

SOUTH DAKOTA WETLAND INVENTORY  
U.S. FISH AND WILDLIFE SERVICE  
1:100,000 MAP NARRATIVE REPORT

Watertown NE

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, South Dakota 57007. Photointerpreters were Kris Sletten, Tara Wertz and Peggy Year. Preparation for this narrative report was completed by Peggy Year. 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 Watertown NW 1:100,000 quadrangle was done on 1:58,000 color infrared aerial photographs taken in April 1984. Photography covered 70% 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 21 April 1986.

Special Mapping Problems

The major problem encountered on this quadrangle was found in the high density area in the north central portion of the quadrangle. The problem was two-fold. 1) The density of wetlands was such that labels and lead lines were inserted where space allowed. All seasonals were delineated and identified. Unlabeled polygons or dot wetlands were considered temporary. 2) Linears appeared to be connecting a majority of the basin oriented wetlands in this high density area. It was decided that some of these linears were not wet.

Others were classified as seasonal and temporary. Some of the linears were considered ditches that were draining one wetland into another. These ditches were not pulled, and "d" modifiers were added to the affected wetlands.

Saturated wetlands were delineated and classified on this quadrangle. This is a classification rarely used in South Dakota. The wetlands exhibited a grayish brown mottling considered indicative of a wet signature on this photography. Topographic maps confirmed that these wet signatures were located on sides of hills not in basins. They were classified as PEMB.

There were some very dark open water signatures which, when field checked, appeared to be more temporary than seasonal. However, using the photography as the primary source those temporaries had to be classified as seasonal.

This same problem affected the identification of semi-permanents. Wetlands were classified as semi-permanent only if clumping of the vegetation was evident or there was permanent water indicated on the topographic map.

#### Riverine System

The southern portion of this quadrangle has a very well developed natural drainage system. There were several R4SBF's labeled on this map. They all exhibited a strong open water signature and appeared to contain a larger volume of water than seasonal linears found in the same area. Also, they generally meandered a great deal and contained many cutoffs and oxbows that helped to determine that the velocity of the water was greater in these channels.

#### Palustrine System

Temporaries (PEMA) found in this quadrangle were located primarily in well-defined basins. They exhibited a variety of signatures from a bright

pink, to a light gray or brownish signature. This included a whitish vegetated signature. There was also a light blue open water signature usually found in plowed fields and a whitish green mottled signature which was located in a pasture situation. If it was determined that a wetland was being drained a "d" modifier was added (PEMAd).

There were several palustrine forested temporaries (PFOA) found on the Watertown NE. The majority of these were located on the edges of seasonals or semi-permanents. Some however, were located in basins. In one or two instances a ditch was located in the basin and appeared to be modifying it. These were classified as PFOAd.

Scrub-shrub was much more prevalent on the Watertown NE. Scrub-shrub temporaries (PSSA) were located in basins with a pink, to a grayish blue or an orangish brown photosignature with a mottled or rough texture. One could generally ascertain the height of the shrubs in relation to the surrounding area, so as to make identification easier when differentiating between PSSA's and other types of wetlands, i.e. forested wetlands. Some PSSA's appeared to be in the process of being drained. These were labeled PSSAd. In some cases it appeared more appropriate to mix classifications. The more dominant vegetative type was always listed first. These combinations included: PEM/FOA, PFO/EMA, PSS/EMA, PEM/SSA. When ditches were found in the wetland a "d" modifier was added, i.e. PEM/FOAd.

There were a few saturated wetlands (PEMB) encountered on this 1:100,000. They were identified by a wet non-basin like mottled signature, as was previously discussed.

There was a variety of signatures exhibited by palustrine emergent seasonals (PEMC). Basin oriented PEMC's exhibited a signature that could be identified as any of the following: a dark blue or black open water

signature; a vegetated light blue or brownish center leading out to a white vegetated edge included in the basin; a heavy mottled gray, red and brown signature. PEMC linears were identified by a dark blue, black or brown photosignature.

There were several palustrine forested seasonals (PFOC) in the Watertown NE. These were found both along the edges of wetland basins, in linears or in the basin itself. They were usually associated with a dark blue or black open water signature. If emergent vegetation was supported in more than 30% of the basin, it was classified as PFO/EMC. A strong growth of trees with little open water visible under the canopy were referred to as PFOC.

Palustrine scrub-shrub seasonal (PSSC) basins were indicated by a gray to blue or black vegetated signature with the scrub-shrub exhibiting a white, brown or red rough texture in which, often times, height could be detected. If the shrubs dominated over 30% of the basin, it was classified as PSS/EMC. If emergents dominated the basin, it was classified as PEM/SSC.

Ditches were found in conjunction with many of the seasonal basins. A "d" modifier was added to the wetlands where it was determined that the wetlands were being modified. Palustrine unconsolidated shore seasonal was used along the edge of one of the R4SBF's.

Palustrine emergent semi-permanent (PEMF) wetlands were characterized by the presence of a whitish gray clumped vegetative signature. The wetlands varied from tightly-packed cattail (Typha spp) to an open water dark blue or black signature with slight clumping along the edges. 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 corroborated by permanent water on the topo, some open water signatures were identified as palustrine aquatic bed semi-permanent (PABF). In some cases seasonal or temporary zones were delineated in conjunction with semi-permanent wetlands. A "d" modifier was added if the basin was being drained.

Road ditches with weak water signatures were classified as PEMA<sub>x</sub>. Ditches with a stronger water signature were classified as PEMC<sub>x</sub>. Occasionally the classification of PFOC<sub>x</sub> was utilized.

Drainage ditches were delineated only if they were a channelized portion of a stream. They were classified as PEMC<sub>x</sub>, PEMF<sub>x</sub>, PEM/ABF<sub>x</sub> or R4SBF<sub>x</sub>.

Gravel pits were classified as PUBF<sub>x</sub>. Dugouts were labeled a PABF<sub>x</sub> or PEM/ABF<sub>x</sub>. Impoundments were classified as PABFh, PABGh, PEM/ABFh, PAB/EMFh or PEMCh. Dugouts acting as impoundments were labeled PABFhx. Large sewage lagoons were called PABG<sub>x</sub>.

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) and white top (Scolochloa festucacea). 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).

### Lacustrine System

The major classifications for the lacustrine system in the Watertown NE were L2ABG and L1UBG. L1UBG was used if the water was considered permanent and was supported with collateral data supplied by The South Dakota Lakes Survey (1981).