DRAFT

NATIONAL WETLANDS INVENTORY

MAP REPORT

For

Northern Idaho (Idaho EPA I)

Columbia Forest Province

Field Work Conducted Week of July 21, 1997

The 1:100,000 Map Units of:

Pullman NE, Pullman SE

U.S. Fish and Wildlife Services
Portland, Oregon

May, 1998

TABLE OF CONTENTS

I. Introduction.....Page 2

II. Field Reconnaissance.....Page 2-3

III. Physical Description of Project Area.....Page 3-4

IV. Description of Wetland Habitats.....Page 4-5

V.Commonly Observed Wetland Vegetation.....Page 5-6

VI. Water Regime Description.....Page 6

VII. Imagery.....Page 6

VIII. Photographic Interpretation Conventions.....Page 6-7

IX. Map Preparation.....Page 7-8

X. Literature Cited.....Page 8

Appendix A – Locator Map.....Page 9

I. Introduction

The United States Fish and Wildlife Service's National Wetlands Inventory (NWI) is producing maps showing the location and classification of wetlands and deepwater habitats of the United States. Classification of Wetlands and Deepwater Habitats of the United States, by Cowardin, et al. (1979) is the document used by the NWI to define and classify wetlands. Photo interpretation conventions, hydric soils lists, and wetland plant lists are used in concert with the Cowardin classification system.

The purpose of this map report is to: (1) provide information on the production of NWI maps, including a discussion of photography and interpretation; (2) provide a descriptive crosswalk from NWI wetland codes used on the map to common terminology, and then to representative plant species found at specific wetland sites; and (3) describe local geography, climate, and wetland communities.

II. Field Reconnaissance

Field reconnaissance is a necessary procedure, in order to accurately interpret aerial photography. Photographic signatures are correlated to the wetland habitat in the field. Collateral information including vegetative communities, soil types and topographic setting are further evaluated to aid in the photointerpretation process. This information is evaluated for seasonality and conditions existing at the time of photography and at ground truthing.

A. Project Area

Field reconnaissance, for the Idaho EPA I project, covered two 1:100,000 maps. This project consisted of twenty-one quads within Pullman SE, twenty-four quads in Pullman NE, and the sixteen quads in Pullman NE-SE "fill-ins". Over one-third of the work area was occupied by the Nez Perce Indian Reservation.

B. Field Personnel

Dennis Peters – U.S. Fish and Wildlife Service
Elaine Blok – U.S. Fish and Wildlife Service
Rick Brovey – Greenhorne & O'Mara, Inc.
Karl Schultz – Greenhorne & O'Mara, Inc.

C. Field Dates

July 21 through July 25, 1997

D. Aerial Photography

Primary Source Data (100%)
Type: NHAP (National High Altitude Program), Color Infra-red, High Altitude
Scale: 1:58,000

Location	Dates of Photography
Pullman NE	7/3/81, 7/4/81, 7/11/81, 8/22/81*
Pullman SE	7/3/81, 7/4/81, 7/11/81, 8/22/81*

Percentage Coverage: All 61 USGS quadrangles of the project area are covered by the NHAP photography. *Note: 8/22/81 is the date of the photography covering the Pullman NE-SE "fill-ins".

E. Collateral Data

- United States Geological Survey (U.S.G.S.) Quadrangles
- Cowardin's Classification of Wetlands and Deepwater Habitats of the United States
- Bailey's Description of the Ecoregions of the United States
- Soil Conservation Service Soil Surveys
- Hydric Soils of the United States
- National List of Plant Species That Occur in Wetlands: Northwest (Region 9)
- WETS Table Data

III. Physical Description of Project Area

A. Geography

The Northern Idaho (Idaho EPA I) study area lies in the Columbia Forest Province as defined by Bailey's Description of the Ecoregions of the United States (1980). This ecoregion consists of high, rugged mountains, rising above 5,000 feet with local relief in excess of 3,000 feet. Most of the region has been glaciated. Elevations within the project area ranged from 1,200 feet to 4,800 feet above sea level. Major drainages within the work area included the Clearwater River, Lawyer Creek, the Palouse River, and the Potlatch River. Most of the landscape on this project consisted of rolling plains used for agricultural purposes and grazing pastures. Higher elevations contained the more forested areas.

