DRAFT

USER REPORT
THERMOPOLIS NW AND SW, WYOMING
NATIONAL WETLANDS INVENTORY MAPS

A. INTRODUCTION

The U.S. Fish and Wildlife Services National Wetlands Inventory is producing maps showing the location and classification of wetlands and deep water habitats of the United States. The Classification of Wetlands and Deepwater Habitats of the United States by Cowardin et al. is the classification system used to define and classify wetlands. Photo interpretation conventions, hydric soils lists and wetland plant lists are also available to enhance the use and application of the classification system.

B. PURPOSE

The purpose of the notes to users is threefold: (1) to provide localized information regarding the production of NWI maps, including specific imagery and interpretation discussion; (2) to provide a descriptive crosswalk from wetland codes on the map to common names and representative plant species; and (3) to explain local geography, climate, and wetland communities.

C. STUDY AREA

Geography:

The study area covered by Thermopolis NW and SW base maps is located in western Wyoming (See Appendices). Bailey (1980) divides the study area into two provinces, the Wyoming Basin Province and the Rocky Mountain Forest Province.

The basin area here consists of broad expanses of sagebrush and numerous small sandy streams. Major rivers in the study area are the Wind, East Fork Wind, and Green rivers. Bull Lake Dam, located in the southeast corner, is the largest lake in the study area. Other lakes include the Dinwoody, Fremont, New Fork, Ross, and Green River Lake. These are some of the larger lakes in the area. Relief in the valley ranges from 6,000 feet to 8,000 feet.

The Wind River Range located in the southern portion of the study area are rugged glaciated mountains that range from 8,000 feet to just over 13,000 feet. Glacial lakes and beaver ponds are prevalent throughout this range.

The mountains to the north are the Absaroka Range. This range is drier then the Wind River Range and consist of mainly mountain streams and glacial lakes spread throughout.

Elevations range from 8,000 feet to 13,000 feet. Three National Forests are found in this study area. They are the Teton, Bridger, and Shoshone National Forests.

Climate:

The high altitude of the Wyoming Basin Province gives it a climate characterized by long, cold winters and hot, short summers. Average annual precipitation is 14 inches to 17 inches and is fairly evenly distributed throughout the year.

Climate in the mountain ranges is a semiarid steppe regime in which precipitation falls in the winter. A considerable part of the annual precipitation is snow, however, permanent snow fields and glaciers cover only small areas. Average annual temperature is 34˚F.

Vegetation:

The chief vegetation of the valley is sagebrush, greasewood, and a mixture of short grasses. Streams and valley bottoms are lines with willows and sedges.

The mountains are marked by distinct vegetational zones that are controlled mostly by a combination of altitude, latitude, directions of prevailing winds, and slope exposure. Vegetation here includes Blue Spruce, Englemann Spruce, aspen, Douglas Fir, and Lodge Pole Pine.

Soils:

Soils in the valley are alkaline Aridisols. Subsoils contain a layer enriched with lime and/or gypsum, which may develop into caliche hardpan. Because the valley is semiarid and weathering is slight, soil texture and composition are dominated by the parent materials.

Soil orders in the mountains occur in zones corresponding to the vegetation zones. These range from Mollisols and Alfisols in the montane zone to Aridisols in the foothill zone. In addition, because of steep slopes and recent glaciation, there are areas of Inceptisols.

D. WETLAND CLASSIFICATION CODES AND WATER REGIME DESCRIPTIONS

TABLE 1: NWI CLASSIFICATION FOR THERMOPOLIS NW and SW, WYOMING

NWI CODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
R2UB (G,H)	Riverine, lower perennial, unconsolidated bottom	Rivers	Unconsolidated bottom
R2US (C)	Riverine, lower perennial, unconsolidated shore	Flats and Sandbars	Sand or mud
R3UB (G,H)	Riverine, upper perennial, unconsolidated bottom	Mountain rivers or streams	Cobble-Gravel substrate
R3US (C)	Riverine, upper perennial, unconsolidated shore	Flats and Sandbars	Sand, and/or cobble-gravel
R3RB (H)	Riverine, upper perennial, rock bottom	Mountain rivers or streams	Bedrock and rubble
R4SB (F,C,A)	Riverine, intermittent, stream bed	Streams or irrigation canals	Sand, mud, or cobble-gravel
L1UB (H)	Lacustrine, limnetic, unconsolidated bottom	Lakes or reservoirs	Unconsolidated bottom
L2AB (F)	Lacustrine, littoral, aquatic bed	Deep Marsh	Submerged and floating aquatics
L2US (C,A)	Lacustrine, littoral, unconsolidated shore	Lake flats, beach	Sand or mud
PUB (H,F)	Palustrine, unconsolidated bottom	Glacial lakes, dugouts and stock ponds	Unconsolidated bottom

D. WETLAND CLASSIFICATION CODES AND WATER REGIME DESCRIPTIONS

TABLE 1: NWI CLASSIFICATION FOR THERMOPOLIS NW and SW, WYOMING

NWI CODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PAB (F,G)	Palustrine, aquatic bed	Vegetated ponds, beaver ponds or borrow pits	Potomogeton sp. (pondweeds) Myriuphyllum sp. (coontail) Lemna sp. (duckweed)
PEM (F,C,B,A)	Palustrine, emergent	Meadows, depressions, swales, floodplains or seeps	Carex sp. (sedges) Carex nebrascensis (nebraska sedge) Typha latifolia (cattail) Juncus sp. (rush) Juncus articus (baltic rush) Scirpus acutus (hardstem bullrush) Potentilla fruticosa (cinquefoil) Poa palustris (blue grass) Phalaris arundinacea (reed canary) Eleocharis macrostachya (spikerush)
PSS (C,B,A)	Palustrine, scrub-shrub	Shrub wetlands	Salix sp. (willow)
PFO (A)	Palustrine, forested	Forested wetlands	Populus angustifolia (narrowleaf cottonwood)

E. 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 surface for extended periods during the growing season, but surface water is seldom present.

