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USER REPORT: LOUISVILLE SW, NW, NE & CINCINNATI SE (KY) NATIONAL WETLANDS INVENTORY MAP

A. INTRODUCTION

The U.S. Fish & Wildlife Service's National Wetlands Inventory is producing maps showing the location and classification of wetlands and deepwater habitats of the United States. The Classification of Wetlands and Deepwater Habitats of the United States by Cowardin et al. is the classification system used to define and classify wetlands. Photo interpretation conventions, hydric soils lists and wetland plant lists are also available to enhance the use and application of the classifications system.

B. PURPOSE

The purpose of the notes to users is threefold: (1) to provide localized information regarding the production of NWI maps, including specific imagery and interpretation discussion; (2) to provide a descriptive crosswalk from wetland codes on the map to common names and representative plant species; and (3) to explain local geography, climate, and wetland communities.

C. STUDY AREA

Geography:

The study area is located in the Oak-Hickory Forest Section of the Eastern Deciduous Forest Province. This section and province is situated in the Hot Continental Division.

Much of the Province is rolling, but some parts are almost flat. The northern part of the province has been glaciated. The range of elevation is from sea level to 2500 feet.

Climate:

Because of the adequate rainfall during all months, the Eastern Deciduous Forest exists. The forest is a response to the even participation. Precipitation is highest in the summer months when evapotranspiration is greatest and moisture demands are at their highest. Usually a small water deficit is incurred in the summer. Normally in the spring a surplus is developed. Cold winters and warm summers mark an annual temperature cycle. The average annual temperature is 40° - 60° F.

Vegetation:

Temperate deciduous forest is characteristic of this province. This forest is dominated by tall, broadleaf trees that provide a dense canopy in summer but shed their leaves completely in winter. Common trees are oak, beech, hickory, walnut, maple, elm, ash, yellow poplar and hornbeam. In more poorly drained habitats, the forest will consist of alder, willow, ash and elm.

D. WETLAND CLASSIFICATION CODES AND WATER REGIME DESCRIPTIONS

Table - Cowardin Classification Codes and Descriptions (1 of 2)

NWI CODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
L1UB (H)	Lacustrine, limnetic, unconsolidated bottom	Open water, lake	Unvegetated mud, sand, gravel
L2UB (F,H)	Lacustrine, littoral, unconsolidated bottom	Shallow open water, lake, lake bottom	Unvegetated mud, sand, gravel
L2US (J,A,C)	Lacustrine, littoral, unconsolidated shore	Lake bed, lake shore	Unvegetated mud, sand, gravel
L1AB1 (F,H)	Lacustrine, limnetic, aquatic bed	Algal mat	Algae
L1AB3 (F,H)	Lacustrine, limnetic, aquatic bed	Rooted vascular	American lotus (<u>Nelumbo lutea</u>)
L1AB4 (F,H)	Lacustrine, limnetic, aquatic bed	Floating pond weeds, water weeds	Duckweed (<u>Lemna</u> sp.) (<u>Azola</u> sp.)
L2AB4 (F,H)	Lacustrine, limnetic, aquatic bed	Floating pond weeds, water weeds	Duckweed (<u>Lemna</u> sp.) (<u>Azola</u> sp.)
R2UB (H)	Riverine lower perennial, unconsolidated bottom	Open water river, stream	Unvegetated mud, sand, gravel
R2RS (A,C)	Riverine lower perennial, rocky shore	Open water, areas of rapids	Unvegetated bedrock, rubble
R2RB (H)	Riverine lower perennial, rock bottom	Open water, areas of rapids	Unvegetated bedrock, rubble
R2US (J,A,C)	Riverine lower perennial, unconsolidated shore	River flat, bar	Unvegetated mud, sand, gravel
R4SB (J,A,C)	Riverine intermittent streambed	Intermittent stream	Unvegetated mud, sand, gravel
PUB (F,H)	Palustrine unconsolidated bottom	Open water, pond bottom	Unvegetated mud, sand, gravel
PUS (J,A,C)	Palustrine unconsolidated shore	Pond shore, pond bed	Unvegetated mud, sand, gravel

Table - Cowardin Classification Codes and Descriptions (2 of 2)

