

NATIONAL WETLANDS INVENTORY
NOTES TO USERS
1:100,000 SCALE MAP
BURLINGTON SW
(IOWA AND MISSOURI PORTION ONLY)

USER REPORT: BURLINGTON SW 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 ^{work} area being discussed in this report lies in Southeastern Iowa and Northeastern Missouri, adjacent to the Mississippi River. It extends from 40° 00' to 41° 30' North Latitude and from 91° 00' to 92° 00' West Longitude. Bailey (1980) classifies this area as being in the Prairie Parkland Province (See Appendix I). The Interior Middle Upland Western Plains Land Surface Form covers the eastern half of Burlington SW (Hammond 1965 and 1969). This Land Surface Form is characterized by flat to rolling plains. The West Central Rolling Hills Land Surface Form covers the western half of Burlington SW (Hammond 1965 and 1969). This land surface form is characterized by gently rolling hills. Burlington SW was glaciated during the Wisconsin Ice Age and is dissected by moderately sloping to steep drainage ways.

The Mississippi, Des Moines, Fox, Wyaconda and Fabius Rivers are the prominent drainages in the study area. It is along these drainages that the forested flood plains are found.

Climate:

The climate of Burlington SW is in the Subhumid Prairie Division (Bailey, 1980). The annual precipitation is approximately 34 inches. 75% of this precipitation falls in the growing season (April-September). The average snowfall is 20 to 30 inches. The average summer temperature is 73° F. In summer the temperature reaches 100° F in only 4 out of every 10 years (Soil Survey Scotland County, 1975). Average winter temperature is 35° F.

Vegetation:

The vegetation of the Burlington SW 1:100,000 scale map is primarily forest-steppe. The forest-steppe is characterized by the intermingling of prairie and strips of deciduous trees. Much of this area is under cultivation and forested stands are generally restricted to floodplains.

Soils:

Two soil surveys, Scotland and Knox County were available for the work area. Bottomland soils in these counties included the Arbela-Blackoar-Westerville association and the Piopolis-Blackoar-Arbela association. These associations contain soils that are poorly drained to somewhat poorly drained and that are level to nearly level. Bottomland wetlands were found on nonhydric as well as hydric soils.

In upland areas wetlands can be found as seeps and in depressions that contain poorly drained soils.

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	Lakes	Sand, mud
L2US (A,C)	Lacustrine, littoral, unconsolidated shore	Shallow Lake	Sand, mud
R2UB (G,H)	Riverine, lower perennial, unconsolidated bottom	River	Sand, mud
R3UB (G,H)	Riverine, upper perennial, unconsolidated bottom	River/Stream	Sand, cobble, gravel bottom
R3AB (G,H)	Riverine, upper perennial, aquatic bed	River/Stream	Algae
R2US (A)	Riverine, lower perennial, unconsolidated shore	Sand Bar	Sand, cobble, gravel
R4SB (C,F)	Riverine, intermittent streambed	River/stream	Sand, mud, cobble, gravel
PUB (F,G,K)	Palustrine, unconsolidated bottom	Pond	Sand, mud
PAB (F,G)	Palustrine, aquatic bed	Farm Pond, deep Marsh, Reservoir	<u>Lemna minor</u> (duckweed) Green algae <u>Potamogeton</u> sp. (pondweed)
PEM (A,C,F)	Palustrine, emergent	Marsh, meadow, depressions, drainages, backwaters	<u>Typha</u> sp. (cattail) <u>Scirpus fluviatilis</u> (river bullrush) <u>Eleocharis</u> sp. (rush) <u>Carex</u> sp. (sedge) <u>Rumex crispus</u> (curly dock) <u>Hydrophyllum virginianum</u> (virginia waterleaf) <u>Solidago</u> sp. (goldenrod) <u>Rhus radicans</u> (poison ivy) <u>Urtica dioica</u> (stinging nettle) <u>Equisetum</u> sp. (horsetail) <u>Polygonum</u> sp. (smartweed) <u>Ambrosia trifida</u> (giant ragweed) <u>Xanthium</u> sp. (cockleburr) <u>Setaria</u> sp. (foxtail)

