

NATIONAL WETLANDS INVENTORY

1:100,000 MAP NARRATIVE DALHART NE

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.

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.

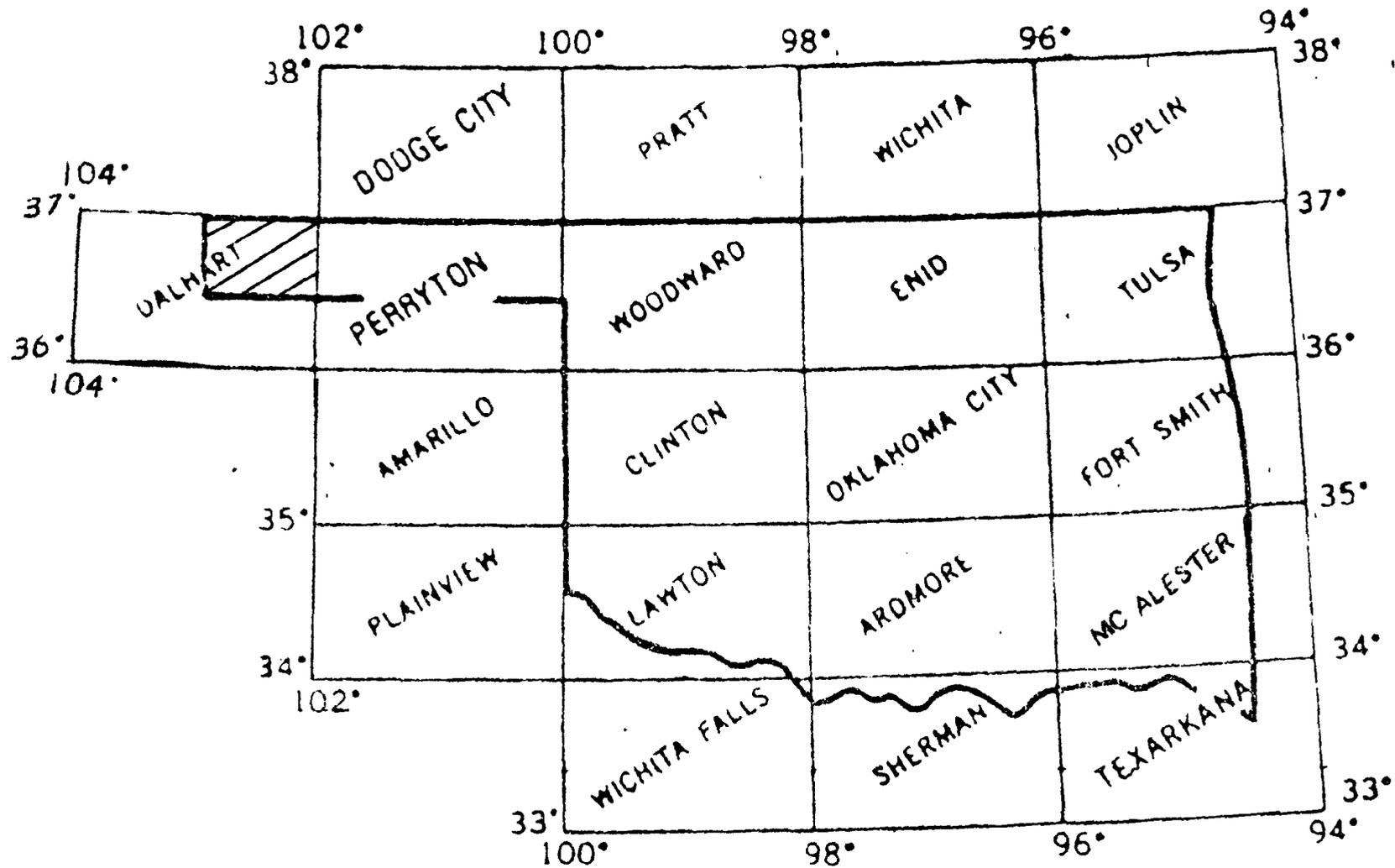
Wetland classification and delineations were produced by photo interpretation of high altitude aerial photography. The photography used is color infrared flown by NHAP at a scale of 1:58,000. The photography was taken during October of the year 1984. The field checking took place in November of 1985. To correctly classify the wetlands, field checks, 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.

STUDY AREA

The Dalhart N.E. 1:100,000 map is a part of the Oklahoma Playa project. This particular map is located in the panhandle of western Oklahoma. The map is bordered by Texas on the south (36°30'N latitude), New Mexico on the west (103°00'W longitude), Kansas on the north (37°00'N latitude), and the 102°00' longitude on the east.

