NATIONAL WETLANDS INVENTORY

NOTES TO USERS

1:100,000 SCALE MAP

ROLLA NE

(MISSOURI PORTION ONLY)

USER REPORT: ROLLA NE
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. Photo interpretation conventions, hydric soils lists and wetland plant lists are also available to enhance the use and application of the classifications 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 area being discussed in this report lies in Southeastern Missouri, from latitude 37° 30' to 38° 00' North and from longitude 90° 00' to 91° 00' West. Bailey classifies the vegetation of this region as the Oak-Hickory-Forest Section of the Eastern Deciduous Forest Province (see Appendix I). The area is also known physiographically as the Ozark-Ouachita Highlands of the Eastern Highlands. This physiographic region is characterized by high hills that are dissected by numerous streams and hollows. Seeps and springs occur throughout these highlands.

The Mississippi, St. Francis, Big, Black, Flat and Aux Vases Rivers are the most prominent drainages in the study area.

Areas of karst topography with an underlying bedrock of predominately limestone are found in St. Genevieve County. This karst topography is characterized by sinkholes and sinkhole ponds (St. Genevieve Soil Survey, 1985).

Climate:

The continental climate is characterized by frequent and sometimes extreme changes in weather. The summers can be hot and humid, while the winters have periods of severe cold. Precipitation is uniform throughout the year and averages more than 45 inches. The rain is mostly a result of thunderstorm activity which is at its maximum in the spring.

Vegetation:

Winter deciduous forest, sometimes called temperate deciduous forest, is characteristic of the Oak-Hickory-Section of the Eastern Deciduous Forest Province. It is dominated by tall, broadleaf trees that provide a continuous canopy in the summer and shed their leaves completely in the winter. With the removal of the canopy, small trees, shrubs and a thick layer of herbs can develop. Common species of this region include oak, ash, hickory, walnut, maple and elm. In poorly drained areas alder, willow, elm, ash and hydrophytic shrubs dominate (Bailey, 1980).

Soils:

Only two soil surveys were available for the work area. These were St. Genevieve and St. Francois County. Soils along the Mississippi River and its tributaries in St. Genevieve County were formed dominantly in clay, silty, or loamy alluvium. These soils would support wetland vegetation but much of the area is drained and prevented from flooding by the use of levees. Bottomland wetlands in St. Genevieve County are found on soils of the Haymond-Ross-Ashton association and the Hayne-Wabash-Nameoki association. In upland areas of St. Genevieve County, wetlands are found in depressions and areas with poorly drained soils. The portion of St. Francois County that extends into the Rolla NE work area has a steeply sloping topography. The level soils along stream terraces of this County would support wetland vegetation.

D. WETLAND CLASSIFICATION CODES AND WATER REGIME DESCRIPTIONS

Table - Cowardin Classification Codes and Descriptions (1 of 2)

NWI CODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
L1UB (H)	Lacustrine, limnetic, unconsolidated bottom	Lakes	Sand, mud
L2US (A,C)	Lacustrine, littoral, unconsolidated shore	Shallow Lake	Sand, mud
R2UB (G,H)	Riverine, lower perennial, unconsolidated bottom	River	Sand, mud
R3UB (G,H)	Riverine, upper perennial, unconsolidated bottom	River/Stream	Sand, cobble, gravel bottom
R3AB (G,H)	Riverine, upper perennial, aquatic bed	River/Stream	Algae
R2US (A)	Riverine, lower perennial, unconsolidated shore	Sand Bar	Sand, cobble, gravel
R4SB (C,F)	Riverine, intermittent streambed	River/stream	Sand, mud, cobble, gravel
PUB (F,G,K)	Palustrine, unconsolidated bottom	Pond	Sand, mud
PAB (F,G)	Palustrine, aquatic bed	Farm Pond, deep Marsh, Reservoir	Lemna minor (duckweed) Green algae Potamogeton sp. (pondweed)
PEM (A,C,F)	Palustrine, emergent	Marsh, meadow, depressions, drainages, backwaters	Typha sp. (cattail) Scirpus fluviatilis (river bullrush) Eleocharis sp. (rush) Carex sp. (sedge) Rumex crispus (curly dock) Solidago sp. (goldenrod) Rhus radicans (poison ivy) Urtica dioica (stinging nettle) Equisetum sp. (horsetail) Polygonum sp. (smartweed) Ambrosia trifida (giant ragweed) Xanthium sp. (cockleburr) Setaria sp. (foxtail)

Table - Cowardin Classification Codes and Descriptions (2 of 2)

NWI CODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PEM (cont)			Phalaris arundinacea (reed canary grass) Smilax sp. (green briar) Geum laciniatum (rough avens) Bidens sp. (beggarticks) Phragmites sp. (common reed)
PSS1 (A,C,F)	Palustrine, scrub-shrub, broad-leaved deciduous	Shrub,swamp	Salix nigra (willow) Sambucus canadensis (elderberry) Cephalanthus occidentalis (button bush)
PFO1 (A,C,F)	Palustrine, scrub-shrub, broad-leaved deciduous	Forested swamp floodplains	Betula nigra (river birch) Salix nigra (black willow) Fraxinus pennsylvanica (green ash) Carya laciniosa (shellbark hickory) Acer saccharinum (silver maple) Acer negundo (box elder) Ulmus americana (american elm) Platanus occidentalis (sycamore) Populus deltoides (cottonwood) Quercus palustris (pin oak) Tilia americana (basswood) Cornus amomum (silky dogwood) Celtis occidentalis (hackberry)
h	Diked, Impounded	Dam or levee, reservoir	NA
x	Excavated	Channelized or ditched, strip mine	NA

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) Seasonably 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 classifications that appear on the Rolla NE National Wetlands Inventory (NWI) Base Maps are 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 April 1983, April 1984, March 1985 and March, 1986.

Field checks of areas found within the Rolla NE 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 topographic maps, SCS soil surveys, climate, 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 and drafting were completed by Geonex Martel, Inc., St. Petersburg, Florida.

G. SPECIAL MAPPING PROBLEMS

The most significant problem encountered was tying photography with different emulsions. For this reason,photo signature, topo information and soil surveys were closely compared for interpretation.

H. 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
National Center
Reston, VA 22092

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.

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APPENDIX I

ECOREGIONS OF THE MISSISSIPPI RIVER ROUNDOUT PROJECT AREA

Prairie Parkland Province
2511-Oak-Hickory-Bluestem
Parkland Section

Eastern Deciduous Forest Province
2215-Oak-Hickory Section

Collateral Data

Bailey, Robert G., 1980. Description of the Ecoregions of the United States.

U.S. Department of Agriculture Forest Service. (1980)

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.

U.S.D.A. Soil Surveys of St. Francois and St. Genevieve Counties.

Hydric Soils of the state of Missouri; 1985. U.S. Department of Agriculture, Soil Conservation Service.

Wetland Plants of the State of Missouri; 1986. U.S. Department of the Interior, Fish and Wildlife Service.

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