

USER REPORT
CASPER NW, 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. Photointerpretation 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 Casper NW base map is located in south-central Wyoming. Bailey's Ecoregion Classification (1980) describes this area as the Wyoming Basin Province (Sagebrush-Wheatgrass Section). The basin area consists of broad expanses of sagebrush and numerous small sandy streams. The major river in this area is the Sweetwater River. Relief in the area ranges from 5,500 feet to 8,000 feet.

Climate:

The climate of the Basin Province is characterized by short, hot summers, with cold winters. Annual temperatures range from 40° F to 52° F. The average annual precipitation for the area ranges from 5 - 14 inches, fairly evenly distributed throughout the year.

Vegetation:

Vegetation in the Wyoming Basin Province is dominated by sagebrush or shadscale, with a mixture of short grasses. Moist alkaline flats support such vegetation as alkali-tolerant greasewood, and other alkali tolerant plants. Where water is good, along streams and mountains, valley bottoms are lined by willows and sedges.

Soils:

Within the study area, there are three major soil groups defined as Great Groups by the "Wyoming General Soil Map". The three groups are 1) Soils of the Mountains and Mountain Valleys, 2) Soils of the Intermountain Basins and Foothills, and 3) Soils of the Eastern Wyoming Plains. This classification is further broken into climatic zones and soil associations.

The mid-eastern portion of Casper NW is dominated by the Soils of Mountains and Mountain Valley. They are dominantly 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 this area elevations range from 7,000 feet - 8,000 feet. The primary soil association is the Haploborolls-Argiborolls-Rock Outcrop association. This association is found on sloping to steep terrain, developing in residuum and transported materials from sedimentary bedrock.

The southern half of Casper NW is dominated by Soils of the Intermountain Basins and Foothills. These soils are light colored soils of basins, terraces, and fans which are dry or may be moist in some parts during the summer. These soils form in cool climates with spring moisture. The elevations range from 5,500 feet - 7,000 feet. The soil associations are formed by residual materials. Soil associations found in this area are Torriorthents-Haplargids-Rock Outcrop association, and Haplargids-Torriorthents association. The Haplargids-Torriorthents association located in the northwestern part of Casper NW is dominantly light colored soils of basins, terraces, and fans which are usually dry in all parts. This soil is formed by residual material.

The northeastern part of Casper NW is dominated by the Soils of the Eastern Wyoming Plains. These are dark and light colored soils on upland plains, terraces, and fans which are usually moist in some parts during the summer. The only association found here is Torriorthents, shallow association which is formed by residual materials or steep uplands.

D. WETLAND CLASSIFICATION CODES AND WATER REGIME DESCRIPTIONS

TABLE 1: NWI CLASSIFICATION FOR CASPER NW, WYOMING (1 of 3)

NWI CODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
R2UB (G, H)	Riverine, lower perennial, unconsolidated bottom	Rivers	Unconsolidated bottom
R3UB (G, H)	Riverine, upper perennial, unconsolidated bottom	Mountain rivers or streams	Cobble-Gravel substrate
R2US (C)	Riverine, lower perennial, unconsolidated shore	Flats	Sand or mud
R3US (C)	Riverine, upper perennial, unconsolidated 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, reservoirs alpine lakes	Unconsolidated bottoms
L2AB (G, F)	Lacustrine, littoral, aquatic bed	Deep Marsh, lakes, or reservoirs	Submerged and floating aquatics
L2US (C, A)	Lacustrine, littoral, unconsolidated shore	Lake flats, beach	Sand or mud

D. WETLAND CLASSIFICATION CODES AND WATER REGIME DESCRIPTIONS

TABLE 1: NWI CLASSIFICATION FOR CASPER NW, WYOMING (2 of 3)

