

# DRAFT

## USER REPORT LANDER SE, 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 deepwater 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 the Lander SE base map is located in west-central Wyoming. Bailey's Ecoregion Classification (1980) describes this area as the Wyoming Basin Province (Sagebrush-Wheatgrass Section). The Wyoming Basin Province consists of plains interrupted by isolated hills and low mountains. Elevations in Lander SE range from approximately 6,500 feet in the Great Divide Basin, to 8,000 feet in the southern end of the Wind River Range in the northwest edge of the work area.

The major river found in the study area is the Sweetwater River. The rest of the Lander SE work area is dominated by temporarily flooded, intermittent streambeds within the Riverine system.

### CLIMATE:

The high altitude of the Wyoming Basin Province gives it a climate characterized by long, cold winters and hot, short summers. Annual temperatures range from 40° - 52°F. The annual precipitation ranges from 5 - 14 inches, and is evenly distributed throughout the year.

### VEGETATION:

The chief vegetation of the basin is sagebrush, shadscale, a mixture of short grasses, and greasewood. Moist alkaline flats support greasewood and other alkali tolerant plants. Streams and valley bottoms are lined with willows and sedges.

### SOILS:

Within the study area, there are two major soil groups defined as Great Groups by the "Wyoming General Soil Map". The two groups are Soils of the Mountains and Mountain Valleys, and Soils of the Intermountain Basins and Foothills. This classification is further broken into climatic zones and soil associations.

The mountainous area located in Lander SE is confined to the northern edge of the work area, and is dominated by the Soils of Mountains and Mountain Valleys Great Group. They are characterized by dark colored soils that are usually moist in some parts during the summer. These soils are formed in a cool climate with moist summers. Within the Lander SE area, elevations that range above 7,000 feet in mountainous areas are dominated by this soil. The soil association in this area is the Cryoborolls-Rock outcrop Association. These rolling to steep soils are developing from residuum and transported materials from igneous bedrocks.

The majority of the work area is dominated by the Soils of the Intermountain Basins and Foothills. These soils are characterized by light colored soils of basins, terraces, and fans which are dry or may be moist in some parts during the summer, and are formed in cool climates with spring moisture. Elevations within 5,000 - 8,000 feet are typically where these soils are located. There are three soil associations in this group. They are: Torriorthents-Haplargids-Rock outcrop Association; Torriorthents-Haplargids-Natrargids Association; Torriorthents-Camborthids-Haplargids Association.

D. WETLAND CLASSIFICATION CODES AND WATER REGIME DESCRIPTIONS

TABLE 1: NWI CLASSIFICATION FOR LANDER SE, WYOMING (1 of 2)

NWI CODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
R2UB (G,H)	Riverine, lower perennial, unconsoli- dated bottom	Rivers	Unconsolidated bottoms
R3UB (H)	Riverine, upper perennial, unconsoli- dated bottom	Mountain rivers or streams	Cobble-Gravel substrate
R3US (C)	Riverine, upper perennial, unconsoli- dated shore	Flats	Sand, mud or cobble-gravel
R4SB (F,C,A)	Riverine, intermittent, stream bed	Streams or irrigation canals	Sand or mud
L1UB (H)	Lacustrine, limnetic, unconsolidated bottom	Lakes or reservoirs	Unconsolidated bottoms
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, unconsoli- dated bottom	Gravel, or overflow pits (gas or oil)	Unconsolidated bottoms
PAB (F,G)	Palustrine, aquatic bed	Vegetated ponds, beaver ponds or borrow pits	<u>Myriophyllum</u> sp. (coontail) <u>Lemna</u> sp. (duckweed)

D. WETLAND CLASSIFICATION CODES AND WATER REGIME DESCRIPTIONS

TABLE 1: NWI CLASSIFICATION FOR LANDER SE, WYOMING (2 of 2)

NWI CODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PEM (F,C,B,A)	Palustrine, emergent	Meadows, depressions, swales, floodplains or seeps	<u>Hordeum</u> <u>jubatum</u> (foxtail barley) <u>Poa pratensis</u> (Kentucky bluegrass) <u>Buchloe</u> sp. (buffalo grass) <u>Agropyron</u> <u>smithii</u> (Western wheat) <u>Distichlis</u> <u>spicata</u> (saltgrass) <u>Carex</u> sp. (sedges) <u>Typha latifolia</u> (cattail) <u>Juncus</u> sp. (rush) <u>Scirpus acutus</u> (hardstem bullrush) <u>Salicornia</u> sp. (glassworts) <u>Eleocharis</u> <u>macrostachya</u> (spikerush) <u>Scirpus</u> <u>paludosus</u> (alkali bullrush)
PSS (C,B,A)	Palustrine, scrub-shrub	Shrub wetlands	<u>Salix</u> sp. (willow) <u>Sarcobatus</u> <u>vermiculatus</u> (greasewood)

## 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) 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 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) Artificially 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 Lander SE 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.

