

**Table 5–11. Natural Community Mitigation Requirements for Permanent Direct Effects
(acres unless otherwise noted in the first column)¹**

| Natural Community/Land Cover Type | Protection Mitigation Requirements ² | | Restoration Mitigation Requirements ³ | | Geographic Distribution Requirements |
|-----------------------------------|--|--|---|--|--|
| | Mitigation Requirement | Total Mitigation Required ⁴ | Mitigation Requirement | Total Mitigation Required ⁴ | |
| Oak woodland and savanna | | | | | |
| Blue oak savanna | Protect 1 times the acreage impacted that are of equal or greater function for covered species and biodiversity. | 1,478 | None | 0 | Mitigation must be located in the CAZ in which impacts are incurred. |
| Blue oak woodland | Protect 1 times the acreage impacted that are of equal or greater function for covered species and biodiversity. | 3,817 | None | 0 | Mitigation must be located in the CAZ in which impacts are incurred. |
| Interior live oak woodland | Protect 1 times the acreage impacted that are of equal or greater function for covered species and biodiversity. | 513 | None | 0 | Mitigation must be located in the CAZ in which impacts are incurred. |
| Mixed oak woodland | Protect 1 times the acreage impacted that are of equal or greater function for covered species and biodiversity. | 5,517 | None | 0 | Mitigation must be located in the CAZ in which impacts are incurred. |
| Grassland | | | | | |
| Grassland | Protect 1 times the acreage impacted that are of equal or greater function for covered species and biodiversity. <i>(Note: Protected land cover may be either grassland or grassland with vernal swale complex)</i> | 7,694 | None. But, see requirements for mitigation for impacts on individual vernal pools and other seasonal wetlands within this land cover. | 0 | Mitigation must be in the same CAZ as impacts with the following exceptions: Northern Orchards may also be mitigated in the Cascade Foothills, Sacramento River may be mitigated in any CAZ, and Basin may also be mitigated in Cascade Foothills. |

**Table 5-11. Natural Community Mitigation Requirements for Permanent Direct Effects
(acres unless otherwise noted in the first column)¹ (continued)**

| Natural Community/Land Cover Type | Protection Mitigation Requirements ² | | Restoration Mitigation Requirements ³ | | Geographic Distribution Requirements |
|--|---|--|---|---|--|
| | Mitigation Requirement | Total Mitigation Required ⁴ | Mitigation Requirement | Total Mitigation Required ⁴ | |
| Grassland with vernal swale complex | Protect 3 times the acreage impacted that are of equal or greater function for covered species and biodiversity. | 4,172 | See requirements for mitigation for impacts on individual vernal pools and other seasonal wetlands in the following row. | See requirements for mitigation for impacts on individual vernal pools and other seasonal wetlands in the following row. | Mitigation must be in the same CAZ as impacts with the following exceptions: Northern Orchards may also be mitigated in the Cascade Foothills, Sacramento River may be mitigated in any CAZ, and Basin may also be mitigated in Cascade Foothills. |
| Vernal pool and other seasonal wetlands ⁵ | Protect 3 times the acreage of jurisdictional vernal pools and other seasonal wetlands impacted that are of equal or greater function for covered species and biodiversity. These vernal pools and other seasonal wetlands will be protected within areas of protected land cover types grassland with vernal swale complex and grassland. No additional land protection is required, but the density of vernal pools and other seasonal wetlands within protected lands must be sufficient to meet the 3-times acreage ratio required. | 906 | Restore 1 times the acreage impacted. Restoration must be vernal pool and swale complex or stream associated seasonal wetlands that are of equal or greater ecological function than vernal pools and other seasonal wetlands impacted. | 302 <i>(Note: An additional 3.5 acres of vernal pool and swale wetlands to mitigate for 7 acres of impact on managed seasonal wetland for a total of 306 acres of restoration)</i> | Mitigation must be in the same CAZ as impacts with the following exceptions: Northern Orchards may also be mitigated in the Cascade Foothills, Sacramento River may be mitigated in any CAZ, and Basin may also be mitigated in Cascade Foothills. |