NWI CODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PUB (G, H)	Palustrine, unconsolidated bottom	Gravel pits, oil and gas pits, alpine ponds	Unconsolidated bottoms
PAB (F, G)	Palustrine, aquatic bed	Vegetated ponds, beaver ponds, or sewage ponds	<u>Lemna</u> sp. (duckweed) <u>Ruppia</u> sp. (pearlwort)
PEM (F, C, B, A)	Palustrine, emergent	Meadows, depressions, swales, floodplains, seeps, or springs	<u>Hordeum</u> sp. (barley) <u>Elymus cincreus</u> (basin wild-rye) <u>Allenrolfea occidentalis</u> (iodine bush) <u>Rumex</u> sp. (dock) <u>Mentha</u> sp. (mint) <u>Salicornia rubra</u> (red saltwort) <u>Juncus</u> sp. (rush) <u>Distichlis</u> sp. (saltgrass) <u>Agrostis alba</u> (redtop) <u>Phleum pratense</u> (timothy) <u>Agropyron smithii</u> (western wheatgrass) <u>Beckmannia syzigachne</u> (american sloughgrass) <u>Triglochin</u> sp. (arrowgrass) <u>Equisetum</u> sp. (horsetail) <u>Iris</u> sp. (iris) <u>Carex nebrascensis</u> (nebraska sedge)

D. WETLAND CLASSIFICATION CODES AND WATER REGIME DESCRIPTIONS

TABLE 1: NWI CLASSIFICATION FOR CASPER NW, WYOMING (3 of 3)

NWI CODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PEM (cont'd)			<u>Phalaris arundinacea</u> (reed canary grass) <u>Juncus</u> sp. (rush) <u>Carex</u> sp. (sedge) <u>Eleocharis</u> sp. (spikerush) <u>Sium suave</u> (water parsnip) <u>Typha latifolia</u> (cattail) <u>Scirpus acutus</u> (hardstem bulrush) <u>Scirpus pungens</u> (three square bulrush) <u>Pedicularis groenlandica</u> (elephants head) Marigold Moss
PSS (C, B, A)	Palustrine, scrub-shrub	Shrub wetlands	<u>Sarcobatus vermiculatus</u> (greasewood) <u>Salix</u> sp. (willow)
PFO (A)	Palustrine, forested	Forested wetlands wetlands	<u>Populus angustifolia</u> (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) 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 Casper NW 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 July 1980, 1981; August 1980; and September 1980, 1981.

Field checks of areas found within Casper NW, 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 Geonex-Martel, Inc., St. Petersburg, Florida.

G. MAP ACQUISITION

To discuss any questions concerning these maps 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, please contact:

Rocky Mountain Mapping Center, ESIC
United States Geological Survey
Box 25046, STOP 504, Denver Federal Center
Denver, CO 80225-0146

(303)236-5829

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.
- Druse, S.A., and S.J. Rucker; 1984. Wyoming Water Resource Data, Water year 1984; 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.

CASPER N.W.
Locator Map (A)

