

USER REPORT: NEW ORLEANS NE, NEW ORLEANS NW,  
NEW ORLEANS SE, NEW ORLEANS SW, AND BRETON SOUND SW

A. INTRODUCTION

The U.S. Fish and Wildlife Service's National Wetland 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 covered by New Orleans NE, New Orleans NW, New Orleans SE, New Orleans SW, and Breton Sound SW is located in southeastern Louisiana. Bailey (1980) identifies this area as being located in the Southern Flood Plain Forest Section of the Outer Coastal Plain Forest Province. More specifically this unique area is shaped by three factors: its proximity to the Gulf, its subtropical climate, and the Mississippi River and its distributaries meandering over a wide flat flood plain, depositing silt. These factors combined are responsible for the extensive saline marsh, freshwater marsh and Cypress-Tupelo swamp. This extensive swamp and marsh provides habitat for numerous species of birds, mammals, and aquatic life. Many migratory birds that use the Mississippi flyway use this habitat to winter or to feed and rest as they continue on their migration. The saline marsh is an estuary that provides food and protection for juvenile fish and crustaceans.

### Climate:

The region has a subtropical marine climate due to its proximity to the Gulf of Mexico and its many bayous and lakes. The summers are long and warm. Winters are mild. Annual average rainfall is approximately 65 inches. Heaviest rainfalls occur during the growing season, June through August.

### Vegetation:

Along the Gulf edge the vegetation type is a result of the salt water tidal influence and the deposition of river sediments. These factors promote the growth of salt tolerant vegetation that can withstand regular flooding. The dominant vegetation under these conditions is Spartina alterniflora mixed with several other emergents and some small black mangrove shrubs. Behind this saline marsh one finds brackish marsh that is only irregularly flooded by the tides. Here the dominant vegetation is Spartina patens and Scirpus olneyi. This brackish marsh grades into nearly fresh to freshwater marsh. Some of the vegetation found in this marsh includes Panicum hemitomon, Typha latifolia and Sagittaria sp.. Between the fresh marsh and the natural levees there are broad flat expanses of poorly drained clayey soils that support the growth of trees which can withstand prolonged flooding. These backswamps are dominated by cypress, tupelo, and willow. On the natural levees a mixture of deciduous trees are found. Species found include oak, maple, sweetgum, hackberry, willow, birch, and elm.

### Soils:

Loamy well drained to imperfectly drained soils are found along the levee ridges. Clayey, poorly drained soils are dominant in the low lying backswamps.

TABLE I

D. WETLAND CLASSIFICATION CODES AND WATER REGIME DESCRIPTIONS  
 TABLE- COWARDIN CLASSIFICATION CODES AND DESCRIPTIONS

NWI CODE (Water Regime)	NWI DESCRIPTION	COMMON DESCRIPTION	VEGETATION/SUBSTRATE
M1UB (L)	Marine, subtidal, unconsolidated bottom	Open ocean	Sand, mud
E1UB (L)	Estuarine, subtidal, unconsolidated bottom	Intracoastal water- ways, including: bays, inlets, and adjacent salt marshes	Sand, mud
E2US (N,M)	Estuarine, intertidal, unconsolidated shore	Sand bar	Sand, mud
E1AB3 (L)	Estuarine, subtidal, rooted aquatic bed	Intercoastal water- ways, including: bays, inlets, and adjacent salt marshes	<u>Thalassia testudinum</u> (turtle grass) <u>Halodule wrightii</u> (shoal grass) <u>Cymodocea manatorum</u> (manatee grass) <u>Halophila engelmanni</u> (halophila) <u>Syringodium filiforme</u> (syringodium)
E2SS1 (N,P)	Estuarine, intertidal	Shrubs	<u>Baccharis</u> sp. (salt bush)
E2SS3 (N,P)	Estuarine, intertidal	Shrubs	<u>Avicennia germinans</u> (black mangrove) <u>Myrica cerifera</u> (wax myrtle)

