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NATIONAL WETLANDS INVENTORY

NOTES TO USERS

1:100,000 SCALE MAP

BURLINGTON SW

NATIONAL WETLANDS INVENTORY

1:100,000 MAP NARRATIVE

BURLINGTON SW

## INTRODUCTION

The U.S. Fish and Wildlife Service, Office of Habitat Resources, is conducting an inventory of the wetlands of the United States. The National Wetlands Inventory (NWI) is establishing a wetland data base in both map and computer forms for the entire country. 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 Notes to Users is to provide general information regarding the production of NWI maps and wetlands found within a relatively similar geographic area. Notes to Users are not intended to include a complete description of all wetlands found in the area nor provide complete plant species information.

## MAP PREPARATION

Wetland classification for the NWI maps is in accordance with the "Classification of Wetlands and Deepwater habitats of the United States" by L. M. Cowardin, et al., 1979.

Wetland classification and delineations were produced by photo interpretation of high level aerial photography. The photography used was NHAP color infrared at a scale of 1:58,000. The photography was taken during March 1985, and April 1983 and 1984. To correctly classify the wetlands, ground truthing, soil surveys, and input from regional U.S.F.W.S. personnel were used to relate the various photographic signatures to actual wetland identification and classification. Initial ground truthing with the photography occurred on June 6, 1986. Collateral data included U.S.G.S. topographic maps (7.5 and 15 minute series), and vegetation 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. Changes in the landscape or habitat could have occurred since the time of photography. Therefore, some discrepancies between the map and current field conditions may exist. Any discrepancies that are encountered in the use of this map should be brought to the attention of Ron Erickson, Regional Wetlands Coordinator; U.S. Fish and Wildlife Service, Region 3, Federal Building, Ft. Snelling, Twin Cities, MN 55111.

## GEOGRAPHY

The area being discussed in this report lies in west central Illinois, from 90°00' W longitude to the Mississippi River and between 40°00' - 40°30' N latitude. Important wetland areas include the broad floodplains associated with the Mississippi River. Bailey's Ecoregion Classification (1980) places this area into the Prairie Parkland Povince, Oak-Hickory-Bluestem Parkland Section. The area is characterized by its gently rolling topography, with steep bluffs and ravines bordering the valley floodplains. The vegetation consists of both prairies and deciduous forests, resulting primarily from the local conditions of soil and slope. Soil is an important element of hydric conditions and is one of the criteria used to define wetlands. Surveys, prepared by the Soil Conservation Service, serve as an aid in properly identifying wetland habitats. The forested stands are generally restricted to the floodplains, depressions, and on moist slopes. The prairies consist largely of grasses, however, much of the area is now under till.

## CLIMATE

The climate of the project area is classified by Bailey as being the Subhumid Prairie Division in the Humid Temperate Domain. This is a continental climate characterized by great temperature changes throughout the year. Temperatures often drop below 0° F in the winter and reach 100° F in the summer. The average annual winter and summer temperatures are 32° and 72° F respectively. The average annual temperature is 53° F. The average annual precipitation is approximately 38 inches. The greatest amount falls in May and June which averages more than 4 inches per month. This is also during the early part of the growing season. The months of December-February experience the least amount of rainfall at an average of 2 inches per month. Prolonged dry periods during the growing season are not unusual. Major droughts are infrequent. Precipitation during the summer months occurs mostly as showers and thunderstorms, usually of brief durations.

## WETLAND COMMUNITIES

Wetlands and deepwater habitats within the area under discussion, fall within the Palustrine, Lacustrine, and Riverine systems. Deepwater habitats are areas which are permanently flooded and are characterized by open water on the aerial photography. These habitats are present in the Riverine and Lacustrine systems, while wetland habitats are present in all systems. (See table 1).

Numerous palustrine unconsolidated bottom (UB) areas are present within the study area, with the majority being excavated (x) or impounded (h) farm ponds. All of the farm ponds are delineated as intermittently exposed (G), except in instances where the pond is 1-2 acres in size. In this case, the pond may be classified as semipermanently flooded (F). Other unconsolidated bottom areas present are natural ponds.

Palustrine water bodies are often vegetated with a rooted vascular and floating vascular aquatic bed. This mixed community of mosses, duckweed (Lemna spp.), and other weeds, was often not discernable on the photography. These aquatics are only classified when visible on the photography or ground truthed as such.

Palustrine emergents (EM) are abundant in this area, ranging from temporarily (A) to seasonally (C) and semipermanently (F) flooded water regimes. Species commonly encountered in the temporarily flooded habitats include reed canary grass (Phalaris arundinacea), sedges (Carex spp.), goldenrod (Solidago spp.), dock (Rumex spp.), and smartweed (Polygonum spp.). Species present in the seasonally and semipermanently flooded water regimes are cattail (Typha latifolia), river bullrush (Scirpus fluviatilis), dock, reed canary grass, arrowhead (Sagittaria spp.), cutgrass (Leersia spp.) and spike rush (Eleocharis spp.). Emergent habitats found under semipermanently flooded conditions are often located in old river meanders and sloughs. Cattail and arrowhead are common in these areas.

Basins located in agricultural fields are often found to support emergents when not drained or otherwise manipulated. Basins, which can be described as depressions, potholes, or meander scars, hold water early in the growing season, but are later farmed. The farmed modifier (f) is used when delineating such emergent habitats.

