

NATIONAL WETLANDS INVENTORY

NOTES TO USERS

1:100,000 SCALE MAP

St. Louis N.W.

Missouri

USER REPORT: St. Louis N.W.

NATIONAL WETLANDS INVENTORY MAP

A. 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. 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 the St. Louis N.W. base map is located in the east central part of Missouri (see map). Bailey classifies 50% of this area as being in the Oak-Hickory Forest of the Hot Continental Division. The other 50% of the area is classified as being in the Oak-Hickory-Bluestem Parkland section of the Prairie Parkland Province in the Prairie Division (Bailey).

The topography of the area ranges from the flat alluvial flood plain of the Missouri River to the more steep loess covered hills along the river, and the flat glacial till plain of the prairie. Elevations range from 470 feet above sea level in the Missouri River floodplain to 950 feet above sea level in the west central portion of the area.

Climate: Climate is characterized by hot summers and cool winters. Average summer temperature is 76 degrees F., dropping to 34 degrees F. in the winter with

the average yearly temperature being 55 degrees F. The average annual precipitation is about 38 inches. Of this 59% (22") usually falls from April through September.

Vegetation: The majority of this study area is under agricultural influence in the form of farmland or pasture. Native vegetation is dominated by deciduous forest, characterized by broad leaf deciduous trees with a dense understory in the spring, which thins as trees leaf out and shade the ground (Bailey 1980). Cottonwoods, silver maples, green ash, boxelder, pin oak, and black walnut were among the trees encountered in the flood plains. These trees often occur on frequently flooded areas, areas not protected by a levee, or areas where the drainage is inadequate for crops. Oak species, white ash, elms, hickories and others were abundant on the hills bordering the river valleys. Grasses are the dominate prairie vegetation, most of which grow moderately tall and in bunches (Bailey 1980).

Soils: Soil surveys for Montgomery and Warren Counties and Franklin County (advance maps) were used as collateral data. Blake-Haynie-Booker, Nodaway-Moniteau-Dockery are listed as bottomland soils.

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.

E. MAP PREPARATION

The wetland classifications that appear on the St. Louis N.W. 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 photography. The photography was taken on 6 & 15, April 1984 and 15 April 1983, 15 March 1985.

Field checks of areas found within the St. Louis N.W. 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 USGS 7.5' topographic maps, SCS soil surveys, USGS Water Resources Data for Missouri, Water Year 1984, vegetation and ecoregional information.

The user of the map is cautioned that, due to the limitation of 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, SD.

F. SPECIAL MAPPING PROBLEMS AND SITUATIONS

No areas on the St. Louis N.W. are designated by underlining the P in the alphanumeric label.

Farmed, palustrine, floodplain wetlands considered non-basin in nature were labeled as PfA. The cultivated fields located between the Missouri River and the first major levee are all considered PfA.

Due to the excessive flooding along many of the rivers, the topographic maps were used to determine if a flooded area contained natural basin areas. If the topographic map showed natural depressions, many of the areas were pulled as PEMA. If no collateral data was available and no basin could be distinguished, these areas were ^{generally} pulled as PFA even though the signature of the water indicated otherwise.

Forested temporary signatures on this photography exhibit a very wet signature often with standing water below the trees. These signatures were attributed mainly to flooding on the photos. Seasonal forested areas were distinguished from temporary forested areas by the presence of a basin.

On strips one and two in the eastern portion of the map the photography is fuzzy especially in the center of the photos.

G. 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.

H. LITERATURE CITED

Bailey, Robert G., 1980. Description of the Ecoregions of the United States. U.S. Department of Agriculture Forest Service. miscellaneous Publication 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. U.S. Department of
the Interior, U.S. Fish and Wildlife Service.
Biological Services Program, Washington, D.C. 103
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Soil Surveys of Montgomery and Warren Counties and
Franklin County (advance maps), Missouri. U.S.
Department of Agriculture, Soil Conservation
Service.

D. WETLAND CLASSIFICATION CODES AND WATER REGIME DESCRIPTIONS for the Missouri River Valley and Adjacent Regions from Council Bluffs, Iowa to Washington, 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)	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
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 perennial rockbottom	River, stream	Rock bottom
R3UB (G)	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> sp. (duckweed) green algae

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NWI CODE (Water Regime)	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PEM (A)	Palustrine, emergent temporary	Depression, drainage	<u>Eleocharis</u> spp. (spike rushes) <u>Ambrosia</u> spp. (ragweed) <u>Carex</u> spp. (sedges), <u>Rumex</u> spp. (dock) <u>Juncus</u> spp. (rushes) <u>Equisetum</u> spp. (horsetail)
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)
PEM (F)	Palustrine, emergent, semi-permanent	Marsh, farm pond backwaters, oxbow	<u>Typha</u> spp. (cattail)

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NWI Code (Water Regime)	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
			<u>Scirpus</u> spp. (bulrush)
PSS1 (A,C,F)	Palustrine, scrub-shrub, broad-leaved deciduous	Marsh, floodplains depressions	<u>Salix</u> spp. (willow) <u>Populus deltoides</u> (cottonwood)
PFO1 (A,C,F)	Palustrine, forested, broad-leaved deciduous	Floodplains depressions	<u>Salix</u> spp. (willow) <u>Populus deltoides</u> (cottonwood) <u>Ulmus americana</u> (American elm) <u>Acer saccharinum</u> (silver maple) <u>Morus</u> spp. (mulberry) <u>Acer negundo</u> (boxelder) <u>Platanus</u> <u>occidentalis</u> (sycamore) <u>Carya ovata</u> (shag bark hickory) <u>Fraxinus</u> <u>pennsylvanica</u> (green ash)
PUS (A,C)	Palustrine, unconsolidated shore	Depression, shallow gravel pit	Unconsolidated shore
h	Diked, impounded	Dam or levee, reservoir	
x	Excavated	Strip mine, barrow pit, ditched or channelized	
d	Drained	Tiled, ditched	

MAP LOCATION, St. Louis NW

