

NATIONAL WETLANDS INVENTORY

NOTES TO USERS

RED RIVER DELTA

1:100,000 SCALE MAPS COVERED

NATCHITOCHE (ALEXANDRIA NW)

LEESVILLE (ALEXANDRIA SW)

DE RIDDER (LAKE CHARLES NW)

VILLA PLATTE (LAKE CHARLES NE)

NATIONAL WETLANDS INVENTORY

1:100,000 MAP NARRATIVE

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.

Areas Covered:

The study area is defined as the northern half of Lake Charles 1:250,000 region and the western half of the Alexandria 1:250,000 region. The area covered lies between 30°30' - 31°00' north latitude by 92°00' - 94°00' west longitude and 31°00' - 32°00' north latitude by 93°00' - 94°00' west longitude. (See Index Map A.) Important wetland areas included are the Toledo Bend Reservoir, Bayou Cocodrie, Cocodrie Lake, Anacoco Lake, and the floodplains associated with the Sabine and Red rivers.

Bailey's Ecoregions:

The Alexandria NW and SW 1:100,000 area and the Lake Charles NW and NE 1:100,000 area can be divided into two physiographic regions. They are the Outer Coastal Plain Forest Province and the Southeastern Mixed Forest Province. The Outer Coastal Plain Forest Province encompasses Lake Charles NW and NE, the southeastern corner of Alexandria NW, and the southern half of Alexandria SW. Relief for this area is less than 300 feet (90M), consisting of gentle slopes. The remainder of the mapping area, Alexandria NW and the northwestern corner of Alexandria SW, lies in the Southeastern Mixed Forest Province where relief is slightly greater.

In the Outer Coastal Plain Forest Province, the forest vegetation is dominated by the magnolia and laurel families, along with the evergreen oaks (Bailey '80). These forests often have a well defined understory of shrubs and herbaceous plants.

The climax vegetation in the Southeastern Mixed Forest Province consists of the broadleaf deciduous and needleleaf evergreen trees, which include the loblolly pine (Pinus taeda), oaks (Quercus sp.), sweetgum (Liquidamber styraciflua), hickory (Carya sp.), and the red maple (Acer rubrum) (Bailey '80). Low lying areas and swamps are dominated by cypress (Taxodium distichum), blackgum (Nyssa sylvatica), and sweetgum (Liquidamber styraciflua). Climatic conditions for the study area are generally uniform. Temperature for the area averages 64°F to 72°F (18°C to 22°C) annually, with rainfall abundant year round and averaging 40-60 inches (1,000 to 1,525 mm) yearly.

Soil is an important element of hydric conditions and is one of the criteria used to define wetlands. Soils for the area vary, but tend to be wet, acidic, and low in major plant nutrients. Poorly drained (hydric) soil associations which can support wetland vegetation are common on the floodplains and are among the richer soils of this area.

In Lake Charles NE, an example of this are the large areas of PF01/4A which consist of hardwoods found on the poorly drained Guyton series. Other common hydric soils encountered are the Basile, Caddo, Frost, Wrightsville, Moreland, and Perry series.

Map Preparation:

Wetland classification for the NWI maps is in accordance with "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 photogaphy was taken during December of 1981, November of 1982, and March and October of 1983. To correctly classify the wetlands, ground truthing, soil surveys, and input from regional USFWS personnel were used to relate various photographic signatures to actual wetland identification and classification.

Collateral data included U.S.G.S. topographic maps (7.5 and 15 minute series) SCS soil surveys, climate, and vegetation information.

USER CAUTION

The map documents were prepared primarily by stereoscopic analysis of high altitude aerial photographs. Wetlands were identified on the photographs based on vegetation, visible hydrology, and geography. The aerial photographs typically reflected conditions during the specific year and season when they were taken. In addition, there is a margin of error inherent in the use of aerial photographs. Thus a detailed, on-the-ground and historical analysis of a single site may result in revision of the wetland boundaries established through photographic interpretation. In addition, some small wetlands and those obscured by dense forest cover may not be included on the map document.

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specific agency regulatory programs and proprietary jurisdictions that may affect such activities.

Changes in the landscape and/or land use could have occurred since the time of photography. Therefore, some discrepancies between the wetland map and current field conditions may exist. Any questions regarding wetland omissions, inclusions, or errors should be brought to the attention of the Regional Wetlands Coordinator, Region 4. The Project Officer for this wetland map is John Hefner, Regional Wetlands Coordinator, U.S. Fish and Wildlife Service, Region 4, R.B. Russell Federal Building, 75 Spring Street, S.W., Atlanta, Georgia 30303. Aerial photo interpretation was completed by Martel Laboratories, Inc., St. Petersburg, Florida. Maps were prepared by NWI National Team in St. Petersburg, Florida.

WETLANDS AND DEEPWATER HABITATS

Wetlands and deepwater habitats within the subject area fall within the Palustrine, Lacustrine, and Riverine systems. Deepwater habitats are areas which are permanently flooded (except during periods of extreme drought) and are characterized by open water on the aerial photography. These habitats are present in the Riverine and Lacustrine systems, whereas wetland habitats are present in all systems (see Table 1).

