

RGP __ Attachment C: Solano HCP Restoration, Preservation, and Enhancement Requirements

RESTORATION, PRESERVATION, AND ENHANCEMENT REQUIREMENTS

All projects authorized under RGP __ are required to implement any applicable habitat restoration, preservation, and/or enhancement requirements included in Tables A through D below. A Restoration and Enhancement Plan shall be prepared for restoration or enhancement activities, as described in Section 7.3.2.1 of the Solano HCP. The performance criteria referenced in the Plan shall be consistent with applicable performance criteria contained in Section 7.4 of the HCP. In general, acceptable Restoration and Enhancement Plans for projects covered under this RGP shall comply with the following guidelines:

1. All temporarily-disturbed habitats shall be restored to original conditions at a minimum 1:1 ratio or as specified in Tables A through D below. Additional woody vegetation replacement or habitat preservation requirements may apply for temporary impacts, as detailed in Tables A through D.
2. For permanent impacts to riparian and stream habitat, additional restoration/enhancement shall occur onsite or within the affected watershed in similar soil types or in soil types typically associated with the applicable natural community.
3. The size, shape, and depth of the target community/vegetation shall be of similar size, shape, and relative density as natural communities on similar soil types.
4. Plans shall describe, as applicable, site grading, erosion control, channel stabilization, preservation methods, fishery enhancement, exotic species removal, and revegetation. Any revegetation program shall use plants indigenous to the watershed.
5. Any construction activities associated with riparian and stream restoration and enhancement to address permanent impacts shall be avoided in areas of high-quality habitat and relatively natural topography. Construction activities shall be limited to areas where the natural community structure has been eliminated or severely disturbed/alterd by past land uses.
6. Revegetation activities shall be limited to native or widespread, non-invasive naturalized plant species common to the region.
7. Specific, measurable criteria shall be established to assess the success of restoration/enhancement activities in meeting desired goals and objectives. Any restoration requirements shall include clearly defined goals focusing on vegetation establishment (stability, succession, reproduction).
8. Unless otherwise noted in Tables A through D, monitoring to assess performance shall occur for a minimum of 5 years (certain habitats or species may require longer monitoring periods) or until final performance criteria have been met for at least 2 years without significant human intervention (e.g., irrigation, replanting, regrading). The monitoring program shall include a provision for remedial action as needed to correct deficiencies.
9. If performance monitoring indicates that temporary impacts have extended beyond one growing season, remedial action shall involve increasing mitigation requirements consistent with those established in the Solano HCP for permanent impacts.
10. Annual reports and a final report shall document the success of all restoration and enhancement efforts. If such efforts are not achieving prescribed performance, an additional period of correction and monitoring shall be specified. Monitoring reports shall be submitted annually to the Solano County Water Agency for review and approval and for annual reporting to the USACE and other Regulatory Agencies.

Table A: Valley Floor Grassland and Vernal Pool Restoration and Preservation Requirements

Temporary Impacts – Within One Growing Season or Less <i>(applies to areas within the Valley Floor Grassland and Vernal Pool natural community shown on Solano HCP Figure 3-5 and seasonal wetlands in agricultural areas)</i>
Restoration of impacted seasonal wetlands and uplands; additional 1:1 preservation of wetlands and uplands. ¹
Impacts Greater Than One Growing Season
<u>Not permitted under Regional General Permit ()</u>

Note:

¹ All temporarily impacted wetlands shall be monitored for a minimum of two wet season to document that hydrology has been restored to pre-project conditions. Additional monitoring and remedial measures may be required if hydrology is not re-established.

