

MAP REPORT FORM

Scale 1:100,000

Map Name: St. Cloud SW State(s): Minnesota

MAP PREPARATION

Photography Used:

<u>Emulsion</u>	<u>Scale</u>	<u>Date</u>	<u>Percent Coverage</u>
1. Color-Infrared	1:65,000	5/1/80	100%
2.		5/2/80	
3.			

Field Check Dates:

1. June 29, 30; July 1, 1981
2. September 14, 1981
- 3.

Contractor(s) for Photo Interpretation:

1. South Dakota Cooperative Wildlife Research Unit, South Dakota State University, Brookings, SD 57007.
- 2.
- 3.

Collateral Data Used:

1. U.S.G.S. Topographic Quad Sheets
2. Soil Survey of Swift Ct. 1973
3. Soil Survey of Pope Ct. 1972
4. Soil Survey of Stevens Ct. 1971
5. Stewart, R. E., and H. A. Kantrud. 1971. Classification of natural ponds and lakes in the glaciated prairie region. USFWS Res. Publ. 92. 57pp.
6. Fassett, N. C. 1957. A manual of aquatic plants. Regents of the University of Wisconsin. 405 pp.
- 7.
- 8.

## GEOGRAPHY

### General Location:

West Central Minnesota

Latitude: 45°30' - 45°00'

Longitude: 96°00' - 95°00'

### Bailey's Ecoregion Classification and Description:

1. 2210 - Eastern Deciduous Forest Province - continental climate, adequate precipitation in all months, average annual precipitation 900 - 1500 mm (35 - 60 in.), small under deficits in summer, surplus in spring, cold winters and warm summers, average temperature 4° - 15° C (40 - 60° F).  
Maple - Basswood Forest and Oak Savanna Section (2213).
2. 2530 - Tall-Grass Prairie Province - flat and rolling plains relief < 90 mm (300 ft.), young glacial drifts and dissected till plains, precipitation and temperature as above, woody vegetation on flood plains.  
Bluestem Prairie Section (2531)
3. 2213 - Approximately the NE 1/3 of the St. Cloud SW  
2531 - Approximately the SW 2/3 of the St. Cloud SW

4.

WETLAND COMMUNITIES

<u>MAP SYMBOLS</u>	<u>LOCAL NAME</u>	<u>DOMINANT VEGETATION</u>	<u>WATER REGIME</u>
PEM	Temporary wetland	<u>Carex</u> sp., <u>Juncus</u> sp., <u>Hordeum jubatum</u> , <u>Aster</u> sp., <u>Spartina pectinata</u>	A
PEM	Saturated wetland	<u>Carex</u> sp., <u>Juncus</u> sp.	B
PEM	Seasonal wetland	<u>Carex atheroides</u> , <u>Polygonum</u> sp., <u>Phalaris arundinacea</u> , <u>Scolochloa festucacea</u> , <u>Panicum</u> sp., <u>Ranunculus</u> sp., <u>Berula</u> sp., <u>Syringane</u>	C
PEM	Semipermanent wetland	<u>Typha</u> sp., <u>Scirpus</u> sp.	F
POW	Semipermanent wetland	Open Water	F, G
PSS	Scrub-Shrub wetland	<u>Salix</u> sp., <u>Populus deltoides</u> , <u>Larix laricina</u>	A, B, C, F
	Includes subclasses 1, 2, 5		
PFO	Forested wetland	<u>Salix</u> sp., <u>Populus deltoides</u> , <u>Larix laricina</u>	A, B, C, F.
	Includes subclass 1, 2, 5		
L10W	Lake	Open Water	G, H
L20W	Lake	Open Water	G
L2US	Shore	Non-vegetated or pioneer sp.	C
R20W	Perennial river	Open Water	G, H
R2US	Shore	Non-vegetated or pioneer sp.	C
R4SB	Intermittent stream	Open water and scattered clumps of emergents	C, F

Where appropriate, the special modifiers of d, h, x were used.

The water regime U was used on wetlands where the specific water regime could not be determined.

## SPECIAL MAPPING PROBLEMS

### PROBLEM

1. Several small problems existed with the photography; two date photography (5-1-80 and 5-2-80) caused flight line misalignment thus several work areas extended into the fiducial marks, labels or edge of the photography. Clouds prevented photo-coverage of a few areas, and several photos were minimally overexposed.  

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2. The most difficult problems encountered was determining the water regime of SS and FO wetlands. These areas occur in isolated spots in agriculturally active fields and those encompassed in large expanses of forested areas. These areas also lacked visual evidence of water, e.g. ditches, adjacent wetlands.  

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3. Burned areas caused delineation and interpretation problems. The upland/wetland boundary (by signature) was subtle or non-existent, EM, SS, and FO were nearly impossible to differentiate.  

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4. At the time of the photography there was not an overabundance of standing open water, the majority of seasonal wetlands have a very light, whitish signature with no open water present. Upland areas surround many wetlands also have a light, whitish signature. When these two areas are adjacent to one another, the subtle break between seasonal wetland and upland is difficult.  

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5. Although not a serious problem some fields with plugged tile drainage created an open water area in those basins originally drained.  

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### RESOLUTION

1. Wetlands were delineated wherever there was photo-coverage. At times this meant monoscopic interpretation and/or mapping over a fiducial mark. Where no photo-coverage existed i.e. cloud, the obstacle was delineated and identified; exposure made interpretation somewhat more difficult although accuracy was not sacrificed.  

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2. At times the signature difference is sufficient to differentiate wet from non-wet (wet being duller and grayish while non-wet appearing more vivid and/or reddish in tone). However, the signature alone proved to be a somewhat unreliable indicator. When available, U.S.G.S. topo maps were a valuable aide as were S.C.S. soil surveys.  

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3. Again, when available the U.S.G.S. topo maps and S.C.S. soil surveys helped in the delineations, although many times their information was not specific enough. Numerous sites were visited in the field although the majority were not; wetlands delineated were labeled water regime U and usually only the darker portions of the burned areas were pulled. Based on field visits this was the best/only way to differentiate the wetland/upland boundary from their photo-signature.  

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4. U.S.G.S. topo map can help if available and specific enough. Because of the variability in signatures there probably isn't an easy resolution. Generally the upland signature was slightly lighter with a smoother texture while seasonal vegetation appeared more rough and thus darker. Apparently many farmers actually plant *Phalaris arundinacea* in upland areas, which also occurs in wetland boundaries; ergo their signatures are nearly identical.  

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5. The timing of the photography eliminated a lot of these areas, however, on those that remained were observed to lack emergent vegetation (other than crops), drainage present and surrounded by crops with no undisturbed band of non-crop vegetation encompassing the wetland.  

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SPECIAL MAPPING PROBLEMS

PROBLEM

RESOLUTION

6. The large number of ditches occurring throughout the map present a variety of water regimes, sizes, and lengths.

6. It's the decision of the Regional Office to map those ditches offering "significant waterfowl habitat." As a result we are pulling those ditches with open water and/or semi-permanent vegetation/open water. The water regimes used on perennial and intermittent riverine systems include F, G, and H.

7. Lack of collateral data; specifically a dearth of S.C.S. soil surveys and U.S.GS. ortho-photo quads in place of the standard topo maps. The ortho's are virtually worthless.

USER CAUTION

The map document was prepared primarily by stereoscopic analysis of high altitude aerial photographs. Wetlands were 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 jurisdiction 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) Ron Erickson, Regional Wetland Coordinator, USFWS, Federal Building,  
Fort Snelling; Twin Cities, Minnesota 55111.
- 2) South Dakota Cooperative Wildlife Research Unit, South Dakota State  
University, Brookings, South Dakota 57007.