**Table 5–11. Natural Community Mitigation Requirements for Permanent Direct Effects
(acres unless otherwise noted in the first column)¹ (continued)**

| Natural Community/Land Cover Type | Protection Mitigation Requirements ³ | | Restoration Mitigation Requirements ⁴ | | Geographic Distribution Requirements |
|-----------------------------------|---|--|---|--|--|
| | Mitigation Requirement | Total Mitigation Required ² | Mitigation Requirement | Total Mitigation Required ² | |
| Riparian⁶ | | | | | |
| Cottonwood-willow riparian forest | Protect 2 times the acreage impacted that is of equal or greater function for covered species and biodiversity. | 53 | Restore 1 times the acreage impacted. Restoration must attain CWHR habitat stage 3P within 10 years of installation. | 27 | Mitigation must be located in the CAZ in which impacts are incurred. |
| Valley oak riparian forest | Protect 2 times the acreage impacted that is of equal or greater function for covered species and biodiversity. | 93 | Restore 1 times the acreage impacted. Restoration must attain a CWHR habitat stage designation of 5D over the term of the BRCP. | 46 | Mitigation must be located in the CAZ in which impacts are incurred. |
| Willow scrub | Protect 2 times the acreage impacted that is of equal or greater function for covered species and biodiversity. | 23 | Restore 1 times the acreage impacted. Restoration must be willow scrub or cottonwood-willow forest and attain greater than 60 percent canopy closure within 10 years of installation. | 11 | Mitigation must be located in the CAZ in which impacts are incurred. |
| Herbaceous riparian river bar | None | 0 | None | 0 | Not applicable. |

**Table 5–11. Natural Community Mitigation Requirements for Permanent Direct Effects
(acres unless otherwise noted in the first column)¹ (continued)**

| Natural Community/Land Cover Type | Protection Mitigation Requirements ³ | | Restoration Mitigation Requirements ⁴ | | Geographic Distribution Requirements |
|--|--|--|---|---|--|
| | Mitigation Requirement | Total Mitigation Required ² | Mitigation Requirement | Total Mitigation Required ² | |
| Dredger tailings with riparian – stream associated | Protect 2 times the acreage impacted that is of equal or greater function for covered species and biodiversity. Protected riparian must be dredger tailings with riparian (stream associated), cottonwood willow riparian forest, or valley oak riparian forest land cover type. | 210 | Restore 1 times the acreage impacted. Restored riparian must be cottonwood willow riparian forest or valley oak riparian forest land cover type. | 105 | Mitigation must be located in the CAZ in which impacts are incurred. |
| Dredger tailings with riparian – not stream associated | Protect 1 times the acreage impacted that is of equal or greater function for covered species and biodiversity. Protected riparian must be dredger tailings with riparian (stream associated), cottonwood willow riparian forest, or valley oak riparian forest land cover type. | 136 | None | 0 | Mitigation must be located in the CAZ in which impacts are incurred. |
| Wetland | | | | | |
| Emergent wetland | Protect 1 times the acreage impacted that is of equal or greater function for covered species and biodiversity. | 35 | Restore permanent emergent wetland at 2 times the acreage impacted. Restored emergent wetland must be of equal or greater function than impacted wetlands for covered species and biodiversity. | 71 <i>(Note: May total 126 acres with restoration of emergent wetland to mitigate loss of managed wetlands and wetlands within agricultural lands)</i> | Mitigation must be located in the CAZ in which impacts are incurred. |

