

NATIONAL WETLANDS INVENTORY

NOTES TO USERS

1:100,000 SCALE MAP

SPRINGFIELD NW

MISSOURI

USER REPORT: SPRINGFIELD NW

NATIONAL WETLANDS INVENTORY MAP

I. INTRODUCTION

The U.S. Fish and 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 this 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 is located in the southwest corner of Missouri (Figure 1). The Springfield NW 1:100,000 consists of 32 7.5' quadrangles. Bailey (1980) classifies the study area as being in the Oak-Hickory-Bluestem Parkland of the Prairie Parkland Province of the Prairie Division of the Humid Temperate Domain, and the Oak-Hickory Forest section of the Eastern Deciduous Forest section of the Hot Continental Division. (Bailey 1980).

Topography consists of high relief and rolling hills. Major drainages on this map include the Sac River, Pomme De Terre River, and Little Sac River, and the Little Niangua River.

Climate: The climate is continental with weather changes being frequent and rapid. Average winter and summer temperatures are about 34°F and 77°F, respectively. The total annual precipitation is approximately 41 inches.

Vegetation: The majority of this study area is under agricultural influence in the form of cropland and pasture. Native vegetation consist of tall prairie grasses and deciduous forest.

Soils: The soils associated with the Oak-Hickory-Bluestem Parkland are the Mollisols and Alfisols (Bailey 1980). The bottomland soils are the Verdigris-Moniteau-Osage Association. The soils associated with the Oak-Hickory Forest are the Inceptisols, Ultisols and the Alfisols (Bailey 1980).

IV. WETLAND CLASSIFICATION CODES AND WATER REGIME DESCRIPTIONS

TABLE - Cowardin Classification Codes and Descriptions

NWI CODE (Water Regime)	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
LIUB (H)	Lacustrine, limnetic, unconsolidated bottom	Lake	Unconsolidated bottom
L2UB (G,H)	Lacustrine, littoral, unconsolidated bottom	Lake, open water, marsh	Unconsolidated bottom
L2AB (G,H)	Lacustrine, littoral, aquatic bed	Lake, marsh	<u>Lemna</u> spp. (duckweed) green algae
L2EM2 (G,H)	Lacustrine, littoral, emergent, nonpersistent	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,H)	Riverine, upper perennial, rock bottom	River, stream	Rock bottom
R3UB (G,H)	Riverine, upper perennial, unconsolidated bottom	River, stream	Unconsolidated bottom
R3AB (G,H)	Riverine, upper perennial, aquatic bed	River, stream	Aquatic bed
R4SB (A,C,F)	Riverine, intermittent, streambed	Stream	Streambed
PUB (F,G,H)	Palustrine, unconsolidated bottom	Pond, reservoir, borrow pit, marsh	Unconsolidated bottom
PAB (F,G,H)	Palustrine, aquatic bed	Pond, reservoir marsh	<u>Lemna</u> spp. (duckweed) green algae <u>Potamogeton</u> spp. (pondweed) <u>Ceratophyllum demersum</u> (coontail)

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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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NWI CODE (Water Regime)	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PEM (F,G)	Palustrine, emergent	Marsh, farm pond, backwater, oxbow	<u>Typha</u> spp. (cattail) <u>Scirpus</u> spp. (bulrushes)
PSSI (A,C)	Palustrine, scrub-shrub, broad-leaved deciduous	Marsh, floodplain, depression	<u>Salix</u> spp. (willow) <u>Populus deltoides</u> (cottonwood)
PFOI (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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NWI CODE (Special Modifier)	NWI DESCRIPTION	COMMON DESCRIPTION
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 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 this National Wetlands Inventory (NWI) Base Map are in accordance with Cowardin et al. (1979). The delineations were produced through stereoscopic interpretation of 1:58,000 scale color infrared aerial photography. The photography was taken in March 1983, April 1984, October 1984, March 1985 and March 1986.

Field checks of areas found within this quad 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 and soil types as well as additional input from field personnel.

Collateral data included USGS 7.5' topographic maps, SCS soil survey of St. Clair County in Missouri, USGS Water Resources Data for Missouri Water Year 1986, and vegetation and ecoregional information.

