USER REPORT: PECOS - FT. STOCKTON

PECOS NW, NE, SW, SE
FT. STOCKTON NW, NE, SW, SE

NATIONAL WETLANDS INVENTORY MAPS

A. INTRODUCTION

The United States Fish and 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 classification 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 project area is located in West Central Texas. The map coordinates are as follows:

Pecos 1:250K map	Latitude 30°00 N to 31°00 N Longitude 102°00 W to 104°00 W
Ft. Stockton 1:250K map	Latitude 31°00 N to 32°00 N Longitude 102°00 W to 104°00 W

DRAFT

The Ft. Stockton study area and 80% of the Pecos study area fall almost entirely in the Tarbush-Creosote Section of the Chihuahuan Desert Province of the Desert Division, according to Baileys Ecoregions. The remaining 20% of the Pecos study area lies in the North Eastern sector of the Grama-Tobosa Section. This area is mostly desert. The topography is characterized by undulating desert plains (elevations near 4,000 feet), cut by washes, dry most of the year. Somewhat isolated mountains rise 2,000 to 5,000 feet. Shallow playa lakes are common to this area, generally, they are dry most of the year. Significant portions of the Tarbush-Creosote Section are covered by shifting sand dunes.

Climate

The climate is typical desert, however, very localized, torrential rain storms do occur in late summer and early fall. In addition the northern part of the province may receive some winter rain. Average annual temperatures range from 50° F to 65° F. Summers are long and hot. Winters are short but, may include brief periods when temperatures fall below freezing.

Vegetation

The characteristic vegetation of the Chihuahuan Desert is a number of shrubs, most of them thorny. These shrubs frequently grow in open stands, but sometimes form low closed thickets. Short grass grows in association with the shrubs in many places. On deep soils, mesquite is often the dominant plant. A few cottonwoods and other trees grow beside the widely separated rivers. Creosote bush covers great areas in its characteristic open stand and is especially common on gravel fans. On rocky slopes the ocotillo is conspicuous; on the slopes leading down to the Rio Grande the ceniza shrub dominates. Juniper and pinyons, which are limited to rocky outcrops, are prominent around the Stockton Plateau in western Texas.

Some isolated mountains in the Chihuahuan Province rise high enough to carry a belt of oak and juniper woodland. On a few of the highest mountains pines grow among the oaks, but locally they sometimes grow in nearly pure stands. (Bailey 1980.)

Soils

Soils in the study area are primarily Aridisols and Entisols.

Throughout the study area and more commonly associated with playa basins the dominant pedogenic process is salinization, which produces areas of salt crust where only salt-loving (halophytic) plants can survive. Calcification is conspicuous on well drained uplands; encrustations and deposits of calcium carbonate (caliche) are common. Humus is lacking and soils are mostly Aridisols and Entisols. (Bailey 1980.)

D. WETLAND CLASSIFICATION CODES AND WATER REGIME DESCRIPTIONS

Table 1: Cowardin Classification Codes and Descriptions

NWICODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
L1UB (H)	Lacustrine, limnetic, unconsolidated bottom	Lakes	Unconsolidated bottom
(K)	Artificially flooded	Sewage treatment ponds and cooling ponds associated with oil industry	
(h)	Impounded	Reservoir lake	
(x)	Excavated	Sewage pond	
L2US (C,A,J)	Lacustrine, littoral, unconsolidated shore	Dry salt lakes	Salt beds
R2UB (H)	Riverine, lower perennial, unconsolidated bottom	River	Unconsolidated bottom
R2US (A,J)	Riverine, lower perennial, unconsolidated shore	Gravel bars, sand bars	Unconsolidated shore
R4SB (C,A,J)	Riverine, intermittent streambed	Arroyo, dry wash	Streambed, cobble-gravel
(K)	Artificially flooded	Irrigation canals	
(x)	Excavated	Irrigation canals	

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PFO1 (A,J)	Palustrine, forested, broadleaf deciduous	Forested wetlands	Willow (Salix sp.) Cottonwood (Populus deltoides) Hackberry (Celtis laevigata varreticulata) Soapberry (Sapindus drummondii) Elm (Ulmus sp.) Walnut (Juglans microcapa)
PSS1 (C,A,J)	Palustrine, scrub-shrub, broadleaf deciduous	Shrub-scrub wetland	Baccharis (Baccharis glutinosa) Desert willow (chilopsis linearis)
PSS2 (A,J)	Palustrine, scrub-shrub, needleleaf deciduous	Shrub-scrub wetlands	Salt cedar (Tamarix sp.)
PEM1 (A,B,C)	Palustrine, emergent persistent	Marsh, seeps	Cattail (Typha latifolia) Bullrush (Scirpus sp.) Sedges (Carex sp.) Spike rush (Eleocharis sp.) Smartweed (Polygonum sp.) Cocklebur (Xanthium strumarium) Marsh boltonia (Boltonis asteroides) Ragweed (Ambrosia sp.)

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NWICODE WATER REGIME	NWI DESCRIPTION	COMMON DESCRIPTION	CHARACTERISTIC VEGETATION
PUS (A,J)	Palustrine, unconsolidated shore	Playa depressions	Upland grasses Smartweed Dock (Rumex sp.) Goosefoot (Chenopodium sp.)
PUS (A,J)	Palustrine, unconsolidated shore	Earthen stock tanks	Unconsolidated shore
(K)	Artificially flooded	(feed by pumps or windmills)	
(x)	Excavated		
(h)	Impounded		
PUB (H)	Palustrine, unconsolidated bottom	Gravel mines along Pecos River and diversion dams	Unconsolidated bottom
(x)	Excavated	Gravel mine	
(h)	Impounded	Diversion dams, spring fed impoundments	

E. 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) 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.

F. MAP PREPARATION

The wetland classification that appear on the Pecos and Ft. Stockton National Wetlands Inventory (NWI) base maps is 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 September, October, and November 1984 and May 1986.

