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NATIONAL WETLANDS INVENTORY

NOTES TO USERS

1:100,000 SCALE MAP

BURLINGTON SE

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1:100,000 MAP NARRATIVE

BURLINGTON SE

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 April 1983, 1984, March of 1985 and April 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 9, 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 Burlington SE map is located in west central Illinois, covering from 90°00'W to 91°00'W longitude and 40°00'N to 40°30'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 irregular plains, of which 50 to 75 percent are gently sloping. Flat plains are found along the Illinois River Valley.

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 major river systems located in the project area are the Illinois, Sangamon, La Moine and Spoon Rivers. The Illinois River has been described as a sluggish river, primarily due to it's nearly level floodplain and relatively insignificant volume. (Mills, Starrett and Belrose) This is largely due to the extensive lock and dam systems and that the river is located in the Illinois Valley, a glacial feature. The other streams and rivers in the mapping area flow at a much steeper gradient, are usually deeply cut and are not impounded.

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 degrees F. in the winter and reach 100 degrees F. in the summer. The average annual winter and summer temperatures are 32 and 72 degrees 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.), spike rush (Eleocharis spp.), Cyperus spp., and foxtail (Setaria sp.). Species present in semipermanently flooded areas include cattail (Typha sp.), reed canary grass, and smartweed. 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 emergent wetlands, with either temporary or seasonal water regimes. Willow (Salix spp.) is the dominant species of the scrub shrub habitat, along with buttonbush (Cephalanthus occidentalis), red-osier dogwood (Cornus stolonifera), river birch (Betula nigra) and cotton wood (Populus deltoides). 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), green ash (Fraxinus pennsylvanica), willow, cotton wood, elm (Ulmus spp.), box elder (Acer negundo), oak (Quercus spp.), sycamore (Platanus occidentalis), hackberry (Celtis 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, river birch and green ash. Semi-permanent forested areas were found along the Illinois River and it's bottomland lakes. Species included silver maple, green ash and cottonwood.

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 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.
- Mills, H.B., Starrett, W.C., Bellrose, F.C., 1966. Man's Effect on the Fish and Wildlife of the Illinois River. Illinois Natural History Survey Biological notes No. 57 Urbana, Illinois.
- Phillips, D.B., Goddard, T.M., 1983. Soil Survey of Bond Courty, Illinois. U.S. Department of Agriculture, Soil Conservation Service in cooperation with the Illinois Agriculture 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 Illionis 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
R 4S B	Riverine, intermittent, streambed	Creek, streambed, canal	Unvegetated. Sand to cobble-gravel
R 2UB	Riverine, lower perennial, unconsolidated bottom	River	Unvegetated. Mud to sand, cobble-gravel
R 2US	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
PUB	Palustrine unconsolidated bottom	Open water	Unvegetated. Sand to mud
PAB	Palustrine, aquatic bed	Pond Weeds, water weeds	Duckweed (<u>Lemna</u> sp.) Moss, Algae
PEM	Palustrine	Marsh or meadow	Cattail (<u>Typha latifolia</u>) Reed canary grass (<u>Phalaris</u> sp.) Spike Rush (<u>Eleocharis</u> sp.) Sedges (<u>Carex</u> sp.) Smartweed (<u>Polygonum</u> sp.) (<u>Cyperus</u> sp.) Cocklebur (<u>Xanthium</u> sp.) Ragweed (<u>Ambrosia</u> sp.) Poison Ivy (<u>Rhus radicans</u>)

TABLE 2

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION AND PHYSIOGRAPHIC FEATURES
PEM (con't)	Palustrine emergents	Marsh or meadow	Umbrella sedge (<u>Cyperus diandrus</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>) Red-Osier Dogwood (<u>Cornus stolonifera</u>) Cotton wood (<u>Populus deltoides</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>) Slippery elm (<u>Ulmus rubra</u>) Honey Locust (<u>Gleditisa triacanthos</u>) Sycamore (<u>Platanus occidentalis</u>) River birch (<u>Betula nigra</u>) Hackberry (<u>Celtis sp.</u>) Cypress (<u>Taxodium distichum</u>) Oak (<u>Quercus sp.</u>) Osage orange (<u>Maclura pomifera</u>) Elm (<u>Ulmus sp.</u>)