1:250,000 MAPS
OF OKLAHOMA



PHYSIOGRAPHY AND CLIMATE

The mapping area is situated within the Grama-Buffer Grass section of the Great Plains-Shortgrass Prairie Province (Bailey 1978). This is characterized by extensive flat to rolling plains, interspersed with canyons and mesas to the west. Playas and depressional wetlands occur throughout the study area, except in the northwest portion of the map. The highest point of elevation is Black Mesa (4,973 ft.) located in the northwest corner of the state. This same corner of the state is considered as Rocky Mountain Piedmont with tablelands and high relief. The remainder of the map (approximately 90%) is classified as High Plains with smooth gently sloping terrain.

There are two major drainages dissecting the map area; the North Canadian and Cimarron Rivers. Both of these rivers will have dry streambeds at different times of the year and in different places due primarily to a lack of major tributaries and precipitation. The Cimarron River is located in the upper quarter of the map. The North Canadian River or Beaver River is situated in the lower half of the project area. The majority of all drainage, including the rivers, flow in an easterly direction.

The climate of this area is semi-arid. The annual average temperature will range from 50°-60°. Actual average temperatures may range from 30° for the winter to 75° for the summer. Precipitation averages 16 inches per year with a higher percentage of occurrence during the spring.

There are only three soils of particular interest within the study area. The Randall, Sweetwater and Lincoln. The Randall is associated with depressions and/or playas. The Lincoln soil is found with great frequency along the major drainages. While the Sweetwater is less common, it too is found on the floodplains.

WETLANDS AND DEEPWATER HABITATS

Wetlands and deepwater habitats within the project area fall within the Palustrine, Lacustrine, and Riverine systems. The following paragraphs define both habitats and their characteristics as described in Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et al. 1979).

Wetland habitats: "In general terms, wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. The single feature that most wetlands share is soil or substrate that is at least periodically saturated or covered by water. The water creates severe physiological problems for all plants and animals except those that are adapted for life in water or in saturated soil.

Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year."

Deepwater Habitats: "Deepwater habitats are permanently flooded lands lying below the deepwater boundary of wetlands. Deepwater habitats include environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live, whether or not they are attached to the substrate. As in wetlands, the dominant plants are hydrophytes; however, the substrates are considered nonsoil because the water is too deep to support emergent vegetation (U.S. Soil Conservation Service, Soil Survey Staff 1975).

"Wetlands and Deepwater Habitats are defined separately because traditionally the term wetland has not included deep permanent water; however, both must be considered in an ecological approach to classification. We define five major systems: Marine, Estuarine, Riverine, Lacustrine, and Palustrine. The first of these include both wetland and deepwater habitats but the Palustrine includes only wetland habitats." (Cowardin, et al. 1979)

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 this wetland map is Warren Hagenbuck, Regional Wetlands Coordinator, U.S. Fish and Wildlife Service, Region 2, 500 Gold St. S.W., P.O. Box 1306, Albuquerque, N.M. 87103. Aerial photo interpretation was completed by Martel Laboratories, Inc., St. Petersburg, Florida. Maps are prepared by the NWI National Team in St. Petersburg, Florida.

BIBLIOGRAPHY

- Bailey, R.G. 1980. Description of the Ecoregions of the United States. USDA Forest Service. Intermtn. Reg. Ogden, Utah 77p.; map.
- Cowardin, L.M., et al., 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Dept. of Interior. U.S. Fish and Wildlife Service. Biological Services Program. Washington, D.C. 103p.
- Murphy, Ralph S., et al., 1956. Soil Survey of Cimarron County, Oklahoma. U.S. Dept. of Agriculture, Soil Conservation Service.

PALUSTRINE

This is the most prevalent system throughout the entire mapping area. The wetlands of Palustrine forested, scrub shrub, and emergents consist primarily of bottomland habitat associated with major rivers and streams. Also included are the numerous playas and/or depressional wetland as well as areas around impoundments (reservoirs) and ponds. With its lower annual precipitation, this region exhibits little diversity compared to the other maps of this project.

The forested areas have Eastern cottonwood (Populus deltoides) and Black willow (Salix nigra) as their primary species. Small stands of elm (Ulmus sp.), Green Ash (Fraxinus pennsylvanica), and Hackberry (Celtis occidentalis) are also evident in some areas. The water regime classification is predominately temporarily flooded. Although there are some seasonally flooded areas which consist mostly of willow. All of these are usually associated with floodplain areas.

The scrub-shrub classification included species such as cottonwood, willow, and buttonbush (Cephalanthus occidentalis) for broadleaf deciduous shrubs. Salt Cedar (Tamarix sp.), a needle leaf deciduous shrub is found primarily along the two major rivers of the map. Temporarily flooded is again the main water regime for these two groups. Willows are predominate in any seasonally flooded area. Buttonbush is generally found in semipermanently flooded areas.

