

NOTES TO USERS

SPECIAL INTERPRETATION CONSIDERATIONS

GREAT BEND SE, KS.

Users should give consideration to the following factors which, to varying degrees, affected the photointerpretation, delineation and classification of many of the wetlands portrayed on the maps of the study area.

Nature of Photo Interpretation

The map documents were prepared primarily by stereoscopic analysis of high altitude aerial photographs. Wetlands were identified on the photographs based on vegetation, visible hydrology, and geography including land-use. The aerial photographs typically reflected conditions during the specific year and season when they were taken. In addition, there is a margin of error inherent in the use of aerial photographs. Thus a detailed on-the-ground and historical analysis of a single site may result in revision of the wetland boundaries established through photographic interpretation.

In areas of high wetlands density and complexity, there may occur small upland areas which, because of their relative size and the scale of the photography, were left as inclusions within larger intricate wetland delineations. This technique helped to relieve potential confusion in areas of extreme complexity and improve the overall readability of the maps. The above procedure was also used where wetlands of different periods of inundation were co-mingled in extreme complexity. For example, some smaller, seasonally flooded pockets may be "lumped" in with temporarily flooded wetlands. In addition, extremely small wetlands or wetlands obscured by canopy may not be included on the map inventory.

The quality of the photography used ranged from somewhat poor to good in quality. In some cases, blue emulsion made interpretation of temporary signatures and differentiation between water regimes difficult. To retain consistency overlap of surrounding frames were used as reference.

The photography dated primarily from 9/27/81 to 10/26/81. Photosynthesis as well as rainfall are drastically reduced by this late in the growing season making detection of wetland vegetation and water bodies less reliable. Field inspection notes, soil, land-use patterns and other interpretative clues were utilized in conjunction with the photographic signature to make the final classification.

Wetland vs. Wetland Signature

The signatures of temporarily flooded meadows (associated with Slickspot and Carwile soils) and the drier, upland soils containing wet inclusions (Drummond, Natrustolls and other complexes) appeared very similar and the distinguishing tones were very subtle. Soil survey and land use patterns were relied upon heavily in making the wetland/upland determination.

The saline conditions of many soils made distinction between dry salt deposits and wet unconsolidated shore signatures difficult. Changes in relief viewed stereoscopically, and topographic contour data provided the primary clues in analysis. Unconsolidated shore signatures were often classified as emergent vegetation or mix classed as emergent/unconsolidated shore because of the eventual domination of emergent hydrophytes and the possibility the emergent signature was obscured by glare.

Common in agricultural areas are numerous small temporarily and seasonally flooded basins and depressions whose photographic signatures were obstructed by land use practices. A great attempt was made to identify as many of these areas as possible using contour data and depression notations from USGS topographic maps and county soil surveys, as well as photographic signature.

The amount of forested and shrub riparian areas included as wetland along rivers and streams was a function of the degree of entrenchment of the water course, the topographic contour data, and the examination of the vegetation for possible wetland understory signatures. Changes in relief and terrain levels were often obscured by the canopy.

Man Induced Factors

In large wetland communities under direct and purposeful control for use as a wetland, determination of the classifications were based on information gained through research of management practices as well as the water conditions the instant of photography. This is particularly the case with the interpretation of Cheyene Bottoms and Quivera wildlife refuges.

However, the classification of the Arkansas River floodplain was based on the date of photography only. Reduced streamflow has allowed for the encroachment of vegetation onto the flats historically denuded by ice flow. No attempt was made to restrict the amount of vegetation identified or approximate the historical condition.

Partially drained wetlands are signified by using a "d" modifier. In no way does this reflect the condition, operation, or effectiveness of the ditches, drains, pumps, or siphons in use. Other factors such as hydrology, irrigation practices, draining, etc. were taken into account.

The diked/impounded modifier (h) was given to all wetlands that were believed to be influenced by water levels controlled by any impoundment. It is difficult however, to determine exactly the definitive boundary as to the water level's impact on soil and vegetation as a result of the dike. In addition, a variety of different management objectives involving water level manipulation further obscures the use of the "h" modifier resulting from impounded water.

The excavated modifier "x" was given to all wetlands formed by excavations. Ponds and canals for agricultural purposes are the primarily wetlands identified as such. These were classified according to size, depth, presence of water, and likelihood of vegetation.

HYDRIC AND POSSIBLE HYDRIC SOILS

HYDRIC SOILS - as listed in SCS plant list

Seasonal

Kingman
Plevna
Ness

SOILS WITH HYDRIC POSSIBILITIES - as interpreted from soil surveys

Seasonal

Wet Alluvial

Seasonal to Temporary

Carwille
Elsmere-plevna Complex
Lesho
Platte
Waldeck
Slickspot Complex

Temporary to Upland

Dillwyn
Hobbs
Uly
Zenda

Upland with Wetland Inclusions

Carwille-Farnum Complex
Dillwyn-Plevna Complex
Dillwyn-Tivoli Complex
Drummond Complex
Elsmere-Tivoli Complex
Farnum-Slickspot Complex
Natrustolls
Pratt-Carwille Complex
Tabler-Drummond Complex
Tabler-Slickspot Complex

WETLAND PLANT - INDICATOR SPECIES

Intermittently Exposed (G)

Potamogeton, sp. (AB)

Semipermanent (F)

Potamogeton, sp. (AB)

Polygonum, sp. (EM)

Scirpus, spp. (EM)

Typha latifolia (EM)

Seasonal (C)

Carex, spp. (EM)

Cyperus, spp. (EM)

Polygonum, sp. (EM)

Salix, spp. (SS)

Temporary (A)

Distichlis, spp. (EM)

Eleocharis, spp. (EM)

Populus, deltoides (FO)

Rumex, sp. (EM)

Spartina, spp. (EM)