DRAFT

NATIONAL WETLANDS INVENTORY

MAP REPORT

FOR

Central Idaho (Idaho EPA II)

Rocky Mountain Forest Province

Field Work Conducted Week of August 11, 1997

The 1:100,000 Map Units of:

Challis NE, Challis SE, Challis SW

U.S. Fish and Wildlife Services
Portland, Oregon

September, 1997

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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 II project, covered three 1:100,000 maps. This project consisted of four quads within Challis NE, twelve quads within Challis SE, and eleven quads in Challis SW. National forests dominated much of the project area.

B. Field Personnel

Elaine Blok – U.S. Fish and Wildlife Service – Region 1 Assistant Regional Wetlands Coordinator
Erin McCormick – Greenhorne & O'Mara, Inc. – Imagery Analyst
Karl Schultz – Greenhorne & O'Mara, Inc. – Imagery Analyst

C. Field Dates

August 11 through August 15, 1997

D. Aerial Photography

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

Location	Dates of Photography
Challis NE & SE	8/21/84, 9/2/84, 9/4/84
Challis SW	7/10/84, 8/19/84, 8/21/84, 8/29/84, 9/4/84

Percentage Coverage: All 27 USGS quadrangles of the project area are covered by the HAP photography.

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 Central Idaho (Idaho EPA II) study area lies predominately in the Rocky Mountain 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 3,000 feet to over 9,000 feet above sea level. Major drainages within the work area included the Payette River, Valley Creek, and the Salmon River. The landscape predominately consists of high mountain terrain. Valleys such as Round Valley, Pahsimeroi, Decker Flat, Stanley Basin, and Garden Valley are primarily used for grazing and hay production.

B. Climate

The climate of Central 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. Snowfall constitutes 30-50 percent of annual precipitation. Summers are usually dry.

C. Soils

Soil survey data is available for parts of Boise and Valley counties. Hydric soil units in the study area include Blackwell and Cabarton loams, found in the drainages of the Round Valley; and Jurvannah sandy loams and Melton loams, found in the floodplains of the Payette River and it's tributaries. In the Middle Fork Payette River floodplain, a mixed alluvial soil is present, which is described as heterogeneous stream-deposited materials and weakly developed soils.

IV. Description of Wetland Habitats

Riverine System

- Permanent rivers in the study area will be classified R3UBH. Examples of the R3UBH classification are the Payette and the Salmon Rivers.
- Perennial rivers as shown on the topographic maps that are dry in the field will 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. High mountain lakes will be assumed to be L1UBH due to depth and/or bedrock shoreline (<20 acres but >2 meters in depth).
- Unvegetated flats or those without persistent emergents, trees or shrubs associated with reservoirs over 20 acres will be classified L2USAh and L2USCh.
- Lakes and reservoirs larger than 20 acres in size with visible stagnant water or evidence of 30% or more aquatic bed will be classified as L1ABH(h).

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 will be classified PABH.
- Areas of scrub-shrub are classified PSSC, PSSB, and PSSA. Wet forested areas will be classified PFOC, PFOB, and PFOA.
- In the higher elevations, emergent and scrub-shrub wetlands may be influenced by beaver ponds. These ponds will be classified PUBHb. Where emergents and scrub-shrub areas are influenced by the beaver ponds, they will be classified as PEMBb and PSSBb repectively.

- Springs may have emergent and scrub-shrub vegetation and saturated soils and will be classified PEMB and PSSB respectively.

V. Commonly Observed Wetland Vegetation
(grouped according to class)

A. *Emergent*

Carex spp.	sedge
Potentilla spp.	cinquefoil
Juncus spp.	rush
Scirpus spp.	bulrush
Typha sp.	cattail

B. *Aquatic Bed*

Lemna sp.	duckweed
Nuphar sp.	lily
Polygonum sp.	smartweed
Potamogeton spp.	pondweed

C. *Scrub-Shrub*

Betula spp.	birch
Salix spp.	willow
Vaccinium spp.	blueberry

D. *Forested*

Alnus rubra	red alder
Pinus contorta	lodgepole pine
Populus tremuloides	aspen
Populus spp.	poplar
Populus balsamifera	black cottonwood

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 HAP 1:58,000 color infrared photography is of high quality. Most of the photos have a dark reddish hue. This results is 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 Conventions

1) Emergents within the work area were predominately seasonally flooded (PEMC) in the major river valleys.

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.

4) Forested wetlands found along streams were predominately temporarily flooded (PFOA).

5) Scrub-shrub wetlands found along streams at higher elevations (above 5,000 feet) and/or in association with springs or seeps were predominately seasonally flooded (PSSC).

6) Scrub-shrub wetlands found along streams at lower elevations or in areas of lower annual precipitation were predominately temporarily flooded (PSSA).

7) Unconsolidated shores associated with rivers that have a whitish photo signature will be classified as R3USC. Grayish tones along rivers were generally upland, although grayish photosignatures can be delineated as temporarily flooded (R3USA), based on topography.

8) Streams that are perennial on the topographic maps will be classified as upper perennial, permanently flooded (R3UBH) unless found to be dry during field reconnaissance when the water regime will be semipermanently flooded (R3UBF). The

class rock bottom (R3RBH) will be used when rapids can be seen on the photo or where rock bottom was seen during field reconnaissance.

9) Streams that are intermittent on the topographic maps will be classified as seasonally flooded (R4SBC, PSSC, or PFOC) if water is present on the photo or if the streambed is obscured by a coniferous or deciduous tree canopy. Intermittent streams will be classified as temporarily flooded (R4SBA) if no water is present on the photo but a white streambed signature can be seen. Unvegetated intermittent streams will be delineated if they are longer than one mile or if shorter than one mile but hydrologically connecting vegetated wetlands.

