FINAL REPORT

WETLAND TECHNICAL REPORT FOR THE US 36 EIS PROJECT

DENVER, ADAMS, JEFFERSON, AND BOULDER COUNTIES, COLORADO

Prepared for Colorado Department of Transportation and the Regional Transportation District

November 9, 2004



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Wetlands and other waters were identified on two 600-foot wide corridors between Denver and Boulder, including an 18-mile corridor along US 36 and a 30-mile corridor along the BNSF. Wetlands were identified based on the presence of wetland vegetation and wetland hydrology, assuming the presence of hydric soils.

A total of 219 wetlands were identified in the study area, including 103 along US 36 and 116 along the BNSF. These wetlands encompass a total of 115.87 acres, 70.18 acres along US 36 and 45.69 along the BNSF. The wetlands are organized into three groups, including natural, irrigation-related, and stormwater-related. Approximately 30 percent of the wetlands are natural wetlands, 55 percent are associated with irrigation, and 15 percent are stormwater-related.

The wetlands were classified into four groups using a standard classification system, including palustrine emergent, palustrine scrub/shrub, palustrine emergent and scrub/shrub combination, and palustrine forested. Most of the wetlands are classified as palustrine emergent (97.57 acres or 84 percent of the wetlands in the study area). Palustrine scrub/shrub wetlands are the secondmost common with 9.63 acres (8 percent), palustrine emergent and scrub/shrub are third-most common with 8.23 acres (7 percent), and palustrine forested are the least common with 0.44 acre (less than 1 percent).

A total of 23 wetland plant associations were identified in the study area, including 14 from a recently published local field guide. The most common six associations observed include Carex emoryi, Phalaris arundinacea, Salix exigua/mesic graminoid, Typha angustifolia/Typha latifolia, and mixed wetland graminoid, mixed wetland herbaceous.

A regionally used and accepted wetland functional assessment method was used to determine the high-rated functions for the wetlands in the study area. A total of 12 functions were examined and high-ratings were received for nine. The functions most commonly rated high include: special status species habitat, shoreline stabilization, general wildlife habitat, and sediment/nutrient/toxicant removal. The wetlands that received high ratings encompass a total of 99.90 acres, including 62.03 along US 36 and 37.87 along the BNSF.

Of the 219 wetlands and 115.87 acres, 87 are likely considered jurisdictional by the USACE for a total of 90.72 acres. Most of the jurisdictional wetlands are along US 36 (61.32 acres or 68 percent of the jurisdictional wetlands), with only 29.40 acres (32 percent) along the BNSF.

In addition to the wetlands, a total of 93 other waters were identified in the study area, encompassing 51.32 acres. This includes 41 along US 36 for a total of 11.30 acres, and 55 along the BNSF for 40.02 acres. These other waters are organized into the same three groups as the wetlands, including natural, irrigation-related, and stormwater-related. Most of the other waters belong to the natural group (36.13 acres or 70 percent of the other waters in the study area). Irrigation-related other waters are the second-most common with 8.01 acres (16 percent) and stormwater-related other waters are the least common with 7.18 acres (14 percent).

Of the 93 other waters (51.32 acres), 71 for a total of 34.55 acres are likely considered jurisdictional by the USACE. Most of the jurisdictional other waters are along the BNSF (29.52) acres or 85 percent of the jurisdictional other waters), with only 5.03 acres (15 percent) along US 36.

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SECTIONONE

1.1 **BACKGROUND**

The purpose of this report is to summarize the data collected for the wetland portion of the US 36 Environmental Impact Statement (EIS). Although the wetlands were not formally delineated per US Army Corps of Engineers (USACE) protocol, they were identified using a faster, more conservative approach. This method is explained in more detail in Section 2.0 Methods.

1.2 WETLAND DEFINITION AND PROTECTION

Wetlands are important biological resources that perform many functions including groundwater recharge, flood flow attenuation, erosion control, and water quality improvement. They also provide habitat for many plants and animals, including threatened and endangered species.

Wetlands are defined by the USACE (33 CFR 328.3, 1986) and the US Environmental Protection Agency (40 CFR 230.3, 1980) as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Many wetlands and other aquatic features, including ephemeral, intermittent, and perennial streams, are considered waters of the US by the USACE and these "jurisdictional" areas are protected under Section 404 of the Clean Water Act.

It should be noted that although the Act "protects" those wetlands and other waters considered jurisdictional by the USACE, Executive Order (EO) 11990 "Protection of Wetlands" directs all federal agencies to "minimize the destruction, loss or degradation of wetlands." Thus, in accordance with EO 11990, other federal policies, and Colorado Department of Transportation (CDOT) policy, all wetlands in the study area will be considered (regardless of jurisdictional status under Section 404) and all impacts to wetlands will be mitigated at a 1:1 ratio.

1.3 STUDY AREA

The study area generally includes two 600-foot wide corridors. One corridor extends over 18 miles along US 36 from Interstate-25 (I-25) in Adams County to Foothills Parkway in Boulder. The second corridor extends over 30 miles along the Burlington Northern Santa Fe Railroad (BNSF) from near Union Station in Denver to Jay Road just north of Boulder. No wetlands or other waters were mapped along the BNSF corridor beyond the intersection of Jay Road. Figure 1 shows both corridors.

Due to the large size of the study area, the US 36 corridor has been divided into five segments and the BNSF corridor into six. The discussions in this report refer to these segments and they include (from south to north):

- Denver (BNSF only)
- **Adams County**
- Westminster

SECTIONONE

- Broomfield
- Superior/Louisville
- Boulder

SECTIONTWO

2.1 DATA COLLECTION

Prior to conducting any fieldwork, existing wetland data were collected and reviewed from several local and national sources. These sources included the National Diversity Information Source (NDIS) database, National Wetland Inventory maps, and Boulder County information. The NDIS database provided a complete data set for the study area and was the primary data set used in the preparation of a preliminary technical report that described the general area.

The entire study area was walked and/or driven on May 17—20, 24, and 28; June 2—4, 9, 10, and 28; and July 2, 15, and 16, 2004 to identify wetlands and other waters. Rather than completing a formal wetland delineation for the entire study area, the wetlands were identified based on the presence of hydrophytic (wetland) vegetation and wetland hydrology. Hydric soils were assumed to be present in all areas. This method was approved by CDOT, the USACE, and the other agencies involved in the project. Although this method may not be used for Section 404 permitting, it is valuable for projects that have very large study areas with numerous alternatives. The method provides a more time efficient approach to mapping wetlands than formal wetland delineation and the results represent a conservative estimate of the size of the wetlands in the study area. However, prior to impacting any of the wetlands within the study area, a formal wetland delineation should be completed.

2.2 WETLAND FUNCTIONS

To assist in evaluating the functions of wetlands within the study area, a modified version of the Montana Department of Transportation Wetland Functional Assessment Method (Berglund 1999) was used to determine the functions of the wetlands within the study area. This method was used because it is efficient and concise, and is generally relevant to this region.

2.3 JURISDICTIONAL STATUS

The jurisdictional status of the wetlands and other waters is generally based on the feature being adjacent to or having an obvious hydrologic connection to a known jurisdictional waterway or wetland. In most cases, if a wetland is only separated from a jurisdictional waterway by a berm, roadway, railway, or other man-made feature, it was considered jurisdictional even if a culvert or other surface connection was not observed. If no hydrologic connection (current or historical) was observed or could be identified on topographical maps, then the wetland was usually considered non-jurisdictional. Although many irrigation ditches and canals are generally considered non-jurisdictional, until further data can be collected on their endpoints and water source(s), they have been considered jurisdictional for this analysis. This includes any wetlands associated with these ditches and canals, including wetlands created by leaky ditches, irrigation water storage, etc.

This is only a preliminary assessment of jurisdiction. Prior to impacting any wetlands, an official jurisdictional determination must be obtained from the USACE.

2.4 MAPPING

Maps of all wetlands and other waters identified in the study area are included in Appendices A1 and A2. As mentioned in Section 1.3 Study Area, the study area generally consists of two 600foot wide corridors (a 300-foot buffer from the centerline of US 36 and the BNSF).

Appendix A1 includes 32 consecutive sheets that show the US 36 corridor from I-25 (Sheet 32) to Foothills Parkway (Sheet 1), plus nine additional sheets that exemplify those areas outside of the 300-foot buffer area (Sheets 1A, 12A, 12B, 16A—16D, 20A, and 24A).

Appendix A2 includes 51 consecutive sheets that show the BNSF corridor from Jay Road (Sheet 4) to Union Station (Sheet 51), plus five additional sheets that show those areas not visible on the other sheets due to relatively abrupt turns in the alignment (Sheets 8A, 8B, 13A, 25A, and 33A). Sheets 1—3 have been omitted from the set since no data were collected north of Jay Road.

2.5 **IDENTIFICATION NUMBERS**

Every wetland and other water in the study area has been assigned a unique identification (ID) number. In many cases a "wetland" may include a group of small wetlands with similar vegetation and source of hydrology. Generally, the ID numbers for all features increase from south to north, except at the South Platte River on the BNSF which was visited last, and along the south/west side of US 36 where (for safety reasons) the work was conducted from Boulder to Denver. Although the same numbering scheme was used for both corridors, the ID numbers are unique to each corridor and the corridors are treated separately (e.g. Wetland 6 on US 36 is NOT the same wetland as Wetland 6 on the BNSF corridor). In some locations, alphanumeric ID numbers with "A" or other letter (e.g. Wetland 8C) was used for some wetlands. These wetlands are usually not associated with the wetlands of the same number (e.g. Wetland 8), but are just in close-proximity.

3.1 WETLANDS

A total of 219 wetlands were identified in the study area, including 103 along US 36 and 116 along the BNSF. Many of these wetlands include multiple parts and many extend beyond the boundaries of the defined study area. The wetlands encompass a total of 115.87 acres, including 70.18 acres along US 36 and 45.69 acres on the BNSF. The wetlands have been organized into three major groups, including natural, irrigation-related, and stormwater-related wetlands. These groups are briefly discussed below and more information can be found in Appendices B, C and D.

Natural Wetlands

Natural wetlands are those associated with natural seeps, springs, ponds, and waterways, including perennial, intermittent and/or ephemeral streams. A total of 41 natural wetlands were identified in the study area, including seven along US 36 and 34 along the BNSF. These wetlands encompass approximately 34.49 acres or 30 percent of the wetlands within the study area, and are generally located in low-lying areas on floodplains or along the banks of the waterways. Table 1 shows the number of acres of wetland in each group by project segment and each segment is briefly discussed below. Maps depicting all of the wetlands can be found in Appendices A1 and A2.

Table 1
Wetlands by Project Segment

| | We | tland Group (| acres) | 1-11-11 |
|---------------------|---------|---------------------|------------------------|---------|
| Project Segment | Natural | Irrigation -Related | Stormwater -Related | Total |
| US 36 Corridor | | | | |
| Adams County | 0.00 | 0.68 | 1.06 | 1.74 |
| Westminster | 0.90 | 1.32 | 3.20 | 5.42 |
| Broomfield | 0.14 | 2.92 | 1.26 | 4.32 |
| Superior/Louisville | 4.96 | 0.79 | 0.81 | 6.56 |
| Boulder | 1.67 | 50.04 | 0.43 | 52.14 |
| Subtotal | 7.67 | 55.75 | 6.76 | 70.18 |
| BNSF Corridor | | | | |
| Denver | 0.23 | 0.00 | 0.00 | 0.23 |
| Adams County | 6.16 | 0.14 | 1.22 | 7.52 |
| Westminster | 5.78 | 0.41 | 1.51 | 7.70 |
| Broomfield | 3.31 | 0.10 | 2.41 | 5.82 |
| Superior/Louisville | 0.59 | 0.52 | 1.43 | 2.54 |
| Boulder | 10.75 | 7.21 | 3.92 | 21.88 |
| Subtotal | 26.82 | 8 | 10.49 | 45.69 |
| TOTAL | 34.49 | 64.13 | 17.25 | 115.87 |
| Percent of Total | 30 | 55 | 15 | 100 |

US 36 Corridor

Seven natural wetlands were identified along US 36 (Wetlands 88, 35, 37, 39, 46, 75, and 59) and they encompass a total of 7.67 acres. These wetlands include the following (most of those listed are associated with the waterways in parentheses):

- Adams County: none
- Westminster: Wetland 88 (Big Dry/Walnut Creek)
- Broomfield: Wetlands 35 and 37
- Superior/Louisville: Wetlands 39, 46, and 75 (Rock Creek, Coal Creek)
- Boulder: Wetland 59 (South Boulder Creek)

BNSF Corridor

Thirty-four (34) natural wetlands were identified along the BNSF corridor and encompass a total of 26.82 acres. These wetlands include the following (most of those listed are associated with the waterways in parentheses):

- Denver: Wetland 112 (South Platte River)
- Adams County: Wetlands 4, 7—11, and 18 (Clear Creek, Little Dry Creek)
- Westminster: Wetlands 27 and 29—31 (Big Dry Creek, Walnut Creek)
- Broomfield: Wetlands 33, 37, 38, and 41 (Rock Creek)
- Superior/Louisville: Wetlands 41, 44, 45, 50, and 52 (Rock Creek, Coal Creek)
- Boulder: Wetlands 65, 75, 76, 81, 82, 84—86, 92—94, 99, 104, and 107 (Dry Creek, Hillcrest Reservoir, South Boulder Creek, Boulder Creek, Fourmile Creek)

Irrigation-Related Wetlands

Irrigation wetlands are those associated with irrigation ditches and canals, and their use. This includes wetlands that have been created by flood irrigation, over-irrigation, irrigation overflow, and seeping or leaking ditches. A total of 72 irrigation-related wetlands were identified in the study area, including 44 along US 36 and 28 along the BNSF. These wetlands encompass approximately 64.13 acres or 55 percent of the wetlands within the study area. Most of these wetlands are linear, are situated in open meadows that receive flood irrigation, or are in lowlying areas that collect irrigation overflow.

US 36 Corridor

Forty-four (44) irrigation-related wetlands were identified along US 36 and they encompass a total of 55.75 acres. These wetlands include the following (many of those listed are associated with the irrigation ditches in parentheses):

- Adams County: Wetlands 2, 6, and 65 (Allen Ditch)
- Westminster: Wetlands 6, 12—14 (Allen Ditch, Farmer's Highline Canal, Niver Canal)
- Broomfield: Wetlands 17—21, 23, 24, 27, 28, 79, 81, 84, 86, and 87 (Equity Ditch, Community Ditch)
- Superior/Louisville: Wetlands 40, 43, 44, 48, 49, 72, 74, 77, and 79

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Boulder: Wetlands 48, 49, 51—57, 60—62, 64, and 68—70 (Davidson Ditch, Goodhue Ditch, South Boulder Canyon Ditch)

BNSF Corridor

Twenty-eight (28) irrigation-related wetlands were identified along the BNSF corridor and they encompass a total of 8.38 acres. These wetlands include the following (many of those listed are associated with the irrigation ditches in parentheses):

- Denver: none
- Adams County: Wetland 2 (Fisher Ditch)
- Westminster: Wetlands 23 and 25 (Allen Ditch, Farmer's Highline Canal)
- Broomfield: Wetlands 34 and 111 (Community Ditch)
- Superior/Louisville: Wetlands 47, 48, 53, and 54 (Goodhue Ditch, Highline Lateral)
- Boulder: Wetlands 57—64, 66, 67, 72, 73, 77, 83, 87, 97, 102, 103, and 108 (Marshallville Ditch, South Boulder Canyon Ditch, McGinn Ditch, New Dry Creek Ditch, Cottonwood Ditch No. 2, Enterprise Ditch, East Boulder Ditch, South Boulder Creek Diversion, Boulder and Lefthand Ditch, Boulder and Whiterock Ditch)

Stormwater-Related Wetlands

Stormwater wetlands are those associated with stormwater runoff from impermeable surfaces such as roadways, buildings, and parking lots. This includes wetlands that have been created in roadside or railside ditches, in detention ponds, at leaky storm-sewer pipes, or at blocked stormwater drains. A total of 106 stormwater-related wetlands were identified in the study area, including 52 along US 36 and 54 along the BNSF. These wetlands encompass approximately 17.25 acres or 15 percent of the wetlands within the study area. Most of these wetlands are generally small and isolated, although those along the roadside or railside can be very long.

US 36 Corridor

Fifty-two (52) stormwater-related wetlands were identified along US 36 and they encompass a total of 6.76 acres. These wetlands include the following:

- Adams County: Wetlands 1, 3—5, 7, 9, 11B, 11C, 66, and 67
- Westminster: Wetlands 8, 8A, 8C, 11, 16, and 89—92
- Broomfield: Wetlands 22, 22A, 25, 26, 29, 30, 33, 36, 38, 79B, 80, 82, 83, 84B, 84C, 84D, and 85
- Superior/Louisville: Wetlands 31, 32, 41, 42, 45, 47, 71, 73, 76, 78, and 1-5
- Boulder: Wetlands 47, 58, 63, 63A, 71, 1-4, and 1-6

BNSF Corridor

Fifty-four (54) stormwater-related wetlands were identified along US 36 and they encompass a total of 10.49 acres. These wetlands include the following:

Denver: none

- Adams County: Wetlands 1, 3, 5, 6, 12—17, and 19—21
- Westminster: Wetlands 22, 24, 26, 28, 29A, 29B, and 32
- Broomfield: Wetlands 35, 36, 39, 40, and 111A
- Superior/Louisville: Wetlands 42, 43, 44B, 46, 49, 51, 55, and 56
- Boulder: Wetlands 65A, 68, 69, 71, 74, 78—80, 88—91, 95, 96, 98, 100, 101, 105, 106, 109, and 110

Wetland Classifications 3.1.1

Using a standard classification system (Cowardin, et al. 1979), the wetlands can be placed into four groups, including palustrine emergent (PEM), palustrine scrub/shrub (PSS), palustrine emergent/palustrine scrub/shrub (PEM/PSS) combination, and palustrine forested (PFO).

PEM wetlands are defined by Cowardin, et al. (1979) as those wetlands that are dominated by erect, rooted, herbaceous plants. These wetlands encompass approximately 97.57 acres (84 percent of the wetlands in the study area), including 59.27 acres along US 36 and 38.30 acres along the BNSF. These wetlands are commonly dominated by cattails (Typha spp.), bulrushes (Scirpus spp.), sedges (Carex spp.), rushes (Juncus spp.), and various forbs.

PSS wetlands are defined by Cowardin, et al. (1979) as those wetlands that are dominated by woody vegetation less than 20 feet tall. These wetlands encompass approximately 9.63 acres (8 percent) in the study area, including 5.94 acres along US 36 and 3.69 acres along the BNSF. These wetlands are commonly dominated by sandbar willow (Salix exigua), with other willows (Salix spp.) and shrubs.

PEM/PSS wetlands are those wetlands that are composed of equal parts PEM and PSS. If the composition of a wetland is not evenly split (i.e. 50 percent PEM and 50 percent PSS), it is not classified as PEM/PSS. Instead, it is classified as the dominant type. These wetlands encompass approximately 8.23 acres (7 percent) in the study area, including 4.53 acres along US 36 and 3.70 acres along the BNSF. These wetlands are commonly dominated by sandbar willow with pockets of sedges, rushes and various forbs.

PFO wetlands are defined by Cowardin, et al. (1979) as those wetlands that are dominated by woody vegetation greater than 20 feet tall. These wetlands encompass approximately 0.44 acre (less than 1 percent) and are only found along Coal Creek on the US 36 corridor. These wetlands contain an herbaceous layer similar to that described for PEM wetlands with an overstory dominated by peachleaf willow (Salix amygdaloides), crack willow (Salix fragilis), green ash (Fraxinus pensylvanica), and plains cottonwood (Populus deltoides). These trees are rooted both inside and outside of the wetland boundary and create a closed canopy over the wetlands.

Table 2 lists the wetland types identified and the number of acres of each in the study area (by segment). The tables in Appendices B1 and B2 provide the wetland classification for each wetland (shown as a percentage of the wetland area for each class).

Table 2 Wetland Classes by Project Segment

| Project Segment | | | Total | | |
|---------------------|-------|------|---------|------|---------|
| | PEM | PSS | PEM/PSS | PFO | (acres) |
| US 36 Corridor | | | | | |
| Adams County | 1.42 | 0.32 | 0.00 | 0.00 | 1.74 |
| Westminster | 3.39 | 1.29 | 0.74 | 0.00 | 5.42 |
| Broomfield | 3.86 | 0.46 | 0.00 | 0.00 | 4.32 |
| Superior/Louisville | 5.77 | 0.28 | 0.07 | 0.44 | 6.56 |
| Boulder | 44.83 | 3.59 | 3.72 | 0.00 | 52.14 |
| Subtotal | 59.27 | 5.94 | 4.53 | 0.44 | 70.18 |
| BNSF Corridor | | | | | |
| Denver | 0.23 | 0.00 | 0.00 | 0.00 | 0.23 |
| Adams County | 5.11 | 2.41 | 0.00 | 0.00 | 7.52 |
| Westminster | 7.20 | 0.50 | 0.00 | 0.00 | 7.70 |
| Broomfield | 5.82 | 0.00 | 0.00 | 0.00 | 5.82 |
| Superior/Louisville | 2.22 | 0.32 | 0.00 | 0.00 | 2.54 |
| Boulder | 17.72 | 0.46 | 3.70 | 0.00 | 21.88 |
| Subtotal | 38.30 | 3.69 | 3.70 | 0.00 | 45.69 |
| TOTAL | 97.57 | 9.63 | 8.23 | 0.44 | 115.87 |

Wetland type is based on Cowardin, et al. (1979)

3.1.2 Wetland Plant Associations

In addition to the Cowardin, et al. (1979) classifications, the recently published Field Guide to the Wetland and Riparian Plant Associations of Colorado (Carsey, et al. 2003) was used to describe the wetlands. A total of 14 of the plant associations included in the document were identified within the study area. This guide is generally useful to characterize many of the common associations but does not provide a comprehensive list of possible associations. Thus, nine additional associations were added to the complete the list of associations in the study area. Table 3 lists the associations identified (by project segment) and the tables in Appendices B1 and B2 provide more information for each wetland.

Table 3 Plant Associations by Project Segment

| | | | | | | | Cars | ey Ass | ocia | tion | s | or a | | | | | | Otl | ier A | ssoc | ciatio | ns | | |
|---------------------|--------------|--------------------|--------------------|----------------------|-----------------|-----------------|----------------------|--|------------------------------|--------------------------------|---|--|----------------------------------|--------------------|--------------------------------------|------------------|---------------------|-------------------------|--------------------------|---------------|--|------------------------------------|---|---|
| Project Segment | Carex emoryi | Carex nebrascensis | Distichlis spicata | Eleocharis palustris | Hordeum jubatum | Juncus balticus | Phalaris arundinacea | Populus dettoides (Salix amygdaloides) / Salix exigua | Salix exigua / Barren Ground | Salix exigua / Mesic Graminoid | Schoenoplectus acutus / Schoenplectus tabernaemontani (Scirpus validus) | Schoenoplectus maritimus (Scirpus paludosus) | Schoenoplectus (Scirpus pungens) | Spartina pectinata | Typha angustifolia / Typha latifolia | Carex lanuginosa | Mixed Wetland Forbs | Mixed Wedand Graminoids | Mixed Wetland Herbaceous | Rumex crispus | Salix amygdaloides / Mixed Wetland Forbs | Salix exigua / Mixed Wetland Forbs | Salix exigua / Mixed Wetland Graminoids | Salix exigua / Mixed Wetland Herbaceous |
| US 36 Corridor | | | | | | 1000 | | | | Allow | | | | | | - | | | | | | The second | | 4. |
| Adams County | X | | | X | X | | | | | X | | | | | X | | | X | X | X | | | | X |
| Westminster | X | | | X | | | X | | | X | Х | | | | X | | | X | X | | | | X | Х |
| Broomfield | X | Х | | X | | Х | X | | | Х | х | | Х | | X | X | X | Х | X | | | | X | X |
| Superior/Louisville | X | X | | Х | | х | | Х | | Х | | | X | X | X | | | Х | X | | X | | | X |
| Boulder | X | | | х | | | Х | | х | х | Х | Х | | | Х | X | | X | X | | | | X | X |
| BNSF Corridor | | | | | | | | | | | | | | | | - | | _ | | | | - | | |
| Denver | | | | - " | | | X | | | X | | | | | | | | | | | | | | |
| Adams County | X | | 1120 | | | | X | | X | Х | | | | | х | X | Х | X | X | | | X | X | |
| Westminster | X | | | Х | | | x | Х | | Х | Х | | | | X | | | х | | Х | | X | Х | |
| Broomfield | X | | | | | | X | | | х | | | | | х | | | х | | х | | | | |
| Superior/Louisville | x | | X | х | | | X | Х | | X | | | | | x | | | Х | X | Х | | | | |
| Boulder | X | | | | | | X | Х | | Х | | | | X | X | Х | Х | X | Х | Х | | | Х | X |

3.1.3 Wetland Hydrology

The water for the wetlands in the study area generally comes from natural sources (rivers, streams, lakes, groundwater discharge, etc.), irrigation-related sources, or stormwater runoff. The tables in Appendices B1 and B2 list the water source for each wetland in the study area. Many wetlands have multiple sources of hydrology, but only the suspected primary source is listed on the table.

3.1.4 Wetland Functions

To assist in evaluating the functions of wetlands within the study area, a modified version of the Montana Department of Transportation Wetland Functional Assessment Method (Berglund

1999) was used to determine the high-rated functions of the wetlands within the study area. This method was used because it is efficient and concise, and is generally relevant to this region.

Due to the extraordinary number of wetlands in the study area and the preliminary nature of the work, a formal functional analysis was not completed for each wetland. Instead, the Montana Method was used to identify any high-rated functions for each wetland. The study area contains wetlands that received high ratings for nine of the 12 functions included in the method. None of the wetlands provide more than five high-rated functions. Table 4 lists the high-rated functions, the number of wetlands in each project segment that received the high-ratings, and the corresponding acreage. The tables in Appendices B1 and B2 list the high-rated functions for each wetland in the study area and more information on the high-rated functions is provided in the following text.

Table 4 **High-Rated Wetland Functions by Project Segment**

| | - | | | | | | | - | | |
|---------------------|---------------------|----------------------|-----------------------------|----------------------------|-------------------|---------------------------------------|-------------------------|--------------------------------------|-----------------------------------|--|
| | | Number | of Wetla | nds with | High-I | Rated W | etland l | Functions | | |
| Project Segment | T&E Species Habitat | CNHP Species Habitat | General Wildlife Habitat | General Aquatic Habitat | Flood Attenuation | Sediment Nutrient Toxicant Removal | Shoreline Stabilization | Production Export/Food Chain Support | Groundwater Discharge/Recharge | Total Acres of Highly Functional Wetlands |
| US 36 Corridor | 17. | | | | | | | | | ** |
| Adams County | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0.43 |
| Westminster | 0 | 4 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 2.83 |
| Broomfield | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1.37 |
| Superior/Louisville | 0 | 5 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 5.48 |
| Boulder | 15 | 16 | 15 | 0 | 0 | 3 | 6 | 2 | 0 | 51.92 |
| Subtotal | 15 | 24 | 15 | 0 | 0 | 9 | 15 | 2 | 0 | 62.03 |
| BNSF Corridor | | | | | | | | | | |
| Denver | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0.23 |
| Adams County | 0 | 7 | 0 | 0 | 1 | 3 | 8 | 0 | 0 | 6.72 |
| Westminster | 1 | 4 | 0 | 0 | 0 | 2 | 5 | 0 | 0 | 6.62 |
| Broomfield | 0 | 4 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 4.07 |
| Superior/Louisville | 0 | 4 | 1 | 0 | 0 | 0 | 6 | 0 | 0 | 1.06 |
| Boulder | 4 | 23 | 5 | 0 | 0 | 2 | 14 | 2 | 1 | 19.17 |
| Subtotal | 5 | 43 | 6 | 0 | 1 | 9 | 36 | 2 | 1 | 37.87 |
| TOTAL | 20 | 67 | 21 | 0 | 1 | 18 | 51 | 4 | 1 | 99.90 |

Listed/Proposed Threatened and Endangered (T&E) Species Habitat

Wetlands that received a high rating for this function are areas of known or suspected populations of species listed by the U.S. Fish and Wildlife Service as federally endangered, threatened, proposed or candidate. These species are listed in Table 5. The species that are responsible for the wetland receiving a high rating are listed in the "Notes" row of the tables in Appendices B1 and B2.

Table 5 Special Status Species Associated With Wetlands in the Study Area

| Common Name | Scientific Name | Status1 |
|-------------------------------|-------------------------------------|---------|
| Preble's meadow jumping mouse | Zapus hudsonius preblei | FT, ST |
| Ute ladies' tresses orchid | Spiranthes diluvialis | FT |
| Colorado butterfly plant | Gaura neomexicana ssp. coloradensis | FT |
| Common shiner | Luxilus cornutus | ST |
| Brassy minnow | Hybognathus hankinsoni | ST |
| Common garter snake | Thamnophis sirtalis | SC |
| Northern leopard frog | Rana pipiens | SC |
| American toothcup | Rotala ramosior | S1 |

Abbreviations: FT=federally threatened, ST=state threatened, SC=state species of special concern, S1=state critically imperiled

Colorado Natural Heritage Program Species Habitat

Wetlands that received a high rating for this function are areas of known or suspected populations of species listed as state threatened, endangered or special concern by the Colorado Division of Wildlife and those listed as critically imperiled in the state by the Colorado Natural Heritage Program. These species are listed in Table 5

The species that are responsible for the wetland receiving a high rating are listed in the "Notes" row of the tables in Appendices B1 and B2. Most wetlands with a perennial water source and well-developed wetland vegetation were considered good habitat for the common garter snake and northern leopard frog. Most of the recently created stormwater ponds were excluded based on the lack of well-developed wetland vegetation. The wetlands located near known populations of American toothcup were rated as high for that species. Only those wetlands associated with waterways known to be suitable habitat for the two fish species were rated as high.

General Wildlife Habitat

Wetlands that received a high rating for this function are those that contain a perennial water source, two or more vegetative strata (e.g. herbaceous with woody overstory), and a low or moderate level of disturbance. Generally, these areas are relatively undisturbed and contain pockets of open water surrounded by a mix of PEM, PSS, and PEM/PSS wetlands with mature woody riparian vegetation on the wetland perimeter.

General Fish/Aquatic Habitat

No wetlands received a high rating for general fish/aquatic habitat. This is mostly due to the lack of a perennial water source with substantial areas of cover for fish (e.g. over hanging banks, logs, large rocks, etc.) and at least 50 percent of the shoreline dominated by trees and shrubs.

Flood Attenuation

Generally, the wetlands that received a high rating for this function are those that are greater than 2 acres in size, flood via overbank or in-channel flow, and have a restricted outlet (or no outlet).

Sediment/Nutrient/Toxicant Removal

Wetlands that received a high rating for this function are those that are densely vegetated; exhibited evidence of ponding; receive water from a land use that has the potential to deliver a moderate amount of sediment, nutrients or toxicants; and has a restricted outlet (or no outlet). The study area contains many wetlands associated with stormwater detention/retention ponds that were given high ratings for this function.

Sediment/Shoreline Stabilization

Wetlands that received a high rating for this function are those associated with open water (e.g. a channel or water body) that has densely vegetated banks or shoreline.

Production Export/Food Chain Support

Wetlands that received a high rating for this function are those that have a perennial or seasonal/intermittent water source, are larger than one acre, have two or more vegetative strata, and contain an outlet.

Groundwater Discharge/Recharge

Wetlands that received a high rating for this function are those that were obviously discharging or recharging groundwater. Typically, these wetlands contained springs or seeps.

3.1.5 **Jurisdictional Status**

Of the 219 wetlands encompassing 115.87 acres in the study area, a total of 87 are likely considered jurisdictional by the USACE. These 87 wetlands include 32 on US 36 (61.32 acres) and 55 along the BNSF (29.40 acres) that encompass a total of 90.72 acres or 78 percent of the wetlands in the study area. The jurisdictional status of these wetlands is based previous project experience and a conversation with the USACE regarding irrigation ditches/canals (McKee 2004). Table 6 shows the acres of jurisdictional wetland in the study area by wetland group and project segment. The tables in Appendices B1 and B2 list the jurisdictional status of each wetland in the study area. More information on the jurisdictional determination is provided in Section 2.4 Jurisdictional Status.

