

NATIONAL WETLANDS INVENTORY

NOTES TO USERS

1:100,000 SCALE MAP

MOBERLY NW

MISSOURI

USER REPORT: MOBERLY NW

NATIONAL WETLANDS INVENTORY MAP

I. INTRODUCTION

The U.S. Fish & Wildlife Service's 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. (1979) 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 application of the classification system.

II. PURPOSE

The purpose of the notes to the 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.

III. STUDY AREA

Geography: The study area covered by the Moberly NW base map is located in the north central portion of Missouri (Figure 1). This report pertains to the entire 1:100,000 quadrangle which involves 32 7.5' topographic quadrangles. Bailey (1980) classifies the study area as being in the Prairie Parkland Province of the Prairie Division of the Humid Temperate Domain. The Oak-Hickory-Bluestem Parkland section comprises the entire study area (Bailey 1980).

The topography ranges from the wide, flat river floodplains of the Thompson River and Grand River to the gently rolling hills surrounding these rivers. The study area also includes other major drainage systems such as Shoal Creek, Locust Creek, Medicine Creek, Mud Creek, and Yellow Creek. Elevations range from approximately 630 feet on the Grand River in the southeast portion of the map to about 1,025 feet in the rolling hills in the southwest part of the map.

Climate: Climate is characterized by hot summers and cool winters. Average winter temperature is 33°F with a summer average of 78°F. The average annual precipitation is approximately 36 inches.

Vegetation: The majority of this study area is under agricultural influence in the form of farmland or pasture. Grasses and legumes consists of bluegrass, switch grass, orchard grass, indian grass, clover, alfalfa, trefoil, and crown vetch. Usually, grasses grow moderately tall and in bunches (Bailey 1980). Herbaceous plants consist of blue-stem, goldenrod, beggarweed, pokeweed, foxtail, croton, and partridge pea. Native vegetation is dominated by deciduous forest characterized by broadleaf deciduous trees with a dense understory in the spring, which thins as trees leaf out and shade the ground (Bailey 1980). Cottonwood, silver maple, green ash, sycamore, box elder, pin oak, and black walnut are among the trees encountered in the floodplains. These trees often occur in frequently flooded areas, areas not protected by a levee, or areas where the drainage is inadequate for crops. Northern red oak, black oak, white oak, white ash, elms, and hickories are found abundant on the rolling hills. A list of wetland plants is given in section IV. of this report.

Soils: The soils associated with this study are the Mollisols and Alfisols (Bailey 1980). Major bottomland soils within the Moberly NW which provide wetland habitat are the Wabash-Nodaway and Edina associations.

IV. WETLAND CLASSIFICATION CODES AND WATER REGIME DESCRIPTIONS for
central Iowa, southern Iowa, and northern Missouri

TABLE - Cowardin Classification Codes and Descriptions

NWI CODE (Water Regime)	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
L1UB (H)	Lacustrine, limnetic, unconsolidated bottom	Lake	Unconsolidated bottom
L2UB (G,H)	Lacustrine, littoral, unconsolidated bottom	Lake, open water, marsh	Unconsolidated bottom
L2AB (G)	Lacustrine, littoral, Aquatic bed	Lake, marsh	<u>Lemna</u> sp. (duckweed) green algae
L2EM2 (G,H)	Lacustrine, littoral, emergent, nonpersistant	Lake, marsh	<u>Scirpus</u> spp. (bulrushes)
L2US (A,C)	Lacustrine, littoral, unconsolidated shore	Beach, sandbar	Unconsolidated shore
R2UB (G,H)	Riverine, lower perennial, unconsolidated bottom	River	Unconsolidated bottom
R2US (A,C)	Riverine, lower perennial, unconsolidated shore	Beach, sandbar, mudflat	Unconsolidated shore
R3RB (G)	Riverine, upper perenial, rock bottom	River, stream	Rock bottom
R3UB	Riverine, upper perennial, unconsolidated bottom	River, stream	Unconsolidated bottom
R4SB (A,C,F)	Riverine, intermittent, streambed	Stream	Streambed
PUB (F,G,H)	Palustrine, unconsolidated bottom	Pond, reservoir, barrow pit, marsh	Unconsolidated bottom
PAB (F,G)	Palustrine, aquatic bed	Pond, reservoir, marsh	<u>Lemna</u> spp. (duckweed) green algae

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PEM (A)	Palustrine, emergent, temporary	Depression, drainage	<u>Eleocharis</u> spp. (spike rushes) <u>Ambrosia</u> spp. (ragwood) <u>Carex</u> spp. (sedges) <u>Rumex</u> spp. (dock) <u>Juncus</u> spp. (rushes) <u>Equisetum</u> spp. (horsetail) <u>Urtica dioica</u> (stinging nettle)
PEM (B)	Palustrine, emergent, saturated	Seep, fen	<u>Phragmites</u> spp. (reeds) <u>Carex</u> spp. (sedges) <u>Typha</u> spp. (cattail) <u>Scirpus</u> spp. (bulrushes)
PEM (C)	Palustrine, emergent, seasonal	Depression, drainage	<u>Polygonum</u> spp. (smartweed) <u>Carex</u> spp. (sedges) <u>Phalaris</u> <u>arundinacea</u> (reed canary grass) <u>Juncus</u> spp. (rushes) <u>Typha</u> spp. (cattail) <u>Scirpus</u> spp. (bulrushes)

