

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

McIntosh NE

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, SD 57007. Photointerpreters were Howard Browers and Tara Wertz. Preparation of this narrative report was completed by Howard Browers. Regional Wetland Coordinator was Charles Elliott, U.S. Fish and Wildlife Service, Denver Federal Center, P.O. Box 25486, Denver, CO 80225.

Wetland delineation and classification for McIntosh NE 1:100,000 quadrangle was done on 1:65,000 color infrared aerial photographs taken in May 1979 and April 1982. 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 the quadrangle was done on 29 and 30 April 1987.

SPECIAL MAPPING PROBLEMS

Several mapping problems were encountered while interpreting the McIntosh NE. First, strips 1, 2, and 3 were photographed in 1979 during a dry period. Many basins had no standing water. Topographic maps and soil surveys were used extensively to identify wetland basins. Due to the absence of water in many basins, strength of water could not always be used as a characteristic to differentiate between palustrine emergent seasonal (PEMC) and temporary (PEMA) wetlands. The absence of farming practices or presence of wetland vegetation in the basin were often used as criteria for seasonal classifications. Also, some

temporary wetlands (PEMA) were probably not delineated because the photosignatures were nonexistent due to the drier conditions.

The second problem involved the differentiation between linear palustrine wetlands and linear riverine wetlands. Since topography is more steep on this 1:100,000 (especially west of the Missouri River) more linears were classified as R4SBC or R4SBA. A stream that crossed several contours in a short stretch (e.g. a drop of 50 ft. in a half-mile) were classified as riverine. Streams which did not drop as rapidly were classified as palustrine.

The third problem involves delineation of Lake Oahe on the Missouri River. As instructed by Region 6 personnel interpreters delineated wetlands down to the 1620 foot contour. This 1620 foot contour represents the spillway elevation of the lake. Delineation of the lake below 1620 feet will be accomplished during the zoom transfer phase of production. Part of Lake Pocasse near Pollock, SD, which is an arm of Lake Oahe, was delineated below the 1620 foot contour. Delineation stopped at a causeway crossing the lake. An h modifier was used on polygons above the causeway within the 1620 foot contour.

WETLANDS

Lacustrine

The most prominent lacustrine feature on McINTosh NE is Lake Oahe on the Missouri River. Lake Oahe was not delineated here as explained under Special Mapping Problems. When Lake Oahe is delineated during ZTS it will be classified L1UBHh.

Smaller, shallow natural lakes were classified as L2ABG (e.g. Sand Lake) or L2ABF (e.g. Renz Lake). Impoundments were classified as L1UBHh (e.g. Lake Campbell) or L1UBGh or L2ABGh.

Riverine

Creeks and rivers were quite common on McIntosh^{NE}, especially west of the Missouri River where topography is more undulating. Major rivers such as the Grand 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. These were usually represented by permanent water on topographic maps.

Because of the high relief of this quadrangle and the highly erodible soils many other streams were classified as R4SBC or R4SBA. The distinction between these 2 classifications was made on the basis of the length of the stream, volume of water, and depth of channel. An X modifier was added to portions of R4's found channelized.

PALUSTRINE

The palustrine system was well represented on this quadrangle. Most of the natural basin palustrine wetlands were located east of Lake Oahe in the Missouri Coteau. Other wetlands of this type were located on tablelands of the Missouri River Breaks.

Palustrine emergent temporary (PEMA) signatures ranged from dark, open water to dark and light grays to reddish-pink. Most PEMA's had little surface water.

Palustrine emergent seasonal (PEMC) signatures were dark, open water or most often white or red vegetated. Many PEMC's on the 1979 photography had no standing water.

Palustrine emergent and/or aquatic bed semipermanents (PEMF, PABF, PEM/ABF,

PAB/EMF) exhibited dark blue or black photosignatures intermixed with white or gray clumped vegetation.

Palustrine scrub-shrub temporaries (PSSA) and palustrine scrub-shrub seasonals (PSSC) usually exhibited dark, rough-textured or mottled signatures.

Palustrine forested temporaries (PFOA) and palustrine forested seasonals (PFOC) exhibited similar signatures except that the trees are more easily distinguished because of their increased height.

Dugouts were classified as PABF_x. Impoundments were classified as PABFh or PABGh. Different classes and water regimes within the impoundment were also classified as impounded (e.g. PEMFh, PEMch). Impounded dugouts were classified as PABFh_x.

Road ditches were classified as PEMC_x or PEMA_x. Drainage ditches when delineated were classified as PEMC_x or PEMA_x.

Gravel pits were generally classified as PUBF_x. Sewage lagoons were classified as PABF_x or PAB6_x.

Grasses were the most common vegetative indicators in temporaries (PEMA). Smartweeds (Polygonum spp.) and spikerushes (Eleocharis spp.) were common in seasonals (PEMC). Cattail (Typha spp.), and bulrushes (Scirpus spp.) and phragmites (Phragmites australis) were common in semi-permanent wetlands (PEMF, PEM/ABF). Cottonwoods (Populus deltoides), boxelder (Acer negundo) and willow (Salix spp.) were common in scrub-shrub (PSS) and forested wetlands (PFO). More detailed descriptions of wetland vegetation in the Dakota's are provided in Stewart and Kantrud (1971, 1972), Fulton (1979) and Larson (1979).

REFERENCES

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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. Resour. Publ. 92. 57pp.
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