Field checks of areas found within Lander SE 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 limitation 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:

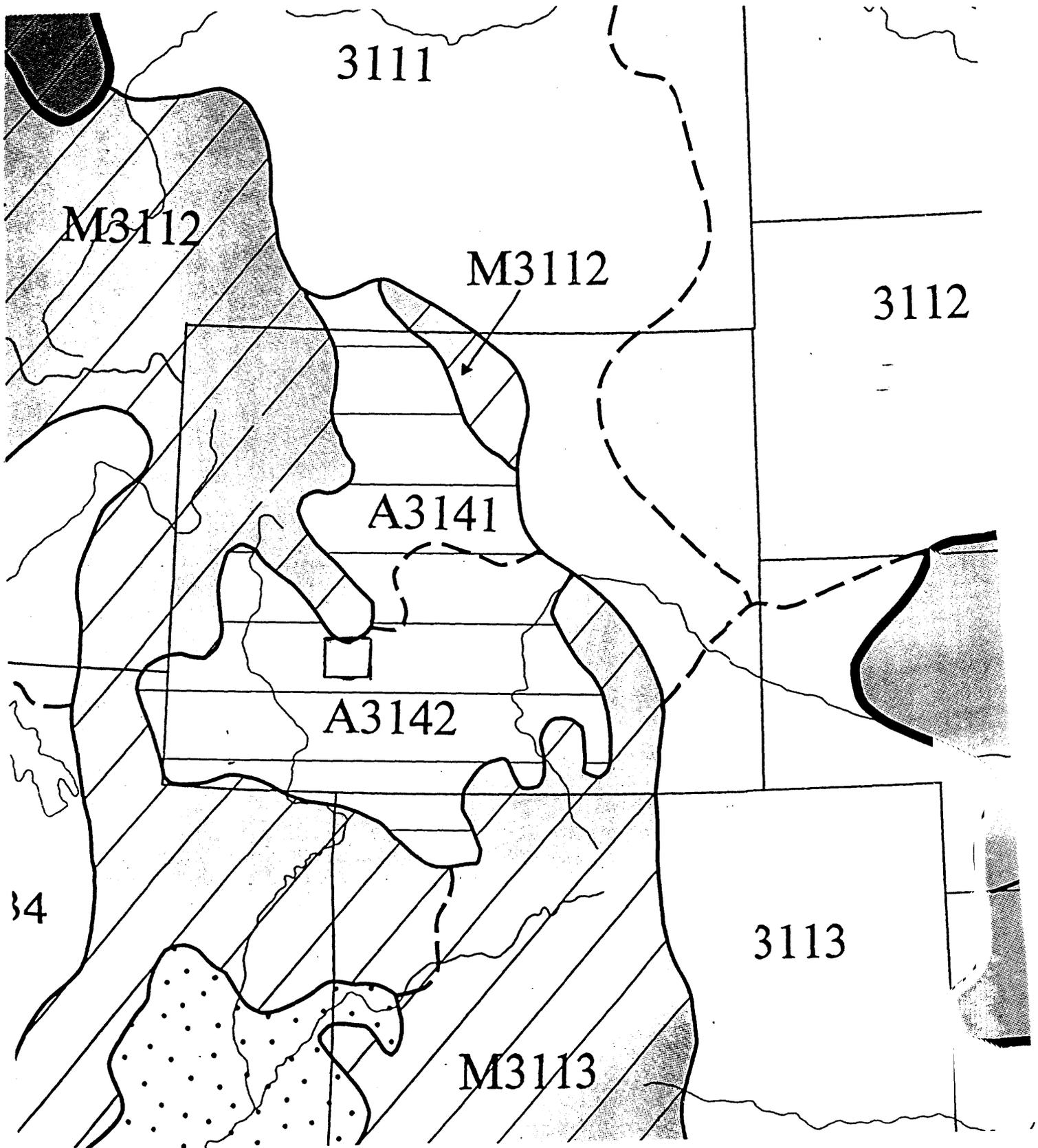
National Cartographic Information Center  
U.S. Geological Survey  
National Center  
Reston, VA 22092

