



United States Department of the Interior

FISH AND WILDLIFE SERVICE

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NATIONAL WETLAND INVENTORY

NOTES TO USERS

POINT ST GEORGE TO TRINIDAD HEAD, CALIFORNIA

1:100,000 SCALE MAPS COVERED

Crescent City (Crescent City NE)

Orick (Crescent City SE)

User Notes: Crescent City Wetland Map

1. Map Preparation

Wetland classification for the Crescent City 1:100,000 scale National Wetlands Inventory (NWI) map and wetland working overlays to the corresponding U.S.G.S. topographic sheets is in accordance with "Classification of Wetlands and Deep-Water Habitats of the United States (An Operational Draft)", Cowardin, et al, 1977.¹ Delineations were produced through interpretation of NASA color aerial photography at a scale of 1:120,000 taken during April 1973. The photographs were viewed stereoscopically at 6X magnification. Delineations were enlarged using a zoom-transferoscope to 1:24,000 overlays to fit U.S.G.S. 7½' topographic map series. Since a U.S.G.S. 1:100,000 scale base map is not yet available for Crescent City, the 1:100,000 scale base map was prepared by enlarging and then quartering the 1:250,000 scale map series.

Collateral data included U.S.G.S. black and white aerial photography at a scale of 1:80,000.

Limited field checks were conducted during the fall of 1978.

The Project Officer for production of the wetland map was Dennis Peters, Regional Wetland Coordinator, U.S. Fish and Wildlife Service, Region 1, Lloyd 500 Building, 500 N.E. Multnomah Street, Portland, Oregon 97232, telephone (503) 231-6154. Aerial photo interpretation was completed by CH2M-Hill, Redding, California. Maps were prepared by the NWI National Team in St. Petersburg, Florida.

2. User Caution

The map document was prepared primarily by stereoscopic analysis of high altitude aerial photographs. Wetlands were identified on the photographs based on vegetation, visible hydrology, and geography. The aerial photographs typically reflected conditions during the specific year and season when they were taken. In addition, there is a margin of error inherent in the use of aerial photographs. Thus a detailed on-the-ground and historical analysis of a single site may result in revision of the wetland boundaries established through photographic interpretation. In addition, some small wetlands and those obscured by dense forest cover may not be included on the map document.

Federal, State, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either design or products of this inventory, to define limits of proprietary jurisdiction of any Federal, State, or local government or to establish the geographical scope of regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, State, or local agencies concerning specific agency regulatory programs and proprietary jurisdictions that may affect such activities.

¹ The final wetland classification system was published in December 1979.
Publication: FWS/OBS-79/31

Any noted discrepancies, land use changes, or additional information regarding this map or other NWI activities should be provided to the Assistant Regional Director-Environment, U.S. Fish and Wildlife Service, Portland, Oregon.

3. Geography

The Crescent City map is located along the northern California coast. Bailey's ecoregion classifications identify the area as within the Marine Division, Pacific Forest Province, Redwood Forest (M2412) and, for a small portion of the northeast corner, Cedar-Hemlock-Douglas Fir Forest (M2413). The Physical Subdivision and Land Surface Form is Pacific Mountain, Coast Ranges; low mountains and Cascade-Klamath-Sierra Nevada Ranges; high mountains.

Soils for the base map area have been mapped by University of California-Davis (McLaughlin and Harradine, 1966). There are no published Soil Conservation Service soil data.

4. Wetland Communities

Deepwater habitats are areas that are permanently flooded (except during periods of extreme drought) and are characterized by open water on the aerial photography. These habitats are classified as open water, rather than rock or unconsolidated bottoms described in the classification system. Marine and estuarine subtidal and riverine tidal open water areas are examples of these habitats.

Unvegetated wetlands may include rocky shores, beach/bars, flats and streambeds. Marine rocky shores wetland classification is based on substrate although these habitats are covered with a variety of macrophytic algae. Estuarine flats are seasonally covered with algal mats (Ulva spp. and Enteromorpha spp). Scattered patches of eelgrass (Zostera spp) and widgeon grass (Ruppia maritima) may be present on the flats. Open water, flats, beach/bar and streambed areas are often lined with sedge (Carex spp), pickleweed (Salicornia virginica), bulrush (Scirpus spp), saltgrass (Distichlis spicata) and/or rush (Juncus spp).

Estuarine intertidal emergent wetlands are often referred to as salt marshes. Within the Crescent City map, these are restricted to areas surrounding Lake Talawa and Lake Earl. The dominant plant species include pickleweed and salt grass. Associated species include bulrush, sedge and silverweed (Potentilla spp).

The riverine system includes tidal, lower perennial and upper perennial open water wetlands. The streambeds are usually unvegetated although they are generally lined with willow (Salix spp), red alder (Alnus rubra), spruce (Picea sitchensis) and various shrubs and berries. Where the riparian canopy obscured the streambed on the aerial photography, the units were mapped as Palustrine forested or scrub/shrub.

