DRAFT

NATIONAL WETLANDS INVENTORY

USER NOTES

SUSANVILLE

1:100,000 Scale Maps Covered

Susanville NE

Map Preparation

The wetland classifications that appear on the Susanville National Wetlands Inventory (NWI) Maps are in accordance with Classification of Wetlands and Deepwater Habitats of the United States, Cowardin et al., 1979. Wetland delineations and classifications were produced through stereoscopic interpretation of 1:58,000 scale color infrared aerial photography. Photographs were taken during June, July, August, and September of 1981.

Collateral photography was utlized to interpret the Madeline Plains, located in Susanville NE. The collateral photography was 1:120,000 scale color infrared taken on 6/27/74 and 6/27/79.

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 could have occurred since the time of photography, therefore, some discrepancies between the map and current field conditions may exist. Any discrepancies that are encountered in the use of this map should be brought to the attention of Dennis Peters, Regional Wetlands Coordinator, U.S. Fish and Wildlife Service, Region 1, Lloyd Building, Suite 1692, 500 NE Multnomah Street, Portland, Oregon 97232, telephone (503) 231-6154.

The area covered by the Susanville 1:100K's is located along the northeastern corner of California. Included in this area are part of the Modoc and Lassen National Forests, Mountain Meadows and Butt Valley Reservoirs, Eagel Lake and Lake Almaner, Honey Lake and Honey Lake Valley, Indian and Dixie Valleys, McCumber and Coyote Flats and the Madeline Plains.

The two western 1:100K's are included in the Sierran Forest Province as it is described by Bailey (Bailey, Robert G., 1980. Description of the Ecoregions of the United States. U.S. Department of Agriculture, Forest Service, Ogden, Utah). The southern portion of the Susanville SE 1:100K is also included in this province. The remainder of the Susanville SE 1:100,000 and the southern and western portions of the Susanville NE 1:100K are part of the Ponderosa Shrub Forest section of the Intermountain Sagebrush Province. Another section of this province, Sagebrush - Wheatgrass is included in the NE portion of the Susanville NE 1:100,000.

The Sierran Forest Province is characterized by steeply sloping to precipitous mountains crossed by many valleys with steep gradients west slopes rise gradually while east slopes drop abruptly to the floor of the great basin. Much of the region has been glaciated. Ground water provides a small percentage of water. Runoff from rain and snow in the Cascade, Siskiyou and Klamath Mountains is the main source of water. The water supply in the Shasta Valley is derived principally from precipitation and snowmelt from Mount Shasta.

The Sierran Forest Province has well marked vegetation zones. Lower slopes and burned areas (from about 1,500 to 4,000 feet) have a coniferous and chaparral shrub association. Buckbrush and manzanita predominate. On higher slopes (to about 8,000 feet), Jeffrey pine, Douglas fir, sugar pine, white fir, and incense cedar predominate. Above this, mountain hemlock, California red fir, lodgepole pine, western white pine, and whitebark are important trees.

Climate

The major climatic features of this area are dry summers with the majority of precipitation falling during the winter. Average temperatures range between 35° and 55°F.

The Sierran Forest Province is influenced by prevailing westwinds. East slopes are dryer than west slopes and winter precipitation makes up 80 to 85 percent of the annual average. Most of this falls as snow in mountainous areas where precipitation increases as temperatures decreases with altitude. The high humidity of the Pacific Forest Provinces facilitates a favorable precipitation/ evaporation ratio.

Soils

The dominant soils in all basins and lowland areas are Aridisols. At higher elevations Mollisols predominate. Narrow bans of Entisols are in stream flood plains of this area. Salt flats and playas without soils are extensive in the lower parts of the basins that have interior drainage.

The mountain slopes of the Siberian Forest Province consist of ultisols where air is humid. Dry Alfisols predominate at lower elevations in this province. The alluvial fans and narrow floodplains of the valleys in the area are occupied by Entisols.

The great basin area consists mostly of semiarid, sagebrush covered plains from which many mountains steeply rise. Much of the area comprises numerous separate interior basins. The lower parts of many basins have a heavy accumulation of alkaline and saline salts. Mountains are well vegetated with upper elevations bearing sparse conifer forests. Streams are rare and few are permanent in the great basin. Flows of these streams vary from year to year and from season to season. Rivers in mountainous regions are swiftly flowing permanent streams with flows which decrease when they meet large valleys.

Sagebrush is the dominant plant of lower elevations in the intermountain sagebrush province. Other important plants are shadscale, four wing saltbush, rubber rabbit brush, horse brush and spiny hopsage. In areas where salt concentration is very

high, these plants are replaced by grease wood and saltgrass communities. Forest vegetation includes aspen, cottonwood, Russian olive and willow. In the montane belt, Ponderosa pine generally occupies the lower and more exposed slopes and Douglas fir the higher and more sheltered ones. In the sub alpine belt, the characteristic trees are subalpine fir and Engelmann spruce. Only a few mountains rise high enough to support an alpine belt community.

Wetland Communities

Riverine

Perennial rivers in the Susanville area move swiftly and are mostly upper perennial with an unconsolidated bottom. Some slow down and become lower perennial where their gradient changes at the edge of large valleys. These may have an unconsolidated bottom or contain aquatic bed such as algae or *Ranunculus aquatilis*. Some perennial rivers have sand bars (unconsolidated shores) which flood seasonally or temporarily.

