FIELD SUMMARY REPORT

WESTERN OREGON UPDATE PROJECT

Hoquiam SW; Vancouver NW, SW, and NE;
Newport NE and SE; Salem NW and SW

I. INTRODUCTION

The following is a summary of field reconnaisance conducted for the Western Oregon Update project. The field trip was instrumental in establishing guidelines for consistent wetland inventories throughout the project area.

II. FIELD DATES

February 13, 1989 - February 19, 1989

III. FIELD PERSONNEL

Ben Harrison	USFWS
Dennis Peters	USFWS
Sheila Ricardi	Geonex Martel, Inc.

IV. PHOTOGRAPHY

Type: Color Infrared, National High Altitude Program (NHAP)
Scale: 1:58,000

Dates	Coverage
07/12/82	85%
08/10/81	5%
08/06/81	5%
08/18/82	5%

V. COLLATERAL DATA

Bailey, Robert G., 1980. Description of the Ecoregions of the United States. U.S. Department of Agriculture, Washington, D.C.

Hotchkiss, Neil, 1972. Common Marsh, Underwater and Floating Learned Plants of the U.S. and Canada. Dover Publishing Company.

Kozloff, Eugene N. Plants and Animals of the Pacific Northwest.

Little, Elbert L. 1980. Audubon Field Guide to North American Trees: Western Region. Alfred A. Knopf, Inc.

Reed, Porter P. Jr., 1986. 1986 Wetland Plant List, Oregon. USFWS.
Weinmann, Fred et al., 1984. Wetland Plants of the Pacific Northwest. U.S. Army Corps of Engineers.

USGS Quadrangles

Soil Surveys for Lane, Linn and Marion Counties.

VI. PHYSICAL CHARATERISTICS

The project area is located in central western to western Oregon and covers eight partial 1:100,000 scale maps. The map area is predominantly located along either side of the north-south orientation of the Coastal Mountain Range. The coordinates for the maps are as follows:

Hoquiam SW	N. Latitude 46° 00′ to 46° 7′
	W. Longitude 123′ 52′ to 124° 00′
Vancouver NE	N. Latitude 45° 30′ to 45° 37′
	W. Longitude 122′ 52′ to 123° 00′
Vancouver NW,SW	N. Latitude 45° 00′ to 45° 30′
	W. Longitude 123° 00′ to 123° 30′
Newport NW,SW	N. Latitude 44° 00′ to 45° 00′
	W. Longitude 124° 00′ to 124° 07′
Salem NW,SW	N. Latitude 44° 00′ to 45° 00′
	W. Longitude 123° 00′ to 124° 00′

According to Bailey (1980), the ecoregions within the map area extend as follows: Willamette-Puget Forest Province lies within Vancouver NE, NW and SW (valley), and Salem NW and SW. The Sitka Spruce-Cedar-Hemlock Section occurs along all of the coastal maps; Hoquiam SW, Vancouver NW and SW, and Newport NW and SW. Geographically, the study area is divided into a north-south situation divided by the Coastal Range. Elevations reach 1,000 feet.

Along the eastern slopes of the Coast Range and the Willamette Valley, the precipitation ranges from 40 to 60 inches annually. West of the Coast Range along the coast, rainfall increases dramatically averaging 70 to 80 inches annually. In the Willamette Valley average annual temperatures range from 48° to 55° F with cool wet winters and warm dry summers. Along the coast, the annual temperatures range from 47° to 57° F.

Forest communities in the valley are coniferous and predominantly Douglas fir, western red cedar and western hemlock. The mixed deciduous trees in the valley include red alder, Oregon ash, and willow. Along the coast, forests consist of Sitka Spruce, Douglas fir, and western hemlock and mixed deciduous trees such as Oregon ash, red alder, and coastal willow also exist.

VII. BIOLOGICAL CHARACTERISTICS OF WETLAND HABITIATS

A. Palustrine

Palustrine habitats include forested, scrub-shrub, emergent, aquatic bed and unconsolidated shore. In the Willamette Valley common species associated with forested wetland communities include Black cottonwood (Populus trichocarpa), Oregon ash (Fraxinus latifolia), willow (Salix sp.), Red alder (Alnus rubra), Bigleaf Maple (Acer macrophyllum), Western red cedar (Thuja plicata), hemlock (Tsuga sp.), Englemann spruce (Picea engelmannii), and Lodgepole pine (Pinus contorta). These species occur in temporary (A), saturated (B), and seasonally flooded (C) water regimes. Ash, willow, alder and cottonwood were the common species encountered in riparian habitat, seasonally flooded. Due to the incised nature of the majority of streams and rivers, the riparian-associated wetland forests occur primarily in a narrow zone adjacent to the drainage. Hemlock, red cedar, Engelmann spruce and lodgepole pine commonly occur in the higher elevations in temporary (A), saturated (B), and seasonal (C) conditions. On the coast, forest communities include sitka spruce (Picea sitchensis), western hemlock (Tsuga heterophylla), and Coast willow (Salix hookerana). These species occur in temporary (A), saturated (B), and seasonally flooded (C) water regimes in the freshwater zone and regularly flooded (N) and irregularly flooded (P) water regimes in the estruarine zone.

Commonly occurring scrub-shrub communities in the valley contain willow, Red alder, Oregon ash, and Douglas spirea (Spiraea douglassii). Shrub wetlands are also frequently found along drainages, adjacent to riparian habitat or occurring in swales or isolated pockets. They may be seasonal, temporary or occasionally semi-permanently flooded and are commonly associated with wet grasses. On the coast, scrub-shrub communities consist of Oregon ash, Red alder, and salmonberry (Rubus spectabilis). These shrub communities often act as boundary conditions between forest and estuarine wetland communities.

