NATIONAL WETLAND INVENTORY

NOTES TO USERS

SALTON SEA SW

USER NOTES
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Introduction:

In 1974, the U.S. Fish and Wildlife Service directed its Office of Biological Services to conduct an inventory of the nation's wetlands. This National Wetlands Inventory (NWI) became operational in 1977.

Wetlands delineations depicted on these maps were produced by stereoscopically interpretating high altitude photography and then transferring this information with a zoom transfer scope to an overlay using the U.S. Geological Survey 7.5' or 15' map series as base information.

Wetlands were identified on the photography by vegetation, visible hydrology, and geography and subsequently classified in accordance with Cowardin et al. (1979) Classification of Wetlands and deep Water Habitats of the United States. The delineations were produced through stereoscopic interpretation of 1:58,000 scale color infrared photography. The photography was taken during July and August, 1984 and 1985.

Field checking within Salton Sea SW was conducted in January 1987 prior to the actual delineation of the wetlands. Field check sites were selected to clarify varying signatures found on the photography. These photographic signatures were then identified in the field using vegetation types and soil types, as well as additional input from field personnel.

Collateral data included USGC topographic maps, SCS soils surveys, climatic data, vegetation and ecoregion information.

The user of the map is cautioned that, due to the limitations of mapping primarily through aerial interpretation, a small percentage of wetlands may have gone unidentified. Changes in landscape which may have occurred after the photography was taken would produce discrepancies between the map and current field conditions. Questions regarding any problems with this map should be directed to Dennis Peters, Regional Wetlands Coordinator, U.S. Fish and Wildlife Service, Region One; Lloyd 500 Building, Suite 1692; 500 N.E. Multnomah Street; Portland, Oregon, 97232.

Special Mapping Problems:

The dry stream beds flowing out of the mountains frequently become braided as the flow of the water lessens. Therefore, the delineations on the maps will not always follow the complete flow of the stream. The main channels are mapped as they appear at the time of photography. The wetlands of the Salton Sea do not have a water regime attached to the labels. This is due to the level of the water being at its highest level at the time of photography.

The irrigation canals of the Imperial District are selectively managed. The canals frequently fill with emergents, especially the drains. This will account for the vegetated labels appearing on the canals.

Geography:

The specific location of this work area is 115° to 116°W longitude and 33° to 33° 30' N latitude.

Bailey (1980) classified the study area in two separate domains: the Dry Domain and the Humid Temperate Domain. The Humid Temperate Domain covers a small portion of the area mapped. It is divided into the Mediterranean Division and the California Chaparral Province. The Dry Domain is made up of the Arid Desert Division and the American Desert Province.

Hammond divides the area by the surface form. This is the Pacific Mountain and the intermountaine. Some of the area is charcteristically flat desert with 100 to 300 feet of local relief. The mountainous area has 1000 to 3000 feet of local relief.

The work area is surrounded by the Santa Ana Mountains to the west, and the Chocolate Mountains to the northeast. The Salton Sea covers the western quarter of the mapping area. Most of the rivers flow to the Salton Sea. The mapping area is primarily affected by the local relief. The mountains have many streams, but few basins. The desert floor has many wide, flat, dry washes.

Climate:

The climate is typified by arid-hot summers and mild winters. The annual range of temperature is moderate with an average annual temperature of 65 degrees. Rainfall is very sporadic with most of it falling in the summer months. Orographic precipitation makes up most of the rain in the mountains. Both temperature and precipitation values change with elevations. One of the biggest factors in the wetlands is the amount of evaportranspiration. The desert has an average of 2.8 inches rain per year. The mountains get more rain each year, with an average of 12 inches per year.

Vegetation:

The primary vegetation of the area is desert plants. The edge of the wetlands is inhabited by salt cedar (*Tamarix* spp.) and arrow

weed (Pluchea serices). Willows (Salix spp.) and cattails (Typha spp.) typify the wetter areas.

Soils:

There are two principal groups of soils in this area; 1) Well drained to poorly drained soils predominantly in the lacustrine basin, and 2) well drained and somewhat excessively drained soils on East Mesa and on West Mesa. This section will discuss the soils most often associated with wetlands.

The first group of associations consist of soils ranging from gravelly sand to silty clay. The soils are highly stratified with finer or coarser textured material and containing varying amounts of gravel, stones, and cobbles. The six associations in this group make up about 66 percent of the survey area.

Imperial soils are well drained and moderately well drained. They generally have a surface layer of silty clay about 17 inches thick and an underlying area of clay that extends to a depth of more than 60 inches. These soils are moderately to strongly saline. The water table fluctuates between 1 to 5 feet in about 25 percent of the total acreage of the Imperial soils.

