

SOUTH DAKOTA WETLAND INVENTORY
U.S. FISH & WILDLIFE SERVICE
1:100,000 MAP NARRATIVE
MCINTOSH SE

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 Tara L. Wertz and Peggy E. Year. Preparation of 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 McIntosh SE 1:100,000 quadrangle was done on 1:65,000 color infrared photography taken April 17 and 18, 1982(NASA) and on 1:58,000 color infrared photography taken April 18 and 19, 1984(NHAP). Photography covered 100% 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 this quadrangle was done on April 30, 1987.

SPECIAL MAPPING PROBLEMS:

Few problems were encountered with either the NHAP or NASA photography. The water conditions were slightly drier at the time that both sets of photography were taken than at present. However, this did not hinder interpretation.

The inundation levels of Lake Oahe did present a special mapping problem. Under the instructions of Kelly Drake, Assistant Regional Coordinator, Region 6, USFWS, the interpreters delineated wetlands down to the 1620' contour line along the shore of the lake. An exception to this was in the example of a road right-of-way bisecting the 1620' contour. In a case such as this, the interpreters delineated the wetlands above the right-of-way and below the 1620'

contour interval as palustrine with an "h" modifier and riverine. Everything below the right-of-way and the 1620' contour will be delineated during the ~~zone~~^{zcm} transfer phase of map production.

RIVERINE:

Creeks and rivers were quite common on the McIntosh SE. Major rivers, such as the Moreau, were classified as R2UBG, Smaller rivers and creeks were classified as R4SBF. These generally had a strong open water signature, a deep channel and a fairly well developed flood plain. They were usually represented by permanent water on the topographic map.

Because of the high relief in most of this quadrangle and the highly erodable ~~soils~~^{Soils} many other streams and creeks were classified as R4SBA. The distinction between these two classifications was made on the basis of the length of the stream, volume of water and depth of the channel. An "x" modifier was added to portions of R4's that were channelized.

LACUSTRINE:

The major lacustrine feature of the McIntosh SE was Lake Oahe. Though not delineated here (SDSU) the lake will be classified as L1UBHh. Lake Oahe will be delineated during the ~~zone~~^{zcm} transfer phase of map production.

Other open water wetlands with greater than 20 acres (8 ha) of open water were classified as L2ABF and L2ABG. Impoundments with more than 20 acres (8 ha) of open water were classified as L2ABFh or L2ABGh. An L1 zone was delineated where the information could be verified by the use of collateral data.

PALUSTRINE:

The palustrine system was well represented on this quadrangle. Most of the palustrine wetland basins were located on the eastern side of Lake Oahe in the Missouri Coteau. Other wetlands of this type were located on the tablelands of the Missouri River Breaks.

Palustrine emergent seasonals (PEMC) generally had a dark blue or black open water signature. Some exhibited a light white or gray vegetated signature. Smartweeds (Polygonum spp.) and spikerushes (Eleocharis spp.) were the most common vegetation indicator found in seasonal wetlands.

Palustrine scrub-shrub temporaries (PSSA) and palustrine scrub-shrub seasonals (PSSC) usually exhibited a dark, rough textured or mottled signature. Willow (Salix spp.) and boxelder (Acer negundo) were the most common vegetative indicators in scrub-shrub wetlands.

Palustrine forested temporaries (PFOA) and palustrine forested seasonals (PFOC) exhibited similar signatures to scrub-shrub wetlands except that the trees are more easily discernible because of their increased height. Cottonwoods (Populus deltoides), boxelder (Acer negundo) and willow (Salix spp.) were the most common trees found in the forested wetlands.

Palustrine emergent and aquatic bed semi-permanents (PEM/ABF) exhibited a dark blue or black photosignature which was intermixed with white or gray clumped vegetation. This is indicative of the presence of cattail (Typha spp.) the major vegetative indicator of semi-permanent wetlands in this region. Bulrushes (Scirpus spp.) were also very common.

In areas which had emergents intermixed with woody vegetation or PFO and PSS intermingled the type which covered more than 30% of the wetland was considered dominant and written first (PFO/EMC; PEM/SSA; PFO/SSA).

If any of the aforementioned wetlands were being affected or modified by a drainage ditch a "d" modifier was added (i.e. PEMAd, PFOCd).

Dugouts were classified as PABFx. Impoundments were classified as PABFh. Different water regimes found within the impoundment had "h" modifier added to them (i.e. PEMAh or PEMFh). Dugouts using the wall of the impoundments as one of it's spoil banks were classified as PABFhx.

Road ditches with a weak water signature were classified as PEMAX. PEMCx was used if the road ditch had a dark open water signature. If trees were

visible in the ditch PFOCx was used. Drainage ditches were delineated only if they were channelized portions of natural streams. Classifications used were PEMCx, PEMAx and PEMFx.

Gravel pits were classified as PUBFx. Vegetated or overgrown gravel pits were called PEM/ABFx, PAB/EMFx. PEM/FOCx or PFO/EMCx. Sewage lagoons were classified as PABFx or PABGx.

Grasses were the most common vegetative indicator in temporaries (PEMA). Smartweeds (Polygonum spp.) and spikerushes (Eleocharis spp.) were common in seasonals (PEMC). Cattail (Typha spp.) and bulrushes (Scirpus spp.) were common in semi-permanent wetlands (PEMF, PEM/ABF). Cottonwoods (Populus deltoides), boxelder (Acer negunda) and willow (Salix spp.) were common trees in ^{forested} wetlands. Shrubs usually found included willow (Salix spp.) and boxelder (Acer negundo). More detailed descriptions of wetland vegetation in the Dakota's are provided in Stewart and Kantrud (1971, 1972), Fulton (1979) and Larson (1979).

REFERENCES:

- Cowardin, L.M. and V. Carter, F.C. Golet, and E.J. LaRoe. 1979. Classification of wetlands and deep water 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.
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- Stewart, R.E., and H.A. Kantrud. 1971. Classification of natural ponds and lakes in the glaciated prairie regions. U.S. Bur. Sport. Fish Wildl. Resource Publ. 92. 57pp.
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