

NATIONAL WETLANDS INVENTORY
PADUCAH NW

DRAFT

Map Preparation

The wetland classifications that appear on the Paducah NW National Wetlands Inventory (NWI) map are in accordance with Cowardin et. al. (1977). The delineations were produced through stereoscopic interpretation of 1:58,000 scale color infrared aerial photographs taken during 11/81, 4/82, and 11/83. Initial ground truthing of the photography was completed between 5/20/85 and 5/24/85.

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 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 & Wildlife Service, Region 3, Federal Building, Ft. Snelling, Twin Cities, MN. 55111

Geography

This 1:100,000 scale map is located in southern Illinois just north of Cape Girardo, Missouri. Roughly one third of the map is in Missouri and the remainder in Illinois. Baileys Ecoregion Classification (1978) describes the area as Humid Warm-Summer Continental Division, Eastern Deciduous Forest Province. It is composed primarily of rolling hills and some areas were once inundated by glaciers. The region is dominated by tall, broadleaved deciduous trees which provide a dense canopy in summer. In spring, an herbacious understory grows with vigor. However, as the trees flush and shade the ground, their growth is greatly reduced.

The Mississippi River runs from the NW corner of the map towards the SE and then due south, leaving the western 1/3 as Missouri and the remainder as Illinois. Its rich bottomlands are under intensive agriculture practices with lush swamps and marshes remaining in undisturbed areas.

The terrain of the Missouri portion of the study area varies greatly, from the Ozark highlands in the west to open hills with many sinkholes to the east. Most of the eastern area is underlain by the St. Genevieve Limestone Formation which is the reason for many of the sinkholes, caves and springs. Many of the drainages in this area course directly over bedrock and have steep banks.

The topography of the Illinois portion of the study area starts with the Mississippi River floodplain which abuts steep limestone bluffs to the east. The LaRue Pine Hills Ecological Area south of Grand Tower are part of these bluffs. To the northeast, the terrain changes to irregular plains. To the southeast, we find more basins and deeply entrenched streams with many sandstone formations.

The northern portion of the study area was glaciated during the Illinoian stage of Pleistocene glaciation. The extent of glaciation does not reach beyond the northern boundary of Crab Orchard Wilderness area, and the southern part remains driftless.

Much of the Illinois portion of the study area is Shawnee National Forest (SNF), which covers 250,000 acres in southern Illinois. Within the SNF are Lake Kinkaid, a 2,750 acre lake, the Oak Wood Bottom Greentree Reservoir and a remarkable oak forest, part of which is artificially flooded annually from October to February. It provides wildlife food and shelter and a fine crop of commercially valuable trees. Another valuable area is the 43,000 acre Crab Orchard Wildlife Refuge with 3 lakes of nearly 9,000 total acres.

Oil and gas fields and coal strip mines occur frequently in the NE portion of the study area and grow more numerous outside of the Paducah NE map. Many of the longwall method of deep mines have left the land's surface with a regular or symmetrical pattern of depressions. These are formed when the rooms of the mine collapse and the land above subsides. The depressions at the surface have filled with water and are viable wetland habitats.

The Mississippi River is a heavily navigated river and also drains more than 40% of the United States. The floodplain is partially protected from flooding by an extensive system of levees to protect the rich farmlands. Many of these farms are still flooded for short periods annually. A good example of this can be seen in the NW corner of the study area. There the Kaskaskia River joins the Mississippi River at Kaskaskia Island.

Other main drainages in the area are Apple Creek and White Water River in Missouri. In Illinois, the Little Muddy River and Beaucoup Creek join the Big Muddy River. The Big Muddy flows SW where it joins the Mississippi River at Grand Tower. These Illinois rivers have extensive floodplains associated with them.

Climate

Evident by the extensive forests and woodland in the area, precipitation is adequate in all months. Average annual precipitation is between 35 to 60 inches. Due to high evapotranspiration, a surplus of water occurs in spring and a slight deficit occurs in summer. This happens in spite of higher precipitation during summer months. Average annual temperatures are between 40° - 60°F.

Wetland Communities

As mentioned earlier, the Mississippi River courses through this map. Much of the floodplain however is utilized intensively for agricultural practices. These are some of the most productive bottom lands in the U.S. Much artificial drainage has taken place to utilize these areas. Though many wet depressions and meander scars remain within the farmed land, they are often void of natural vegetation due to agricultural practices. Since these areas do hold water early in the year and are utilized by waterfowl, they are mapped as temporary emergent wetlands (PEMA or PEMC). When they are also farmed in late spring, the farmed modifier will be used at the end of the label (eg. PEMAf).

Where agriculture has not taken over the floodplains, lush, productive swamps remain. Characteristic semipermanently flooded trees include bald cypress (Taxodium distichum), tupelo (Nyssa sp.) and willow (Salix sp.). Common species in seasonally and temporarily wet areas are silver maple (Acer saccharinum), red maple (A. rubrum), box elder (A. negundo), eastern cottonwood (Populus deltoides), locust (Gleditsia sp.), slippery and american elm (Ulmus sp.), ash (Fraxinus sp.), pin, white, burr, and water oak (Quercus sp.), hackberry (Celtis sp.) willow (Salix sp.) and dogwood (Cornus sp.). Typical shrubs in seasonal and semipermanent areas include buttonbush (Cephalanthus occidentalis) and willow. Temporarily wet scrub shrub communities were often tree saplings occurring within or on the edges of forests.

