FIELD TRIP SUMMARY FOR SNAKE RIVER, IDAHO
TRIP II
HAILEY SE, SW, NE; IDAHO FALLS SW

I. INTRODUCTION

Field reconnaissance of the work area is an integral part for the accurate interpretation of aerial photography. Photographic signatures are compared to the actual wetland's appearance in the field by observing vegetation, soil and topography. This information is weighed with seasonality and conditions at both dates of photography and ground truthing.

The total project area covered 11 1:100,000's: all four Twin Falls, two western Pocatellos, Hailey NE, SE, NE, Idaho Falls SW and Jordan Valley NE. Ground truthing was divided into two separate trips for the entire project: the southern maps in April, 1988 and the northern maps in June, 1988. A field trip summary was generated for the first trip and this summary will describe the results of the second field investigation. Unfortunately, we were unable to visit Jordan Valley NE due to field time. However, due to similar geology of the previous ground truthing, photointerpretation can still be accurate. Ground truthing was therefore confined to the northern maps of the project: Hailey NE, SE and SW and Idaho Falls SW for this report.

II. FIELD MEMBERS

Barbara Schuster	Martel Laboratories, Inc.
Benjamin Harrison	U.S. Fish and Wildlife Service

III. FIELD DATES

June 6 - 10, 1988

IV. AERIAL PHOTOGRAPHY

Type: Color Infrared Transparencies
Scale: 1:58,000

V. COLLATERAL DATA

U.S. Geological Survey Quadrangles

Soil Survey of Camas County, Idaho, 1981. U.S. Department of Agriculture, Soil Conservation Service.

Potential Natural Vegetation Map, Idaho, 1986. U.S. Department of Interior, U.S. Fish and Wildlife Service.

Wetland Plants of the State of Idaho, 1986. U.S. Department of the Interior, Fish and Wildlife Service.

Description of the Ecoregions of the U.S., 1980. Bailey, Robert G., U.S. Department of Agriculture.

Important Fish and Wildlife Habitats of Idaho, 1980. Boccard, Bruce. U.S. Department of the Interior, Fish and Wildlife Service.

VI. PHYSICAL CHARACTERISTICS

The study area is just north of the Snake River and in south central Idaho. It extends from the lowlands of the Snake River up into the Sawtooth Mountains. There are a variety of other mountain ranges including the Boulder, Pioneer and Smoky Mountains, all within the Sawtooth National Forest. Just south of the Smoky Mountains and North of Mount Bennett Hills is the Camas Prairie. Lava flows cover a large portion of the southeastern map of Idaho Falls SW.

Bailey (1980) characterizes this area as falling within two provinces. The Intermountain Sagebrush Province dominates the study area and is described as the Great Basin physiographic section. The many individual basins accumulate alkaline and saline salts. Mountains here rise abruptly from the semi-arid plains. The Sagebrush-Wheatgrass Section is the only section found within this study area.

The Rocky Mountain Forest Province is described as rugged glaciated mountains with sections of intermontane depressions of parks at altitudes of 6000 feet. The highest mountain is Handyman Peak at 12,009 feet. The Grand Fir-Douglas Section dominates this province here since these firs are commonly associated.

The Camas Prairie is a broad alluvial valley dissected by Camas Creek and its tributaries which drain much of the surrounding foothills and steep mountains. Camas Creek empties into Magic Reservoir. East of this bottom land is an undulating lava plain. To the south is rolling upland grading into steep hills composed of rhyolitic and silicic volcanics. To the north are steep mountains composed of granite and andesite.

Soils of the highlands are dominated by Mollisols with some Alfisols. Due to steep slopes and recent glaciation, Inceptisols are also present. Flood plain soils are typically Entisols. Some basins may have pockets with no soil. Soils on the Snake River Plain formed in wind-laid and water-deposited materials over lava flows and are dominated by Aridisols.

The climate in the lowlands is characterized by hot summers and moderate winters shielded by the Rocky Mountains from strong Artic winds. The average annual temperature is in the 40's (^{o}F). Precipitation averages approximately 15 inches annually and snowfall averages 93 inches annually. January and December are the wettest months due to high rainfall and snowfall. The climate in the higher mountainous regions is described as semiarid, however, more precipitation falls here than in the lowlands ranging upward to 40 inches annually. Climate is a result partly of west winds and the north-south orientation of the mountain ranges. The west slopes receive much of more rainfall than the east slopes. The average annual temperature ranges with variation in altitude but is mainly in the 40's (^{o}F).