3111

3112

3113

M3112

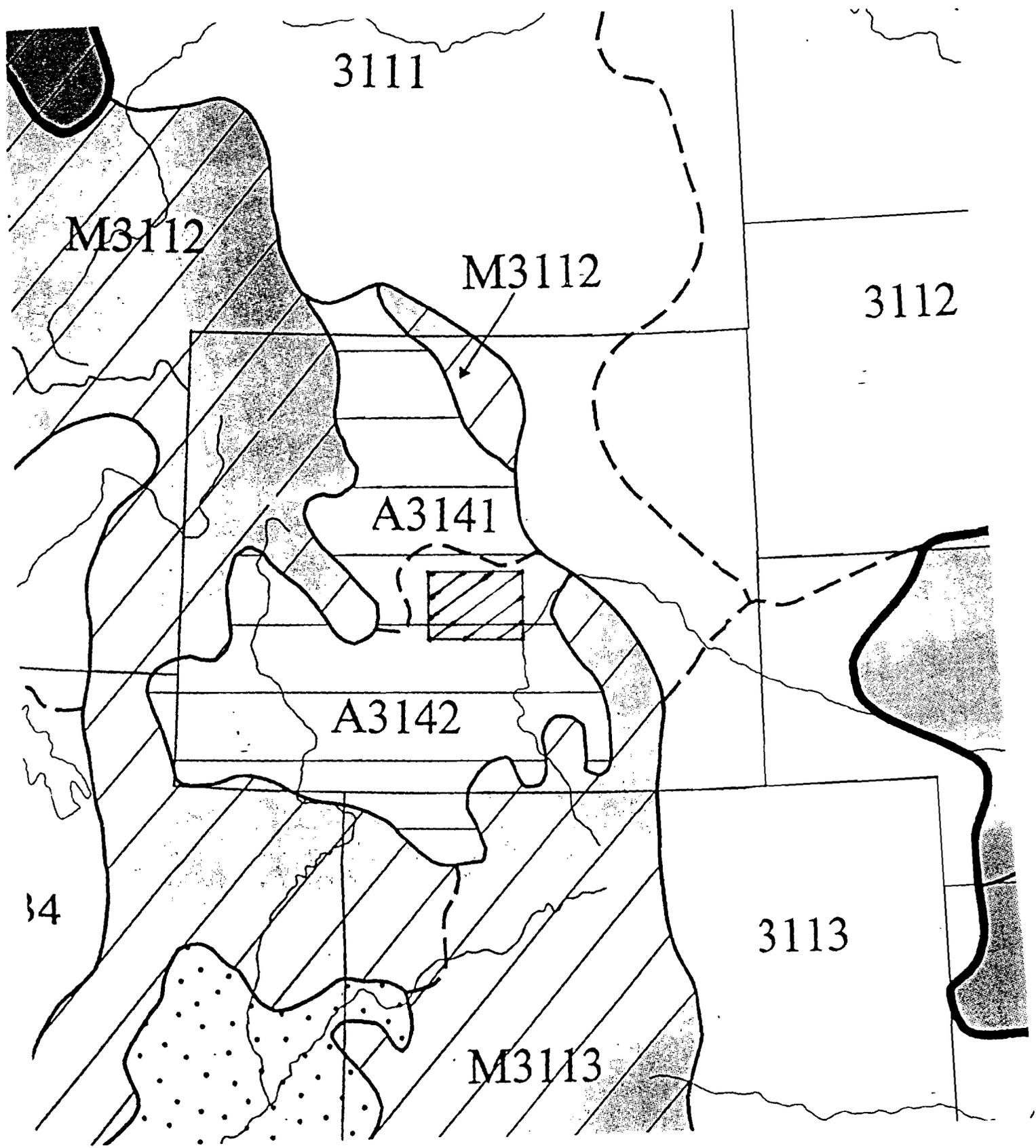
