FIELD SUMMARY REPORT

OREGON

CANYON CITY NW, CANYON CITY SW
BEND NE, BEND SE
CRESCENT NE, CRESCENT SE

I. INTRODUCTION

The following is a summary of field reconnaissance conducted for the Oregon project. The field trip was instrumental in establishing guidelines for consistent wetland mapping throughout the project area.

FIELD DATES

May 7 - 12, 1990

FIELD PERSONNEL

Howard Browers	U.S. Fish and Wildlife Service
Norman Mangrum	U.S. Fish and Wildlife Service
Elaine Blok	Geonex Martel, Inc.
Toni Alese	Geonex Martel, Inc.

PHOTOGRAPHY

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

Dates	% Coverage
06/81	15.63%
07/81	14.58%
08/81	3.13%
07/82	25.52%
08/82	39.58%
09/82	1.56%

COLLATERAL DATA

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

Hall, Frederick C., 1973. Plant Communities of the Blue Mountains in Eastern Oregon and Southeastern Washington. U.S.D.A. Forest Service Pacific Northwest Region.

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

Kozloff, Eugene N., 1988. Plants and Animals of the Pacific Northwest. University of Washington Press.

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

Reed, Porter P. Jr., 1988. National List of Plant Species That Occur In Wetlands: Northwest (Region 9). U.S. Fish and Wildlife Service, Department of Interior, Washington, D.C.

Spellenberg, Richard, 1979. The Audubon Field Guide To North American Wildflowers - Western Region. Alfred A. Knopf, Inc., N.Y.

Weinmann, Fred et al., 1984. Wetland Plants of the Pacific Northwest. U.S. Army Corps of Engineers, Seattle, WA

U.S.G.S. Quadrangles

Soil Surveys for the Prineville Area, the Trout Creek-Shaniko Area, and Grant County.

II. OVERVIEW

Geographical Location

- The project area is located in Central Oregon and encompasses six 1:100,000 scale maps. The coordinates for the maps are as follows:

Bend NE	N. Latitude 44° 30′ to 45° 00′ W. Longitude 120° 00′ to 121° 00′
Bend SE	N. Latitude 44° 00′ to 44° 30′ W. Longitude 120° 00′ to 121° 00′
Crescent NE	N. Latitude 43° 30′ to 44° 00′ W. Longitude 120° 00′ to 121° 00′
Crescent SE	N. Latitude 43° 00′ to 43° 30′ W. Longitude 120° 00′ to 121° 00′
Canyon City NW	N. Latitude 44° 30′ to 45° 00′ W. Longitude 119° 00′ to 120° 00′
Canyon City SW	N. Latitude 44° 00′ to 44° 30′ W. Longitude 119° 00′ to 120° 00′

Ecoregion and Physiography

According to Bailey (1980), the ecoregions within the Oregon map areas extend as follows: The Rocky Mountain Forest Province (Grand Fir-Douglas Fir Forest Section) covers approximately 60% of the study area including all of Canyon City SW, the majorities of both Canyon City NW, and Bend SE, and large portions of both Bend NE and Crescent NE; The Intermountain Sagebrush Province (Sagebrush-Wheatgrass Section) covers approximately 30% of the study area including all of Crescent SE, a large portion of Crescent NE, and smaller areas in both Bend SE, and Bend NE; The Palouse Grassland Province is the least represented ecoregion as it covers only 10% of the study area including a large portion of Bend NE, and a very small portion of Canyon City NW. Local relief ranges from approximately 1,500 feet up to nearly 7,000 feet in the area of the Aldrich Mountains in Canyon City SW. Average annual precipitation and temperature vary from province to province as follows:

Province	Average Annual Temperature	Average Annual Precipitation
Rocky Mountain Forest Province	35° F to 45° F	10" to 40"
Intermountain Sagebrush Province	40° F to 55° F	5" to 20"
Palouse Grassland Province	45° F to 55° F	18" to 23"

Forest communities are coniferous and predominantly ponderosa pine, Douglas-fir, Engelmann spruce, subalpine fir, or lodgepole pine. Well marked vegetational zones are a striking feature. Their distribution is controlled mostly by a combination of altitude, latitude, direction of prevailing winds, and slope exposure.

