SOUTH DAKOTA WETLAND INVENTORY

U.S. FISH AND WILDLIFE SERVICE

1:100,000 MAP NARRATIVE REPORT

HURON SE

Map Preparation

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Wetland delineation and classification for the Huron SE 1:100,000 quadrangle was done on 1:65,000 color infrared aerial photography taken April 22 and 28, 1986. Photography covered 99% 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 3 March 1987.

Special Mapping Problems

The Huron SE can be catagorized by two separate physiographic regions. The major portion of the quad is described as Mankato Drift Plain. There is very little relief, and the majority of wetlands are expansive and shallow. There are some large areas of semi-permanent, but in terms of acreage and number of basins, seasonals and temporaries are more dominant.

The other geological classification is outwash and alluvium. These areas are located in almost all of the natural drainage ways which criss-cross the James River lowlands.

This entire quadrangle suffered severe drought conditions in the 1970's. The area is now rebounding. The last two years have had excessively wet springs and falls. The major mapping problem on this quadrangle was a result of this excessive amount of precipitation. Many of the wetlands are expanded beyond the upland-wetland boundary. Temporaries have a much stronger photo-signature than they normally exhibit. Finally, the excessive water conditions covered many vegetation indicators that would have aided interpretation. The resolutions to these problems will be discussed under the separate systems (riverine, lacustrine, palustrine) of this narrative report.

Riverine System

The photosignature of intermittent streams were not easily distinguished from palustrine streams in this area due to expanded water conditions. Certain characteristics were considered in helping to determine the difference between riverine and palustrine linears. Linears classified as R4SBF had well developed flood plains with oxbows and remnant meanders and appeared to have larger areas of avoidance around them. On occasion, *Typha* spp. was found in pockets along the edge of the R4, which helped to classify a linear as riverine. Although the presence or lack of a permanent water designation on the topographic map was not a deciding factor, it was seriously considered due to the flooded conditions. Some channelized portions of R4SBF's were classified as R4SBFx.

The James River above Huron was interpreted as the photosignature indicated (R2UBG). The flooded conditions below Huron made it possible to identify the channel. Flooding was bank-to-bank in the floodplain. It was necessary to use 1984 NHAP photography of the river basin to accurately interpret the channel and associated wetlands within the floodplain.

Lacustrine System

Wetland classified as lacustrine exhibited a dark or bright blue signature. Often a whitish gray clumped signature, denoting the presence of *Typha* spp., was present along the edge. If the expanse of the signature was more than 20 acres and was indicated as permanent water on the topo, it was labeled L2ABG. An L1UBG was used to classify the portions of lakes deeper than two meters, when information was corroborated by the *South Dakota Lakes Survey* (1981).

Field verification proved some semi-permanent and seasonal wetlands had been inundated with greater than normal amounts of precipitation. As a result, some wetlands were greatly expanded and/or vegetation was drown out. These wetlands exhibited a photosignature very similar to an L2ABG. Areas such as this, covering more than 20 acres and illustrated on the topo by intermittent water or marsh symbols, were classified as L2ABF.

Palustrine System

The photosignatures of palustrine emergent temporaries (PEMA) were found to vary. Signatures ranged from a light gray to dark gray or black signature. This also included some pinks and light blues. All were basin-oriented.

A bright blue, indicated light reflecting from a non-basin wetland, usually found on the edges of plowed fields or on flood plains. In these situations only areas where water was discerned were classified as PEMA. The dark, mud signature was avoided.

There were also very strong, open water, basin-oriented signatures in plowed fields. These basins had been found to contain Polygonum spp. and Alisma spp., usually seasonal wetland indicators. Three major factors were considered to decide classification in this situation: (1) higher than normal water conditions; (2) the areas had not been plowed that spring (1986); (3) as a result of the first two factors the conditions of the basin were to the invasion of Polygonum spp. and Alisma spp. Wetlands such as this were classified as PEMA. PEMA linears were a dark pink, or if found in plowed fields, a dark blue.

Most of the temporaries appeared to have been plowed through or hayed. Those that were being drained were classified as PEMAd. PEMAx was sometimes used to classify road ditches.

Palustrine forested temporary wetlands were classified as PFOA. These were usually found on the edges of seasonal and semi-permanent basins or along floodplains. PEM/FOA was used if over 30% of the wetland was dominated by emergents. PFO/EMA was used if over 30% of the wetland was dominated by trees. If they were located in wet ditches, they were labeled PFOAx.

There were very few palustrine scrub-shrub temporaries (PSSA) on the Huron SE. They were identified by a rough-texture and height differentiation when compared to nearby trees. If it appeared that either a PSSA or PFOA was being drained, a "d" modifier was added.

Palustrine emergent seasonals (PEMC) had a dark or bright blue open-water signature, were basin-oriented and usually had not been plowed. Seasonal wetlands sometimes had expanded into farmed areas along the peripheral of the basins. This was a similar photosignature of some PEMA's. The topographic map generally had these areas designated as basins and aided the classification of the wetland as a seasonal. If a seasonal wetland was being drained, it was classified as PEMCd.

Seasonal linears had a strong open-water signature and generally had been avoided. There were some seasonal linears found in plowed fields. These usually were connecting two portions of the linear that were not being farmed and had a very dark blue signature. It may or may not have contained water. PEMCx was used to identify channelized portions of seasonal streams and road ditches.

Seasonal wetlands containing trees were classified as palustrine forested seasonal (PFOC). PEM/FOC or PFO/EMC was used depending on which vegetation type dominated over 30% of the wetland. If the wetland was being drained or modified by a drain, a "d" modifier was added.

When trees were located in seasonal linears or riverine systems, they were classified as PFOC. If the trees were in wet road ditches or channelized portions of streams, an "x" was added (PFOCx).

Palustrine emergent semi-permanents (PEMF) had a dark blue open water signature with a whitish clumped signature, indicating the presence of Typha spp. PEM/ABF was used if emergents dominated over 30% of the wetland. PAB/EMF was used if aquatic bed (open water) dominated over 30% of the basin. PABF (palustrine aquatic bed semi-permanent) was used if the wetland was less

than 20 acres, had a dark blue open water signature and was illustrated by a permanent water designation on the topographic map. In several instances it was possible to delineate additional seasonal or temporary zones in conjunction with semi-permanent wetlands. If the wetland was being modified by a ditch, a "d" modifier was added.

Dugouts and sewage lagoons were classified as PABFx, PABGx, PEMFx, PAB/EMFx and PEM/ABFx. Open water gravel pits were classified as PUBFx. Those that were beginning to become over-grown were labeled PEM/FOCx or PFO/EMCx, depending on which life form dominated over 30% of the basin.

Impoundments were classified as PABFh, PEM/ABFh or PAB/EMFh, PABGh, or if 20 acres or more of water was impounded, L2ABGh. If it was possible to determine and delineate a seasonal portion of the impounded linear, a PEMCh was added. If trees had been inundated, a zone of PFOCh or PFOAh was also added. In the case of a dugout acting as an impoundment, it was classified as PABFhx.

Vegetation commonly found in emergent temporary basins (PEMA) included sedges (Carex spp.), spikerush (Eleocharis ppp.) and dock (Rumex spp.). Emergent seasonals were dominated by smartweed (Polygonum spp.), water plantain (Alisma plantago-aquatica) and white top (Scolochloa festucacea). Typical vegetation found in emergent semipermanents (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).

References

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