

SOUTH DAKOTA WETLAND INVENTORY  
U.S. Fish and Wildlife Service  
1:100,000 Map Narrative Report  
Aberdeen SW

MAP PREPARATION

Contractor for this wetland inventory was the South Dakota Cooperative Fish and Wildlife Research Unit, P.O. Box 2207, South Dakota State University, Brookings, South Dakota 57007. Photointerpreters were Howard Browers, Eileen Dowd, and Dave Nomsen. Preparation of this narrative report was completed by Howard Browers. 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 Aberdeen SW 1:100,000 quadrangle was done on 1:65,000 color infrared aerial photographs taken 17, 22 April 1982. Photography covered 98% 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 the quadrangle was done on 13 September 1983 and 16 January 1984.

SPECIAL MAPPING PROBLEMS

Few problems were encountered during the mapping of this quadrangle. The spring of 1982 was relatively wet whereas 1980 and 1981 were relatively dry. This probably resulted in more palustrine emergent semipermanent basins being grazed or cut for hay in 1980-81. Thus in 1982 when the basins were reflooded, the vegetation was probably covered and did not show

up on the photography. When collateral information was sufficient some open water basins and some weakly vegetated basins on the 1982 photography were classified as PABF and PEMF, respectively. The U.S. Fish and Wildlife Service and South Dakota Game, Fish and Parks personnel familiar with the area were also consulted on suspected semipermanent basins.

Water conditions varied across the photography with drier conditions noted at the western edge of each strip. Numerous temporary wetlands have light gray tan or white signatures. Some seasonals also contained only small amounts of water near the western side of the quad. Some temporary wetlands may be missed in these drier areas.

Clouds obscured some wetlands on frames 3493 and 3491. Where a wetland border could be distinguished an unknown water regime was used to identify the wetland. Some wetlands were probably missed due to cloud cover.

## WETLANDS

### Lacustrine System

The lacustrine system is not well represented on the Aberdeen SW. Occasionally an L2ABG or L2ABF is identified and characterized by an open water signature in a fairly large, deep basin. Semipermanent vegetation usually borders these wetlands.

### Riverine System

The riverine system was not common on the Aberdeen SW. The riverine classification R4SBF is occasionally used. All other drainages exhibited weaker water signatures and these usually develop persistent emergents. These drainages were classified PEMA, PEMC.

### Palustrine System

The most common palustrine wetland on the Aberdeen NW was the emergent seasonal wetland (PEMC). Some seasonal basins were characterized by a dark blue, open water signature or by a smooth, even-textured vegetative signature with an absence of recognizable clumping. Seasonal basins also exhibited a whitish or grayish-white vegetative signature with only some water in the basin. A seasonal basin in a plowed field may exhibit a dark blue open water signature in the main part of the basin and lighter bluish or grayish-white signatures on the edges or ends which is more of a temporary signature; however, the entire basin was classed as seasonal (PEMC) due to the absence of cultivation practices in the entire basin.

The palustrine emergent semipermanent wetlands (PEMF) were clumped and rough textured with a white to gray color. The vegetation was either within a blue open water signature or in a tightly packed basin with little or no discernable water. Palustrine wetlands that were mixed emergent and aquatic bed (PEM/ABF or PAB/EMF) had the blue open water signature with clumps of white to gray vegetation scattered throughout the wetland. Palustrine aquatic bed wetlands (PABF or PABG) were blue open water areas less than 8 ha and were generally surrounded by a definitive clumped, rough textured grayish cattail signature.

Palustrine emergent temporary wetlands (PEMA) had several variable signatures. Similar to semipermanents, these wetlands had a gray to white signature; however, it was smooth textured with no clumping and no standing water. Weak open water signatures fading out into a dark gray signature were also temporary. Other temporary signatures were a maroon color or a

grayish red tone. Wetlands too small for a polygon were delineated by a dot. Dot temporaries had a weak blue open water signature whereas the stronger open water signatures were dot seasonals.

Temporary forested wetlands (PFOA) were identified by a dark gray or blue open water signature beneath the trees. These wet forests were found along the borders of palustrine emergent wetlands. Seasonal forested wetlands (PFOC) were located within a seasonal wetland basin surrounded by standing water. Emergent and forested classes were mixed where appropriate. On occasion a scrub shrub wetland (PSSA) was identified.

Road ditches with a weak water signature were classified as PEMA<sub>x</sub> while ditches with stronger water were called PEMC<sub>x</sub>. Gravel pits with shallow water were classed as PEMC<sub>x</sub> whereas the deeper gravel pits as well as dugouts were classed as PUBF<sub>x</sub>. Small sewage lagoons were classified as PUBG<sub>x</sub>. Impoundments were either PEMCh, PUBFh, or PUBGh, depending on the strength of the open water signature, its depth, and the size of the impoundment.

Open water basins obscured by clouds such that water regime could not be determined were classified as palustrine emergents unknown (PEMU).

Vegetation commonly found in emergent seasonal basins (PEMC) included reed canarygrass (Phalaris arundinacea), whitetop (Scolochloa festuacea), and smartweeds (Polygonum spp.). Typical vegetation found in emergent semipermanent (PEMF) basins was cattail, river bulrush (Scirpus fluviatilis), and hardstem bulrush (Scirpus acutus). Duckweed (Lemna spp.) and pondweed (Potamogeton spp.) were found in aquatic bed semipermanents (PEMF). Bluegrass (Poa palustris), dock (Rumex spp.) and various sedges (Carex spp.)

are found in emergent temporaries (PEMA). 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. 1970pp.
- Larson, G. 1979. The aquatic and wetland vascular plants of North Dakota. Ph.D. Dissertation, Department 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.