NWI CODE (Water Regime)	NWI DESCRIPTION	COMMON DESCRIPTION	VEGETATION/SUBSTRATE
E2EM1 (N,P)	Estuarine, intertidal, emergent persistent	Salt Marsh	<u>Spartina alterniflora</u> (smooth cord grass) <u>Spartina patens</u> (wire grass) <u>Spartina cynosuroides</u> (big cord grass) <u>Juncus roemerianus</u> (black rush) <u>Scirpus olnevi</u> (three corner grass) <u>Distichlis spicata</u> (seashore salt grass)
R1UB (V)	Riverine, tidal, perennial, unconsolidated bottom	River, canal	Sand, mud
R1US (N)	Riverine, tidal, unconsolidated shore	Sand bar	Sand, cobble, gravel
R2UB (H)	Riverine, lower perennial, unconsolidated bottom	River or drainage ditches	Sand, mud
R2US (A,C)	Riverine, lower perennial, unconsolidated shore	Sand bar	Sand, cobble, gravel
R4SB (C,F)	Riverine, intermittent, stream bed	River, stream, canal	Sand, mud, cobble, gravel

NWI CODE (Water Regime)	NWI DESCRIPTION	COMMON DESCRIPTION	VEGETATION/SUBSTRATE
L1UB (H,V)	Lacustrine, limnetic unconsolidated bottom	Lake	Unconsolidated bottom
L2AB3 (G,H,V)	Lacustrine, littoral, aquatic bed rooted vascular	Lake Marshes	<u>Nymphaea</u> sp. (waterlily) <u>Nelumbo lutea</u> (American lotus) <u>Myriophyllum spicatum</u> (watermilfoil)
L2AB4 (G,H,V)	Lacustrine, limnetic, aquatic bed floating vascular	Lake	<u>Lemna</u> spp. (duckweed) <u>Azolla caroliniana</u> (mosquito fern) <u>Pistia stratiotes</u> (water lettuce) <u>Elchornia crassipes</u> (water hyacinth) <u>Salvinia</u> sp. (water fern)
PUB (F,G,H,V)	Palustrine unconsolidated bottom	Pond	Sand, mud
PAB3 (G,H,V)	Palustrine, aquatic bed rooted vascular	Ponds or deep marshes	<u>Nymphaea</u> sp. (waterlily) <u>Nelumbo lutea</u> (American lotus)

NWI CODE (Water Regime)	NWI DESCRIPTION	COMMON DESCRIPTION	VEGETATION/SUBSTRATE
PAB4 (G,H,V)	Palustrine, aquatic bed, floating vascular	Pond	<u>Lemna</u> spp. (duckweed) <u>Azolla caroliniana</u> (mosquito fern) <u>Pistia stratiotes</u> (water lettuce) <u>Elchornia crassipes</u> (water hyacinth) <u>Salvinia</u> sp. (water fern)
PEM1 (A,C,F, H,G,S, R,T,V)	Palustrine, emergent persistent	Ponded prairies, marshes, depressions or drainage areas	<u>Typha latifolia</u> (cattail) <u>Polygonum</u> sp. (smartweed) <u>Panicum hemitomon</u> (maiden cane) <u>Juncus</u> sp. (rush) <u>Cyperus</u> sp. (flat sedge) <u>Carex</u> sp. (sedge) <u>Eleocharis</u> sp. (spike rush) <u>Scirpus americanus</u> (three square) <u>Setaria</u> sp. (foxtail) <u>Zizaniopsis miliaceae</u> (giant cutgrass) <u>Sagittaria</u> sp. (duckpotato) <u>Panicum virgatum</u> (switch grass) <u>Cladium jamaicense</u> (sawgrass) <u>Colocasia antiquorum</u> (elephant ear)

