

NATIONAL WETLANDS INVENTORY

NOTES TO USERS

1:100,000 SCALE MAP

CINCINNATI NE

CINCINNATI SE

(INDIANA ONLY)

USER REPORT: CINCINNATI, NE & SE
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 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 Cincinnati NE, and Cincinnati SE base maps is located along the southeastern border of Indiana. (See Appendix.) Bailey classifies the study area as being in the Eastern Deciduous Forest Province of the Humid Warm - Summer Continental Division (Bailey 1980). Two sections of the Eastern Deciduous Forest Province are present in the study area. These sections are the Beech-Maple Section (2212L) to the north and the Oak-Hickory Section (2215L) to the south (Bailey 1980).

The Interior, Middle Western Upland Plains cover the entire mapping area (Hammond 1965 and 1969). Overall, this topography is characterized by gently rolling hills, although there are some broad flat areas. The topography is dissected by moderately sloping to very steep drainage ways. This area was glaciated during the Wisconsin Ice Age (Bailey 1980).

The mapping area includes numerous lakes, ponds, and streams. The Great Miami, Whitewater and Ohio Rivers are the most prominent drainages in the study area. Lake Brookville, a large reservoir, is also located in the work area.

Climate: The climate is considered to be a midcontinental climate characterized by cold winters and hot summers. The average winter temperature is 30°F with an average daily minimum of 21°F. The average summer temperature is 73°F with an average daily maximum of 85°F. Total annual precipitation is 38". Sixty percent of the precipitation falls between April and September, which is the growing season (Bailey 1980).

Vegetation: The winter Deciduous or Temperate Deciduous forest is characteristic of the vegetation of the study area. The Winter Deciduous Forest is dominated by tall, broadleaf deciduous trees. A lush understory develops quickly in the spring, but is greatly reduced in areas where trees have reached full foliage. Common trees are oak, beech, birch, hickory, walnut, maple, basswood, elm ash, tulip tree, and hornbean. In poorly drained areas, species may consist of alder, ash, willow, elm, and hydrophytic shrubs. Pines develop as second growth vegetation where forests have been cleared by logging or mining (Bailey 1980).

Soils: The soils associated with deciduous forests are the Alfisols (Bailey, 1980).

Bottomland soils within the Cincinnati NE and SE area are of the Genesee-Eel and Huntington-Dearborn-Elkinsville associations. These associations consist of soils that are well drained and are level to nearly level. They are also subject to occasional flooding. Bottomland wetlands were found on nonhydric soils. In the upland areas, wetlands can be found on Crosby-Brookston, Xenia-Russell, Fincastle-Brookston, and Clermont-Avonburg associations. These associations consist of soils that are level and are poorly to very poorly drained. Brookston is included on the hydric soils list for the state of Indiana.

D. WETLAND CLASSIFICATION CODES AND WATER REGIME DESCRIPTIONS

TABLE - Cowardin Classification Codes and Descriptions

NWI CODE (Water Regime)	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
L1UB (H)	Lacustrine, limnetic, unconsolidated bottom	Lakes	Unconsolidated bottom
L1AB (H)	Lacustrine, limnetic, aquatic bed	Lakes	<u>Lemna</u> sp. (duckweed) Green algae
L2US (C)	Lacustrine, littoral	Lake, Marshes	Unconsolidated shore
L2AB (F,G)	Lacustrine, littoral, aquatic bed	Lake, Marshes	<u>Lemna</u> sp. (duckweed) Green algae
L2UB (F)	Lacustrine, littoral	Lake, Marshes	Unconsolidated bottom
R2UB (H)	Riverine, lower perennial, unconsolidated shore	River	Unconsolidated bottom
R3UB (H)	Riverine, upper perennial, unconsolidated bottom	River/Stream	Unconsolidated bottom
R2US (A)	Riverine, lower perennial unconsolidated shore	Sand Bar	Unconsolidated bottom (Sand, Cobble, Gravel)
R3AB (H)	Riverine, upper perennial aquatic bed	River/Stream	Algae
R4SB (C,F)	Riverine, intermittent	River/Stream	Streambed
PUB (F,G)	Palustrine, unconsolidated bottom	Pond	Unconsolidated bottom

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PAB (F,G)	Palustrine, aquatic bed	Farm Pond, Reservoir, Marsh	<u>Lemna</u> sp. (duckweed) Green algae
PEM (A,C,F)	Palustrine, emergent	Marshes, Depressions, Drainages, Backwaters	<u>Solidago</u> sp. (golden rod) <u>Rhus radicans</u> (posion ivy) <u>Galium aparine</u> (cleavers) <u>Typha</u> sp. (cattail) <u>Carex</u> sp. (sedge) <u>Juncus</u> sp. (rush) (Grasses) <u>Urtica dioica</u> (stinging nettle) <u>Rumex crispus</u> (curly dock) <u>Cirsium</u> sp. (thistle) <u>Eleocharis</u> sp. (rush) <u>Impatiens</u> sp. (jewelweed) <u>Equisetum</u> sp. (horsetail) <u>Polygonum</u> sp. (smartweed) <u>Senecio</u> sp. <u>Ambrosia trifida</u> (giant ragweed)

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PSS1 (A,C,F)	Palustrine, scrub shrub, broad-leaved deciduous	Marsh, floodplains	<u>Potamogetan sp.</u> (pondweed) <u>Phragmites sp.</u> (common reed)
PFO1 (A,C,F)	Palustrine scrub shrub, broad-leaved deciduous	Forested stands, floodplains	<u>Salix sp.</u> (willow) <u>Sambucus canadensis</u> (elderberry) <u>Salix nigra</u> (black willow) <u>Populus deltoides</u> (cottonwood) <u>Fraxinus sp.</u> (ash) <u>Salix sp.</u> (willow) <u>Betula nigra</u> (river birch) <u>Ulmus sp.</u> (elm) <u>Platanus occidentalis</u> (sycamore) <u>Acer saccharinum</u> (silver maple) <u>Acer negundo</u> (box elder) <u>Carya laciniosa</u> (shagbark hickory) <u>Celtis occidentalis</u> (hackberry) <u>Acer saccharinum</u> (sugar maple) <u>Acer rubrum</u> (red maple) <u>Quercus palustris</u> (pin oak) <u>Populus deltoides</u> (cottonwood)

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NWI CODE (Water Regime)	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
			<u>Liquidambar</u> <u>styraciflua</u> (sweet gum) <u>Quercus</u> <u>muehlenbergii</u> (chink a pin oak) <u>Liriodendro</u> <u>tulipifera</u> (yellow poplar)
h	Diked, Impounded	Dam or levee, reservoir	
x	Excavated	Strip mine, ditched, or channelized	

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.

F. MAP PREPARATION

The wetland classifications that appear on the Cincinnati NE and SE Wetlands Inventory (NWI) Base Maps (Figure 1) 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 and May 1984.

Field checks of areas found within the Cincinnati NE and SE 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, 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 photo interpretation and drafting were completed by Martel Laboratories, Inc., St. Petersburg, Florida.

G. SPECIAL MAPPING PROBLEMS

Numerous non-hydric soils were encountered in the bottomlands (many were check sited as wetland) as well as hydric soils. For this reason, photography 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
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.

I. LITERATURE CITED

Bailey, Robert G., 1980. Description 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 Jennings, Dearborn, Union, and Ripley counties. U.S. Department of Agriculture, Soil Conservation Service.

Hydric Soils of the State of Indiana; 1985. U.S. Department of Agriculture, Soil Conservation Service.

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

LOCATOR MAP
APPENDIX A



