

NATIONAL WETLANDS INVENTORY

NOTES TO USERS

1: 100,000 SCALE MAP

DECATUR NW

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## 1:100,000 MAP NARRATIVE

### DECATUR NW

#### 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 May of 1983 and March of 1986. 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 December 8 and December 14, 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 covered by Decatur NW map is located in south central Illinois, covering from 89°00'W to 90°00'W longitude and 39°30'N to 40°00'N latitude. Bailey's Ecoregion Classification (1980) identifies the area in the Prairie-Parkland Province, Oak-Hickory-Bluestem Parkland Section (2511L).

The topography of the area has been glaciated. It is characterized predominantly by partially flat, smooth plains. Irregular plains are found in the north west portion of the area. Twenty to fifty percent of the area is gently sloping. The greatest change in elevation is under 100 ft.

Vegetation in the project area is classified by Bailey as forest-steppe. Trees grow commonly near streams and on north facing slopes. The upland forest is dominated by oak and hickory while the floodplains are dominated by a fertile forest of deciduous trees. Prairie vegetation consist primarily of grasses, however, much of the area is tilled.

Agriculturally, soil is considered the most important natural resource. However, it is also an important element in considering hydric conditions for the mapping of wetlands. Soil surveys, prepared by the Soil Conservation Service, serve as an aid in properly identifying wetland habitats.

The Sangamon River is the largest river system in the project area possessing a well developed floodplain. Although, not as extensive as the Sangamon, the South Fork Sangamon River is the other major drainage in the area. This and other numerous creeks and streams serve as tributaries to the Sangamon, which in turn, flows into the Illinois River. This natural drainage system flows westward and drains the entire project area except the northeast corner. Numerous impounded reservoir lakes are also in the area with Lake Springfield, Lake Taylorville and Lake Kincaid being the largest.

## 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. Winter precipitation occurs mostly as light snow.

#### WETLAND COMMUNITIES

Wetlands and deepwater habitats within the area 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 (PUB) 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). Sewage treatment ponds will be classified as artificially flooded, impounded (PUBKh). Other unconsolidated bottom areas present are natural ponds.

Palustrine water bodies are often vegetated with a rooted vascular and floating vascular aquatic bed (PAB). 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 (PEM) are abundant in the area. They range from temporarily (A) to seasonally (C) and semipermanently (F) flooded water regimes. Species commonly encountered in temporarily and seasonally flooded habitats include reed canary grass (Phalaris arundinacea), ragweed (Ambrosia spp.), golden rod (Solidago spp.), sedge (Carex spp.), cocklebur (Xanthium sp.), smartweed (Polygonum spp.), foxtail (Setaria spp.), poison ivy (Rhus radicans), greenbriar (Smilax spp.), velvet leaf (Abutilon theophrasti), wild onion (Allium spp.) and stinging nettle (Urtica spp.). Species present in semipermanently flooded areas include cattail (Typha spp.), reed canary grass, and smartweed. Emergents found in seasonal and semipermanent conditions are often located in old river meanders, sloughs, low pockets, and in backwaters of impounded reservoirs.

Basins located in agricultural fields are often found to support emergents when not drained or otherwise manipulated. Some basins 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 forested wetlands, with water regimes ranging from temporary to semipermanently flooded. Dominant species include willow (*Salix* spp.) and buttonbush (*Cephalanthus occidentalis*). The palustrine forested wetlands are found predominantly in the floodplains of the drainages in the area. The majority of the forested wetlands flood on a temporary basis. Common species occurring in these areas include silver maple (*Acer saccharinum*), red maple (*Acer rubrum*), green ash (*Fraxinus pennsylvanica*), willow, cotton wood (*Populus deltoides*), elm (*Ulmus* spp.), box elder (*Acer negundo*), oak (*Quercus* spp.), sycamore (*Platanus occidentalis*), hackberry (*Celtis* spp.), honey locust (*Gleditsia triacanthos*), hickory (*Carya* spp.) and aspen (*Populus* spp.). Old meander scars, sloughs and low pockets often support seasonally flooded forests supporting the following species: silver maple, willow, elm, cottonwood, sycamore, red maple and green ash. No semi-permanently 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 rivers and streams emptying into the Illinois floodplain or other major drainages in the area were identified as perennial by U.S.G.S. and are labeled accordingly (R2UBH). 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 system. 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. Many rivers and streams are excavated (x) to improve drainage. In instances of streamside vegetation which sustains flooding, the stream is delineated as a palustrine feature.