CHARACTERISTICS OF NWI WETLAND SYSTEMS IN

ALEXANDRIA NW, SW,

LAKE CHARLES NW, NE

Marine and Estuarine Systems

No marine or estuarine systems are found in the study area.

Palustrine

Numerous palustrine open water (OW) areas are present within the study area, with the majority being excavated (x) or impounded (h). Other open water areas are natural ponds and springs. Palustrine open water is often vegetated with rooted vascular (PAB3) and/or floating vascular (PAB4) aquatic bed. Some floating species present are duckweed (Lemna sp.), Azolla sp., and Salvinia sp.

Palustrine emergents (EM) are not abundant in the area. Those present are often located in open fields and old river cuts. Species include stinging nettle (Urtic sp.) and some grasses which were not identified as ground truthing was conducted late in the growing season. Emergents found along lake edges include bullrush (Scirpus sp.) and umbrella sedge (Marylaughlin sp.)

Forest and scrub shrub wetlands dominate the study area. Palustrine scrub shrub (PSS) and Palustrine forested (PFO) wetlands are characterized by woody species. The classification of scrub shrub or forested wetlands is determined by the height of woody vegetation, the forested being greater than 6 meters and scrub shrub being less than 6 meters. Common seasonal scrub shrub species are sugarberry (Celtis laevigata sp.) and wax-myrtle (Myricecea sp.). Buttonbush (Cephalanthus occidentalis) is found in semipermanent conditions with willow (Salix sp.) mixed in both. Most forested areas are supported on floodplains under temporary water conditions. Common species include hickory (Carya sp.), sweetgum (Liquidamber styraciflua), chestnut oak (Quercus prinus), willow oak (Quercus phellos), laurel oak (Quercus laurifolia), muscledwood (Ostrya sp.), red maple (Acer rubrum), sycamore (Platanus sp.), beech (Fagus sp.), elm (Ulmus sp.), and ash (Fraxinus sp.). Seasonal flood plains, sloughs, meander scars, and other depressions consist of sweetgum (Liquidamber styraciflua), swamp chestnut oak (Quercus michauxii), willow oak (Quercus phellos), laurel oak (Quercus laurifolia), river birch (Betula nigra), American holly (Ilex opaca), red maple (Acer rubrum), tallow tree (Sapium sebiferum), elm (Ulmus sp.), and alder (Alnus sp.). These broad leaved deciduous trees are sometimes found mixed with broad leaved evergreen, redbay (Persea borbonia), loblolly bay (Gordonia lasianthus), and ti-ti (Cyrilla sp.). The semipermanently flooded areas are a mixture of bald cypress (Taxodium distichum), blackgum (Nyssa sylvatica), water tupelo (Nyssa aquatica), and occasionally black willow (Salix sp.) and laurel oak (Quercus laurifolia).

Palustrine unconsolidated shore areas (PUS) include pond edges which are exposed during drier parts of the year.

Lacustrine

Natural or artificial open water bodies greater than 20 acres are classified as Lacustrine. The Lacustrine system on the NWI maps include the classes of open water (L10W), unconsolidated bottom (L2UB), and unconsolidated shore (L2US), and aquatic bed (L1FB). Lacustrine open water and unconsolidated bottom are deepwater habitats. Nonvegetated Lacustrine substrates which are exposed at some time during the growing season are classified as Lacustrine unconsolidated shore. This system is present in the study area either as an impounded (h) or excavated (x) area. Lacustrine aquatic bed areas are classified similar to those in the Palustrine system.

Riverine

The Riverine system includes the classes: open water (OW), unconsolidated shore (US), and streambed (SB). Open water and unconsolidated shore are restricted to the riverine lower perennial (R20W) subsystem. Streams which do not flow year round are classified as Riverine intermittent streambeds (R4SB). Some streams are excavated (x) to improve drainage. In cases of streamside vegetation, these are mapped as Palustrine features.

Water Regimes

Hydrologic characteristics are an important aspect of wetlands. The following water regimes describe in general terms the duration and timing of surface inundation, as well as ground-water fluctuations.

Temporarily Flooded (A) - Surface water present for brief period's during the growing season, but water table usually lies well below the surface.

Saturated Flooded (B) - Surface water is seldom present, but substrate is saturated to the surface for extended periods during the growing season.

Seasonally Flooded (C) - 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 very variable, ranging from a saturated condition to one in which the water table is well below the ground's surface.

Semipermanently Flooded (F) - Surface water persists throughout the growing season in most years. Land surface is normally saturated when water level drops below soil surface.

Intermittently Exposed (G) - Surface water is present throughout the year except in years of extreme drought.

Permanently Flooded (H) - Water covers land surface throughout the year in all years.