Table 6 Jurisdictional Status of Wetlands by Project Segment

| | | We | tland Gr | oup (acre | es) | | | | |
|---------------------|----------------|------------------------|----------------|------------------------|----------------|------------------------|------------------------------------|---|------------------|
| | Natu | ıral | | Irrigation- Related | | water- ated | | maal Nas | |
| Project Segment | Jurisdictional | Non- Jurisdictional | Jurisdictional | Non- Jurisdictional | Jurisdictional | Non- Jurisdictional | Total Jurisdictional (acres) | Total Non- Jurisdictional (acres) | Total (acres) |
| US 36 Corridor | | | | | | | | | |
| Adams County | 0.00 | 0.00 | 0.63 | 0.05 | 0.00 | 1.06 | 0.63 | 1.11 | 1.74 |
| Westminster | 0.90 | 0.00 | 0.93 | 0.39 | 0.00 | 3.20 | 1.83 | 3.59 | 5.42 |
| Broomfield | 0.14 | 0.00 | 1.33 | 1.59 | 0.45 | 0.81 | 1.92 | 2.40 | 4.32 |
| Superior/Louisville | 4.96 | 0.00 | 0.27 | 0.52 | 0.00 | 0.81 | 5.23 | 1.33 | 6.56 |
| Boulder | 1.67 | 0.00 | 50.04 | 0.00 | 0.00 | 0.43 | 51.71 | 0.43 | 52.14 |
| Subtotal | 7.67 | 0.0 | 53.20 | 2.55 | 0.45 | 6.31 | 61.32 | 8.86 | 70.18 |
| BNSF Corridor | | | | | | | , | | |
| Denver | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.23 | 0.00 | 0.23 |
| Adams County | 5.94 | 0.21 | 0.14 | 0.00 | 0.00 | 1.22 | 6.08 | 1.44 | 7.52 |
| Westminster | 0.93 | 4.85 | 0.41 | 0.00 | 0.00 | 1.51 | 1.34 | 6.36 | 7.70 |
| Broomfield | 2.10 | 1.21 | 0.09 | 0.01 | 0.00 | 2.41 | 2.19 | 3.63 | 5.82 |
| Superior/Louisville | 0.49 | 0.10 | 0.42 | 0.10 | 0.16 | 1.27 | 1.07 | 1.47 | 2.54 |
| Boulder | 10.73 | 0.02 | 5.00 | 2.21 | 2.75 | 1.17 | 18.52 | 3.36 | 21.88 |
| Subtotal | 20.42 | 6.39 | 6.06 | 2.32 | 2.91 | 7.58 | 29.40 | 16.25 | 45.68 |
| TOTAL | 28.09 | 6.39 | 59.26 | 4.83 | 3.36 | 13.89 | 90.72 | 25.11 | 115.87 |

3.2 **OTHER WATERS**

A total of 93 other waters were identified in the study area, including 41 along US 36 and 55 along the BNSF. These features encompass a total of 51.32 acres (11.30 acres along US 36 and 40.02 along the BNSF) and have been organized into three major groups, including natural, irrigation-related, and stormwater-related. These are discussed below.

Natural Other Waters

Natural other waters are those associated with natural waterways and water bodies, including perennial, intermittent and/or ephemeral streams, lakes, reservoirs and ponds. A total of 38 natural other waters encompassing approximately 36.13 acres or 70 percent of the other waters within the study area were identified. This includes 12 along US 36 for a total of 4.07 acres (Other Waters 16, 88, 34, 84, 39, 46, 74, 75, 23, 50, 59, and 63A) and 26 along the BNSF encompassing 32.06 acres (Other Waters 112, 4, 7—11, 18, 29—31, 41, 44, 46, 52, 53A, 65, 73, 76, 85, 86, 89, 94, 97, 99, and 107). Table 7 shows the number of acres of other waters in each group by project segment and the tables in Appendices B3 and B4 provide detailed information on each other water identified in the study area.

Table 7 Other Waters by Project Segment

| | 0 | cres) | Total | |
|---------------------|---------|---|-------|---------|
| Project Segment | Natural | Natural Irrigation- Related | | (acres) |
| US 36 Corridor | | 100000000000000000000000000000000000000 | | |
| Adams County | 0.00 | 0.44 | 0.23 | 0.67 |
| Westminster | 1.02 | 0.59 | 0.00 | 1.61 |
| Broomfield | 0.36 | 0.52 | 3.23 | 4.11 |
| Superior/Louisville | 1.36 | 0.16 | 0.38 | 1.90 |
| Boulder | 1.33 | 1.44 | 0.24 | 3.01 |
| Subtotal | 4.07 | 3.15 | 4.08 | 11.30 |
| BNSF Corridor | | | M** | |
| Denver | 1.48 | 0.00 | 0.00 | 1.48 |
| Adams County | 9.63 | 0.16 | 0.17 | 9.96 |
| Westminster | 8.12 | 0.33 | 0.00 | 8.45 |
| Broomfield | 0.05 | 0.31 | 0.00 | 0.36 |
| Superior/Louisville | 0.73 | 0.30 | 1.80 | 2.83 |
| Boulder | 12.05 | 3.76 | 1.13 | 16.94 |
| Subtotal | 32.06 | 4.86 | 3.10 | 40.02 |
| TOTAL | 36.13 | 8.01 | 7.18 | 51.32 |
| Percent of Total | 70 | 16 | 14 | 100 |

Irrigation-Related Other Waters

Irrigation-related other waters are those associated with irrigation ditches, canals and storage ponds. A total of 43 of these waters were identified, encompassing approximately 8.01 acres or 16 percent of the other waters within the study area. This includes 20 along US 36 for a total of 3.15 acres (Other Waters 6, 67C, 13, 27, 86, 44, 45, 49, 51—57, 60—62, 69, and 70) and 23 along the BNSF for a total of 4.86 acres (Other Waters 2, 23, 25, 111, 48, 52A, 53, 54, 55, 57, 59—62, 64, 67, 71, 72, 77, 82, 83, 103, and 109). Table 7 shows the number of acres of other waters in each group by project segment and the tables in Appendices B3 and B4 provide detailed information on each other water identified in the study area.

Stormwater-Related Other Waters

Stormwater-related other waters are those associated with the collection of stormwater runoff from impermeable surfaces such as roadways, buildings, and parking lots. Twelve (12) of these waters, encompassing approximately 7.18 acres or 14 percent of the other waters within the study area were identified. This includes seven along US 36 for a total of 4.08 acres (Other Waters 2, 4, 90, 81, 82, 76, and 47A) and five along the BNSF encompassing 3.10 acres (Other Waters 6, 13, 20, 43 and 91). Table 7 shows the number of acres of other waters in each group by project segment and the tables in Appendices B3 and B4 provide detailed information on each other water identified in the study area.

3.2.1 **Jurisdictional Status**

Of the 93 other waters encompassing 51.32 acres in the study area, a total of 71 (34.55 acres) or 67 percent are likely considered jurisdictional by the USACE. This includes 26 other waters for a total of 5.03 acres along US 36 and 45 other waters encompassing 29.52 acres along the BNSF. Table 8 shows the acres of jurisdictional other waters in the study area by group and project segment. The tables in Appendices B3 and B4 list the jurisdictional status of each other water in the study area. More information on the jurisdictional determination is provided in Section 2.4 Jurisdictional Status.

Table 8 Jurisdictional Status of Other Waters by Project Segment

| | | We | tland Gr | oup (acr | es) | | | | |
|---------------------|----------------|------------------------|-------------------|------------------------|----------------|------------------------|------------------------------------|---|------------------|
| | Nati | ural | | ation- ated | | water- ated | | | |
| Project Segment | Jurisdictional | Non- Jurisdictional | Jurisdictional | Non- Jurisdictional | Jurisdictional | Non- Jurisdictional | Total Jurisdictional (acres) | Total Non- Jurisdictional (acres) | Total (acres) |
| US 36 Corridor | | | The second second | | | | | | |
| Adams County | 0.00 | 0.00 | 0.40 | 0.04 | 0.00 | 0.23 | 0.40 | 0.27 | 0.67 |
| Westminster | 0.42 | 0.60 | 0.59 | 0.00 | 0.00 | 0.00 | 1.01 | 0.60 | 1.61 |
| Broomfield | 0.01 | 0.35 | 0.52 | 0.00 | 0.00 | 3.23 | 0.53 | 3.58 | 4.11 |
| Superior/Louisville | 1.02 | 0.34 | 0.13 | 0.03 | 0.00 | 0.38 | 1.15 | 0.75 | 1.90 |
| Boulder | 0.50 | 0.83 | 1.44 | 0.00 | 0.00 | 0.24 | 1.94 | 1.07 | 3.01 |
| Subtotal | 1.95 | 2.12 | 3.08 | 0.07 | 0.00 | 4.08 | 5.03 | 6.27 | 11.30 |
| BNSF Corridor | | | | | | | | | |
| Denver | 1.48 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.48 | 0.00 | 1.48 |
| Adams County | 9.56 | 0.07 | 0.16 | 0.00 | 0.00 | 0.17 | 9.72 | 0.24 | 9.96 |
| Westminster | 0.24 | 7.88 | 0.33 | 0.00 | 0.00 | 0.00 | 0.57 | 7.88 | 8.45 |
| Broomfield | 0.05 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.36 | 0.00 | 0.36 |
| Superior/Louisville | 0.21 | 0.52 | 0.24 | 0.06 | 0.00 | 1.80 | 0.45 | 2.38 | 2.83 |
| Boulder | 12.05 | 0.00 | 3.76 | 0.00 | 1.13 | 0.00 | 16.94 | 0.00 | 16.94 |
| Subtotal | 23.59 | 8.47 | 4.80 | 0.06 | 1.13 | 1.97 | 29.52 | 10.50 | 40.02 |
| TOTAL | 25.54 | 10.59 | 7.88 | 0.13 | 1.13 | 6.05 | 34.55 | 16.77 | 51.32 |

Wetlands and other waters were identified on two 600-foot wide corridors between Denver and Boulder, including an 18-mile corridor along US 36 and a 30-mile corridor along the BNSF. Wetlands were identified based on the presence of wetland vegetation and wetland hydrology, assuming the presence of hydric soils.

A total of 219 wetlands were identified in the study area, including 103 along US 36 and 116 along the BNSF. These wetlands encompass a total of 115.87 acres, 70.18 acres along US 36 and 45.69 along the BNSF. The wetlands are organized into three groups, including natural, irrigation-related, and stormwater-related. Approximately 30 percent of the wetlands are natural wetlands, 55 percent are associated with irrigation, and 15 percent are stormwater-related.

The wetlands were classified into four groups using a standard classification system, including palustrine emergent, palustrine scrub/shrub, palustrine emergent and scrub/shrub combination, and palustrine forested. Most of the wetlands are classified as palustrine emergent (97.57 acres or 84 percent of the wetlands in the study area). Palustrine scrub/shrub wetlands are the secondmost common with 9.63 acres (8 percent), palustrine emergent and scrub/shrub are third-most common with 8.23 acres (7 percent), and palustrine forested are the least common with 0.44 acre (less than 1 percent).

A total of 23 wetland plant associations were identified in the study area, including 14 from a recently published local field guide. The most common six associations observed include Carex emoryi, Phalaris arundinacea, Salix exigua/mesic graminoid, Typha angustifolia/Typha latifolia, and mixed wetland graminoid, mixed wetland herbaceous.

A regionally used and accepted wetland functional assessment method was used to determine the high-rated functions for the wetlands in the study area. A total of 12 functions were examined and high-ratings were received for nine. The functions most commonly rated high include: special status species habitat, shoreline stabilization, general wildlife habitat, and sediment/nutrient/toxicant removal. The wetlands that received high ratings encompass a total of 99.90 acres, including 62.03 along US 36 and 37.87 along the BNSF.

Of the 219 wetlands and 115.87 acres, 87 are likely considered jurisdictional by the USACE for a total of 90.72 acres. Most of the jurisdictional wetlands are along US 36 (61.32 acres or 68 percent of the jurisdictional wetlands), with only 29.40 acres (32 percent) along the BNSF.

In addition to the wetlands, a total of 93 other waters were identified in the study area, encompassing 51.32 acres. This includes 41 along US 36 for a total of 11.30 acres, and 55 along the BNSF for 40.02 acres. These other waters are organized into the same three groups as the wetlands, including natural, irrigation-related, and stormwater-related. Most of the other waters belong to the natural group (36.13 acres or 70 percent of the other waters in the study area). Irrigation-related other waters are the second-most common with 8.01 acres (16 percent) and stormwater-related other waters are the least common with 7.18 acres (14 percent).

Of the 93 other waters (51.32 acres), 71 for a total of 34.55 acres are likely considered jurisdictional by the USACE. Most of the jurisdictional other waters are along the BNSF (29.52 acres or 85 percent of the jurisdictional other waters), with only 5.03 acres (15 percent) along US 36.

URS

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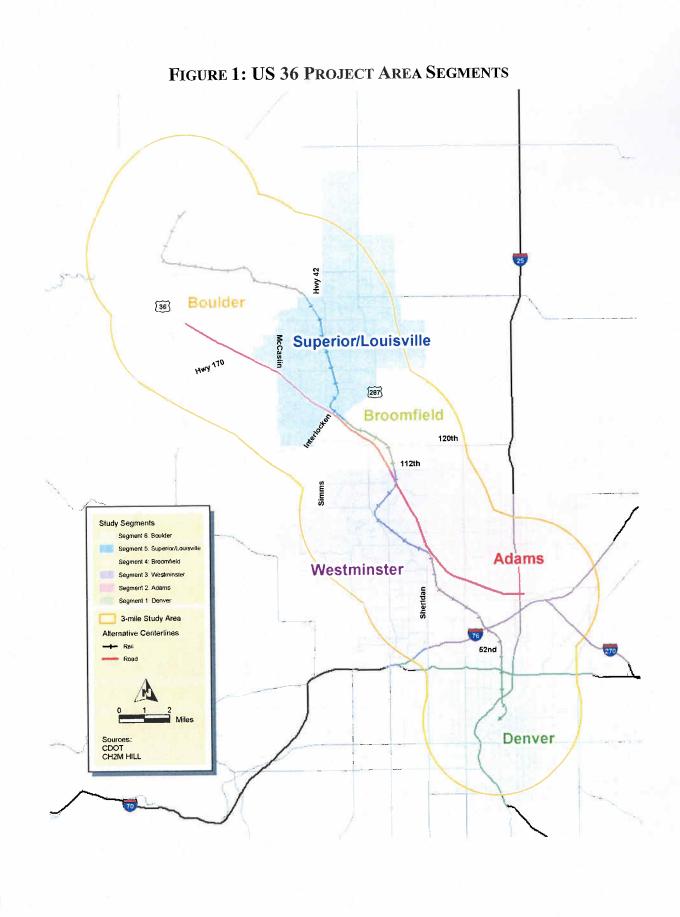
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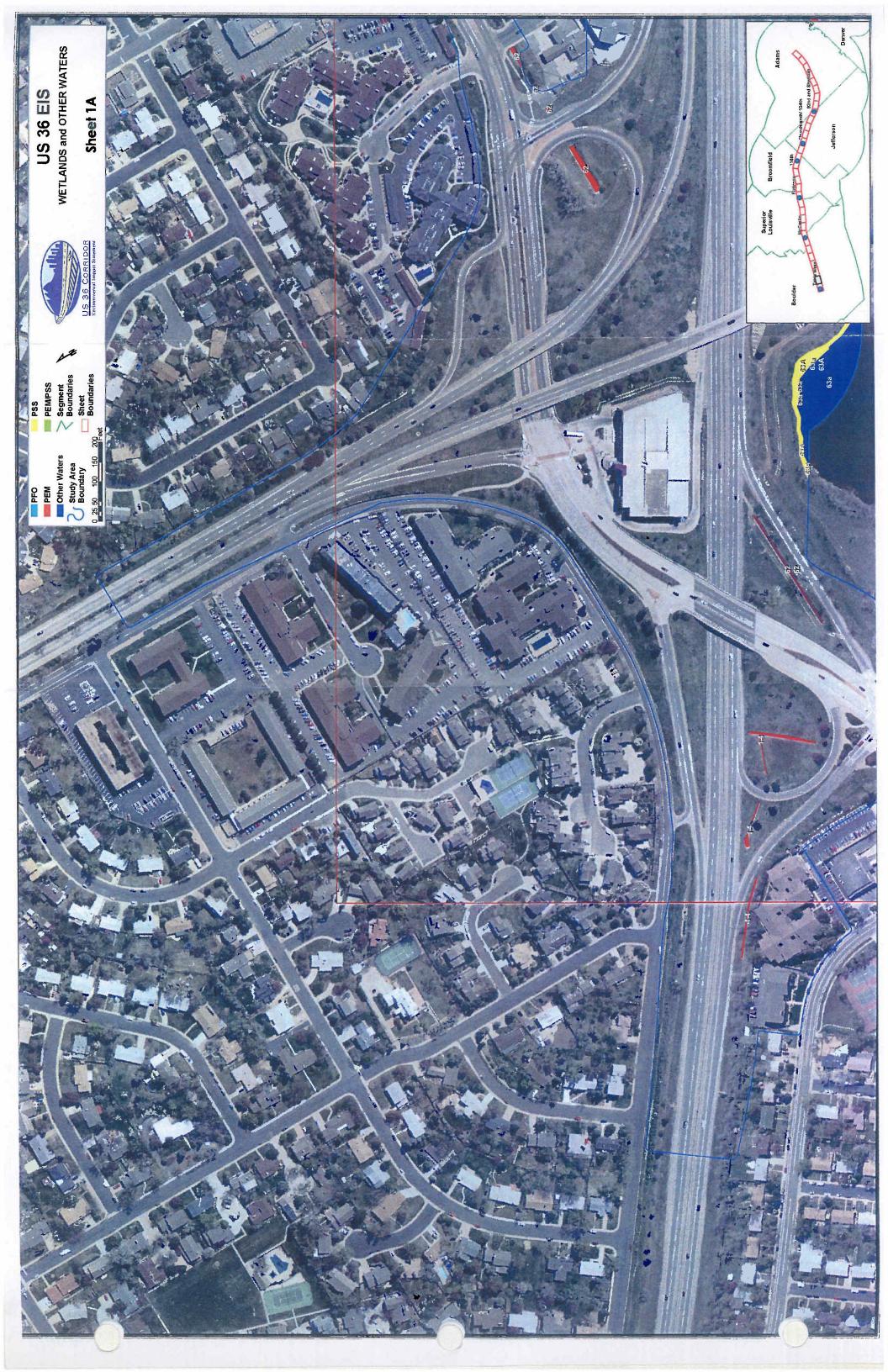
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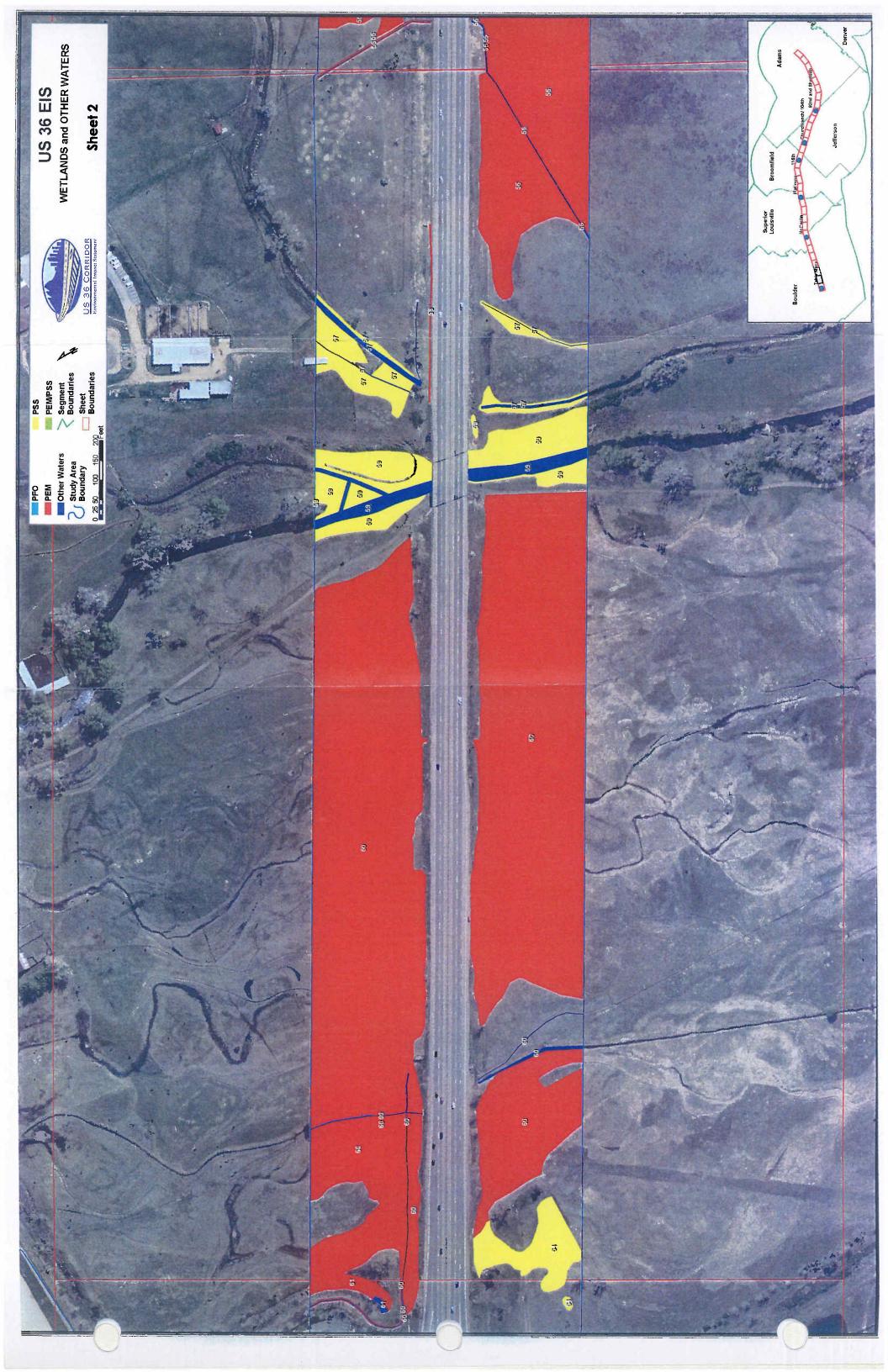


Appendix A1

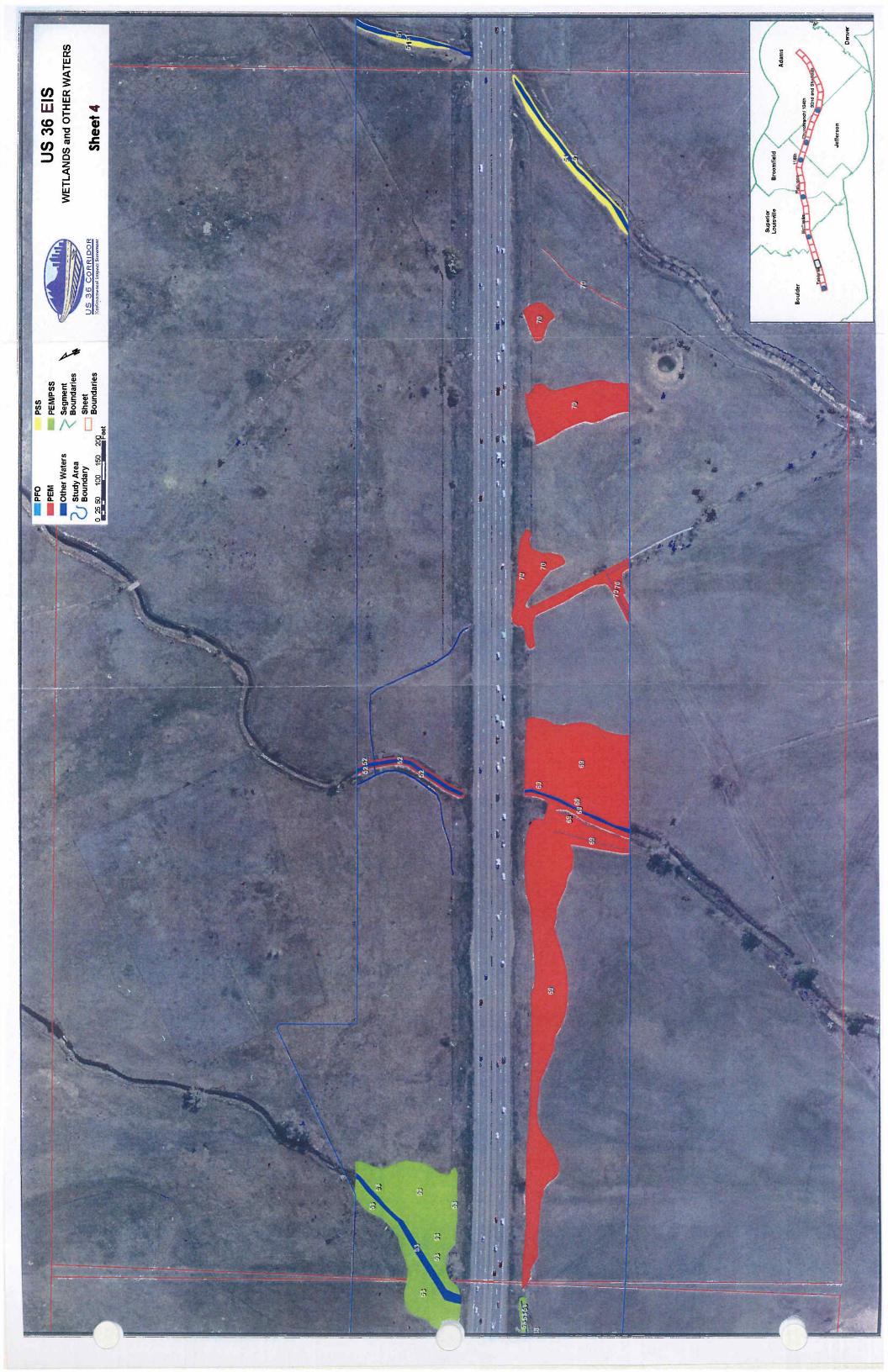
Maps of Wetlands and Other Waters Along US 36







