

FIELD SUMMARY REPORT - MAPPING CONVENTIONS  
FOR OKLAHOMA PLAYAS, CENTRAL OKLAHOMA PART 2,  
AND THE OKLA/BLM PROJECTS.

Date of Field Trip: 3/31 - 4/11/86.

Personnel: Warren Hagenback USFWS  
Bob Short USFWS  
Charles Scott USFWS  
Phil Keasling BLM  
Andy Commer US Army Corps of Engineers  
Steve Elsener SCS  
Frank J. Sargent Martel  
Donley Fisher Martel  
Tom Kanneke Martel

1:100,000 Map Names:

Oklahoma Playa - Clinton NW, SW; Lawton NW, SW.  
Central Oklahoma - Oklahoma City NW, SW; Ardmore NW, SW.  
Okla/BLM - Lawton SE, (Waurika West, Taylor, Charlie,  
Burkeburnett, Clara, Sunshine Hill, and Upper Creek  
Wichita Falls NE (Riverland Cemetary) Lawton SW  
(Frederick SW, Davidson NW, NE) Ardmore SW (Ryan SW).

Collateral Data:

USGS Quads (1:24,000, 1:62,500, 1:250,000)  
Soil Surveys for all maps where available.

Photography:

NHAP, CIR photography (1:58,000 scale), dates of photos include September to November 1981 and November 1983. The resolution and corresponding emulsions for entire photo coverage are good quality. The climatic conditions present on the November 1983 photos are wetter than normal, but the conditions present on the 1981 photos represent the drought conditions during summer/fall 1981. All photo signatures reviewed during field reconnaissance, especially emergents and forests, reflect emulsion and resolution qualities consistently throughout the project area.

Ecoregion and Physiography:

The project area is divided by four provinces according to Bailey, Description of the Ecoregions of the United States (1980). These provinces include the Great Plains Shortgrass Prairie Province, Tall Grass Prairie Province, Prairie Brushland Province and Prairie Parkland Province. The Great Plains Shortgrass Prairie Province extends southeastward into the northwest portion of the Clinton maps, where rainfall averages 15" to 25" annually and temperature averages 50° to 60° annually. The Tall Grass Prairie and Prairie Parkland Provinces receive 23" to 40" of rainfall annually and the average annual temperature ranges between 50° and 60°.

The Prairie Brushland Province receives 20" to 30" of rainfall annually and the average annual temperature ranges between 60° and 70°. The major river drainages within the project area include the following: South Canadian River, Washita River, North Fork Red River, Elm Fork Red River, Salt Fork Red River, Prairie Dog Town Fork Red River, Red River, Pease River, Cimarron River, North Canadian River, Deep Fork River, Little River, Rush Creek, Wildhorse Creek, Willow Creek and Beaver Creek.

The portion of the Great Plains - Shortgrass Prairie Province within the study area (Clinton and Lawton maps) is characterized by extensive flat to rolling plains with a few mesas or tablelands. The highest elevation in the project area (2,525 ft) is within this province. The South Canadian and North Fork Red Rivers flow within broad streambeds and may dry up during the summer months due to low rainfall and high surface evaporation. The Washita River is confined within a relatively entrenched streambed. Vegetation in this province is limited to short grasses and trees/shrubs (willow, cottonwood, salt cedar) along the drainageways and floodplains.

The topography of the Tall Grass Prairie Province is characterized by flat and rolling plains through the project area (Clinton, Lawton, Oklahoma City). The elevation gradually increases westward toward the high plains. The river courses throughout this part of the project area have well developed drainage systems, mostly incised. Woody vegetation is rare, except for cottonwood, willow and salt cedar on the flood plains.

The topography of the Prairie Brushland Province is characterized by flat to gently rolling plains within the project area (Lawton). Characteristic vegetation includes xerophytic grasses and sparse trees and shrubs. Mesquite is common in this province, growing in stands among grasses. The Red River generally marks the northern boundary of this province.

The topography of the Prairie Parkland Province (Oklahoma City, Ardmore) is mostly gently rolling plains, with moderately steep bluffs bordering some of the valleys. Vegetation is alternating between prairie and forest in the eastern region of the project area, with prairie dominating the westernmost area. The upland forest consists primarily of oak and hickory, while the drainages support a mixture of deciduous trees such as eastern cottonwood, willow, ash and elm.

#### Vegetation:

Although upland plant species are considerably varied throughout the four major ecoregions of the work area (Prairie Parkland, Prairie Brushland, Tall-Grass Prairie and Great Plains-Shortgrass Prairie), wetland plant species show less diversity.