NWI CODE (Water Regime)	NWI DESCRIPTION	COMMON DESCRIPTION	VEGETATION/SUBSTRATE
PSS1 (A,C,F, G,S,R,T)	Palustrine, scrub shrub, broad- leaved deciduous	Willow thicket	<u>Salix</u> sp. (willow) <u>Populus heterophylla</u> (swamp cottonwood) <u>Acer rubrum</u> (red maple) <u>Cephalanthus</u> <u>occidentalis</u> (buttonbush) <u>Nyssa sylvatica</u> (blackgum) <u>Baccharis</u> sp. (saltbush)
PSS3 (A,C,F, T,S,R)	Palustrine, scrub shrub, mixed evergreen	Shrub forest	<u>Myrica cerifera</u> (wax myrtle)
PFO1 (A,C,F, S,R,T)	Palustrine, forested broad-leaved deciduous	Floodplains, swamps or depressions	<u>Acer rubrum</u> (red maple) <u>Liquidambar styraciflua</u> (sweetgum) <u>Liriodendron</u> <u>tulipifera</u> (tulip poplar) <u>Nyssa aquatica</u> (water tupelo) <u>Quercus lyrata</u> (overcup oak) <u>Fraxinus</u> sp. (ash) <u>Salix nigra</u> (black willow) <u>Betula nigra</u> (river birch) <u>Nyssa sylvatica</u> (blackgum) <u>Sapium sabiferum</u> (Chinese tallow) <u>Quercus nigra</u> (water oak) <u>Gleditsia aquatica</u> (water locust)

NWI CODE (Water Regime)	NWI DESCRIPTION	COMMON DESCRIPTION	VEGETATION/SUBSTRATE
PF02 (A,C,F, S,R,T)	Palustrine,	Sloughs, swamps	<u>Taxodium distichum</u> (bald cypress)
PF06 (A,C, F,R,T)	Palustrine, forested broad leaf and needle leaf deciduous	Sloughs, swamps	<u>Acer rubrum</u> (red maple) <u>Liquidambar styraciflua</u> (sweetgum) <u>Liriodendron tulipifera</u> (tulip poplar) <u>Nyssa aquatica</u> (water tupelo) <u>Quercus lyrata</u> (overcup oak) <u>Fraxinus sp.</u> (ash) <u>Salix nigra</u> (black willow) <u>Betula nigra</u> (river birch) <u>Nyssa sylvatica</u> (blackgum) <u>Sapium sabiniferum</u> (Chinese tallow) <u>Quercus nigra</u> (water oak) <u>Gleditsia aquatica</u> (water locust) <u>Taxodium distichum</u> (bald cypress)

E. Water Regime Description

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 approximating 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) 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.

General Note: Table I

In the Palustrine Forested NWI codes, the split subclasses will be meant to also include the inverse subclasses. However, the vegetation characteristics will be the same only in different percentages.

Also, any split classes will generally contain those vegetation characteristics found in the singular class.

F. MAP PREPARATION

The wetland classification that appears on the New Orleans NE, New Orleans NW, New Orleans SE, New Orleans SW, and Breton Sound SW National Wetlands Inventory (NWI) Base Maps (Table I) is in accordance with Cowardin et al. (1977). The delineations were produced through stereoscopic interpretation of 1:65,000 scale color infrared photography. The photography was taken during October 1988, January 1989, and February 1989.

Field checks of areas found within New Orleans NE, New Orleans NW, New Orleans SE, New Orleans SW, and Breton Sound 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 surveys, 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

None.

H. MAP ACQUISITION

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

John Hefner  
Regional Wetland Coordinator  
U.S. Fish and Wildlife Service - Region IV  
R.B. Russell Federal Building  
75 Spring Street S.W.  
Atlanta, GA 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.

KS/drs.nwi

## LITERATURE CITED

- Bailey, Robert G. 1980. Description of the Ecoregions of the United States; United States 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.
- Harrar, Ellwood S. and J. George Harrar. 1962. Guide to Southern Trees. Dover Publishing Co.
- Hotchkiss, Neil, 1972. Common Marsh, Underwater and Floating-leaved Plants of the U.S. and Canada. Dover Publishing Co.
- Little, Elbert L., 1985. Audubon Field Guide to North American Trees: Eastern Region. Alfred A. Knopf, Inc.
- U.S.D.A. Soil Surveys of St. Mary, St. Charles, Jefferson, Lafayette, Iberville, Ascension, Lafourche, St. Martin, Assumption, St. James, St. John the Baptist, and Terrebonne parishes.
- Hydric Soils of the State of Louisiana; 1985. United States Department of Agriculture, Soil Conservation Service.
- Wetland Plant of the State of Louisiana; U.S. Department of the Interior, Fish and Wildlife Service.