

DRAFT

NATIONAL WETLANDS INVENTORY

NOTES TO USERS

CENTRAL KENTUCKY

1:100,000 SCALE MAP

FORT KNOX (WINCHESTER, TN)

Wetlands

NATIONAL WETLANDS INVENTORY NOTES TO USERS

MAP NARRATIVE

FORT KNOX (WINCHESTER NW)

Introduction

The U.S. Fish and Wildlife Service's National Wetlands Inventory Program is conducting an inventory of the wetlands of the United States. The National Wetlands Inventory (NWI) is establishing a wetlands data base in both map and computer forms for the Nation and its territories. The NWI information will serve to identify the current status of U.S. Wetlands and can be used as a reference point from which future changes in wetlands can be evaluated.

Purpose

The purpose of the Notes to Users is to provide general information regarding the production of NWI maps and wetlands found within a relatively similar geographic area.

Area Covered

The project area is defined by the U.S.G.S. Evansville SE 1:100,000 area (see index map A). The study area is located in north central Kentucky. The 38°00' N latitude is the northern border and the 37°30' N latitude is the southern border. The east-west borders are 85°00' W - 86°00' W longitude. Major wetlands and deepwater habitats within the project area include the floodplains of the Rolling Fork, Salt and Nolin Rivers.

Bailey classifies the study area into the Hot Continental Division Eastern Deciduous Forest Province - Oak-Hickory Section. According to Hammond, the study area is found within the Eastern Interior Uplands and Basins Subdivision of the Eastern Highland Division with irregular plains and open hills.

The Eastern Deciduous Forest represents a continental climate that receives adequate rainfall in all months. The average annual precipitation ranges approximately 50 inches. A small water deficit occurs in the summer where a surplus normally develops in spring. The area is characterized by cold winters and warm humid summers. The average annual temperature is 40-60°F.

The temperate deciduous forest found in this area is dominated by tall, broadleaf trees that provide a dense canopy in summer then shed their leaves completely in winter.

Wetlands and Deepwater Habitats

Wetland classification for the NWI maps is in accordance with "Classification of Wetlands and Deepwater Habitats of the United States" by L.M. Cowardin, et al., 1979. A more detailed community description of some of the commonly used designations is given below.

Commonly Used Designations

PF01A Palustrine,, forested, broad-leaved deciduous, temporarily flooded.

This classification is primarily used to describe bottomland hardwood habitat associated with major rivers and streams. The water table is near the surface during the spring rainy season but is well below the surface for most of the year. Overbank flooding may occur briefly or surface water may pond during heavy or extended rainfall. Mature forests of this type are vegetated by sycamore (Platanus occidentalis), red maple (Acer rubrum), American elm (Ulmus Americana) as well as willow (Salix spp.). This is the most common wetland type throughout the study area.

PF01C Palustrine, forested, broad-leaved deciduous seasonally flooded.

This habitat type is characterized by poorly drained soils and a high water table. Flooding occurs for extended periods especially early in the growing season. The more common woody vegetation include the following species: willow (Salix spp.), red maple (Acer rubrum), green ash (Fraxinus pennsylvanica), overcup oak (Quercus lyrata), swamp red oak (Quercus falcata), river birch (Betula nigra), eastern cottonwood (Populus deltoides), and sweetgum (Liquidambar styraciflua). This is a common wetland type in floodplain areas.

Because of the complexity of alluvial topography, inclusions of wetland habitats with slightly wetter or drier characteristics may also occur within the designation. Although these inclusions were often visible on the photography,, scale limitations made them impossible to delineate.

PF01F Palustrine, forested, broad-leaved, deciduous, semi-permanently flooded.

These areas are characterized by standing water throughout the growing season in most years. Dominant species include green ash (Fraxinus pennsylvanica), and willow (Salix spp.) are frequently found and less oftenly swamp cottonwood (Populus heterophylla).

PF05H Palustrine, forested, dead, intermittently exposed.

The classification describes wetland consisting primarily of dead timber. A minimum 30% areal coverage by dead timber is necessary according to Cowardin et al. in order for this classification to apply. Flooded conditions are present throughout the entire year. The death of trees often results from the physiological stresses caused by prolonged flooding. Reasons for extended periods of flooding include beaver impoundments, flowage restrictions due to road construction, and blockage of natural drainages by debris or siltation.

PSS1A Palustrine, scrub/shrub, broad-leaved deciduous, temporarily flooded.

The designation usually describes recently cleared bottomland or formerly farmed bottomland in an early stage of succession. Trees are young and are less than 20 feet tall. Typically species are: red maple (Acer rubrum), sycamore (Platanus occidentalis), and sweetgum (Liquidambar styraciflua).

PSS1C Palustrine, scrub/shrub, broad-leaved deciduous, seasonally flooded.

This habitat is similar to that identified as "PSS1A" except that wetter conditions prevail. These areas remain flooded for extended periods especially early in the growing season. The typical species included in this community are willow (Salix spp.), red maple (Acer rubrum), and primrose (Rosa palustris).