Table B: Riparian, Stream, and Freshwater Marsh Restoration and Enhancement Requirements

TEMPORARY IMPACTS TO RIPARIAN, STREAM, SEASONAL WETLANDS IN THE INNER COAST RANGE, AND FRESHWATER MARSH HABITAT – WITHIN ONE GROWING SEASON OR LESS											
Restore channel or bank disturbance to original conditions at a 1:1 ratio. Replace all woody vegetation > 1 in. dbh as specified below.											
IMPACTS TO RIPARIAN, STREAM, AND FRESHWATER MARSH HABITAT – GREATER THAN ONE GROWING SEASON											
<i>Riparian and Stream Habitat</i>											
	Restoration Area		Woody Vegetation Replacement Ratios ¹								
	Enhancement	Creation/Restoration	Native Species (except oaks and elderberry) ²			Oak Species ³			Nonnative Species		
			1-12 in. dbh	12-24 in. dbh	>24 in. dbh	1-12 in. dbh	12-24 in. dbh	>24 in. dbh	1-12 in. dbh	12-24 in. dbh	>24 in. dbh
Priority Drainages <i>(see Solano HCP Figure 4-10)</i>	4:1	2:1	3:1	6:1	10:1	5:1	7:1	12:1	1:1	2:1	3:1
Non-Priority Drainages	3:1	2:1	3:1	4:1	6:1	5:1	7:1	12:1	1:1	1.5:1	3:1
<i>Ponds and Freshwater Marsh Habitat Not Associated with Streams</i> – <u>Not permitted under Regional General Permit ()</u>											
<i>Seasonal Wetlands in the Inner Coast Range</i> – <u>Not permitted under Regional General Permit ()</u> <i>(see Solano HCP Figure 3-5)</i>											

Notes:

¹ Trees shall be measured at diameter at breast height (dbh); multiple trunked trees shall be reported as the cumulative total of all trunks. Shrubs shall be measured at the midpoint of the main trunk (the ground and the first branch).

The number of native riparian plants that become established at the end of the 5-year monitoring period shall equal a minimum of 80 percent of total required plantings. Established plants may include natural regeneration and volunteer plants. The 5-year monitoring period for documenting successful establishment may be extended if the mitigation is not performing adequately. At a minimum, the determination of success monitoring shall require at least 2 years without significant intervention (e.g., additional plantings or irrigation). Vegetation may need to be planted at higher ratios, depending on site conditions, in order to account for mortality of planted material.

² Removal of elderberry shrubs or stems 1 inch in diameter or greater and associated riparian vegetation shall not create gaps in a riparian corridor greater than 300 feet. For each removed elderberry bush, plant a minimum of 5 elderberry seedlings or rooted cuttings and 5 associated native, woody riparian plants. For every 10 elderberry stems 1 inch in diameter or greater that are trimmed/removed, plant 2 elderberry seedlings and 2 associated native, woody riparian plant seedlings. Refer to Measure RSM MIT 12 in the Solano HCP for additional detail. Tree and shrub replacement requirements as specified above in Table B may be used to fulfill all or contribute to the associated native woody riparian vegetation requirements prescribed under Measure RSM MIT 12.

³ If acorns are used instead of seedlings (at least 1 year old), planting ratios shall be doubled.

Table C: Coastal Marsh Restoration and Enhancement Requirements

Temporary Impacts – Within One Growing Season or Less <i>(see Solano HCP Figure 3-5)</i>
1.5:1 restoration/enhancement ¹
Impacts Greater Than One Growing Season
<u>Not permitted under Regional General Permit ()</u>

Note:

¹ Established marsh communities (e.g., deep water, shallow water/mudflat, low marsh, mid marsh, high marsh, and upland) shall be commensurate with impacted habitat.

Table D: California Red-Legged Frog Preservation and Restoration Requirements

Temporary Impacts – Within One Growing Season or Less
Temporary ¹ or short-term impacts for activities in breeding and non-breeding aquatic habitats in the California Red-Legged Frog Conservation Area <i>(see Solano HCP Figures 4-14 and 4-15)</i> shall not require direct compensation for the temporary loss of herbaceous vegetation or woody vegetation less than 1 inch diameter at breast height, provided activities comply with the riparian vegetation replacement ratios specified in Table B above and all work is conducted with specified work windows and conditions under Solano HCP Avoidance and Minimization Measure RLF CON 4 (Section 6.3.3).
Impacts Greater Than One Growing Season
<u>Not permitted under Regional General Permit ()</u>

Note:

¹ Temporary effects are defined as actions that can be restored to baseline values or higher within one season following a disturbance.