

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

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 Kristin K. Sletten, Tara L. Wertz and Peggy E. Year. Preparation for this narrative report was completed by Peggy E. Year. 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 the Watertown NW 1:100,000 quadrangle was done on 1:58,000 color infrared aerial photographs taken in April and May 1984. Photography covered 100% 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 May 1986.

Special Mapping Problems

The major problem encountered on the mapping of this quadrangle was the dryness of the wetlands at the time the photography was taken. Water conditions were very depressed after a series of drought years resulting in difficulty defining the upland/wetland boundary for both seasonals and semi-permanents. Some temporaries were undoubtedly missed due to the fact they exhibited no signature on the photography. Seasonal and semi-permanents were illustrated by many signatures ranging from very rough

textured dry seasonals to open water semi-permanents with slight clumping along the edges or tight-packed cattail marshes.

Verification of wetlands and wetland-upland boundaries was gained through the use of soil surveys and topographic maps. Topographic maps were relied upon heavily due to the depressed conditions and the lack of soil surveys for some of the counties involved.

Field checking of this photography was also difficult due to the extremely high water conditions this spring. There was a great deal of ephemeral water which disguised the upland-wetland boundary that was already difficult to locate, as was previously discussed.

Another major problem encountered was very large semi-permanent basins that appeared to have portions of them drained. It was decided to put a "d" modifier on the entire basin, to include all wet looking areas within the basin and classify it as part of the overall basin (PEM/ABFd). This did exclude possible temporary or seasonal border zones. These border zones did, however, receive the "d" modifier.

Riverine System

The major R4SBF delineated in the Watertown NW was the Big Sioux River. A small portion of the outflow channel from Lake Poinsett was also included. All of these R4SBF's exhibited a strong open water signature and appear to contain a large volume of water. Most of these creeks were also described as perennial on the topographic maps.

Palustrine System

Temporaries (PEMA) delineated on this quadrangle exhibited a wide variety of signatures. They ranged from very pink to a light pink with

light gray mixed in, or a light gray to a dark gray. The most difficult signature encountered in identifying PEMA's was in plowed fields. In some cases there was no indication at all of the presence of a temporary. These wetlands were obviously missed. If a ditch was identified in conjunction with a PEMA a "d" modifier was added (PEMAd).

There were several palustrine forested temporaries (PFOA) found on the Watertown NW. Most of these were located on the edges of seasonals and semi-permanents. Some, however, were basin-oriented. In a few instances a ditch was located in the PFOA that appeared to be modifying it. These were classified as PFOAd.

Scrub-shrub temporaries (PSSA) were located in basins with a pink to grayish blue tone 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 the rough-textured seasonals. If the PSSA appeared to be in the process of being drained a "d" modifier was added. These were called PSSAd.

Palustrine emergent seasonals (PEMC) exhibited the greatest variety of signatures. Basin oriented PEMC's exhibited a signature that could be identified as any of the following: a bright white or grayish even-toned dry seasonal; a dark blue open water signature; a vegetated light blue center with a bluish to pink edge which was included in the PEMC; a dark blue open water signature with a pink border extending to a tree line surrounding the basin (everything included within the basin to the tree line was classified as PEMC); a blue open water signature with reddish or white smooth toned vegetation, to differentiate them from a more clumped vegetated signature which would indicate a semi-permanent; a mixed white, pink or reddish vegetated rough textured signature, lacking height in the

vegetation which might have indicated trees, shrubs or cattail clumping; and finally, a dark red even-toned vegetated signature.

There were several PEMC linears delineated on the Watertown NW quadrangle. These were identified by a dark blue or black photosignature.

There were several palustrine forested seasonal (PFOC) signatures. These were found both on the edges of wetland basins and within the basin. They were usually associated with a dark blue open water signature. If emergent vegetation was supported by more than 30% of the basin it was classified as PEM/FOC. If forested vegetation dominated 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 or along the borders of the wetland basin was referred to as PFOC.

Palustrine emergent semi-permanent (PEMF) wetlands were characterized by the presence of whitish-gray clumped vegetative signature. The wetlands varied from tightly-packed vegetation to an open water signature with slight clumping along the edges which aided identification. Those that were mixed emergent and aquatic bed (PEM/ABF, PAB/EMF) had a blue or black open water signature with a border of cattail, clumps of white to gray vegetation scattered throughout the wetland or a few whitish colored clumps in the central portion of the basin. Some open water signatures were identified as palustrine aquatic bed semi-permanent (PABF) if the call was corroborated by permanent water on the topo.

Road ditches with weak water signatures were classified as PEMAx. Ditches with stronger water were called PEMCx. Occasionally the classification of PFOCx was utilized.

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

PFOCx, and R4SBFx.

Gravel pits were classified as PUBFx. If they had started to become overgrown they were classified as PEM/ABFx, PAB/EMFx, PEM/FOCx, PFO/EMCx. Dugouts were called PABFx or PEM/ABFx. Large sewage lagoons were labeled PABGx. Impoundments were classified as PABFh and PABGh. Other classifications used were PEM/ABFh, PAB/EMFh and PABFhx.

Vegetation commonly found in emergent temporary basins (PEMA) included sedges (Carex spp.), bluegrass (Poa palustris) and dock (Rumex spp.). Emergent seasonals were dominated by 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.). 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

Two of the main classifications for the lacustrine system in the Watertown NW were L2ABG and L1UBG. An L1 zone of a lake was pulled if there was collateral data to support the call. These data were usually supplied by the South Dakota Lakes Survey (1981). There was one L2ABF classification used. This call was supported with information supplied by the topographic map. The classification L2ABGh was also used on impoundments with over twenty acres of open water.

References

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Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79-31. 103pp.
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- 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.
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