B. Climate

The climate of Northern Idaho provides for an average four to five month growing season. Severe winters are usual. An average daily winter temperature is 32 degrees Fahrenheit. The average daily summer temperature is 63 degrees with the average daily maximum temperature being 80 degrees. Precipitation averages 20 to 40 inches per year, mainly in the fall, winter and spring. Summers are usually dry.

C. Soils

Soil survey data is available for Latah and Idaho counties. This data will be utilized wherever these counties occupy the project area. According to USDA's Hydric Soils of the United States, there are three hydric soils units found in Latah County: Latah, Latahco, and Porrett. The table below describes those hydric soils and the units in the project area that have a "w" capability subclass, according to the soil survey data.

Soil Type	Location	Depth to Water Table	Capability Sub-Class
Crumarine Loam	Valley floors at an elevation of @ 2800'	6"-18" from surface in late winter and early spring	IIIw
Fenn Silty Clay	Bottom lands at elevations of 3000' to 3600'	18"-30" from surface. Seasonal high.	IIw
Hampson Loam	Valley floors at an elevation of @ 2500'	36"-60" from surface in late winter and early spring	IIIw
Jughandle Loam	Bottomlands and low terraces at an elevation of @ 4000'	6"-18" from surface in winter and spring	IVw
Latah Loam	Valley floors at an elevation of @ 2600'	Water is perched above the subsoil in early spring	IIIw
Latahco Loam	Valley floors at an elevation of @ 2600'	Water is perched above the subsoil in spring	IIIw
Lovell Loam	Flood plains at an elevation of @ 2600'	18"-24" from surface in late winter and early spring	IIIw
Porrett Loam	Valley floors at an elevation of @ 2700'	< 12" from surface in spring	IVw
Westlake Loam	Bottomlands & drainageways at elevations of 3000' to 4000'	6"-18" from surface in late winter and spring	Ivw
Wilkins Loam	Narrow bottomlands at elevations of 2500' to 3500'	Perched water table at depths of 1'-3' in spring	Ivw

IV. Description of Wetland Habitats

Riverine System

- Permanent rivers in the study area are classified R3UBH. Examples of the R3UBH classification are the Clearwater and the Palouse Rivers.
- Rivers with smaller stream channels can be classified R3UBF.
- Riverine bars and flats will be classified R3USC and R3USA.
- Intermittent streams will be classified R4SBC and R4SBA.

Lacustrine System

- Lakes and reservoirs larger than 20 acres in size will be classified L1UBH. Reservoirs will carry the impounded (h) modifier. Dworshok Reservoir in Pullman NE is an example of L1UBHh.

- Flats associated with reservoirs over 20 acres will be classified L2USAh and L2USCh.

Palustrine System

- The majority of wetlands in the study area are palustrine. Emergents are classified PEMF, PEMC, PEMB and PEMA. The dominant classifications are PEMC and PEMB. There are also ponds with aquatic bed throughout the work area. They are classified PABH.

- Areas of scrub-shrub are classified PSSC, PSSB, and PSSA. These scrub-shrub wetlands are more common than the wet forested PFOA.

- In the higher elevations, saturated emergents are the dominant cover types. These emergent wetlands may be influenced by beaver ponds. These ponds are classified PABGb. The vegetation has the beaver (b) modifier as well. The emergents are classified PEMBb and the scrub-shrub areas are classified PSSBb.

- Springs may also cause emergent and scrub-shrub saturation and are classified PEMB and PSSB respectively.

V. Commonly Observed Wetland Vegetation

(grouped according to class)

A. *Emergent*

Agrostis alba	redtop
Carex spp.	sedge
Cinquefoil spp.	potentilla
Juncus spp.	rush
Phalaris arundinacea	reed canary grass
Phleum pratense	timothy
Scirpus spp.	bulrush
Typha sp.	cattail
Veratrum viride	false hellebore

B. *Aquatic Bed*

Potamogeton spp.	pondweed

C. *Scrub-Shrub*

Cornus stolonifera	red-osier dogwood
Crataegus spp.	hawthorn
Rosa woodsii	woods rose
Salix spp.	willow

D. *Forested*

Alnus rubra	red alder

Populus tremuloides	aspen
Populus spp.	poplar
Populus deltoides	cottonwood
Salix spp.	willow

VI. Water Regime Description

(A) Temporarily Flooded – Surface water present for brief periods during growing season, but water table usually lies well below soil surface. Plants that grow both in uplands and wetlands are characteristic of this water regime.

