USER NOTES
NATIONAL WETLANDS INVENTORY
FRESNO NW, SW, AND BAKERSFIELD NW, SW

Map Preparation

The wetland classifications that appear on the Fresno NW, SW and Bakersfield NW, SW Wetlands Inventory (NWI) maps are in accordance with Cowardin et. al. (1977). The delineations were produced through stereoscopic interpretation of 1:58,000 scale color infrared aerial photographs taken during 6/84, 9/84 and 2/83, 3/83. Initial ground truthing of the photography was completed between 11/18 and 11/22.

The user of the map is cautioned that, due to the limitation of mapping primarily through aerial photointerpretation, a small percentage of wetlands may have gone unidentified. Changes in the landscape or habitat could have occurred since the time of photography, therefore, some discrepancies between the map and encountered in the use of this map should be brought to the attention of Dennis Peters, Regional Wetlands Coordinator; U.S. Fish & Wildlife Service, Lloyd 500 Building, Suite 1692 Portland, Oregon 97232.

Geography

The area covered by the Fresno NW, SW, and Bakersfield NW, SW, base maps is located in the Central Valley of California. It is within the San Joaquin Valley and the western slope of the Sierra Nevada. Bailey's Ecoregion Classification (1978), identifies the western half of the base maps as the California Grassland Province (2610). The smaller northeastern section of the base map lies within Sierran Forest Province (M2610).

The topography of the area is characterized by the flat alluvial plain of the San Joaquin Valley and the Sierra Nevada range which forms a barrier on the eastern side of the valley. The eastern slope of the Sierra Nevada range has many deeply cut river canyons. The rivers are fed by many tributaries that are commonly separated by sharp crested interfluves or by broad, hilly to steep land, adjacent to the streams. The dominant waterways include the San Joaquin, Kings, Kern, and Kaweah rivers. The San Joaquin flows southwesterly through the area and eventually drains into San Francisco Bay. The Kings, Kern, and Kaweah rivers originate in the Sierra Nevada's and flow into the valley rather than through it. Due to irrigation practices the Kings, Kern, and Kaweah rivers are pumped into various canals along the eastern edge of the San Joaquin Valley.

The San Joaquin Valley is mostly cultivated and supports a variety of crops under irrigation. The majority of farming takes place in the Tulare, Buena Vista, and Kern lake beds which have been drained and now support a variety of crops. Some natural vegetation remains on alluvial fans and terraces and in some areas of unreclaimed areas of saline-alkali soils. In the foothills the vegetation ranges from annual grasses to dense trees and shrubs. The principal trees in the woodlands are blue oak, interior live oak, and California buckeye. The trees at higher elevations are canyon live oak, black oak, ponderosa and sugar pines, incense-cedar, and white fir. Giant sequoias are found mostly on the north facing slopes at higher elevations.

The climate of the San Joaquin Valley is hot and dry in summer and cool and moist in winter. The maximum amount of precipitation falls in December, January, and February. Annual rainfall ranges from approximately 6 inches in the San Jocquin Valley to 30 inches in higher elevations of the Sierra Nevada's. Annual temperatures average 60°F to 55°F.

Wetland Communities

The Riverine system is the most extensive wetland type in the work area. The San Joaquin, King, Kern and Kaweah rivers with their tributaries and floodplains comprise most of the riparian communities. The dominant forested species found along these rivers are Freemont cottonwoods (Populus fremontii), and willows (Salix lasiandra). The other less common species are western sycamore (Platanus racemosa) and valley oak (Quercus lobata).

Riverine Intermittent Streambeds are streams and creeks that have surface flow during the winter runoff. Most of the surface waters of the major rivers and streams of the work area are diverted and used for irrigation.

The major Lacustrine systems in the San Joaquin valley are Pine Flat reservoir nd Millerton reservoir.

These lakes are classified as Lacustrine Limnetic Open Water. Soda Lake, located in the Carrey Plain, is a large salt lake bed which is classified as Lacustrine littoral unconsolidated shore. Palustrine Open Water and Palustrine emergent wetlands occur sparsely throughout the area. Most Palustrine Open Water refers to small reservoir holding ponds used for irrigation.

There are small marshes in the valley consisting of bulrush, sedges, and cattail. Palustrine forested and scrub shrub wetlands are found along many streams and rivers and consist mainly of cottonwood, willow, western sycamore, wild rose, California blackberry, and valley oak.

BIBLIOGRAPHY

The purpose of this report is to provide general information about wetland classifications found within the area covered by the base Map. There has been no attempt to describe all wetlands occurring in the area nor provide complete faunal and floral lists of those wetlands discussed. The references listed below refer to literature cited in the text of this report as well as sources of additional information.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1977. Classification of wetlands and deepwater habitats of the United States (an operational draft). USDI. Fish and Wildl. Serv. Wash., D.C. 100 p.

Bailey, R.G. 1978. Description of the ecoregions of the United States. USDA For. Serv., Intermt. Reg., Ogden, UT. 77p.

WETLAND CHART

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION AND PHYSIOGRAPHIC FEATURES
R4SB	Riverine, Intermittent, rub, Streambed	Creek, Streambed	Unvegetated. Sand to Cobble-Gravel
R2UB	Riverine, Lower Perennial Unconsolidated Bottom	River	Unvegetated. Mud to Sand, Cobble-Gravel
R2US	Riverine Lower Perennial. Unconsolidated Shore	River Flat	Unvegetated. Sand to Cobble-Gravel
L1UB	Lacustrine Limnetic Unconsolidated Bottom	Open Water Lake	Unvegetated. Sand to Mud
L2UB	Lacustrine Littoral Unconsolidated Bottom	Shallow Lake	Unvegetated. Sand to Mud
L2US	Lacustrine Littoral Unconsolidated Shore	Lake Shore	Unvegetated. Sand to Cobble-Gravel
L1AB	Lacustrine Limnetic Aquatic Bed	Pond Weeds, Water Weeds	Duckweed (Lemna sp.) Pond weed (Potomageton sp.) Unvegetated. Sand to Mud
PUB	Palustrine Unconsolidated Bottom	Open water, Pond	Unvegetated. Sand to Mud
PAB	Palustrine Aquatic Bed	Pond Weeds, Water Weeds	Duckweed (Lemna sp.) Pondweed (Potomageton sp.)

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION AND PHYSIOGRAPHIC FEATURES
PEM	Palustrine Persistant Emergents	Marsh or Meadow	Cattail (Typha latifolia) Narrow-leaved cattail (Typha angustifolia) Rush (Juncus sp.) Bulrushes (Scirpus sp.) Spike rush (Eleocharis sp.) Sedges (Carex sp.) Arrowhead (Sagittaria sp.) Smartweed (Polygonum sp.) Saltgrass (Distichlis) Iodinebush (Allenrolfea) Greasewood (Sarcobatus)
PSS	Palustrine Scrub Shrub	Shrub Wetland	Willow (Salix sp.) Red Alder (Alnusrubra) Dogwood (Cornus sp.)
PFO	Palustrine Forested	Forested Wetland	Cottonwood (Populus Fremontii) Willow (Salix sp.) Red Alder (Alnus rubra) Western Sycamore (Platanus sp.)