As described by the Potential Natural Vegetation Map of Idaho, natural vegetation over most of the study area consists of lowland plant communities of Wyoming big sagebrush, bluebunch wheatgrass, sandberg and Nevada bluegrass and needlegrasses. Along the valley of the Snake River Basin big sagebrush, Wyoming big sagebrush, fourwing salt bush, basin wild rye, Indian rice grass, bluebrush wheatgrass, needle and thread grass, Thurber needlegrass and bottlebrush squirreltail are the dominant plants. Black greasewood and inland saltgrass are common within this community in lower terraces that are poorly drained and saline. The vegetation on the south and west-facing aspects along the Boise River is grassland or an open ponderosa pine forest. Arrowleaf balsamroot is a dominant forb. The North-facing slopes along the major drainages and the mountainous upland at low and mid-elevations are dominated by a mixed coniferous forest of ponderosa pine, Douglas-fir, and Grand fir. Draws and enclosed basins contain subalpine fir and Engelmann Spruce. High elevations also can have these two species along with limber pine. Over all the terrain is found much lodgepole pine. The trees of the Sawtooth National Forest include Douglas fir, lodgepole pine and quaking aspen. The lava beds support various plant species from wildflowers such as dwarf monkeyflower and scabland pentstemon, shrubs such as rubber rabbit brush and antelope bitterbrush, to the scattered limber pines.

The major industry is agriculture utilizing the Snake River and subsurface water resources. Crops range from corn, potatoes, wheat, barley, alfalfa hay, sugar beets, beans, peas and onions. Wildlife is abundant and utilizes the rich food resources of the Snake River floodplain and its tributaries along with various lakes that are rimmed with cattail and hardstem bulrush. Commonly sighted birds were marsh hawks, red-tailed hawks, red-headed blackbirds, western tanagers, yellow-headed blackbirds and a variety of waterfowl including cinnamon teals.

VII. BIOLOGICAL CHARACTERISTICS OF WETLAND HABITATS

A wetland plant list is included in this section for reference.

A. Palustrine

This system is the majority of the vegetated wetlands including floodplains, marshy areas, playas, drainages, springs, sloughs, excavations, impoundments, beaver ponds, and natural ponds. Some playas are not 30% vegetated and may be due to a higher alkaline soil than plants can tolerate.

Temporary emergent wetland communities are typically vegetated by saltgrass (Distichlis spp.), tanzy suncup (Oenothera tanacafolia), iris (Iris spp.), dock (Rumex), pussytoes (Antennaria spp.) and grasses. These are often found on wetland edges where drawdown occurs. More often the meadows are seasonally flooded and support a wide variety of emergent vegetation including abundant colorful wildflowers. These plant communities include sedges (Carex spp.), rushes (Juncus spp.), spikerushes (Eleocharis spp.), cinguefoil (Potentilla spp.), buttercup (Ranunculus spp.), foxtail (Alopecurus spp.), camas (Camassia spp.), groundsel (Senecio spp.), monkey flower (Mimulus guttatus), American brookline (Veronica americana), starwort (Stellaria sp.), Jeffrey's shooting star (Dodecatheon Jeffreyi) and swordleaf rush (Juncus ensifolius). This type of wetland is found extensively on Camas Prairie, lake shores, mountain seeps, lowland mountains, spring-fed pockets, and floodplains. Cattail (Typha spp.) and hardstem bulrush (Scirpus acutus) are found in both seasonally and semipermanently flooded wetlands. Seeps dot the foothills, prairies and mountains.

Aquatic vegetation observed in the field was dominated by watercress (Rorripa sp.). A nonpersistent emergent smartweed found in various ponds and lakes throughout the study area was Polygonum amphibium. Both of these species are found in permanent or semipermanent water regimes.

Commonly associated with the emergents is shrubby cinquefoil (Potentilla fruiticosa). This ericaceous health was usually found in seasonally flooded basins and floodplains. Silver sage (Artemisia cana) is a typical plant in temporary water regimes of the Camas Prairie. This was observed to be growing with rushes between and alongside wetter sloughs. The scrub shrub species that populates floodplains, springs and drainages is predominantly willow (Salix sp.). Young river birch (Betula occidentalis), rose (Rosa sp.), red osier dogwood (Cornus stolonifera), and red alder (Alnus rubra) in with the willows.

Forested wetlands which are flooded temporarily support black cottonwoods (Populus balsamifera trichocarpa) and quaking aspens (Populus tremula tremuloides). These are usually found in riparian zones and old river scars. Engelmann spruce (Picea engelmannii) and lodgepole pine (Pinus contorta) were the dominant tree species found in mountain area forested wetlands.

B. Lacustrine

This classification includes some major reservoirs such as Anderson Ranch, Little Camas, Twin Lakes, Magic Creek and Fish Creek. Natural lakes within the study area are located mainly in the Sawtooth National Forest and include Alturus and Petit Lake. Reservoirs had extremely low water levels due to drought conditions in 1987 and 1988. Zones of semipermanent and temporarily exposed shores will be mapped when possible. These lakes are usually considered permanent.

C. Riverine

The classification is always upper perennial for permanent rivers here since even in the flatlands flow is rapid due to the many drainages from the steep mountains. Most have an unconsolidated bottom and shore. The unvegetated shores and islands are temporarily or seasonally flooded. Major rivers include South Fork Boise, Big Wood, East Fork Salmon, and Lost River.

