

DRAFT

NATIONAL WETLANDS INVENTORY

NOTES TO USERS

1:100,000 SCALE MAP

INDIANAPOLIS NW

USER REPORT: INDIANAPOLIS NW
NATIONAL WETLANDS INVENTORY MAP

Draft

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 Indianapolis NW base map is located along the western edge of central Indiana. (See Appendix.) Baily classifies the study area as being in two ecoregions: the Prairie-Parkland Province in the Subhumid Prairie Division and the Eastern Deciduous Forest Province in the Humid Warm-Summer Continental Division. Both ecoregions fall within the Humid Temperate Domain.

The Interior, Middle Western Upland Plains cover 90% of the mapping area. The Interior, East Central Drift and Lake-bed Flats cover 2% in the north-central section and 8% along the western edge of the study area. Overall, this topography is characterized by broad, flat uplands that are dissected by moderately sloping to very steep drainageways and flat bottomlands along streams. The area was glaciated during the Wisconsin age. Twenty to fifty percent of the area is gently sloping. Baily includes the area as the Oak-Hickory-Bluestem Parkland Section to the west and the Beech-Maple Section in the central portion and to the east.

The mapping area includes numerous lakes, ponds, rivers, and streams. The Cecil M. Hardin Lake is the most prominent. At the time of field check, the reservoir-lake was approximately 22' below normal pool. Field pool level was 640' and normal pool is 662'. The Wabash River is the largest riverine system along with its associated bottomland.

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

Vegetation: The study area is comprised of two different vegetated areas. The Winter Deciduous Forest or Temperate Deciduous Forest is characteristic of the Eastern Deciduous Forest Province, Beech-Maple section, and the Forest-Steppe area is characteristic of the Prairie-Parkland Province, Oak-Hickory-Bluestem Parkland Section. (Bailey, 1980.)

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 hornbeam. 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.

Vegetation in the Forest-Steppe area is characterized by a mix of prairie, groves, and deciduous trees. Upland forests are dominated by oak and hickory while floodplains are dominated by fertile forests of deciduous trees. Prairie vegetation consists primarily of grasses.

Soils: The soils associated with deciduous forests are the Alfisols, while soils found in grasslands are the darker Mollisols. (Bailey, 1980.)

Generally, soils associated with the bottomlands in the work area are of the Wakeland-Stendal-Genesse, Stendal-Shoals-Newark and Evansville-Peoga-Zip associations. The first association consists of nearly level, well-drained to somewhat poorly drained soils having a loam or silt loam subsoil. The latter associations are comprised of nearly level, somewhat poorly drained soils formed in alluvium and nearly level, poorly drained to very poorly drained soils formed in silty and clayey sediments. Of the associations mentioned, Genesse is a non-hydric soil, but wetlands communities can be found on this type and similar soils.

In upland areas wetlands can be found on the Reesville-Iva association. This soil group consists of deep, somewhat poorly drained, nearly level to gently sloping soils that have a silt loam to silty clay loam subsoil.

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 bottoms
L1AB (H)	Lacustrine, limnetic, aquatic bed	Lakes	<u>Lemna</u> sp. (duckweed) Green algae
L2AB (F,G)	Lacustrine, littoral, aquatic bed	Lake Marshes	<u>Lemna</u> sp. (duckweed) Green algae
R2UB (H)	Riverine, lower perennial, unconsolidated bottom	River	Unconsolidated bottom
R2US (A)	Riverine, lower perennial unconsolidated shore	Sand Bar	Unconsolidated bottoms
PUB (F,G)	Palustrine, unconsolidated bottom	Pond	Unconsolidated bottoms
PAB (F,G)	Palustrine, aquatic bed	Farm 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,C,F)	Palustrine, emergent	Marshes, Depressions Drainages Backwaters	<u>Taraxacum</u> <u>officinale</u> (dandelion) <u>Asclepias</u> sp. (milkweed) <u>Sanicula</u> sp. (snakeroot) <u>Solidago</u> sp. (golden rod) <u>Rhus radicans</u> (poison ivy) <u>Galium aparine</u> (cleavers) <u>Allium</u> sp. (wild onion) <u>Carex</u> sp. (sedge) <u>Rubus odoratus</u> (raspberry) Grasses <u>Hydrophyllum</u> <u>virginianum</u> (virginia waterleaf) <u>Urtica dioica</u> (stinging nettle) <u>Osmorhiza claytoni</u> (aniseroot) <u>Rumex crispus</u> (curly dock) <u>Peltandra virginica</u> (arrow arum) <u>Sagittaria</u> <u>latifolia</u> (arrowhead) <u>Ambrosia</u> sp. (giant ragweed) <u>Impatiens</u> sp. (jewelweed) <u>Renoculose</u> sp. (buttercup) <u>Sececio</u> sp. (yellow ragwort)

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NWI CODE (Water Regime)	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PSS1 (A,C,F)	Palustrine, scrub shrub, broad-leaved deciduous	Marsh, floodplains	<u>Equisetum sp.</u> (horsetail) <u>Glechoma hederacea</u> (ground ivy) <u>Polygonum sp.</u> (smartweed) <u>Salix sp.</u> (willow) <u>Cephalanthus occidentalis</u> (button bush)
PFO1 (A,C,F)	Palustrine scrub shrub, broad-leaved deciduous	Forested stands, floodplains	<u>Salix nigra</u> (black willow) <u>Populus deltoides</u> (cottonwood) <u>Fraxinus sp.</u> (ash) <u>Salix sp.</u> (willow) <u>Prunus virginiana</u> (common chokecherry) <u>Ulmus americana</u> (american elm) <u>Platanus occidentalis</u> (sycamore) <u>Acer saccharinum</u> (silver maple) <u>Acer negundo</u> (box elder) <u>Aesculus glabra</u> (ohio buckeye) <u>Celtis occidentalis</u> (hackberry) <u>Acer saccharinum</u> (sugar maple) <u>Acer rubrum</u> (red maple) <u>Quercus palustris</u> (pin oak)
h	Diked or Impounded	Dam, levee	NA
x	Excavated	Channelized	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) 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 classification that appears on the Indianapolis NW National Wetlands Inventory (NWI) Base Map (Figure 1) is 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 May 1984 and March 1986.

Field checks of areas found within the Indianapolis NW 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

The May 1984 photography was well leafed out, thus making interpretation of the wetland/upland break difficult. Numerous non-hydric soils were encountered in the bottomlands (many were checksited on wetland) as well as hydric soils. The wetland/upland signature differences are somewhat consistent when topographic and soil survey correlations are made. Usually a bright red signature was found for uplands and a grey red for wetlands, although the reverse was also found. To help resolve this problem, soil surveys (when available), topographic maps and check site data will be used to help determine the wetland/upland break.

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.

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

Soil Surveys of Fountain, Vermillion, Parke and Clay counties.
U.S. Department of Agriculture, Soil Conservation
Service.

Locator
Map
Appendix A