**Table 5–11. Natural Community Mitigation Requirements for Permanent Direct Effects
(acres unless otherwise noted in the first column)¹ (continued)**

| Natural Community/Land Cover Type | Protection Mitigation Requirements ³ | | Restoration Mitigation Requirements ⁴ | | Geographic Distribution Requirements |
|-----------------------------------|---|--|--|---|--|
| | Mitigation Requirement | Total Mitigation Required ² | Mitigation Requirement | Total Mitigation Required ² | |
| Managed seasonal wetland | None | 0 | Jurisdictional portions of managed seasonal wetland removed by covered activities will be replaced with restored vernal pool and swale wetlands at a ratio of 0.5 acre of restore vernal pool and swale for every 1 acre of impacted jurisdictional wetland within managed seasonal wetland directly removed. Restored wetlands will be of higher ecological function than the impacted jurisdictional wetlands. | Restoration of 3.5 acres of vernal pool and swale wetlands to mitigate for 7 acres of impact on managed seasonal wetland. | Mitigation must be in the same CAZ as impacts with the following exceptions: Northern Orchards may also be mitigated in the Cascade Foothills, Sacramento River may be mitigated in any CAZ, and Basin may also be mitigated in Cascade Foothills. |
| Managed wetland | None | 0 | Restore either managed wetland or permanent emergent wetland at a ratio of 1 times the acreage of impacted managed wetland. Restored wetland must be of equal or greater function than impacted wetlands for covered species and biodiversity. | 5 | Mitigation must be located in the CAZ in which impacts are incurred. |

**Table 5–11. Natural Community Mitigation Requirements for Permanent Direct Effects
(acres unless otherwise noted in the first column)¹ (continued)**

| Natural Community/Land Cover Type | Protection Mitigation Requirements ³ | | Restoration Mitigation Requirements ⁴ | | Geographic Distribution Requirements |
|-----------------------------------|---|--|--|---|---|
| | Mitigation Requirement | Total Mitigation Required ² | Mitigation Requirement | Total Mitigation Required ² | |
| Aquatic | | | | | |
| Open water | None | 0 | None | 0 | Not applicable. |
| Major canal | None | 0 | None | 0 | Not applicable. |
| Pond | Protect one pond for each pond impacted that is of similar size and of equal or greater function for covered species and biodiversity. | 52 | None —the creation of ponds may be substituted for protection of existing ponds on a per unit basis if protection of existing ponds is deemed less feasible. | 0 | Mitigation may be located in any CAZ that supports modeled western pond turtle or western spadefoot toad habitat. |
| Agriculture | | | | | |
| Rice | <p><i>Rice located within BRCP modeled giant garter snake habitat:</i> Protect and maintain 2 times the acreage impacted that is of rice land extent equivalent to 2 times the extent removed.</p> <p><i>Rice located outside of BRCP modeled giant garter snake habitat:</i> Protect and maintain 1 times the acreage impacted that is of rice land extent equivalent to 1 times the extent removed.</p> <p><i>(Note: Creation of managed wetland designed as giant garter snake habitat may be substituted at a ratio of 0.2 to 1 for habitat acreage to be protected.)</i></p> | 3,182 | <p>Restore emergent wetland acreage at a ratio of 0.5 times the acreage of impacted Section 404 jurisdictional wetland within the impacted rice land. Restored wetlands will be of higher ecological function than the impacted jurisdictional wetlands.</p> <p><i>(Note: jurisdictional wetlands are estimated to be 5 percent of impacted rice land for the purpose of estimating impacts. Actual impacts will be determined at the time of project planning.)</i></p> | 39 <i>(Note: restoration of emergent wetland to mitigate loss of jurisdictional wetlands within rice.)</i> | Mitigation must be located in the Basin, Northern Orchards, or Sacramento River CAZ and within BRCP modeled giant garter snake habitat. |

**Table 5–11. Natural Community Mitigation Requirements for Permanent Direct Effects
(acres unless otherwise noted in the first column)¹ (continued)**

