

DRAFT

NATIONAL WETLANDS INVENTORY

NOTES TO USERS

1:100,000 SCALE MAP

**VINCENNES SW
(Indiana Portion Only)**

USER REPORT: VINCENNES SW
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 project area is located in south western Indiana with its western border being the Illinois/Indiana state line down the middle of the Wabash River. The eastern boundary is roughly at 87°00' West longitude. The northern and southern limits are between 38°00' and 38°30' North latitude.

The Wabash River is the largest river system in the mapping area. The White River just enters the work area in the NW corner and empties into the Wabash near Mt. Carmel, Illinois. Other major drainages include the Patoka River and Pigeon Creek. Smaller intermittent and perennial streams are abundant in this gently sloping area and many act as tributaries to these large rivers.

Coal strip mines are abundant to the east, providing many open water ponds and a landscape of elongate ridges (spoil mounds). Oil rigs also litter the area.

Bailey's Ecoregion Classification (1980) classifies the area in the Eastern Deciduous Forest Province. This province is typically rolling terrain though some areas are flat. Much of the forest has been cleared today. Most woodland occurs along drainages, as isolated patches and on floodplains.

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. Average annual precipitation is 38". Sixty percent falls between April and September, which is the growing season.

Vegetation: The Eastern 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.

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 (Sand, Cobble, Gravel)
PUB (F,G)	Palustrine, unconsolidated bottom	Pond	Unconsolidated bottoms
PAB (F,C)	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>Rose</u> sp. (rose) <u>Geranium maculatum</u> (wild geranium) <u>Solidago</u> sp. (golden rcd) <u>Rhus radicans</u> (posion ivy)

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NWI CODE (Water Regime)	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PEM (A,C,F)	(cont'd.)		<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 maiculata</u> (water hemlock) <u>Rumex crispus</u> (curly dock) <u>Cirsium</u> sp. (thistle) <u>Acorus calamus</u> (sweetflag) <u>Eleocharis</u> sp. (rush) <u>Impatiens</u> sp. (jewelweed) <u>Equisetum</u> sp. (horsetail) <u>Polygonum</u> sp. (smartweed)
PSS1 (A,C,F)	Palustrine, scrub shrub, broad-leaved deciduous	Marsh, floodplains	<u>Salix</u> sp. (willow) <u>Xanthium</u> sp. (cockle bur) <u>Sambucus canadensis</u> (elderberry)
PFO1 (A,C,F)	Palustrine scrub shrub, broad-leaved deciduous	Forested stands, floodplains	<u>Salix nigra</u> (black willow) <u>Populus deltoides</u> (cottonwood)

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NWI CODE (Water Regime)	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PFO1 (A,C,F)	(cont'd.)		<u>Fraxinus sp.</u> (ash) <u>Salix sp.</u> (willow) <u>Betula sp.</u> (river birch) <u>Ulmus sp.</u> (elm) <u>Platanus</u> <u>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>Fraxinus americana</u> (white ash) <u>Populus deltoides</u> (cottonwood) <u>Cercis canadensis</u> (eastern redbud) <u>Liquidambar</u> <u>stryaciflua</u> (sweet gum)
h	Diked, Inopounded	Dam, levee	Special modifier at end of label
x	Excavated	Channelized, pit	Special modifier at end of label

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 SW 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, April 1985 and March 1986.

Field checks of areas found within the Vincennese SW 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. CONSIDERATIONS OF IMAGERY

Imagery was flown in the spring of 1984, 1985 and 1986. Ground truthing was conducted October 26 through October 27, 1986 and conditions appeared to be abnormally dry. This made ground truthing difficult. The dry year made lowlands more accessible to farmers. Some wet signature on spring imagery showed no evidence of hydrophytes in the field. These areas were often tilled or planted with cover or crops. These conditions made the in-field identification of temporary emergent basins difficult. Repeated tillage of temporary areas can cause a soil to lose its hydric characteristics (e.g., mottling, indicating a fluctuating water table). The lack of vegetation and soil indicators may lead to a conservative interpretation of temporary and seasonal emergent basins. Some spring photography shows woody vegetation well leafed out, masking the understory. This makes identification of season and temporary areas difficult.

All photography is of good resolution and colors are uniform throughout the frame. Outside of the high spring water, interpretations should be consistent throughout the project area.

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 Survey of Pike county. U.S. Department of Agriculture, Soil Conservation Service.

NWI#18

PROJECT AREA
SHOWN IN RED

