Field Summary Report-Mapping Conventions for Texas PI and Draft Project

Date of field trip: 1/12-1/16/87

Personnel:

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1:100,000 Map Names:

Sherman NW (16 quads), SW; Dallas NW, SW

Collateral Data:

USGS topographical quads- 1:24,000, 1:250,000
Soil survey for all maps where available.
Rainfall data for all maps where available.

Photography

The CIR photography being used is produced by NHAP at a scale of 1:58,000 with flight dates of September to December 1981. The quality is good for both resolution and emulsion. Climate conditions at the time of photography appear to be typical. All photo signatures reviewed during field reconnaissance reflect emulsion and resolution qualities consistently throughout the project area.

Ecoregion and Physiography

The project area is located primarily within the Prairie Parkland Province, Oak-Bluestem Section. This region is characterized by 23" to 40" of precipitation annually with yearly average temperatures between 47°F-83°F. The topography of the maps' northern and eastern sections are comprised of irregular plains (gently rolling) with relief upwards of 100-300 feet. In the remaining western half of the work area the relief may vary from 300-500 feet with tableland features. Within this western section , in the very southwest corner of Dallas SW, is the Prairie Bushland Province, Juniper-Oak-Mesquite Section.

The Prairie Bushland Province also has an area of irregular plains, yet the relief is 300-500' in elevation. The temperature range is 48°F-84°F during the year, with a precipitation average of 30 inches per year. Grasses and shrubs are the predominate vegetation. Juniper, oak, and mesquite are the common woody vegetation.

Most of the primary drainage flows in a northwest-southeast direction. For the Sherman maps the Elm Fork Trinity River, Clear Creek, Denton Creek, Big Sandy Creek, and the West Fork Trinity River are the major drainages.

The major streams and river of the Dallas maps are: Brazos River, West Fork Trinity River, Paluxy River, Nolan River, Walnut Creek, Clear Fork Trinity River. Reservoirs are numerous throughout the project area. Several of them are subject to irregular drawn downs during the year.

Vegetation

Generally speaking, the same broad leaf deciduous species are found throughout the mapping area. The common species found in the temporarily flooded wetlands (PFO1A) are; Green ash (Fraxinus pensylvanica), elm (Ulmus spp.), cottonwood (Populus deltoides), pecan (Carya illinoensis), sycamore (Platanus occidentalis), hackberry (Celtis occidentalis), and willow (Salix nigra). Willows are the predominate specie for seasonal and semi-permanently flooded wetland forests (PFO1C, PFO1F).

Signatures for wetland forest areas on September photography will show brighter than surrounding upland trees. While on November and December photography, the opposite is true. The wet trees are darker than upland trees. Temporary trees give an orange return. Seasonal trees are bright with a pink or orange color. Areas that are semi-permanent will have variable colors and are seen standing in water. The preceeding signature also hold true for scrub/shrub wetlands. The exception to this would be for buttonbush which has a darker return then willow.

The scrub/shrub community consist of the aforementioned trees below twenty (20) feet in height for temporary wetlands (PSS1A). Seasonally flooded shrub communities will have primarily willows (PSS1C). Semi-permanently flooded shrub wetlands consist of willows and/or buttonbush (Cephalanthus occidentalis) PSS1F. Both forested and scrub/shrub communities are commonly found along rivers and their smaller tributaries, as well as around reservoirs and impoundments.

The emergents of the project area exhibit more diversity than the other communities do. Common emergents of temporarily flooded area are: Aster sp., sumpweed (Iva sp.), cockleburr (Xanthium strumarium), saltgrass (Distichlis sp.), switchgrass (Panicum virgatum), Juncus sp., and dock (Rumex sp.)(PEM1A). Seasonal emergents such as Carex sp., Eleocharis sp., smartweed (Polygonum sp.), and Juncus sp. will comprise this community (PEM1C). Cattail (Typha latifolia) and Bulrush (Scirpus sp.) are the primary emergents in a semi-permanent situation (PEM1F).

Aquatic bed was found throughout the project area. Algal mats, American lotus, and Azola. Classification labels shall be AB1, AB3 or AB4.

Mapping Conventions for Texas PI and Draft

Lacustrine

1. All open water bodies 20 areas or larger will classified as unconsolidated bottom (L1UB or L2UB) as data indicated. Water regines of semi-permanent(F) or permanent(H) flooding are used with the preceeding class.

2. Non-vegetated shoreline will be classified as unconsolidated shore L2US with water regimes of temporarily or seasonally flooded. Exposed bottom is denoted as L2UBF.

Riverine

1. Perennial streams with water shown on photogrpahy will be R2UBH. R4SBC 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 or field checked) and intermittent streambeds with water shown on photography.

3. R4SBA is used only in intermittent situations. Generally these are located at the beginning of a drainage system.

4. Riverine flats and bars are designated as R2US (temporary or seasonally flooded).

Palustrine

1. Ponds are classified as PUSA-C or PUBF-H. The temporary (with little or no water) are seasonally flooded (with water). PUS's are generally for small ponds and/or dot size polygons. The larger ponds (1/2 acre or larger) tend to be semi-permanent to permanently flooded.

2. Aquatic beds (AB) are classified as AB1 (algal), AB3 (rooted vasular) or AB4 (floating vascular). These may also be found in Lacustrine systems. The water regimes are limited to semi-permanent and permanently flooded.

3. Emergents (PEM1) are only classified within the Palustrine system and are only persistent. The water regimes are temporary (A) seasonal (C) and semi-permanent (F).

4. Scrub/shrub (PSS1-broad leaf deciduous) wetlands may have water regimes of A,C, or F.

5. Forested wetlands (PF01-broad leaf deciduous) are classified with A,C, or F water regimes. Some areas may contain dead trees which will be PF05F-H.

Special Modifiers

Special modifiers to be used are excavated (x) or impounded (h). Th are found in all three systems. Partially drained/ditched (d) is us for instances of draining and/or ditching wetlands.

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These conventions do not discuss the reservoir situati although in previous letters and map histories (found in photo pak file) the current procedure has been accepted.

(1.) Reservoirs will be mapped at normal pool.

(2) Areas of inundation beyond the normal pool may be delin PEM or L2EM at the discretion of the PI. This of cou involves using the topo, field notes, and other collateral information.

The decision to map the reservoirs this way comes at lengthy discussion with the National PI Q.C. team (Storrs, Vilich