MAP REPORT FORM
Scale 1:100,000

Map Name: Sioux City NE State(s): Iowa (Region 3 portion)

MAP PREPARATION

Photography Used:

	Emulsion	Scale	Date	Percent Coverage
1.	Color--infrared	1:58,000	5-25-83	100%
2.				
3.				

Field Check Dates:

1. 1-27-87
2.
3.

Contractor(s) for Photo Interpretation:

1. South Dakota Cooperative Fish and Wildlife Research Unit, South Dakota State University P.O. Box 2206, Brookings, SD 57007
2.
3.

Collateral Data Used:

1. U.S.G.S. Topographic Quad. maps
2. U.S.D.A. - SCS Soil Surveys for Plymouth and Woodbury Counties
3. U.S.G.S Water Resource Data for Iowa, Water Year 1983
4.
5
6.
7.
8.

GEOGRAPHY

General Location:

The region 3 portion of the Sioux City NE is included within 42°30' to 43°00' N latitude and 96°00' W longitude to the Big Sioux River.

Bailey's Ecoregion Classification and Description:

1. Humid Temperate domain
   Prairie division
   Tall grass prairie province
   Blue stem prairie section

2.

3.

4.

WETLAND COMMUNITIES

MAP SYMBOLS		LOCAL NAME	DOMINANT VEGETATION	WATER REG
PEM		temporary wetland	(Stewart and Kantrud 1971)*	A
PEM		saturated wetland	Carex spp., Typha spp., Juncus spp.	B
PEM		seasonal wetland	Carex spp., Polygonum spp., Phalaris arundinacea Scholochloa festucacea	C
	PEM	semipermanent wetland	Typha spp., Scirpus spp.	F
	PUB	pond	open water	F,G
	PSS	scrub-shrub wetland subclass 1	Salix spp.	A,C
	PFO	Forested wetland subclass 1	Salix spp., Ulmus americana Fraxinus pennsylvania, Populus deltoides, Acer negundo	A,C
	L1UB	lake	open water	H
	R4SB	stream	none	C,F
	R2UB	river	open water	G,H
	R2US	beach	none	A,C

Special modifiers d, h, and x were used in appropriate situations. Water regime K was used in conjunction with the water regime at the time of photography on sewage treatment ponds.

*(Stewart, R.E., and H.A. Kantrud. 1971. Classification of natural ponds and lakes in the glaciated prairie region. U.S. Bur. Sport Fish. Wild. Resour. Publ. 92. 57pp.)

SPECIAL MAPPING PROBLEMS

1. The photography was taken at the end of a five year drought in that area. The photography is dry overall.

1.

2. Visit the Big Sioux River flood plain and determine characteristics of wetlands lying there in.

2. The lighter gray signatures on the photos will be left as upland unless it occurs in a depressional area indicated on the topo. The area will then be considered for a PEMA classification. The dark gray and "sheet water" signature will be left as upland unless it has a very strong and definite boundary, in which case is will be called a PEMA. A seasonal water regime may be considered if the area has a deep depression shown on the topo. The forested areas alon the flood plain will be left as upland unless there is a good wet signature presen on the photo. Most of the wet trees will b temporary unless extremely wet or standing in water.

3. Check linears in the field as to perennial or intermittant in comparison to the topos.

3. Linears were a little weaker in the field than on the topos. We will use our judgement as to intermittant or perennial using the photo as the main data source. Temporary linears did not show up on the photos, in many cases, because of dry conditions.

4. See if draws and waterways in farmed fields

4. Grassy waterways will be considered upland

plowed draws. Field work verified these as upland.

SPECIAL MAPPING PROBLEMS

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

6. Check water regimes of different sized impoundments.

5. Temporary and seasonal basins in plowed fields were usually completely 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 the drained modifier, if called for. These basins may also have a small amount of red looking vegetation on the photo.

6. Seasonal impoundments were found to be very small or exhibiting a white or gray signature and may also appear dry on the photography. Larger impoundments will be semipermanent or intermittantly exposed depending on strength of water and height of the dike.

USER CAUTION

The map document was prepared primarily by stereoscopic analysis of high altitude aerial photographs. Wetlandswere identified on the photographs based on vegetation, visible hydrology, and geography in accordance with Classification of Wetlands and Deep Water Habitats of the United States (An Operation Draft) Cowardin, et al., 1977. The aerial photographs typically reflected conditions during the specific year and season when they were taken. In addition, there is a margin of error inherent in the use of aerial photographs. Thus a detailed on-the-ground and historical analysis of a single site may result in revision of the wetland boundaries established through photographic interpretation. In addition, some small wetlands and those obscured by dense forest cover may not be included on the map document.

Federal, State, and local regulatory agencies with jursidiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either design or products of this inventory, to define limits of proprietary jurisdiction of any Federal, State, or local government or to establish the geographical scope of regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, State, or local agencies concerning specific agency regulatory programs and proprietary jurisdictions that may affect such activities.