NWI CODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PAB3,4 (F,H)	Palustrine aquatic bed	Algal mat	Algae American lotus (<u>Nelumbo lutea</u>) Bulrush (<u>Scirpus</u> sp.) Cattail (<u>Typha latifolia</u>) Cocklebur (<u>Xanthium</u> sp.) Rush (<u>Juncus</u> sp.) Saltgrass (<u>Distichlis</u> sp.) Sedge (<u>Carex</u> sp.) Smartweed (<u>Polygonum</u> sp.) Rivercane (<u>Arundo donax</u>)
PSS1 (J,A,C,F)	Palustrine, scrub shrub, broad leaved deciduous	Shrub wetland	Buttonbush (<u>Cephalanthus occidentalis</u>) Cottonwood (<u>Populus deltoides</u>) Willow (<u>Salix nigra</u>) Seepwillow Baccharis (<u>Baccharis glutinosa</u>)
PF01 (J,A,C,F)	Palustrine, forested, broad leaved deciduous	Forested wetland	Cottonwood (<u>Populus deltoides</u>) Elm (<u>Ulmus</u> sp.) Green ash (<u>Fraxinus pennsylvanica</u>) Hackberry (<u>Celtis occidentalis</u>) Willow (<u>Salix nigra</u>) Pecan (<u>Carya illinoensis</u>) Sycamore (<u>Platanus occidentalis</u>) Retama (<u>Parkinsonia aculeata</u>) Huisache (<u>Acacia smallii</u>)

E. MAP PREPARATION

The wetland classifications used on Louisville SW, NW, NE and Cincinnati SE basemap is in accordance with Cowardin et al (1977). The delineations were produced through stereoscopic interpretation of 1:58,000 scale color infrared photography.

Field checks in all 1:100,000's were made prior to the actual delineation of wetlands. Field check sites were selected to clarify varying signatures found on the imagery. The photographic signatures were then identified using vegetation types and soil types as well as input from local field personnel.

Collateral data included USGS Topographic Quadrangles, SCS county soil surveys, climate, vegetation, field personnel input, ecoregional information.

The user of the map is cautioned that, due to the limitations of mapping primarily through aerial photointerpretation, a small percentage of wetlands may have gone unidentified. Since the photography was taken at a particular time and season, there may be discrepancies between the map and current field conditions. Changes in landscape which occurred after the photography was taken would result in such discrepancies.

Aerial photointerpretation and drafting were completed by Martel Laboratories, Inc., St. Petersburg, Florida.

F. SPECIAL MAPPING PROBLEMS

Several forested areas along the Ohio River were at higher than normal water level on the photography. This caused three areas to appear much wetter than the actual area. After field checking and noting of tree species, field personnel determined the actual water regime that should be used.

G. MAP ACQUISITION

To discuss any questions concerning these maps or to place a map order:

John Hefner
R. B. Russell Federal Building
75 Spring Street SW
Atlanta, Georgia 30303

To order maps only, contact:

National Cartographic Information Center
U.S. Geological Survey
National Center
Reston, VA 22092

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

Water Regime Modifiers

Tidal

Salt and Brackish Areas - Marine and Estuarine Systems

- (L) Subtidal - The substrate is permanently flooded with tidal water.
- (M) Irregularly Exposed - Land Surface is exposed by tides less often than daily. This corresponds to the area on NOS charts from seaward edge of light green tone (mean low water) to depth contour approximately extreme low water.
- (N) Regularly Flooded - Tidal water alternately floods and exposes the land surface at least once daily.
- (P) Irregularly Flooded - Tidal water floods land surface less often than daily. The area must flood by tide at least once yearly as a result of extreme high spring tide.

Freshwater Tidal Areas - Lacustrine, Palustrine and Riverine Systems

- (N) Regularly Flooded - Fresh tidal water alternately floods and exposes the land surface at least once daily.
- (R) Seasonally Flooded - Tidal
- (S) Temporarily Flooded - Tidal
- (T) Semipermanently Flooded - Tidal
- (V) Permanently Flooded - Tidal

Non-Tidal

- (A) Temporarily Flooded -- Surface water present for brief periods during growing season, but water table usually lies well below soil surface. Plants that grow both in uplands and wetlands are characteristic of this water regime.
- (B) Saturated -- The substrate is saturated to surface for extended periods during the growing season, but surface water is seldom present.
- (C) Seasonally Flooded -- Surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is extremely variable, extending from saturated to a water table well below the ground surface.
- (F) Semipermanently Flooded -- Surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or very near the land's surface.

- (G) Intermittently Exposed -- Surface water is present throughout the year except in years of extreme drought.
- (H) Permanently Flooded -- Water covers land surface throughout the year in all years.
- (K) Artificially Flooded -- The amount and duration of flooding is controlled by means of pumps or siphons in combination with dikes or dams.
- (U) Unknown -- The water regime is not known.
- (J) Intermittently Flooded -- Substrate is usually exposed, but surface water present for variable periods without detectable seasonal periodicity. Weeks or months or even years may intervene between periods of inundation. The dominant plant communities under this regime may change as soil moisture conditions change. Some areas exhibiting this regime do not fall within our definition of wetland because they do not have hydric soils or support hydrophytes.

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Literature Cited

Bailey, Robert G., 1980. Description of the Ecoregions of the United States. U.S. Department of Agriculture. Forest Service, Miscellaneous Publications No. 1391.

Cowardin, L.M.; V. Carter; F.C. Golet and E.T. LaRoe, 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, U.S. Fish and Wildlife Service. Biological Services Program, Washington D.C., 103p.