

South Dakota Wetland Inventory
U.S. Fish and Wildlife Service
1:100,000 Map Narrative Report

Grand Forks NW

Map Preparation:

Contractor for this wetland inventory was the South Dakota Fish & Wildlife Research Unit, P.O. Box 2206, South Dakota State University, Brookings, SD 57007. Photointerpreter was Tara Wertz , who also prepared this report. Regional Wetland Coordinator was Charles Elliott, U.S. Fish & Wildlife Service, Denver Federal Center, P.O. Box 25486, Denver, CO 80225.

Wetland delineation and classification for Grand Forks NW 1:100,000 quadrangle was done on 1:65,000 color infrared aerial photography taken 4 June 79 and 7 April 81. Photography covered 100% of the quadrangle. Classification of wetlands was done according to Cowardin et al. (1979). National Wetlands Inventory mapping conventions were used to assist in photointerpretation. Field checking for the quadrangle was done 22 June 87.

SPECIAL MAPPING PROBLEMS

The majority (70%) of the quad was delineated using the 1981 photography. The 1981 photos had a green cast and some were bleached out. This was a very dry period for the area and many wetland basins were partially filled, while some basins were dry. Some palustrine emergent temporaries and seasonals were probably missed because photosignatures were not visible. Also, because of the dryness of the

photography some semipermanent wetlands may have been classified as seasonal.

The rest of the quad was delineated from the 1979 photography. Water conditions were much better on these photos even though these were taken later in the spring. Delineation was more straightforward on this photography.

Lacustrine System

Most of the lacustrine basins were classified as L2ABG. These wetlands had strong, open-water signatures in a well-defined basin of >20 acres. These basins often had an outer zone of semi-permanent vegetation. Large impoundments were classified as L2ABGh. The large sewage lagoons near Grand Forks were classified as L2ABGx.

Riverine Systems

There are many riverine wetlands on the Grand Forks NW. The Red River has already been classified as R2UBH. The Goose River (and its branches) were classified as R4SBF until the juncture of the Goose and the North Branch where it was classified as R2UBG. Other tributaries were classified as R4SBF, R4SBC, and R4SBA depending on the strength of the water signature and the depth of the channel they follow. Channelized portions of these systems were identified with an x modifier. County ditches were classified as PFMFX.

Palustrine Systems

Palustrine emergent semi-permanent wetlands (PEMF) were generally represented by white, vegetative clumping with some open water. If there was a 70-30% mixture or greater, a mixed classification was used (PEM/ABF or PAB/EMF). Open water semi-permanents were also present (PABF).

Palustrine emergent seasonals (PEMC) were numerous on the western portion of the quad, and few were found in the Red River Valley. Signatures varied from white to green to dark blue, sometimes vegetated with fine-textured gray or green emergents. These basins varied the most in signatures; and due to the dryness of the photography, many of these basins were in draw-down.

Palustrine emergent temporaries (PEMA) had signatures ranging from light gray to dark gray, mud signatures, with an occasional open water signature. Basins were not well-defined, and often it was difficult to distinguish upland/wetland boundaries in areas where wetlands had not been drained.

Basins which have been drained were classified with a d modifier. Linear systems of drainage ditches were classified as PEMCx or PEMFx when vegetation was present or drainage ditch was very large (i.e. a diversion canal). Roadside ditches were classified as PEMCx.

Forested wetlands were called PFOC if standing water was present or PFOA if not. Scrub-shrub was called PSSC if water was present or PSSA if not. Mixed classes of PFO/SS or PSS/FO were common.

Dugouts were classified as PABFx. Gravel pits were PUBFx or L2ABGx if greater than 20 acres. Vegetated pits were PEMFx, PFOCx or

PSSCx. Sewage lagoons were called PABFx. Impoundments (<20 acres) were PABFh or PABGh.

The following is a list of the most commonly found plant species and their classification:

PEMA

foxtail barley	<u>Hordeum jubatum</u>
dock	<u>Rumex</u> spp.

PEMC

whitetop	<u>Scolochloa festucacea</u>
smartweed	<u>Polygonum</u> spp.
water plaintain	<u>Alisma</u> spp.

PEMF

cattail	<u>Typha</u> spp.
hardstem bulrush	<u>Scirpus acutus</u>

PSS

willow	<u>Salix</u> spp.
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PFO

willow	<u>Salix</u> spp.
cottonwood	<u>Populus deltoides</u>

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 & Wildlife Service. FWS/OBS-79-81. 103pp.
- Fulton, G. W. 1979. Wetland vegetation in southwestern North Dakota.
M.S. thesis, Dept. of Botany. North Dakota State University,
Fargo. 1970pp.
- Larson, G. 1979. The aquatic and wetland vascular plants of North
Dakota. PhD dissertation, Dept. of Botany, North Dakota State
University, Fargo. 453pp.
- 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.
- Stewart, R. E., and H. A. Kantrud. 1972. Vegetation of prairie
potholes, North Dakota, in relation to quality of water and other
environmental factors. U.S. Geol. Surv. Prof. paper 585-D. 36pp.