WA

NATIONAL WETLANDS INVENTORY

NOTES TO USERS

OLYMPIC PENINSULA AND SAN JUAN ISLANDS

1:100,000 SCALE MAPS:

CAPE FLATTERY SE

COPALIS BEACH I

SEATTLE NW

SEATTLE SW

VICTORIA NW

VICTORIA SW

NATIONAL WETLANDS INVENTORY

1:100,000 MAP NARRATIVE

INTRODUCTION

The U.S. Fish and Wildlife Service, Office of Habitat Resources, is conducting an inventory of the wetlands of the United States. The National Wetlands Inventory (NWI) is establishing a wetland data base in both map and computer forms for the entire country. The NWI Information will serve to identify the current status of U.S. wetlands and can be used as a reference point from which future changes in wetlands can be evaluated.

PURPOSE

The purpose of Notes to Users is to provide general information regarding the production of NWI maps and wetlands found within a relatively similar geographic area. Notes to Users are not intended to include a complete description of all wetlands found in the area nor provide complete plant species information.

Areas Covered:

The study area is part of a larger area generally defined as the Olympic Peninsula and San Juan Islands west of 123 degrees west longitude and north of 47 degrees north latitude. The Olympic Peninsula is bordered on the north by the Juan de Fuca Strait, on the east by Puget Sound, and the west by the Pacific Ocean. The San Juan Islands lie to the northeast of the Olympic Peninsula. Important wetland areas included are Ozette Lake, Hood Canal, Isabella Lake, and the lower reaches of the Clearwater River.

Bailey's Ecoregions:

Fenneman divides the study area into two distinct parts of the Pacific Border physiographic province. On the west, the Olympic Mountains rise to elevations exceeding 8,000 feet above sea level. Small glaciers are still present in the mountains with U-shaped glacial valleys extending to the base of the mountains. The timber line ranges between 5,000 and 5,500 feet elevation, with dense forest prevalent below 4,000 feet. The eastern district consists of a long valley called the Puget Trough, and includes Puget Sound at its north end. A few hilly areas occur in the district, but elevations rarely exceed 500 feet. Puget Sound is a partially drained drainage system with steep banked inlets and canals, modified by temporary glacial channels. (Fenneman '31).

The San Juan Islands represent the highest points of a submerged mountain range. The shorelines are rugged and deeply indented by many coves and inlets. The island surfaces are marked by abrupt differences in elevation with numerous rocky knobs extending above a glaciated plain (Schlots et. al., 1962).

Bailey includes the study area in the Pacific Forest Province. The climax vegetation for this province is western hemlock (Tsuga heterophylla) on the shaded slopes and silver fir ( ) on the southern and western slopes (Bailey '80). Other forested vegetation includes Douglas-fir (Pseudotsuga menziesii), western redcedar (Thuja plicata), grand fir (Abies gradis), and Sitka spruce (Picea sitchensis). The western half of the Olympic Peninsula consists primarily of Sitka Spruce - Cedar - Hemlock forest, and in the eastern half the primary associations are Cedar - Hemlock - Douglas fir (Bailey '80).

Climatic conditions in the study area are characterized by extreme differences in precipitation. Moisture laden winds from the ocean rise along the western slopes of the Olympic Mountains, and the rapid cooling causes the heaviest amounts of precipitation in the United States, varying from about 100 inches along the coast to 150 inches on the southwestern slopes. In contrast, the eastern and northeastern slopes average only about 55 inches per year, decreasing to about 20 inches in the vicinity of Port Townsend. This phenomenon is referred to as the "rainshadow effect." Temperatures in the lower elevations are moderate with winter afternoon and night readings in the 40's and 30's respectively. Summer afternoon temperatures average in the 60's along the coast and the 70's in the foothills (McCreary, '75).

Soil is an important element of hydric conditions and is one of the criteria used to define wetlands. Most of the upland soils have developed under dense forest cover and have been subjected to continuous leaching during rainy seasons. Due to climatic conditions, the soils are normally either too wet or too dry for most farm crops. Poorly drained (hydric) soil associations which can support wetland vegetation are common in floodplains and depressions. These soils consist of fine silts, clays, organic muck and peat. Many of these areas, however, have been drained and are intensively cultivated (Smith, '51).

Map Preparation:

Wetland classification for the NWI maps is in accordance with "Classification of Wetlands and Deepwater Habitats of the United States" by L. M. Cowardin, et al, 1979.

Wetland classification and delineations were produced by photo interpretation of high level aerial photography. The photography used was 1980 and 1981 color infrared at a scale of 1:58,000. The photography was taken during July 1980 and August and September 1981. To correctly classify the wetlands, ground truthing, soil surveys, and input from local experts were used to relate various photographic signatures to actual wetland identification and classification.

Collateral data included U.S.G.S. topographic maps (7.5 and 15 minute series), soil, climate and vegetation information (Bailey '80 and county soil surveys). Large-scale NWI wetland maps are available for the 7.5 minute and 15 minute topographic sheets indicated on Index Map B.

USER CAUTION:

The map documents were 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 the 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.

Changes in the landscape and/or land use could have occurred since the time of photography. Therefore, some discrepancies between the wetland map and current field conditions may exist. Any questions regarding wetland omissions, inclusions, or errors should be brought to the attention of the Regional Wetlands Coordinator, Region 1. The Project Officer for this wetland map is Dennis Peters, Regional Wetlands Coordinator, U.S. Fish and Wildlife Service, Region 1, Lloyd 500 Bldg., Suite 1692, 500 N. W. Multnomah St., Portland, Oregon 97232, telephone (503) 231-6154. Aerial photo interpretation was completed by Martel Laboratories, Inc., St. Petersburg, Florida. Maps were prepared by NWI National Team in St. Petersburg, Florida.

WETLANDS AND DEEPWATER HABITATS

Wetlands and deepwater habitats within the subject area fall within the Palustrine, Lacustrine, Riverine, Estuarine and Marine systems. Deepwater habitats are areas which are permanently flooded (except during periods of extreme drought) and are characterized by open water on the aerial photography. These habitats are present in all systems except the Palustrine, whereas wetland habitats are present in all systems.

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