

NATIONAL WETLANDS INVENTORY

NOTES TO USERS

NEW MEXICO

1:100,000 SCALE MAPS COVERED -

CLIFTON NE

TULAROSA NW

NATIONAL WETLAND INVENTORY

1:100,000 Scale Map Narrative

Clifton NE

Tularosa NW

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 complete description of all wetlands found in the area nor provide complete plant species information.

Area Covered

The area is defined by two maps at a scale of 1:100,000. These maps are Clifton NE and Tularosa NW. The major river in the mapping area is the Rio Grande including a small portion of Elephant Butte Reservoir. Portions of Cibola and Gila National Forests are also included.

Bailey's Ecoregions

Most of the mapping area is in the Upper Gila Mountains Forest Province. This area consist mostly of steep foothills and mountains. Elevations range from 4,500 to 10,000 feet. In many areas the relief is higher than 3,000 feet.

Climate varies considerably with altitude. Average annual precipitation ranges from 10 to 35 inches and increases with rising elevation. Much of the rain comes in summer as thunderstorms. Also fall and winter brings rain to the lower elevations and snows in the highlands. During the spring there is a moisture deficit until the summer rains come. Average annual temperature is about 55°F in the lower foothills and 40°F on the upper mountain slopes.

Detailed information about orders of soils is lacking for much of this area. Mollisols and Aridisols dominate upland areas. Stony land and rock outcrops occupy some areas on both mountains and foothills.

A small area in the southeast corner of the Tularosa NW 1:100,000 scale map is in the Chihuahuan Desert Province. Briefly stated, this area is drier and the vegetation sparser than in the lowland areas of the remaining portion of the map. The elevation is roughly 4,500 feet. The Rio Grande River, as a portion of the Elephant Butte Reservoir runs along the northwestern edge of the province.

Map Preparation

Wetland classification for the NWI maps is in accordance with "Classification of Wetlands and Deepwater Habitats of the United States," Cowardin, et al, 1979.

Wetland classification and delineations were produced by air photo interpretation of high level aerial photography. The photography used was flown on 5/82 and 6/82 for Clifton NE and 5/82 and 6/82 for Tularosa NW. All the photography was color infrared at a scale of 1:58,000. It ranged from good to excellent in quality, enabling a close correlation of field conditions to the photo interpretation process. A field trip was conducted in June 1984 in an effort to relate various photographic characteristics to actual wetland classification.

Collateral data included U.S.G.S. topographic maps (7.5 minutes and 15 minutes) and soil, climate, and vegetation information from Baileys Ecoregions. Small-scale NWI wetland maps (1:100,000 scale) are available for portions of the U.S.G.S. 1:250,000 scale topographic maps which are included within this study area.

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 2. The Project Officer for those wetland maps is Warren Hagenbuck, Regional Wetlands Coordinator, U.S. Fish and Wildlife Service, Region 2, P.O. Box 1306. Albuquerque, NM 87103. Aerial photo interpretation was completed by Martel Laboratories, Inc., St. Petersburg, Florida. Maps were prepared by an 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 all systems.

Characteristics of NWI Wetland Systems in Clifton NE and Tularosa NW

Palustrine System

In the two maps encompassed in this report, one of the most common Palustrine wetlands is farm ponds. These are usually small impoundments or excavated ponds used for livestock watering. These intermittent ponds called "tanks" were found to be seasonally flooded in the higher elevations and temporarily flooded in lower areas. However, special consideration was taken for tanks shown as permanent on the topographic quads and containing water at the time of photography. These were generally seasonally or semi-permanently flooded. Temporarily and seasonally flooded tanks were classified (PUSA) and (PUSC) respectively, while semi-permanently flooded tank were classified as (POWF). All the above are given special modifiers, "h" for impounded or "x" for excavated. Palustrine unconsolidated shore commonly consists of gravel, mud, and sand exclusively or in combination.

In the mountainous areas, there are springs which support some seasonally flooded emergents (PEM1A) dominated by Eleocharis spp., Scirpus spp., Juncus spp., Rocky Mountain iris (Iris missouriensis), narrow leaved vetch (Vicia angustifolia), and Buttercup (Ranunculus sp.). When there were trees associated with these spring areas, they were quaking aspen (Populus tremuloides), and lower in elevation, cottonwood (Populus fremontii). Emergent areas that are temporarily flooded (PEM1A) contain species such as: cockleburr (Xanthium spinosum), sedges (Carex spp.), dandelion (Taraxacum officinale), clover (Trifolium spp.), Iris missouriensis and western wheatgrass (Agropyron smithii). There are natural depressions in this area which are intermittent lake or pond beds. These were normally covered with pioneering herbaceous vegetation and were called unconsolidated shores (PUS) except when there were wetland plant species found, for example: spurge (Euphorbia spp.), plantain (Plantago spp.), Russian thistle (Salsola kali) and foxtail (Setaria spp.). These intermittent emergent areas also occur along streambeds.