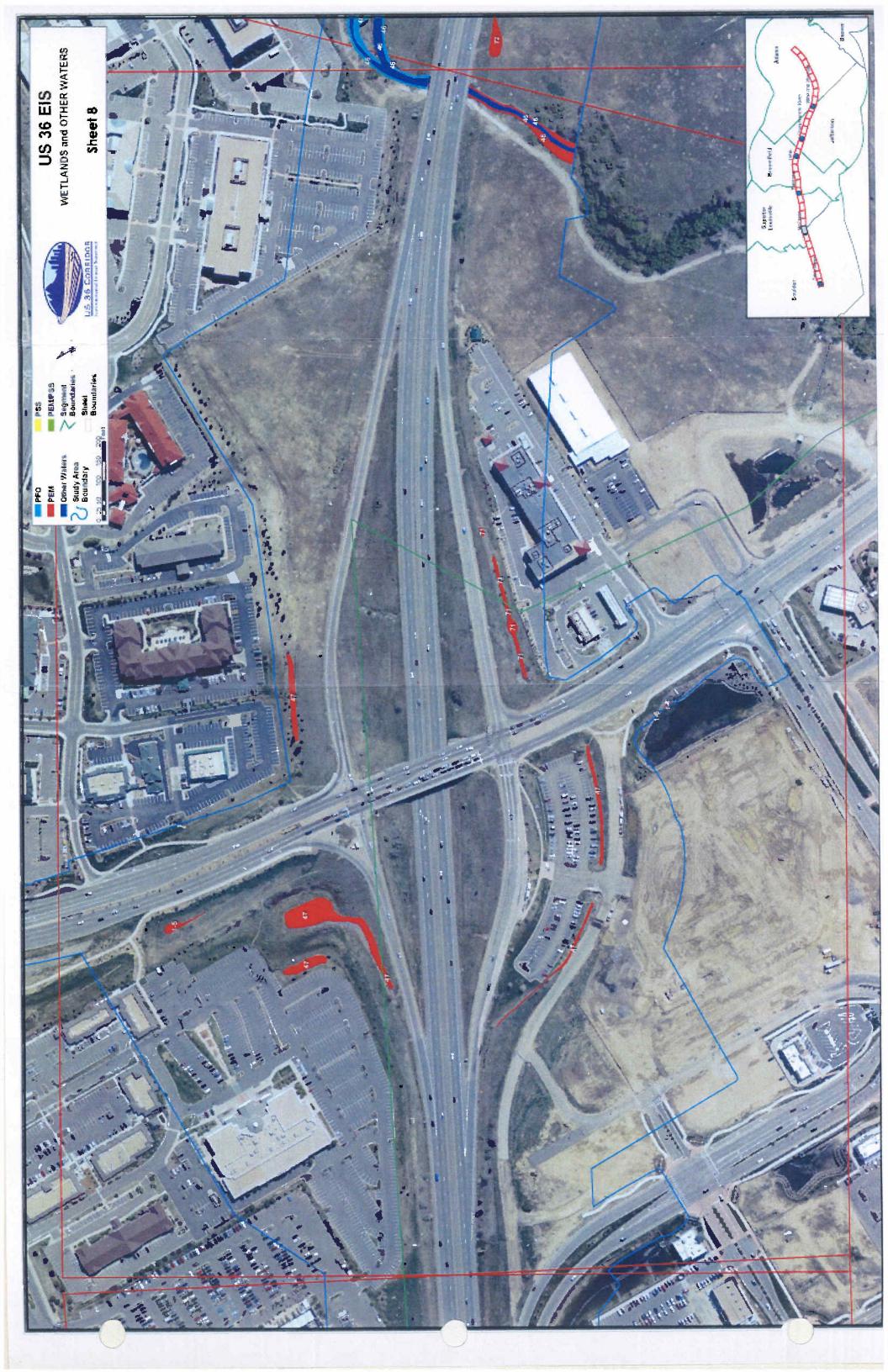


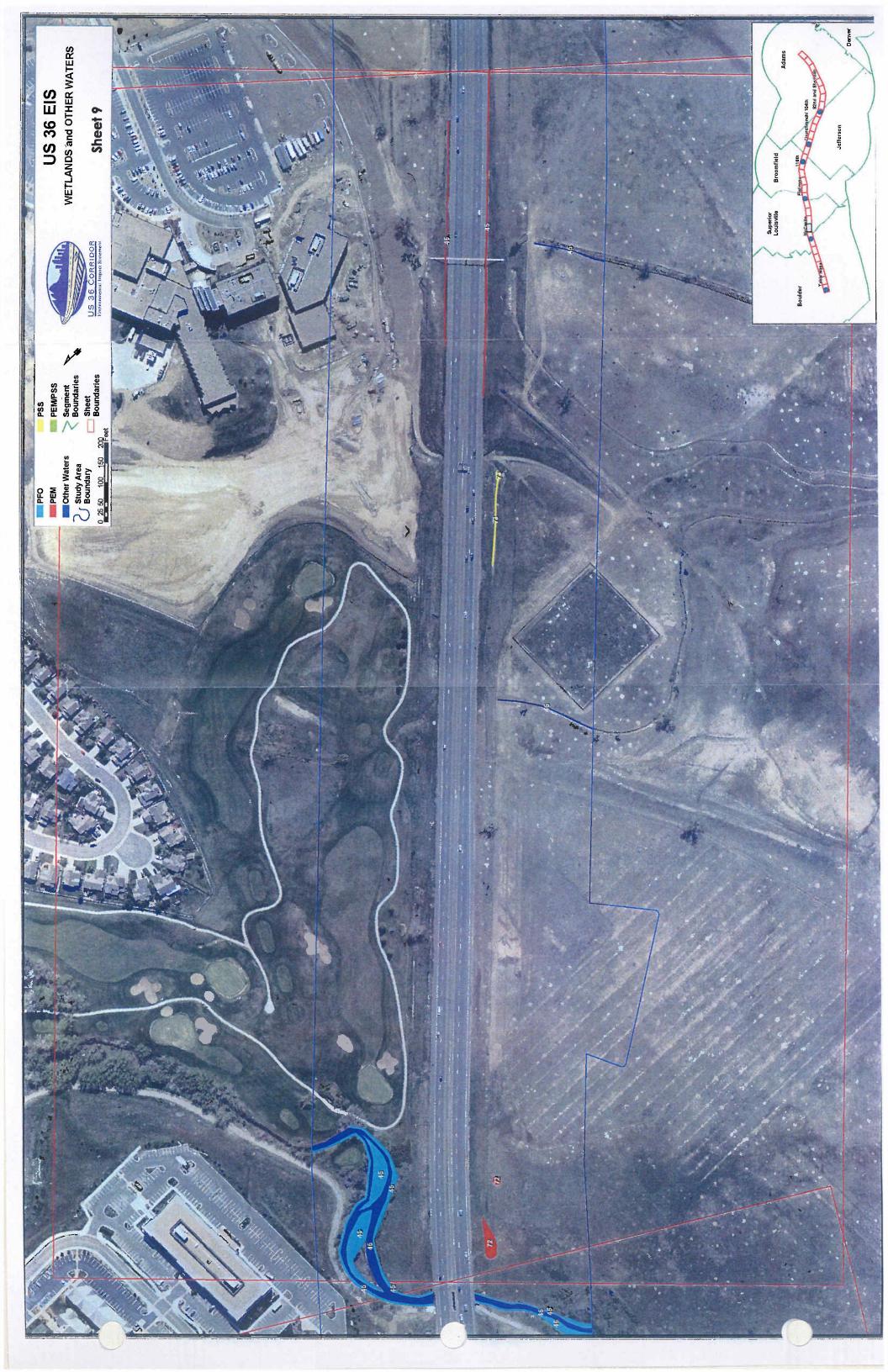




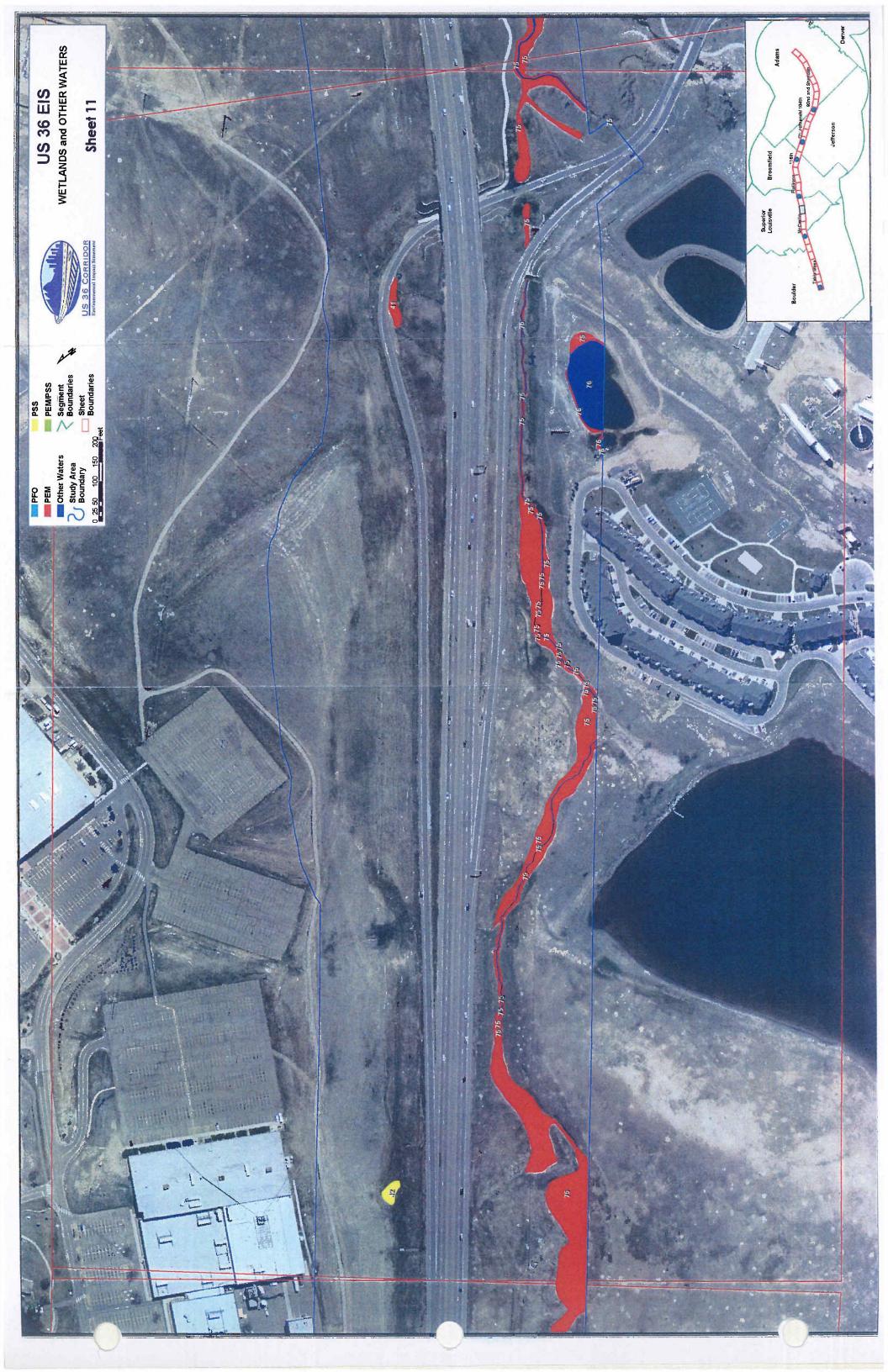




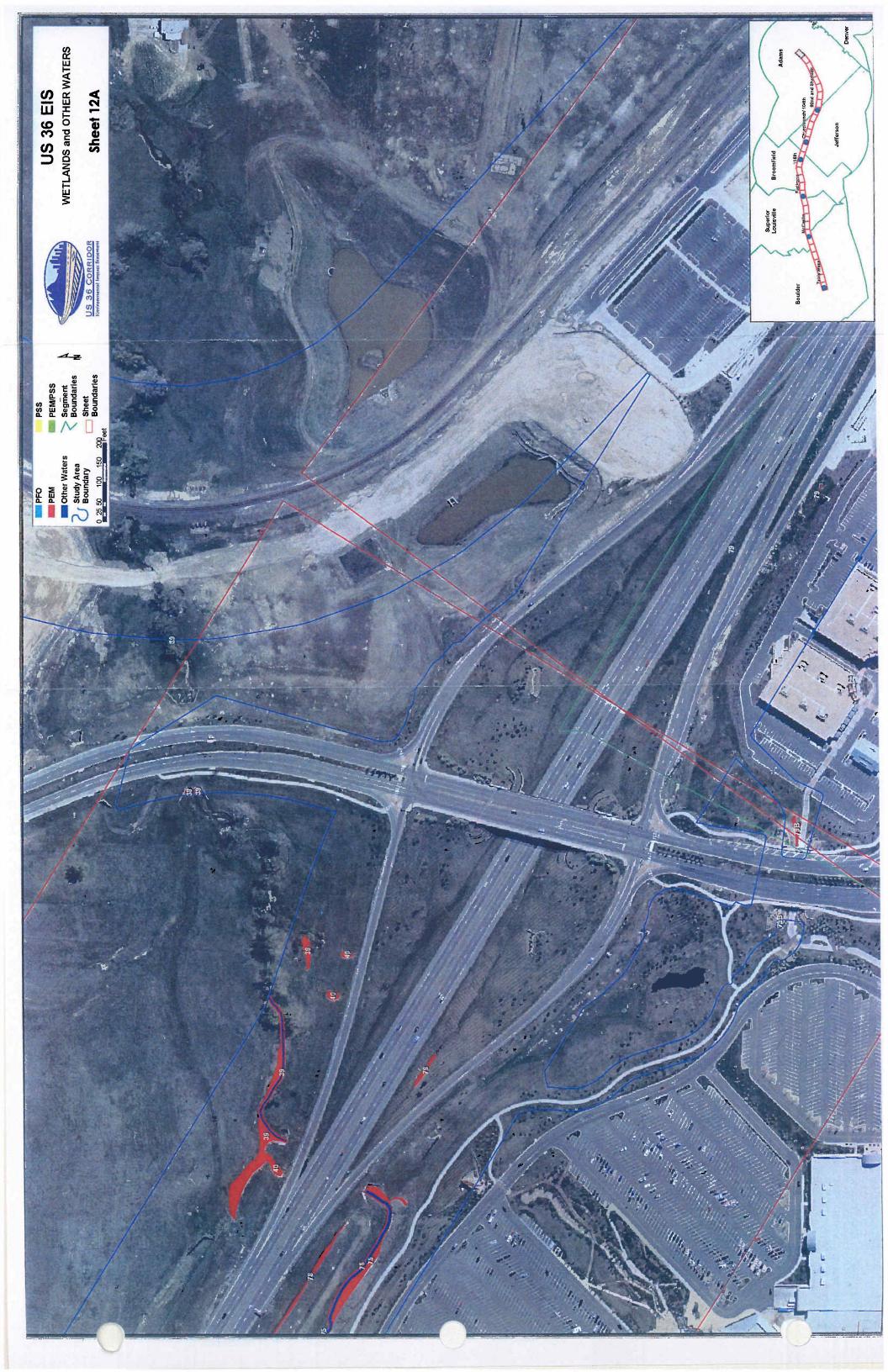


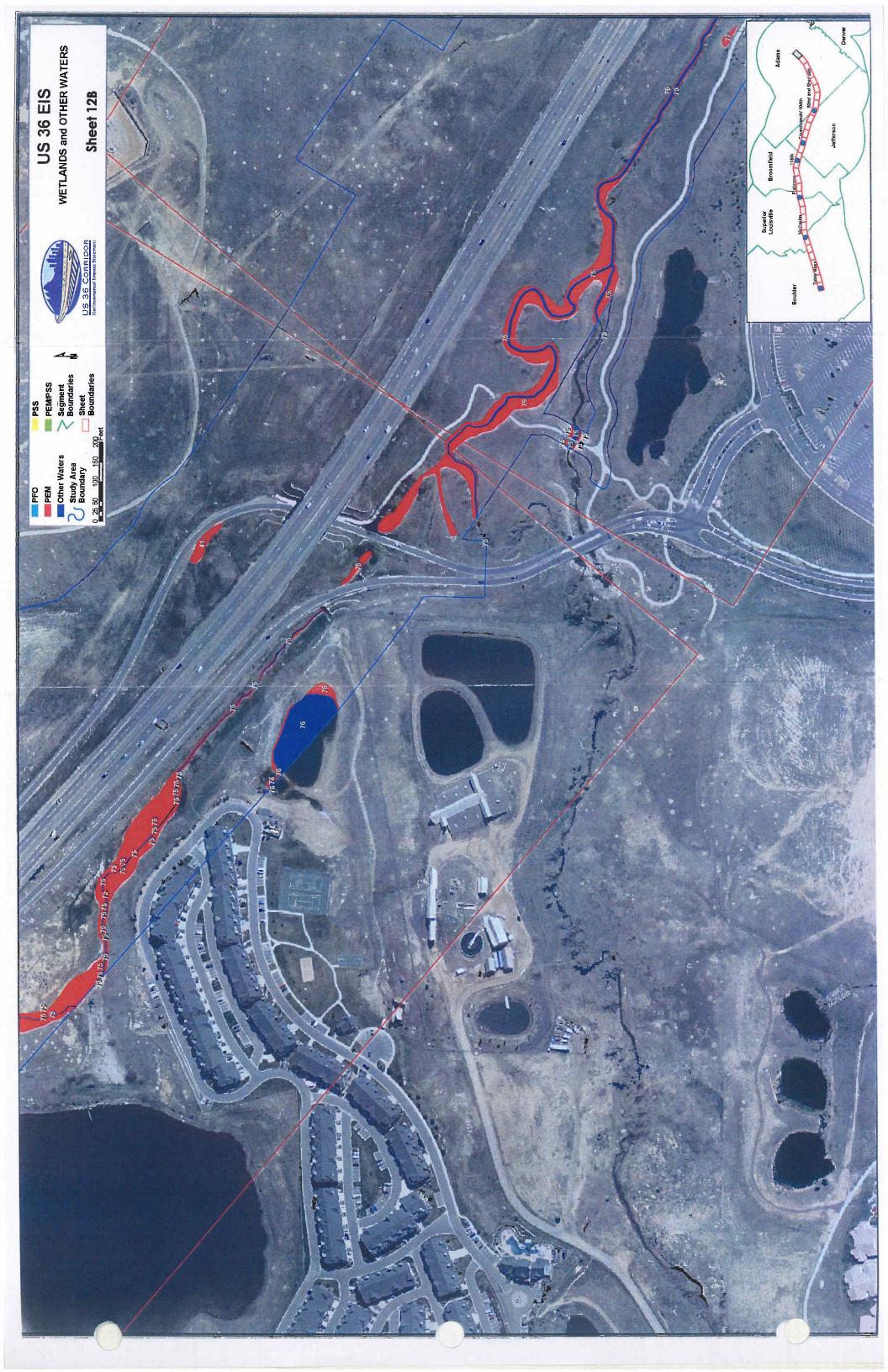




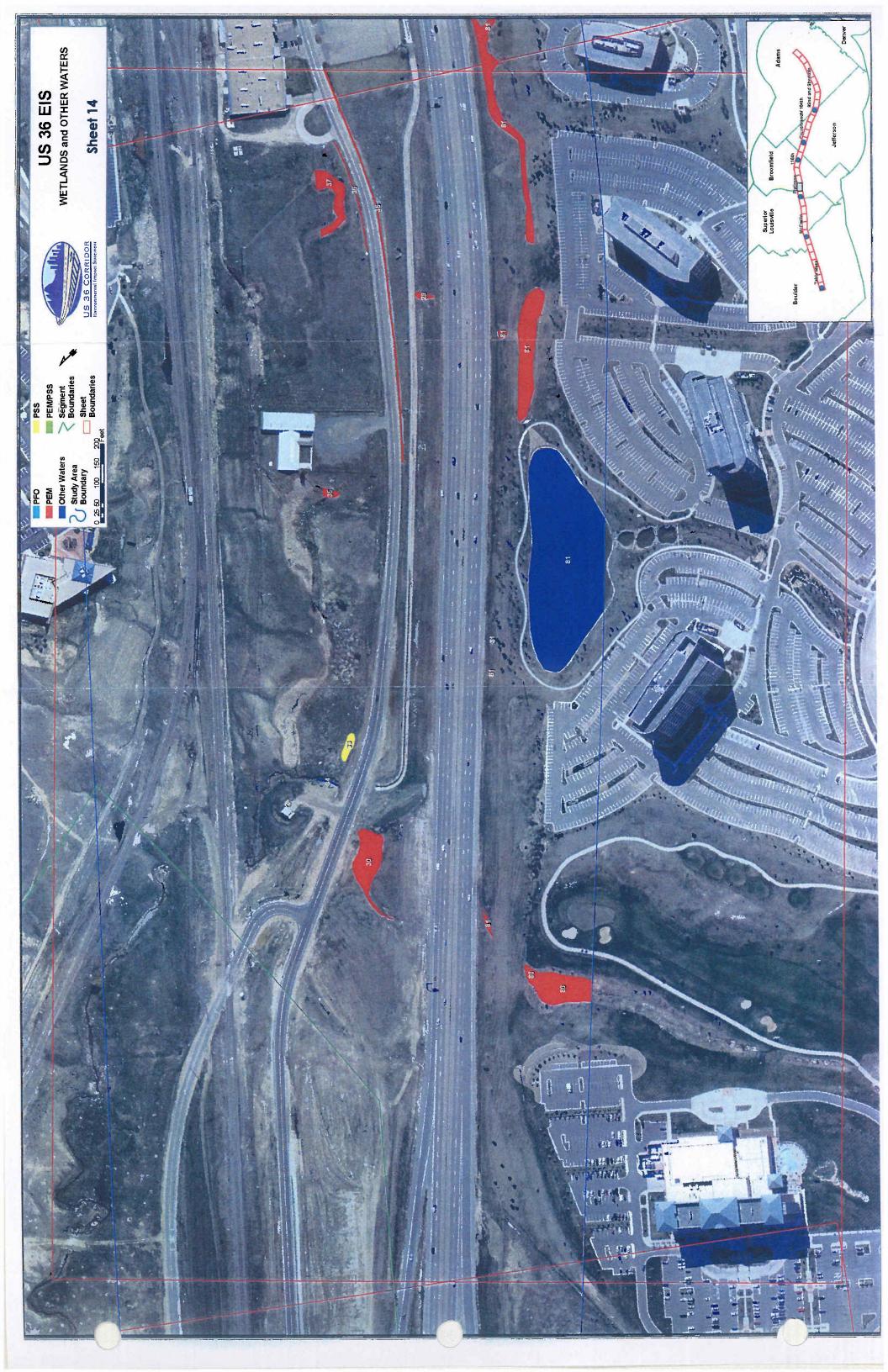


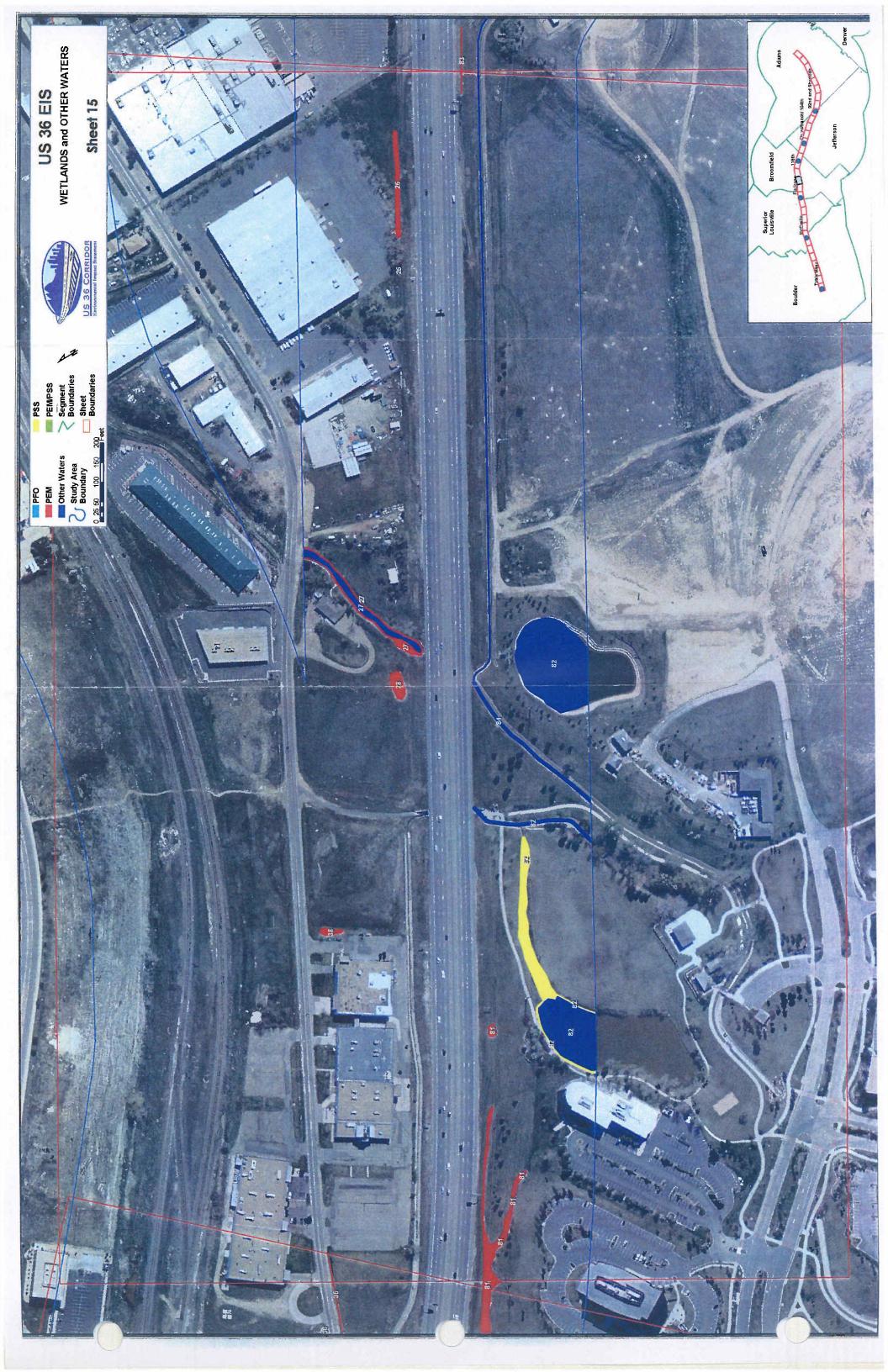






















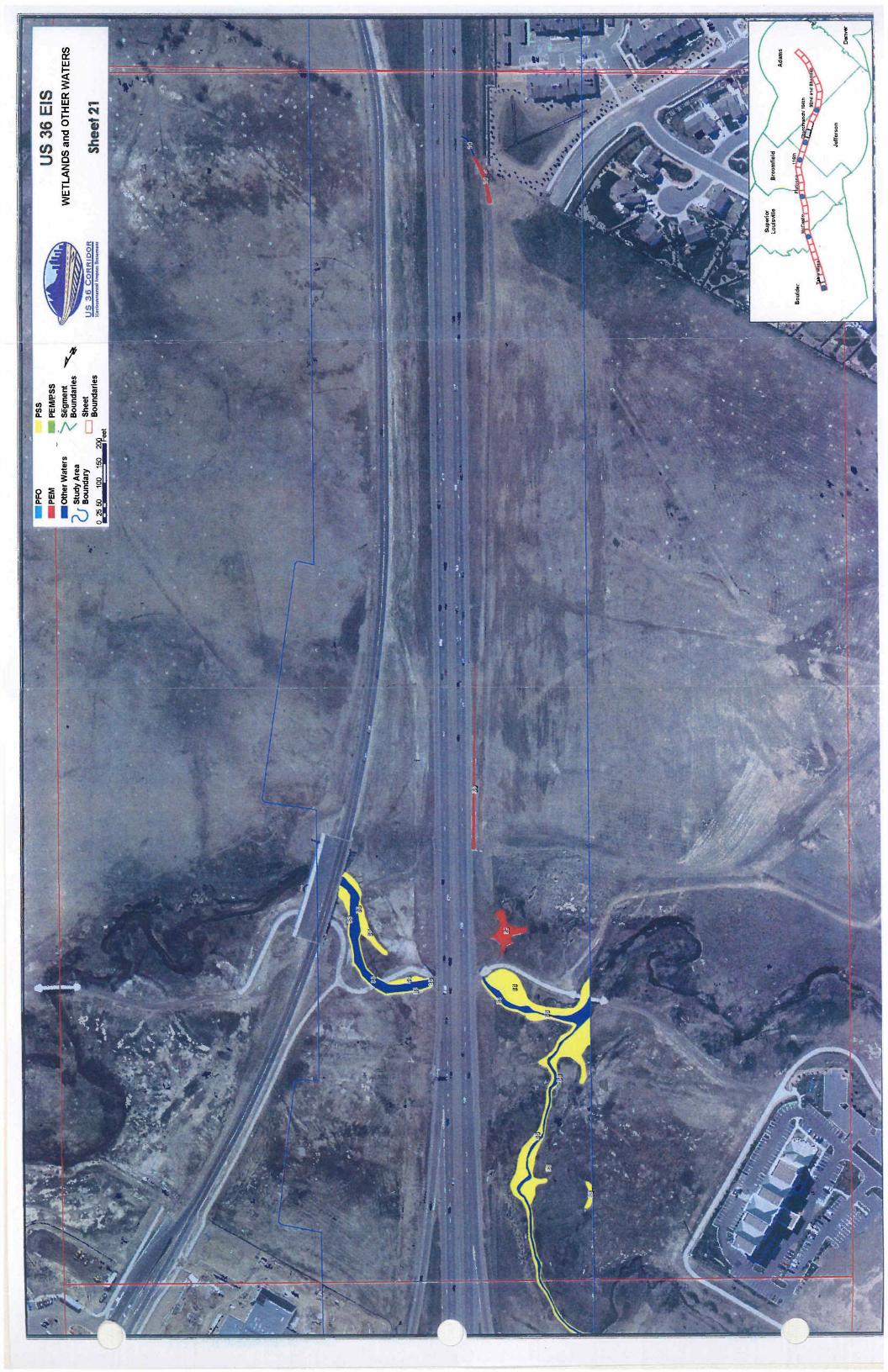




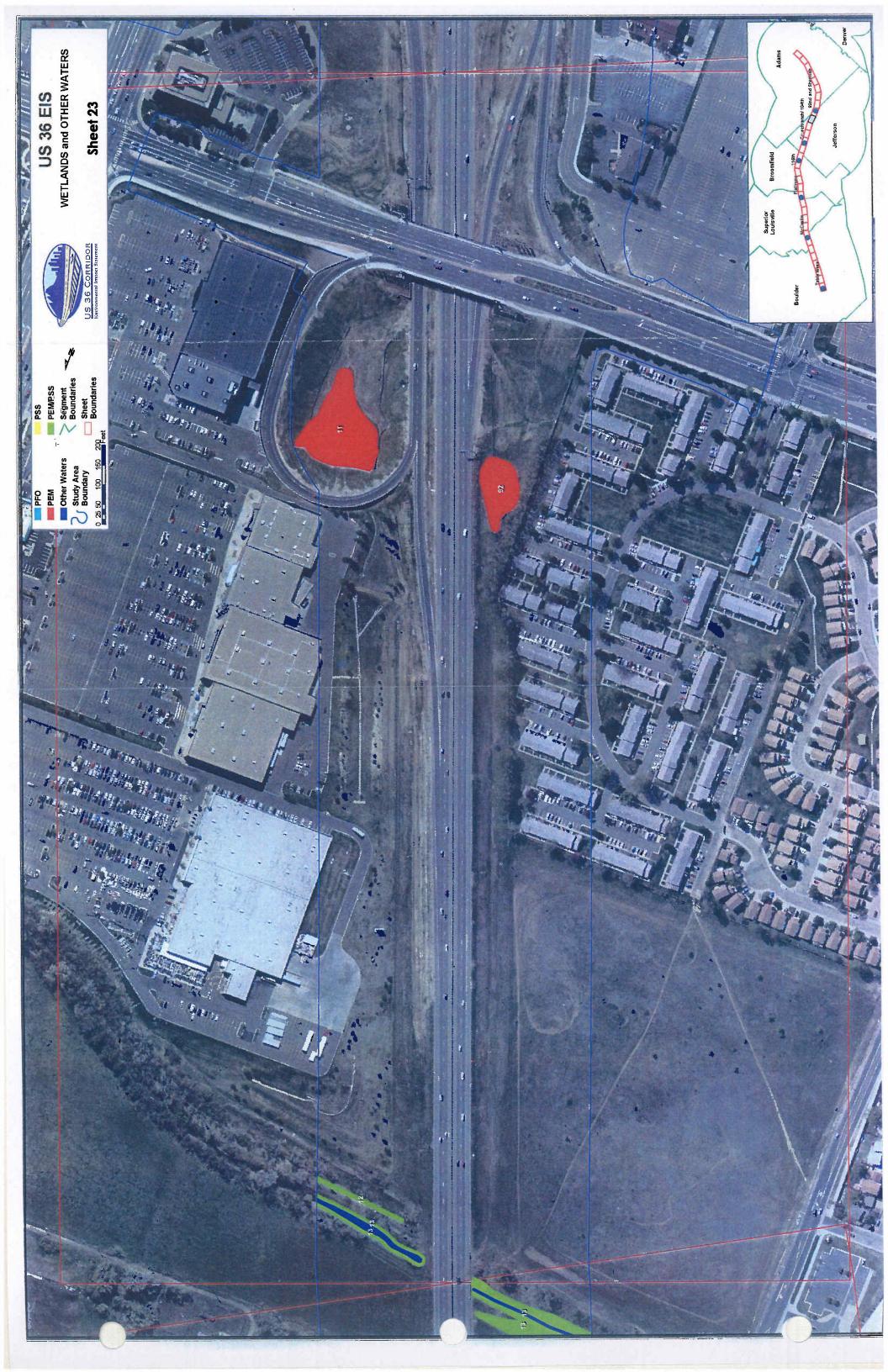