Field checks of areas found within the Pecos-Ft. Stockton study area 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 Quadrangles, SCS county soil surveys, 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 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 was performed by Geonex North American Operations, Inc., St. Petersburg, Florida.

G. SPECIAL MAPPING PROBLEMS

There are 12 different dates of photography for the study area. Though differences in the overall tone of the emulsion do exist, none of the photography is expected to present any unusual problems for photo interpretation. Soil surveys are used where available and topographic maps are followed closely as an aid to interpretation.

H. MAP ACQUISITION

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

Warren Hagenbuck
Regional Wetland Coordinator
U.S. Fish & Wildlife Service- Region II
500 Gold Avenue SW, Room 4012
P.O. Box 1306
Albuquerque, NM 87103

To order maps only, contact:

1-800-USA-MAPS

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.

I. LITERATURE CITED

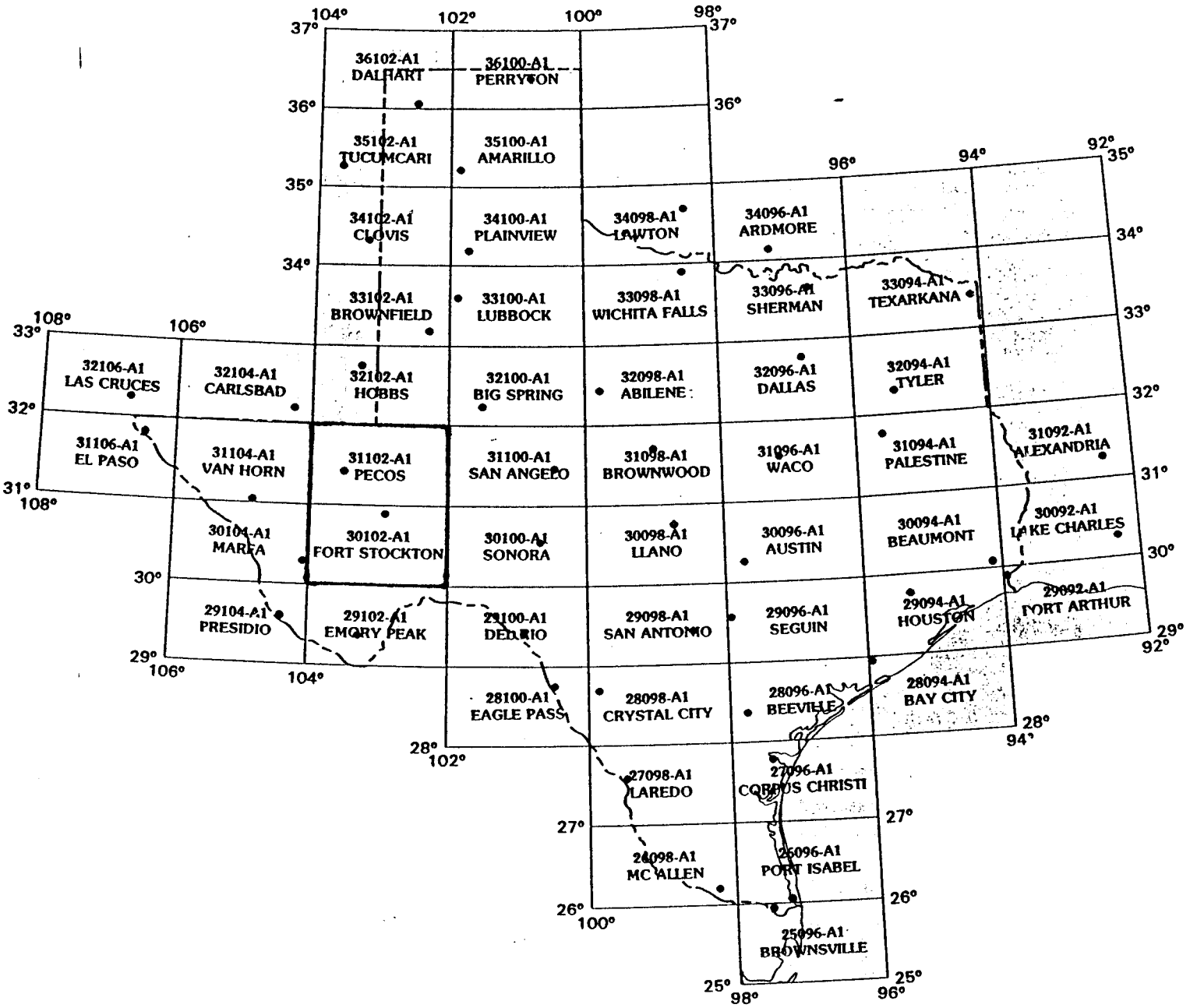
Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRue, 1979. Classification of Wetlands and Deepwater Habitats of The United States. United States Department of Interior, Fish and Wildlife Service. Biological Services Program, Washington, D.C.

Bailey, R.G., 1978. Description of The Ecoregions of The United States. United States Department of Agriculture, 1980.

Hydric Soils of the State Texas, 1985. United States Department of Agriculture, Soil Conservation Service.

Wetland Plants of the State of Texas, 1986. United States Department of the Interior, Fish and Wildlife Service.

Soil Surveys for the Counties of Terrell, Reeves, Jeff Davis, Pecos, Upton, Midland, Ector, and Crane. United States Department of Agriculture, Soil Conservation Service.

Figure 1

Locator Map for Pecos-Ft. Stockton