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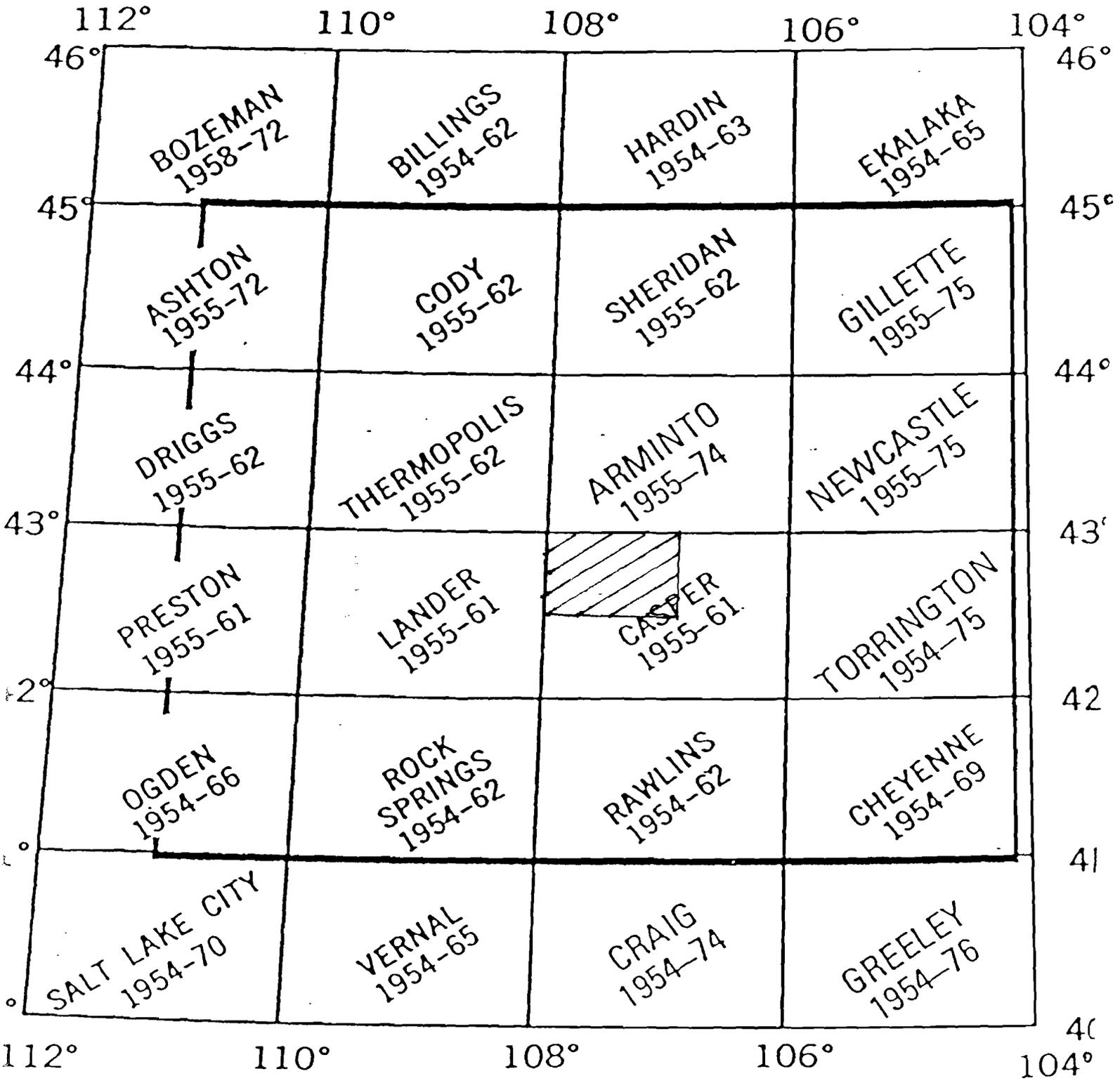
M3113

