

M e m o r a n d u m

Date : September 17, 1998

To : Naser Bateni

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Environmental Services Section

From : Department of Water Resources

Subject: Offstream Storage Wetland Studies

The following information summarizes the work which has been completed for the wetland studies within the Offstream Storage Sites. Field work will continue through Spring 1999. The delineations have not been verified by the U.S. Army Corps of Engineers.

Background Methodology

Stereo pairs of 1:12000 or 1:6000 scale color aerial photos were reviewed for wetland types prior to field studies. All aerial photos used for wetland identification were taken during the late spring in order to best differentiate seasonal wetlands from annual grassland cover. Wetland types were identified on the photographs and representative types were selected throughout each reservoir for field verification. Site visits were made early in the year in order to observe hydrology conditions. These sites and others were visited later in the season when wetland vegetation was identifiable to the species level. Wetland delineations were made using the "routine method" as described in the 1987 "Corps of Engineers Wetland Delineation Manual". This method involves a field review of the hydrology conditions, plant species composition, and indicators of hydric soil.

Stream width measurements were taken on perennial and ephemeral drainages throughout the project sites. We are currently completing the acreage tabulation of areas which would be classified as "waters of the United States". This would include perennial and ephemeral drainages, ponds and existing reservoirs which do not delineate out as wetlands.

Results of the wetland delineations were used to produce a draft wetland delineation map. The aerial photos were viewed in stereo and all areas which matched signatures of wetland sample sites were identified as wetlands. Areas which were questionable were also identified as wetlands and marked for future field verification. Acreages of each wetland type were calculated.

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Results and Comparisons

A summary of wetland types is shown in Table 1. The percentage of total wetlands within the inundation area of each reservoir was roughly 2 percent.

Seasonal wetlands are the most common wetland type within the Colusa cell and the Sites and Thomes-Newville reservoirs. Both of these areas have many low gradient areas and heavy clay soils. Significant areas of alkaline wetland occur in both the Sites Reservoir and the Colusa cell areas. Vernal pools occur throughout Thomes-Newville and Sites reservoirs and the Colusa cell. However, both the quality and plant species diversity of the Thomes-Newville vernal pools are higher than the pools found in the Colusa Reservoir Area. In addition, the Thomes-Newville Reservoir contains areas of concentrated pool habitat.

Very small areas of seasonal wetlands occur within the Red Bank Project. No alkaline wetland or vernal pools were noted within this site. The dominant wetland type within the Red Bank Project is riparian wetland.

Linear distances for the larger (i.e. greater than 15 feet in width) streams are included in Table 2.

cc: Glyn Echols

Table 1. Offstream Storage Reservoirs Draft Jurisdictional Wetlands

Red Bank Project

	<u>Acres</u>
Riparian	76
Seasonal	7
Total Wetlands	83
Reservoir Area	4,905

Colusa

	<u>Colusa Cell Acres</u>	<u>Sites Reservoir Acres</u>
Alkaline	35	19
Emergent	0	2
Riparian	11	22
Seasonal	263	153
Vernal Pools	3	5
Total Wetlands	312	201
Reservoir Area	13,664	14,162

Thomes-Newville

	<u>Acres</u>
Alkaline	3.2
Emergent	5.9
Riparian	77.2
Seasonal	303.5
Vernal Pools	23.2
Total Wetlands	413
Reservoir Area	17,073

Table 2. Length of Streams with Average Widths Greater than 15 Feet

Red Bank Project

	<u>miles</u>
Red Bank Creek	2.8
Dry Creek	2.6
Little Grizzly Creek	4.5
Cottonwood Creek	5.9
N. Fork Red Bank Creek	1.1
Total	16.9

Colusa

<u>Colusa Cell</u>		<u>Sites Reservoir</u>	
	<u>miles</u>		<u>miles</u>
Hunter Creek	5.1	Funks Creek	8.5
Logan Creek	6.7	Grapevine Creek	4.5
Minton Creek	3.3	Antelope Creek	6.8
		Stone Corral Creek	5.3
Total	15.1		25.1

Thomes-Newville

	<u>miles</u>
Heifer Camp Creek	5.2
N. Fork Stoney Creek	6.4
Salt Creek	5.7
Total	17.3