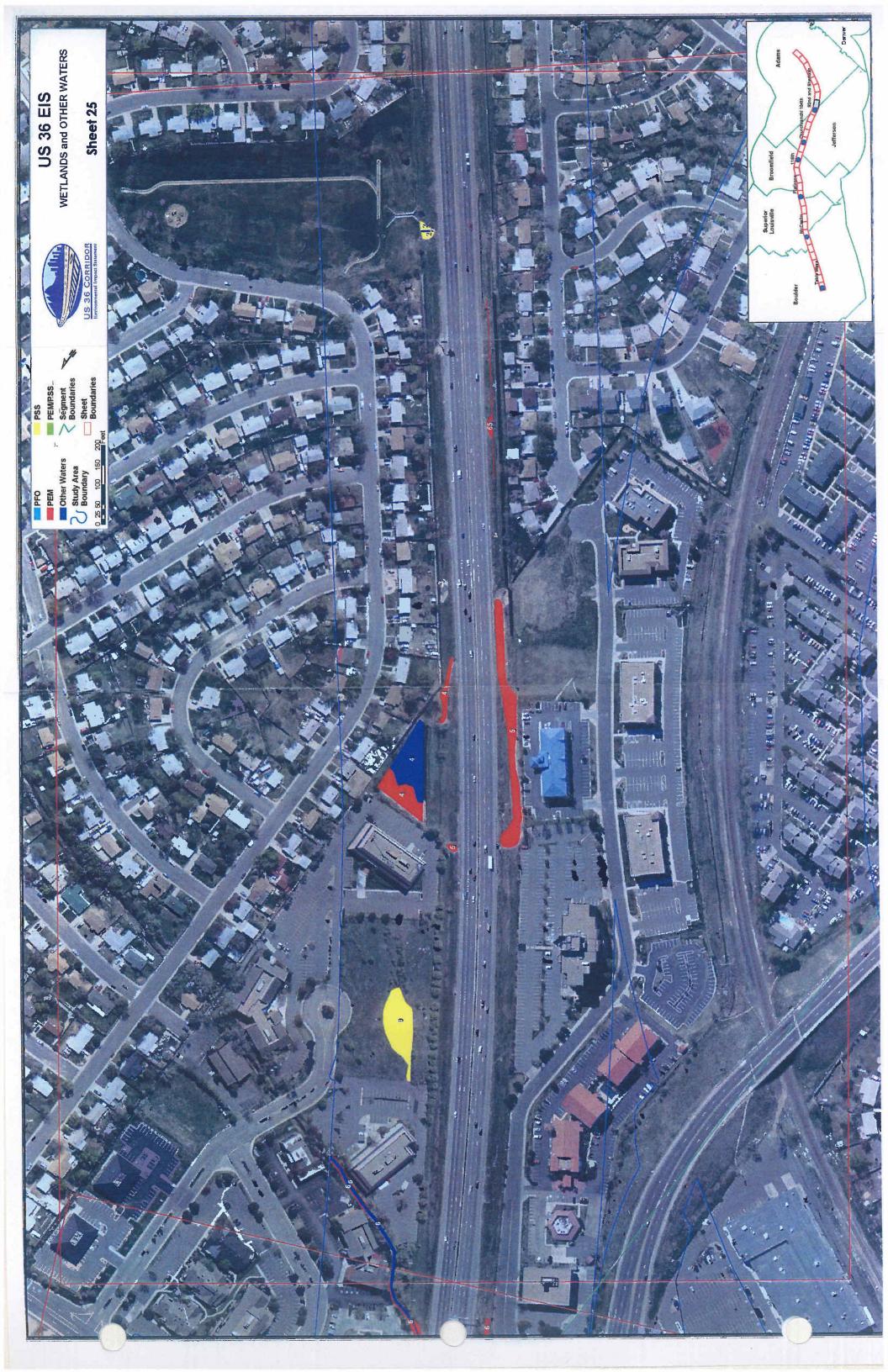




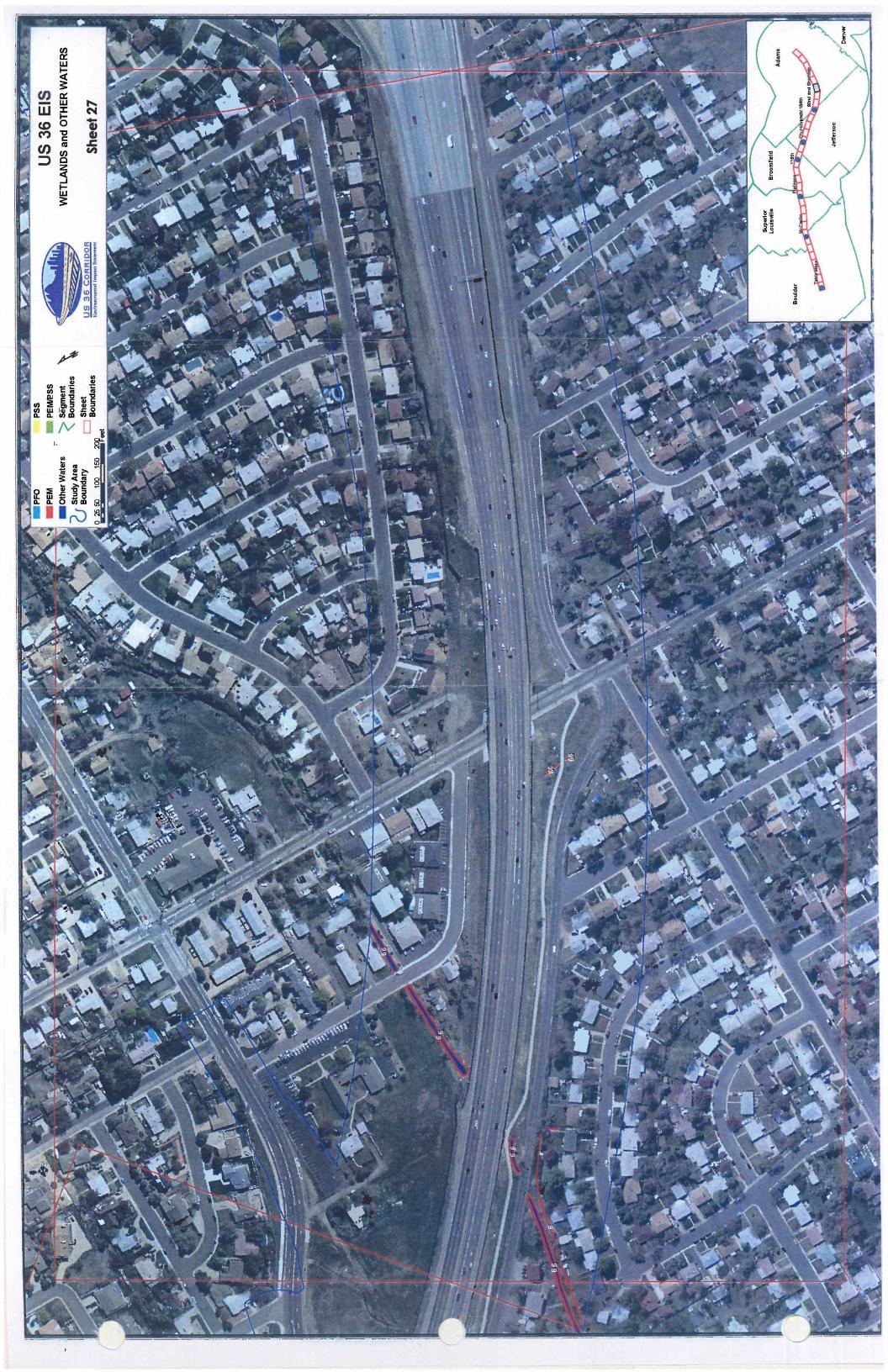






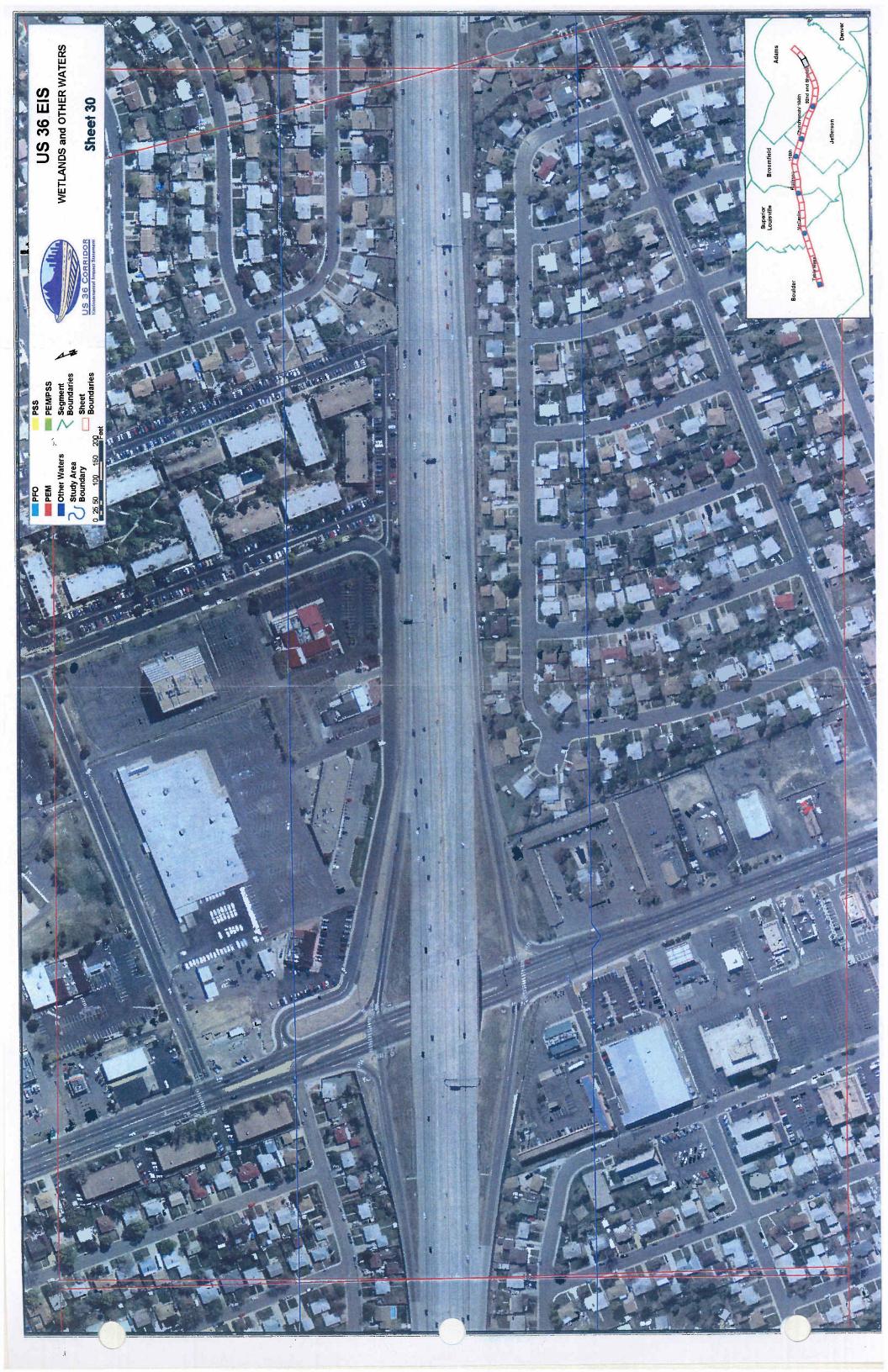




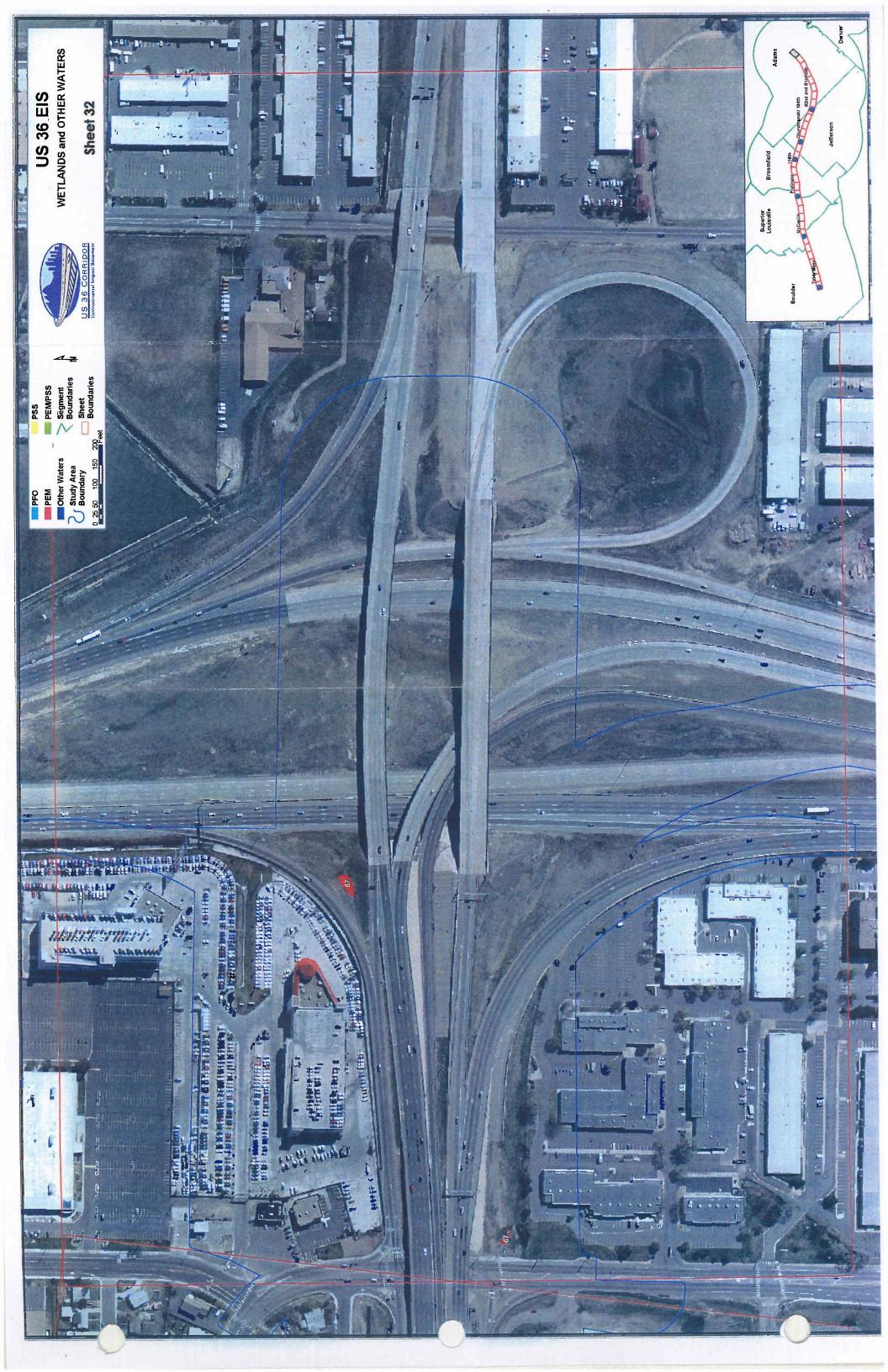






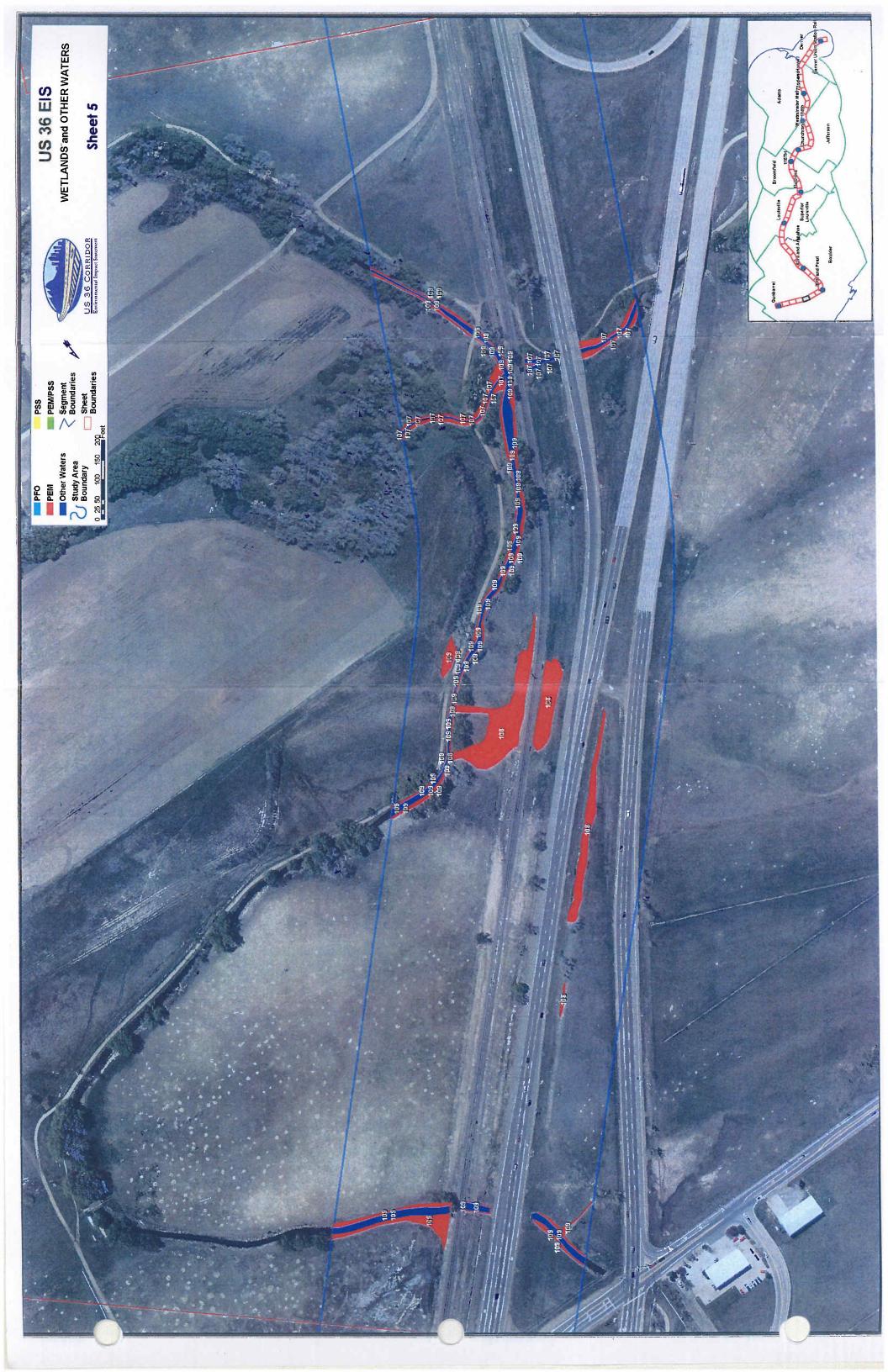


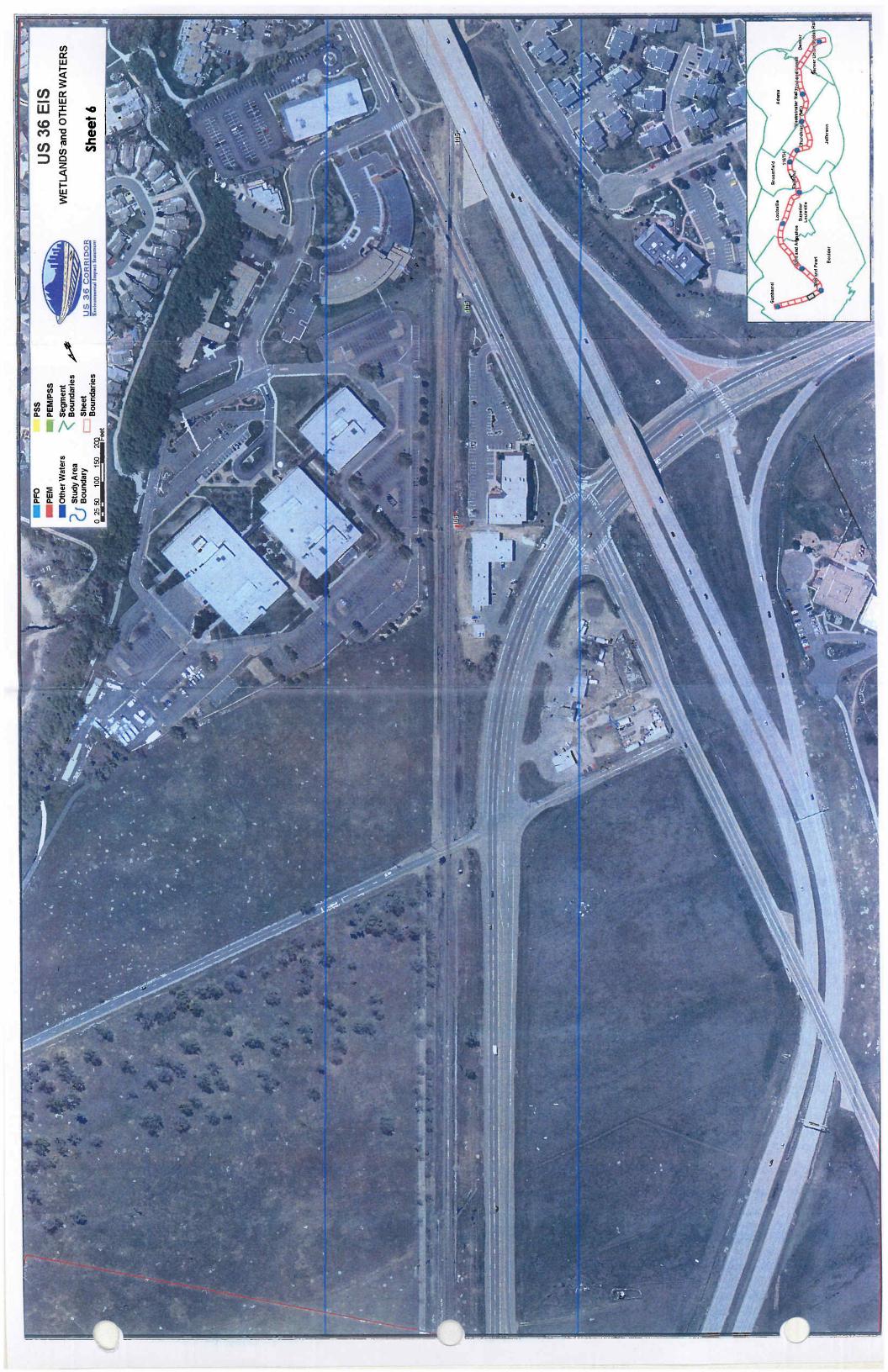


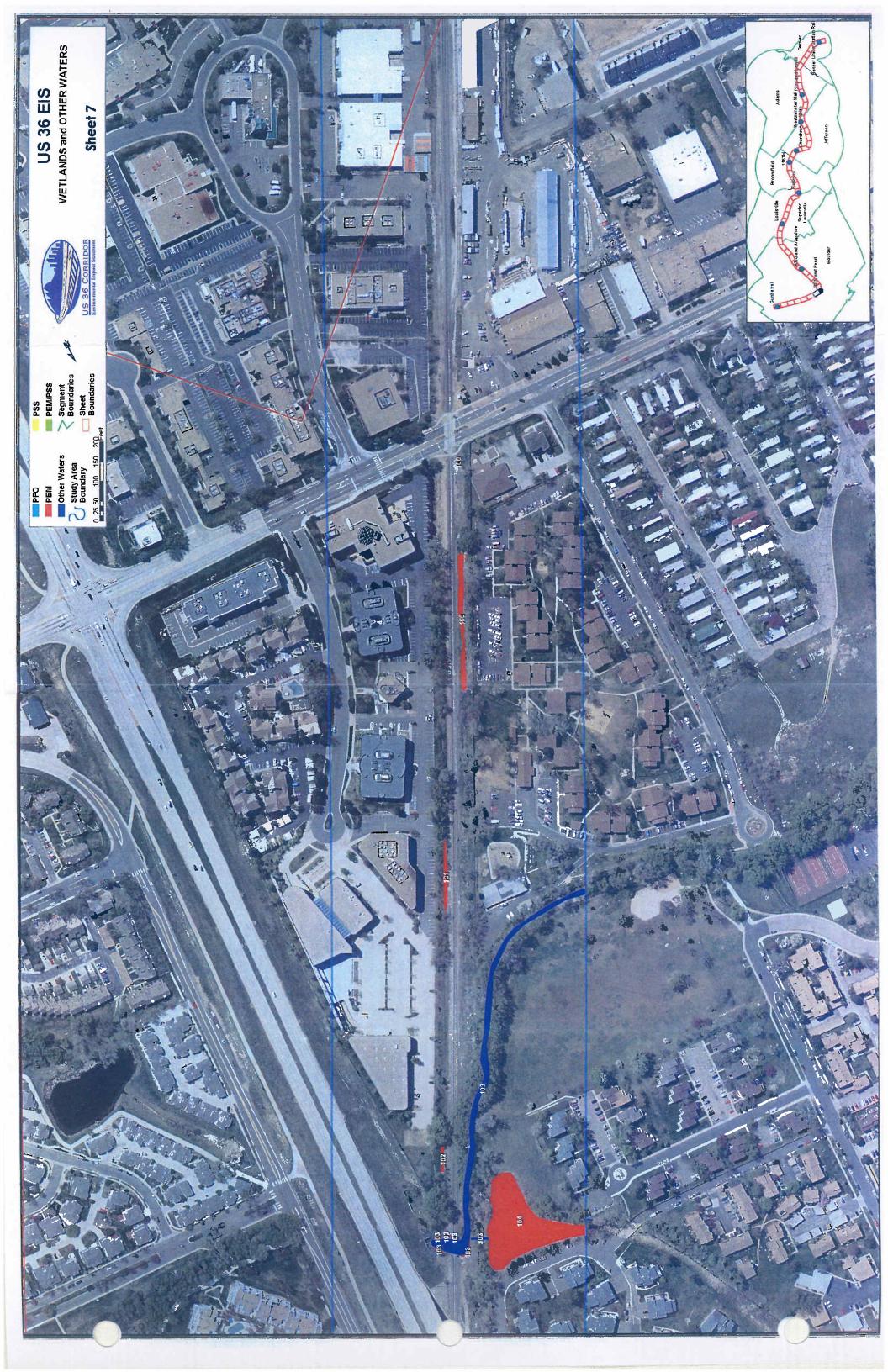


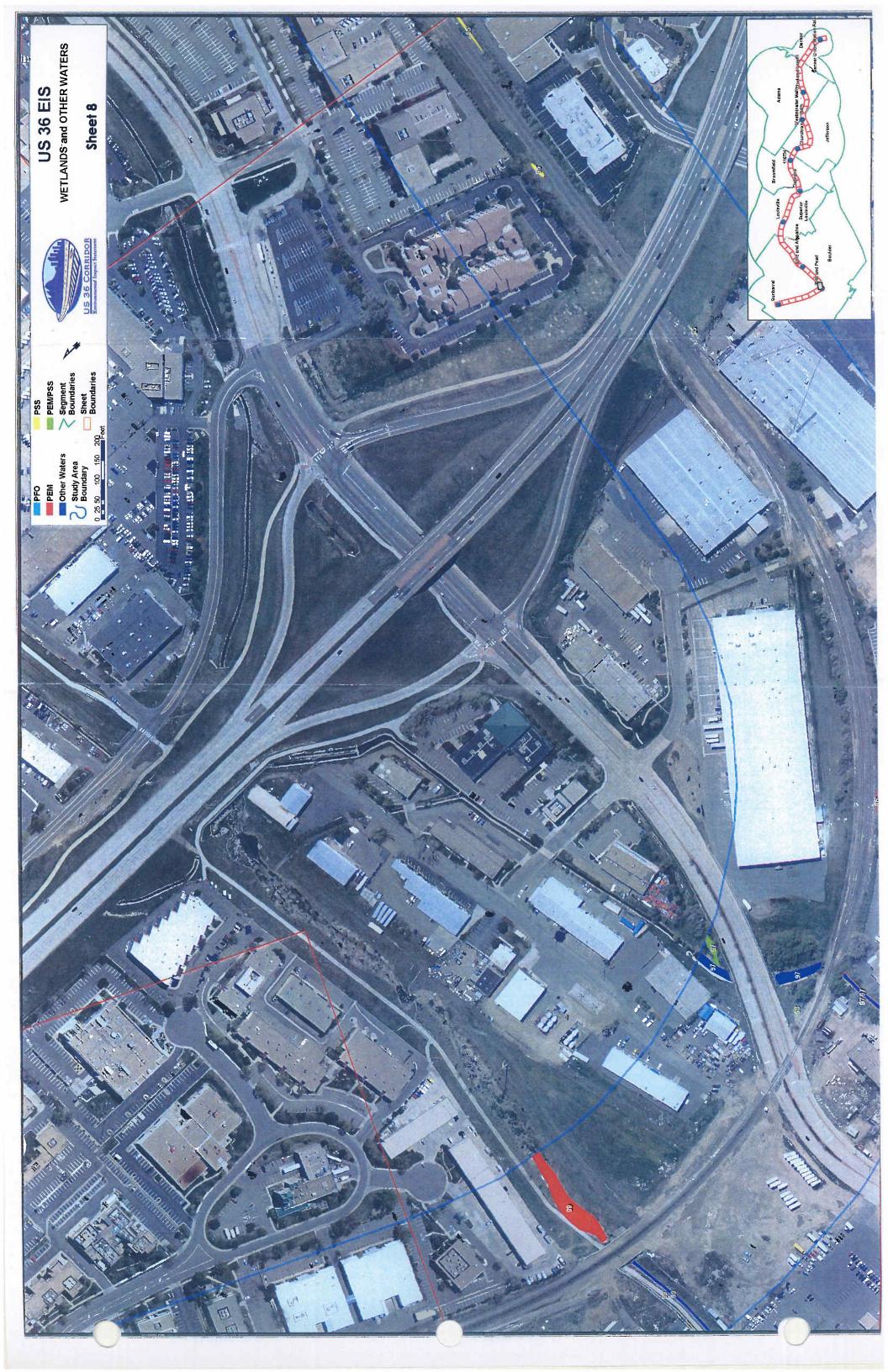
Appendix A2
Maps of Wetlands and Other Waters Along the BNSF



