

Kansas City NE (Missouri)

**Field Trip Summary Report
with focus on the Missouri River Valley**

I. Introduction

- A. Map Name: Kansas City NE -- Missouri portion
- B. 7.5' quads visited: Halls*, St. Joseph North, St. Joseph South, Amazonia*, Wathena * Topo with check site
- C. Report prepared by:
Ross Blank-Libra, Wetland Resource Specialist, SDSU
- D. Personnel:
Howard Browsers, Research Associate, SDSU
Brian Smith, Wetland Resource Specialist, SDSU
Kevin Hop, Biological Technician, SDSU
Jerry Zimmerman, Soil Conservation Service, St. Joseph, MO
- E. Dates of field trip:
June 7-8, 1988
- F. Available photography: (for entire map)
 - 1. Dates: 5-15-83 (37.5%)
5-16-83 (31.0%)
5-23-83 (12.5%)
11-20-83 (19.0%)
 - 2. Scale: 1:58,000
 - 3. Type: CIR-HAP
- G. Collateral Data:
 - 1. USGS topographic maps (7.5' and 1:250,000)

2. USDA-SCS soil survey for Platte Co. and draft survey for Buchanan Co.
3. USGS water resources data for Missouri, Water Year 1984

II. Overview

The Kansas City NE 1:100,000 quadrangle is located within 39°30' to 40°00' N latitude and 94°00' to 95°00' W longitude. The ecoregion is the Oak-Hickory-Bluestem Parkland section of the Prairie Parkland Province of the Prairie Division of the Humid Temperate Domain.

The topography of the area ranges from steep bluffs along the flat Missouri River Valley to gently rolling farm land. Elevation ranges from 785 ft. at the Missouri River southwest of St. Joseph to about 1,150 ft. in the hills and bluffs along the same stretch of the Missouri River. The average annual temperature is 55°F with extremes of -10°F to +112°F. Annual precipitation averages about 36 inches. Agriculture is common with corn and soybeans being the major crops.

III. Biological Characteristics of Wetland Habitats: By system

- A. Marine: Not present
- B. Estuarine: Not present
- C. Lacustrine:

Natural lacustrine systems occur only in the Missouri River Valley as large oxbow lakes. Artificial lacustrine systems occur as impoundments on the remainder of the map. In both of these situations the limnetic subsystem will be used with the unconsolidated bottom class, unless depth data

is available, or the area was visited and determined to be otherwise.

D. Riverine:

The Missouri River is the major system in this category and will be classified as R2UEH. Due to the threat of flooding this river is bound by many dikes and levees. Other major riverine systems include the Platte River, Little Platte River, and Shoal Creek. These will be labeled as R2UBG or R2UEH depending on the water resources data available. The high relief topography of the map was formed by many smaller drainages. They consist of unconsolidated bottoms and can also consist of rock, cobble, or sand, and can be classified as R2UBG, R4SBF, R4SBC, or R4SBA. Most riverine systems have a PF⁰1A or C associated with them.

E. Palustrine:

The most common type of palustrine wetland on this 1:100,000 map are stock dams (PUBGh, PUBFh, or PEMCh). Many of these have aquatic beds. If the wetland was seen in the field to have an AB class then it will be classified in that manner. Otherwise, the UB class will be used. The Missouri River floodplain had a number of Palustrine wetlands. Most have been drained and farmed at one time or another. There were some large semipermanent and intermittently exposed wetlands still intact. Forested wetlands were prevalent along rivers and streams. Shrubs are also common with the linears, and undisturbed basins on the floodplain. Saturated

wetlands occurred at the top of some smaller drainages or along these smaller linears and often were encountered below stockdams.

Plants commonly associated with palustrine wetlands and their water regime:

Temporary

Boxelder	<u>Acer negundo</u>
Silver maple	<u>Acer saccharinum</u>
Green ash	<u>Fraxinus pennsylvanica</u>
American elm	<u>Ulmus americana</u>
Spike rushes	<u>Eleocharis</u> spp.
Ragweed	<u>Ambrosia</u> spp.
Mulberry	<u>Morus</u> spp.
Shagbark hickory	<u>Carya ovata</u>
Sycamore	<u>Platanus occidentalis</u>
Sedges	<u>Carex</u> spp.
Dock	<u>Rumex</u> spp.
Nettle	<u>Stachys</u> spp.
Rushes	<u>Juncus</u> spp.
Horsetail	<u>Equisetum fluviatile</u>
Willow	<u>Salix</u> spp.