Common seasonal and semipermanently wet emergent habitats include cattail (Typha latifolia), reed grass (Phragmites sp.), sedges (Carex sp.), bulrush (Scirpus), rush (Juncus sp.), sweatflag (Acorus sp.), arrow arum (Peltandra sp.), loosestrife (Lythrum sp.), Water willow (Decadon sp.), and spikerush (Eleocharis sp.). Temporary areas supported a wide variety of grasses along with dock (Rumex sp.) smartweed (Polygonum sp.), and cut grass (Leersia sp.).

Semipermanently wet emergent basins and farm ponds often supported a variety of aquatic vegetation. The only floating vascular plant observed in the field was duckweed (Lemna sp.). Rooted vascular species include water lily (Nymphaea sp.) pondweed (Potamogeton sp.) and creeping willow primrose (Ludwigia sp.).

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION AND PHYSIOGRAPHIC FEATURES
R4SB	Riverine, Intermittent, Streambed	Creek, Streambed	Unvegetated. Sand Cobble-Gravel
R2UB	Riverine, Lower Perennial Unconsolidated Bottom	River	Unvegetated. Mud Sand, Cobble-Gravel
R2RB1	Riverine, Lower Perennial. Rocky Bottom	River Rock Bottom	Unvegetated. Rock Bottom. Bedrock
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
L2US	Lacustrine Littoral Unconsolidated Shore	Open Water Shallow Lake	Unvegetated Sand to Mud
L1AB	Lacustrine Limnetic Aquatic Bed	Pond Weeds, Water Weeds	Duckweed (<u>Lemna sp.</u>)
PUB	Palustrine Unconsolidated Bottom	Open water, Pond	Unvegetated Sand to Mud
PAB	Palustrine Aquatic Bed	Pond Weeds, Water Weeds	Duckweed (<u>Lemna sp.</u>) Water Lily (<u>Nymphaea sp.</u>) Creeping willow primrose (<u>Ludwigia sp.</u>)

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION AND PHYSIOGRAPHIC FEATURES
PEM	Palustrine Persistant Emergents	Marsh or Meadow	Cattail (<u>Typha latifolia</u>) Reedgrass (<u>Phragmites sp.</u>) Sedges (<u>Carex sp.</u>) Bulrush (<u>Scirpus sp.</u>) Rush (<u>Juncus sp.</u>) Sweetflag (<u>Acorus sp.</u>) Loosestrife (<u>Lythrum sp.</u>) Spikerush (<u>Eleocharis sp.</u>) Dock (<u>Rumex sp.</u>) Smartweed (<u>Polygonum sp.</u>) Cutgrass (<u>Leersia sp.</u>) Water Willow (<u>Decodon sp.</u>)
PF02	Palustrine Forested Needelleaved Deciduous	Cypress Swamp	Bald Cypress (<u>Taxodium distichium</u>)
PF01/2	Palustrine Forested Mixed Deciduous	Forested Wetland	Tupelo (<u>Nyssa sp.</u>) Bald Cypress (<u>Taxodium distichium</u>)
PF01	Palustrine Forested Broadleaved Deciduous	Forested Wetland	Silver Maple (<u>Acer saccharinum</u>) Red Maple (<u>Acer rubrum</u>) Box elder (<u>Acer negundo</u>) Cottonwood (<u>Populus deltoides</u>) Locust (<u>Gleditsia sp.</u>) Slippery elm (<u>Ulmus rubra</u>)

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION AND PHYSIOGRAPHIC FEATURES
PF01	Palustrine Forested Broadleaved Deciduous	Forested Wetland	American elm (<u>Ulmus americana</u>) Ash (<u>Fraxinus sp.</u>) Pin, White, Burr and Water oaks (<u>Quercus sp.</u>) Hackberry (<u>Cetis sp.</u>) Willow (<u>Salix sp.</u>) River Birch (<u>Betula nigra</u>)
PSS	Palustrine Scrub Shrub	Shrub Wetland	Buttonbush (<u>Cephalanthus occidentalis</u>) Willow (<u>Salix sp.</u>) Dogwood (<u>Cornus sp.</u>)

BIBLIOGRAPHY

The purpose of this report is to provide general information about wetland classifications found within the area covered by the Base Map. There has been no attempt to describe all wetlands occurring in the area nor provide complete faunal and floral lists of those wetlands discussed. The references listed below refer to literature cited in the text of this report as well as sources of additional information.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1977. Classification of wetlands and deepwater habitats of the United States (an operational draft). USDI. Fish and wildl. Serv. Wash., D.C. 100 p.

Bailey, R.G. 1978. Description of the ecoregions of the United States. USDA For. Serv., Intermt. Reg., Ogden, UT. 77 p.

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