NORTH DAKOTA WETLAND INVENTORY

U.S. Fish and Wildlife Service

1:100,000 Map Narrative Report

Jamestown NE

MAP PREPARATION

Contractor for this wetland inventory was the South Dakota Cooperative Wildlife Research Unit, P.O. Box 2207, South Dakota State University, Brookings, South Dakota 57007. Photointerpreter was Michael Broschart. Preparation of this narrative report was completed by Michael Broschart. 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 Jamestown NE 1:100,000 quadrangle was done on 1:65,000 color infrared aerial photographs taken in May 1979. 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 from 11 - 15 July 1983.

SPECIAL MAPPING PROBLEMS

The most prevalent problem encountered in mapping this quadrangle was differentiating the water regime (temporary vs. seasonal) on those wetlands with an open water signature. It was determined through field observation that open water signatures were to be classified as palustrine, emergent, seasonal wetlands (PEMC) when a strong, dark open water signature was present in a fairly well-defined basin. Weaker, shallow appearing open water signatures were given a palustrine, emergent temporary (PEMA) classification. Further clues indicating a temporary wetland were shallow, less well-defined basins and the fading out of the signature along the edges. Shallow open water spreading over extensive flat areas which flooded shelterbelts or with

scattered inclusions of upland were also classified as temporary.

Due to the extremely wet conditions at the time of photography, many ephemerals and muddy spots in fields were a source of interpretive problems. These areas showed up as a dark signature amidst the blue signature of upland cropland. These dark blue signatures were classified as temporary wetlands only if a definitive basin was present. Dark areas that were spread out and irregular in shape were determined to be upland.

Another problem was the classification of semipermanent wetlands with the smooth, even-textured vegetation signature characteristic of seasonal wetlands. Field work indicated that these were Scirpus spp. dominated wetlands which may have little residual vegetation due to ice action in winter, grazing, or mowing. Interpretation of these wetlands with the smooth, even-textured vegetation signature was based on the presence or absence of some tight packed clumping within the wetland. Such clumping was a good clue for indicating a semipermanent water regime. Also, basins with predominantly an open water signature but containing a few whitish clumps of vegetation were classified as semipermanent (PEMF, PAB/EMF, or PEM/ABF).

WETLANDS

Lacustrine System

The most common lacustrine system on the Jamestown NE was the L2ABG. This type of lake was characterized by an open water signature in a fairly large, deep basin. On the USGS topographic map, permanent water was indicated and was usually labeled with a lake name. A few L2ABF's were also classified and were differentiated by an open water signature in a smaller shallower basin bordered by a fairly substantial band of Typha spp. An L1ABH with an L2ABG border was delineated based on collateral data

supplying information concerning depth contours. Pipestem and Jamestown reservoirs were given the classification of L1UBHh. The sewage lagoons greater than 8 ha (20 acres) were called $L2UBG_x$.

Riverine System

The James and Sheyenne rivers were classified as R2UBH in this quadrangle. Streams with relatively narrow, yet continuous channel and usually draining into the James or Sheyenne rivers, were called R4SBF. Other drainages in which the open water signature was weak or absent or the water present was discontinuous or formed pools were called palustrine. Many streams in this area do not flow by the end of the growing season.

Palustrine System

The most common palustrine wetland located in the Jamestown NE was the seasonal emergent wetland (PEMC), usually characterized by an open water signature or a smooth, even-textured vegetation signature. The dominant vegetation of most seasonal wetlands was whitetop (Scolochloa festucacea) with some containing reed canary grass (Phalaris arundinacea). Another common wetland was the temporary emergent wetland (PEMA) having a weak open water signature, a dark blue color, or a white to gray signature. Semi-permanent wetlands (PEMF) were also present, usually dominated by Typha spp. or Scirpus spp. The typical semipermanent signature was a rough-textured whitish to grayish tone with conspicuous clumping. One PEMB was located as a result of field work, a cattail seep on the side of a hill. For a more detailed description of the vegetation characteristic of these palustrine, emergent wetlands refer to the publications by Stewart and Kantrud (1971, 1972).

Also present on the area were several other types of palustrine wetlands. One type was the mixed emergent and aqautic bed wetlands (PAB/EMF or PEM/ABF).

These were large wetland complexes composed of an interspersion of emergents and standing water which contained floating-leaved or submerged vegetation. Another classification used was the palustrine aquatic bed wetland (PABF). These were small (< 8 ha) open water areas dominated by submerged or floating-leaved vegetation and were commonly surrounded by a good stand of emergents such as Typha spp. The PABF call was also given to oxbows along the James and Sheyenne rivers which field work showed to be at least semipermanent with aquatic beds often composed of Lemna spp.

Several excavated palustrine wetlands were classified. $PEMC_x$ and $PEMA_x$ were used to describe road ditches. Some of the shallower gravel pits were classified as $PEMC_x$ while the deeper ones were $PUBF_x$. Dugouts were also $PUBF_x$. Sewage ponds were designated as $PUBG_x$. The majority of the small impoundments in the Jamestown NE were classified as PUBFh.

Temporary forested wetlands (PFOA) were found along rivers, bordering wetlands or in wet swales and depressions. Forested wetlands were designated as seasonal (PFOC) on the rare occasion when trees were entirely surrounded by standing water in a wetland basin. Several PEM/FOA's were also present on this quadrangle. Scrub shrub wetlands (PSSA, PSSC, PEM/SSA, PSS/FOC) were classifications sparingly used on this map.

RFERENCES

Cowardin, L. M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79-31. 103pp.

Stewart, R. E., and H. A. Kantrud. 1971. Classification of natural ponds and lakes in the glaciated prairie region. U.S. Bur. Sport Fish. Wildl. Resour. Publ. 92. 57pp.

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