Reg 3

FIELD SUMMARY REPORT

I. Study Area - Omaha NE

A. 1:100,000 Map Involved

Omaha NE

B. Quads Involved (*Indicates quad with checksite)

Berkley*	Rippey*	Cooper*	Bagley N.W.
Perry*	Dawson	Yale*	Bagley*
Panther*	Adel NW	Panora	Guthrie Center E.
Adel*	Redfield	Stuart N.	Menlo*

Coon Rapids*	Coon Rapids N.	Viola Center*	Templeton
Bayard*	Coon Rapids S.	Dedham	Gray
Guthrie Center W	North Branch		Audubon (15')*
Casey*	Adair N		

C. Personnel

George Eliason	Martel Corp.
Dennis Fowler	Martel Corp.
Janis Stone	Region 3 USFWS
Ken Herring	Iowa State Conservation Commission

D. Dates of Field Trip

8/20/84 - 8/24/84

E. Available Photography

HAP 83 1:58KCIR 5/15/83 - 87%
5/23/83 - 13%

F. [illegible]

USGS quadrangles - all were 7.5' except for Audubon 15'.

Soil surveys - Guthrie, Dallas Audubon, Carroll, Cass, Adair, Boone, Madison Counties.

II. OVERVIEW

The book by Robert G. Bailey, Descriptions of the Ecoregions of the United States, classifies the division that includes the study area as Prairie Parkland Province. The section of the Prairie Parkland Province in which the mapping area occurs is the Oak Hickory Parkland.

The landforms in this area range from gently rolling plains to steep bluffs along river valleys. The range of annual precipitation is 23" to 40" and is received primarily during the growing season.

The characteristic vegetation of this Province is Forest-Steppe. The typical Forest-Steppe vegetation is characterized by the intermingling of linear areas of deciduous trees, groves of deciduous trees, and prairie. The dominant plants in the prairies are grasses. The foreested areas have a variety of deciduous trees including maple, elm, cottonwood and willow.

III. Biological Characteristics of Wetlands

A. Marine System - not represented

B. Esturine System - not represented

C. Lacustrine

Natural and man-made lakes were found in the study area. If depth information is available and the classification is warranted, the L20W(littoral open water) will be used. All L20W zones will have the "G"(Intermittently exposed) water regime. All other lakes will be classified L10WH (limnetic open water permanent) with the appropriate modifiers. The two modifiers found in the study area are "h" (diked/impounded) and "X" (excavated).

D. Riverine

The major rivers in the study area are the North Raccoon, Middle Raccoon, South Raccoon, and the East Nisn abotna. These rivers and all perennial streams will be classified R20WH or R20WHX. Intermittent streams that meet mapping conventions, which are (1) must be on USGS quadrangle (2) show some floodplain development, will be classified R4SBF. River flats are seasonally flooded and will be classified R2USC.

E. Palustrine

A large part of the flood plains of the major rivers i[illegible] mainly seasonally wet stands of trees. Towards the west the rivers have been channelized to the advantage of agriculture and here the temporarily flooded water regime is more prevalent.

The seasonally flooded water regime supports a variety of trees including Silver Maple (Acer saccharinium), Willow (Salix sp), EasternCottonwood (Populus deltoidies), and Elm (Ulmus). [illegible] of the less common trees are Red Maple (Acer rubrum), Walnut (Juglans sp.), Locust (Gleditsia sp.) and Box Elder (Acer negundo).

The most common species in the temporarily flooded area are Silver Maple (Acer saccharinium), Willow (Salix sp.), Eastern Cottonwood (Populus deltoidies), and Box Elder (Acer negundo).

The classification scrub-shrub is represented in the seasonally flooded and temporarily flooded water regimes. Common species of both water regimes are Willow (Salix sp.), Elm (Ulmus), Gray Dogwood (Cornus sp.), Silky Dogwood (Cornus sp.), Box Elder (Acer negundo) and Elderberry (Sambucus canadensis).

Oxbow lakes and meander scars are common. Classifications vary widely and are determined by photosignature, on-site observation, soil surveys, and USGS quadrangles.

Emergents were observed in four water regimes: temporarily flooded (A), seasonally flooded (C), semi-permanently flooded (F), and intermittently exposed (G). The most common emergents encountered in the temporary water regime are smartweed (Polygonium sp.), whitetop (Scholocholoa festucacea), foxtail (Alopecurus aequalis), and dock (Rumex verticillatus). Less common was reed canary grass (Phalaris arundinacea).

