

USER REPORT: DEL RIO SW, SE, NW, NE
EMORY PEAK SW, SE, NW, NE
EAGLE PASS SE, NE

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 National Wetland Inventory (NWI) maps; (2) to describe 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 Texas study area is contained in two distinctly different provinces. Three-quarters of Del Rio NE and one-quarter of Del Rio SE are within the Juniper-Oak-Mesquite Savanna section of the Prairie Brushland Province. This province is a region of rolling plains, plateaus, and dissected canyons. Elevations range from sea level to 3,600 feet.

This area experiences long, hot summers and short mild winters. Average annual temperatures are 60° F to 70° F. The annual range of frost free days is from 250 to 300. Precipitation ranges from 20 to 30 inches and falls primarily during the growing season.

The rest of the study area is in the Tarbush-Creosote bush section of the Chihuahuan Desert Province of the Desert Division. Because of the severe aridity of most of this province the Rio Grande, the Pecos and a few larger tributaries are the only perennial streams. Undulating plains are characteristic of the area. Elevations range up to 4,000 feet. Isolated mountains range in elevation from 2,000 to 5,000 feet and more in some cases.

Stream beds or washes are dry most of the year but fill with water following a rain storm.

The climate is arid. Spring and early summer are particularly dry. The summer rains usually begin during July and continue through October. Normally they are localized torrential thunderstorms. Average annual temperatures range from 50° F to 65° F. Summers are hot and long. Winters are normally short and usually mild but may include brief periods when temperatures fall below freezing.

The characteristic vegetation of the area is a number of thorny shrubs. Short grasses are usual between clumps of these shrubs. On deep soils, mesquite is many times the dominant vegetation. A few cottonwoods and other trees may grow along streams. Much of the more westerly area is dominated by creosote bush. Ocotillo, cholla, prickly pear, and lechiguilla are some of the other common upland plants. Some isolated mountain areas rise to a great enough elevation to support a band of oak-juniper woodland. A few will also support ponderosa pines.

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
PAB1 (F,H)	Palustrine aquatic bed	Algal mat	Algae

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

NWI CODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PAB3 (F,H)	Palustrine aquatic bed	Rooted vascular	American lotus (<u>Nelumbo lutea</u>)
PAB4 (F,H)	Palustrine aquatic bed	Floating pond weeds, water weeds	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>)
PSS2 (J,A,C)	Palustrine, scrub shrub, needle leaved deciduous	Shrub wetland	Salt Cedar (<u>Tamarix</u> sp.)
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>)

F. MAP PREPARATION

The wetland classifications that appear on the Eagle Pass SE, NE, Del Rio SW, SE, NW, NE and Emory Peak SW, SE, NW, NE NWI basemap (Figure 1) 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. These photographic signatures were then identified in the field using vegetation types and soil types, as well as additional 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.

G. SPECIAL MAPPING PROBLEMS

A problem was observed on the imagery flown during October, 1984. Standing water is evident in areas that would normally be dry. Ground truthing and data obtained from the International Boundary and Water Commission helped to resolve the problem. Areas that have a photo signature that shows standing water under shrubs were observed to be slightly depressional areas full of healthy stands of mesquite. These areas will not be classified as wetlands. IBWC rain gauges supplied local rainfall data showing an unusual amount of precipitation, resulting in the wet photography.

Other depressions in the same general area are classified. These areas are indicated on the topo as intermittent water areas. These differ in photo signature significantly. These areas are slightly vegetate to totally unvegetated. These areas will be classified PUSJ, PUSA, and if twenty acres or more, L2USJ, L2USA.

H. MAP ACQUISITION

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

Regional Wetland Coordinator (ARD-E)
U.S. Fish and Wildlife Service - Region II
P.O. Box 1306
Albuquerque, New Mexico 87103

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

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.
- (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.

gc:wp

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.

Soil Survey of Big Bend National Park, Texas; 1981. United States Department of Agriculture, Soil Conservation Service.

Saunders, Geoffrey P., 1987. Analysis of Streamflow of the Rio Grande, Big Bend National Park, Brewster County, Texas. U.S. Department of the Interior, Office of Resource Management, Big Bend National Park, National Park Service.