Sagebrush communities were also found to be extensive in the study area. At lower elevations the sagebrush was associated predominantly with rabbitbrush and various grasses. At higher elevations juniper shrubs were widely interspersed throughout the sagebrush communities.

III. BIOLOGICAL CHARACTERISTICS OF WETLAND HABITATS

A. Palustrine

Palustrine habitats include forested, scrub-shrub, emergent, aquatic bed, unconsolidated bottom, and unconsolidated shore. Common species associated with forested wetland communities include Black cottonwood (*Populus trichocarpa*), Willow (*Salix* spp.), Sitka alder (*Alnus sinuata*), Quaking aspen (*Populus tremuloides*), Ash (*Fraxinus* sp.), Hemlock (*Tsuga* sp.), Alder (*Alnus* spp.). These species occur in temporary (A), saturated (B), and seasonally flooded (C) water regimes. Willows, Cottonwood, and Ash were the common species encountered in riparian habitat. Due to the incised nature of the majority of streams and rivers, the riparian-associated wetland forest occur primarily in a narrow zone adjacent to the drainage. Aspen, Alder, and Hemlock occur in wet meadows.

Commonly occurring scrub-shrub communities contain willow (*Salix* spp.), Alder (*Alnus* spp.), Black hawthorn (*Crataegus douglasii*), Quaking aspen (*Populus tremuloides*), Cottonwood (*Populus trichocarpa*), Rabbitbrush (*Chrysothamnus* spp.), Greasewood (*Sarcobatus* spp.), and Sagebrush (*Artemisia* spp.). These species occur in temporary (A), saturated (B), seasonal (C), and semi-permanent (F) wetlands, with the exception of the rabbitbrush, greasewood, and sagebrush which occur almost exclusively in intermittent (J) and occasionally temporary (A) wetlands. Shrub wetlands are frequently found along drainages, adjacent to riparian habitat, in swales, isolated pockets, mountain seeps, or alkali flats. Shrub wetlands are usually associated with a variety of hydric grasses.

Palustrine emergent habitats are characterized by numerous species of persistent wetland plants. Emergent habitat is extensive in marshes associated with lakes and rivers, along floodplains and reservoir fringes, in wet meadows, spring and seep areas, and depressional "pothole" type areas. Emergent wetlands can be temporary (A), saturated (B), seasonal (C), semi-permanent (F), permanent (H), and intermittent (J). Common emergents found in these water regimes are *Juncus* spp., *Carex* spp., *Scirpus* spp., *Typha* spp., and *Rumex* spp.

Palustrine aquatic beds observed in the field were semi-permanently and permanently flooded areas containing Duckweed (*Lemna* sp.), Pondweed (*Potamogeton* sp.), and Marestail (*Hippurus vulgaris*).

Palustrine unconsolidated bottom lakes found throughout the study area are classified as semi-permanent and permanent based on U.S.G.S. topographic maps. In the drier areas some seasonally or temporarily flooded palustrine unconsolidated shore lakes and stock ponds were found.

B. Lacustrine

Numerous lacustrine wetlands occur in the project area, including lakes, reservoirs, and large alkali flats. The reservoirs are used primarily for flood control and irrigation purposes and have drawdown zones. The photography shows most reservoirs at full pool elevation.

C. Riverine

Riverine wetlands were encountered throughout the project area occurring predominantly as upper perennial (R3) when permanent and as intermittent (R4) when not permanent. Intermittent riverine wetlands will be classified as temporary (A), seasonal (C), or semi-permanent (F) in most instances. The intermittent (J) classification will be seldom seen, if at all. Where drainages have forest canopy extending across the stream bed on the photography, the riverine classification will be used; with the exception of deciduous trees or shrubs with a wet signature which will be classified palustrine. All field checked rivers were classified as unconsolidated bottom. Rivers will only be classified as rock bottom if they have a very strong rock bottom signature on the photography. Riverine flats will be classified as seasonally flooded (C), or temporarily flooded (A) and will be either rocky shore (RS) or unconsolidated shore (US) depending on signature.

IV. IMAGERY/FIELD VERIFICATION

Consideration of Imagery

The photography used for the project area was acquired during the months of June through September in two consecutive years (1981 and 1982). The emulsion varies from very dark to very light with the majority of the photography being of good resolution and consistent quality. Should further review of the photography prove poor quality it will be replaced before photointerpretation is attempted to insure consistency.