CHERRY CREEK WATERSHED

FIELD SUMMARY REPORT

I. PURPOSE

The purpose of this field trip was to ground truth aerial photography of the study area so that photo interpretation could be facilitated with a high degree of accuracy.

II. 1:100,000 MAPS REVIEWED

Denver NE	6 quads
Denver SE	12 quads

III. 7.5' QUADRANGLE MAPS WITH CHECKSITES

Coal Creek	Larkspur
Fitzsimmons	Greenland
Sedalia	Castle Rock South
Parker	Russelville Gulch

IV. FIELD PERSONNEL

Chuck Elliott	USFWS, Region 6
Kelly Drake	USFWS, Region 6
Bill Noonan	USFWS
Vern Helbig	USFWS
Brad Miller	Environmental Protection Agency
Lynn Ashby	Martel
Frank Schwartz	Martel

V. FIELD DATES

May 9, 1988 - May 11, 1988

VI. PHOTOGRAPHY

Type:	Color Infrared
Scale:	1:58,000 scale
Date:	10/84
Percent Coverage:	100%

DRAFT

VII. COLLATERAL DATA

Bailey, Robert G., 1980. Description of the Ecoregions of the United States. U.S. Department of Agriculture Forest Service, Miscellaneous Publications.

Cowardin, L.M., V. Carter, F.C. Golet and T.T. LaRue, 1979. Classification of Wetland and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service.

Duncan, A.C., R.C. Ugland, R.D. Steger and J.L. Blattner, 1984. Water Resources Data, Colorado, Water Year 1984. U.S. Department of the Interior, Geologic Survey, Data Report CO-84-1.

National Technical Committee for Hydric Soils, 1985. Hydric Soils of the State of Colorado. U.S. Department of Agriculture, Soil Conservation Service.

Reed, Porter B. Jr., 1986. 1986 Wetland Plant List, Colorado. U.S. Department of Interior, Fish and Wildlife Service.

USGS Quads 18 at 1:24,000 scale
1 at 1:250,000 scale

Soil Surveys for Arapahoe, Castle Rock Area (Douglas County), Elbert, El Paso and Denver counties.

VIII. PHYSICAL CHARACTERISTICS

Latitude 39° to 39° 45'
Longitude 104° 30' to 105°

Bailey's Ecoregion Classification (1980) identifies this area as Great Plains-Shortgrass Steppe Provence (Grama-Buffalo Grass Section) and Rocky Mountain Forest Provence (Ponderosa Pine-Douglas Fir Forest Section).

A. Great Plains-Shortgrass Prairie Province

This region is characterized by rolling plains and tablelands of moderate relief. Altitudes in the Cherry Creek Watershed drainage area range from just under 6,000 feet to over 7,000 feet. Elevation is lowest at the northern and eastern borders and increases to the South and West. Winters are cold and dry and summers are cool and relatively dry. Average annual precipitation ranges from 15 to 20 inches with the greatest amounts occurring in spring and summer. Starting in early May, evapotranspiration rates start to increase rapidly. In spite of increased precipitation during spring and summer, evapotranspiration exceeds the amount of moisture received as rain. Mean annual temperature is 46° F and mean summer temperature is 68° F. Average seasonal snowfall is 42 inches. Many species of grasses and herbs grow in this province.

B. **Rocky Mountain Province**

The Rampart Range in this province covers a small portion to the southwest of the work area. Elevations range from 6,500 feet to over 9,000 feet. Precipitation falls mainly in the winter. The base of these mountains receive only 10-20 inches of rainfall. At the higher elevations precipitation increases to 40 inches, most of which is snow. Average annual temperatures are mainly 35° to 45° F. Chief vegetation is the ponderosa pine and Douglas-fir.

IX. BIOLOGICAL CHARACTERISTICS OF WETLAND HABITATS

A. **Marine**

Not present.

B. **Estuarine**

Not Present.

C. **Riverine**

The major rivers in this work area are Cherry Creek, Plum Creek and the South Platte River. Cherry Creek flows from its headquarters in the Black Forest north into Cherry Creek Reservoir. Cherry Creek and the South Platte River will be classified as riverine, lower perennial, unconsolidated bottom, permanently flooded. Plum Creek, based on information in the USGS Water Resource Book, will be classified as riverine, lower perennial, unconsolidated bottom, intermittently exposed. A portion of Cherry Creek, south of Franktown, drops several hundred feet over a few miles with a substrate of bedrock and boulders. This area is riverine, upper perennial, rock bottom, permanently flooded.

The majority of smaller streams observed in the Cherry Creek drainage area are found to have a muddy substrate and these will be classified under the palustrine system. Others with a sandy substrate in the Cherry Creek drainage and many streams found in the Plum Creek drainage will be riverine, intermittent streambed, semi-permanently, seasonally or temporarily flooded. Streams in the mountains will be classified riverine, intermittent, streambed, semi-permanently flooded. These streams flow west to east while streams in the plains flow south to north.