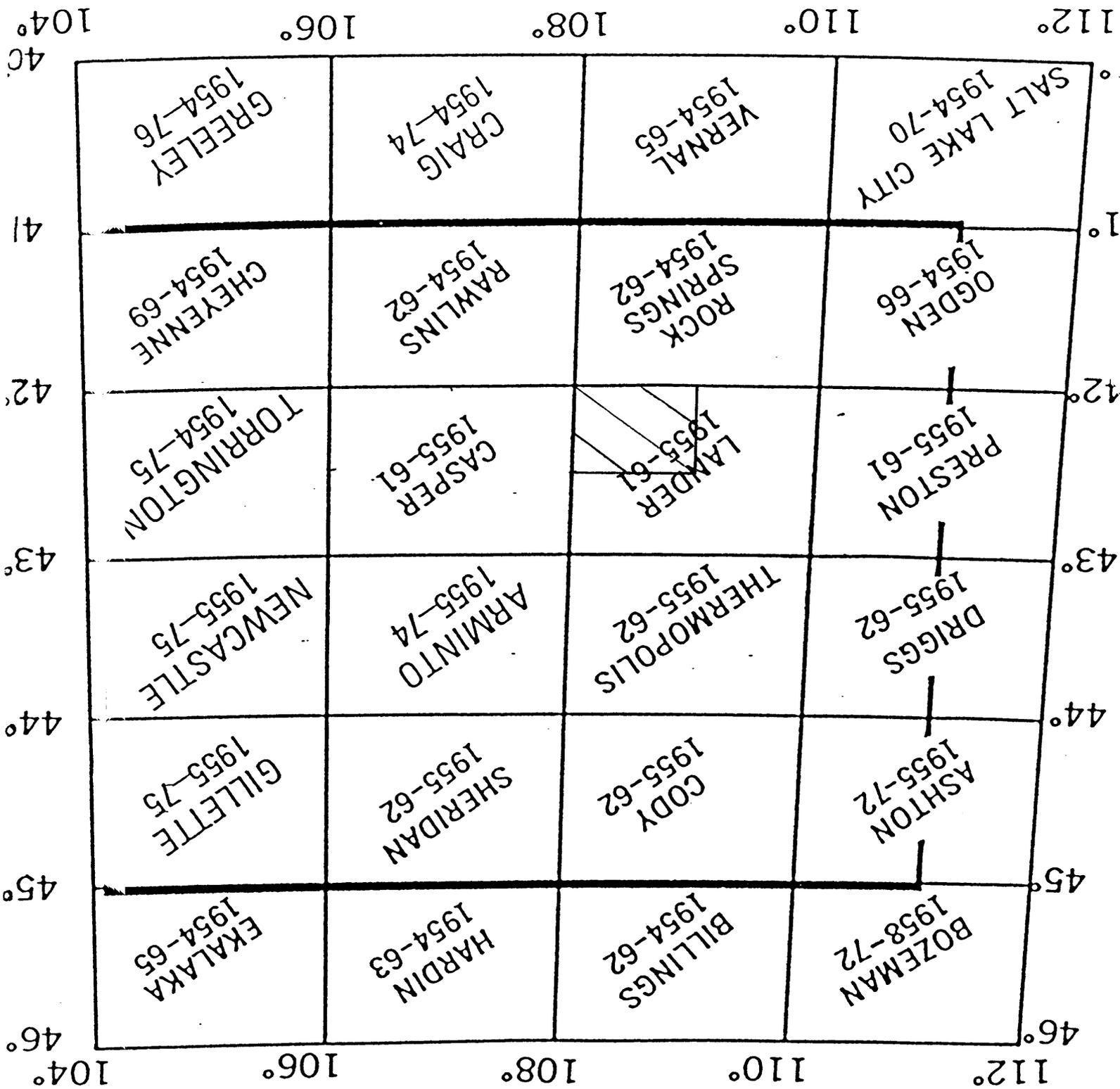
Maps are identified by the name of the corresponding U.S.G.S. 1:24,000 scale topographic quadrangle name. Topographic map indices are available from the U.S. Geological Survey.