Additional information regarding this map or other National Wetland Inventory activities may be obtained by contacting:

1) Ronald E. Erickson, Regional Wetland Coordinator, USFWS, Federal Building, Fort Snelling, Twin Cities, MN 55111

2) South Dakota Cooperative Fish and Wildlife Research Unit, South Dakota State University, P.O. Box 2206, Brookings, SD 57007

SD Wetland Inventory
U.S. Fish and Wildlife Service
1:100,000 Map Narrative Report
Sioux City NE

Map Preparation

Contractor for this wetland inventory was the SDCFWRU, P.O. Box 2206, SDSU, Brookings, SD 57007. Photointerpreter was Tara Wertz. Regional Wetland Coordinator was Charles Elliott, U.S. Fish and Wildlife Service, Denver Federal Center, P.O. Box 25486, Denver, Colorado 80225.

Wetland delineation and classification for the Sioux City NE 1:100,000 quadrangle was done on 1:65,000 color infrared aerial photographs taken 22 and 23 May 1983. Photography covered 100% of the quadrangle. Classification of wetlands was done according to Cowardin, et. al.(1979). National Wetland Inventory mapping conventions were used to assist in photointerpretation. Field checking was done 27 April and 3 August 1987.

Special Mapping Problems

The major mapping problem was interpretation of low areas adjacent to the river. It was difficult to distinguish wetland-upland boundaries, especially in areas with trees and/or shrubs. It was determined the purple-gray or gray signatures were temporary wetlands. Areas with dense vegetation were considered upland.

Areas which had great topographic relief (hills along the floodplain of the rivers) had numerous linear systems. If the linear cut a definite channel and was on a considerable slope, it was classified as a riverine system. Vegetation overhanging linears made it extremely difficult to determine the water regime on the photo.

Wetlands

Lacustrine System

This system was not common on this quadrangle. Wetlands classified as lacustrine were L2ABG.

Riverine System

The Missouri River was classified as R2UBH. Side channels connected at both ends to the Missouri were classified R2UBG or R2USC. Unconsolidated shores were called R2USC or R2USA. The Big Sioux River was classified as R2UBG and R2UBH. The Vermillion River was classified as R4SBF except for channelized portions called R4SBFx.

In areas of high relief, linears were classified as R4SBA or R4SBC depending on water flow and size of the channel. Large streams with an open water signature and definite channel were classified as R4SBF.

Palustrine System

Palustrine temporary wetlands (PEMA) varied greatly throughout the quad. Most were dark gray and basin-oriented, although light gray and dark blue signatures were also found. Non-basin wetlands were pulled only if there was standing water present. These were usually associated with the flood plains of the the river systems and plowed fields.

Seasonal basins (PEMC) usually exhibited a dark-blue open water signature in a basin. Some wetlands were pink or bright red due to the green-up of vegetation on this late photography.

Semi-permanent wetlands were most often used on oxbow lakes adjacent to rivers and streams. These usually exhibited a rough-textured, clumped signature of white to mottled gray and occasionally a purple-green color. These open water systems were called PABF; densely vegetated wetlands were

PEMF. Areas with a mixture of open water and vegetation were PAB/EMF or PEM/ABF.

Palustrine forested temporary wetlands were identified by a dark gray signature beneath the trees (PFOA). Trees with an open water signature were classified as PFOC. Emergent and forested classes were mixed where appropriate. Scrub-shrub wetlands (PSSA, PSSC) were rough-textured gray or purple-gray signatures. The classifications PSS/USA and PUS/SSA were used on areas adjacent to the Missouri River where shrubs and unconsolidated shores were mixed.

Road ditches with an open water blue signature were classified as PEMCx. Vegetated road ditches were PEMFx, usually found along the interstate. Dugouts and sewage lagoons were classified as PABFx. Gravel pits were called PUBFx. Impoundments were classified as PABFh, PEMCh, or PEMAh depending on the strength of the water signature, presence of vegetation, and size.

Palustrine seasonal (PEMC) and temporary (PEMA) linear systems were common throughout the quad. Water regime depended upon strength of water signature.

Vegetation commonly found were as folows:

PEMA	
Spikerush	*Eleocharis* spp.
PEMC	
Smartweed	*Polygonum* spp.
Spikerush	*Eleocharis* spp.
PEMF	
Cattail	*Typha* spp.

	Hardstem bulrush	*Scirpus acutus*
	River bulrush	*Scirpus fluviatilus*
PFO		
	Cotttonwood	*Populus deltoides*
	Willow	*Salix* spp.
PSS		
	Willow	*Salix* spp.

More detailed descriptions of wetland vegetation in the Dakotas are provided in Stewart and Kantrud (1971, 1972), Fulton (1979), and Larson (1979).

References

Cowardin, L.M., V. Carter, F.C. Golet, and E.J. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79-31. 103pp.

Fulton, G.W. 1979. Wetland vegetation in southwestern North Dakota. M.S. Thesis, Department of Botany, North Dakota State University, Fargo. 197pp.

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Stewart, R.E., and H.A. Kantrud. 1971. Classification of natural ponds and lakes in the glaciated prairie region. U.S. Bur. Sport Fish Wildl. Resourc. Publ. 92. 57pp.

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