Intermittent streams are abundant and can flood temporarily, seasonally, or on a semi-permanent basis. Many irrigation ditches are present and classified either seasonal or semi-permanent with the excavated modifier. Some are lined in concrete or rip rap and will also include the artificial substrate modifier. Many of the ditches and drainages are vegetated and will therefore be considered to be palustrine.

VIII. IMAGERY, PRIMARY DELINEATION AND FIELD CHECKING

Imagery is consistent throughout the study area, however, dates range from summer to fall during 1983, 1984 and 1985. The uncommon high water level of 1984 is reflected in the areas collecting runoff such as playas and reservoirs. Ground truthing neatly balanced this condition out, since it was during a drought year (following another drought year) and water levels were low. Most irrigation ditches were dry and shores were exposed. This can easily be assimilated into accurate photo interpretation by using the topographical quadrangles for collateral data.

Our time of investigation was good on this follow-up trip since it was later in the season and more herbaceous vegetation was present to identify. Acessibility was not a problem except in the Camas Prairie, where we encountered one flooded road.

IX. SUMMARY

The quality of photography for this study area is sufficient for cover typing and will allow good wetland delineations under stereo. A wide range of wetlands was documented in the field and corresponding signatures were identified to be fairly consistent throughout the project. The soil survey for the Camas Prairie will greatly aid in establishing wetland boundaries for this unusual area. Riparian forests will have to be carefully examined due to their tendency to be on higher ground than the surrounding wetland shrubs and therefore tend to be upland in many cases.

/jrg:nwi.2

OBSERVED WETLAND VEGETATION

A. EMERGENT

Achillea lanulosa	yarrow
Alopecurus aequalis 115	foxtail
A. arundinaceus	creeping meadow foxtail
A. geniculatus 115	water foxtail
Antennaria spp.	pussytoes
Arnica spp.	arnica
Brassica spp.	mustard
Camassia quamash	camas
Castilleja spp.	indian paintbrush
Carex spp. 157	sedge
Cirsium spp	thistle
Distichlis spp	saltgrass
Dodecatheon spp.	shooting star
Eleocharis spp. 129	spikerushes
Epilobium spp	fireweed
Equisetum spp	horsetail
Festuca rubra	red fescue
Juncus effusus 174	soft rush
Juncus spp.	rush
Iris missouriensis	iris
Lilium	lily
Mentha 295	mint
Mertensia ciliata	mountain bluebells
Oenthera tanaceafolia	tanzy suncup
Penstemon spp	penstemon
P. globosus	globe penstemon
Pedicularis groenlandica	elephant's head
Phalaris arundinacea	reed canary grass
Phleum	timothy grass
Plagiobothrys	popcorn flower
Plantago major	common plantain
Polygonum spp 198	smartweed
P. bisortoides	American bisort
Polygonatum pubscense	Solomon's seal
Polentilla spp	cinquefoil
P. drummondi	Drummond's cinquefoil
P. anserina	silverweed
Ranunculus spp 218	buttercup
R. alisonifolius	dwarf buttercup
Rumex spp 198	dock
R. acetosella	sheep sorrel dock
Sagittaria cuneata 78	northern arrowhead
Saxifraga spp.	saxifrage
Scirpus spp 143	bulrush

S. microcarpus	small-fruited bulrush
Senecio spp 143	groundsel
S. triangularis	arrowleaf groundsel
Taraxacum officinale	dandelion
Tenacetum spp.	tanzy
Trifolium spp.	clover
Trollius laxus	American globe flower
Vaccinium spp	huckleberry
Veratrum viride	northern false hellebore
Verbascum spp.	mullein
Wyethia helenioides	whitehead wyethia
Xanthium strumarium	cockleburr
Zygadenus venenosus	death camas
Dodecatheon Jeffeyi	Jeffrey's shooting star
Juncus ensifolius	swordleaf rush
Mimulus guttatus	monkeyflower
Stellaria spp.	starwort
Veronica americana	American brookline
Scirpus acutus	hardstem bulrush
Typha spp.	cattail
Polygonum amphibium	water smartweed

B. AQUATIC BED

Rorripa spp. 27, 229	watercress
Myriophyllum spp. 29, 263	milfoil
Lemna spp. 167	duckweed
Azolla spp.	mosquito fern
Utricularia spp. 309	bladderwort

C. SCRUB SHRUB

Artemisia cana	silver sage
Alnus rubra 197	red alder
Ribes spp	currant
Rosa spp	rose
Cornus stolonifera	red osier dogwood
Potentilla fruiticosa 241	shrubby cinquefoil
Salix spp. 182	willow

D. FORESTED

Betula occidentalis	riverbirch
Crataegus spp.	hawthorn
Picea engelmannii	Englemann spruce
Pinus contorta	lodgepole pine
Populus balsamifera trichocarpa	black cottonwood
P. tremula tremuloides	quaking aspen
Alnus rubra	red alder