Fluvaquents, nearly level, poorly drained soils of undifferentiated texture in the lacustrine basin are typically saline soils along the edge of the Salton Sea.

BIOLOGICAL CHARACTERISTICS OF WETLAND HABITATS

The Riverine system contains upper perennial subsystems in the work area. The Whitewater River is an example and is classified as R3UBH; Riverine, Upper Perennial, Unconsolidated Bottom, Permanently Flooded. Most of the mountain streams are called intermittent. These are characterized by washed out stream beds with lack of vegetation. Some of the major flows are flooded seasonally or temporarily. For the most part, the washes are labeled R4SBJ; Riverine, Intermittent, Stream Bed, Intermittently Flooded.

Lacustrine areas which are greater than 20 acres include both limnetic and littoral subsystems. Most of the littoral areas coincide with the Salton Sea draw down. This is labeled L2US; Lacustrine, Littoral, Unconsolidated Shore. The wetlands around the short of the Salton Sea do not have a water regime attached to the label. This is due to the excessively high water level during the time of photography. The open water areas, including the Salton Sea, is called L1UBH; Lacustrine, Limnetic, Unconsolidated Bottom, Permanently Flooded.

Palustrine areas include forested, scrub-shrub, emergent, aquatic bed, unconsolidated bottom, and unconsolidated shore.

Excavated farm ponds are considered PUBHx; Paulstrine, Unconsolidated Bottom, Permanently Flooded, Excavated. Unconsolidated shore is salt flats and ponds that do not have water in them at the time of photography. These ponds are primarily farm ponds that have been drained for one reason or another. The label to associate this type is PUSCx; Palustrine, Unconsolidated Shore, Seasonally Flooded, excavated. The salt flats will be labeled PUSJ, PUSA, or PUSC (water regimes of Intermittent, Temporary, or Seasonal respectively). This will depend upon the duration of standing water which is represented by different photo signatures.

Emergent areas are primarily associated with fringe wetlands. The temporary emergent areas, PEMA, contain cattails, common reed (*Phragmites australis*), and rush (*Juncus balticus*). The seasonal emergent areas, PEMC, tend to be areas that are larger and often more isolated then the temporary ones. The plant types for the seasonal areas include the reeds, coneflower (*Rudbeckia* spp.), cattails, rushes, and salt grass (*Distichilis spicata*). The semipermanent emergents (PEMF) are on the edges of open water bodies and vegetated streams. The vegetation is common of the other emergent areas including spikerush (*Elecocharis*) and hard stream bullrush (*Scirpus acutus*).

Scrub-shrub communities are characterized by vegetated stream beds and fringe areas. Willows are the most common. Typically the willow is associated with either seasonal or semipermanent (PSSC or PSSF) wetland communities. Other inhabitants include baccharis (Bacharris emoryi or B. glutenosa), elder, (Sambucus spp.) and salt cedar. The salt cedar and arrow weed typically temporary wetlands (PSSA) but can be found in Semipermanent areas. Some upland areas contain both arrow weed and salt cedar. The willows and small cottonwood (Populus freemontii) inhabited some intermittent stream beds in the mountainous areas.

The forested wetlands are infrequent. These forested areas are represented by large willows and cottonwoods. The temporary areas, (PFOA) were around springs and seeps and the edge of stream beds. The seasonal forested areas (PFOC) include the willows and cottonwoods, as well as sycamore (Plantanus racemosa). These wetlands are generally part of floodplains.

TABLE 1: NWI CLASSIFICATION FOR SALTON SEA SW, CALIFORNIA

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
R2UB	Riverine, lower perennial, unconsolidated bottom	Rivers	Unconsolidated bottoms
R3UB	Riverine, upper perennial, unconsolidated bottom	Rivers	Unconsolidated bottoms
R4SB	Riverine, intermittent, stream bed	Washes	Unconsolidated bottoms
L1UB	Lacustrine, unconsolidated bottom	Salton Sea	Unconsolidated bottoms
L2US	Lacustrine, unconsolidated shore	Salton Sea	Unconsolidated shores
PUB	Palustrine unconsolidated bottom	Ponds	Unconsolidated bottoms
PUS	Palustrine unconsolidated shore	Flats	Unconsolidated shores
PEM	Palustrine emergent	Emergents	Cattails (*Typha* spp.) Giant cane (*Phragmites* spp.) Wire grass (*Juncus balticus*) Bullrush (*Scirpus acutus*)

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PSS	Palustrine scrub shrub	Shrubs	Willow (*Salix* spp.) Salt cedar (*Tamarix* spp.) Arrow weed (*Pluchea sericea*)
PFO	Palustrine, forested	Trees	Willow (*Salix* spp.) Cotton wood (*Populus freemonti*) Sycamore (*Plantanus recemosa*)

LITERATURE CITED

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