The emergents of Dalhart NE are associated with two communities; bottomland and playas. Those emergents common to the playa communities are Juncus sp. and Polygonum sp. which are usually temporarily or seasonally flooded. The farmed modifier is applied in some instances where playas or depressions are periodically farmed, but will revert back to a wetland when not altered by the farmer. The other communities may have Juncus sp., Polygonum sp., Scirpus sp., Carex sp., and Typha latifolia within their areas. Most semi-permanently flooded areas will have Typha latifolia as its main species.

The aquatic bed, Duckweed (Lemna sp.), though rarely seen is classified as floating vascular in areas that are permanently or semipermanently flooded.

LACUSTRINE

Natural or artificial open water bodies twenty acres or greater are classified as Lacustrine. The Lacustrine system will include the classes of unconsolidated bottom (L1,L2-UB), unconsolidated shore (L2US), and aquatic bed (L1, L2-AB). Nonvegetated Lacustrine substrates which are exposed at some time during the growing season are classified as unconsolidated shore (L2US-A,C) or unconsolidated bottom (L2UBF). This system is present in the study area as a natural, impounded, or excavated situation. Lacustrine aquatic beds are classified similar to those in the Palustrine system.

RIVERINE

The Riverine system includes the following classes: Unconsolidated bottom (UB), unconsolidated shore (US) and streambed (R4SB). Unconsolidated bottom (R2UBH) and shore (R2US-A,C) are restricted to the riverine lower perennial subsystem (R2). Streams which do not flow year round are classified as Riverine intermittent stream beds (R4SB-J,A,C,F). In some cases perennial streams on the topographic quadrangle map are called R4SBC and R4SBF. This is done where streambeds are actually dry during some part of the growing season or have flow through most of the year, but dry up before the year's end. Some streams may be excavated (x) to improve drainage or routing.

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.

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

Temporarily Flooded (A) - Surface water present for brief periods 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 sometimes 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.

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.

Farmed (f): The soil surface has been mechanically or physically altered for crop production, but hydrophytes will reestablish themselves if farming is discontinued. This applies only for: 1. farmed prairie potholes and pothole depressions, 2. farmed intermittent lake bottoms (playa lakes).

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	VEGETATION/SUBSTRATE
L1UB	Lacustrine limnetic unconsolidated bottom	Open water, lake	Unvegetated mud, sand, gravel
L2UB	Lacustrine littoral unconsolidated bottom	Shallow open water lake, lake bottom	Unvegetated mud, sand, gravel
L2US	Lacustrine littoral unconsolidated shore	Lake bed	Unvegetated mud, sand, gravel
L1AB4	Lacustrine littoral aquatic bed	Pond weeds, water weeds	Duckweed (<u>Lemna sp.</u>)
L2AB4	Lacustrine littoral aquatic bed	Pond weeds, water weeds	Duckweed (<u>Lemna sp.</u>)
R2UB	Riverine lower perennial unconsolidated bottom	Open water river, stream	Unvegetated mud, sand, gravel
R2US	Riverine lower perennial unconsolidated shore	River flat, bar	Unvegetated mud, sand, gravel
R4SB	Riverine intermittent streambed	Intermittent stream	Unvegetated mud, sand, gravel
PUB	Palustrine unconsolidated bottom	Open water, pond bottom	Unvegetated mud, sand, gravel
PUS	Palustrine unconsolidated shore	Pond shore	Unvegetated mud, sand, gravel

NWI CODE	NWI DESCRIPTION	COMMON DESCRIPTION	VEGETATION/SUBSTRATE
PAB4	Palustrine aquatic bed	Pond weeds, water weeds	Duckweed (<u>Lemna sp.</u>)
PEM1	Palustrine persistent emergents	Marsh, wet meadow	Bulrush (<u>Scirpus sp.</u>) Cattail (<u>Typha latifolia</u>) Cocklebur (<u>Xanthium</u>) Rush (<u>Juncus sp.</u>) Saltgrass (<u>Distichlis sp.</u>) Sedge (<u>Carex sp.</u>) Smartweed (<u>Polygonum sp.</u>)
PSS1	Palustrine scrub shrub, broad leaved deciduous	Shrub wetland	Buttonbush (<u>Cephalanthus occidentalis</u>) Cottonwood (<u>Populus deltoides</u>) Willow (<u>Salix nigra</u>)
PSS2	Palustrine scrub-shrub, needle leaved deciduous	Shrub wetland	Salt Cedar (<u>Tamarix sp.</u>)
PFO1	Palustrine forested broad leaved deciduous	Forested wetland	Cottonwood (<u>Populus deltoides</u>) Elm (<u>Ulmus sp.</u>) Green Ash (<u>Fraxinus pennsylvanica</u>) Hackberry (<u>Celtis occidentalis</u>) Willow (<u>Salix nigra</u>)