## LITERATURE CITED

- Bailey, Robert G. 1980. Description of the Ecoregions of the United States; United States Department of Agriculture Forest Service. Miscellaneous Publications No. 1391.
- 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.
- Denison, E.S.; J.R. Schuetz, and S.J. Rucker; 1982. Wyoming Water Resource Data, Water year 1982; United States Department of Agriculture, Soil Conservation Service.
- National Committee for Hydric Soils, 1985. Hydric Soils of the State of Wyoming; United States Department of Agriculture, Soil Conservation Service.
- Reed, Porter B. Jr., 1986. 1986 Wetland Plant List, Wyoming; United States Department of Interior, Fish and Wildlife Service.
- Wyoming General Soil Map; 1977. United States Department of Agriculture, Soil Conservation Service, Research Journal 117.

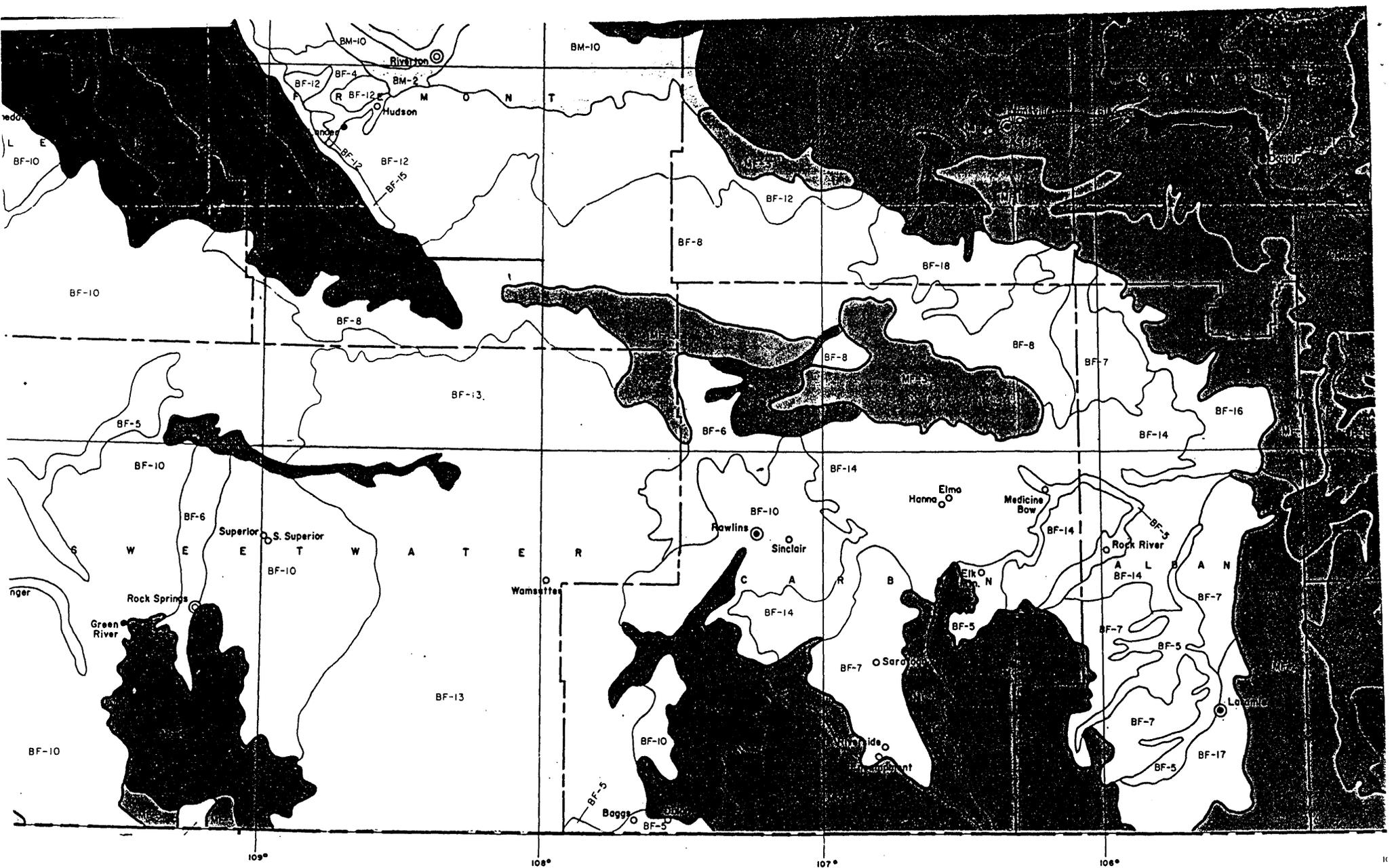
# BAILEY'S ECOREGION MAP





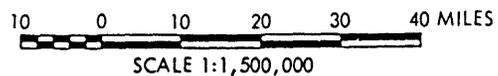
ANDERSON RIDGE 1932-1931	SOUTH CITY PASS 1933	ATLANTIC CITY 1933-1931	RADIUM SPRINGS 1953	LENGSTON LAKES 1953	BARBAS SPRINGS 1953	HAPPY SPRINGS 1953	SOAP HOLES 1951
PACIFIC SPRINGS 1958	DICKIE SPRINGS 1958	CONTINENTAL PEAK 1958	CIRCLE LAKE 1958-1957	PICKET LAKE 1961-1957	SULPHUR BAR SPRINGS 1961	OLSON SPRINGS 1961	LOST CREEK RESERVOIR 1961
FREIGHTER GAP 1958	THE PINNACLES 1958	FIVE FINGERS BUTTE 1960	LOST CREEK LAKE 1961				

LANDER SE



# GENERAL SOIL MAP WYOMING

NOVEMBER 1975

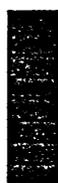


LANDER SE, WY.

## SOIL ASSOCIATIONS

### M - Soils of the Mountains and Mountain Valleys

MC - Dark and light colored soils of the high mountains that are usually moist, have an AAP (1) of 45-100 cm. (18-40 In.), and a MSST (2) of less than 15°C. (59°F.).



Soils formed from residual materials:

- MC-1 Cryoboralfs-Cryoborolls association
- MC-2 Cryoborolls-Cryoboralfs association
- MC-3 Cryoborolls association
- MC-4 Rock Outcrop-Cryoboralfs-Cryoborolls association
- MC-5 Cryoborolls-Rock Outcrop association
- MC-6 Cryochrepts-Cryumbrepts association
- MC-7 Cryoboralfs-Cryoborolls-Rock Outcrop association
- MC-8 Cryoborolls-Cryorthents association



Soils formed from transported materials:

- MC-9 Cryoboralfs, stony-Cryoborolls, stony association