PSS1F Palustrine, scrub/shrub, broad-leaved deciduous, semi-permanently flooded.

Scrub-shrub communities are vegetated with willow (Salix spp.), buttonbush (Cephalanthus occidentalis), primrose (Rosa palustris), and occasionally red maple (Acer rubrum). These areas are generally located along streams, in floodplains, in depressions, and on the perimeter of lakes.

PEM1A Palustrine, emergent, persistent, temporarily flooded.

Pasture lands, depressions often located in field corners, or newly cleared bottomland which experience brief flooding early in the growing season or during periods of extended rainfall are included in this category. Species found here include sedge (Carex spp.), bulrush (Scirpus spp.), rush (Juncus spp.) and spikerush (Eleocharis spp.).

PEM1C Palustrine, emergent, persistent, seasonally flooded.

These areas are similar to "PEM1A" but flooding is more prolonged and more water tolerant plant species predominate. Commonly occurring are sedge (Carex spp.), arrowhead (Sagittaria spp.), smartweed (Polygonum spp.) and cattail (Typha spp.).

PEM1F Palustrine, emergent, persistent, semipermanently flooded.

Water usually stands in these areas throughout the growing season. All emergents in these areas are obligate hydrophytes. Species include cattail (Typha spp.), smartweed (Polygonum spp.), arrowhead (Sagittaria spp.), and various sedges (Carex spp.) and (Scirpus spp.).

PAB3H Palustrine aquatic bed rooted.

This classification includes yellow lotus (Nelumbo lutea), watershield (Brasenia shreberi) and lemon bacopa (Bacopa Caroliana).

PAB4H Palustrine aquatic bed floating.

This classification includes water velvets (Azolla spp.).

PUSA Palustrine, unconsolidated shore, temporarily flooded.

PUSC Palustrine, unconsolidated shore, seasonally flooded.

PUBH Palustrine, open water, permanently flooded.

This classification usually identifies farm ponds but may also include other open bodies of water less than 20 acres in size. Excavated ponds are considered unconsolidated bottom and labelled PUBHx. Many of the ponds in the area are naturally sinkhole depressions due to the karst topography. Impounded stock ponds are designated as PUBHh.

L1UBHh Lacustrine, limnetic, unconsolidated bottom, permanently flooded, impounded.

Impoundments greater than 20 acres in size or smaller impoundments known to be deeper than 2 meters.

L2AB3H Lacustrine, littoral, rooted aquatic bed, permanently flooded.

Species commonly found are yellow lotus (Nelumbo lutea), watershield (Brasenia shreberi) and lemon bacopa (Bacopa Caroliana).

- L2AB4H Lacustrine, littoral aquatic bed, floating, permanently flooded.
- R4SBA Riverine intermittent streambed, temporarily flooded.
- R4SBC Riverine intermittent streambed, seasonally flooded.
- R2USC Riverine, lower perennial, unconsolidated shore, seasonally flooded.

River bars which are normally exposed during the dry season each year.

- R2UBH Riverine, lower perennial, open water, permanently flooded.

Perennial rivers and their tributaries normally having well defined floodplains.

- R2UBHx Riverine, lower perennial, open water, permanently flooded, excavated.

Identified channelized rivers and streams and new river "cutoffs" forming navigational improvements.

Map Preparation

Mapping was initiated in the spring of 1986 and completed in the beginning of 1987. The maps were prepared through photo interpretation of color infrared photography at a scale of 1:58,000 acquired by the National High Altitude Photography Program. Photographs were taken in April 1983 and 1985. The date of photography used for an individual map is given in the lower right hand corner of that map. Field checking took place in June 1986. Photo interpretation and cartographic production were performed by Martel Laboratories, Inc., service support contractor to the NWI in St. Petersburg, Florida. Materials used to assist in the photo interpretation included United States Geological Survey topographic maps and USDA, Soil Conservation Service, County Soil Surveys where available. Collateral data used included U.S.G.S. topographic maps, and soil, climate, and vegetation information (Bailey 1980, Hotchkiss 1972, Little 1985, Niering 1983 and Whitaker 1972).

Special Mapping Problems

The photography was found to be in general representative of wetter conditions than those found during the field trip. Compensation for wetter photography during a dry field season will be taken in classifying wetland areas.

How to Acquire Maps

National Wetlands Inventory maps are available from:

Regional Wetlands Coordinator
U.S. Fish and Wildlife Service
75 Spring Street, S.W.
Atlanta, Georgia 30303

or

National Cartographic Information Center
U.S. Geological Survey
National Space Technology Laboratories
Building 1100
NSTL Station, Mississippi 39529

Maps are identified by the name of the corresponding U.S. Geological Survey 1:24,000 scale topographic quadrangle name. Topographic map indices are available from the Geological Survey.

REFERENCES AND ADDITIONAL SOURCES OF INFORMATION

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