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

NWI CODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PEM (cont)			<u>Phalaris arundinacea</u> (reed canary grass) <u>Smilax</u> sp. (green briar) <u>Geum laciniatum</u> (rough avens) <u>Scirpus cyperinus</u> (wool grass) <u>Bidens</u> sp. (beggarticks) <u>Phragmites</u> sp. (common reed)
PSSI (A,C,F)	Palustrine, scrub-shrub, broad-leaved deciduous	Shrub,swamp	<u>Salix nigra</u> (willow) <u>Sambucus canadensis</u> (elderberry) <u>Cephalanthus occidentalis</u> (button bush)
PFOI (A,C,F)	Palustrine, scrub-shrub, broad-leaved deciduous	Forested swamp floodplains	<u>Betula nigra</u> (river birch) <u>Salix nigra</u> (black willow) <u>Fraxinus pennsylvanica</u> (green ash) <u>Carya laciniosa</u> (shellbark hickory) <u>Acer saccharinum</u> (silver maple) <u>Acer negundo</u> (box elder) <u>Ulmus americana</u> (american elm) <u>Platanus occidentalis</u> (sycamore) <u>Populus deltoides</u> (cottonwood) <u>Quercus palustris</u> (pin oak) <u>Tilia americana</u> (basswood) <u>Cornus amomum</u> (silky dogwood) <u>Celtis occidentalis</u> (hackberry)
h	Diked, Impounded	Dam or levee, reservoir	NA
x	Excavated	Channelized or ditched, strip mine	NA

Water Regime Description

- (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) Seasonably 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.

F. MAP PREPARATION

The wetland classifications that appear on the Burlington SW National Wetlands Inventory (NWI) Base Map (Figure 1) are in accordance with Cowardin et al (1977). The delineations were produced through stereoscopic interpretation of 1:58,000 scale color infrared photography. The photography was taken during April 1983, April 1984 and March 1985.

Field checks of areas found within the Burlington SW photography were made prior to the actual delineation of wetlands. Field check sites were selected to clarify varying signatures found on the photography. These photographic signatures were then identified in the field using vegetation types and soil types, as well as additional input from field personnel.

Collateral data included USGS topographic maps, SCS soil survey, climate, vegetation, and ecoregional 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. Since the photography was taken during 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.

G. SPECIAL MAPPING PROBLEMS

The most significant problems encountered were determining upland-wetland breaks in flooded photography and tying photography with different emulsions. For this reason, photo signature, topo information and soil surveys were closely compared for interpretation.

H. MAP ACQUISITION

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

Ron Erickson
Regional Wetland Coordinator
U.S. Fish and Wildlife Service - Region 3
Federal Building, Ft. Snelling
Twin Cities, MN 55111

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.

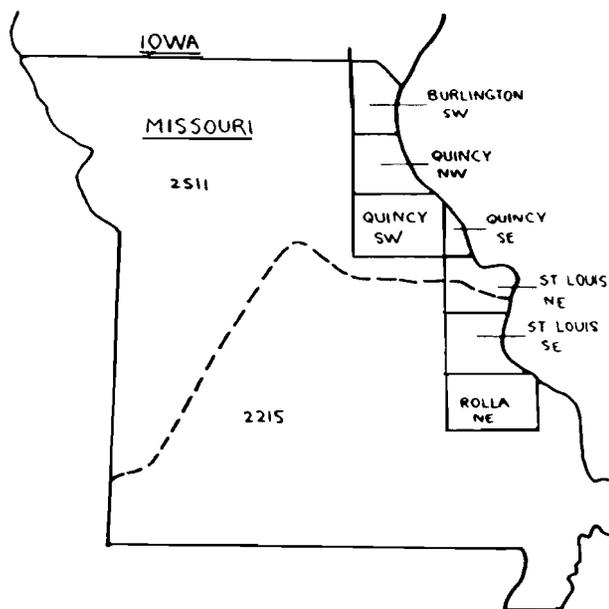
/nwi.2

APPENDIX I

ECOREGIONS OF THE MISSISSIPPI RIVER ROUNDOUT PROJECT AREA

Prairie Parkland Province
2511-Oak-Hickory-Bluestem
Parkland Section

Eastern Deciduous Forest Province
2215-Oak-Hickory Section



Collateral Data

Bailey, Robert G., 1980. Description of the Ecoregions of the United States. U.S. Department of Agriculture Forest Service. (1980)

Cowardin, L.M.; V. Carter; F.C. Golet and E.T. LaRue, 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.

U.S.D.A. Soil Surveys of Des Moines and Knox counties.

Hydric Soils of the State of Iowa; 1985. U.S. Department of Agriculture, Soil Conservation Service.

Wetland Plants of the State of Iowa; 1986. U.S. Department of the Interior, Fish and Wildlife Service.

Hydric Soils of the state of Missouri; 1985. U.S. Department of Agriculture, Soil Conservation Service.

Wetland Plants of the State of Missouri; 1986. U.S. Department of the Interior, Fish and Wildlife Service.