Palustrine scrub shrub (PSS) and palustrine forested (PFO) wetlands are characterized by woody species. The scrub shrub habitats are often found on the perimeters of emergent wetlands, with either temporary or seasonal water regimes. Willow (Salix spp.) is the dominant species of the scrub shrub habitat, along with the commonly found buttonbush (Cephalanthus occidentalis) and cottonwood saplings (Populus sp.). The palustrine forested wetlands, which primarily occur within the floodplains of the Mississippi river and Bear Creek, generally flood on a temporary basis. Common species occurring in these temporarily flooded areas are silver maple (Acer saccharinum), willow, elm (Ulmus spp.), cottonwood, box elder (Acer negundo), and sycamore (Platanus occidentalis). Old meander scars and depressions often support seasonally flooded forests, supporting species such as silver maple, willow, river birch (Betula nigra), cottonwood, and green ash (Fraxinus pennsylvanica). Forests along the banks of the Mississippi are found to be temporarily flooded, with seasonal forests restricted to depressions, scars, and sloughs. No semipermanently flooded forests were observed in the field.

The riverine system includes the classes: unconsolidated bottom (UB), unconsolidated shore (US), and streambed (SB). Unconsolidated bottom and shore are restricted to the riverine lower perennial (R2) subsystem. Most streams emptying into the Mississippi floodplain were identified as perennial by U.S.G.S.

labeled accordingly (R2UBH). Small perennial and intermittent streams are often entrenched drawing down quickly after flooding. Forested areas along these channels often do not pond or retain water. Intermittent streams are classified as having semipermanent flow (R4SBF). U.S.G.S. topographic information is used to determine intermittent and perennial breaks along the riverine systems. Many rivers and streams are excavated (x) to improve drainage. In instances of streamside vegetation, the stream is delineated as a palustrine feature.

Natural or artifical open water bodies greater than 20 acres are classified as lacustrine. These large bodies have been created through excavation (x) or by impounding (h) rivers and streams. Generally, these large open water systems are classified as limnetic (L1) with an unconsolidated bottom, and are considered to be permanently flooded (H). Classified as L1UBHh behind its numerous lock and dams, the Mississippi River is an example of one such body. Delineated as a lacustrine body, the Illinois remains as such until it reaches back to spillway elevation, then returns to a riverine system. The impounded modifier is also used on the wetland habitats associated with the Mississippi River.

## BIBLIOGRAPHY

Bailey, Robert G., 1980. Descripton of the Ecoregions of the United States. U.S. Department of Agriculture Forest Service, Ogden, UT.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe, 1977. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service, Washington, D.C.

TABLE 1

| NWI CODE | NWI DESCRIPTION | COMMON DESCRIPTION | CHARACTERISTIC VEGETATION AND PHYSIOGRAPHIC FEATURES |
|---|---|---|---|
| R4SB | Riverine, intermittent, streambed | Creek, Streambed, Canal | Unvegetated. Sand to cobble-gravel |
| R2UB | Riverine, lower perennial, unconsolidated bottom | River | Unvegetated. Mud to sand, cobble-gravel |
| R2US | Riverine, lower perennial, unconsolidated shore | River flat | Unvegetated. Sand to cobble gravel |
| L1UB | Lacustrine, limnetic, unconsolidated bottom | Open water lake | Unvegetated. Sand to mud |
| L2UB | Lacustrine, littoral, unconsolidated bottom | Shallow lake | Unvegetated. Sand to mud |
| L2US | Lacustrine, littoral, unconsoidated shore | Lake shore | Unvegetated. Sand to cobble-gravel |
| L1AB | Lacustrine, limnetic, aquatic bed | Pond weeds, water weeds | Duckweed (*Lemna* sp.) |
| PUB | Palustrine unconsolidated bottom | Open water, pond | Unvegetated. Sand to mud |
| PAB | Palustrine aquatic bed | Pond weeds, water weeds | Duckweed (*Lemna* sp.) Pondweed (*Potomageton* sp.) |
| PEM | Palustrine emergents | Marsh or meadow | Cattail (*Typha latifolia*) Reed canary grass (*Phalaris* sp.) |

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|---|---|---|---|
| PEM (con't) | Palustrine emergents | Marsh or meadow | Bullrushes (*Scirpus* sp.)<br>Spike Rush (*Eleocharis* sp.)<br>Sedges (*Carex* sp.)<br>Arrowhead (*Sagittaria* sp.)<br>Smartweed (*Polygonum* sp.)<br>Cutgrass (*Leersia* sp.)<br>Dock (*Rumex* sp.)<br>Cocklebur (*Xanthium* sp.)<br>Giant Ragweed (*Ambrosia trifida*)<br>Velvetleaf (*Abutilon theophrasti*)<br>Goldenrod (*Solidago* sp.)<br>Milkweed (*Asclepias* sp.) |
| PSS | Palustrine scrub shrub | Shrub wetland | Willow (*Salix* sp.)<br>Buttonbush (*Cephelanthus occidentalis*) |
| PFO | Palustrine forested | Forested wetland | Silver maple (*Acer saccharinum*)<br>Cottonwood (*Populus deltoides*)<br>Willow (*Salix* sp.)<br>Box elder (*Acer negundo*)<br>Green ash (*Fraxinus pennsylvanica*)<br>Red Maple (*Acer rubrum*) |

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TABLE 1

| NWI CODE | NWI DESCRIPTION | COMMON DESCRIPTION | CHARACTERISTIC VEGETATION AND PHYSIOGRAPHIC FEATURES |
|---|---|---|---|
| PFO (cont) | Palustrine forested | Forested wetland | Slippery elm (*Ulmus rubra*)<br>American elm (*Ulmus americana*)<br>Honey locust (*Gleditisa triacanthos*)<br>Sycamore (*Platanus occidentalis*)<br>River birch (*Betula nigra*)<br>Red Mulberry (*Morus rubra*)<br>Hackberry (*Celtis sp.*)<br>Black Walnut (*Juglan nigra*)<br>Pin Oak (*Quercus palustris*)<br>Swamp White Oak (*Quercus bicolor*) |