In the Willamette Valley, palustrine emergent habitats are characterized by numerous species of persistent wetland plants. Emergent habitat is extensive along several marshes associated with lakes, in addition to floodplain and reservoir fringes. Very few beaver ponds were found in most of the project area. Common emergents, found in temporary and seasonal conditions, are Juncus sp., Carex sp., reed canary grass

(Phalaris sp.), and dock (Rumex sp.). Commonly associated with seeps is Monkey-flower (Mimulus sp.), classified as saturated (B) water regime. On the coast, the palustrine emergent habitats are commonly associated with old river valleys, diked former tidelands, and deflation plain wetlands found in the sand dunes. These emergents consist of reed canary grass, slough sedge (Carex obnupta), and juncus.

Palustrine aquatic beds observed in the field were usually semi-permanently flooded areas containing Duckweed (Lemna sp.), Pondweed (Potamogetan sp.), and Spatterdock (Nuphar luteum). On the coast, these are commonly found in marginal lakes that have been naturally impounded by sand dunes.

Palustrine unconsolidated bottom lakes found in the valley are classified as semipermanent and permanent due to size and location. With the drier, warmer summers in the valley, the smaller ponds dry up at certain times.

B. Lacustrine

Numerous lacustrine lakes and reservoirs occur in the project area. Reservoirs are usually drained in summer for irrigation and therefore have a drawdown. Lacustrine lakes on the coast are usually in the form of marginal lakes.

C. Riverine

Riverine wetlands throughout the valley occur as lower perennial (R2), upper perennial (R3), and intermittent (R4). Most of the lower perennial rivers drain through the Willamette Valley, along the western edge of the Cascades. Due to the variation in stream topography and stream conditions along the lower portions of the rivers draining the Cascades, the drainages may occur as upper or lower perennial, depending on gradient, stream course and location. Generally speaking, this pertains to the foothills of the Coast Range and of the Cascades. Where drainages have forest canopy extending across the stream bed on the photography, the riverine classification will be used because of the incised nature of the streams. Riverine flats will be classified as seasonally flooded (USC).

Riverine tidal wetlands (R1) were encountered on the coast and are classified R1 because of the tidal influence. The tidal reach terminates downstream where the ocean-derived salts in water exceeds .5 ppt during period of low flow. These usually occur where rivers flow into estuaries and there is not steep topography to stop tidal flucuations.

D. Estuarine

Many estuaries occur along the coast in varying sizes. The estuaries are very dynamic in this region due to wind, precipitation, and ocean currents. Frontal storms occur in winter with heavy precipitation. Wind currents are strong due to the Aleution low in winter and the north pacific high in summer dominating the weather patterns. Ocean currents are extremely active with the California current dominating in summer flowing south and the Davidson current dominating in winter flowing north. But the longshore currents are more important at the local level in shoreline processes. The two types of estuaries that are most prevelent in this region are the bar-built and the drowned river. The bar-built estuaries are formed by the accumulation of sand along bars which, when connected to shore, restrict water flow to coastal embayments. Drowned-river estuaries were formed at the end of the last ice age when the rising sea level flooded the former river valleys. Estuaries will be classified with (E1) Estuarine subtidal and (E2) Estuarine intertidal, depending on if the water is permanent with low tide. Regularly flooded emergents (E2EMN) are significant of a low marsh that is flooded daily by tides. Irregularly flooded emergents (E2EMP) are significant of a high marsh that is flooded less often than daily by tides. The (N) and (P) water regimes are used often in this region. (L) Subtidal, is used to describe the channels of permanent water throughout the estuary. (UB) Unconsolidated bottom and (AB) aquatic bed classes are most often used with the (L) water regime. (US) Unconsolidated shores are regularly and irregularly flooded depending on topography. Artifical levees were classified with a linear of E2RSNr. Estuarine intertidal, rocky shore, regularly flooded, artifical substrate on the inside with the estuarine influence. On the outside of the levee, with the marine influence, they were classified M2RSNr marine intertidal, rocky shore, regularly flooded, artifical substrate.

E. Marine

Because of the topography of the region, the marine classification system had few classes and water regimes used. Excluding the estuaries, the Oregon coast is mostly rocky headland with pockets and short expanses of beach. Beach that is regularly flooded (N) and irregularly flooded (P) is common. (RS) is used often to describe the rocky shores of the headlands. Aquatic bed (AB) is used to describe the algae and rockweed that exists near or on the rocky shores and this is usually

regularly flooded. (MIUBL) is used to classify the subtidal beach and this extends out to the end of the continental shelf.

VIII. IMAGERY/FIELD VERIFICATION

The photography used for the project area exhibits satisfactory resolution throughout. The false-color characteristics of the emulsion varies slightly from the lowlands to the highlands, but is also of satisfactory quality. The photography was acquired during a three-month span in the same year so consistent photointerpretation is anticipated. However, the seasonal rainfall/hydrologic conditions for the photo dates were higher than average, reflecting in many of the wetland areas. Since the photography was taken in July, August, and September (dry season), these conditions were not typical for the region in that many seasonal wetlands normally look drier on the photography during these months. This affected most of the western cascades in 1982. This condition was taken into consideration during field work and no problems are expected.