

NATIONAL WETLANDS INVENTORY

NOTES TO USERS

1:100,000 SCALE MAP

CENTERVILLE NW

IOWA

USER REPORT: CENTERVILLE 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 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 Centerville NW base map is located in the southcentral portion of Iowa (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 nearly level floodplains to the very steep upland divides between the drainages. The study area includes the major drainages of the Thompson River, Little River, Weldon River, Chariton River, and South Fork Chariton River. Elevations range from approximately 950 feet above sea level in the valley floors to approximately 1260 feet at the highest elevation.

Climate: Climate is characterized by hot summers and cool winters. Average temperatures range from about -10°F to 100°F. The average annual precipitation is approximately 34 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,

bluestems, clover, alfalfa, trefoil, and crown vetch. Usually, grasses grow moderately tall and in bunches (Bailey 1980). Herbaceous plants consist of 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 area are the Molisols and Alfisols (Bailey 1980). Major bottomland soils which provide wetland habitat are the Vesser-Lawson-Nodaway and the Lawson-Nodaway-Colo associations.

IV. WETLAND CLASSIFICATION CODES AND WATER REGIME DESCRIPTIONS for south-central Iowa

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 |

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|----------------------------|--|------------------------------------|--|
| 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 |
| R3US (A,C) | Riverine, upper perennial, unconsolidated shore | Beach, sandbar, mudflat | Unconsolidated shore |
| 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 |
| 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) <u>Urtica dioica</u> (stinging nettle) |

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|-------------------------------|--|---------------------------------------|--|
| 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,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) |

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| NWI CODE (Water Regime) | NWI DESCRIPTION | COMMON DESCRIPTION | CHARACTERISTIC VEGETATION |
|-------------------------------|---|---|---|
| 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 |
| 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 the Centerville NW 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 on the 15th and 23rd of May, 1983.

Field checks of areas found within the Centerville 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 Wayne, Monroe, and Appanoose counties, USGS Water Resources Data for Iowa Water Year 1983, 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.

The Rathbun Lake Reservoir is an artificial lake created by the Corps of Engineers in 1969. According to the field trip report, classification consists of L1UBHh up to the 900' contour interval. The 900' contour will act as the L1/L2UBGh break. The L2/Palustrine break was determined to be at 904' but will be delineated at 905' for simplification purposes. Above this break up to 910', the area will be classified as PEMCh. ZTS will put in these breaks below 910'. Photointerpretation was done without the use of the h modifier, according to field trip instructions. The h modifier will be added to the draft maps during draft map review. The photography shows open water up to 910', so the only boundary delineated on the photos is at 910', which is the upland-wetland boundary. All wetlands delineated above 910' are assumed to be natural. Only the wetlands that showed a basin-like appearance or may be wet under natural, nonflooded conditions were delineated. On the photography, these areas appeared much wetter than they would be under natural conditions. Many shrubs and trees show open water in the understory due to the flooded conditions. These areas were classified as temporary (unless they were basins) because this would be the classification under normal conditions.

Statistics of Rathbun Lake:

Normal Pool Reservoir: 904'

Pool during photography: 5-8-83 -- 910.45'

5-15-83 -- 909.83'

Aquatic beds (L2AB) on lakes were not visible on the photography. Thus this classification was not used unless the lake was visited.

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 perennial (R4) or intermittent (R2) was left to the interpreter. Effort was made to insure consistency between the provisional topographic maps and the regular topographic maps.

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. In forested floodplain wetlands, photosignatures were not the sole indicator of the water regime. Forested temporary (PF01A) signatures associated with riverine systems were usually a light pink with a darker understory or a bright red signature with no understory visible. This same bright red signature in an oxbow situation or configuration usually indicated a seasonal forested wetland (PF01C).

Saturated areas (PEMB) were prevalent on this quadrangle. 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.

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

VII. 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
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 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 of Wayne, Monroe, and Appanoose Counties. U.S. Department of Agriculture, Soil Conservation Service.

Location of Centerville NW Quad.

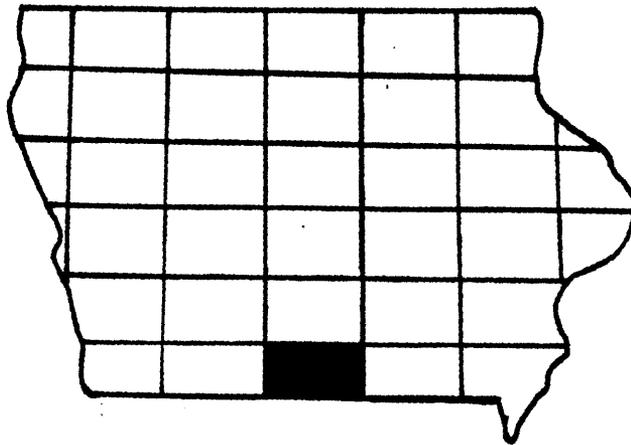


Figure 1.