| Natural Community/Land Cover Type | Protection Mitigation Requirements ³ | | Restoration Mitigation Requirements ⁴ | | Geographic Distribution Requirements |
|--|---|--|--|---|---|
| | Mitigation Requirement | Total Mitigation Required ² | Mitigation Requirement | Total Mitigation Required ² | |
| Irrigated cropland and irrigated pasture | <p><i>Cropland and pasture located within BRCP modeled giant garter snake habitat: Protect and maintain 2 times the acreage impacted that is irrigated cropland or irrigated pasture supporting giant garter snake habitat.</i></p> <p><i>Cropland and pasture located outside of BRCP modeled giant garter snake habitat: Protect and maintain 1 times the acreage impacted that is irrigated cropland or irrigated pasture that does not support giant garter snake habitat</i></p> <p><i>(Note: Creation of managed wetland designed as giant garter snake habitat may be substituted at a ratio of 0.2 to 1 for habitat acreage to be protected.)</i></p> | 3,780 | <p>Restore emergent wetland acreage at a ratio of 0.5 times the acreage of impacted Section 404 jurisdictional wetland within the impacted irrigated cropland and irrigated pasture. Restored wetlands will be of higher ecological function than the impacted jurisdictional wetlands.</p> <p><i>(Note: jurisdictional wetlands are estimated to be 1 percent of impacted irrigated cropland and irrigated pasture for the purpose of estimating impacts. Actual impacts will be determined at the time of project planning.)</i></p> | 11 <i>(Note: restoration of emergent wetland to mitigate loss of jurisdictional wetlands within irrigated cropland and pasture.)</i> | Mitigation must be located in the Basin or Sacramento River CAZ and within BRCP modeled giant garter snake habitat. |

**Table 5–11. Natural Community Mitigation Requirements for Permanent Direct Effects
(acres unless otherwise noted in the first column)¹ (continued)**

| Natural Community/Land Cover Type | Protection Mitigation Requirements ³ | | Restoration Mitigation Requirements ⁴ | | Geographic Distribution Requirements |
|-----------------------------------|---|--|--|--|--------------------------------------|
| | Mitigation Requirement | Total Mitigation Required ² | Mitigation Requirement | Total Mitigation Required ² | |
| Orchard/vineyard | None | 0 | None | 0 | Not applicable. |
| Non-native woodland | None | 0 | None | 0 | Not applicable. |

¹Discrepancies in mitigation acreage totals based on the application of mitigation ratios to the impact acreage shown in Tables 4–3 and 4–4 are due rounding of impact acreage values in those tables. For example, the impact acreage of emergent wetland shown in Table 4–5 is 35.44 acres, but is rounded to 35 acres in that table. Consequently, applying the mitigation ratio of 2:1 for restoration of emergent wetland shown in this table results in a total mitigation restoration requirement of 71 acres (based on the 35.44 acres of impact at 2:1 mitigation equaling 70.88 acres of restoration, and rounded to 71 acres) rather than 70 acres.

²Details of requirements for the protection of natural communities for both mitigation and conservation components of the BRCP are provided in CM1, *Acquire Lands*.

³Details of requirements for the restoration of vernal pools and other seasonal wetlands, emergent wetlands, and riparian habitats for both mitigation and conservation components of the BRCP are provided in CM4, *Develop and Implement Site Specific Wetland and Riparian Restoration Plans*.

⁴Mitigation requirements are based on the amount of each natural community land cover type that will be removed as identified in the impact assessment for full implementation of covered activities (chapter 4, *Impact Assessment and Estimated Level of Take*). The amount of mitigation required during BRCP implementation will be based on the actual amount of each natural community that is removed by the covered activities. For CWA Section 404 jurisdictional wetlands, wetland delineations are required at time of project planning to determine the mitigation acreage required based on ratios identified in this table. Acreages shown in this column represent the acres of mitigation that will be required to replace the lost habitat functions of the affected land cover types. In some instances, the land cover type required to mitigate the impact differs from the land cover type that is impacted (e.g., 39 acres of emergent wetland will be restored to mitigate impacts on jurisdictional wetlands that are present in impacted rice land).

⁵Vernal pool and other seasonal wetlands is a component of the grassland natural community, occurring within the grassland and grassland with vernal swale complex land cover types.

⁶The discrepancy in the total acreage of 189 acres of restored riparian comprised of cottonwood-willow riparian forest or valley oak riparian forest and willow with the 190 acres shown in Tables 5–7 and 5–10 is due to rounding.