Semipermanently flooded emergent (PEM1F) marshes occurred in mountainous areas as well as in wider valleys which had seepage areas and/or impoundments (either natural or man-made). The dominant vegetation in these areas consisted of cattail (Typha latifolia), bulrush (Scirpus spp.), smartweed (Polygonum spp.), sedges (Cyperus spp.), spikerush (Eleocharis spp.), water-cress (Nasturtium officinale) and arrowhead (Sagittaria spp.).

Forested areas adjacent to streams were often temporarily flooded (PFO1A) and the vegetation consisted of cottonwood (Populus fremontii), narrow leaved cottonwood (Populus angustifolia), and some willow (Salix spp.). The shrubs (PSS) dominating these same areas were Russian olive (Elaeagnus angustifolia), New Mexico forestiera (Forestiera neomexicana), alder (Alnus tenuifolia), and some willow (Salix spp.). In the seasonally flooded areas of forest and scrub/shrub, the dominant was Salix sp.

Associated with many intermittent streambeds in the dryer areas was salt cedar (Tamarix gallica). This scrub-shrub was found growing alongside streambeds where surrounding vegetation was sparse. In most cases it was classified (PSS2J)

Lacustrine System

Natural or artificial unvegetated basins greater than 20 acres are classified as Lacustrine. Within the mapping area there are a few intermittent lake beds containing pioneering species not considered wetland plants. The lakebeds are classified (L2USJ). All other lacustrine systems in the area are classified (L2USC). Both natural and artificial lacustrine systems are present.

Riverine System

The Riverine system includes the classes open water (OW), unconsolidated shore (US), and streambed (SB). In this study area open water and unconsolidated shore are restricted to the Riverine upper perennial (R3) and lower perennial (R2) subsystems. While Riverine unconsolidated shore is not covered by perennial flow, it is associated with the reach of the river that contains permanent water and is included in that perennial subsystem. Streams which do not flow year round are classified as Riverine intermittent streambeds (R4SB). Some Riverine systems have their banks lined with trees or shrubs. In some cases where streamside Palustrine wetland vegetation cannot be separately delineated from the Riverine system, the wetlands are mapped as linear Palustrine features.

As the Rio Grande River flows through the mapping as a portion of the Elephant Butte Reservoir it is channelized into a conveyance channel which always has water in it, leaving the adjacent river bed dry except for spring. Also the volume of the remaining rivers in the mapping fluctuate greatly throughout the year.

Modifiers

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

Intermittently Flooded (J) -- The substrate is usually exposed, but surface water is present for variable periods without detectable seasonal periodicity. Weeks, months, or even years intervene between periods of inundation.

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

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 variable, being near the land surface to well below the land surface.

Semi-permanently Flooded (F) -- Surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or near the land surface.

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

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

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.

TABLE 1 SUMMARY OF WETLANDS AND DEEPWATER HABITATS

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	VEGETATION/SUBSTRATE
POW	Palustrine open water	Pond	Open water
PUS	Palustrine unconsolidated shore	Pond shore	Exposed pond shore
PEM1	Palustrine emergent persistent	Marsh, wet meadow	Spikerush (<u>Eleocharis</u>) Bulrush (<u>Scirpus</u>) Rush (<u>Juncus</u>) Sedge (<u>Carex spp.</u>) Cattail (<u>Typha spp.</u>) Smartweed (<u>Polygonum</u>)
PSS1	Palustrine scrub/shrub broad-leaf deciduous	Shrub swamp	Russian Olive (<u>Elaeagnus angustifolia</u>) Alder (<u>Alnus tenuifolia</u>) Willow (<u>Salix spp.</u>)
PSS2	Palustrine scrub/shrub needle-leaf deciduous	Shrub wetland	Saltcedar (<u>Tamarix gallica</u>)
PF01	Palustrine forested broad-leaf deciduous	Forested wetland	Cottonwood (<u>Populus fremontii</u>) Narrow-leaf Cottonwood (<u>Populus angustifolia</u>) Willow (<u>Salix spp.</u>)
L2US	Lacustrine littoral unconsolidated shore	Lake flat	Mud, sand, gravel
R2OW	Riverine lower perennial	River	Open water
R3OW	Riverine upper perennial open water	River	Open water
R4SB	Riverine intermittent streambed	Stream	Mud, sand, or gravel streambed/open water
R2US	Riverine lower perennial unconsolidated shore	River flat	Mud, sand, gravel
R3US	Riverine upper perennial unconsolidated shore	River flat	Mud, sand, gravel

LITERATURE CITED

Bailey, R.G., 1978. Description of the Ecoregions of the United States.

U.S. Dept of Agriculture, Forest Service, 77 pp.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRue, 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Dept of Interior, Fish and Wildlife Service, FWS/PBS-79/81, 103 pp.