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USER REPORT: WICHITA FALLS NW, NE, SW & SE
NATIONAL WETLANDS INVENTORY MAP

DRAFT

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

Wichita Falls NW, NE, SW and SE are located in north central Texas. The coordinates are Latitude 33° 00' N to 34° 00' N, Longitude 98° 00' W to 100° 00' W.

The northern and western half of the Wichita Falls 1:250,000 falls in the Mesquite-Buffalo Grass Section of the Prairie Brushland Province. This region is characterized by rolling plains and plateaus. The vegetation consists of mostly grasses (bluestem, three-awn, buffalo grass and grama) with shrubs and low trees growing singly or in bunches and open stands of mesquite.

In Wichita Falls NW and NE, the Bluestem-Grama Prairie Section of the Tall-Grass Prairie Province covers a small portion of the total map area. Here flat and rolling plains characterize the landscape with tall grass and mixed grass the dominant vegetation.

The southern and eastern half of the study area is in the Oak-Bluestem-Parkland section of the Prairie Parkland Province. The terrain is similar to the rest of the study area with gently rolling plains and some rounded hills. Grasses dominate this region with an intermixing of oak-hickory deciduous forests. Overall, the elevation may range from 900-1700 feet above sea level.

The general drainage pattern is from NW to SE with several large rivers flowing through the study area. In Wichita Falls NW, the North Wichita River and South Wichita River meet to form the Wichita River. Two large reservoirs, Lake Kemp, the largest in the study area, and Lake Diversion are formed along the Wichita River as it flows into Wichita Falls NE and turns towards the north and drains into the Red River in Oklahoma. Also in Wichita Falls NE, Lake Kickapoo, on the north fork of the Little Wichita River and Lake Arrowhead, on the Little Wichita River flow towards the east northeast and the Red River. The Brazos River is the largest river in the study area winding through Wichita Falls NW, SW and SE and fed by many smaller creeks, including Millers Creek, Elm Creek and Salt Creek.

The northeast corner of Wichita Falls SW is the location of many large playa lakes. In some cases, these have been drained to create more farm land.

Climate

The subhumid climate is similar for both the Prairie Parkland Province and the Prairie Brushland Province. Summers are hot with frequent thunderstorms and winters are dry with brief cold spells. The average annual precipitation is approximately 25 inches, which mainly falls during the growing season. The average annual temperature ranges between 55° and 70° F. The average annual number of frost-free days is 220 a year.

Vegetation

The wetland vegetation in the study area is primarily associated with riparian habitats, sloughs, floodplains and the backwaters of the reservoirs.

Common wetland trees associated with these wetlands include elm (Ulmus sp.), cottonwood (Populus deltoides), pecan (Carya illinoensis) and willow (Salix sp.).

Willow shrubs and buttonbush (Cephalanthys occidentalis) are often found in the backwaters of reservoirs. Salt cedar (Tamarix sp.) primarily occurs in riparian situations but can be found invading the backwaters of reservoirs in seasonal conditions.

Dominant emergents include cocklebur (Xanthium strumarium), smartweed (Polygonum sp.), spike rush (Eleocharis sp.), cattail (Typha latifolia), Juncus sp. and three square (Scirpus sp.).

Soils

Mollisols dominate throughout the study area. Some common Alluvial soils include the Clairmont, Mangum and Lincoln series, found mostly in or near stream beds. Also Randall clay is associated with the playa lakes and ponds in Wichita Falls SW.

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 (F,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 (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>)
L2AB3 (F, H)	Lacustrine limnetic	Pond weeds, water weeds	American lotus (<u>Nelumbo lutea</u>)
L1AB4 (F,H)	Lacustrine, limnetic, aquatic bed	Floating pond weeds, water weeds	Duckweed (<u>Lemna sp.</u>)
L2AB4 (F,H)	Lacustrine, limnetic, aquatic bed	Floating pond weeds, water weeds	Duckweed (<u>Lemna sp.</u>)
R2UB (H)	Riverine lower perennial, unconsolidated bottom	Open water river, stream	Unvegetated mud, sand, gravel
R2US (A,J,C)	Riverine lower perennial unconsolidated bottom	River flat, bar	Unvegetated mud, sand, gravel
R4SB (J,A,C,F)	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
PAB (F,II)	Palustrine aquatic bed	Algal mat	Algae American lotus (<u>Nelumbo lutea</u>)
PEM1	Palustrine persistent emergent	Marsh, wet meadow	Bulrush (<u>Scirpus</u> sp.) Cattail (<u>Typha latifolia</u>) Cockleburr (<u>Xanthium</u> sp.) Rush (<u>Juncus</u> sp.) Sedge (<u>Carex</u> sp.) Smartweed (<u>Polygonum</u> sp.) Spikerush (<u>Eleocharis</u> sp.)
PSS1 (J,A,B,C,F)	Palustrine, scrub shrub, broad leaved deciduous	Shrub wetland	Buttonbush (<u>Cephalanthus occidentalis</u>) Willow (<u>Salix</u> sp.) Sweepwillow (<u>Baccharis glutinosa</u>)
PSS2 (J,A,C)	Palustrine scrub-shrub, leaved deciduous	Shrub wetland	Salt Cedar (<u>Tamarix</u> sp.)
PFO1 (J,A,B,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</u> sp.) Pecan (<u>Carya illinoensis</u>) Oak (<u>Quercus</u> sp.) <u>smallii</u>

Water Regime Modifiers

- (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.
- (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.

F. MAP PREPARATION

The wetland classifications used on Wichita Falls NW, NE, SW & SE National Wetlands Inventory (NWI) 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.

G. SPECIAL MAPPING PROBLEMS

None

H. MAP ACQUISITION

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

Regional Wetland Coordinator (ARD-E)
U.S. Fish & Wildlife Service- Region II
P.O. Box 1306
Albuquerque, NM 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.

TEXAS

