

NATIONAL WETLANDS INVENTORY

NOTES TO USERS

1:100,000 SCALE MAP

Nebraska City NE

Iowa and Missouri

USER REPORT: Nebraska City NE
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 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 Nebraska City NE base map is located in the northwest corner of Missouri and the southwest portion of Iowa (Figure 1). This report pertains to the entire 1:100,000 quadrangle which involves 32 7.5' topographic quadgrangles. 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 nearly level floodplains to the very steep upland divides between the drainages. The study area includes the major drainages of the Platte River, the Grand River, the Nodaway River, the Tarkio River, the East Nishnabotna River, the Middle Nodaway River and the One Hundred and Two Mile Rivers.

Climate: Climate is characterized by hot summers and cool winters. Average winter temperature is 25°F with a summer average of 74°F. The average annual precipitation is approximately 32 inches.

Vegetation: The majority of this study area is under agricultural influence in the form of cropland and pasture. Grasses and legumes consist of bluegrass, switchgrass, orchard grass, indian grass, clover, alfalfa, trefoil, and crown vetch. Usually, grasses grow moderately tall and in bunches (Bailey 1980). Herbaceous plants consist of bluestem, goldenrod, beggarweed, pokeweed, foxtail, croton, and part-ridge 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 area are the Mol-lisols and Alfisols (Bailey 1980). Major bottomland soils which provide wetland habitat are the Nodaway-Colo-Wabash, the Colo-Kennebec-Nodaway, the Nodaway-Zook, the Nodaway-Colo-Zook, and the Wabash-Nodaway-Kennebec associations.

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 (F,G,H)	Riverine, lower perennial, unconsolidated bottom	River	Unconsolidated bottom
R2US (A,C)	Riverine, lower perennial, unconsolidated shore	Beach, sandbar, mudflat	Unconsolidated shore
R3RB (F,G,H)	Riverine, upper perennial, rock bottom	River, stream	Rock bottom
R3UB (F,G,H)	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,H)	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)
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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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.

IV. MAP PREPARATION

The wetland classifications that appear on the Nebraska City NE 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 May 15, 16, and 23, 1983 and October 23, 1984. Field checks of areas found within the Nebraska City NE 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 Adams, Page and Union Counties in Iowa, and Harrison, Nodaway and Worth Counties in Missouri. USGS Water Resources Data for Iowa Water Year 1983, and Missouri Water Year 1986. U.S. Army Corps of Engineers topographic maps, 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.

V. SPECIAL MAPPING PROBLEMS AND SITUATIONS

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

Perennial versus intermittent linears were distinguished in most areas by using the topographic maps. However, some linears marked perennial on the topographic map appeared very weak and short in length. In these situations the decision to classify the stream as R4 or R2 was left to the photointerpreter.

Forested temporary signatures associated with riverine systems were usually a light pink with a darker understory, or a bright red with no understory visible. This same bright red signature in a oxbow situation or configuration may indicate a seasonal forested wetland.

Saturated areas (PEMB) were prevalent on this quad. The saturated signature varied considerably but typically had a mottled gray and white or red and white signature. Any saturated area which showed evidence of plowing was left as upland. Areas which had distinct boundaries and gave a dark brown-black signature at the head of drainages were also delineated as saturated.

VI. MAP AQUISITION

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
4101 East 80th Street
Bloomington, Mn. 55425-1600

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.

VII. 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 Surveys of Adams, Page and Union Counties in Iowa, and Harrison, Nodaway and Worth Counties in Missouri.
U.S. Dept. of Agriculture, Soil Conservation Service.