Palustrine wetlands are evident throughout the Eureka maps in the sand dunes, adjacent to rivers, and in pasture/agricultural fields. These wetlands consist of forested, scrub/shrub, emergent, and open water areas.

Palustrine forested and scrub/shrub wetlands are dominated by willow, alder, spruce, and assorted berries and herbs. These areas are found as "riparian" strips or isolated pockets in depressions. The classification of forested or scrub/shrub is determined by height of the woody vegetation - forested greater than 6 m and scrub/shrub less than 6 m.

Palustrine emergent wetlands are dominated by rush (Juncus spp), bulrush (Scirpus), sedge (Carex spp), saltgrass (Distichlis spicata) and spikerush (Elecharis spp). Associated species include cattail (Typha latifolia), burreed (Sparganium spp) and pondweed (Potamogeton spp).

Of special note on the Crescent City base map are Palustrine emergent wetlands that have been or are being used as pasture areas or agricultural fields. These wetlands generally have waterlogged soils, are without standing water in the summer but with shallow water in the winter, and are characterized by soft rush (Juncus effusus) and various grasses. Sedges, silverweed and dock (Rumex spp) may be present. These Palustrine emergent wetlands are former tidelands which have been diked or drained floodplain and river terraces. These areas are often described as wet meadows.

5. Sources of Additional Information

The purpose of this report is to provide general information regarding the production of the map and the wetlands found within the area of this map. It does not include descriptions of all wetlands found in the area nor complete species information. For additional information, the following publications are recommended:

Bailey, Robert G. 1978. Description of the ecoregions of the United States. U.S. Forest Service, U.S.D.A., Ogden, Utah 77 pp.

Biological Services Program. 1978. An ecological characterization of the Pacific Northwest Coastal Region. U.S. Fish and Wildlife Service Contract No. 14-16-0001-77-019, Portland, Oregon. var. pp.

Cowardin, Lewis M., et al. 1977. "Classification of wetlands and deepwater habitats of the United States (an operational draft)." U.S. Fish and Wildlife Service. Washington, D.C. 100 pp.

Macdonald, Keith B. 1977. Coastal salt marsh. pp 263-94. In M.G. Barbour and J. Major (eds.). Terrestrial vegetation of California. John Wiley & Sons, Inc.

Mason, Herbert L. 1969. A flora of the marshes of California. Univ. of California Press, Berkeley. 879 pp.

McLaughlin, James and Frank Harradine. 1966. Soils of Coastal Del Monte County, California. Univ. of California, Davis. 55 pp.

Monroe, Gary W., et al. McLaughlin. 1975. Natural resources of Lake Earl and the Smith River Delta. Coastal Wetland Series # 10, California Department of Fish and Game, Sacramento, CA 114 pp. w/app.

Shaw, Samuel P. and Gordon Fredine. 1956. Wetlands of the United States. U.S. Fish and Wildlife Service, Circular 39, Washington, D.C. 67 pp.

U.S. Army Corps of Engineers. 1978. Preliminary guide to wetlands of the west coast. Technical Report Y-78-4, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss. 66 pp.

U.S. Department of Interior. 1979. Concept plan for waterfowl wintering habitat preservation California coast. U.S. Fish and Wildlife Service, Portland, Oregon 122 pp/w/app.

SELECTED WETLAND CLASSIFICATIONS

<u>MAP DESIGNATION</u>	<u>CLASSIFICATION</u>	<u>COMMON NAME</u>	<u>PLANT SPECIES</u>
M2RS	Marine, intertidal rocky shore (regularly flooded) <u>1/</u>	Tide pools Shoreline	Macrophytic algae
E10W	Estuarine subtidal open water (subtidal)	Estuary, bay	Unvegetated
E2FL	Estuarine, intertidal flat (irregularly exposed or regularly flooded)	Mud flats	Algae
E2BB	Estuarine, intertidal, beach/bar (regularly or irregularly flooded)	Gravel bar	Pioneer herbaceous or woody plants
E2EM	Estuarine, intertidal emergent (irregularly flooded)	Tidal marsh (high salt marsh)	Pickleweed, salt grass, bulrush, silverweed, sedge
R10W	Riverine, tidal open water (permanently flooded)	Tidal river	Lined w/willow, red alder, and/or spruce
R1,2 or 3BB	Riverine, tidal, lower or upper perennial, beach/bar (seasonally flooded)	Gravel bar	Unvegetated or vegetated w/pioneer woody or herbaceous species
PEM	Palustrine, emergent (seasonally flooded)	Marsh, swamp	Rush, sedge, dock, bulrush
PSS or F0	Palustrine, scrub/shrub or forested (seasonally or temporarily forested)	Wet hummock woodland habitat, Riparian strip	Willow, red alder, spruce, salal, various berries
PF	Palustrine, farmed	Wet meadow Agricultural fields Diked floodplain	Softgrass, various grasses, dock, silverweed

1/ Water regime modifier, not included in designation,
in parenthesis.

