

FIELD SUMMARY REPORT
NEBRASKA, PLATTE RIVER

I. INTRODUCTION

Field reconnaissance was conducted during the period of August 25, 1989 through August 28, 1989 to ground truth aerial photography for McCook, North Platte, and Fremont 1:250,000 maps.

A. 1:100,000's:

McCook NW North Platte SW
Fremont SE North Platte SE

B. Personnel:

M. Bevilacqua - Geonex Martel, Inc.
D. Jones - Geonex Martel, Inc.
C. Elliott - U.S. Fish and Wildlife Service
B. Pearson - U.S. Fish and Wildlife Service

C. Date of Field Trip:

August 25, 1989 through August 28, 1989

D. Photography:

Type: CIR
Scale: 1:58,000

<u>Series</u>	<u>McCook NW</u> <u>Date</u>	<u>% Coverage</u>
249	09/17/80	11%
253	09/18/80	42%
261	09/21/80	36%
183	08/20/80	11%

<u>Series</u>	<u>North Platte NW and North Platte SW</u> <u>Date</u>	<u>% Coverage</u>
153	06/29/84	14%
343	07/05/85	14%
333	06/22/85	14%
331	05/31/85	19%
329	05/31/85	19%
339	06/23/85	20%

<u>Series</u>	<u>Fremont SE</u> <u>Date</u>	<u>% Coverage</u>
211	10/26/81	12.5%
151	09/19/81	12.5%
155	09/20/81	12.5%
157	09/20/81	12.5%
209	10/23/81	12.5%
43	05/14/81	12.5%
41	05/14/81	25.0%

E. Collateral Data:

1. 7.5' and 1:250K U.S.G.S. topographic maps.
2. Bailey, Robert G., Description of the Ecoregions of the United States, U.S. Department of Agriculture. 1980.
3. Hydric Soils of the State of Nebraska, 1985. U.S. Department of Agriculture, Soil Conservation Service.
4. Wetland Plants of the State of Nebraska, 1986. U.S. Department of the Interior, Fish and Wildlife Service.
5. Soil Surveys for the counties of Lincoln, Saunders, Logan, Crawford, Washington, Dodge, Custer Butler, Hayes, Seward, Douglas, Sarpy, and Dawson, Nebraska.

II. OVERVIEW

The project area covers the Platte River in Central and Eastern Nebraska. The North and South Platte River's join at the town of North Platte. The entire water course, both upstream and in the study area, is heavily drawn upon for irrigation. Because of this the river system is reduced to perhaps a quarter of it's historical flow before diversion. A further result of this reduced flow is a shrinkage of habitat along the river banks. Subirrigate soils extending sometimes for several miles away from the river no longer receive sufficient moisture. Some of these areas are irrigated from the river and as such are wetlands.

Much of this area of subirrigated soils flanking the Platte River is used for agriculture. Most of that is corn. Much of this corn is consumed by waterfowl to fatten them up for their long flights.

One issue in question during ground truthing was the extent of wetland loss due to draw down. Both the immediate rivers area and the subirrigated land to either side were observed to be drier than underlying soil types would suggest. Some twenty or more subirrigated soils once conveyed ample moisture outward from the river. This is no longer true unless aided by irrigation and overflow ditches. Even the alluvial gravels in the river itself appear to be upland in nature in some locations.

Access to river sites for ground truthing were limited but maximum use was made of those that were visited. Areas north of the river in North Platte SW and North Platte SE are mostly sand hills. These are very dry. They are dotted with windmills and occasional pivot irrigation systems. South of the river are agriculture fields.

III. BIOLOGICAL CHARACTERISTICS OF WETLANDS

- A. Marine: Not present.
- B. Estuarine: Not present.
- C. Lacustrine: All water bodies over twenty acres that are not primarily emergent in nature. Some lakes are natural others are impoundments or reservoirs. More permanent lakes will be called L1UBH or L1UBHh for reservoirs. During late season aquatic beds, rooted and floating, can develop. These are referred to as L2ABG(h).
- D. Riverine: The major riverine system is the Platte River. At the town of North Platte the North and South Plattes merge to form a single river. The Loup River, although not included in the area ground truthed on this occasion, is a large nearby tributary to the Platte River, both are R2UBH. Some bypass canals are called R2 also, generally R2UBGx. The remaining streams are not permanent and are called R4SBC, F, A with "x" modifier for irrigation ditches. Point bars will be R2USA and R2USC.
- E. Palustrine: Palustrine forested and scrub shrub will be one or more of the following: Salix spp., Populus deltoides, and Acer saccharinum. Shrubs and especially trees appear more frequently as you move eastward where precipitation increases considerably. Trees and shrubs occur in drainages, near impoundments and marshes and in road ditches. Their water regime is most often temporary although eastward more forested wetland can be found.

Emergent wetlands are temporarily flooded. Species common to temporarily flooded areas include Rumex spp., Polygonum spp., Spartina pectinata, Echinochloa crusgalli, Carex spp., Helianthus spp., Andropogon gerardii, Heteranthera limnosa. Seasonally flooded include Eleocharis spp., Carex spp., Equisetum spp. Semipermanently flooded include Scirpus spp., Typha latifolia, Typha angustifolia.

Aquatic bed and unconsolidated shore are characterized by duckweed and unvegetated mud and gravel. Both of these generally occur at the fringes of larger wetlands, usually unconsolidated bottom lacustrine or palustrine.

IV. IMAGERY, PRELIMINARY DELINEATIONS, AND FIELD CHECKING

A. Conditions of Imagery:

There were a total of fifteen different dates of imagery spread over the work area. The range was from late May to late October within a four-year period. The signatures for basin and linear wetlands varied somewhat as did wet field signatures (irrigated). These signatures were noted and pose no difficulty. The irrigated fields will be delineated only when ditches are present along with the signatures known to represent them.

The Platte River itself presented a different problem. Significant differences in water level prevented direct typing of the imagery. The convention for doing this was to use the low water imagery as a guide to interpreting that with high water. The rationale for this is that the river should be shown as it is most of the year. The error in the method is primarily in slightly mislocating the river channel. The balance of wetlands to flowing water should remain accurate.

V. SUMMARY

Interpretation of the sand hills and agricultural field presents no major difficulty. Irrigated fields with underlying subirrigated soils are dealt with by convention. The Platte River itself is at very low flow. Subirrigated soils on either side are no longer wet unless flooded by ditches from the river. Many former flood plain wetlands are now dry because they receive no water from the river. Photography showing flooding is delineated with overlapping low water imagery to show only the channel and the real aerial extent of wetlands.