In the seasonal water regime, the commonly seen emergents were reed canary grass (Phalaris arundinacea), smartweed (Polygonium sp.), vervain (Lippa lanceolata), arrowheads (Sagittaria sp.), dock (Rumex verticillatus), soft-stem bulrush (Scirpus sp.) and sedge (Carex sp.).

In the semi-permanent water regime we encountered cattail (Typha lattifolia), river bulrush (Scirpus sp.), reed grass (Phragmites sp.), soft-stem bulrush (Scirpus sp.), swamp milkweed (Asclepias incarnata), and cutgrass (Zizaniopsis sp.). These three water regimes include a variety of unidentifiable emergents.

In a few instances, the classification PEM2 is used. This classification is used only with semi-permanently flooded (F) or intermittently exposed (G) water regimes. Arrowheads (Sagittaria sp.) is the only non-persistant emergent in this classification.

Aquatic Bed was found on a few occasions. Duckweed (Lemna sp.) and blue-green algae were the only two species found. They were classified PAB4 and L2AB1, respectively.

IV. Imagery and Field Checking

The photography for Omaha N[illegible] through seven were flown on 5/15/83. Strip eight was flown [illegible] 5/23/83. The photography was high resolution throughout the mapping area. In certain areas, open water and sheet water caused reflection of sunlight. This made it difficult at times to make wetland/upland breaks and water regime breaks in field basins. Close attention had to be paid to USGS quadrangles, soil surveys, and vegetation changes. Some photos were dark around their perimeters. Many of these areas were associated with open fi[illegible] that were already darkly mottled, thus doubling the difficulty [illegible] seeing the wetlands. The USGS quadrangles and soil surveys w[illegible] helpful in these areas but, without a visible signature, some basins may have been missed.

Work into palustrine

Isolated basins in fields were the cause of an unexpected problem. Many times the photo signature did not match what was expected to be found in the field. One example of this is the well defined, black basins with a white border. These appeared to be strong seasonal wetlands. However, field inspection found healthy crops and often no evidence of a basin. The white border is thought to be associated with the practice of tile draining these areas. Other basins with poorly defined edges and gray signatures were often found to be temporary wetlands holding stunted corn or scattered emergents. This problem is most evident on Dawson quad.

Because of the nature of the terrain, many hillside drainageways are in evidence. The initial information was that these areas were too wet to plow and may be seeps with saturated (B) soil conditions. Investigation into soil types indicate that these areas are not seeps and are not, for the most part, classifiable as wetlands. There are exceptions. Before delineating any of these areas, certain criterion must be met. They must show evidence of vegetation, a slope that will allow a wetland environment to develop, and evidence of hydric soils. The photo signature, USGS quadrangles, and county soil surveys are invaluable in making the classifications on these areas. These drainageways, if wet, will be classified PEMA.

No subclass will be used on palustrine emergents unless they are found to be non-persistant. A few areas of non-persistant emergents were noted. The only emergent present in these areas was arrowhead (Sagittaria sp.). The photo signature was bright pink. These will be classified as PEM2 and a semi-permanent (F) or an intermittently exposed (G) water regime will be used.

The breaks between the seasonally flooded and temporarily flooded forested areas is generally clear. The seasonal areas display a gray-red mottling, whereas the temporary areas tend to be more red with some gray. If the understory can be seen, it becomes an [illegible] this differentiation. Most areas of seasonally [illegible] have a sparse understory. Temporary areas have generally a lush understory. This understory has a bright red photo signature. Other good indicators of the A/C break are the contour lines on USGS quadrangles and soil information.

Very few areas of aquatic bed were noted in this mapping area. Two of these (#44, #35 Wetland Field Data Sheets) were specific checksites. The Springbrook State Park checksite was observed and it was noted that the open water areas at the western end of the impounded lake, showing black (OW) on the photo, had in fact been covered by duckweed (Lemna sp.). This area is classified PAB4Gh.

Use in palustrine

in lacustrine section

use

The second checksite was McCord Pond. The photo showed open water, but when observed, the open water had been covered by bl[illegible] n algae. [illegible] site is classified [illegible].

also

The photo signatures differ in these two areas. The area within Springbrook State Park returned a black photo signature. The McCord Pond checksite returned a bluish-gray photo signature.

Impounded open water bodies are numerous throughout the study area. Size is the major factor in classification. Normally, the classification will be POWHh. If the pond is small, the POWGh classification will be used.

Summary

The moderate climate and sufficient annual precipitation of Omaha NE, Iowa allows a diverse community of wetlands to exist. Wetlands occur throughout the study area.

Overall, the imagery was of good quality and allowed good detail in delineation. Close attention to topographic maps, soil surveys, on-site inspections, visible vegetation, and characteristic basin shapes can overcome most of the problems mentioned in the previous section.