(B) Saturated – The substrate is saturated to the surface for extended periods during the growing season, but surface water is seldom present.

(C) Seasonally Flooded – Surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is extremely variable, extending from saturated to a water table well below ground surface.

(F) Semipermanently Flooded – Surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or very near the land's surface.

(G) Intermittently Exposed – Surface water is present throughout the year except in years of extreme drought.

(H) Permanently Flooded – Water covers the land surface throughout the year in all years.

(K) Artificially Flooded – The amount and duration of flooding is controlled by means of pumps or siphons in combination with dikes or dams.

VII. Imagery

Overall the emulsion of the NHAP 1:58,000 color infrared photography is of high quality. Most of the photos have a dark reddish hue. This results in only slight difficulties in determining saturated emergent (PEMB)/upland breaks. Soil surveys and side overlap will be used whenever possible to assist with delineation.

VIII. Photographic Interpretation Conventions

1) Emergents within the work area were predominately seasonally flooded (PEMC). This classification will constitute most of the emergent delineations. Many emergents occur as linears within agricultural fields throughout the work area. These have different photo signatures from the adjacent uplands and generally follow drainage patterns. Grassy waterways (non-wetlands) generally do not have different signatures from the uplands.

2) Visible water and/or other collateral data will be required for delineation of semi-permanently flooded emergents (PEMF). This was an uncommon classification during ground truthing.

3) Wet meadows (large and small) in higher elevations will be classified as saturated emergent (PEMB). Photosignature, slope, and treeline will dictate the saturated/upland boundary in these areas. Seasonal drainages may be found and delineated if visible within these meadows.

4) Emergents within agricultural areas may have a mowed signature, which follows the wetland boundary.

5) Scrub-shrub and forested wetlands found along streams were predominantly temporarily flooded (PSSA or PFOA). These signatures will usually cover the stream and be delineated as a linear of the appropriate cover type.

6) Scrub-shrub wetlands along the Clearwater River and on islands within the river will generally be classified as seasonal (PSSC).

7) Unconsolidated shores associated with rivers will usually have a seasonal water regime (R3USC) and will emit whitish photosignatures. Grayish tones along the rivers were generally upland, although grayish-temporarily flooded areas can be delineated (R3USA).

8) All perennial streams will be classified as upper perennial (R3) with unconsolidated bottoms (UB) if vegetation is not present. Rivers indicated as permanent on the USGS topo maps, and obscured by trees on the aerial photos, will be classified as R3UBH, unless field verified as intermittent. If field verified as such, these rivers will be classified as R3UBF.

9) Intermittent streams (R4), with a strong photosignature will be pulled as seasonally flooded (C) or temporarily flooded (A) streambeds (SB) when lacking cover types or when associated with conifers. These delineations will be driven by photosignature and length. They generally must be at least one mile long.

10) If 30% of aquatic bed (AB) is seen in any body of water in the project area, the entire body of water will be delineated as an aquatic bed wetland.

11) Ditches will be labeled R3UBHx or R4SBCx if they do not have a water photosignature.

12) Sewage treatment ponds and fish hatcheries will carry the artificially flooded (K) water regime and the excavated (x) modifier.

13) Springs and seeps present on the USGS quads within the work area will be delineated as PEMB, unless no photosignature can be found. Dot polygons may be used.

IX. Map Preparation

Wetland delineation and classification is in accordance with Cowardin et al (1979). Further wetland mapping guidance is provided by NWI photographic and cartographic conventions in concert with National consistency. Delineations are produced through stereoscopic interpretation of 1:58,000 scale color infrared photography.

Field checksites of areas found within Pullman NE & SE were made prior to the actual delineation of 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 and soil types, as well as additional input from field personnel.

Collateral data included USGS topographic maps, SCS soil surveys, USGS water resources data, vegetation, climate, and ecoregional information.

The user of the map is cautioned that, due to the limitation of mapping primarily through aerial photointerpretation, a small percentage of wetlands may be unidentified. Since the photography was taken during a particular time and season, there may be discrepancies between the maps and current field conditions. Changes in landscape, which occurred after the photography was taken, would result in such discrepancies. One example is scrub-shrub photosignatures, which have since grown into forested areas.