Saturated

Reeds	<u>Phragmites</u> spp.
Sedges	<u>Carex</u> spp.
Cattail	<u>Typha</u> spp.

Willow	<u>Salix</u> spp.
Boneset	<u>Eupatorium perfoliatum</u>
Bulrushes	<u>Scirpus</u> spp.

Seasonal

Smartweed	<u>Polygonum</u> spp.
Sedges	<u>Carex</u> spp.
Reed canary grass	<u>Phalaris arundinacea</u>
Sycamore	<u>Platanus occidentalis</u>
Willow	<u>Salix</u> spp.
Silver maple	<u>Acer saccharinum</u>
Mulberry	<u>Morus</u> spp.
Box elder	<u>Acer negundo</u>
Rushes	<u>Juncus</u> spp.
Cattail	<u>Typha</u> spp.
Bulrushes	<u>Scirpus</u> spp.

Semi-permanent

Cattail	<u>Typha</u> spp.
Bulrush	<u>Scirpus</u> spp.
	<u>Algae</u> spp.
Duckweed	<u>Lemna</u> spp.

Intermittently Exposed

	<u>Algae</u> spp.
Duckweed	<u>Lemna</u> spp.

Pondweed

Potamogeton spp.

Coontail

Ceratophyllum demersum

IV. Imagery, Preliminary Delineations, Field Checking

A. Considerations of Imagery

1. Quality: Excellent
2. Season of photography:

Spring 1983, Fall 1983

3. Climatic conditions at the time of photography:

Conditions on the Spring photography were very good. They exhibited what would be normal water conditions. Conditions in the field at the time of the trip were extremely dry.

B. Expectations versus Ground Verification (Missouri River floodplain)

1. No wetland-upland boundary problems were encountered
2. Wetland photosignatures:

Temporary emergent wetlands' photosignatures in the Missouri River floodplain usually displayed surface water or very dark muddy signature in a fairly well-defined basin. Seasonal emergent wetlands showed a stronger water, or white to gray signature in a well-defined basin. Most of these two types contain drains and were often farmed when encountered in the field. Forested temporary wetland signatures were usually light pink with darker understory, or bright red with no

understory visible. Seasonal forested and scrub-shrub wetlands almost always exhibited flooding of the wetlands were in association with linears. Semi-permanent wetlands exhibited an open water signature with or without clumps of vegetation. The open water signature of the semipermanent and intermittently exposed wetlands gave a very dark even-toned blue signature. We found no evidence of aquatic beds giving a photosignature on the spring photography.

Saturated areas exhibited an odd green-gray and white mottled signature or a dark gray red signature. The later along side linears and on an incline. The former along the bottom of fairly wide drainages and below stockdams where seepage is occurring.

3. Problems:

a. Aquatic bed signatures are not visible on our spring photography.

b. Very dry conditions on the field trip (June 1988).

Reports had some "old timers" saying it was drier than they've seen it in 40 years.

c. R2UBG and R2UEH distinction.

d. R2 and R4 distinction.

e. Wetlands were found on the Waldren soil, which is not considered hydric.

V. Solutions to Problems in Part IV

A. Limitations of Aerial Photography:

Aquatic bed photosignatures are not visible because they may never emerge above the water's surface or they are not growing yet at the date of photography. Therefore, the wetland will be labeled with the UB class, unless visited.

The distinction between a permanent and an intermittently exposed river will be determined with the aid of the Water Resources Data. The R2 and R4 distinction will be made with the topo maps. If the linear is perennial on the topo it is an R2, if intermittent then it will be R4. If a perennial stream was visited and found to be dry, it will be classified as an R4.

We were informed by the SCS that the Waldren soil is a catch all for the area and could contain hydric inclusions.

VI. Problems:

Overall, there are no major interpretation problems on this portion of the map. The areas outside the Missouri River floodplain will be field investigated at another time.

Note: Farmed Palustrine wetlands in the Missouri River floodplain will have the P in the alphanumeric label underlined.