(C) Seasonably 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 varialble, extending from saturated to a water table well below the 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 land surface throughout the year in all years.

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

(U) Unknown - The water regime is not known.

F. MAP PREPARATION

The wetland classification that appears on the Thermopolis National Wetlands Inventory (NWI) Base Map (Table 1) is in accordance with Cowardin et al. (1977). The delineations were produced through stereoscopic interpretation of 1:58,000 scale color infrared photography. The photography was taken during August 1982, 1984; September 1982, 1983, and 1984.

Field checks of areas found within Thermopolis NW and SW photography 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 types and soil types, as well as additional input from field personnel.

Collateral data included U.S.G.S. topographic maps, climate, vegetation, and ecoregional information. The user of the map is cautioned that, due to the limitiation of mapping primarily through aerial photo interpretation, a small percentage of wetlands may have gone unidentified. Since the photography was taken during a particular time and season, there may be discrepancies between the map and current field conditions. Changes in landscape which occurred after the photography was taken would result in such discrepancies.

Aerial photo interpretation and drafting were completed by Martel Laboratories, Inc., St. Petersburg, Florida.

G. MAP ACQUISITION

To discuss any questions concerning these maps or to place a map order, please contact:

Regional Wetland Coordinator
U.S. Fish and Wildlife Service - Region VI
Denver Federal Center
Post Office Box 25486
Denver, CO 80225

To order maps only, please contact:

National Cartographic Information Center
U.S. Geological Survey
National Center
Reston, VA 22092

Maps are identified by the name of the corresponding U.S.G.S. 1:24,000 scale topographic quadrangle name. Topographic map indices are available from the U.S. Geological Survey.

LITERATURE CITED

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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 the Interior, U.S. Fish and Wildlife Service.

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LOCATOR MAP (A)

FORK LAKES NEW 1967-(77-I)	KENDALL MTN 1968-(77-I)	BULL LAKE EAST 1951-(77-I)	CROWHEART BUTTE 1952	BIG SHEEP MTN 1968	FISH CREEK PARK 1967	CROWHEART NE 1952-57 (77-I)	CIRCLE RIDGE 1967-(77-I)
WISE FLAT 1952-(77-I)	ST LAWRENCE BASIN 1952-(77-I)	BULL LAKE WEST 1952-(77-I)	CROWHEART 1952-(77-I)	GREEN RIVER LAKES 1968-(77-I)	UNION PEAK 1968-(77-I)	CROWHEART NW 1952-(75-I)	JOHNSON DRAW 1967-(77-I)
PARADISE BASIN 1952-(77-I)	KIRKLAND PARK 1952-(77-I)	BURRIS 1952-(75-I)	WILDERNESS 1952	CROW MTN 1967	EAST FOX BASIN 1967-(77-I)	MONUMENT PEAK 1967-(77-I)	WILLOW CREEK 1967-(77-I)
ALPINE LAKE 1952-(77-I)	BOB LAKES 1952-(77-I)	HAYS PARK 1952-(77-I)	BLUE HOLES 1952	BAIN DRAW 1967	CASTLE ROCK 1967-(77-I)	DUNRUD PEAK 1969-(77-I)	TWIN PEAKS 1969-(77-I)
FREMONT PEAK SOUTH 1968-(77-I)	FREMONT PEAK NORTH 1968-(77-I)	INK WELLS 1968-(77-I)	TORREY LAKE 1968-(77-I)	MASON DRAW 1956	INDIAN POINT 1956-(77-I)	WIGGINS PEAK 1969-(77-I)	FRANCS PEAK 1969-(77-I)
BRIDGER LAKES 1968-(77-I)	GANNETT PEAK 1968-(77-I)	DOWNS MTN 1968-(77-I)	SIMPSON LAKE 1968-(77-I)	DUBOIS 1956	RAMSHORN PEAK 1956-(77-I)	SNOW LAKE 1956-(77-I)	MT BURWELL 1969-(77-I)
FREMONT LAKE NORTH 1968-(77-I)	SQUARETOP MTN 1968-(77-I)	GREEN RIVER LAKES 1968-(77-I)	UNION PEAK 1968-(77-I)	WARM SPRING MTN 1956	ESMOND PARK 1956-(75-I)	POCKETS 1956-(77-I)	EMERALD LAKE 1956-(77-I)
YOUNTS PEAK 1970-(75-I)	SHOSHONE PASS 1956-(75-I)	FIVE MTN 1970-(77-I)	HARD LUCK 1970-(77-I)				
FERRY LAKE 1970-(75-I)	DUNDEE MEADOWS 1956-(75-I)	KISINGER LAKES 1956	FISH LAKE 1956				
		COTTONWOOD PEAK 1969-(77-I)	MOON POINT 1969-(77-I)				
		DICK CREEK LAKES 1969-(77-I)					

LOCATOR MAP (B)