34



LOCATOR MAP (B)

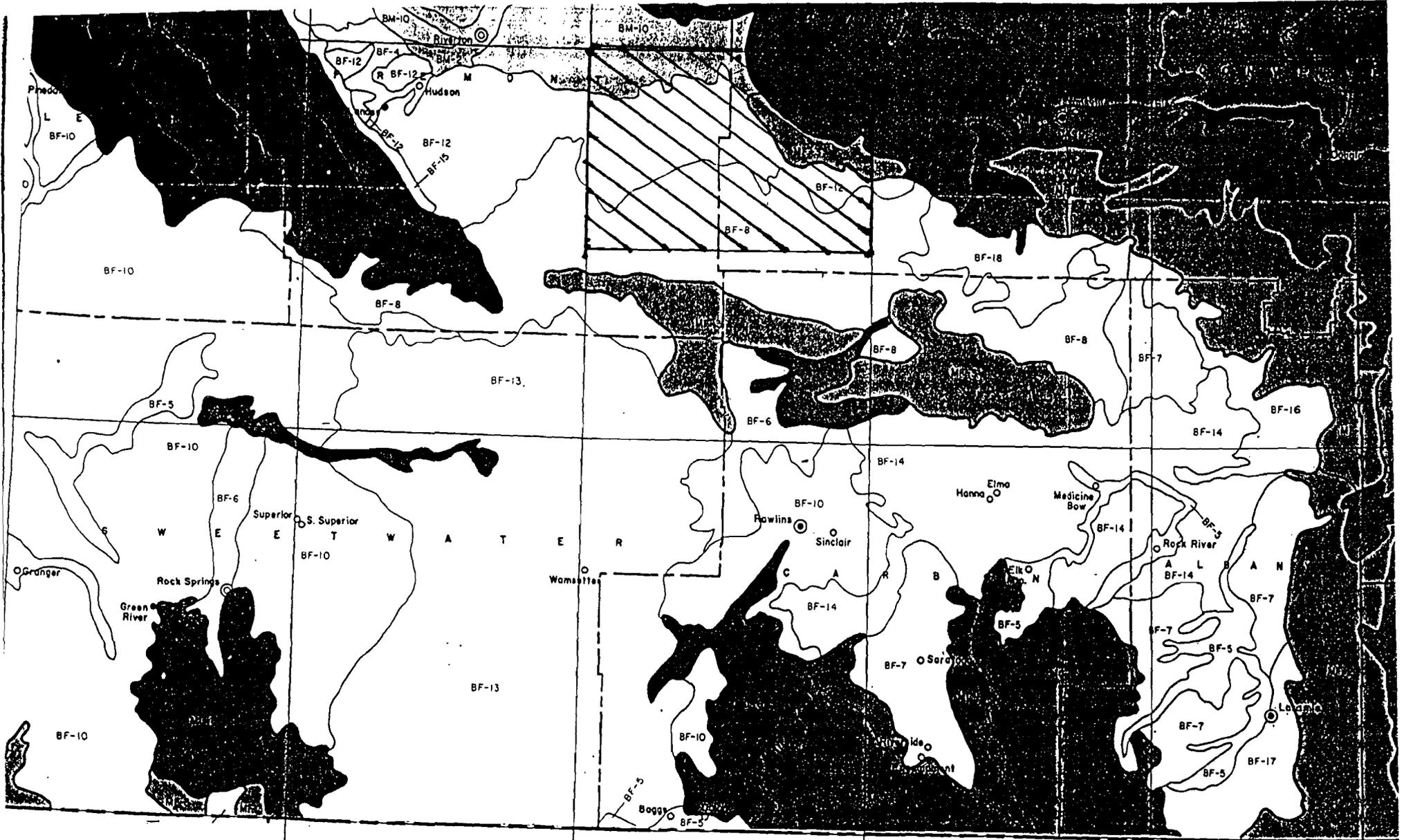
CASPER N.W.



LOCATOR MAP (D)

CASPER N.W.

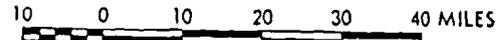
DOUBLE BUTTE 1952-57	BUTTE WELL 1952	LOVE RANCH 1952	MILES RANCH 1952-57	ERVAY BASIN 1952	MC RAE GAP 1959	BROAD MESA 1959	GAYLORD RESERVOIR 1959
RONGIS RESERVOIR 1952	RONGIS RESERVOIR SE 1952	PUDDLE SPRINGS 1952-57	GAS HILLS 1952-58	ERVAY BASIN SW 1952	GARFIELD PEAK 1959	STINKING WATER CREEK 1959	EIGHTMILE DRAW 1959
TIN CUP MTN 1952	MUSKRAT BASIN 1952	COYOTE SPRINGS 1952	MC INTOSH MEADOWS 1952	BLACKJACK RANCH 1959	BARLOW GAP 1959	SADDLE ROCK 1959	HORSE CREEK SPRINGS 1959
GRAHAM RANCH 1951	STAMPEDE MEADOW 1951	BLACK ROCK GAP 1951	LANKIN DOME 1951	LONE MTN 1951	MILLER SPRING 1959	BELLAH BELLE LAKE 1959	SANFORD RANCH 1959



LOCATOR MAP (C)
CASPER N.W.

GENERAL SOIL MAP WYOMING

NOVEMBER 1975



SCALE 1:1,500,000