Special modifiers included on these NWI maps, where applicable, are:

Partly Drained (d): The water level has been artificially lowered, but the area is still classified as wetland because soil moisture is sufficient to support hydrophytes. Drained areas are not considered wetland if they can no longer support hydrophytes.

Diked/Impounded (h): Created or modified by a barrier, dike, or dam which obstructs the inflow or outflow of water.

Excavated (x): Lies within a basin or channel excavated by man.

Bibliography:

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

Cowardin et al., 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., 103 p.

Soil Survey of Allen Parish, Louisiana, September 1980. U.S. Department of Agriculture, Soil Conservation Service.

Soil Survey of Red River Parish, Louisiana, April 1980. U.S. Department of Agriculture, Soil Conservation Service.

Soil Survey of Evangeline Parish, Louisiana, August 1974. U.S. Department of Agriculture, Soil Conservation Service.

Soil Survey of Rapides Parish, Louisiana, March 1980. U.S. Department of Agriculture, Soil Conservation Service.

TABLE 1

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	VEGETATION SUBSTRATE
L10W	Lacustrine open water	Lake	Open Water
L2US	Lacustrine littoral unconsolidated shore	Lake bed	Unvegetated mud, sand, gravel
L2UB	Lacustrine littoral unconsolidated bottom	Lake bottom	Unvegetated mud, sand, gravel
L2AB3	Lacustrine aquatic bed	Pond weeds, waterweeds	Rooted vascular
L2AB4	Lacustrine floating aquatic bed	Pond weeds, waterweeds	<u>Azolla sp.</u> <u>Salvinia sp.</u> <u>Lemna sp.</u> (duckweed)
R20W	Riverine perennial open water	River, stream	Open water, year-round flow
R4SB	Riverine intermittent streambed	Intermittent stream	Unvegetated river bottom
R2US	Riverine unconsolidated shore	River bar, river flat	Unvegetated mud, sand, gravel
POW	Palustrine open water	Pond	Open water
PAB3	Palustrine aquatic bed	Pondweeds, waterweeds	Rooted vascular
PAB4	Palustrine floating aquatic bed	Pondweeds, waterweeds	<u>Azolla sp.</u> <u>Salvinia sp.</u> <u>Lemna sp.</u> (duckweed)
PUS	Palustrine unconsolidated shore	Pond shore	Unvegetated mud, sand, gravel
PEM1	Persistent Palustrine Emergents	Marsh, wet meadow	<u>Scirpus sp.</u> (bulrush) <u>Urtic sp.</u> (stinging nettle) <u>Marylaughlin sp.</u> (Umbrella sedge)

TABLE 1 (Continued)

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	VEGETATION SUBSTRATE
PSS1	Palustrine scrub shrub, broadleaf deciduous	Shrub swamp	<u>Myricecea sp.</u> (wax myrtle) <u>Cephalanthus occidentalis</u> (buttonbush) <u>Salix sp.</u> (willow) <u>Celtus laevigata</u> (sugarberry)
PFO1	Palustrine forested, broadleaf deciduous	Forested wetlands	<u>Carya sp.</u> (hickory) <u>Liquidamber styraciflua</u> (sweetgum) <u>Quercus prinus</u> (chestnut oak) <u>Quercus phellos</u> (willow oak) <u>Quercus laurifolia</u> (laurel oak) <u>Ostrya sp.</u> (musclewood) <u>Acer rubrum</u> (red maple) <u>Ulmus sp.</u> (elm) <u>Fraxinus sp.</u> (ash) <u>Quercus michauxii</u> (swamp chestnut oak) <u>Betula nigra</u> (river birch) <u>Ilex opaca</u> (American holly) <u>Sapium sebiferum</u> (tallow) <u>Alnus sp.</u> (alder)
PF01/3	Palustrine forested, broadleaf deciduous and broadleaf evergreen	Forested wetland	<u>Liquidamber styraciflua</u> (sweetgum) <u>Nyssa sylvatica</u> (blackgum) <u>Cyrilla sp.</u> (ti-ti) <u>Persea borbonia</u> (redbay)

TABLE 1 (Continued)

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	VEGETATION SUBSTRATE
PF01/4A	Palustrine forested, broadleaf deciduous and needleleaf evergreen	Forested wetland	Broadleaved deciduous as per PFC <u>Pinus taeda</u> (loblolly pine)
PF02	Palustrine forested, needle-leaved deciduous	Forested wetland	<u>Taxodium distichum</u> (bald cypress)
PF06	Palustrine forested, deciduous	Forested wetland	<u>Taxodium distichum</u> (bald cypress) <u>Nyssa sylvatica</u> (blackgum) <u>Nyssa aquatica</u> (water tupelo) <u>Salix nigra</u> (black willow) <u>Quercus laurifolia</u> (laurel oak)

DEADWOOD GRAND CANY MANSFIELD JOHNSHATTA ASHLAND GULDONNA JONSBORO SIKES COLUMBIA

99°00'

93°00'

MAP INDEX A

32°00'

CENTER

30°

31°31'00"

30°

93°00'

92°00' 31"

