

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

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. The photointerpreters were Tony Apa, Ross Blank-Libra, Howard Browsers, Kris Sletten, Bob Speck, and Peggy Year.

Preparation of this narrative report was completed by Kris Sletten. 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 Sioux City NW 1:100,000 quadrangle was done on 1:65,000 color infrared aerial photographs taken 23 May 1983 and 1:58,000 color infrared aerial photographs taken 19 April 1984. Photography covered 99% 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 23 May 1985 and 21 October 1985.

Special Mapping Problems

The main mapping problems were signatures that appeared along the Missouri River. There were several pink signatures that were sometimes difficult to distinguish. Through field investigation it was determined that the bright pink, grainy signature was scrub-shrub and the smoother, light-pink signature was Phragmites. At times it was difficult to determine upland from wetland along the river. Trees generally seemed to be higher and were usually considered upland. Scrub-shrub, with either a pink or gray

Because of the high relief of the area, there were many streams that were classified as R4SBA or R4SBC. It was sometimes difficult to tell if these streams should be classified as riverine or palustrine. If the gradient was steep and the stream formed a deep channel, it was considered riverine. There were some red signatures adjacent to some streams and these posed a slight problem. For the most part, these were considered upland. If the red signature had a grainy appearance, it was called PEMA.

There was some cloud cover on the map. In most cases, we had National High Altitude Photography (NHAP) photos to replace areas where cloud cover obscured wetlands. Where we had no replacement photography the area of cloud cover was outlined and indicated as "cloud".

Wetlands

Lacustrine System

The lacustrine system was not well represented on this quadrangle. When found, it was classified as L2ABG.

Riverine System

Since the Sioux City NW is an area of high elevational relief, the riverine system was well represented. A R4SBF signature was represented by open water in well-defined channels on the photography and often by permanent water on U.S.G.S. topographic maps. R4SBA and R4SBC classifications were used for linears in areas of high relief where well defined channels were formed.

The Missouri River was classified as R2UBH. Unconsolidated shores were classified R2USC or R2USA.

Excavated channels were classified as R4SBFx.

Palustrine System

There were several different palustrine emergent temporary (PEMA) signatures encountered on the Sioux City NW. The most common was dark gray in a well-defined basin. In the case of large non-basin temporary-like signatures, only the darker spots were delineated as temporary. Other temporary signatures included reddish-gray and purple-gray; these were often adjacent to streams. Some temporaries exhibited blue and white streaked signatures; these were often drained basins.

Palustrine emergent seasonal basins (PEMC) exhibited several different photosignatures. The most common was a dark-blue, open water signature. Some basins exhibited a smooth, even-textured, white, vegetative signature. Other signatures included red, grayish-red, or white.

Palustrine emergent semipermanent (PEMF) were clumped and rough-textured with a white to gray color. The vegetation was either within a blue, open water signature or tightly packed in a basin with little or no discernable water. Basins that were mixed emergent and open water were classified PEM/ABF. Palustrine aquatic bed wetlands (PABF) were blue, open water areas less than 8 ha. The PABF classification was often used on oxbow lakes adjacent to rivers and streams.

Palustrine forested temporary (PFOA) wetlands were identified by a dark gray signature beneath trees. Seasonal forested (PFOC) wetlands exhibited dark blue or open water signatures beneath trees. Emergent and forested classes were mixed where appropriate. Scrub-shrub wetlands (PSSA, PSSC) were more rough-textured gray or blue signatures. Scrub-shrub along the Missouri River exhibited a rough-textured pink signature which was often mixed with a gray to white unconsolidated shore signature (PSS/USA, PSS/USC).

Road ditches with a light blue water signature were classified as PEMAx while those with darker water signatures were PEMCx. Forested or scrub-shrub ditches were also identified (PFOCx, PFOAx, PSSCx, PSSAx). Dugouts and sewage lagoons were classified PABFx or PABGx. Gravel pits were classified as PUBFx or PUBGx. Impoundments were classified PABGh, PABFh, PEMCh or PUSCh depending on the strength of the water signature, presence of vegetation, depth, and size for each impoundment.

Vegetation commonly found in emergent temporaries (PEMA) included bluegrass (Poa palustris), docks (Rumex spp.), and various sedges (Carex spp.) and rushes (Juncus spp.). Emergent seasonal basins (PEMC) commonly contained smartweeds (Polygonum spp.), spikerushes (Eleocharis spp.), and reed canary grass (Phalaris arundinacea). Typical vegetation found in emergent semipermanent (PEMF) basins included cattail (Typha spp.) and various bulrushes (Scirpus spp.). Aquatic bed semipermanent basins often contained duckweed (Lemna spp.), pondweed (Potamogeton spp.), and various species of Ranunculus. Willows (Salix spp.) and cottonwood (Populus deltoides) were typical of palustrine forested (PFOC, PFOA) and scrub-shrub (PSSC, PSSH) wetlands. More detailed descriptions of wetland vegetation in the Dakotas are provided in Stewart and Kantrud (1971, 1972), Fulton (1979), and Larson (1979).

References

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