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

Milbank NE

MAP ~~PRESENTATION~~ 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 Ross Blank-Libra. 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 Milbank NE 1:100,000 quadrangle was done on 1:58,000 color infrared aerial photographs taken in April and October 1984. 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 4 and 5 April and 26 June 1988.

SPECIAL MAPPING PROBLEMS

Interpretation of this 1:100,000 was originally to be done on NASA 1:65,000 CIR. However, most (approximately 75%) of the NASA photos were taken in spring 1982 and exhibited depressed wetland conditions. The remaining 25% of the NASA was taken in spring 1979 and had much better wetland conditions. The NHAP used to replace the NASA was taken in spring and fall 1984 and generally had better wetland conditions. Both dates of NASA photos were used as collateral data while

interpreting the NHAP. By using these photos as collateral data we were able to enhance the quality of the NHAP. In a few cases, temporary wetlands were more evident on the NASA and were added to the NHAP. The NASA was also used in water regime determinations. Semipermanent vegetation in some wetlands was more evident on the NASA photos. These wetlands would exhibit mostly open water signatures on the NHAP photos.

Another problem encountered on the 1:100,000 was the darkness of the spring NHAP photography. Linework and lettering were often difficult to see. This problem was especially evident when delineating large lakes with very dark, black photosignatures. The dark imagery sometimes made it difficult to distinguish between temporary wetlands and ephemeral areas. Use of collateral data helped to reduce this problem.

Another problem was the extremely dry field conditions of wetlands during field work (4 and 5 April and 26 June 1988). Most seasonal and many semipermanent wetlands had no surface water. Temporary and seasonal wetlands had been plowed and were devoid of hydrophytes making it difficult to determine water regime. Also, wetlands on the NHAP photography seemed to exhibit lower water levels. Many basins showed evidence of plowing. However, unlike the NASA photography which was replaced, a photosignature was visible. The result of these two factors is that some seasonal wetlands may have been classified as temporary.

One other problem encountered was the interpretation of a large wetland complex on the east side of the quad. This area just west of

the Minnesota border and north of Lake Traverse is a large complex of semipermanent, seasonal, and temporary wetlands. Part of the complex is managed by SD Game, Fish and Parks. Distinctions between water regimes were sometimes difficult to determine because the area is covered by fall photography. The fall photography exhibits more vegetation and surface water is hard to see. Also, the fall photography was taken on 28 October; at least one and perhaps several frosts have occurred by this date so the vegetation is not photosynthesizing. Thus, most of the vegetation appears gray or whitish gray. There are, most likely, areas where seasonal and semipermanent vegetation blends together. Thus, a large part of this complex which is on the Boisberg and Wheaton West 7.5′ quads has been classified as semipermanent. The Roberts County Soil Survey was used to help make water regime determination. However, in the soil survey most of the area in question is classified as Marsh. Thus, there may be seasonal or even temporary areas within this complex that have been classified as semipermanent.

Finally, one last problem was the possible existence of saturated wetlands. There were wetlands found in areas of high relief. Some of these were underlain by Rauville Mucky Silt Loam (0-2 percent slopes, Vw) which is described as occurring "in seepy areas along drainageways, in swales, and on flats". A separate field trip was conducted 26 June 1988 to investigate some of these areas. Access was poor but some were found to support a mixture of shrubs, cattail, phragmites and other hydrophytes. However, some of these areas were PEMC, PSSC, or PEMF. Only those wetlands in high relief situations underlain by the Rauville

soil will be classified with a saturated water regime. Most of these occurred on slopes above the Cottonwood Lake Complex.

WETLANDS

Lacustrine

The lacustrine system is well represented on the Milbank NE. The most prominent are Lake Traverse and Mud Lake on the South Dakota-Minnesota border. Lake Traverse was classified as L1UBHh with an L2ABGh zone above the 5 foot depth contour. Mud Lake was classified as L1UBHh. Numerous natural lakes occur on the Milbank NE which were classified as L2ABG or L2ABF. An x modifier was used on excavated lacustrine wetlands found along Interstate 29.

Riverine

Very few riverine wetlands are found on the Milbank NE. The Little Minnesota River and Jim Creek were classified as R4SBF. The Bois de Sioux which flows north along the SD-MN border was classified as R2UBGx. A few smaller streams in areas of high relief along Lake Traverse were classified as R4SBC. Intermittent streams in flatter areas generally support emergent vegetation and were classified in the palustrine system.

Palustrine

Palustrine emergent temporary (PEMA) wetlands were most commonly found. Photosignatures included open-water, dark gray, light gray,

grayish-white, and grayish-pink. Many of the wetlands classified as PEMA showed evidence of plowing.

Palustrine emergent seasonal (PEMC) wetlands exhibited open-water or white to grayish-white vegetated photosignatures.

Palustrine emergent and/or aquatic bed semipermanent wetlands (PEMF, PABF, PEM/ABF, PAB/EMF) exhibited white or gray clumped vegetation, dark, open water or a mixture of clumped vegetation and open water. Some open water semipermanents were classified as emergent based on NASA photos used as collateral data. Some open water areas within semipermanent vegetation were classified as PABG.

Palustrine emergent saturated (PEMB) wetlands exhibited grayish-white signatures. Palustrine scrub-shrub (PSSB) wetlands had dark gray photosignatures. Saturated wetlands were found in areas of high relief underlain by Rauville Mucky Silt Loam. Not all areas of Rauville soil were classified as saturated; some were classified as temporary, seasonal, or semipermanent.

Other forested or scrub-shrub wetlands were classified as temporary (PFOA, PSSA) or seasonal (PFOC, PSSC). Temporarily flooded trees or shrubs were usually found on the outer edge of a PEMC or PEMF wetland. Seasonal trees or shrubs were within PEMC or PEMF wetlands. Seasonal signatures were generally darker than temporary signatures.

Dugouts were classified as PABFx. Impoundments were classified as PABFh or PABGh. Different classes and water regimes within the impoundment were also classified as impounded (e.g. PEMFh, PEMCh).

Road ditches were classified as PEMCx or PEMAx. Large drainage ditches were classified as PEMCx or PEMFx. Gravel pits were generally

classified as PUBFx, PEMCx, or PSSCx. Sewage lagoons were classified as PABFx or PABGx.

Plants commonly found in wetlands on the Milbank NE were:

PEMA

foxtail barley	*Hordlum jubatum*
bluegrass	*Poa* spp.
sedges	*Carex* spp.
prairie cordgrass	*Spartina pectinata*

PEMC

smartweeds	*Polygonum* spp.
spikerushes	*Eleocharis* spp.
reed canary grass	*Phalaris arundinacea*
phragmites	*Phragmites australis*

PEMF

cattail	*Typha* spp.
bulrushes	*Scirpus* spp.
phragmites	*Phragmites australis*

PEMB

cattail	*Typha* spp.
sedges	*Carex* spp.
bulrushes	*Scirpus* spp.

PSS

willow	*Salix* spp.
red-osier dogwood	*Cornus stolonifera*

PFO

willow	*Salix* spp.
cottonwood	*Poulus deltoides*

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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