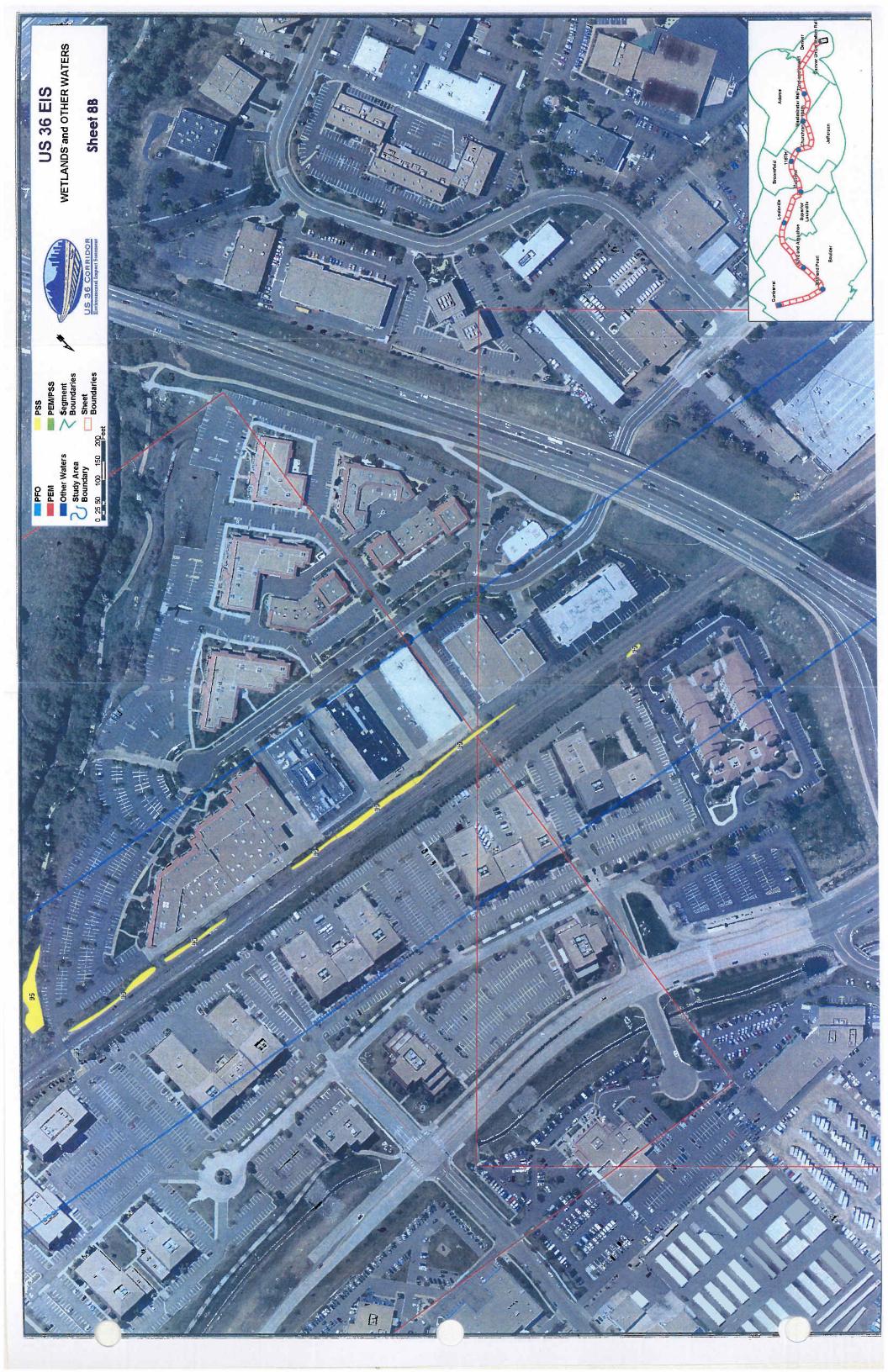


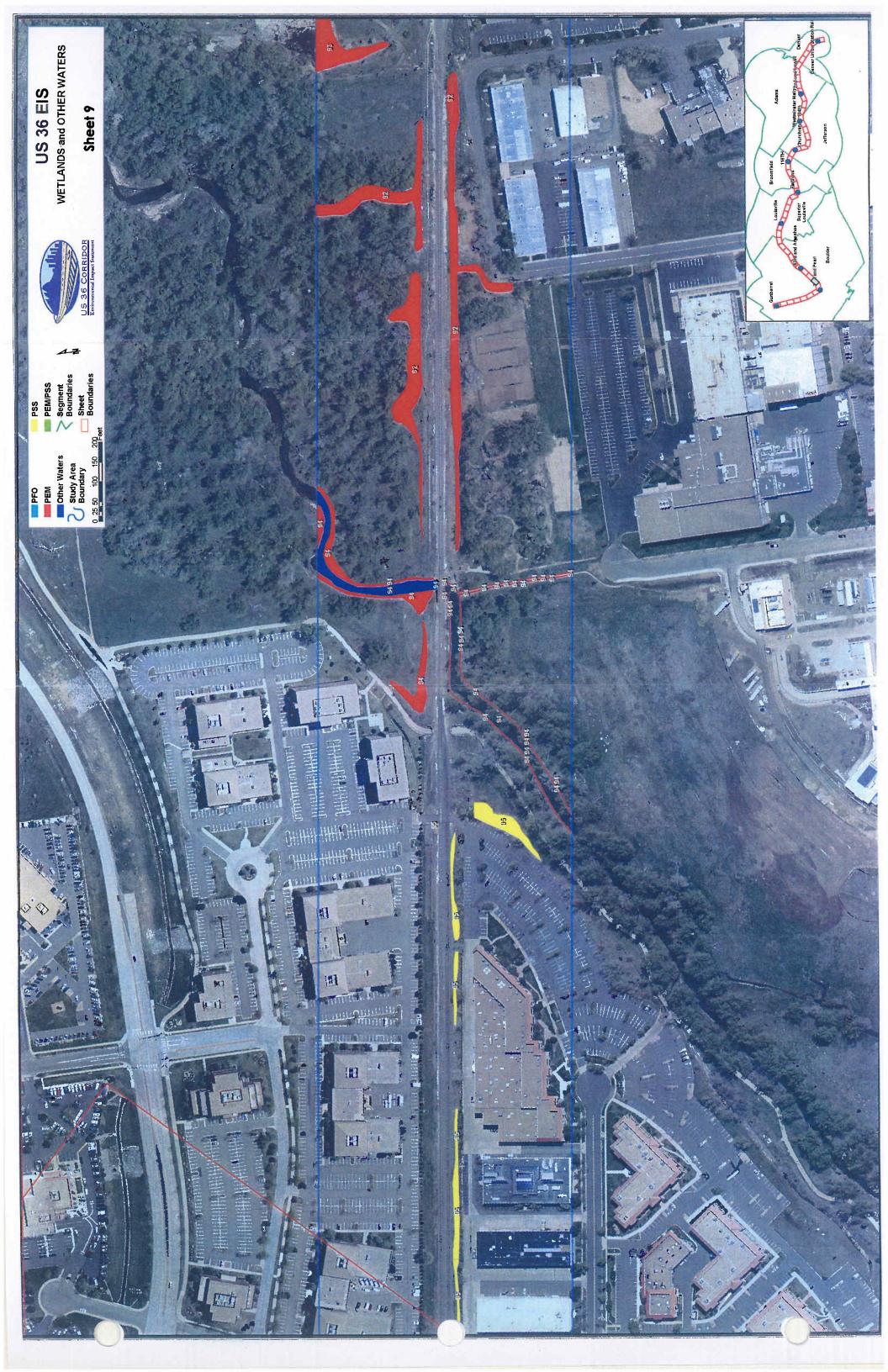


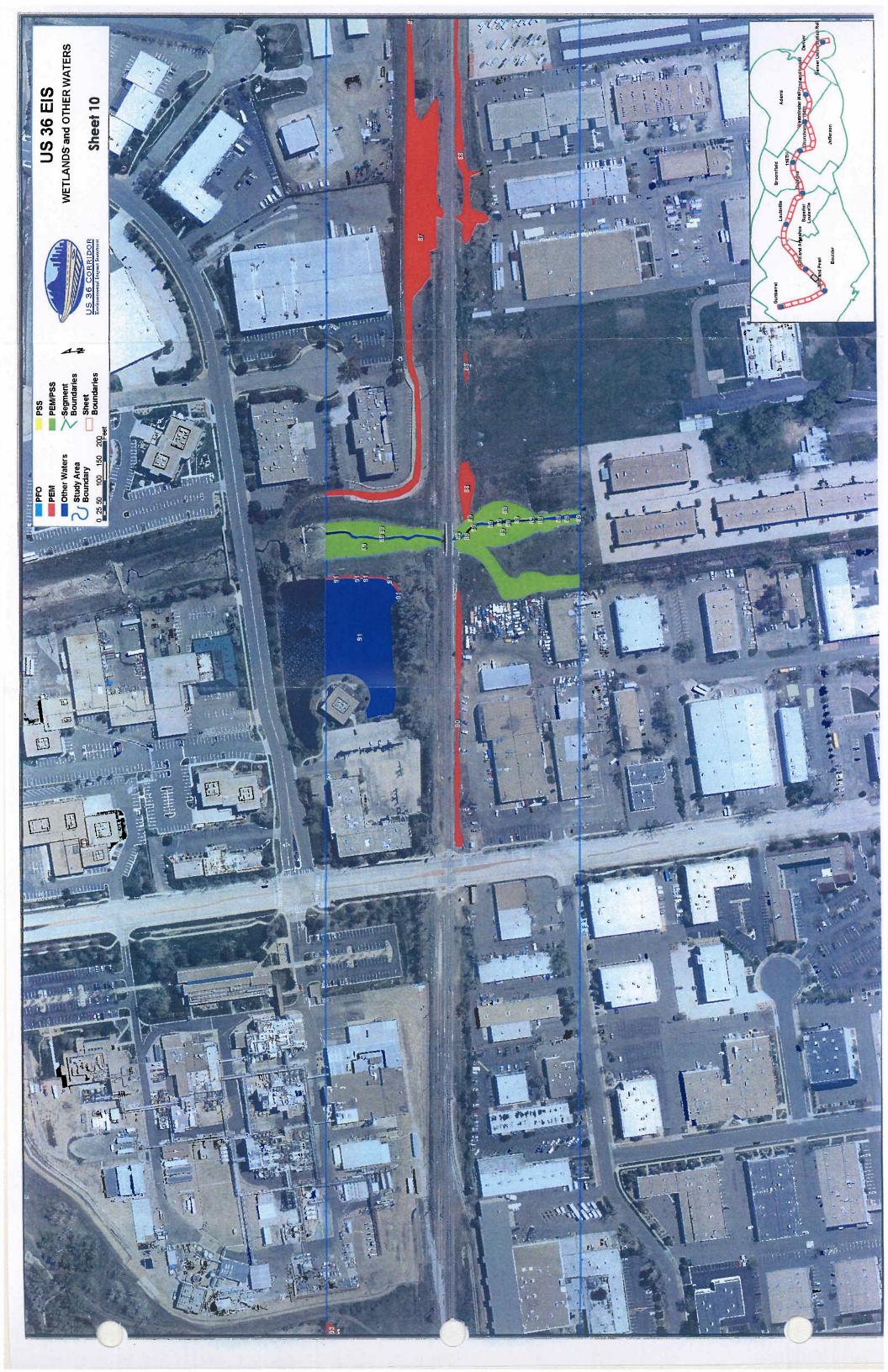


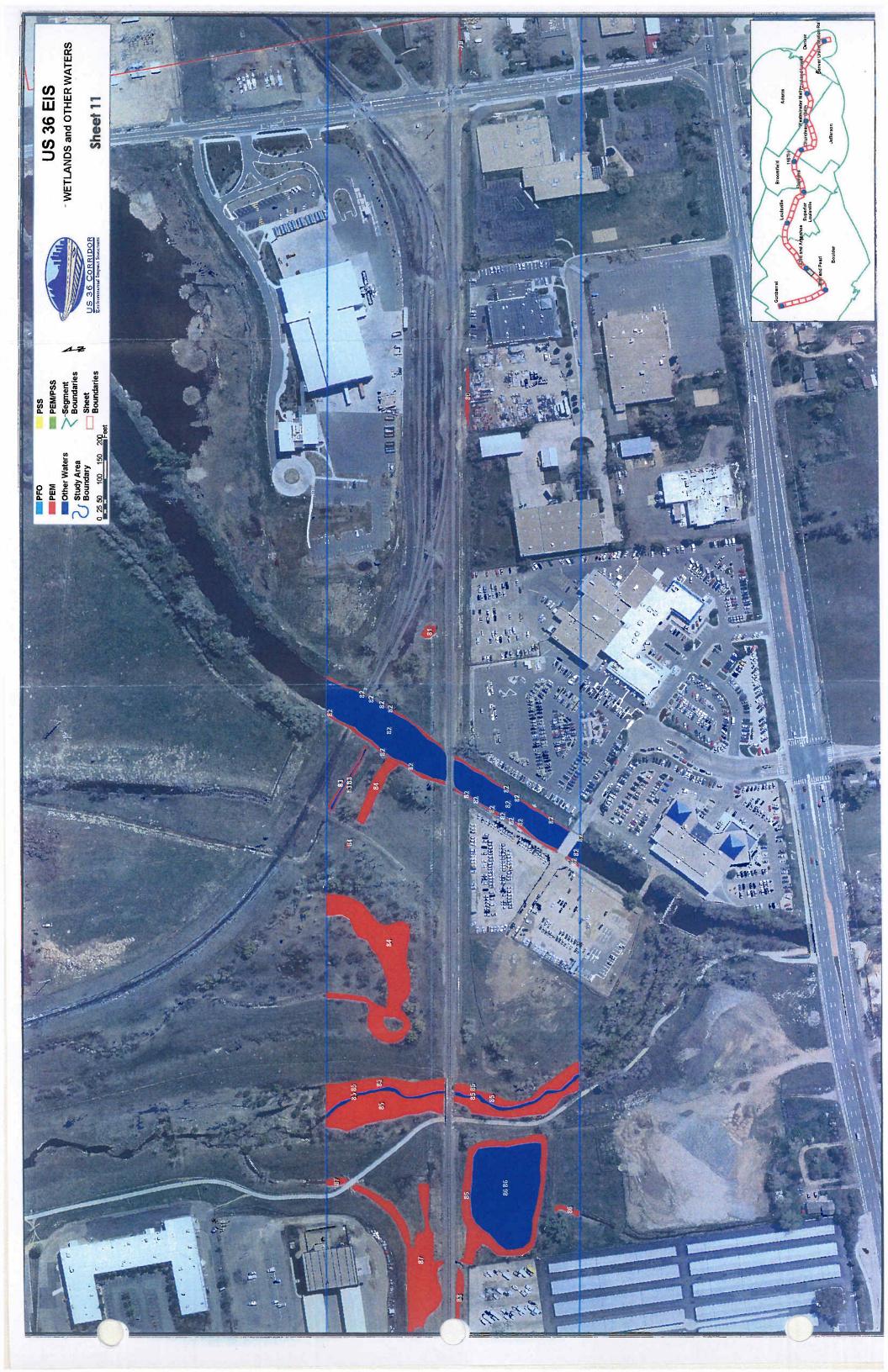






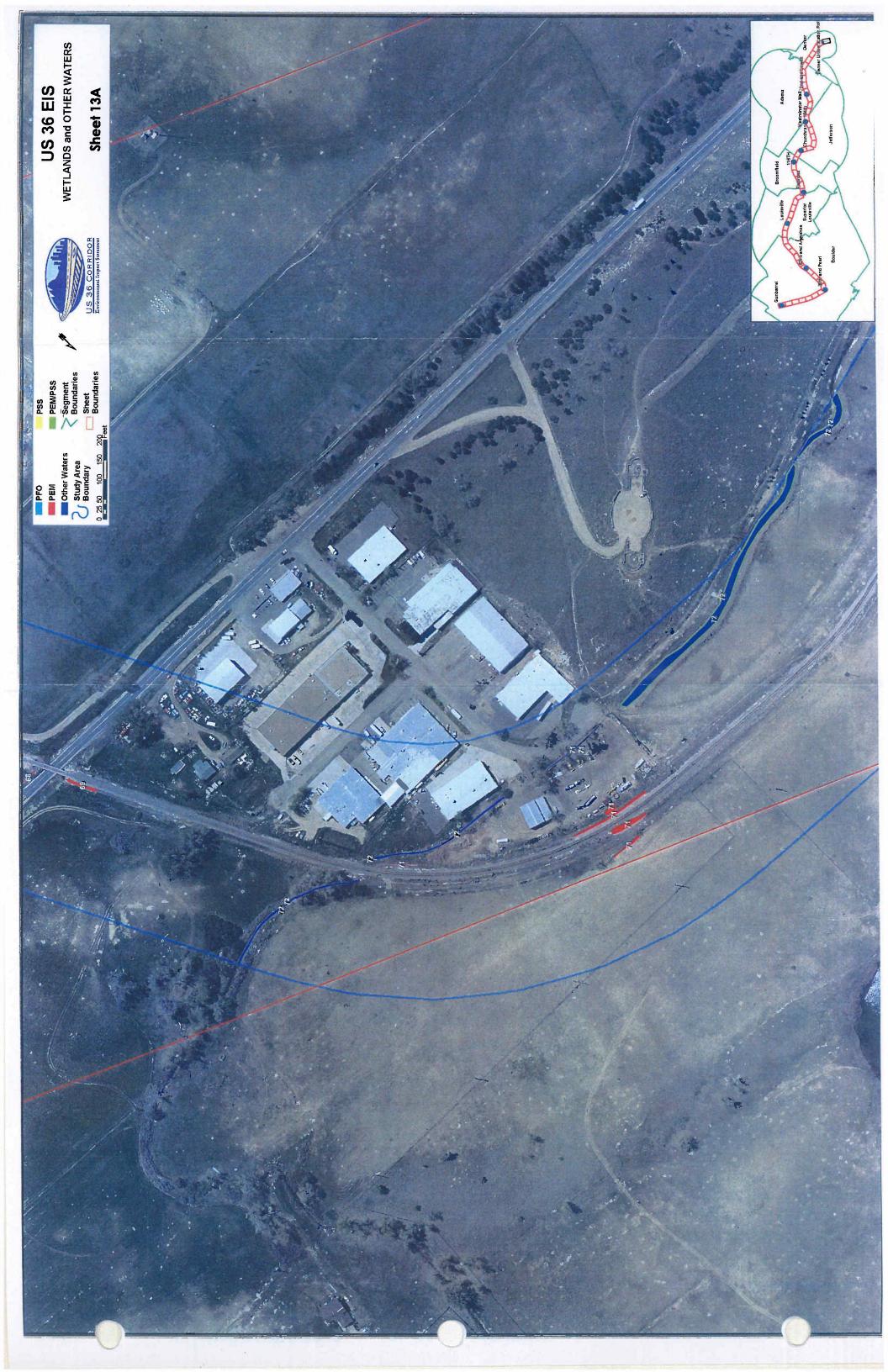




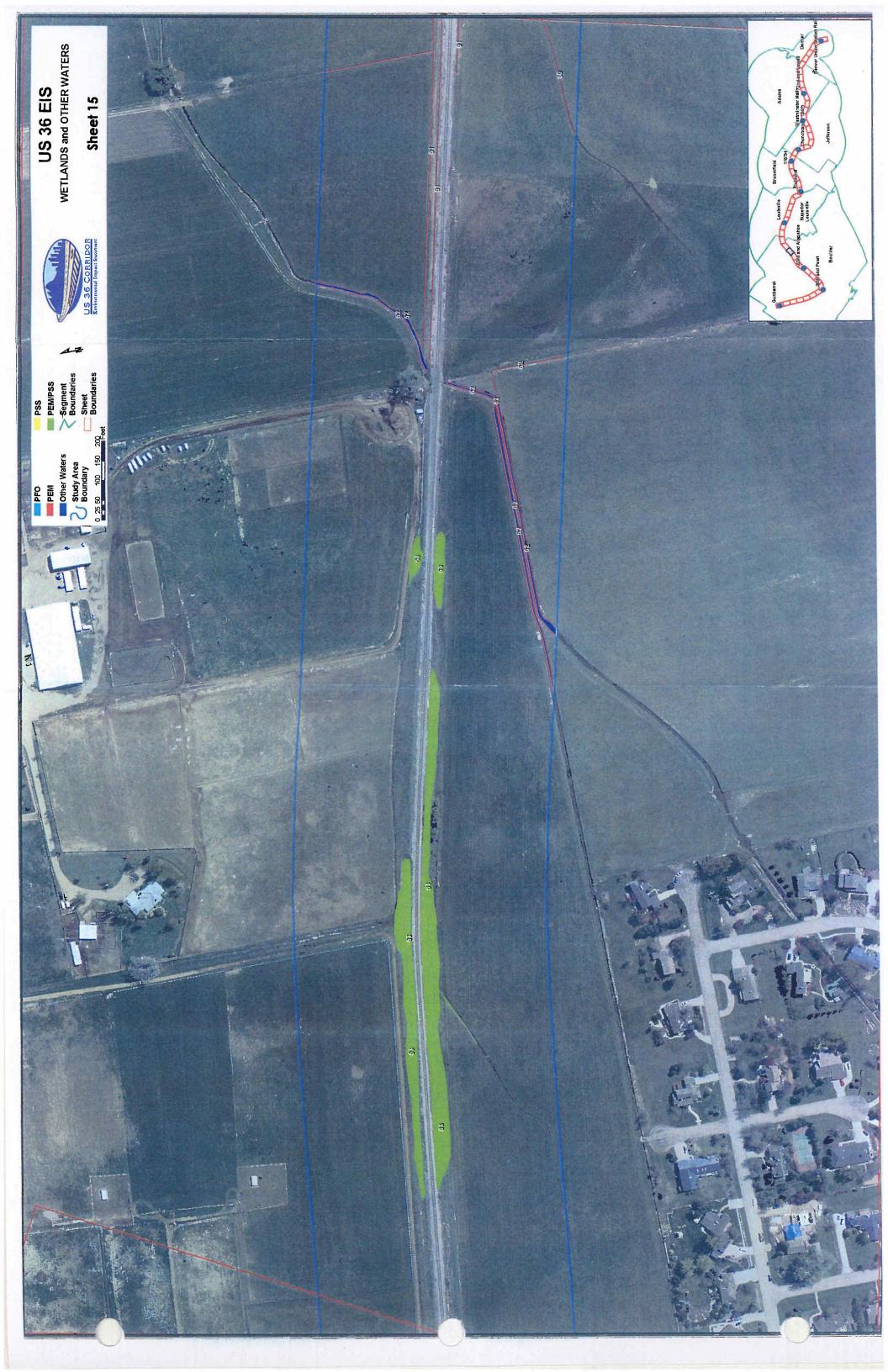
















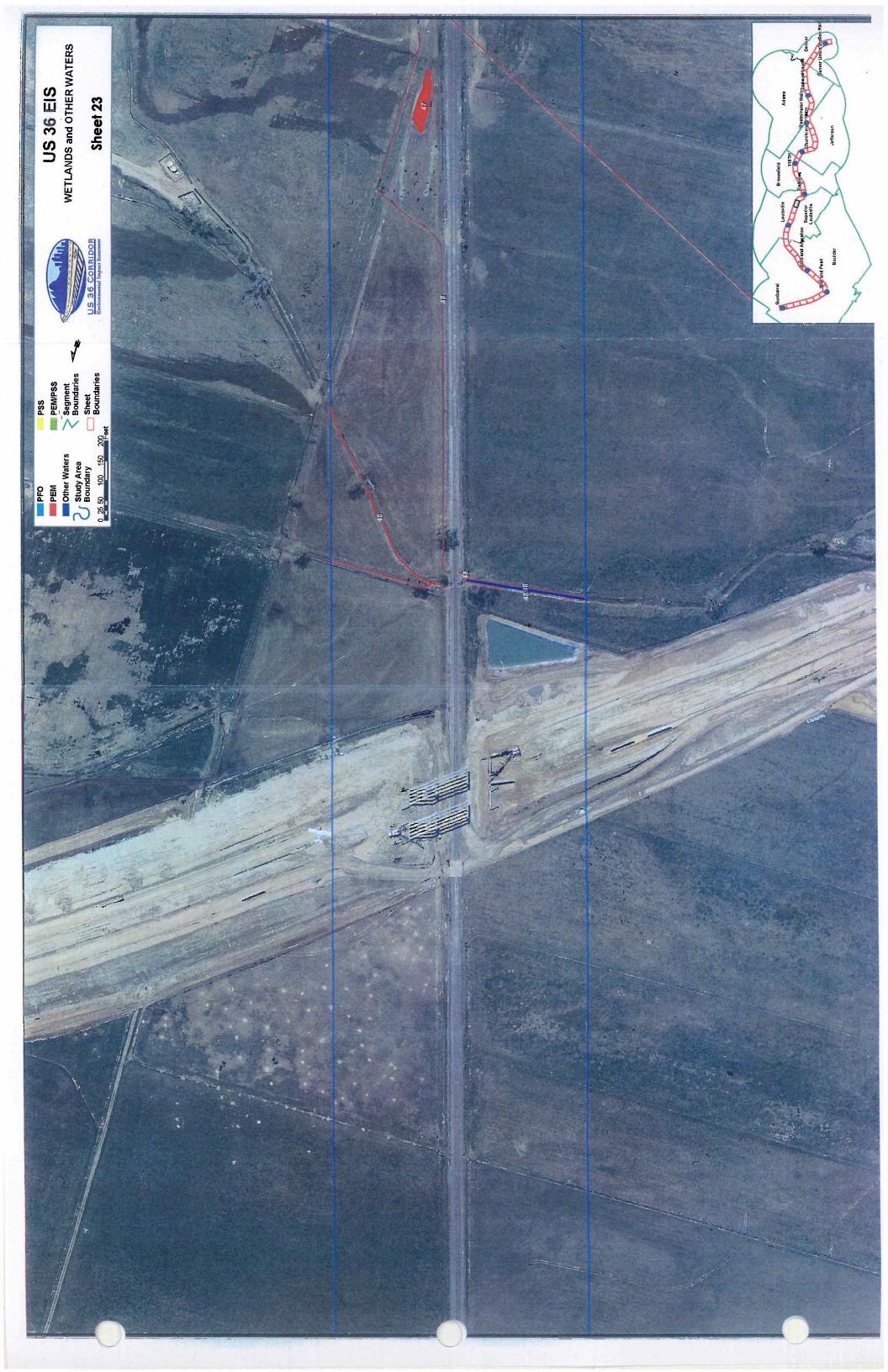


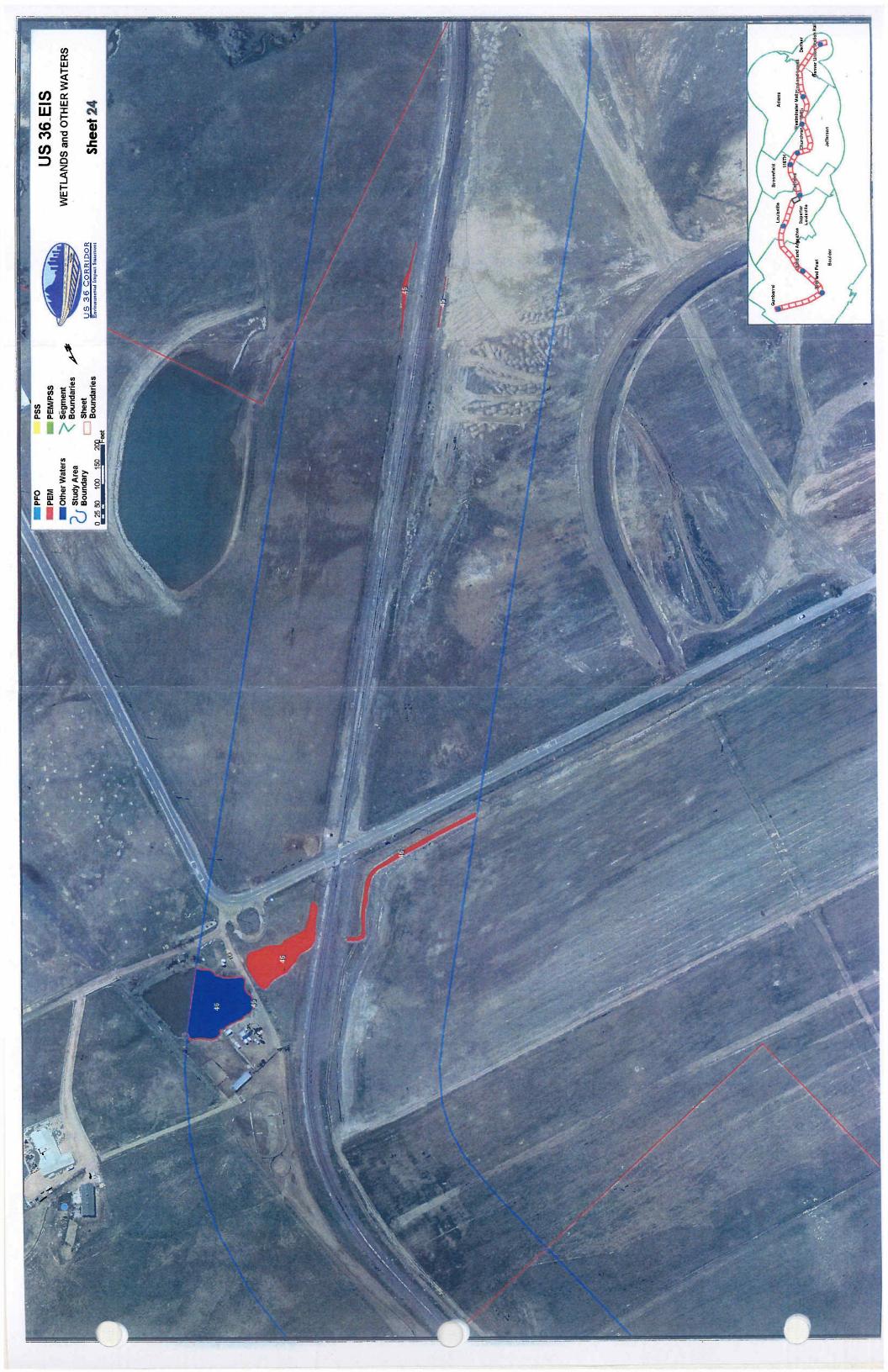


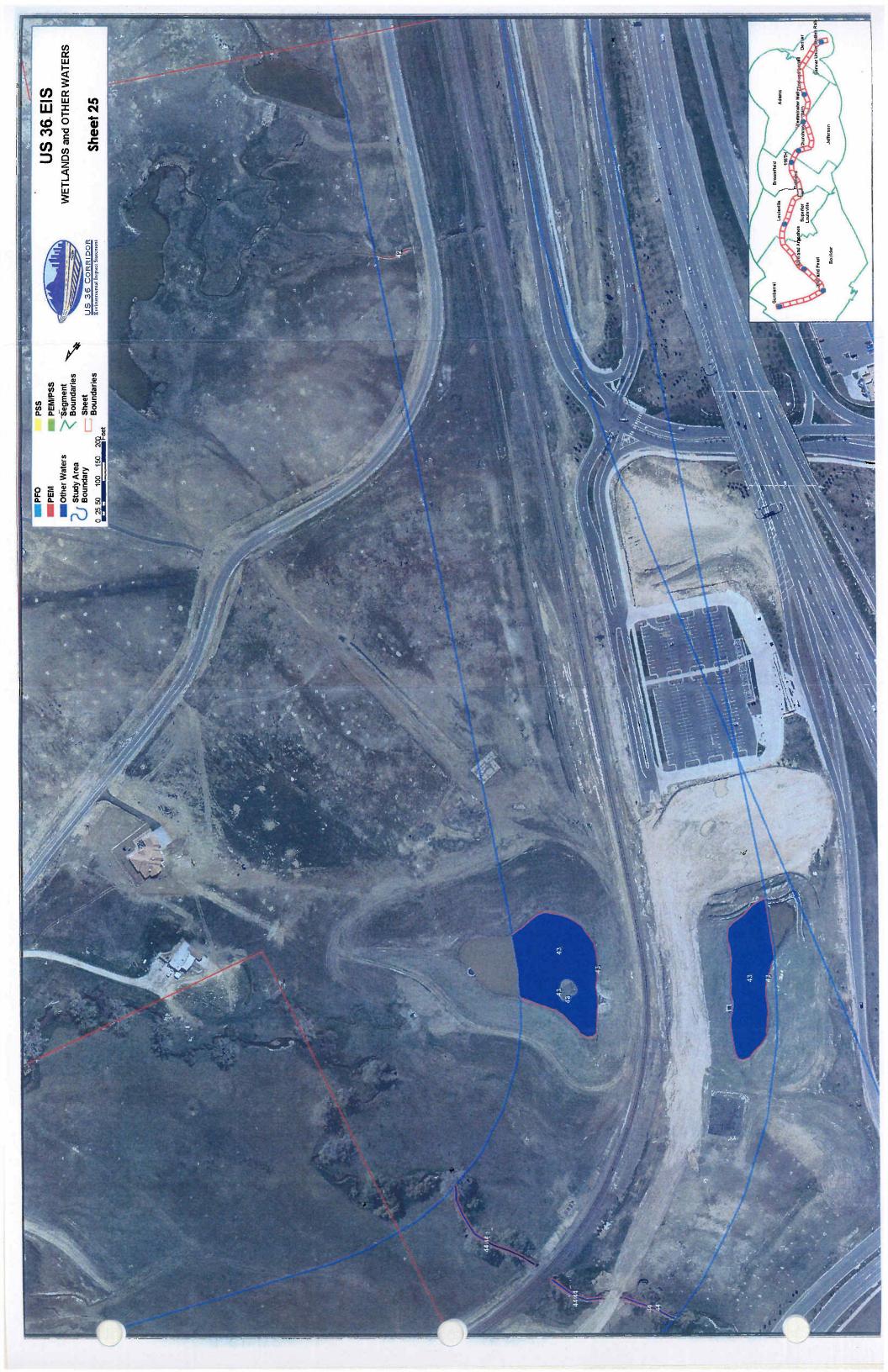


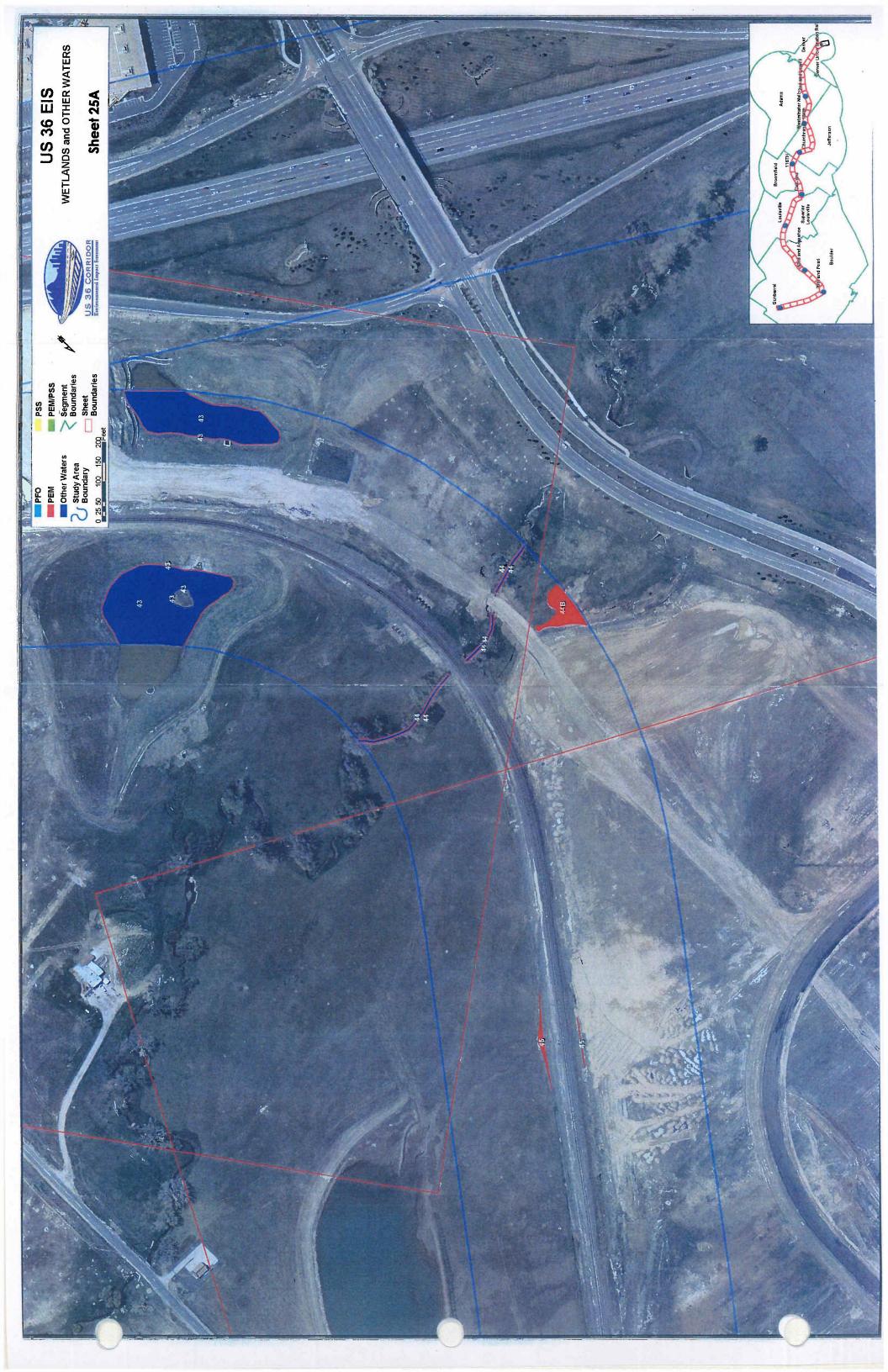


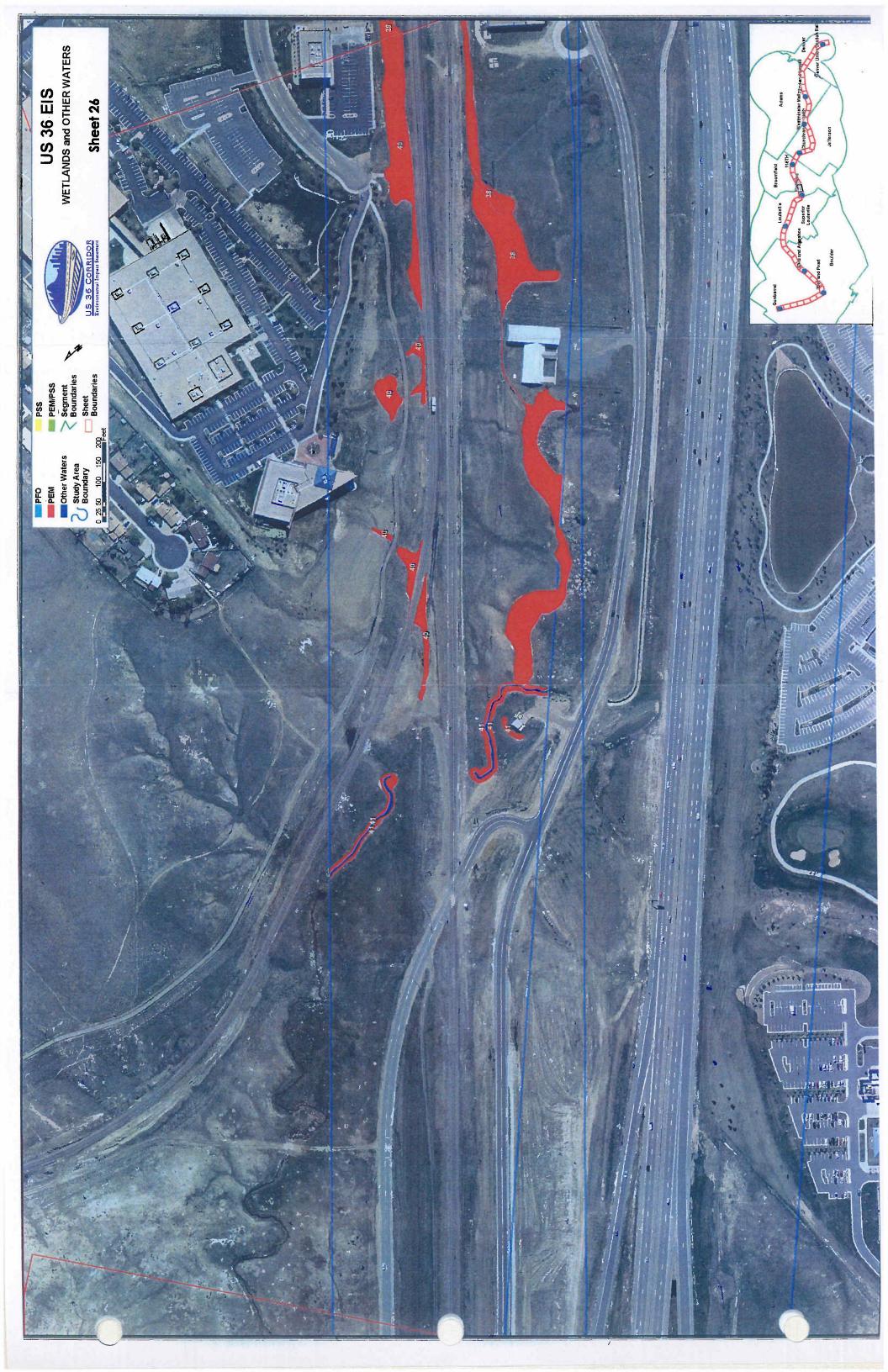












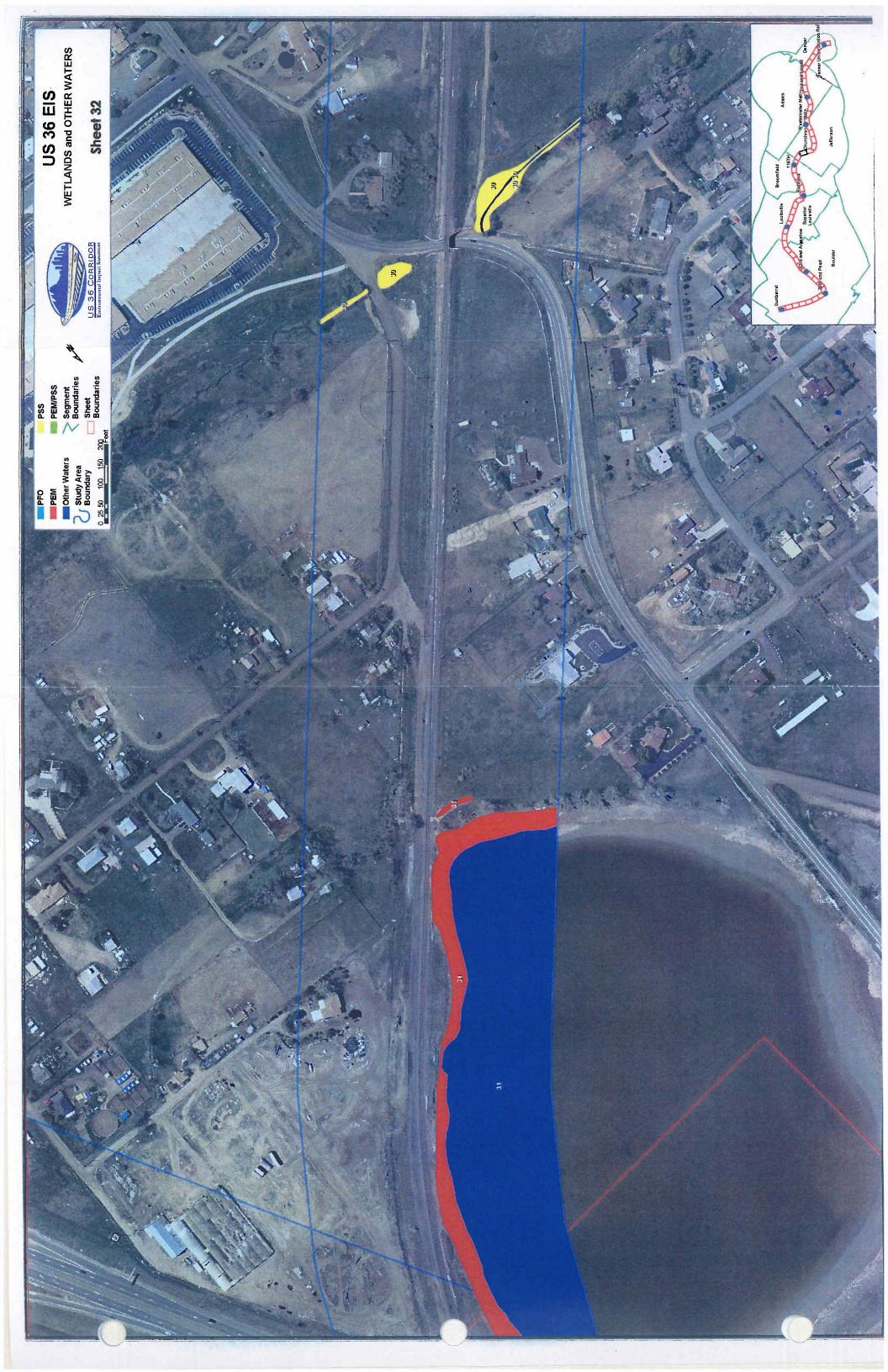










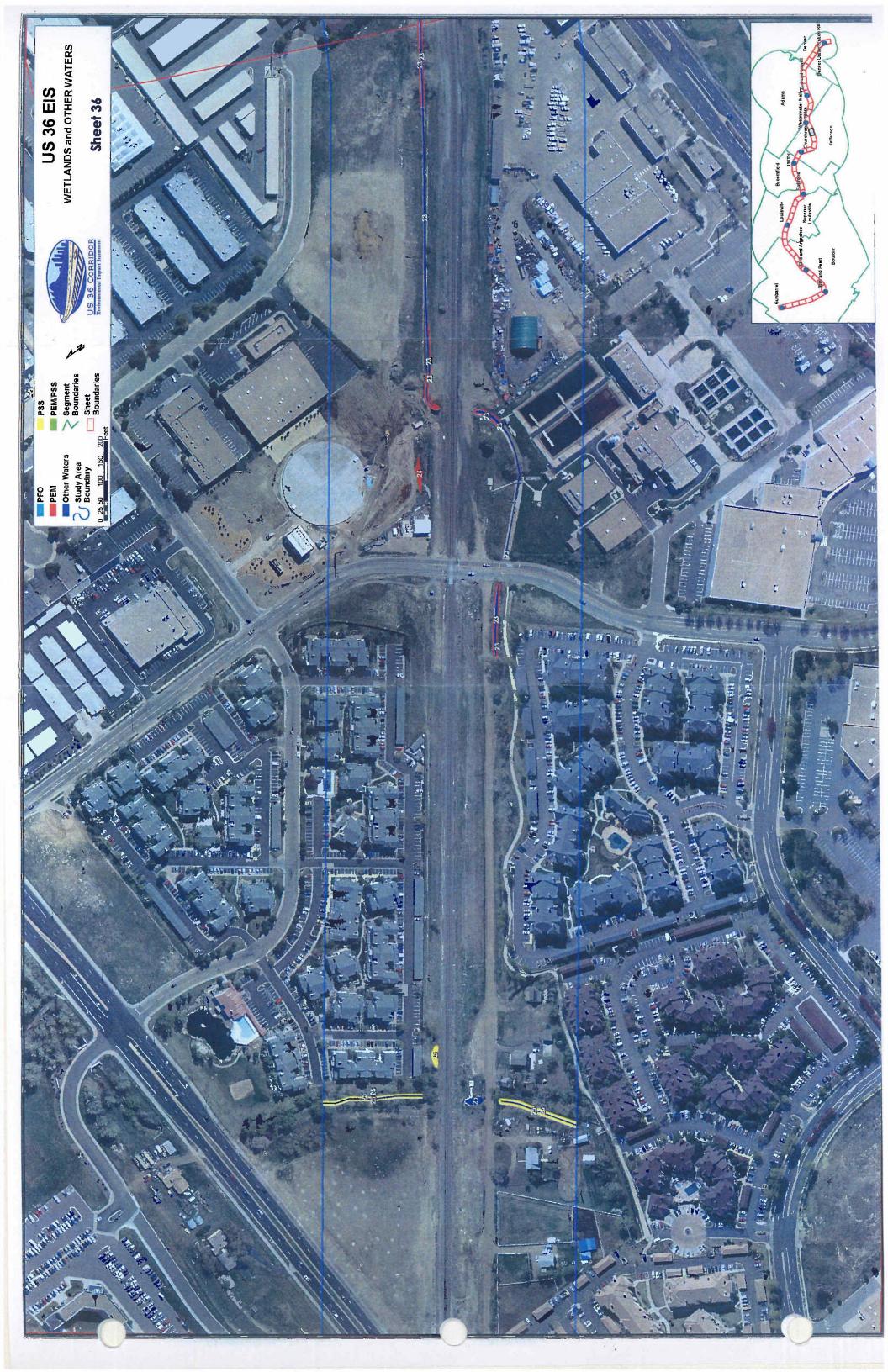
















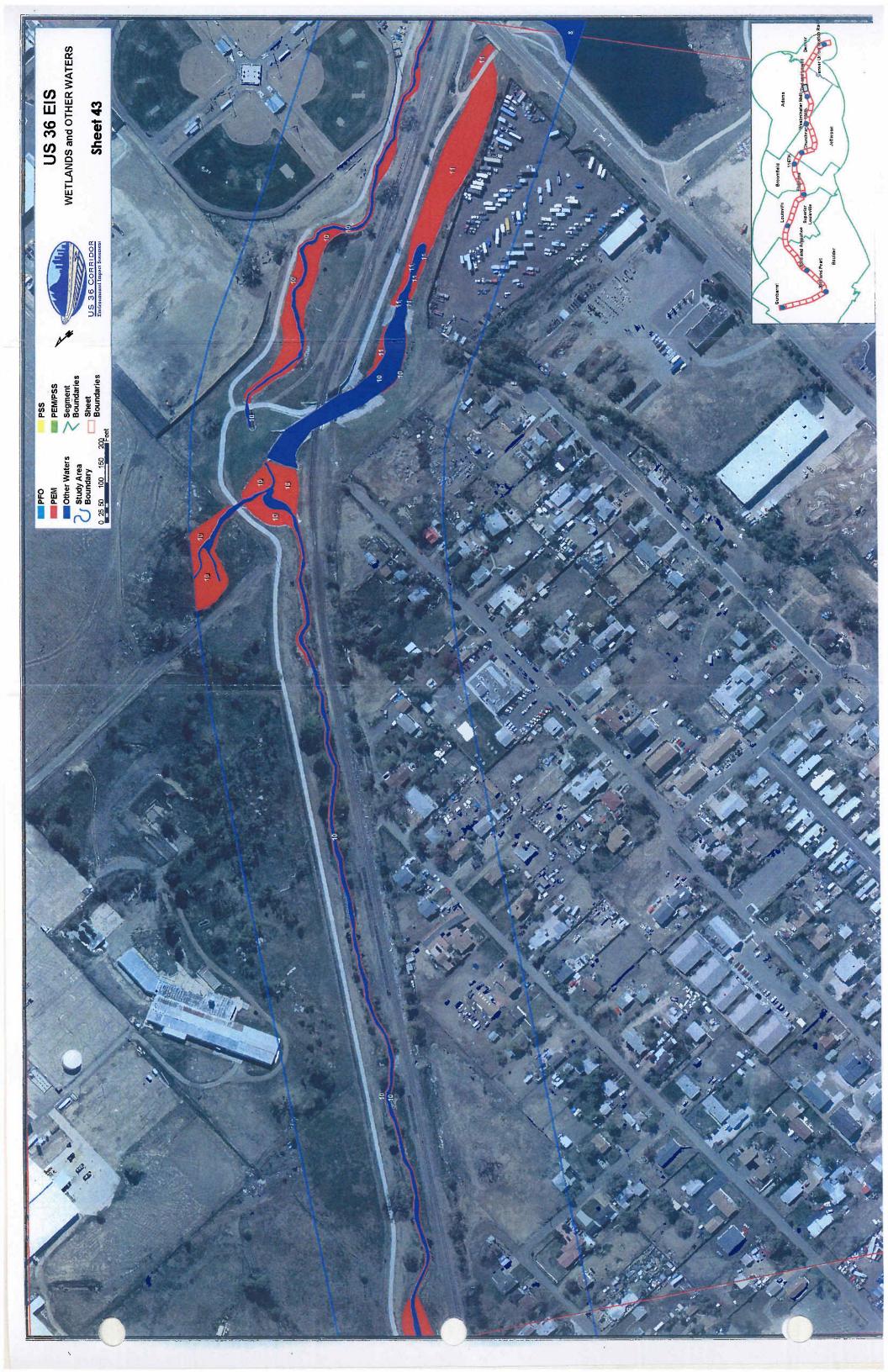


























Appendix B1
Wetland Data Tables for US 36

US 36 Adams County Segment

Segment Summary:
Number of Wetlands: 13
Number of Wetlands with High-Rated Functions; 3
Acres of Wetlands: 1.74
Percent Natural Wetlands: 0
Percent Irrigation-Related Wetlands: 39
Percent Sformwater-Related Wetlands: 61

| Wetland ID | - | 2 | 3 | 4 5 | | | - | - | - | + | - | 99 | 67 | |
|--|---------|---------|---------|----------------|------|---|--------|----------|-----------|-----------|-------------|----------------|---------------------|--|
| Size (acres) | 0.16 | 0.02 | 0.00 | 0.19 0.35 | 22 | 0.63 | 0.01 | 0.24 | 0.01 | 90.0 | 0.03 | 0.01 | 0.04 | |
| | 400 | 1 | 100 | - | 100 | 80 | 100 | - | 100 | - | 100 | 100 | 100 | |
| | 3 | 00 | 3 | 00 | 2 | 8 8 | 3 | 100 | | 100 | \vdash | | | |
| Old | ı | 00 | T | 20 | | 707 | H | | H | Н | | Н | | |
| Carsey Associations | | | | | | | | | | | | | | |
| | | | | × | 1 | | × | 1 | 1 | Ì | 1 | | I | |
| Carex nebrascensis | 1 | | 1 | 1 | ł | | t | I | 1 | | | + | | |
| Distrohits spicate Eloocharis palushis | Ì | Ī | | 1 | + | | | | | | | × | | |
| Hordeum inhatum | × | | ŀ | - | - | | | | | | | | | |
| Juncas paliticus | | | | | | | | | | | | | | |
| Phalaris arundinacea | | | | | | 3 | | | 1 | 1 | 1 | | | |
| Populus deltoides - Salix amygdaloides I Salix exigua | | | | | + | | | 1 | 1 | 1 | 1 | | | |
| Salix exigua / Barren Ground | 1 | | 1 | - | + | , | 1 | > | Ì | > | - | | T | |
| Salix exigua / Mesic graminoid | 1 | | | - | + | × | Ì | < | 1 | < | l | I | | |
| Schoenoplectus acutus - Schoenoplectus tabernaemontani (Scripus validus) | 1 | Ì | 1 | - | + | | | T | | | | - | | |
| Schoenoplectus maritimus (Scribus paiudosus) | 1 | | | - | | | l | | - | | - | | | |
| Schoenoplectus pungens (Scipus pungens) | Ī | | | | + | | | | T | | | | | |
| Typha angustiona - Typha latifolia | | | | × | × | × | | | | | | | × | |
| Officer Associations | | | | | | | | | | 1 | | | | |
| | | | | | | | | | | | | 1 | | |
| Mixed Wetland Forbs | | 1 | | | | | | | | 1 | - | 1 | | |
| Mixed Wetland Graminoids | | | | | - | | | 1 | - | 1 | × | 1 | | |
| Mixed Wetland Herbaceous | | × | × | | + | | | | × | Ī | | 1 | | |
| Rumex criedus | | | 1 | 1 | + | | Ì | | + | l | | - | | |
| Salix amyodaloides / Mixed Wetland Forbs | | | | | + | | t | | + | İ | - | t | | |
| Salix exigua / Mixed Welland Forbs | | 1 | 1 | | | | t | | - | İ | - | | | |
| Salix exigua / Mixed Wetland Ushagan | | | + | × | + | | t | T | | | | - | | |
| Minh Dated Eurotions | 1 | | ١ | | | | | | | | | | | |
| | | | - | | H | | | | | | | | | |
| CO Natural Heritage Program Species Habitat | | | - | | | | | 1 | | | + | 1 | | |
| General Wildlife Habitat | | 1 | | | + | | 1 | | 1 | T | 1 | t | I | |
| General Fish / Aquatic Habitat | | - | Ī | 1 | + | | Ì | 1 | T | 1 | - | t | | |
| Flood Attenuation | | 1 | | | - | | Ī | | 1 | T | t | | | |
| Short and Long Term Surface water Storage | | 1 | t | > | - | > | | | - | | t | | × | |
| Sediment / Nutrient / Joxicant Removal | | 1 | | < | + | < | t | t | 1 | T | - | Ī | | |
| Production Export / Egod Chain Quarter | | 1 | | | - | | l | - | | | | | | |
| Groundwater Discharge / Recharge | | | ĺ | - | H | | Ī | | | | | | | |
| Uniqueness | Ī | | - | | - | | | | | | | | | |
| Recreation / Education Potential | Ī | | | | H | | | | | | | 1 | | |
| | | | | | _ | | | | | | | | | |
| Notes ¹ | | | | | - | | | | | | | | | |
| Hydrology (Primary Source) | | | | | | | 5 | | | | 1 | | | |
| Stormwater | × | | × | × | × | | × | × | × | × | 1 | × | × | |
| Imigation Figure | | × | 1 | 1 | + | × | Ì | | | 1 | × | | T | |
| | 2 | z | Z | Z | - | > | z | z | z | Z | z | z | z | |
| Jurisdictional? | 1 | 1 | t | 1 | | | t | İ | I | I | t | l | 46 | |
| Photograph Number(s) | 1 (6/3) | 2 (6/3) | 3 (6/3) | 4, 5 (6, (6/3) | | 7, 8, 12, 13 (6/3) 26, 27 (7/16) 39, 40, 43, 44 (6/9) | 6(6/3) | 11 (6/3) | 23 (7/16) | 24 (7/16) | 42 (6/9) | 45 (6/9) 12 | (6/9) 12, 13, 15 | |
| Chank Mumbardal | 28 | 25 | 25 | 25 2 | 25 2 | 24, 24A, 25, | 24 | 25 | 24 | 24 | 25 | 27 | 32 | |
| Succe numer(s) | 1 | 1 | t | ł | + | 77.07 | t | t | t | t | t | 1- | | |
| Date of Visit(s) | 6/3 | 6/3 | 6/3 | 6/3 | 6/3 | 6/3, 7/16 | 6/3 | 6/3 | 1/46 | 2//16 | 6/9 | 6/9 | 6/9, 6/28 | |
| Motors | | | | | | Allen Ditch | | | | | | | | |
| Notes | | | _ | | _ | | | | | | Ī | | | |

Abbreviations/Agronyms; PMJM = Preble's meadow jumping mouse, NLF = Northern leopard frog, CGS = Common garter snake, ULT = Ute ladies' tresses orchid, CBP = Colorado butterfly plant, ATC = American toothcup, Fish = Common shiner, brassy minnow

US 36 Westminster Segment

Segment Summary:
Number of Wetlands: 14
Number of Wetlands with High-Rated Functions: 6
Acres of Wetlands: 54.2
Percent Natural Wetlands: 17
Percent Inrigation-Related Wetlands: 24
Percent Stormwater-Related Wetlands: 59

| Wetland ID | 9 | 80 | 8A | 8C | 11 | - | 13 14 | 16 | 88 | 83 | 8 | - | 95 |
|---|---|------------|------------|-----------|----------|--------------------------|------------------|----------------------|---|------------------|--------|-----------------------|------------|
| Size (acres) | 0.19 | 0.05 | 0.02 | 0.04 | 0.71 0 | 0.07 0 | 0.67 0.39 | 9 0.29 | 0.90 | 0.12 | 0.03 | 1.64 | 0.30 |
| assification | 00 | - | 907 | 007 | 400 | 400 | 5 | 100 | L | 100 | 100 | 06 | 8 |
| NEW COOK | 2 6 | 3 | 201 | + | + | + | 50 100 | 1 | 3 2 | 2 | | 102 | 20 |
| OH | 0 | İ | + | T | | | H | | | | | | |
| Careau Accordations | | | | | | | | | | | | İ | |
| | | | | | | | × | | × | | | | |
| Carex nebrascensis | | | | | | | | | | | | Ì | |
| Distichlis spicata | | | 1 | | , | | | > | | | | | |
| Eleocharis palustris | | + | 1 | | × | | < | < | | - | | Ī | T |
| Hordeum Jubatum | | | | | | l | - | | | | | | Γ |
| Phalaris armdinage | | Ì | | | | | | | × | × | | | |
| Donulus delibides - Salix amundaloides / Salix exitua | | | | | | | | | | | | | |
| | | | | | - | | | | | 1000 | | | |
| Safix exigua / Mesic oraminoid | × | | | _ | | | × | | × | | | | 1 |
| Schoonadactus acutus - Schoennolectus fahernaemontani (Scirius validus) | | | | | × | | | | | | | | |
| Schoenoplectus maritimus (Schous paludosus) | | | | | | | | | | | | | T |
| Schoenoplectus pungens (Scipus pungens) | | | | | | | | | | | 1 | | 1 |
| Spartina pectinata | × | × | | | × | | | × | | | × | - | × |
| Typha angustifolia - Typha latifolia | | | | | | | | | | | | | |
| Other Associations | | | | | | | | | | | | Ī | |
| Carex lanuginosa | | | | | 1 | | - | | | | | 1 | |
| Mixed Wetland Forbs | | | | | | | | | | | | | |
| Mixed Wetland Graminoids | | | × | | | | | | | | | × | |
| Mixed Wetland Herbaceous | | | | × | | | 1 | | | | | 1 | - |
| Rumex crispus | | | | | | | | | | | | | |
| Salix amygdaloides / Mixed Wetland Forbs | | | | | | | 1 | | | | | | I |
| Salix exigua / Mixed Wetland Forbs | | | | | | | 1 | - | - | - | | | > |
| Salix exigua / Mixed Wetland Graminoids | | 1 | 1 | 1 | 1 | , | + | 1 | - | | | | < |
| | | 1 | | | 1 | < | | 1 | | | | | 1 |
| High-Rated Functions | | Ī | t | - | - | - | - | - | - | | | | |
| Listed/Proposed 1&E Species habitat | | İ | Ì | + | | × | × | × | × | | | | |
| CO Natural Heritage Program Species Habitat | | | | 1 | 1 | < | | - | | | | | |
| General Fish / Aguatic Habitat | | | İ | | | | | | | | | | |
| Flood Attenuation | | | | | | | | | | | | | |
| Short and I ong Term Surface Water Storage | | | | | | | | | | | | | |
| Sediment / Nutrient / Toxicant Removal | × | | | | × | | | | | | | | |
| | | | | | | × | | | × | | | | |
| Production Export / Food Chain Support | | | | | | 1 | | + | | | | | |
| Groundwater Discharge / Recharge | | | | | | 1 | | - | | | | | 1 |
| Uniqueness | | | | 1 | | 1 | 1 | | | | | | |
| Recreation / Education Potential | | | Ī | 1 | | 1 | | 1 | 1 | 1 | | | |
| FOREN | | | | | 20 | NLF, CGS | NLF, CGS | CGS, | N. P. S. | | | | |
| Budrolom (Briman Source) | | 1 | 1 | | 1 | 1 | | | | | | | |
| Stormwater Stormwater | | × | × | × | × | | Н | × | | × | × | × | × |
| Irrigation | × | | | | | × | ^ × | × | * | | | | |
| | | | | | 1 | 1 | , | | < > | 1 | 2 | 2 | Z |
| Jurisdictional? | > | z | z | z | z | _ | , | + | 1 | 2 | 2 | | - |
| Photograph Number(s) | 7, 8, 12, 13 (6/3) 26, 27 (7/16) 39, 40, 43, 44 (6/9) | 10 (6/3) | 38 (6/9) | 11 (6/28) | 14 (6/3) | 16 (6/3) (| 15 1 (6/3) (6 | 17 20 (6/3) (6/3) | 18, 19 (6/3) 110, 111, 112 (6/10) | (6/10) (6/10) | (6/10) | 115, 116 (6/10) | 117 (6/10) |
| Sheet Number(s) | 24, 24A, 25, | 24, 244 | 24, 24A | 24 | 23 | 23 2 | 22, 23 | 22 19 | 20, 20A, 21 | ٨, 21 | 21 | 22 | 23 |