Excavated drainage ditches in the city of Denver will be classified as riverine, intermittent streambed, semi-permanently flooded with the excavated modifier. These canals are flooded during the growing season and then are allowed to dry up later in the year. The exception is Cherry Creek, north of the

reservoir. This is excavated through Denver City. Although not much water is released from the reservoir, springs recharge this channel. It is delineated as lower perennial, unconsolidated bottom, intermittently exposed, with the excavated modifier.

D. **Lacustrine**

Cherry Creek reservoir is the largest impoundment in the study area. It will be classified as lacustrine, limnetic, unconsolidated bottom, permanently flooded where the depth is greater than two (2) meters. The reservoir will be further delineated when information becomes available from the region VI NWI staff. Vegetation along the reservoirs will be classified under the palustrine system. Other impoundments and lakes 20 acres or larger in size will also fall under the lacustrine classification. The impounded or excavated special modifiers will be used where appropriate.

E. **Palustrine**

Palustrine emergent wetlands found in the Cherry Creek watershed occured along creeks, in draws and wet meadows. Species found in these areas include spikerush (Eleocharis macrostachia), least spikerush (Eleocharis acicularis), nebraska sedge (Carex nebrascensis), sedges (Carex spp.), baltic rush (Juncus balticus), american three square (Scirpus americanus) and smartweed (Polygonum spp.). These areas are palustrine, emergent, seasonally flooded. Some stands of mainly baltic rush and one area ground truthed supported mullein (Verbascum sp.) are interpreted as temporarily flooded although most emergent areas throughout the study area are found to be seasonally flooded. Semi-permanently flooded emergents found in the study area include cattail (Typha latifolia) and hardstem bulrush (Scripus acutus). While ground truthing some of these semi-permanently flooded areas, some were found to be spring fed. Although cattail stands are being used as a semi-permanent indicator some cattails are also found growing among seasonal vegetation.

Small basins of emergent species are found in fields to the east and northeast of the study area. A few temporaries were observed but the majority are seasonal. Species found included baltic rush, smartweed, american three square, dwarf spikerush and some unknown grasses. Signatures rather than plowing practices will determine water regime. Basins containing good water with no vegetation present will be delineated as aquatic bed, semi-permanent.

Impoundments under 20 acres in size were found to support aquatic vegetation sometime during the growing season. Duckweed (Lemna sp.) was observed in some of these impoundments during the ground truthing while the signature is

not always apparent on the photography. These impoundments are classified under the palustrine system as aquatic bed, semi-permanently flooded. Larger impoundments less than 20 acres in size found next to rivers and creeks will be classified as palustrine, aquatic bed but with the intermittently exposed water regime. Water is taken from the rivers and creeks to keep these impoundments full. Smaller impoundments with little or no water present are classified as unconsolidated shore with the seasonal or temporary water regime. The impounded modifier will be used on all of the above.

Active beaver ponds in the mountains of the study area are classified under the palustrine system as aquatic bed, intermittently exposed with the beaver modifier. Since the extent of vegetation influenced by beaver modification cannot be determined on the photography, the beaver modifier will be used strictly on the ponds created by these dams.

Willows (Salix spp.) were the only species of shrub found along rivers, creeks and in draws. This scrub-shrub will be delineated as seasonally flooded. Only one area that was ground truthed showed willows to be temporarily flooded. This was an exception as to what was observed throughout the study area.

Forested areas along rivers and creeks were, for the most part, vegetated with upland species. Many cottonwood (Populus deltoides) were found on upper terraces or in upland conditions. Some areas were observed supporting cottonwoods in temporarily flooded conditions and these will be classified accordingly. No seasonally flooded forested areas were found during ground truthing.

X. MISCELLANEOUS INTERPRETATION

Ponds in parks and golf course will be delineated as follows:

1. Large ponds over 20 acres will be considered in the lacustrine system as unconsolidated bottom, intermittently exposed.

2. Smaller ponds under 20 acres will be considered in the palustrine system as unconsolidated bottom, intermittently exposed.

3. Very small ponds will be considered in the palustrine system as unconsolidated bottom, semi-permanently flooded.

4. The excavated and impounded special modifier will be used where appropriate.

XI. SUMMARY

All photography was taken during October, 1984 and field work was conducted in May, 1988. Field reconnaissance of the study area showed photography to be fairly consistent with field observations although field conditions were found to be drier than normal for this time of the year. The photography showed high resolution and should facilitate accurate photo interpretation.

LA/jrg:nwi.2

COMMONLY FOUND SPECIES

PFOA

cottonwood	Populus deltoides

PSSC

willow	Salix spp.

PEMA

baltic rush	Juncus balticus
mullein	Verbascum sp.
least spikerush	Eleocharis acicularis

PEMC

least spikerush	Eleocharis acicularis
spikerush	Eleocharis macrostachia
nebraska sedge	Carex nebrascensis
baltic rush	Juncus balticus
sedges	Carex spp.
american three square	Scripus americanus
smartweed	Polygonum spp.
cattail	Typha latifolia

PEMF

cattail	Typha latifolia
hardstem bulrush	Scripus acutus

PABF

duckweed	Lemna sp.