Intermittant streams in the area may flood seasonally or temporarily. Drainage ditches and irrigation canals are intermittant also and were mapped with excavated modifiers. They may be flooded seasonally or semipermanently. Some contain aquatic bed such as algae, *Ranunculus aquatilis* or *Lemna minor*. Some contain emergents and are included in the Palustrine system.

Some riverine systems have their banks lined with persistant wetland vegetation. In cases where wetland vegetation cannot be separately delineated from the riverine system, the wetlands are mapped as linear Palustrine features.

Forested wetlands may be temporarily or seasonally flooded and may include *Populus tremuloides*, *Pinus contorta*, and/or *Veratrum californicum*.

The Susanville area also includes unvegetated palustrine wetlands. These include seasonal, temporary, and intermittantly flooded playas in lowland areas on the eastern part of the 100,000. Palustrine ponds which range from seasonal ponds to permanent subalpine ponds also occur in the higher elevations.

Lacustrine

The Susanville area includes three major lakes: Lake Almanor, Eagle Lake and Honey Lake. All have unconsolidated bottoms. Lake Almanor and Eagle Lake are permanent while Honey Lake floods and dries very irregularly. Lakes in this area generally have unconsolidated bottoms and some contain aquatic bed such as *Nuphar polysepalum*, *Polygonum coccinum*, *Ranunculus aquatilis*, or algae.

Palustrine

Many of the wetlands in the Susanville area are vegetated. This is true of excavated and impounded ponds as well as natural systems. Permanent, semipermanent, and intermittantly exposed ponds usually contain aquatic bed, such as algae, *Ranunculus aquatilis*, and *Lemna minor*.

Temporary and seasonal emergent wetlands often contain similar species in this area. However, different species dominate in temporary and seasonal emergent communities. The temporary communities are often dominated by *Distichlis* sp., *Oenothera taracetifolia*, *Downingia insignis*, *Potentilla* sp., or *Plagiobothrys mollis*. Seasonal emergent wetlands may be dominated by *Juncus* sp., *Carex* sp., *Eleocharis* sp., *Iris* sp., or *Arnica* sp. Seasonal wetlands are often associated with springs. Springheads are often easily recognized by the abundance of *Mimulus* sp. associated with them.

Semipermanent emergent wetlands typically contain *Scirpus acutus*, *Typha* sp., and/or *Potamogeton* sp.

Shrub wetlands may be temporary or seasonal in this area. Temporary depressions (playas) in lowlands typically contain a pure stand of *Artemesia cana* or a mix of *Artemesia cana* and *Distichlis* spp. Seasonal shrub wetlands usually contain *Salix* sp. and *Alnus rubra*, with *Salix* sp. more common at lower elevations and *Alnus rubra* at higher elevations.

Table 1: Wetland Communities

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION AND PHYSIOGRAPHIC FEATURES
R3UB	Riverine, upper perennial, unconsolidated bottom	River	Open water
R3AB	Riverine, upper perennial, aquatic bed	River	Algae
R3US	Riverine, upper perennial unconsolidated shore	Sand bar	Sand/gravel
R2UB	Riverine, lower perennial, unconsolidated bottom	River	Open water
R2AB	Riverine, lower perennial, aquatic bed	River	Algae, *Ranunculus aquatilis* *Lemna minor*
R2US	Riverine, lower perennial, unconsolidated shore	Sand bar	Sand/gravel
R4SB	Riverine, intermittent, steam bed	Stream	Sand
L1UB	Lacustrine, limnetic, unconsolidated bottom	Lake	Open water
L2UB	Lacustrine, littoral unconsolidated bottom	Shallow lake areas	Open water

Table 1: Wetland Communities

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION AND PHYSIOGRAPHIC FEATURES
L2AB	Lacustrine, littoral aquatic bed	Shallow lake areas	*Polygonum coccinum* Algae *Ranunculus aquatilis* *Nuphar polysepalum*
L2US	Lacustrine, littoral unconsolidated shore	Lake Shoreline	Sand
PUB	Palustrine, unconsolidated bottom	Ponds	Open water
PAB	Palustrine aquatic bed	Ponds	Algae *Ranunculus aquatilis* *Lemna minor*
PUS	Palustrine, unconsolidated shore	Alkali flats	Salt
PEM	Palustrine, emergents	Marsh, Meadow	*Potamogeton* sp. *Psilocarpus brevissmus* *Carex* sp. *Eleocharis* sp. *Oenotherea tanacetifolia* *Downingia insignis* *Potentilla* sp. *Plagiobothrus mollis* *Arnica* sp. *Mimulus* sp. *Rumex* sp. *Typha* sp. *Scirpus acutus*
PSS	Palustrine, shrubs	Shrub wetland	*Artemesia cana* *Salix* sp. *Alnus rubra*
PFO	Palustrine, forested	Forested wetland	*Populus tremuloides* *Pinus contorta* *Veratrum californicum*

References

Bailey, Robert G., 1980. Description of the Ecoregions of the United States. U.S. Department of Agriculture, Forest Service, Ogden, Utah.

Cowardin, Lewis M, Virginia Carter, Francis C. Golet and Edward T. LaRoe. 1979 Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of Interior, Fish and Wildlife Service, Washington, DC.

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