Des Moines NW

Field Trip Summary Report

I. Introduction

A. Date of Visitation: 16 July 1987

B. Reported by: Anthony Apa, Wetland Resource Spec., SDSU

C. Participants: Brian Smith, Wetland Resource Spec., SDSU

Howard Browers, Acting Project Director, SDSU

Ron Erickson, USFWS, Region 3, Wetland Coordinator

D. Available photography: NHAP (CIR-1:58,000)

1. Date: 15 May 1983 (88%)
23 October 1984
29 October 1984 (12%)

2. Photos visited:

343-35	539-26	537-48
343-33*	343-122	343-29
347-121*	343-124	343-31
347-35	537-52*	343-130*
347-119	537-50*	347-183*
539-52	343-265	347-185
539-30	343-267	347-123
343-126*		

* Photos with check sites

E. Collateral data:

1. USGS topographic maps

a. 7.5' quadrangle maps visited: Des Moines NE, Grimes, Maxwell, Des Moines NW, Des Moines SW, Des Moines SE, Rising Sun, Runnells, Mitchellville*, Colfax, Mingo,

Loring*, Ekhart*, Polk City*, Granger*, Madrid NW,

Luther, Slater*, Huxley

* Topos with check sites

2. USGS Water Resources Data: Iowa, Water Year 1983

3. USDA - SCS soil surveys for:

   a. Boone County

   b. Polk County

   c. Dallas County

II. Overview

The Des Moines NW is located within 93o00' to 94o00' N latitude and 42o00' to 42o30' W longitude.

Most of the geological deposits for the area are of glacial origin. There are also deposits of loess throughout the area. The topography is level to undulating, although there are steeper areas along the rivers. The native vegetation of the area is prairie grasses and hardwoods.

R.G. Bailey classified the area as Oak-Hickory-Bluestem parkland. The average annual precipitation is approximately 31 inches. Most of this precipitation comes in the rainy season. Average annual temperatures may be as high as +55o F (+13o C).

The area is primarily agricultural. Eighty to 90% of the area is farmland. Dairy cattle, beef cattle and poultry are typical livestock.

III. Biological Characteristics of Wetland Habitats:

A. Marine: Not present

B. Estuarine: Not present

C. Riverine:

The major river systems include the South Skunk, Des Moines, and Raccoon rivers and the Indian and Beaver creeks. These rivers will be classified as R2UBH. All other rivers will be classified as collateral data and signature dictate, as either R2UBG or R4SBF. Most of the major river systems, both permanent and intermittently exposed are channelized and will have an excavated modifier.

D. Lacustrine:

All of the lacustrine systems visited on this quad are artificial impoundments. The lakes will be pulled as L1UBHh unless the USGS topo indicates a 5' contour, then a L2UBGh zone will be pulled. The major lacustrine system visited was Saylorville Lake. The reservoir was formed by an earth-fill dam on the Des Moines River. The reservoir's boundary will be estimated on the May photography at the conservation pool level, and follow the given boundary which is the conservation pool boundary on the October photography. Considerations about problems along the reservoir will be discussed later in this report.

E. Palustrine:

One group of palustrine wetlands include the small impoundments in draws. Due to the undulating and sometimes steep draws along river valleys, they were quite prevalent. Most were intermittently flooded but there were also several semi-permanent and seasonal impoundments. Another artificial situation includes gravel pits. Most will be classified as palustrine with intermittently exposed or semi-permanent water regimes. Another group of palustrine wetlands were temporary and

seasonal basins found in plowed farmland. These classic "potholes" were usually found in plowed fields and drained.

The final group of palustrine systems are usually found in association with riverine systems or are themselves linear seasonal or temporary wetlands. Many of the wetlands are cutoff oxbows along the rivers in association with forested temporary or seasonal flood plains. Water permanence will be determined by photosignature and collateral data.

A unique situation presented itself along Saylorville Lake. The palustrine system will be used on the area surrounding the lake from the conservation pool elevation (its deepest point) to the flood pool elevation. The intermittently flooded water regime will be used. The class determination will be as photosignature indicates on the October photography. By default, the emergent class will be used on the May photography. The entire area will have the impoundment modifier.

Plants commonly associated with palustrine systems and water regimes on this trip were:

Temporary	
Silver maple	*Acer saccharinum*
Green ash	*Fraxinus pennsylvanica*
Willow	*Salix* spp.
Sedges	*Carex* spp.
Dock	*Rumex* spp.
Saturated	
Sedges	*Carex* spp.
Reed canary grass	*Phalaris* spp.

Cattail	*Typha* spp.
Seasonal	
Sedges	*Carex* spp.
Smartweed	*Polygonum* spp.
Cattail	*Typha* spp.
Semi-permanent	
Cattail	*Typha* spp.
Bulrush	*Scirpus* spp.
Duckweed	*Lemna* spp.

IV. Imagery, Preliminary Delineations (expected cover type), Field Checking

A. Considerations of imagery

The quality of the imagery is good. Both the May and October photography have good sharp clarity and are adequate for interpretation. The only consideration is that there are 2 dates of photography. The extent of October photography is minimal and ironically will be very helpful when interpreting Saylorville Lake as the May photography is at flood pool levels.

Climatic conditions at the time of photography appeared to be adequate also. We may have to be slightly agressive on the temporary wetlands due to slightly dryer conditions at the time of the photography.

IV & V Problems and Resolutions

A. Determine upland-wetland boundary on Saylorville Lake due to fluctuating reservoir levels from spring to fall.

Solution: Saylorville reservoir was formed by an earth-fill dam completed in 1976. Storage began in April of 1977. The conservation

pool elevation is at 833 ft. and the flood pool elevation is at 890 ft. On the May photography the water level was very near flood pool elevation. At the time of field investigation the reservoir was at conservation pool level and very similar to the October photography. It was determined that the zone between the two pool levels will be considered intermittently flooded. The upland-wetland border on the October photography will be estimated from the topographic map and class designation will be as it appears on the photography. The intermittently flooded zone on the May photography is flooded and the lacustrine-palustrine boundary will be estimated by the topographic map contour lines. Areas that have no higher life form of vegetation present (trees, shrubs) will have the emergent class by default.

B. Upland-wetland determination on forested floodplain.

Solution: As with previous Iowa 1:100,000's, the forested floodplains were found to be temporarily wet with some seasonal oxbows present. The signatures are not typical of wet trees but we will be more aggressive in pulling these areas due to the consistency of field verification of wetland presence.

C. Check linears in the field as to perennial or intermittent in comparison to the topos.

Solution: Linears in the field were found to be consistent with topographic map designation and topo designation will be followed closely.

D. Find out what kind of signature in plowed fields should be considered wetland.

Solution: Temporary and seasonal basins in plowed fields were usually completly drained. Those that still exhibit a very well defined basin with a strong wet signature will be pulled as A's or C's with a drained modifier when applicable. These basins may also have a small amount of red looking vegetation on the photo.

VI. Summary

Interpretation on this 1:100,000 will not be difficult and very typical of past areas interpreted. The only problems will be Saylorville Lake and tie-in between May and October photography. Ron Erickson and the photointerpreters present solved the situation.