

**DRAFT**

NATIONAL WETLANDS INVENTORY

Notes To Users

ADEL SW

## Map Preparation

The wetland classifications that appear on the National Wetlands Inventory maps for Adel SW are in accordance with Classification of Wetlands and Deepwater Habitats of the United States by Cowardin, et al., 1979. Wetland delineations and classifications were produced through stereoscopic interpretation of 1:58,000 scale color infrared photography taken during July and August of 1983. Because this photography was taken during one-hundred year flood conditions, collateral photography was used for reference. The collateral photography was taken during July and August of 1979 in black and white at a scale of 1:80,000.

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 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 500 Building, Suite 1692, Portland, Oregon 97232, telephone (503) 231-6154.

## Geography

Adel SW is located in the southeast corner of Oregon, along the borders of California and Nevada, just west of the Steens Mountains. Major lakes in the area are Hart, Crump, Coleman, Greaser, Guano, Long, Desert, Alger, and Shallow Lakes. Bailey describes this area as the Sagebrush-Wheatgrass Section of the Intermountain Sagebrush Province (Bailey, 1980). It is an area of semiarid, sagebrush covered plains separated by steep mountains. The plains form separate interior basins which accumulate alkaline and saline salts. Streams are rare and few are permanent. Mountains in the area are well vegetated and may have sparse conifer forests at higher elevations. Mountainous rivers flow swiftly and permanently down to the plains, where their flows decrease suddenly or dry up completely.

Sagebrush dominates the vegetation of the lower elevations of the province other important plants in this sagebrush belt are shadscale, fourwing saltbrush, rubber rabbitbrush, spinhop sage, and horsebrush.

All these shrubs tolerate alkali but in varying degrees; this tolerance is essential to their survival on the poorly drained soils that are widespread in the region. In areas where salt concentration is very high, these shrubs are unable to grow; instead communities dominated by greasewood or salt grass appear.

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 subalpine belt, the characteristic trees are subalpine fir and Engelmann spruce. Only a few mountains rise high enough to support an alpine belt.

### Climate

Summers of this area are dry and hot while winters are only moderately cold. Spring comes early except at higher elevations. Total annual precipitation averages only 5 to 20 inches. Almost no rain falls during the summer months, except in the mountains.

### Soils

The dominant soils of all basins and lowland areas in eastern Oregon is Aridisols. Mollisols are at higher elevations. Narrow bands of Entisols lie in streamflood plains. Salt flats and playas without soils are extensive in lower parts of the basin that have interior drainage.

### Wetland Communities

#### Riverine

Perennial rivers in Adel SW flow 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. They may have an unconsolidated bottom or contain aquatic bed such as algae.

Deep Creek, located on the far western edge of Adel SW, was determined through field investigation to have a rock bottom and classified as such. 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 also intermittant and were mapped with excavated modifiers. They may be flooded seasonally or semipermanently. Some may contain aquatic bed such as algae or emergents. Those with emergents were included in the palustrine system.

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

## Lacustrine

Most lakes in Adel SW, are shallow, temporary or seasonal playas. Many contain alkali. The Warner Valley and the Guano Valley contain some large, more permanent lakes. These lakes are semipermanent or intermittantly exposed. They have unconsolidated bottoms and some contain an aquatic bed of algae.

## Palustrine

Palustrine wetlands in Adel SW, typically occur in small isolated basins which are temporarily or seasonally flooded. Common species in temporary emergent basins include a mix of woolly marbles (Psilocarphus brevisissimus), gunkweed (Navarretia sp.), primrose (Oenothera tancetifolia), Downingia insignis, shadscale saltbush (Atriplex sp.), popcorn flower (Plagiobothrys mollis), and saltgrass (Distichlis sp.). Seasonal emergent basins contain a mix of rushes (Juncus sp.), Elymus sp., foxtail barley (Hordeum sp.), Arnica sp., smartweed (Polygonum sp.), spike rush (Eleocharis sp.), and Atriplex sp. Temporary shrub basins typically contain silver sage (Artemisia cana) and saltgrass (Distichlis sp.) or greasewood (Sarcobatus vermiculatus).

Palustrine wetlands also occur along the edges of rivers or lakes or around springs. Temporary and seasonal emergent communities are similar to those in the isolated basins. Seasonal shrubby areas are typically stands of willow (Salix sp.). Saturated areas around springs may contain watercress (Rorippa spp.), monkey flower (Mimulus spp.), willow (Salix spp.), American brookline (Veronica americana), Olney threesquare (Scirpus Olneyi), spike rush (Eleocharis sp.). The Warner Valley contains semipermanent marshes of bulrush (Scirpus acutus) and cattail (Typha sp.).

## REFERENCES

- Bailey, Robert G., 1980. Description of the Ecoregions of the United States. U.S. Dept. 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 U.S. Department of Interior, Fish and Wildlife Service, Washington, D.C.

Table 1  
COMMON NWI WETLAND CODES

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION AND PHYSIOGRAPHIC FEATURES
R3UB	Riverine, upper perennial, unconsolidated bottom	River	Open water
R3RB	Riverine, upper perennial, rock bottom	River	Open water
R3AB	Riverine, upper perennial, aquatic bed	River	Algae
R3US	Riverine, upper perennial, unconsolidated shore	Sand bar	Sand
R2UB	Riverine, lower perennial, unconsolidated bottom	River	Open water
R2AB	Riverine lower perennial, aquatic bed	River	Algae
R2US	Riverine, lower perennial, unconsolidated shore	Sand bar	Sand
R4SB	Riverine, intermittent, streambed	Stream	Sand
L1UB	Lacustrine, limnetic, unconsolidated bottom	Lake	Open water
L2UB	Lacustrine, unconsolidated bottom	Shallow lake areas	Open water

Table 1  
COMMON NWI WETLAND CODES

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION AND PHYSIOGRAPHIC FEATURES
L2AB	Lacustrine, littoral, aquatic bed	Shallow lake areas	Algae
L2US	Lacustrine, littoral, unconsolidated shore	Lake shoreline	Sand
PUB	Palustrine, unconsolidated bottom	Ponds	Open water
PAB	Palustrine, aquatic bed	Ponds	Algae
PUS	Palustrine, unconsolidated shore	Alkali flats	Sand
PEM	Palustrine, emergents	Marsh, Meadow	<u>Juncus</u> spp. <u>Elymus</u> spp. <u>Arnica chamissonis</u> <u>Eleocharis</u> sp. <u>Atriplex</u> sp. <u>Navarretia</u> sp. <u>Plagiobathrys mollis</u> <u>Psilocarphus brevisimus</u> <u>Oenothera tanacetifolia</u> <u>Downningia insignis</u> <u>Downningis</u> sp. <u>Polygonum</u> sp.
PSS	Palustrine, shrubs	Shrub wetland	<u>Artemesia cana</u> <u>Sarcobatus vermiculatus</u> <u>Salix</u> sp.

REFERENCES

Bailey, Robert G., 1980. Description of the Ecoregions of the United States. U.S. Dept. 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 U.S. Department of Interior, Fish and Wildlife Service, Washington, D.C.

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