

DRAFT

NATIONAL WETLANDS INVENTORY

NOTES TO USERS

1:100,000 SCALE MAP

VINCENNES NW

(INDIANA ONLY)

USER REPORT: VINCENNES NW
NATIONAL WETLANDS INVENTORY MAP

UNRAFT

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 Vincennes NW base map is located along the south-western edge of Indiana. (See Appendix.) Bailey 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 (Bailey 1980).

The Interior, Middle Western Upland Plains cover the entire mapping 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. (Hammond 1965 and 1969). The area was glaciated during the Wisconsin age. Twenty to fifty percent of the area is gently sloping. Bailey includes the area as the Oak-Hickory-Bluestem Parkland Section in the central and western sections and as the Beech-Maple Section to the east.

The mapping area includes numerous lakes, ponds, rivers, and streams. The Wabash River with its associated bottomland and the White River are the most prominent drainages in the study 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 fall between April and September, which is the growing season (Bailey 1980).

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, while Forest-Steppe vegetation 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 a fertile forest 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 bottom
L1AB (H)	Lacustrine, limnetic, aquatic bed	Lakes	<u>Lemna sp.</u> (duckweed) Green algae
L2AB (F,G)	Lacustrine, littoral, aquatic bed	Lake Marshes	<u>Lemna sp.</u> (duckweed) Green algae
R2UB (H)	Riverine, lower perennial, unconsolidated bottom	River	Unconsolidated bottom
R2US (A)	Riverine, lower perennial unconsolidated shore	Sand Bar	Unconsolidated bottom
R4SB (C,F)	Riverine, intermittent	River	Streambed
PUB (F,G)	Palustrine, unconsolidated bottom	Pond	Unconsolidated bottom
PAB (F,C)	Palustrine, aquatic bed	Farm Pond, Reservoir, Marsh	<u>Lemna sp.</u> (duckweed) Green algae

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PEM (A,C,F)	Palustrine, emergent	Marshes,Depressions Drainages Backwaters	<u>Juncus effuses</u> (rush) <u>Podetaria cordata</u> (pickeral weed) <u>Vitus</u> sp. (grape vine) <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>Hydrophyllum</u> <u>Virginianum</u> (virginia waterleaf) <u>Urtica dioica</u> (stinging nettle) <u>Circuta maiulata</u> (water hemlock) <u>Rumex crispus</u> (curly dock) <u>Cirsium</u> sp. (thistle) <u>Acorous calamus</u> (sweetflag) <u>Eleocharis</u> sp. (rush) <u>Impatiens</u> sp. (jewelweed) <u>Equisetum</u> sp. (horsetail) <u>Polygonum</u> sp. (smartweed) <u>Smilax</u> , sp. (greenbriar) <u>Asclepies</u> sp. (milkweed)

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PSS1 (A,C,F)	Palustrine, scrub shrub, broad-leaved deciduous	Marsh, floodplains	<u>Acer saccharinum</u> (silver maple) <u>Salix</u> sp. (willow) <u>Xanthium</u> sp. (cockle bur) <u>Sambucus canadensis</u> (elderberry) <u>Cephalanthus</u> <u>occidentalis</u> (button bush)
PF01 (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</u> <u>pennsylvania</u> (green ash) <u>Salix</u> sp. (willow) <u>Platanus</u> <u>occidentalis</u> (sycamore) <u>Acer saccharinum</u> (silver maple) <u>Acer negundo</u> (box elder) <u>Acer rubrum</u> (red maple) <u>Quercus palustris</u> (pin oak) <u>Fraxinus americana</u> (white ash) <u>Populus deltoides</u> (cottonwood) <u>Cercis canadensis</u> (eastern rosebud)

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NWI CODE (Water Regime)	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PFO1 (A,C,F)	cont.		<u>Liquidambar</u> <u>stryaciflua</u> (sweet gum) <u>Quercus</u> <u>muehlenbergii</u> (chink a pin oak) <u>Robinia</u> <u>pseudoacacia</u> (black locust) <u>Celtis laevigata</u> (sugar berry) <u>Carpinus</u> <u>caroliniana</u> (American hornbean)
h	Diked, Impounded	Dam or levee,	
x	Excavated	Ditches 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 classification that appears on the Vincennes 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 April 1985.

Field checks of areas found within the Vincennes 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 check-sited as 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 sometimes 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.

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Soil Surveys of Davies, Knox and Sullivan counties. U.S.
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Locator Map
Appendix A