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PEM (F,G)	Palustrine, emergent	Marsh, farm pond, backwater, oxbow	<u>Typha</u> spp. (cattail) <u>Scirpus</u> spp. (bulrushes)
PSS1 (A,C)	Palustrine, scrub-shrub, broad-leaved deciduous	Marsh, floodplain, depression	<u>Salix</u> spp. (willow) <u>Populus deltoides</u> (cottonwood)
PFO1 (A,C,F)	Palustrine, forested, broad-leaved deciduous	Marsh, floodplains depression	<u>Salix</u> spp. (willow) <u>Ulmus americana</u> (american elm) <u>Acer</u> <u>saccharinum</u> (silver maple) <u>Acer negundo</u> (box elder) <u>Fraxinus</u> <u>pennsylvanica</u> (green ash) <u>Populus</u> <u>deltoides</u> (cottonwood) <u>Morus</u> spp. (mulberry) <u>Plantanus</u> <u>occidentalis</u> (sycamore)
PFO5 (G,H)	Palustrine, forested	Impoundment	Dead trees
PUS (A,C)	Palustrine, unconsolidated shore	Depression, shallow gravel pit	Unconsolidated shore

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h	Diked, impounded	Dam or levee, reservoir	
x	Excavated	Dugout, farm pond, borrow pit, ditched, or channelized	
d	Partially drained	Tiled, ditched	

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 very 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.

V. MAP PREPARATION

The wetland classifications that appear on the Moberly NW National Wetlands Inventory (NWI) Base Map are in accordance with Cowardin et al. (1979). The delineations were produced through stereoscopic interpreta-

tion of 1:58,000 scale color infrared photography. The photography was taken on 23 May 1983 and 20 November 1983.

Fields checks of areas found within the Moberly NW 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 USGS 7.5' topographic maps, SCS soil surveys of Daviess county, USGS Water Resources Data for Missouri Water Year 1986, U.S. Army Corps of Engineers topographic maps, vegetation and ecoregional information was also used.

The user of the map is cautioned that, due to the limitation of the mapping primarily through aerial photointerpretation, 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 photointerpretation was completed by the South Dakota Cooperative Fish and Wildlife Research Unit, SDSU, Brookings, S.D.

VII. SPECIAL MAPPING PROBLEMS AND SITUATIONS

The PFA or PFC label was used in classifying those farmed, palustrine floodplain wetlands considered non-basin in nature.

Floodplain oxbows and basins were delineated and classified where visible. However, the user is cautioned that several of these wetlands could not be seen because of the extensive leaf-out conditions that forested areas contributed on the spring photography. Leaf-out limits photointerpretation of the understory in forested situations.

Several areas near Swan Lake National Wildlife area and Fountain Grove Wildlife Management area surrounded by levees are used as hunting ponds in the fall and winter, and as crop land in the spring and summer. These areas were classified using the artificial water regime.

Perennial versus intermittent linears were distinguished in most areas by using the topographic maps. However, the provisional topographic maps had very short, weak linears mapped as perennial. In these situations the decision to go R4 or R2 was left to the interpreter. Effort was made to insure consistency between the provisional topographic maps and the regular topographic maps.

VIII. MAP ACQUISITION

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

Ron Erickson
Regional Wetland Coordinator
U.S. Fish and Wildlife Service - Region 3
Federal Building, Ft. Snelling
Twin Cities, Mn. 55111

To order maps only, contact:

National Cartographic Information Center
U.S. Geological Survey
507 National Center
Reston, VA 22092
1-800-USA-MAPS

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

IX. LITERATURE CITED

Bailey, Robert G., 1980. Descriptions of the Ecoregions of the United States. U.S. Department of Agriculture Forest Service. Miscellaneous Publications No. 1391.

Cowardin, L.M.; V. Carter; F.C. Golet and E.T. LaRue, 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, U.S. Fish and Wildlife Service. Biological Services Program, Washington, D.C., 103 p.

Soil Survey of Daviess County. U.S. Department of Agriculture, Soil Conservation Service.

Location of Moberly NW map

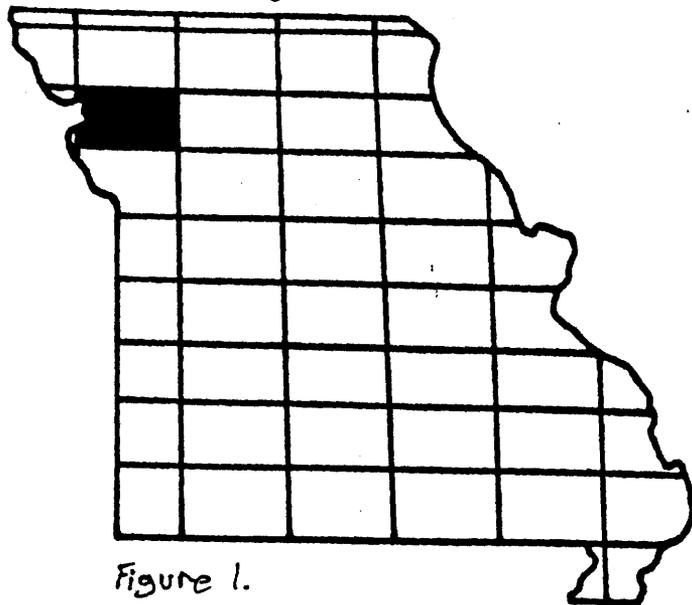


Figure 1.