| | 8/7 7/16 | 6/3 | 6/3 | 808 | 8 | 8/3 | 6/3 | 6/3 6/3 | 6/3, 6/10 | 0 6/10 | 6/10 | 6/10 | 6/10 |
| Date of Visit(s) | 913, 1710 | 2 | 3 | Olko | 3 | + | ╁ | + | ╅ | - | ╀ | | T |
| Notes | Allen Ditch | | 1 | | <u> </u> | Farmer's N Highline C | Niver | | Big Dry Creek/ Walnut | | | | |
| | | 1 | 1 | | | | | 1 | 0 | | | | |

Abbreviations/Accondus; PMJM = Prebie's meadow jumping mouse, NLF = Northern leopard frog, CGS = Common garder snake, ULT = Ute ladies' tresses orchid, CBP = Colorado butterfly plant, ATC = American toothcup, Fish = Common shiner, brassy minnow

US 36 Broomfield Segment

Segment Summary:
Number of Wetlands: 33
Number of Wetlands with High-Rated Functions: 4
Acres of Wetlands: 4.32
Percent Natural Wetlands: 3
Percent Irrigation-Related Wetlands: 67
Percent Stormwater-Related Wetlands: 30

| | L | | | - | ŀ | H | ŀ | H | | 100 | ŀ | H | H | H | 30 | 96 | 2.2 | 30 | 7.0 | 700 | 004 | 60 | 83 | 6 | 8 AB | SAC | יי | 85 86 | 87 |
|--|----------|--------------|----------|--------------|----------|-------------|-----------------------|--|-----------------|----------|------------------|-----------|----------|------------------|-----------|-------------|-------------|-------------|-------------------------|-----------------------|----------|------------|--------|---------------------|------------------|-------------|-------------------|--------------------------------------|--|
| Wetland ID | D 17 | 18 | 19 | - | \dashv | - | - | - | - | - | | - | + | 33 | င္သ | 30 | - | 1. | + | ľ | - | - | - | 4 6 | 040 | + | + | | 1 |
| Size (acres) | 0.03 | 0.20 | 90.0 | 0.23 | 0.14 0 | 0.05 0.03 | 03 0.08 | 8 0.05 | 0.01 | 0.08 | 0.10 | 0.05 0.01 | 07 0.20 | - | - | 100 | 0.12 | - | 1 | -1 | - | -1 | - | 4. | 0.04 | - | | 1 | 1 |
| Cowardin Classification | 100 | 100 | 400 | 100 | - | 100 10 | 100 100 | 100 | 100 | 100 | H | 100 10 | 100 100 | H | 100 | 95 | 100 | 100 | 100 | 20 | 100 | 30 | 100 | 09 | 100 | 100 | 100 | 100 100 | 0 100 |
| | - 1 | 201 | 3 | 2 | 3 5 | + | + | + | | | 30 | - | H | 100 | | 2 | | - | Ц | 100 | - | | | 40 | | | | | |
| OHO | 000 | | | | 2 | | | | | | - | | | | | | | | | | | | | | | | | - | |
| | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Carsey Associations | | | | - | > | | | | | | × | | _ | | | | | | | | | | × | × | | | | × | × |
| Carex emory | V 1/1 | | | > | < | | | | | | | | | | | | | | | | | | | | | | | | |
| Carex nebrascensis | SIS | | | < | | - | | | | | | | | | | | | | | | | | | | | | | | |
| Distichlis spicata | ıta | | | | | | - | | | | | | | | | | | | > | 1 | | | | | | | L | | |
| Eleocharis palustris | ris | | | 1 | | | × | | | | | | | | 1 | | | | < | - | | 1 | 1 | | | | | | - |
| Hordoum inhatum | | | | | | | | | | | | | | | | | | | | | - | | | | | | | 100 | |
| London holistics | | | E SE SE | | | | | | | | | | | | | | × | | | | | | | | | | | | |
| Junicus Danicus | S | | 1 | | - | | | | | | | | | | | | | | | | | | × | | | | | | |
| Phalaris arundinacea | ea | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| Populus deltoides - Salix amygdaloides I Salix exigua | ua | | I | | | | | The state of the s | | | - | 1 | | | | | | | - | - | ŀ | - | | | | | | | |
| Salix exigua / Barren Ground | pu | | | | | | | | - | | 1 | | | ; | | | - | | , | , | - | | | | | | | 1 | |
| Salix exima / Mesic graminoid | Dic. | | | | × | | | | | | × | | | × | | | | | < | < | | | | | | - | 1 | | + |
| subject straigs of inchangement of the first of the | 1 | | | | | | | | 3 | | | * | × | | | | | | 1 | | | | | | | | | | |
| Schoenoplectus acutus - Schoenoplectus labernaemoniarii (Scripus vanuus) | (2) | | | | - | | | | | | | | | | | | | | | | | | | | | | | | |
| Schoenoplectus maritimus (Scirpus paludosus | (8) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Schoenoplectus pungens (Scirpus pungens) | (SL | × | | | | | | | | | - | | - | | | | | | | | | | | | | | | | |
| Spartina pectinata | \ta | | | | 100 | The same | | | | | | - | - | | | | | | - | | 2 | , | | | , | > | - | | - |
| Tvnha angustifolia - Tvnha latifolia | lia | × | × | | | | × | | | × | | × | × | | × | × | | × | × | × | × | × | | | × | < | | | |
| | | | | | | | | | | | | | | | 240 - 1 4 | | | | | | | | | | | | | | |
| Other Associations | 20 | | | | | | | - | | | - | | | | | | | | × | | | | | | | | | × | |
| Carex lanuginosa Herbaceous Vegetation | uo. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed Wetland Forbs | psi | | | | | + | < | | | | | | | | | | | | | - | - | | | | | | | | |
| Mixed Wetland Graminolo | spi | | | | | × | | | | | | | | | | | | | | | | | | | | | > | > | |
| Mixed Wetland Herhacepus | SI | | 3 | | | | | × | × | | | | | | | | | 1 | 1 | 1 | | | | | | | < | < | 1 |
| Stings vomid | 91. | | | | | | | | | | | | | | | | | | | | | | | - | | | 1 | - | 1 |
| ndern yelling | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | S Indian | |
| Salix amygdaloides / Mixed Wetland Fort. | sq | | | | | | | - | | | | 1 | | | | | | | | | | | | | | | | | |
| Salix extorus / Mixed Wetland Forb | -ps | | | | | Ĭ, | | | | | | 1 | | - | | | - | 1 | | 1 | | | | > | | | | > | |
| Saliv exima / Mixed Wetland Graminoids | spi | | | | | | | | | | | | | | | | | 1 | | 1 | + | ; | | < | | | 1 | | |
| Salv exima / Mixed Wetland Herbaceous | Sth | | | | | | | | | | | | | | | | | | | | | × | | | | | 1 | | 1 |
| | - | | | | | | | | | | | | | | | | | | | | | | | | | | - | | |
| Figur-Kateu Futicions Listed/Droposed T&E Species Habits | tat. | | | | | | _ | | | | | | | | | | | | | | | | | | | | 1 | | 1 |
| Cardoll Colored Table Decoded Table In 1990 | 100 | | | | | | | | | | | | | | × | | | | | | | | | | | | | | |
| CO Natural Demaye Program openes mani | 101 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| General Wildlife Habit. | nat | | | | | 1 | - | | | | | | | - | | | | | | | | | | | | | | | |
| General Fish / Aquatic Habitat | itat | | | | | | | | | | | | | | | | - | | | | | | | | | | | | - |
| Flood Attenuation | lon | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| Short and Long Term Surface Water Storage | a | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | 1 | 1 |
| Since and John Street Minds of John Street | 200 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | |
| Sediffer / Nutrient / Toxicant Nemov | , all | | | | - | | | | | | × | | × | | | | | | | | | | | | | | _ | × | |
| Sediment / Shoreline Stabilization | ion. | | | | | | | | | | < | | 1 | | | | | | | | | | | | | | | | |
| Production Export / Food Chain Support | ort | | 1000 | | | | | | | | | | 1 | | | | - | I | | | | | | | | | | | |
| Gmundwater Discharge / Recharge | in in | | | | | | | | | | | | | | | | | | | | - | | | | | | | | |
| oscionistali | 0 00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | C S | | | | - | - | - | | | | | - | | | | | | | | | | | | | | | | | |
| Recreation / Education Potential | II II | | | | | | - | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | Y. | | | | | | | • | _ | | | | | | | | | | | | | _ | Z.F. |
| STORY | ~ | | | | | | | | | | | | | | Ses | | | | | | _ | | | | | | | | , |
| CAION | G | | | | 1 | | - | | and the same of | | | | | | | | | | | | | | | | | | | | |
| Hydrology (Primary Source) | | | | 1 | - | - | , | - | > | > | | | × | × | | × | | × | | × | | × | × | | × | × | × | × | |
| To a second | | | | | | \ \ | , | + | < | < | , | , | + | + | | | | | > | - | × | | | × | | | | × | |
| Irrigation | × | × | × | × | × | | × | < | | | < | < | | | × | | × | | - | | | | | | | | | | |
| Nate | | | | | | 1 | 1 | 1 | | | 1 | | | ŀ | 1 | - | 1 | 2 | | 2 | 2 | 2 | 2 | 2 | Z | Z | Z | Z | - |
| lurisdictional? | Z | Z | z | z | > | - | z | z | z | z | - | - | 2 | Z | - | 2 | 1 | 1 | 1 | | - | - | 1 | | | | - | T | |
| I CUOTIGIT | | 22 | | - | | 20 | | | | | _ | | | _ | - | | | | 88 | | | 1, 94, 95, | | 97 98 101 | | | | _ | |
| Photograph Number(s) | 21 (6/3) | | 23 (6/3) | (6/28) | 25 (6/3) | _ | 21 27 (7/15) (6/4) | 7 28 4) (6/4) | 29 (6/4) | 30 (6/4) | (6/4) | 32 N | NA (6/4) | 4 39 4) (6/4) | (6/4) | 41 (6/4) | 42 (6/4) | 43 (6/4) | (6/10) 11 (7//15) | 9 89 (7/15) (6/10) | 9 92, 93 | (6/10) | 100 | (6/10) 13 (7/15) | 15, 16 (7/15) | (7/15) | 19 1 (7/15) (6 | (6/10) (6/10) 14 (7/2) 12, 18 (7/15) | 8, 109 105 4 (7/2) (6/10) (7/15) |
| Minister | 45 | 18 | 18 | 18 | 17 | 1 | 16D 17 | 17 | 17 | 5 | 15 | 15 | 14 14 | 4 4 | 17 | 14, 15 | 41 | 15 | | 12 14 | 4 14,15 | 5 15 | 15, 16 | 16 | 16B, 16C | 16B, 16C | 16B | 16 16, 16B, 17 | B, 17 |
| Sneet Number(s) | 2 | | + | | + | ٠ | + | ╁ | ł | | | ŀ | ╀ | ╀ | ╀ | | | t | ٠ | ╀ | ₽ | ₽ | H | 027.0 | | H | ⊢ | ٠ | 7/2, |
| Date of Visit(s) | 6/3 | 6/3, 6/28 | 6/9 | 6/3, 6/28 | 6/3 | 7/15 7, | 7/15 6/4 | 4 6/4 | 6/4 | 6/4 | 6/4 | 6/4 6 | 6/4 6/4 | 4 6/4 | 6/4 | 6/4 | 6/4 | 6/4 | 7/15 7 | 7/15 6/10 | 0 6/10 | 01/9 | 6/10 | 6/10, //15 | (M2 | //15 | 9 //15 | 6/10 7/15 | 5 6/10 |
| | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | - | |
| | | | | Equity | | | | | | | Community Diffch | | - | _ | | | | | | | | Pond | | | Pond | | | _ | Pond |
| | | | | <u>.</u> | | | | | | | | | | | | | | | 1 | - | - | | | | | 1 | 1 | | |
| | | | 1 | | - | | | | | | | | | | | | | | | | | | | | | | | | |

