

APPENDIX B-2

Addendum to Vernal Pool Classifications

1 PURPOSE

The purpose of this document is to explain the changes in the analysis methods described in *Vernal Pool Classifications* (Appendix B-1 of the Aquatic Resources Plan (ARP)) that were used to generate the results presented in the ARP. Specifically, the focus of this addendum is regarding the classification of SSHCP vernal pools and the Vernal Wetland Acre/Density Index (VWADI) (Section 5.2 of *Vernal Pool Classifications*).

2 MODIFICATIONS

There are three factors that were modified in the analysis presented in the ARP from those used in the 2010 *Vernal Pool Classifications* document that affect the results: (1) land cover data; (2) land analysis unit (LAU) size; and (3) assigned intervals for vernal pool wetted acreage categories. Each of these modifications is described below.

2.1 Land Cover Data

The 2010 *Vernal Pool Classifications* did not use the most current available land cover data, which identifies the size and location of the vernal pools. The original mapping efforts have been updated and refined at various times to reflect modifications of land cover types (such as cover type conversion), to accommodate an expansion of the Plan Area boundary, and to correct errors in the original mapping. The current land cover map provides fairly detailed information for the existing conditions in the Plan Area based on 2009 aerial photos and limited field-truthing, with the updates occurring in May 2010 and July 2012. The analysis presented in the ARP is based upon the current land cover data.

2.2 Land Analysis Units

The VWADI is based on the variation in vernal pool areas (acres) and variation in vernal pool density (number of vernal pools per unit land area). In the 2010 *Vernal Pool Classifications*, these two parameters were assessed together as an index for vernal pool resources within standardized 160-acre LAUs (i.e., one-quarter sections) and served as the primary descriptors of the range of spatial-ecological variability of vernal pools in the Plan Area. Based on an informal recommendation from the U.S. Fish and Wildlife to the County of Sacramento, a 40-acre LAU was used to generate the results for the VWADI presented in the ARP. The 40-acre LAUs allow for more detailed analysis and preserve planning.

2.3 Assigned Intervals Based Upon Vernal Pool Wetted Acres

As described in Section 5.2.3 of the 2010 *Vernal Pool Classifications*, 25 VWADI categories were designated using 5 intervals, designated A–E, based on vernal pool density and 5 intervals,

APPENDIX B-2 (Continued)

designated 1–5, based on vernal pool wet-acres¹ within the LAUs. The VWADI letter category for vernal pool wetland density is presented in Table B2-1. The attributes and assigned VWADI letter category for vernal pool density was not modified in the analysis presented in the ARP even though the LAU was reduced in size from 160 to 40 acres. For example, a 160-acre LAU with more than 100 vernal pools was assigned as “E” in the 2010 *Vernal Pool Classifications*, whereas in the ARP a 40-acre LAU would have to include more than 100 vernal pools to be assigned “E.”

Table B2-1
Assigned Intervals Based Upon Vernal Pool Density

Total Number of Vernal Pools/LAU	VWADI Letter Category
1–10	A
11–25	B
26–50	C
51–100	D
>100	E

The attributes and assigned VWADI number category for vernal pool wetted acres was scaled to the 40-acre LAU in the analysis presented in the ARP. The VWADI number category for the vernal pool wet-acres in the 2010 *Vernal Pool Classifications* and the ARP are presented in Table B2-2 to show the differences between the two analyses. The more stringent requirement for the vernal pool density factor, in combination with the reduction in the size of the LAU, provides a more fine-grained analysis of the VWADI categories across the Plan Area landscape.

Table B2-2
Assigned Intervals Based Upon Vernal Pool Wetted Acres

Total Acres Vernal Pools/LAU		VWADI Number Category
2010 <i>Vernal Pool Classifications</i>	ARP	
0–2	0–0.5	1
2–4	0.5–1	2
4–6	1–1.5	3
6–10	1.5–2.5	4
>10	>2.5	5

¹ The wet-acres or wetted acres is equivalent to the area delineated as a vernal pool in the land cover data.