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

Map Preparation

Contractor for this wetland inventory was the South Dakota Cooperative Fish and Wildlife Research Unit, P.O. Box 2206, South Dakota State University, Brookings, South Dakota 57007. Photointerpreters were Kris Sletten and Tara Wertz. Preparation for this narrative report was completed by Kris Sletten. Regional Wetland Coordinator was Charles Elliot, U.S. Fish and Wildlife Service, Denver Federal Center, P.O. Box 25486, Denver, Colorado 80225.

Wetland delineation and classification of the Watertown SE 1:100,000 quadrangle was done on 1:58,000 color infrared aerial photographs taken in April 1984. Photography covered 50% of the quadrangle. Classification of wetlands was done according to Cowardin et al.(1979). National Wetlands Inventory mapping conventions were also used to assist in photointerpretation. Field checking for the quadrangle was done on 25 September 1986.

Special Mapping Problems

The major problem encountered on this quadrangle was the interpretation of the Sioux River flood plain. The river was flooded out of its banks, making the channel hard to pull out. The topographic maps had to be used extensively to delineate the river. The surrounding waters were considered seasonal if they displayed a strong water signature and temporary if the signature was weaker. The soil survey showed extensive portions of the flood plain to be wet soil. It was decided, however, that if a signature did not exist it could not be pulled as wetland, even though the soil was supposedly hydric.

A second problem existed with temporaries in plowed fields. Many had been drained and it was sometimes difficult to tell if these should be

delineated. Because of water conditions, we felt that we should be aggressive on temporaries so sometimes even weak signatures were included.

The interpretation of this quad was relatively straight forward and any problems were quite easily solved.

Riverine System

Much of the quad has a very well developed natural drainage system. The Big Sioux River is the main river and was classified as R4SBF. Some of the tributaries to the Sioux were also identified as R4SBF. The remainder of the linears in the drainage system were considered to be palustrine.

Lacustrine System

The eastern portion of the Watertown SE quadrangle is almost devoid of any lacustrine basins. Lake Hendricks is a notable exception. The western portion of the quad has a much better representation of the lacustrine system with Lake Campbell and Oakwood Lakes. Most of the lacustrine basins were called L2ABG, while some of the larger lakes had L1UBG zones, as determined by The South Dakota Lakes Survey (1981).

Palustrine System

Emergent temporaries (PEMA) exhibited a variety of signatures from gray to brown to pink. Most were basin oriented although some were contained in expansive areas particularly along the borders of rivers and creeks. Many wetlands were drained and the "d" modifier was added (PEMAd).

There were some palustrine forested temporaries (PFOA) found on the Watertown SE. Most were located along the borders of rivers and creeks although some were found in basins. There were a few scrub- shrub temporaries (PSSA).

A very few saturated wetlands were found on the extreme eastern portion of the quad. They were identified by a wet non-basin like mottled signature, often going across contour lines.

Palustrine seasonals also showed a variety of signatures ranging from a dark open-water signature to a vegetated blue, brown, white, red or pink. There were many PEMC linears that were identified by a dark blue or black photo signature.

There were some forested seasonals (PFOC) identified by an open water signature under a tree canopy. These were most often found associated with the Big Sioux River and were often mixed with emergent seasonals (PFO/EMC, PEM/FOC). Palustrine scrub-shrub seasonals (PSSC) were also represented but there were very few. These exhibited a brown or red rough texture signature.

Palustrine emergent semi-permanent (PEMF) wetlands were characterized by the presence of a whitish-gray clumped vegetative signature. Those that were mixed emergent and aquatic bed (PEM/ABF, PAB/EMF) had a blue open water signature with a border of cattail, clumps of vegetation scattered throughout the basin or a few whitish colored clumps in the central portion of the basin. If the topo showed permanent water and the signature showed open water, then the basin was delineated as a palustrine aquatic bed semi-permanent (PABF). In some cases seasonal or temporary zones were delineated in conjunction with semi-permanent wetlands.

Road ditches with weak water signatures were classified as PEMAx. Ditches with a stronger water signature were classified as PEMCx. Occasionally, the classifications of PFOCx and PSSCx were used.

Drainage ditches were delineated only if they were a channelized portion of a stream. They were classified as PEMCx, PEMFx, PEM/ABFx or R4SBFx.

Gravel pits were classified as PUBFx. Dugouts were labled as PABFx or PEM/ABFx. Impoundments were classified as PABFh, PABGh, PEM/ABFh, PAB/EMFh or PEMCh. Dugouts acting as impoundments were called PABFhx. Sewage lagoons were called either PABFx or PABGx.

Vegetation commonly found in emergent temporary wetlands (PEMA) included sedges (*Carex* spp.), blue grass (*Poa palustris*) and dock (*Rumex* spp.). Emergent seasonals included smartweed (*Polygonum* spp.) reed canary grass (*Phalaris arundinacea*). Typical vegetation found in emergent semi-permanents (PEMF) was cattail (*Typha* spp.) and bulrush (*Scirpus* spp.). Typical aquatic bed species were duckweed (*Lemna* spp.) and pondweed (*Potamogeton* spp.). Willows (*Salix* spp.) and cottonwood (*Populus deltoides*) were found in palustrine forested wetlands (PFOA, PFOC). More detailed descriptions of wetland vegetation in the Dakotas are provided in Stewart and Kantrud (1971, 1972), Fulton (1979) and Larson (1979).