure to submit monitoring
1421 reports in a timely manner may result in compliance action by the permitting authority.

1422 (3) Monitoring reports must be provided by the permitting authority to interested federal, tribal,
1423 state, and local resource agencies, and the public, upon request.

1424 § 230.97 Management.³⁴

1425 (a) Site protection.

1426 (1) The aquatic habitats, riparian areas, buffers, and uplands that comprise the overall
1427 compensatory mitigation project must be provided long-term protection through real estate
1428 instruments or other available mechanisms, as appropriate. Long-term protection may be
1429 provided through real estate instruments such as conservation easements held by entities such
1430 as federal, tribal, state, or local resource agencies, non-profit conservation organizations, or
1431 private land managers; the transfer of title to such entities; or by restrictive covenants. For
1432 government property, long-term protection may be provided through state or federal facility
1433 management plans or integrated natural resources management plans. When approving a
1434 method for long-term protection of non-government property other than transfer of title, the
1435 permitting authority shall consider relevant legal constraints on the use of conservation
1436 easements and/or restrictive covenants in determining whether such mechanisms provide
1437 sufficient site protection. To provide sufficient site protection, a conservation easement or
1438 restrictive covenant should, where practicable, establish in an appropriate third party (e.g.,
1439 governmental or non-profit resource management agency) the right to enforce site protections
1440 and provide the third party the resources necessary to monitor and enforce these site
1441 protections.

1442 (2) The real estate instrument, management plan, or other mechanism providing long-term
1443 protection of the compensatory mitigation site must, to the extent appropriate and practicable,
1444 prohibit incompatible uses (e.g., clear cutting or mineral extraction) that might otherwise
1445 jeopardize the objectives of the compensatory mitigation project. Where appropriate, multiple
1446 instruments recognizing compatible uses (e.g., fishing or grazing rights) may be used.

1447 (3) The real estate instrument, management plan, or other long-term protection mechanism
1448 must contain a provision requiring 60-day advance notification to the permitting authority before
1449 any action is taken to void or modify the instrument, management plan, or long-term protection
1450 mechanism, including transfer of title to, or establishment of any other legal claims over, the
1451 compensatory mitigation site.

1452 (4) For compensatory mitigation projects on public lands, where state or Federal facility
1453 management plans or integrated natural resources management plans are used to provide long-
1454 term protection, and changes in statute, regulation, or agency needs or mission results in an
1455 incompatible use on public lands originally set aside for compensatory mitigation, the public

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1456 agency authorizing the incompatible use is responsible for providing alternative compensatory
1457 mitigation that is acceptable to the permitting authority for any loss in functions resulting from
1458 the incompatible use.³⁵

1459 (5) A real estate instrument, management plan, or other long-term protection mechanism used
1460 for site protection of permittee-responsible mitigation must be approved by the permitting
1461 authority in advance of, or concurrent with, the activity causing the authorized impacts.

1462 (b) Sustainability. Compensatory mitigation projects shall be designed, to the maximum extent
1463 practicable, to be self-sustaining once performance standards have been achieved. This includes
1464 minimization of active engineering features (e.g., pumps) and appropriate siting to ensure that
1465 natural hydrology and landscape context will support long-term sustainability. Where active long-
1466 term management and maintenance are necessary to ensure long-term sustainability (e.g.,
1467 prescribed burning, invasive species control, maintenance of water control structures, easement
1468 enforcement), the responsible party must provide for such management and maintenance. This
1469 includes the provision of long-term financing mechanisms where necessary. Where needed, the
1470 acquisition and protection of water rights must be secured and documented in the permit conditions
1471 or instrument.

1472 (c) Adaptive management.

1473 (1) If the compensatory mitigation project cannot be constructed in accordance with the
1474 approved mitigation plans, the permittee or sponsor must notify the permitting authority. A
1475 significant modification of the compensatory mitigation project requires approval from the
1476 permitting authority.

1477 (2) If monitoring or other information indicates that the compensatory mitigation project is not
1478 progressing towards meeting its performance standards as anticipated, the responsible party
1479 must notify the permitting authority as soon as possible. The permitting authority will evaluate
1480 and pursue measures to address deficiencies in the compensatory mitigation project. The
1481 permitting authority will consider whether the compensatory mitigation project is providing
1482 ecological benefits comparable to the original objectives of the compensatory mitigation project.

1483 (3) The permitting authority, in consultation with the responsible party (and other federal, tribal,
1484 state, and local agencies, as appropriate), will determine the appropriate measures. The
1485 measures may include site modifications, design changes, revisions to maintenance
1486 requirements, and revised monitoring requirements. The measures must be designed to ensure
1487 that the modified compensatory mitigation project provides aquatic resource functions
1488 comparable to those described in the mitigation plan objectives.³⁶

1489 (4) Performance standards may be revised in accordance with adaptive management to
1490 account for measures taken to address deficiencies in the compensatory mitigation project.
1491 Performance standards may also be revised to reflect changes in management strategies and
1492 objectives if the new standards provide for ecological benefits that are comparable or superior to

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1493 the approved compensatory mitigation project. No other revisions to performance standards will
1494 be allowed except in the case of natural disasters.

1495 (d) Long-term management.

1496 (1) The permit conditions or instrument must identify the party responsible for ownership and all
1497 long-term management of the compensatory mitigation project. The permit conditions or
1498 instrument may contain provisions allowing the permittee or sponsor to transfer the long-term
1499 management responsibilities of the compensatory mitigation project site to a land stewardship
1500 entity, such as a public agency, non-governmental organization, or private land manager, after
1501 review and approval by the permitting authority. The land stewardship entity need not be
1502 identified in the original permit or instrument, as long as the future transfer of long-term
1503 management responsibility is approved by the permitting authority.

1504 (2) A long-term management plan should include a description of long-term management
1505 needs, annual cost estimates for these needs, and identify the funding mechanism that will be
1506 used to meet those needs.

1507 (3) Any provisions necessary for long-term financing must be addressed in the original permit or
1508 instrument. The permitting authority may require provisions to address inflationary adjustments
1509 and other contingencies, as appropriate. Appropriate long-term financing mechanisms include
1510 non-wasting endowments, trusts, contractual arrangements with future responsible parties, and
1511 other appropriate financial instruments. In cases where the long-term management entity is a
1512 public authority or government agency, that entity must provide a plan for the long-term
1513 financing of the site.

1514 (4) For permittee-responsible mitigation, any long-term financing mechanisms must be
1515 approved in advance of the activity causing the authorized impacts.