The user of this 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.

VI. SPECIAL MAPPING PROBLEMS AND SITUATIONS

Wetlands visited but not checksited will have the water regime in the alphanumeric label underlined.

Perennial versus intermittent streams were distinguished by using USGS topographic maps.

Floodplain oxbows and basins were delineated and classified where visible. However, the user is cautioned that some of these wetlands may not have been photointerpreted because of leaf-out conditions present in some forested situations. Extensive leaf-out present on the photography limits photointerpretation of the understory.

1984 dated photography exhibits dryer than normal conditions. Therefore, some small wetlands may have been missed during photointerpretation. Wetlands were pulled more aggressively than usual to compensate for the dry conditions.

Stockton Reservoir was mapped at its' normal pool elevation of 867 feet. However, pool elevation at date of photography is approximately 10 feet higher than normal. Some natural wetlands in the floodplains of inflow rivers and streams may have been missed due to high reservoir inundation of these areas. It is not necessary to reinterpret the area inundated by high water above normal pool on this reservoir using photographs taken at the normal pool elevation of the reservoir, since the number of natural depressional wetlands in this area will be minimal.

Pomme De Terre Reservoir: In accordance with NWI Conventions, delineation of the reservoir was completed to the normal pool elevation of 839.28 ft. (840' contour). Since the photography is the same as the

normal pool elevation, any wetland delineated above 840' will be considered natural.

Harry S. Truman Reservoir: Normal pool elevation for this reservoir is 706'ft. Delineation was done at normal pool elevation in accordance to NWI conventions.

Sinkholes are presented as wetland on this map. The majority of these are classified as seasonally flooded, although several are classified as temporarily or semipermanently flooded. Water regimes of sinkholes seen on the photography were not always consistent with what was seen in the field. Therefore, classification of some sinkhole wetlands on these maps may not be completely correct because of the changing nature of sinkholes and karst topography.

Wetlands that are nonbasin and farmed at the time of photography were not delineated on the Inventory map.

The rock bottom class was used with the upper perennial riverine system only when seen during the field verification trip (which was done prior to photointerpretation). Rock bottom streams are very difficult to identify when using high-altitude photography.

Saturated wetlands are uncommon on this map and were not mapped unless sited in the field. Several areas appeared saturated on the photography, but were consistently found upland during field work.

VII. MAP ACQUISITION

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

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To order maps only, contact:

National Cartographic Information Center
U.S. Geological Survey
507 National Center
Reston, VA 22902
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.

VIII. 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 pp.

Soil Surveys for St. Clair County in Missouri. U.S. Department of Agriculture, Soil Conservation Service.

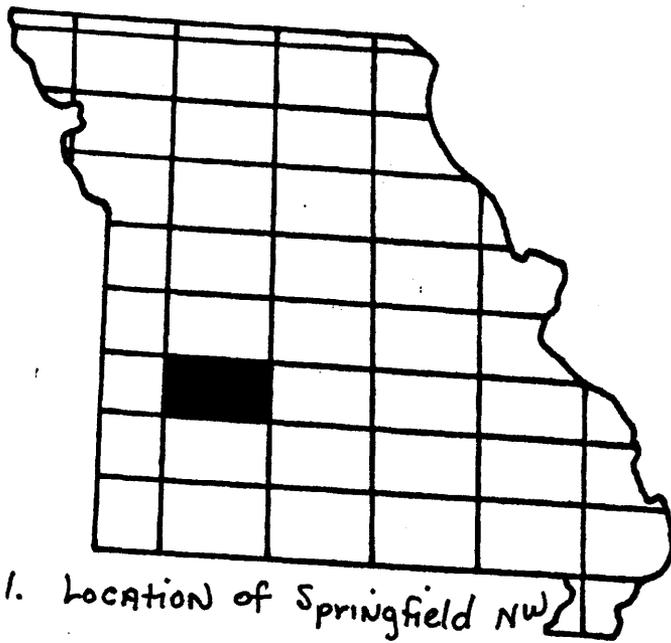


Fig 1. Location of Springfield NW