Natural or artificial 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. Strip mines greater than 20 acres will be classified limnetic and permanent. Sewage treatment plants with impoundments greater than 20 acres will be considered artificially flooded. Power plant reservoirs which are also larger than 20 acres will carry the impounded modifier and be classified limnetic. Generally, these large open water systems are classified as limnetic (L1) with an unconsolidated bottom, and are considered to be permanently flooded (H).

#### BIBLIOGRAPHY

Bailey, Robert G., 1980. Description 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.

Downey, C.E., Odell, R.T., 1969. Soil Survey of Montgomery County, Illinois. U.S. Department of Agriculture, Soil Conservation Service, in cooperation with the Illinois Agricultural Experiment Station.

Phillips, D.B., Goddard, T.M., 1983. Soil Survey of Bond County, Illinois. U.S. Department of Agriculture, Soil Conservation Service, in cooperation with the Illinois Agricultural Experiment Station.

Reed, P.B. Jr., 1986. Wetland Plants of the State of Illinois 1986. U.S. Department of Interior, Fish and Wildlife Service, Army Corps of Engineers, Environmental Protection Agency, Soil Conservation Service, in cooperation with the National and Regional Wetland Plant List Review Panels.

Young, K., Chairman, Soil Survey Division, SCS, Washington, D.C., 1985. Hydric Soils of the State of Illinois 1985. U.S. Department of Agriculture, Soil Conservation Service, in cooperation with the National Committee for Hydric Soils.

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
PUB	Palustrine unconsolidated bottom	Open water pond	Unvegetated. Sand to mud
PAB	Palustrine, aquatic bed	Pond Weeds, water weeds	Duckweed ( <u>Lemna</u> spp.)
PEM	Palustrine	Marsh or meadow	Cattail ( <u>Typha latifolia</u> ) Reed canary grass ( <u>Phalaris</u> spp .) Wild Onion ( <u>Allium</u> sp.) Sedges ( <u>Carex</u> sp.) Smartweed ( <u>Polygonum</u> sp.) Cocklebur ( <u>Xanthium</u> sp.) Giant Ragweed ( <u>Ambrosia trifida</u> ) Velvet Leaf ( <u>Abutilon theophrasti</u> ) Stinging Nettle ( <u>Urtica</u> sp.)

TABLE 1

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC FEATURES
PEM (con't)	Palustrine emergents	Marsh or meadow	Poison Ivey ( <u>Rhus radicans</u> ) Ragweed ( <u>Ambrosia trifida</u> ) Greenbriar ( <u>Smilax sp.</u> ) Golden Rod ( <u>Solidago sp.</u> ) Foxtail ( <u>Setaria sp.</u> )
PSS	Palustrine scrub shrub	Shrub wetland	Willow ( <u>Salix sp.</u> ) Buttonbush ( <u>Cephalanthus occidentalis</u> )
PFO	Palustrine forested	Forested wetland	Silver Maple ( <u>Acer saccharinum</u> ) Cottonwood ( <u>Populus deltoides</u> ) Willow ( <u>Salix sp.</u> ) Box elder ( <u>Acer negundo</u> ) Green ash ( <u>Fraxinus pennsylvanica</u> ) Elm ( <u>Ulmus sp.</u> ) Honey locust ( <u>Gleditisa triacanthos</u> ) Sycamore ( <u>Platanus occidentalis</u> ) Hackberry ( <u>Celtis sp.</u> ) Oak ( <u>Quercus sp.</u> ) Red Maple ( <u>Acer rubrum</u> ) Hickory ( <u>Carya sp.</u> ) Aspen ( <u>Populus sp.</u> )

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