Aerial photointerpretation and drafting were completed by Greenhorne & O'Mara, Inc., in Pinellas Park, Florida, with quality control conducted by the United States Fish and Wildlife Service.

X. Literature Cited

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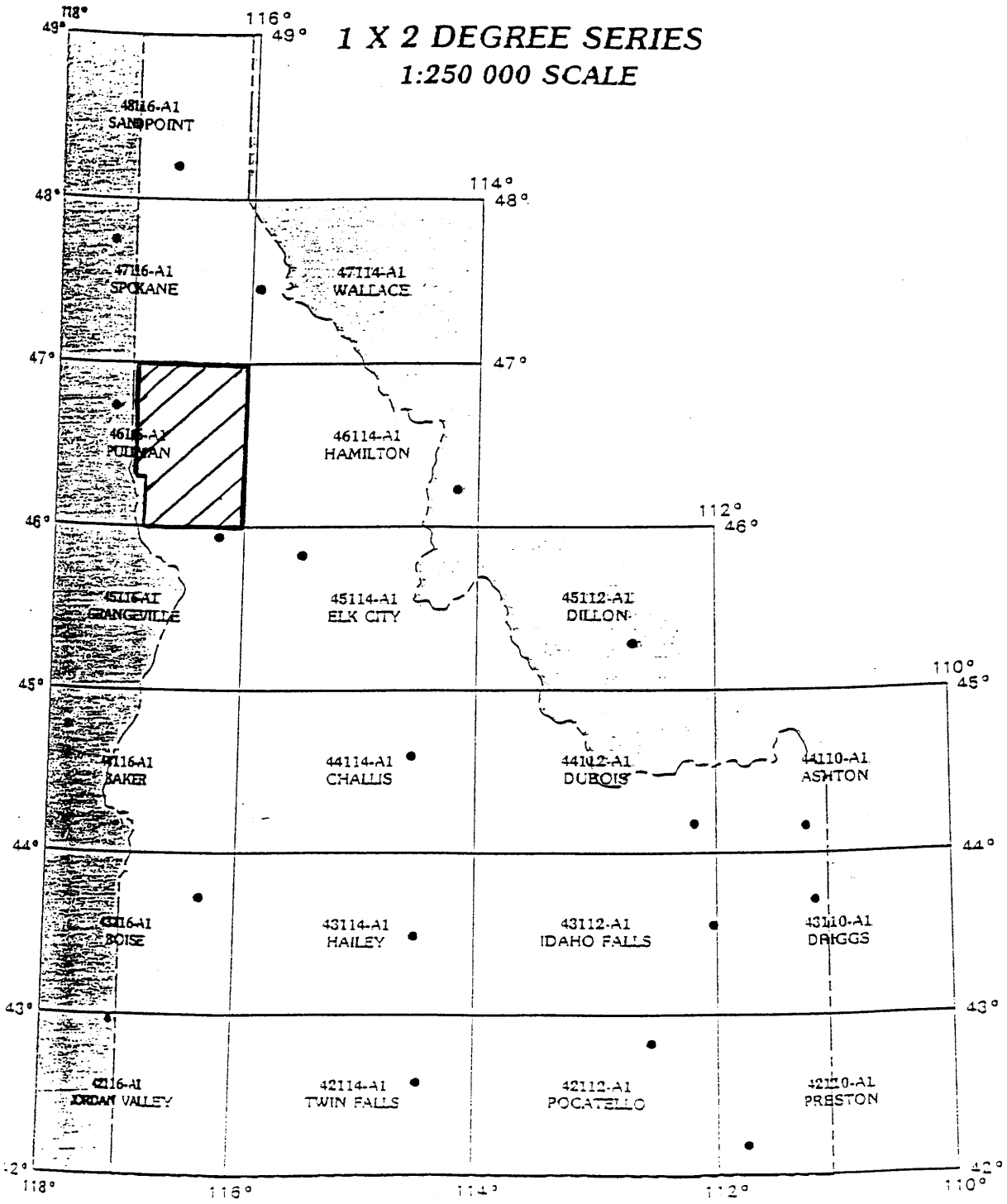
APPENDIX A
LOCATOR MAP