Abbreviations/Acronyms: PMJM = Preble's meadow jumping mouse, NLF = Northern leopard frog, CGS = Common garter snake, ULT = Ute ladies' tresses orchid, CBP = Colorado buttenfly plant, ATC = American toothcup, Fish = Common shiner, brassy minnow

US 36 Superior/Louisville Segment

Segment Summary:
Number of Wetlands: 23
Number of Wetlands with High-Rated Functions: 8
Acres of Wetlands: 6.59
Percent Natural Wetlands: 74
Percent Injation-Related Wetlands: 11
Percent Stormwater-Related Wetlands: 15

| Wetland ID | 31 | 32 | 39 40 | 14 | 42 | 43 | 44 | 45 | 46 47 | | 3 49 | 71 | 72 | 73 | 74 | 75 | | | | |
|--|----------|----------|------------------------------|-------------|----------|----------|--------------------------------|--------|---|---------------------------------|------------------------------|-----------------------|--------|--------|--------------------------------------|---|--------------|--------------|-------------------------------|---------------|
| | П | 0.07 | 0.27 0.04 | 4 0.06 | 0.04 | 0.31 | 90.0 | 0.12 0 | 0.56 0.34 | 4 0.20 | 0.01 | 1 0.03 | 90.0 | 0.03 | 0.07 | 4.13 | 0.07 | 0.02 | 0.05 0.02 | 2 0.02 |
| Cowardin Classification | 100 | 100 | 001 100 | 100 | | 100 | 100 | 100 | 30 100 | - 6 | | 96 | 100 | 20 | 20 | 90 | 100 | 100 | 100 100 | 100 |
| DOG | | + | 10 | + | 100 | 3 | | - | + | 100 | 0. 100 | 0 10 | | 80 | 20 | 10 | - | Н | Н | Н |
| PFO | | | | | | | | | 70 | | Н | | | | | | | | 1 | |
| Pareov Associations | | | | | | | | | | | | | | | | | | 1 | | |
| Sey Associations Carex emoryi | | | - | | | | × | | | | | | | | | | | | 1 | - |
| Carex nebrascensis | | | | | | | | | | | | | | | | × | | | - | - |
| Distichlis spicata | | | | 100 | | | | | | | 1 | | | | | ; | | | 7 | 1 |
| Eleocharis palustris | | | | × | | | | | | | | | | | | × | | 1 | \ | |
| Hordeum jubatum | | | | - | | | | | | | | | | | | | 1 | + | 1 | × |
| Juncus balticus | | - | | - | - | | | | | | - | | | | | | | | F | |
| Phalaris arundinacea | | 1 | | 1 | | | | | > | | - | | | | | | | _ | | |
| Populus deltoides - Salix amygdaloides I Salix exigua | | 1 | | 1 | | | | | < | | | | | | | | | | | |
| Salix exigua / Barren Ground | | | | | | | | | | | > | | | × | | | | | | |
| Salix exigua / Mesic graminoid | | | | 1 | - | 1 | 1 | - | | | 1 | | | | | | | | | |
| Schoenoplectus acutus - Schoenoplectus tabernaemontani (Scirpus validus) | | | | | | | | | | | 1 | - | | | | | | l | - | - |
| Schoenoplectus maritimus (Scirpus paludosus) | | | | | | | | | | | 1 | 1 | , | | | | | 1 | 1 | - |
| Schoenoelectus pungens (Scirgus pungens) | | | | | | | | | × | | | | × | | | | | 1 | | - |
| Spartina pectinata | | | | | 8-1-1-1 | | | | | | | | 9 | | | | | | | |
| Tveha angustifolia - Tveha latifolia | × | × | × | × | | × | | × | × | | | × | | × | × | × | | × | | |
| Other Associations | | | | | | | | | | | | | | | | | | ŀ | 0,0 | |
| | | - | - | L | | | | | | | | | | | | | | | | - |
| Carol Mischall Mischall Carol | | | | - | | | | | | | | | | | | | | | | |
| Wilder of the state of the stat | | | > | - | | | | | | | | | | | | | | | × | _ |
| Wikeu Wellain Grammona | | | > | - | 1 | | | | | | | × | | | | | × | | | |
| Mixed Wetland Herbaceous | | | | | | | | | | × | | | | | | | | | | |
| Kumex Cristuas | | | | | | | | | | | | - | | | × | | | | | |
| Salix amygdaloides / Mixed Wetland Forbs | | | | - | | | | | | | | - | | | | | | | | |
| Salix exigua / Mixed Wetland Forbs | | | - | | | | | | | | | | | | | | | | | - |
| Salix exigua / Mixed Wetland Graminolds | | | | | > | | | | > | | | | | | | × | | | | |
| Salix exigua / Mixed Wetland Herbaceous | | | < | | < | | | | | | | | | | Name and Address of the Owner, where | | | | | |
| High-Rated Functions | | - | - | - | - | | | | | - | - | | | | | | | | - | |
| Listed/Proposed T&E Species Habitat | | | 1 | - | 1 | | | 1 | , | 1 | 1 | | | | | > | × | | | - |
| CO Natural Heritage Program Species Habitat | | | × | | - | | | | < | 1 | - | - | | | | | | | | |
| General Wildlife Habitat | | | | | | | - | 1 | | - | - | | | | | | | | | |
| General Fish / Aquatic Habitat | | | | - | | | | | | - | - | | | | | | | l | | |
| Flood Attenuation | | | | - | - | | | | | | 1 | 1 | | | | | | | _ | _ |
| Short and Long Term Surface Water Storage | | | | | | | | | | | | | | | | | | | - | L |
| Sediment / Nutrient / Toxicant Removal | | | | | - | | , | | < > | | > | | | | | | | | | - |
| Sediment / Shoreline Stabilization | | | × | - | | | < | | < | | | | | | | | | | | |
| Production Export / Food Chain Support | | | | - | | | | | | | | - | | | | | | t | | |
| Groundwater Discharge / Recharge | | | - | - | | | | | | | | | | | | | | | | |
| Uniqueness | | | 1 | - | 1 | | | | | | + | - | | | | | | | | L |
| Recreation / Education Potential | | | 1 | | - | | | | - | | - | | | | | | | İ | | |
| | | _ | NLF, NLF, | щ, | | | | | NLF, | | | | | | | NLF, CGS | Ä. | | | |
| Notes ¹ | | | - | SS | | | | | 25 | - | - | | _ | | | | 200 | 1 | | - |
| Hydrology (Primary Source) | | | | | | | | | | | - | 1 | - | ; | | | , | | , | > |
| Stormwater | × | × | | × | × | | | × | × | 1 | | × | 1 | × | 1 | | < | , | \ \ | < |
| Imgation | 1 | | - | × | - | × | × | | > | × | × • | | × | | < | × | | < | < | + |
| | 1 | | ×I | ľ | ľ | | 1 | | | | | 2 | 2 | 2 | 2 | > | z | Z | Z | Z |
| Jurisdictional? | z | z | Z . | + | 2 | 2 | 40 54 | I | | | 1 | - | 1 | 1 | Ī | 01 11 31 31 7t vt | | T | 88 | ╀ |
| Photograph Number(s) | 36 (6/4) | 37 (6/4) | (6/4) 4 (6/4) 4 10 (6/ | 46 47 (6/4) | 48 (6/4) | 50 (6/4) | (6/4) (6/4) 72 (6/10) | G 6 | 53, 54, 56 (6/4) 63. 55, 66 (6/10) 1 (6/4) (6/28) | 4) 63 57 (3) 1 2 (6, 28) | 57 (6/4) 58 2 (6/28) (6/- | 58 65 (6/4) (6/10) | (6/10) | (6/10) | 71 (6/10) | (6/10) 13, 70, 71, 73, 80, 81, 82, 86 (6/10) 13 (7/2) 4, 5, 6 (6,7 (7/15) | 78 (6/10) | 83 (6/10) | 87 (6/10) (6/10) (7/15) | 0) 9 (7/2) |
| Sheet Number(s) | 13 | 13 | | 12 11, | - a | 10 | 10 | | 8, 9 | 8 6, | 9 2,9 | 8 | 8,9 | 6 | 10 | 10, 11, 12, 12B | 11, 12B | 12 | 12 12, 13 | 13 8 |
| | 77.0 | 7/0 | 6/4, | 614 | 8/3 | 6/4 | 6/4 | 6/4 | 6/4 6/4 | 614 6128 614 6128 | 6/28 6/4 | 6/10 | 6/10 | 6/10 | 6/10 | 6/10, 7/2, 7/15 | 6/10 | 6/10 | 6/10 6/10, | 0, 7/12 |
| Date of Visit(s) | 5/0 | + | + | + | + | + | | | | + | 1 | + | + | ₽ | | | ╀ | ₽ | - | + |
| Notes | | | Rock | | | Old | | | Coal | | + | | | | Young Saam | Rock Creek | | | | Side Ditch |
| | | | | | | | | | | | - | | | | | | | | | - |

Abbreviations/Acronyms: PMJM = Preble's meadow jumping mouse, NLF = Northern leopard frog, CGS = Common garter snake, ULT = Ute ladies' tresses orchid, CBP = Colorado butterfly plant, ATC = American toothcup, Fish = Common shiner, brassy minnow

US 36 Boulder Segment

Segment Summary:
Number of Wetlands: 24
Number of Wetlands: 18
Acres of Wetlands: 52.14
Percent Natural Wetlands: 3
Percent Irrigation-Related Wetlands: 3
Percent Stormwater-Related Wetlands: 96

| Wetland ID | 47 | 48 | 49 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | H | 09 | Н | Н | Н | Н | Н | 69 | 02 | 11 | | 1-6 |
|--|---|----------------------|-------------|---|-------------------------------|------------------------------------|----------------------|--------------------------|--------------------------------------|-----------------|----------------|--|--|----------|------------------------------|--------------------------|-----------|------------------|-------------|---------------|--------------|---------|--------|
| | 0.09 | 0.01 | 0.01 | 0.22 | 20.0 | 3.72 | 0.41 | 0.57 | 17.16 | 0.83 0 | 0.04 | 1.67 20 | 20.34 | 0.31 0. | 0.08 0.02 | 2 0.17 | 7 0.68 | 1.14 | 3.22 | 1.27 | 0.05 | 90.0 | 0.00 |
| fassification | 100 | | | 10 | 80 | 20 | 100 | 70 | 100 | H | 100 | H | 100 | 80 1 | 100 | 5 | 30 | 100 | 100 | 100 | 90 | 100 | 100 |
| PSS | | 100 | 100 | 2 6 | 20 88 | 20 20 | 2 | 30 | | 02 | H | 85 | Ħ | H | 100 | H | H | | | | 9 | | |
| | | | | | 1 | 1 | 1 | | | 1 | 1 | | | | $\left\{ \right.$ | 1 | | | | | | | 1 |
| Carsey Associations | | | | F | | × | | - | | | | - | - | | H | - | L | | L | | | × | |
| Carex nebrascensis | | | | T | | | | | | | | | | | | | | | | | 31 | | |
| Distichlis spicata | | | | | | | | | | | | | | 1 | | + | | > | | | 2 | | T |
| Eleocharis palustris | | | | l | | | | - | | | | 1 | l | | | | - | < | | | | İ | T |
| Hordeum jubatum | | | | | | | | - | | | - | | | | | | | | | | | | T |
| Juncus particus | | | | | | | | | | | | | | | × | | | | | | | × | |
| Don'the definides - Saliv amundaloides / Saliv exigna | | | | | | | | | | | H | | | | | | | | | | | | T |
| Pupulus denouces - Sank aniguatories I Dank Sagua | | | | × | | | | | | | | | | | × | | | | | | | | T |
| Salix exists / Masic draminoid | | | × | | | × | | | | | | | | | | | | | | | | | 1 |
| Schoenorlactus acutus - Schoenonlectus fahernaemonfani (Scirous Validus) | | | | | | | | | | | | | | | | | | | | | | | × |
| Schoenoplectus acutus - Schoenoplectus maritimus (Scirous paludosus) | | | | | - | | | | | | | | | | - | + | | | | | | | × |
| Schoenoplectus pungens (Scirpus pungens) | × | | | | | | | | | | | | 1 | - | | - | | | | | | | 7 |
| Spartina pectinata | | | | | | | | | | | | | | | | - | - | | , | | ^ | | |
| Typha angustifolia - Typha latifolia | × | | | | | | × | | | | × | × | | × | | - | | | × | | × | | 1 |
| Other Associations | | | | | | | | | | | - | | - | - | - | - | | | | | | | ſ |
| | | | | | | | × | × | | | + | | 1 | | - | + | | | | | | Ī | T |
| Mixed Wetland Forbs | | | | | | | | | | | | | | > | - | | > | | × | | | | |
| Mixed Wetland Graminoids | | | | | | | | | , | 1 | 1 | < | , | < | - | - | < | | | > | > | 1 | Ī |
| Mixed Wetland Herbaceous | | | | | | | | | × | × | 1 | | < | | | - | - | | | < | < | Ī | T |
| Rumex crispus | | × | | | 1 | | | 1 | | 1 | | | | | + | - | | | | | | Ī | T |
| Salix amygdaloides / Mixed Wettand Forbs | | | | | | | | 1 | Ī | Ī | + | | | | | - | - | | | | | Ī | T |
| Salix exigua / Mixed Wetland Forbs | | | | | | | | - | | × | | | | × | - | - | × | | | | | | |
| Salix exigua / Mixed Wettand Urchange | | | | 1 | × | × | | × | | | - | | | | | × | H | | | | | | |
| Galix Salada Functions | | | | | | | | | | | | | | | | | 1 | | | | | | |
| | | | | × | × | × | × | × | × | × | × : | × | × | ×× | + | × > | × > | > | × > | < > | | 1 | T |
| CO Natural Heritage Program Species Habitat | | | | × | × | × | × | × | × | × : | × ; | × ; | < ; | < ; | 1 | | + | < | <> | <> | | | Ī |
| General Wildlife Habitat | | | | × | × | × | × | × | × | × | × | × | × | × | - | \ | + | | < | < | | Ī | I |
| General Fish / Aruatic Habitat | | | | | | | | - | | | + | 1 | t | 1 | | - | | | | | | ĺ | Ī |
| Flood Attenuation | | | | 1 | | | | | | 1 | + | - | | | | | L | | | | | | |
| Short and Long 1 erm Surface Water Storage | × | | | İ | 1 | ŀ | | | × | | | | l | | | × | | | | | | | |
| Sedinent / National Palesing Salinated Shoreline Stabilization | | | × | | × | × | | × | × | | | × | | | | | | | | | | | |
| Production Export / Food Chain Support | | | | | | × | | | | | | × | | | | - | 204 | | | | | 1 | |
| Groundwater Discharge / Recharge | 4 | | | | | | | | | 1 | + | | | | + | + | - | - | | | | İ | |
| Uniqueness | | | | | 1 | Ì | | | | | | 1 | 1 | | + | + | | | | | | T | |
| Recreation / Education Potential | | | | DAY 184 | DAL MA | DAM IM | DM IM | PMIM | | | PM.IM P | + | PM.JM. | PMJM. | - | ŀ | PMJM | | PMJM, | | | | |
| | | | | | _ | _ | | | - | | _ | ULT, | | JLT, | | PM | _ | _ | _ | | | | |
| | | | | N.F. | NLF, | RLF. | H 2 | NLF, | ςς | NLF, | N.F. | | _ | т, об | _ | NLF. | F, NLF, | CGS, | | NLF. | | | |
| Notes | | | | _ | CGS, | CGS, ATC | CGS, | GGS, ATC | 2 2 | | | - | ATC A | ATC. | - | 3 | _ | - | - | - | | | |
| Hydrology (Primary Source) | | | | | | | | | | | 1 | ŀ | ۱ŀ | | ^ | - | | | | | × | × | × |
| <i>5</i> 5 | × | > | > | > | + | × | × | × | × | × | <u> </u> | - | × | × | × | \ | × | × | × | × | | | |
| Ingaron | | < | < | < | < | < | | : | | | | × | | H | H | Н | Н | | | | | | |
| | Z | > | > | > | > | > | > | > | > | > | z | \ | > | , | N A | П | λ. | À | > | > | z | z | z |
| Jurisdictional? | 20 (8/0) 63 | | | | 9 | R3 (B/4) | | 1 | | L | | 10, 11, 14, | | 17 18 | | $\overline{}$ | | \vdash | _ | - | | | |
| Photograph Number(s) | 56 (9/4) 63 (6/10) 1 (6/28) 10 (7/2) | 57 (6/4) 2 (6/28) | 58 (6/4) | 60 (6/4) 61 (6/4) 62 59 (6/10) (6/10) | 51 (6/4) 5 59 (6 (6/10) | 52, 53, 54 (6/10) 3 5 (7/15) | 1 (6/9) 51 (6/10) | (6/9) 47, 2 (7/15) | 47, 48, 49, 50 (6/10) 1 (7/15) | 36, 37 (6/9) | 8 (6/9) 32, | 12, 13, 19, 32, 33, 35 28, (6/9) 3 | 19, 26, 27, 28, 29, 30, 31 (6/9) | | (6/9) 21 6 (6/9) (7/2) | 1 (6/9) 9) 5 (7/2) | | 55, 56 (6/10) | (6/10) | (6/10) | 65 (6/10) | 8 (7/2) | (7/2) |
| Sheet Number(s) | 80 | 6,7 | g | 4,5 | 4 | 3,4 | 6 | ю | 2,3 | 2 | 2 | 2 1, | 1, 1A, 2 | 1, 1A, | 1, 1A 1, 1A | 1, 1A | IA 1, 1A, | ю | 3, 4 | 4 | æ | 1, 1A | 8 |
| Date of Visitis) | 6/4, 6/28, | 6/4, 6/28, 6/4, 6/28 | 6/4 | 6/4 | 6/4, 6 | 6/4, 6/10, 6 | 6/9, 6/10 | 6/9, 6 | 6/9, 6/10, | 6/9 | 6/9 | 6/9 | 6/9 | 6/9 | 6/9, 7/2 6 | 6/9 6/9, 7/2 | 7/2 6/9 | 6/10 | 6/10 | 6/10 | 6/10 | 7112 | 712 |
| | | | | | 2 | Т | | ╌ | 1 | South | | di i | | | H | - | L | | | | | | Storm- |
| Satur | | | | Davidson Goodhue | Soodhue | | | | | Boulder | ш | Boulder | | _ | | | | | Goodnue | Φ | | Ī | water |
| | | | | | _ | _ | | | | Ditch | | Clear | _ | _ | _ | _ | _ | | | | | | 2 5 |

Abbreviations/Acconyms: PMJM = Preble's meadow jumping mouse, NLF = Northern leopard frog, CGS = Common garter snake, ULT = Ute ladies' tresses orchid, CBP = Colorado butterfly plant, ATC = American toothcup, Fish = Common shiner, brassy minnow

Appendix B2
Wetland Data Tables for the BNSF

BNSF Railroad Denver Segment

Segment Summary:
Number of Wetlands: 1
Number of Wetlands: 1
Acres of Wetlands: 0.23
Percent Natural Wetlands: 100
Percent Irrigation-Related Wetlands: 0
Percent Stormwater-Related Wetlands: 0

| OI backet | 412 |
|--|------|
| | 0.23 |
| Size (acres) | |
| Cowardin Classification (Percent) | 80 |
| T EM | |
| 000 | |
| PFC | |
| Carsey Associations | |
| | |
| Carey nehrascensis | |
| ologico olidologia | |
| Distinities spinare | |
| Eleocharis palustris | |
| Hordeum jubatum | |
| Dhalarie arrindinacea | × |
| | < |
| Populus deltoides - Salix amygdaloides I Salix exigua | |
| Salix exigua / Barren Ground | |
| Salix extrus / Mesic Graminoid | × |
| Schoononfactus fahe | |
| Scriberiopiecus acutus - ocitoenopiecus tacchiacinaminatina contractina contra | |
| Schoenopiectus marinins (Scripus parudosus | |
| Schoenopiectus pungens (Schous pungens) | 200 |
| Spartina pectinata | |
| Typha angustifolia - Typha latifolia | |
| Other Associations | |
| Carex lanuginosa | |
| Mixed Wetland Forbs | |
| Spinoring Charles M. Landy | |
| Mixed Wedang Grantingias | |
| Mixed Wetland Herbaceous | |
| Rumex crispus | 951 |
| Caliv amundalaides / Mixed Metland Forths | |
| Saix arrigidations / Mixed World Property | |
| Sallx exigna / Mixed Welland Folios | |
| Salix exigua / Mixed Wetland Graminoids | |
| Salix exigua / Mixed Wetland Herbaceous | |
| High-Rated Functions | |
| Listed/Proposed T&E Species Habitat | _ |
| CO Natural Haritata Species Habitat | × |
| Solicate in 1801 - Ognation 19 | |
| Cellelar Wildlife Habilia | |
| General Fish / Aquatic Habitat | |
| Flood Attenuation | |
| Short and Long Term Surface Water Storage | |
| Sediment / Nutrient / Toxicant Removal | |
| THE PROPERTY OF THE PROPERTY O | |
| Sediment / Shoreline Stabilization | × |
| Production Export / Food Chain Support | 47 |
| Groundwater Discharge / Recharge | |
| senginjul | |
| Citation collection Testing of the collection Citat | |
| Kecreation / Education Potentia | |
| | NLF. |
| | |
| Notes | |
| Hydrology (Primary Source) | |
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| Irination | |
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| ואמותוכ | 1 |
| Jurisdictional? | > |
| | 4 |
| Photograph Number(s) | |
| | |
| Shoot Nimber(s) | 49 |
| eet Number(s) | |
| | - |

South Platte River Date of Visit(s)

¹ <u>Abbreviations/Acronyms:</u> PMJM = Preble's meadow jumping mouse, NLF = Northern leopard frog

BNSF Railroad Adams County Segment

Segment Summary:
Number of Wetlands: 21
Number of Wetlands with High-Rated Functions: 12
Acres of Wetlands: 7.52
Percent Natural Wetlands: 82
Percent Irrigation-Related Wetlands: 2
Percent Stormwater-Related Wetlands: 16

| Care James | N TO | X X | | x x x x x x x x x x x x x x x x x x x | X X | 2 0 0 × | X × | 8 6 × × × | S 04 00 × × | X X | x x x x x x x x x x x x x x x x x x x | X X |
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1 Abbreviations/Acronyms: PMJM = Preble's meadow jumping mouse, NLF = Northern leopard frog, CGS = Common garter snake, ULT = Ute ladies' tresses orchid, CBP = Colorado butterfly plant, ATC

BNSF Railroad Westminster Segment

Segment Summary:
Number of Wetlands: 13
Number of Wetlands with High-Rated Functions: 8
Acres of Wetlands: 7.70
Percent Natural Wetlands: 45
Percent Intigation-Related Wetlands: 50
Percent Stormwater-Related Wetlands: 50

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| Wetland ID | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 29A | 29B | 30 | 31 | 32 |
|---|-----------|---------------|-----------|-------------------------|-----------|---------------|---|------------------|----------------|--------------|---|-------------|--------------|
| Size (acres) | 0.04 | 0.29 | 0.02 | 0.12 | 0.07 | 2.89 | 0.41 | 0.56 | 0.57 | 0.02 | 0.37 | 1.96 0.38 | 0.38 |
| owardin Classification (Percent) PEM PSS | 100 | 80 | 100 | 25 | 100 | 95 | 60 | 15 | 100 | 100 | 30 | 100 | 100 |
| Carsey Associations | | | 1 | | | | | | | | | | П |
| Carex emoryi Carex nebrascensis | | × | | | İ | | | | | | | | |
| Distichlis spicata | | | × | | | Ī | | | | | 1 | | |
| Liedurais pausis | | П | | | | | | | | | | | |
| Phalaris arundinacea | | T | | | | Ť | × | | | | × | | |
| ropulus veitolites - (Salix arriguationes) / Salix exigua | | | | | | | | | 3 | | | | |
| Salix exigua / Mesic graminoid | × | | 8 | | | | 10 | , | | | | | |
| Schoenoplectus acutus - Schoenoplectus tabernaemontani (Scrpus validus) | | T | | İ | | 1 | | < | | | | | |
| Schoenoblectus marinus (Scirpus paudosus) Schoenoblectus pumaers (Scirpus pumens) | | 2000 | | | T | Ī | | | | | | | |
| Sparting pediagram | | | | | | | , | | | , | | , | > |
| | | × | | | × | × | < | | | < | | < | < |
| Other Associations | | | - | - | | Ī | | | | | | | |
| Carex landilinosa | | | | 1 | 1 | | | | | Ī | | İ | |
| Mixed Wetland Graminoids | I | Ī | Ī | × | | Ī | × | | | | 100 | | |
| Mixed Wetland Herbaceous | | | | | | | | | | | | | |
| Rumex crispus | | | | | × | | | | × | | | | |
| Salix amygdaloides / Mixed Welland Forbs | | | | | | | | 1 | | | | | |
| Salix exigua / Mixed Wetland Forbs | | , | | , | 1 | T | | × | | | , | | |
| Salix exigua / Mixed Wetland Graminoids | | × | Ī | × | Ī | | | | | 1 | < | | |
| Salix exiqua / Mixed Wettand Herbaceous | | | | | | 1 | | | | | | | |
| Listed/Proposed T&E Species Habitat | | | | | | | | | | | × | | |
| CO Natural Heritage Program Species Habitat | | | | | | × | | × | | | × | × | |
| General Wildlife Habitat | | | | | | 1 | | | | | | 1 | |
| General Fish / Aquatic Habitat | | 1 | 1 | | İ | Ī | | | | Ī | Ì | İ | |
| Flood Attenuation | | | 1 | Ī | Ī | | | | | | | 1 | |
| Short and Long Term Surface Water Storage | | | I | | | × | | | | × | 8 | | |
| Sediment / Shoreline Stabilization | | × | Ī | × | | T | × | × | | | × | | |
| Production Export / Food Chain Support | | | | | | | | | | | | | |
| Groundwater Discharge / Recharge | | | | | | | | | | | | 19-50 | |
| Uniqueness | | Ī | | | | | | | | Ī | Ī | 1 | |
| Recreation / Education Potential | Ī | Ī | Ī | 1 | | ı | | | | | Gao | | |
| Noteca | | | | | | NLF, CGS | | NLF, CGS | | | N. P. P. S. S. S. S. S. S. S. S. S. S. S. S. S. | NLF, CGS | |
| Hydrology (Primary Source) | | 1 | 1 | | 1 | 1 | | | | | 3 | | |
| Stormwater | × | | × | | × | | × | | × | × | | | × |
| Irrigation | Н | × | | × | | | | | | | , | , | |
| | -1 | 1 | 1 | Ţ | 1 | × | - | ×, | 1 | 1 | , | × | I |
| Jurisdictional? | z | - | z | 7 | Z | z | Z | - | z | 2 | + | z | z |
| Photograph Number(s) | 35 (5/18) | 36, 37 (5/18) | 38 (5/18) | 39, 40, 41 (5/18) | 42 (5/18) | 43, 44 (5/18) | 45, 46, 47, 48, 49, 50, 51 (5/18) | 52, 53 (5/18) | 54 (5/18) | 10 (6/28) | 55 (5/18) | 56, 57 | 58 (5/18) |
| Sheet Number(s) | 37 | 36, 37 | 36 | 36 | 35 | 34, 35 | 34, 35 | 33A, 34 | 33, 33A, 34 | 33A | 32 | 31, 32 | 31 |
| Date of Visit(s) | 5/18 | 5/18 | 5/18 | 5/18 | 5/18 | 5/18 | 5/18 | 5/18, 6/28 | 5/18 | 6/28 | 5/18 | 5/18 | 5/18 |
| | | | T | | | Ī | | | | 1 | Ī | | |
| Notes | | Allen | | Farmer's Highline | | | | Big Dry Creek | | water | Walnut | Church | |
| | | | | Canal | Ī | | | | | | | Lake | |

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BNSF Railroad Broomfield Segment

Segment Summary:
Number of Wetlands: 11
Number of Wetlands with High-Rated Functions: 7
Acres of Wetlands: 5.82
Percent Natural Wetlands: 57
Percent Irrigation-Related Wetlands: 2
Percent Stormwater Related Wetlands: 2

| Wetland ID | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | - | 111A |
|--|--------|--------|--------|---------|--------|---------|----------|--------|--------|----------|--------|
| Size (acres) | 1.10 | 0.01 | 0.40 | 0.53 | 0.11 | 1.88 | 0.39 | 1.08 | 0.22 | 0.09 | 0.01 |
| Cowardin Classification (Percent) | 1 | 400 | 400 | 400 | 40 | 00 | 100 | 100 | 100 | 100 | 60 |
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| Carsey Associations | | | | | | | 1 | - | - | | ľ |
| Carex emoryi | | × | | | | | | | | 1 | |
| Carex nebrascensis | | | | Ì | | | | | 1 | | |
| Distichlis spicata | | | | | | | | Ì | | | - |
| Eleocharis palustris | | | | | 8 | | | | | | ĺ |
| Hordeum inhatum | | | | | | | 250 | | | | |
| Dhalaris aradinacaa | - | - | | - | - | | | | × | × | |
| poor more to be the party of th | - | 1 | 1 | | - | | | | | | |
| Populus Deligiues - Salik antigualdies I Salik exigua | - | | | 1 | - | | | | | Ī | |
| Salix exigua / Barren Ground | | Î | | | | | | | | Ì | > |
| Salix exigua / Mesic Graminoid | | | | | | | 1 | 1 | | 1 | < |
| Schoencelectus acutus - Schoenoplectus fabernaemontani (Scirpus validus) | | | | | | | | | | | |
| Schophophics (Science partitions (Science paludosus) | | | | | | | | | | | Į, |
| Consoning Committee of the Consoning Control of the | | | | | | | | | | | |
| Schoendinectus juridens (Schipus pungens) | | | | 1 | | | | | 1 | | - |
| Spartina jectinata | > | | > | > | > | > | X | × | × | | × |
| | < | | < | < | < | | < | | | | |
| Other Associations | | | | Ì | | | | Ī | 1 | - | |
| Carex lanuginosa | | | | | | | - | - | 1 | | I |
| Mixed Wetland Forbs | | | | | | | | | | | |
| Mixed Wetland Graminoids | | X | | | 8 | | × | | | | |
| Mixed Wetland Herbaceurs | | | | | | | | | | | |
| collectory are controlled to the control of the con | | × | | | | | | | | | |
| Kumex cristus neroaceus vegetation | 1 | < | | İ | | - | | | 1 | Ī | |
| Salix amygdaloides / Mixed Wetland Forbs | | | | | | | | | Ì | 1 | |
| Salix exigua / Mixed Wetland Forbs | | | | | | | | | | | |
| Safix exigua / Mixed Wetland Graminoids | | | | | | | | | | | |
| Solv avina / Miyed Welland Herhacentis | | | | | | | | | | | |
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| High-Kated Functions | | | | | | | | | | | |
| Listed/Troposed Tat. Ordered Listed | | | | | | > | × | × | × | | |
| CO Natural heritage Program Species napital | | | | | | < | < | | | | |
| Certeral Withhie Habita | - | | | | | | | | | | |
| General Fish / Aquatic napitat | | | | Ī | | - | | | | | |
| Flood Attenuation | | | | | - | | | | 1 | | |
| Short and Long Term Surface Water Storage | | | | | | | | | 1 | 1 | > |
| Sediment / Nutrient / Toxicant Removal | | | × | | | | | | 1 | 7 | < |
| Sediment / Shoreline Stabilization | | | | | | | | | < | < | |
| Production Export / Food Chain Support | | | | | | | | | | | |
| Groundwater Discharge / Recharge | | 2 | | | | | | | | | |
| Uniqueness | | | | | | | | | | | |
| Recreation / Education Potential | | | | | | | | | | | |
| | | Ī | | | | 2 | u Z | u Z | u. | | |
| Notes | | | | | ě | CGS | CGS | ces | CGS | | |
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| Hydrology (Frimary Source) | | | × | × | | | × | × | | | × |
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| Jurisdictional? | Z | z | 2 | 1 | 2 | - | - | I | 1 | 1 | I |
| | 00 | ě | ç | 63, 64, | 99 | 67, 68, | 9 | 7 | 22 | 34 35 | 82 |
| Photograph Number(s) | (5/18) | (5/18) | (5/18) | 65 | (5/18) | 02,7 | (5/19) | (2/19) | (5/19) | (6/2) | (6/2) |
| | | 1 | | (81/0) | | (2/18) | | | Ī | 1 | I |
| Sheet Number(s) | 98 | 53 | 58 | 27, 28 | 27 | 26, 27 | 26, 27 | 26 | 92 | 27 | 27 |
| | 07/2 | 07/10 | 5/18, | 5/18, | 07/40 | 67/40 | 5/10 | 5/10 | 5/19 | 6/2 | 6/9 |
| Date of Visit(s) | 0 70 | 9 | 6/2 | 6/2 | 2 | 2 | 2 | 2 | | 1 | I |
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| Notes | | | | | | | | | Creek | iy Ditch | water |
| | | | | | | | | | IUD. | | Long |
| | | | | ١ | | | | | | | |