Generally speaking, the same tree species are found throughout the mapping area, although there is a trend toward an increasing number of wetland tree communities as one goes eastward through the area. The most common tree species are eastern cottonwood (Populus deltoides) and black willow (Salix nigra). Less common species found are elm (Ulmus sp.), hackberry (Celtis occidentalis), box elder (Acer negundo), green ash (Fraxinus pennsylvanica), pecan (Carya illinoensis) and dogwood (Cornus sp). Sycamore (Platanus occidentalis) is found in the extreme eastern part of the mapping area. All tree species listed above are broadleaf deciduous. Also, eastern red cedar (Inniperus virginiana) a needle leafed evergreen and black locust (Robina pseudoacacia), most widely known as upland species, are found in small quantities in temporarily flooded tree communities.

The scrub shrub communities follow the same pattern as the forested communities, but involve less variety. The most common broadleaf deciduous shrub is black willow with some eastern cottonwood, indigo bush (Amorpha sp.) groundsel (Baccharis, sp.) and buttonbush (Cephalanthus occidentalis) also being present. Another common shrub is salt cedar (Tamarix pentandra), a needle-leaf deciduous variety. Both forested and scrub shrub communities are commonly found on river flood plains and along smaller tributaries, as well as around reservoirs and impoundments.

Most of the emergent plant species found are common throughout the mapping area, where again, as mentioned in relation to forested areas, there is a slight increase in wetland communities in the eastern portion of the mapping area. Common emergents found are cattail (Typha latifolia), rushes (Juncus sp. Cyperus sp.), spikerush (Eleocharis sp.), sedges (Carex sp.), smartweed (Polygonum coccineum) and switchgrass (Panicum virgatum). Emergents found less frequently are giant reedgrass (Phragmites communis), saltgrass (Distichlis sp.), sunflower (Helianthus annuus) and dock (Rumex sp.). Most of the above can be found mixed or in pure communities, much of which is determined by the periodicity of flooding. For example: Eleocharis and Juncus may be found in a seasonal wetland; while pure stands of cattails are primarily in a semi-permanently flooded location.

Areas of aquatic bed were also found throughout the work area. The types found are duckweed (Lemna minor), watercress (Nasturtium officinale), water primrose (Jussiaea repens) Ludwigia sp. and green algae.

#### MAPPING CONVENTIONS

Interpretation of the 1983 November photography will be conservative due to the amount of standing water at the time of photography. In some areas, standing water will delineated as PEM1A. Drought photography will be delineated as is.

## Lacustrine

1. All open water bodies 20 acres or larger will be classified as LIUBH or L2UBH as data indicates. Special modifiers excavated (x) or impounded (h) as needed.
2. Non-vegetated shoreline will be classified as unconsolidated shore (L2USA-C) or bottom (L2UBF).

## Riverine

1. Perennial streams with water shown in photography will be classified as R2UBH. R4SBF will be used in situations where the stream does not appear to flow throughout the year.
2. R4SBC is the designation used for perennial streams (no water on photography) and intermittent streambeds (water shown on photography).
3. R4SBA will be used only in intermittent situations.
4. Riverine flats and bars are designated as R2USA-C.
5. The excavated (x) modifier to be used when needed.

## Palustrine

1. Ponds are classified as PUSA-C or PUBF-H. The temporary (with little or no water) and seasonally flooded (with water) PUS's are generally for small ponds. The larger ponds tend to be semi-permanent to permanently flooded. Excavated (x) and impounded (h) modifiers to be used where needed. Dot size polygons will usually be temporarily or seasonally flooded.
2. Aquatic beds (AB) are classified as AB1 (algal), AB3 (rooted vascular) or AB4 (floating vascular). These may also be found in lacustrine systems. Two examples would be Ludwigia (AB3) and duckweed (AB4). (x) and (h) modifiers allowed.
3. Emergents (PEM1) are only denoted within the Palustrine system. The water regimes are A, C, and F. (x) and (h) modifiers allowed. Some emergent species are typha, carex, eleocharis and juncus.
4. Scrub/shrub (PSS1) wetlands will use A, C, and F water regimes. Such areas are predominantly willow, buttonbush, and cottonwood. (x) and (h) modifiers allowed.  
  
Scrub/shrub (PSS2) areas consist of salt cedar which is usually temporarily flooded (A). On riverine flats they may be classified as PSS2C. (x) and (h) modifiers allowed.
5. Forested wetlands (PF01) are classified as temporarily (A) or seasonally (C) flooded. Some of the major types of trees are cottonwood, willow, elm, and ash. Areas of dead trees are PF05F-H. (x) and (h) modifiers allowed.

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