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 classified R3UBHx or R4SBCx, unless vegetated. If vegetated they will be classified PSSCx or PEMCx.

12) Sewage treatment ponds or similar facilities will carry the artificially flooded (K) water regime and the excavated (x) modifier, for example PABKx.

13) Springs and seeps present on the USGS quads within the work area will be delineated as PEMB or PSSB, 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 Regional and National Quality Assurance guidelines and consistency. Delineations are produced through stereoscopic interpretation of 1:58,000 scale color infrared photography.

Field reconnaissance and Field Data Sheets within Challis NE,SE, & SW were completed prior to the aerial photographic delineation of wetlands. Field 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

Bailey, R.G., 1978. Description of The Ecoregions of the United States. Dept. of Agriculture, US Forest Service.

Cartographic Conventions for the National Wetlands Inventory, 1994. United States Department of the Interior, Fish and Wildlife Service.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. Laroe, 1979. Classification of Wetlands and Deepwater Habitats of The United States. United States Department of Interior, Fish and Wildlife Service, FWS/PBS 79/81.

Hydric Soils of the United States, 1991. United States Department of the Interior, Soil Conservation Service.

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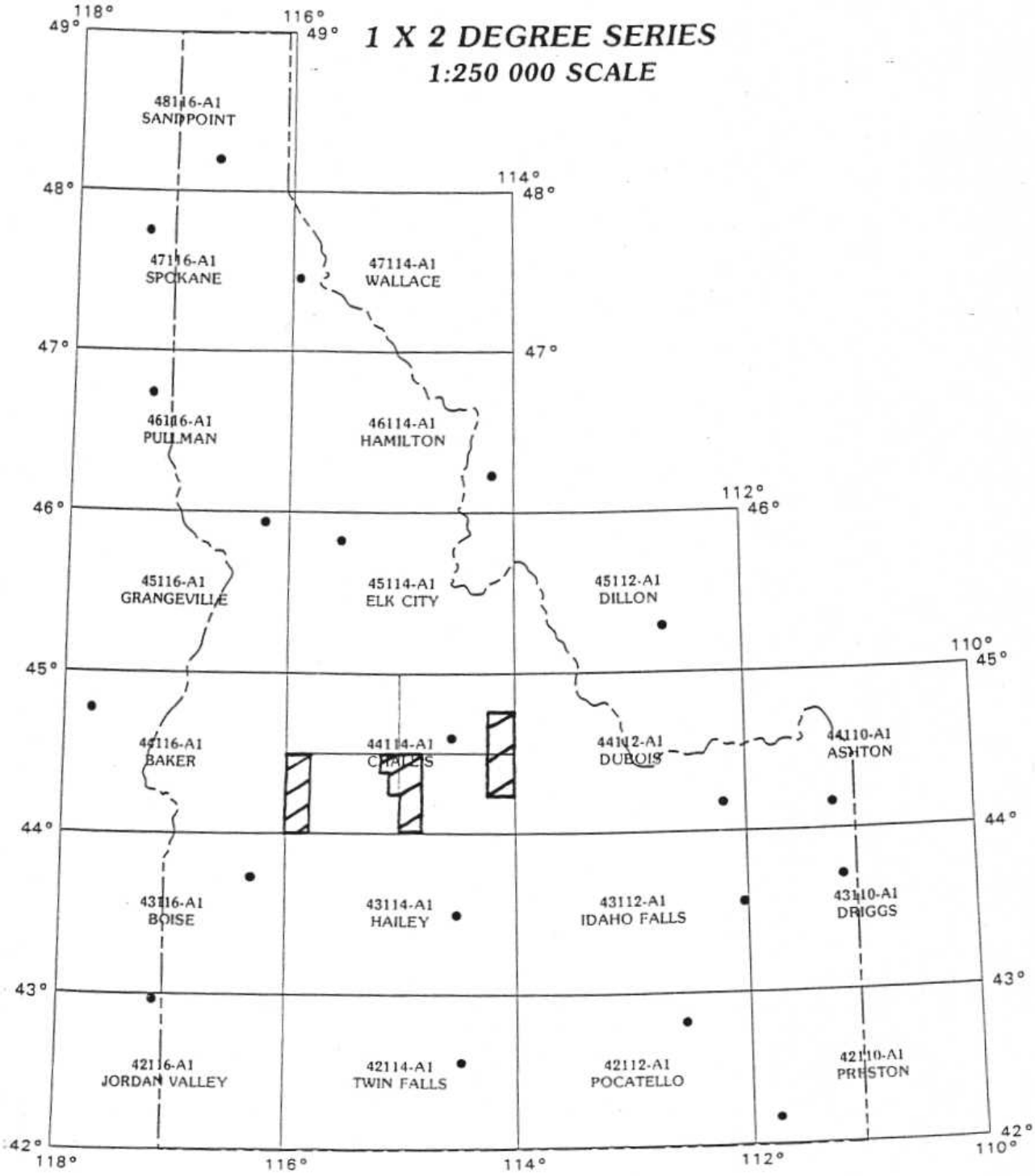
Soil Survey of Middle Fork Payette River Area, Idaho, 1976. United States Department of Agriculture, Soil Conservation Service.

Soil Survey of Valley Area, Idaho, 1981. United States Department of Agriculture, Soil Conservation Service.

APPENDIX A
LOCATOR MAP

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