1 Abbreviations/Acronyms: PMJM = Preble's meadow jumping mouse, NLF = Northern leopard frog, CGS = Common garter snake, ULT = Ute ladies' tresses orchid, CBP = Colorado butterfly plant, ATC = American toothcup, Fish = Common shiner, brassy minnow

BNSF Railroad Superior/Louisville Segment

Segment Summary:
Number of Wetlands: 17
Number of Wetlands with High-Rated Functions: 7
Acres of Wetlands: 2.54
Percent Natural Wetlands: 38
Percent Irrigation-Related Wetlands: 37
Percent Stormwater Related Wetlands: 45

| Wetland ID | 14 | 42 | 43 | 44 | 44B ' | 45 4 | Н | Н | Н | Н | 21 | 52 | -1 | -1 | Н | 56 |
|---|-----------------|----------------|----------|---------------------|---------|------------|--------------------|-----------------------------------|--------------------|--------|--------|----------------|-----------|---------------------|-------------|------------|
| Size (acres) | 0.11 | 0.01 | 0.11 | 0.08 | 0.15 0 | 0.06 0. | 0.52 0.10 | 0 0.24 | 4 0.02 | 0.04 | 0.01 | 0.30 | 0.13 | 0.05 | 0.29 | 0.32 |
| Cowardin Classification (Percent) | 100 | 100 | 100 | 09 | 100 | 100 10 | 100 100 | 0 100 | 0 100 | 100 | 100 | 95 | 100 | 09 | 100 | |
| PSS PFO | | | | 40 | | | | | | | | က | | 40 | | 9 |
| Carsey Associations | | 1 | | | | | | , | > | | | | - | + | f | |
| Carex eminyn. Carex nebrascensis | Ì | 1 | | | | | 1 | < | 100 | | | 100 | | | | |
| Distichlis spicata | | | | | | × | | | | | | | | | | |
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| Hordeum jubatum Phalarie arrindinacea | × | | | | 1 | | + | - | | | | | × | | | |
| Populus deltoides - Salix amyadaloides / Salix exiqua | 3 | | 2) = | | | | | | | | | | | | | × |
| Salix exigua / Barren Ground | | | 8 | | | | | | | | | | | 1 | - | |
| Salix exigua / Mesic graminoidi | | | | × | | | | _ | | | | | 1 | × | - | |
| Schoenoplectus acutus - Schoenoplectus tabernaemontarii (Scirpus validus) | | 1 | 1 | 1 | | | | | | | | | | | İ | |
| Schoenoplectus maritimus (Scirpus paludosus) | | 1 | | 1 | + | - | Ì | | - | - | | | - | | İ | |
| Schoenopiectus pungens (Scripus pungens) | | T | | Ì | | - | | - | - | | | | | | | |
| Tvnha and stifolia - Tvoha latifolia | × | × | F | | × | _ | | - | | | | | | | × | |
| Other Associations | | | | | | | | | | | | | | | | |
| Carex lanusinosa | - | - | | | | | * | | | | | | 10 | | | |
| Mixed Wetland Forbs | | | | | | | | | | | | | | 1 | 1 | 1 |
| Mixed Wetland Graminoids | | | | | | | | | + | | S. | × | 100 | × | | |
| Mixed Wetland Herbaceous | | | × | | | - | × | 1 | | > | > | | | 1 | | |
| Rumex crispus | | + | 1 | + | 1 | | - | | - | < | < | | Ì | | | |
| Salix amygdaloides / Mixed Wetland Forbs | 1 | | İ | T | | + | 1 | 1 | - | | | | | | | |
| Salix exigua / Mixed Wetland Graminoids | | | | 1 | - | | | | | | | | | | | |
| Salix exigna / Mixed Wetland He | | | | | 1 | | | | | | | | | 1 | 1 | |
| High-Rated Functions | - | - | ŀ | 1 | | - | - | | | - | | | | - | | |
| Listed/Proposed 1&E Species Habitat | > | | Ī | > | > | | | 1 | | - | | × | | | l | |
| CO Natural Hentage Program Species Habitat | < | t | t | < | < | 1 | | I | - | - | | × | | l | | |
| General Fish / Aquatic Habitat | | | | | t | H | | | | | | | | | | |
| Flood Attenuation | | | | | | | | | | | | | | 1 | i | |
| Short and Long Term Surface Water Storage | | | | | | | - | - | | | | | | 1 | Ì | 1 |
| Sediment / Nutrient / Toxicant Removal | | 1 | | 1 | - | | | - | | | | , | > | > | | |
| Sediment / Shoreline Stabilization | × | 1 | 1 | × | 1 | - | 1 | × | | | 1 | < | < | <u> </u> | I | |
| Production Export / Food Chain Support | | | t | | 1 | 1 | - | - | | - | | | | t | | 1 |
| Groundwater Discharge / Recharge | | 1 | 1 | | | - | + | + | | L | | | | | 1 | |
| Uniqueness Porreation / Education Potential | | | İ | | | | - | + | | | | | | | H | |
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| Notes | ces | _ | | CGS | ces | Ö | ces | | - | | | ces | | | 1 | |
| Hydrology (Primary Source) | | | | | , | | 5 | - | > | | > | | | t | > | > |
| Stormwater | 1 | × | × | 1 | × | | < | , | < | 1 | < | | × | × | < | \ \ |
| Irrigation | > | 1 | 1 | × | t | × | | ł | | × | | × | < | + | | |
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| Jurisquational | t | t | t | t | | ŀ | | 3 | L | H | L | | | _ | ₽- | |
| Photograph Number(s) | 72 (5/19) (8 | 73 7 (5/19) | 74, 75 7 | 76, 77 (5/19) (6 | (6/28) | | 79 8 (5/19) (5/ | 80 81, 82, (5/19) 83 (5/19) | 82, 84 3 (5/19) | 85 | (5/19) | 88, 89 (5/19) | 91 (5/19) | (5/20) | 3 (5/20) (9 | 4,5 (5/20) |
| Sheet Number(s) | 26 | 25 2 | 25, 25A | 25, 25A | 25A 2 | 24, 25A | 24 2 | 23 23 | 3 22 | 22 | 22 | 21 | 19 | 19 | 18 | 17, 18 |
| Date of Visit(s) | 6/19 | 5/19 | 5/19 | 5/19 | 6/28 5 | 5/19 5/ | 5/19 5/ | 5/19 5/19 | 9 2/19 | 9 5/19 | 5/19 | 5/19 | 5/19 | 2/20 | 5/20 | 5/20 |
| | Pool | | | | | - | | | H | | | | | | | |
| Notes | Creek | 50 | Unnamed | Rock | | - E | Private | Goodhue | thue ch | | | Creek Creek | | Highline Lateral | | |

Notes

| Creek | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Detail | Deta

BNSF Railroad

Segment Summary:
Number of Wellands: 54
Number of Wellands: 28
Arass of Wellands: 7.18
Percent Makure Wellands: 49
Percent Inrigation-Related Wellands: 33
Percent Stormwater-Related Wellands: 18 **Boulder Segment**

6/2 6/2 6/2 6/2 6/2 6/2 6/2 mile hydron mi 100 60 65 40 35 20 (8/2) 90 50 18, 19 (6/2) 16, 17 (6/2) CGS. 7 7 7 6/2 6/2 804der and Witkerook Oikch 100 NLF. CGS 100 14 (6/2) 96 0 11 (6/2) 9, 10 (6/2) 06 0 7.8 (6/2) 100 NLF, CGS 2 2 6(5/2) 100 4, 5 (6/2) 40 100 3 (8/2) × 2 (8/2) 90 04 NLF, CGS NLF. CGS 37 (5/24)
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So Carox fanuginosas Mede Weland Porbs Mare Mede Weland Cerbs Mared Weland General Med Weland Hefraceous Salix am gedalodes I Mayed Weland Cerbs Salix am gedalodes I Mayed Weland Cerbs Salix exigen A Mede Weland Cerbs Salix exigen A Mared Weland Cerbs Salix exigen A Mared Weland Herbscreous Salix exigen A Mared Weland Herbscreous Short and Long Term Surface Water Stange Sodiment | Nutrient | Toxican Removal Sediment | Sonotien Statemoval Sediment | Sonotien Statemoval Production Egrori Food Cylar Support Groundwater Disch sings / Recharge Recreation / Education Potential Listed/Proposed T&E Species Habitat
CO Natural Heritage Program Species Habitat
General Middife Habitat
General First Aguater Habitat
Flood Miternation
Flood Miternation Size lacres! Cowardin Classification (Percent) Hydrology (Primary Source) Photograph Number(s) Righ-Rated Functions Date of Visit(s)

NE.

NLF. NLF. 27, 28, 29 (6/2)

40

jumping mouse, NLF = Northern leopard frog, CGS = Common garter snake, * Abbreviations/Acronyms; PMJM = Preble's meadow

Appendix B3
Other Waters Data Tables for US 36

Adams County Segment

| | Other Water | 2 | 4 | 9 | 67C |
|--|-------------------------------------|-------------------|---------|----------------------------|------|
| Size (acres) | | 0.00 | 0.23 | 0.40 | 0.04 |
| Type of Feature | | | | | |
| | Pond/Reservoir | | | 0000 | |
| The state of the s | Perennial Stream | | | | |
| | Intermittent Stream | | | | |
| | Stormwater Detention/Retention Pond | | × | | |
| | Irrigation Ditch/Canal | | | × | × |
| | Stormwater Ditch | × | | | |
| Jurisdictional? | | z | z | , | z |
| Photograph Number(s) | (| N A | 5 (6/3) | 5 (6/3) 7, 8, 12, 13 (6/3) | NA |
| Sheet Number(s) | | 25 | 25 | 24, 24A, 25, 26, 27 | 31 |
| Date of Visit(s) | | 6/3 | 6/3 | 6/3 | 6/9 |
| Notes | | | | Allen Ditch | |
| The state of the s | | The second second | | | |

| Other Water | 9 | 13 | 16 | 88 | 06 |
|-------------------------------------|------------------------|---|-------------------------|------------------------------------|------------|
| Size (acres) | 0.40 | 0.19 | 09.0 | 0.42 | 0.00 |
| Type of Feature | | | | | |
| Pond/Reservoir | | | × | | 2000 |
| Perennial Stream | | | | × | |
| Intermittent Stream | | | | | |
| Stormwater Detention/Retention Pond | | | | | |
| Irrigation Ditch/Canal | × | × | | | |
| Stormwater Ditch | | | | | × |
| Jurisdictional? | X | ╁ | z | ≻ | z |
| ımber(s) | 7, 8, 12, 13 (6/3) | Ϋ́Z | Ą | 18, 19 (6/3) 111, 112 (6/10) | 114 (6/10) |
| Sheet Number(s) | 24, 24A, 25, 26, 27 | 22, 23 | 19 | 20, 20A, 21 | 21 |
| Date of Visit(s) | 6/3 | 6/3 | 6/3 | 6/3, 6/10 | 6/10 |
| Notes | Allen Ditch | Farmer's Lower Highline Church Canal Lake | Lower Church Lake | Walnut/ Big Dry Creek | |

| Other Water | 27 | 34 | 81 | 82 | 84 | 86 |
|-------------------------------------|--------------------|----------------------------|--------------|---|-------------------------------|----------------------------|
| Size (acres) | 0.14 | 0.01 | 1.94 | 1.29 | 0.35 | 0.38 |
| Type of Feature | | | | | | |
| Pond/Reservoir | | | | | × | |
| Perennial Stream | | × | | and the second | 83 | |
| Intermittent Stream | | | | | | |
| Stormwater Detention/Retention Pond | | | × | × | | |
| | × | | | | | × |
| Stormwater Ditch | | | | | | |
| Jurisdictional? | > | Y | z | z | z | Y |
| Photograph Number(s) | 31 (6/4) | 34 (6/4) | 91 (6/10) | 94, 96, 99 (6/10) | 97, 98 (6/10) | 103, 104, 106 (6/10) |
| Sheet Number(s) | 15 | 14 | 14 | 15 | 15, 16, 16A | 16, 16A, 16B, 17 |
| Date of Visit(s) | 6/4 | 6/4 | 6/10 | 6/10 | 6/10 | 6/10 |
| Notes | Community Ditch | Rock Creek Tributary | | Two Stormwater Ponds and Ditch | Old Farm Pond and Ditch | Unnamed Ditch |

Superior-Louisville Segment

| | | The second second | | | | | | |
|-------------------------------------|---------------|----------------------------|--------|-----------------|----------|---------------------|-------------------------|--------------|
| Other Water | 39 | 44 | 45 | 46 | 49 | 74 | 75 | 9/ |
| Size (acres) | 0.05 | 0.10 | 0.03 | 0.47 | 0.03 | 0.34 | 0.50 | 0.38 |
| Type of Feature | | | | | 1 | | | |
| Pond/Reservoir | | | | | | × | | |
| Perennial Stream | × | | | × | | | × | |
| Intermittent Stream | | | | | | | | |
| Stormwater Detention/Retention Pond | | | | | | | | × |
| Irrigation Ditch/Canal | | × | × | | × | | - Commence | |
| Stormwater Ditch | | | | | | | | |
| Jurisdictional? | ≻ | Y | z | ╁ | Υ | z | > | z |
| Photograph Number(s) | 44 (6/4) | 49, 51 (6/4) | Z Y | 53, 54 (6/4) | 58 (6/4) | 71 (6/10) | 79, 80, 81 (6/10) | 78 (6/10) |
| Sheet Number(s) | 12 | 10 | 6 | 6 | 9 | 10 | 11, 12, 12B | 11, 12B |
| Date of Visit(s) | 6/4 | 6/4 | 6/4 | 6/4 | 6/4 | 6/10 | 6/10 | 6/10 |
| Notes | Rock Creek | | | Coal | | Old Farm Pond | Rock Creek | |
| | - | THE PERSON NAMED IN COLUMN | | | | | | |

US 36

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| Size lacres) Other Water 23 47A 49 50 61 55 56 57 59 60 61 Size lacres) Dod/Reservoir X 0.24 0.01 0.02 0.17 0.14 0.26 0.77 0.14 0.26 0.77 0.14 0.26 0.79 0.77 0.74 0.74 0.74 0.70 0.77 0.74 0.75 0.70 0.77 0.74 0.70 0.77 0.74 0.70 0.77 0.74 0.75 0.74 0.74 0.75 0.74 0.74 0.75 0.74 | | | | | | | THE REAL PROPERTY AND ADDRESS OF THE PARTY AND | THE PERSON NAMED IN COLUMN | THE REAL PROPERTY. | Name and Address of the Owner, where | THE PERSON NAMED IN | Appropriate the Personal Property lies | | | | | | | |
|---|-------------------------------------|--------|--------------|-------------|----------|-------------------|--|----------------------------|--------------------|--------------------------------------|---------------------|--|---------------------------|-----|------|----------|----------|--------------|--------|
| Pond/Reservoir X | Other Water | 23 | 47A | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 22 | 59 | 09 | 61 | 62 | 63A | 69 | 20 |
| Type of Feature Pond/Reservoir X | Size (acres) | 0.24 | 0.24 | 0.01 | 0.02 | 0.17 | 0.14 | 0.35 | 0.00 | 0.17 | 0.14 | 0.20 | 0.50 | Н | 0.02 | 0.02 | 0.57 | 90.0 | 0.01 |
| Pond/Reservoir X Perennial Stream Stormwater Detendinol/Canal X X X X X X X X X | Type of Feature | | | | | | | | | | | | | | | | | | |
| Perennial Stream | | | | | | | | | | | | | | | | | × | | |
| Notes | Perennial Stream | | | | | | | | | | | | × | | | | | | |
| Stormwater Detention/Retention Pond | Intermittent Stream | | | | × | | | | | | | | | | | | | | |
| Stormwater Ditch/Canal N | Stormwater Detention/Retention Pond | | × | | | | | | | | | | | | | | | ; | ; |
| Jurisdictional? NA Y | Irrigation Ditch/Canal | | | × | | × | × | × | × | × | × | × | | × | × | × | | × | × |
| mber(s) NA V< | | | | | | | | | | | | The state of the s | | | | - | | | |
| mber(s) NA 58 (6/4) 66/4) (6/4) < | | | z | Υ | z | Υ | \ | \ | \ | > | > | > | > | > | > | > | z | > | - |
| 1,1A 7 6 5 4,5 4, 5 4, 9 3, 4 3, 9 2,3 2, 2 2 2 2 2 2 2 3 2 4, 5 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 | mpe | N A | A A | 58 (6/4) | 59 (6/4) | 60 (6/4) | 61 (6/4) | 62 (6/4) | 1 (6/9) | 2, 3 (6/9) | 4, 6 (6/9) | Ą Z | 11, 12, 13 (6/9) | | | 20 (6/9) | 22 (6/9) | 58 (6/10) | A A |
| of Visit(s) 6/9 6/4, 6/1 6/4 6/4 6/4 6/4 6/4 6/4 6/4 6/4 6/4 6/4 6/4 6/4 6/4 6/4 6/4 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/9 6/ | Sheet Number(s) | 1, 1A | 7 | 9 | 5 | 4, 5 | 4 | 3, 4 | က | е | 2,3 | 2 | 2 | 2 | | 1, 1A | 1, 14 | 4 | 4 |
| South Davidson Goodhue Boulder Ditch Ditch Ditch | Date of Visit(s) | 6/9 | 6/4, 6/10 | 6/4 | 6/4 | 6/4 | 6/4 | 6/4 | 6/9 | 6/9 | 6/9 | 6/9 | 6/9 | 6/9 | 6/9 | 6/9 | 6/9 | 6/10 | 6/10 |
| | Notes | | | | | Davidson Ditch | Goodhue Ditch | | | 4 | | South Boulder Canyon Ditch | South Boulder Creek | 3 | | | - | Goodhue | |

Appendix B4
Other Waters Data Tables for the BNSF

BNSF Railroad

Denver Segment

| | Other Water | 112 |
|----------------------|-------------------------------------|-------------|
| Size (acres) | | 1.48 |
| Type of Feature | | |
| | Pond/Reservoir | |
| | Perennial Stream | × |
| | Intermittent Stream | |
| Stormwater D | Stormwater Detention/Retention Pond | |
| | Irrigation Ditch/Canal | |
| | Stormwater Ditch | |
| Jurisdictional? | | ≻ |
| Photograph Number(s) | | 1, 3 (5/28) |
| Sheet Number(s) | | 49, 50 |
| Date of Visit(s) | | 5/28 |
| Notes | | |

BNSF Railroad

Adams County Segment

| Other Water | 2 | 4 | 9 | 7 | 8 | თ | 10 | 1 | 13 | 18 | 20 |
|-------------------------------------|-----------------|-----------------------|----------|----------------|---------------------------------------|-----------------------|---------------------------------------|------------------------|--------------|------------------------|------------------|
| | 0.16 | 1.89 | 0.04 | 1.25 | 4.19 | 0.07 | 1.84 | 0.14 | 0.01 | 0.25 | 0.12 |
| Size (acies) | | | | | | | | | | | |
| Pond/Reservoir | | × | | | × | × | | | | | |
| Perennial Stream | | | | × | | | × | × | | × | |
| Intermittent Stream | | | | | | | | | | | |
| Stormwater Detention/Retention Pond | | | | | | | | | 1 | | |
| Irrigation Ditch/Canal | × | | | | | | | | | | ; |
| Stormwater Ditch | | | × | | | | | | × | | × |
| .lurisdictional? | Y | \ | z | \ | ╁ | z | \ | > | z | > | z |
| Photograph Number(s) | 2 (5/17) | 2 (5/17) (5/17) | 6 (5/17) | 7, 8, 9 (5/17) | 10 (5/17) | 12 (5/17) | 13, 16, 17 (5/17) 21, 22 (5/18) | 14, 15 (5/17) | 19 (5/17) | 27, 28 (5/18) | 30, 31 (5/18) |
| Sheet Number(s) | 45 | 44 | 44 | 44 | 43, 44 | 44 | 42, 43, 44 42, 43 | 42, 43 | 42 | 39, 40 | 38 |
| Date of Visit(s) | 5/17 | 5/17 | 5/17 | 5/17 | 5/17 | 5/17 | 5/17, 5/18 | 5/17 | 5/17 | 5/18 | 5/18 |
| Notes | Fisher Ditch | Old Gravel Pond | | Clear Creek | Old Old Gravel Gravel Pond Pond | Old Gravel Pond | Little Dry Creek | Little Dry Creek | | Little Dry Creek | |

BNSF Railroad

Westminster Segment

| Other Water | 23 | 25 | 29 | 30 | 31 | |
|-------------------------------------|------------------|--|------------------|---|-------------------------|----|
| Size (acres) | 0.27 | 90.0 | 0.20 | 0.04 | 7.88 | (7 |
| Type of Feature | | | | | | |
| Pond/Reservoir | | | | | × | |
| Perennial Stream | | | × | × | | |
| Intermittent Stream | | | | | | |
| Stormwater Detention/Retention Pond | | | | | | |
| Irrigation Ditch/Canal | × | × | | | | |
| Stormwater Ditch | V. | | | | | |
| Jurisdictional? | \ | Υ | ≻ | ╁ | z | |
| Photograph Number(s) | 36, 37 (5/18) | 36, 37 39, 40, 41 52, 53 (5/18) (5/18) | 52, 53 (5/18) | NA | 56, 57 (5/18) | |
| Sheet Number(s) | 36, 37 | 36 | 33A, 34 | 32 | 31, 32 | |
| Date of Visit(s) | 5/18 | 5/18 | 5/18 | 5/18 | 5/18 | |
| Notes | Allen Ditch | Farmer's Highline Canal | Big Dry Creek | Big Dry Walnut Church Creek Creek Lake | Lower Church Lake | |

| | Other Water | 41 | 111 |
|----------------------|-------------------------------------|----------------------------|--------------------|
| Size (acres) | | 0.05 | 0.31 |
| Type of Feature | | | |
| | Pond/Reservoir | | |
| | Perennial Stream | × | |
| | Intermittent Stream | | |
| Stori | Stormwater Detention/Retention Pond | | |
| | Irrigation Ditch/Canal | | × |
| | Stormwater Ditch | | |
| Jurisdictional? | | Υ | ٨ |
| Photograph Number(s) | | A A | 34, 35 (6/2) |
| Sheet Number(s) | | 26 | 27 |
| Date of Visit(s) | | 5/19 | 5/18, 6/2 |
| Notes | | Rock Creek Tributary | Community Ditch |

BNSF Railroad

Superior-Louisville Segment

| Other Water | 41 | 43 | 44 | 46 | 48 | 52 | 52A | 53 | 53A | 54 | 55 |
|-------------------------------------|----------------------------|--------------------------|-------------|-----------------|--|---------------|--------------|-----------------------|-----------------|------------------------------|--------|
| Size (acres) | 0.05 | 1.80 | 0.07 | 0.46 | 90.0 | 60.0 | 0.04 | 0.10 | 90.0 | 0.08 | 0.02 |
| Type of Feature | | | | | | | | | | | |
| Pond/Reservoir | | | | × | | | | | × | | |
| Perennial Stream | × | | × | | | × | | | | | |
| Intermittent Stream | | | | | | | | | | | |
| Stormwater Detention/Retention Pond | | × | | | | | | | | | |
| Irrigation Ditch/Canal | | | | | × | | × | × | | × | × |
| Stormwater Ditch | | | | | | | | | | | - |
| Inrisdictional? | Υ | z | > | z | \ | \ | z | > | z | > | z |
| Photograph Number(s) | ₹ | 74, 75 (5/19) | 76 (5/19) | 79 (5/19) | 82 (5/19) | 88, 89 (5/19) | 87 (5/19) | 91 (5/19) 1 (5/20) | 90 (5/19) | 2 (5/20) | A A |
| Sheet Number(s) | 26 | 25, 25A | 25, 25A | 24 | 23 | 21 | 21 | 19 | 20 | 19 | 18 |
| Date of Visit(s) | 5/19 | 5/19 | 5/19 | 5/19 | 5/19 | 5/19 | 5/19 | 5/19, 5/20 | 5/19 | 5/20 | 5/20 |
| Notes | Rock Creek Tributary | Includes two ponds | Rock | Private Pond | Rock Private Goodhue Creek Pond Ditch | Coal | | | Private Pond | Highline Lateral Ditch | |

BNSF Railroad

Boulder Segment

| Other Water | r 57 | 59 | 09 | 61 | 62 | 64 | 65 6 | 67 71 | 1 72 | 73 | 92 | 7.7 | 82 | 83 | 85 | 98 | 68 | 91 | 94 | 97 | 66 | 103 | 107 | 109 |
|-------------------------------------|-------------|------------------------|-------------------------------------|--------|-----------------|----------------------------------|------------------------|-------------------------------------|------------------------------------|------------------|-------------------------------------|-----------------------------|--|-----------|---------------------------|--------------|---------------------|---------------------|---|--|-------|---|----------------------------|--------------------------------------|
| | 0 4 0 | 777 | 0.27 | 0.03 | 0.19 | 0.20 | 0.36 | 0.12 0.01 | 0.42 | 2 0.27 | 9.19 | 0.23 | 1.16 | 0.02 | 0.13 | 0.91 | 0.11 | 1.13 0 | 0.75 | 0,17 0 | 0.05 | 0.44 | 0.11 | 0.38 |
| Size (acres) | 2 | | 17:0 | | | 4 | 1 | | 1 | | | | | | | | | | | | | | | |
| lype of reature | | | | - | | - | - | | | × | × | | | | | × | | | | | | | | |
| Hond/Reservoil | | | | | | | × | | | | | | | | × | | × | | × | × | × | 16 | × | |
| Perenniai Stream | | | | | | | - | | | - | | | | | | | | | | | | | | |
| Intermittent Stream | ٤ | | | | | | | | | | | | | | | l | | × | | | | | | |
| Stormwater Detention/Retention Pond | þ | | | | | 1 | | 1 | 1 | | - | ; | , | > | | İ | | | | | | > | | × |
| Irrigation Ditch/Canal | al X | × | × | × | × | × | | × | × | - | | × | < | < | | 1 | | | | | | < | | < |
| Stormwater Ditch | ÷ | | | | | | | | | | | | | | | | | | | | | , | ļ | ļ |
| livicalistional? | > | > | ٨ | ٨ | \ | > | ΄ . | λ λ | > | > | > | > | > | > | > | > | _ | _ | | <u></u> | | . | _ | - |
| Photograph Number(s) | 6 (5/20) | 9, 10 (5/20) | 11, 12, 13 (5/20) | A V | 15 (5/20) (| 20 22 (5/20) (5 | 22, 23 2 (5/20) (5/ | 25 3 (5/20) (5/24) | 24) (5/24) | 6 7 4) (5/24) | NA (1 | 12, 14 (5/24) | 18 (5/24) | 19 (5/24) | 23, 24, 25 (5/24) | 26 (5/24) | 33 (5/24) | 36 41 (5/24) (5, | 41, 42 (5/24) 4, { 1 (6/2) | 4, 5 (6/2) 7, 8 (6/2) | | 12, 13, 15 ² (6/2) | 21, 22, 24, 25 (6/2) | 23, 26, 30 (6/2) |
| Sheet Number(s) | 16, 17 | 16 | 16 | 16 | 15 | 41 | 14 | 14 13, | 3, 13, A 13A | , 12, 13 | 3 12, 13 | 12 | 11 | 11 | 11 | 11 | 10 | 10 8F | 8B, 9 8 | 8, 8A 8 | 8, 8A | 7 | 2 | 2 |
| Date of Visit(s) | 5/20 | 5/20 | 5/20 | 5/20 | 5/20 | 5/20 5 | 5/20 5/ | 5/20 5/24 | | 4 5/24 | 1 5/24 | 5/24 | 5/24 | 5/24 | 5/24 | 5/24 | 5/24 | 5/24 5/ | 5/24, 6/2 | 6/2 | 6/2 | 6/2 | 6/2 | 6/2 |
| Notes | | Marshallville Ditch | South Boulder Canyon Ditch | | McGinn Ditch | New Dry I Creek C Ditch | Dry we Creek Di | Cotton-Enter-wood prise Ditch Ditch | er- Enter- se prise ch Ditch | | Private Hillcrest Pond reservoir | East Boulder Ir Ditch | South Boulder Creek Diversion | | South Boulder Creek | 2 4 | Unnamed Drainage | <u>8</u> ਹ | Boulder Creek Lei | Boulder and Unnamed Lefthand Drainage Ditch | | Boulder and Fo Whiterock C Ditch | Fourmile Creek W | Boulder and Whiterock Ditch |

Appendix C1

Dominant Wetland Vegetation Tables for US 36

US 36

Adams County Segment

| TAM NOMMOD | SCIENTIFIC NAME | | | |
|---------------------------------------|---|---|---|----------|
| Redfon | Aurostis aigantea X | | × | |
| Rediop | | | | |
| Creeping Beniglass | All Doubs storounera Alisma triviale | | | |
| Crow Alder | Alnus incana | | | |
| Indian Hemo | Apocvnum cannabinum | | | |
| Showy Milkweed | Asclepias speciosa | | | |
| Smooth Brome | Bromus inermis | × | | |
| Japanese Brome | Bromus japonicus | × | | |
| Whitetop | B | | | |
| Emory's Sedge | Carex emoryi X X X X X | | | |
| Wooly Sedge | Carex lanuginosa | | ; | |
| Nebraska Sedge | Carex nebrascensis | | × | - |
| Pointed Broom Sedge | Carex scoparia | | | ; |
| Canada Thistle | Cirsium arvense | | | × |
| Poison Hemlock | Conium maculatum | | | |
| Golden Tickseed | Coreopsis tinctoria | | | |
| Common Teasel | Dipsacus fullonum | | | 1 |
| Barnyard grass | Echinochloa crusgalli | × | + | 1 |
| Creeping Spikerush | Eleocharis palustris | | × | |
| Slender Wheatgrass | Elymus trachycaulus | | | |
| Willowherb | Epilobium ciliatum | - | 1 | |
| Meadow Fescue | Festuca pratensis | | | 1 |
| American Mannagrass | | | > | > |
| Fox-tail Barley | Hordeum jubatum | | < | < |
| Jointleat Rush | Juricus articulatus | | | |
| Bailic Rush | 0 | | | |
| Illee-stallfell Austi Slondor Dish | Juncus tenuis | | | |
| Torrev's Rush | Juncus torrevi | | | |
| Mexican-fireweed | Kochia scoparia | | | |
| Common Duckweed | Lemna minor | | | 4 |
| Yellow Sweetclover | Melilotus officinalis | × | > | |
| Switchgrass | | | < | |
| Reedcanary Grass | Phalaris arundinacea X | | | > |
| Timothy | Phleum pratense | | 1 | < |
| Narrowleaf Plantain | Plantago lanceolata | | | 1 |
| Canada Bluegrass | Poa compressa | | | |
| Kentucky Bluegrass | Pod prateriors | | | |
| Currytop Knotweed | Paninoulus amelinii | | | _ |
| Woods Door | Rosa woodsii | | | |
| Orith Dock | Rumex crispus | | | × |
| Arimleaf Arrowhead | Sagittaria cuneata | | | |
| Peach-leaf Willow | Salix amygdaloides X | | | |
| Sandbar Willow | Salix exigua | × | | |
| Crack Willow | Salix fragilis | | | 1 |
| Small-fruit Bulrush | snd | | | -1 |
| Cloaked Bulrush | Scirpus pallidus X X X | | | 1 |
| Cosmopolitan Bulrush | 90 | | | |
| Three-square Bulrush | Scirpus pungens A | | 1 | < > |
| Soft-stem Bulrush | | | | - |
| Prairie Cordgrass | Spermlaria media | | | - |
| Middle-size Sariuspari y Red Clover | Trifolium pratense | | | |
| Narrow-leaf Cattail | Typha angustifolia X X X X X | | | \times |
| | | | - | |

| COMMON NAME | SENTIFIC NAME | | |
|--------------------------------|--------------------------------------|------------|-----|
| Redtop | Agrostis gigantea X | | П |
| Creeping Bentgrass | Agrostis stolonifera X | × | |
| Northern Water Plantain | Alisma triviale | | |
| Grev Alder | Alnus incana | | |
| Indian Hemp | Аросупит саппаріпит | | |
| Showy Milkweed | Asclepias speciosa | | |
| Smooth Brome | Bromus inermis | × | |
| Japanese Brome | Bromus japonicus | > | |
| Whitetop | | < | |
| Emory's Sedge | Carex emoryi X | | |
| Wooly Sedge | