

SOUTH DAKOTA WETLAND INVENTORY  
U.S. FISH AND WILDLIFE SERVICE  
1:000,000 MAP NARRATIVE  
GRAND FORKS SW

Map Preparation:

Contractor for this wetland inventory was the South Dakota Fish and Wildlife Research Unit, P.O. Box 2206, South Dakota State University, Brookings, SD 57007. Photointerpreters were Debbie Henry and Howard Browers. Preparation of this narrative report was completed by Debbie Henry and Howard Browers. Regional Wetland Coordinator was Charles Elliott, U.S. Fish and Wildlife Service, Denver Federal Center, P.O. Box 25486, Denver, CO 80225.

Wetland delineation and classification for the Grand Forks SW 1:100,000 quadrangle was done on 1:65,000 color infrared photography taken May 16, 1979 (NASA). Photography covered 100% of the quadrangle. Classification of wetlands was done according to Cowardin et al. (1979). National Wetland Inventory mapping conventions were also used to assist in photointerpretation. Field checking for this quadrangle was done on June 23 and November 5, 1987.

Special Mapping Problems:

The major problem encountered was the delineation of palustrine emergent temporaries (PEMA) in plowed fields. On some photos there are large areas of dark and light grays which looked like they might be wetlands. Soil surveys were used when available. Some of these signatures were underlain by hydric soils; others weren't. Often these areas had drainage ditches running through them. Also, this part of North Dakota was experiencing above-normal precipitation around the time of photography which may have resulted in ephemeral water. This was

especially evident around Page, ND. Based on these factors some of these large grays were classified as FEMA especially if basin oriented; others were excluded or only the darker, more central portions were delineated.

Another problem was distinguishing between seasonal (PEMC) and temporary (PEMA) wetlands as both exhibited open water signatures. Open water signatures with more or less undefined boundaries were often classified as temporary. Stronger, deeper looking basins were generally classified as seasonal. Land use could occasionally be used to distinguish between the two water regimes. Wetlands that showed evidence of being plowed around were generally called seasonal. However, since this area of North Dakota is so heavily impacted by the plow, land use differences were not very evident. Consequently, some seasonal wetlands may have been classified as temporary.

#### WETLANDS:

##### Lacustrine System

There were very few lacustrine classifications. Basins larger than 20 acres were commonly classified as L2ABG because most lakes and large wetlands in this area are shallow. A few sewage lagoons were larger than 20 acres and were therefore classified as L2ABGx. Some of the larger impoundments were classified as L2ABGh or L1UBHh.

##### Riverine System

There were several riverine classifications on the Grand Forks SW. Most rivers were classified as R4SBF. These rivers showed a dark open water signature often with pools and oxbows of semipermanent vegetation.

Rivers such as the Goose River were classified as R2UBG. These rivers were wider and carried water most of the year according to Water Resource Data and usually showed permanent water on the topos. Rivers that had

been channelized were commonly called R4SBFx.

### Palustrine System

Palustrine wetlands were more abundant on the western half of the quadrangle in the drift plain than on the eastern half in the Red River Valley. Wetland drainage was evident on the whole 1:100,000.

Emergent seasonal basins (PEMC) were often characterized by a strong open water signature. Some seasonal basins exhibited a smooth, even texture of vegetation. There were also some seasonals with a shiny, silver-type signature. A few were a mottled, gray-white color.

Emergent semipermanent basins (PEMF) had a clumped and rough texture which signified cattail (Typha spp) or other semipermanent vegetation. Some semipermanent wetlands had an open water-clumped mixture and these were classified as PEM/ABF. Some open water semi-permanents (PABF) were delineated.

Emergent temporary basins (PEMA) had a variety of signatures. One of which was a light gray signature. Some temporary wetlands had an open water signature with undefined edges. A few temporary basins had a light pink signature. There were drained temporary basins which were called PEMAd.

Temporary forested areas (PFOA) were identified by a light purple and pink signature. Seasonal forested areas were identified by a dark blue signature with trees within it. Some scrub shrub seasonals and temporaries (PSSC or PSSA) had a mottled photosignature.

Road ditches with a weak blue water signature were classified as PEMAX. Ditches with stronger water signatures were classified as PEMCx. Some ditches along interstates were classified as PEMFx because of clumped signatures. County drainage ditches were classified as PEMCx or PEMFx.

Gravel pits were usually classified as PUBFx. Any gravel pits that had been overgrown were called PSSCx or PSSAx. Dugouts were classified as PABFx. Some sewage lagoons were classified as PABFx or PABGx.

Vegetation commonly found in emergent wetland basins (PEMC) include prairie cordgrass (Spartina pectinata), and smartweeds (Polygonum spp.). Typical vegetation found in emergent temporary basins (PEMA) include foxtail bailey (Hordeum jubatum), saltgrass (Distichlis spicata), and western wheatgrass (Agropyron smithii). Cattail (Typha spp.), was the most common emergent vegetation in semipermanent wetlands (PEMF). More complete descriptions of wetland vegetation in the Dakotas may be found in Stewart and Kantrud (1971, 1972), Fulton (1979), and Larson (1979).

#### References

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