- MC-10 Cryoborolls-Cryaquents association
- MC-11 Cryoborolls-Cryaquolls association

MF - Dominantly dark colored soils of the mountains and mountain valleys that are usually moist in some parts during the summer, have an AAP of 35-60 cm. (14-24 In.), a MAST (3) of less than 8°C. (47°F.), and a MSST of more than 15°C. (59°F.).



Soils formed from residual materials:

- MF-1 Eutroboralfs-Haploborolls association
- MF-2 Argiborolls-Haploborolls association
- MF-3 Haploborolls-Argiborolls-Rock Outcrop association
- MF-4 Haploborolls, shallow association

MX - Dominantly dark colored soils of the mountains and mountain valleys that are usually dry during the summer and have an AAP of 35-55 cm. (14-22 In.), a MAST of less than 8°C. (47°F.), and a MSST of more than 15°C. (59°F.).

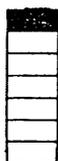


Soils formed from residual materials:

- MX-1 Calcixerolls-Calciorthids association
- MX-2 Haploxerolls association
- MX-3 Argixerolls association

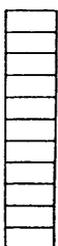
### B - Soils of the Intermountain Basins and Foothills

BF - Dominantly light colored soils of basins, terraces, and fans which are usually dry or may be moist in some parts during the summer, have an AAP of 20-35 cm. (8-14 In.), a MAST of less than 8°C. (47°F.), and a MSST of more than 15°C. (59°F.).



Soils formed from transported materials:

- BF-1 Torripsamments association
- BF-2 Argiborolls-Torriorthents association
- BF-3 Haplargids-Haploborolls association
- BF-4 Haplargids association
- BF-5 Torrifuvents-Fluvaquents-Halaquepts association
- BF-6 Torriorthents, alkali association
- BF-7 Calciorthids-Haplargids association



Soils formed from residual materials:

- BF-8 Torriorthents-Haplargids-Rock Outcrop association
- BF-9 Torriorthents-Rock Outcrop association
- BF-10 Torriorthents-Haplargids-Natrargids association
- BF-11 Torriorthents, shallow association
- BF-12 Haplargids-Torriorthents association
- BF-13 Torriorthents-Camborthids-Haplargids association
- BF-14 Torriorthents, shallow-Torriorthents association
- BF-15 Torriorthents association
- BF-16 Haploborolls-Rock Outcrop association
- BF-17 Torriorthents-Camborthids association
- BF-18 Torriorthents, shallow-Rock Outcrop association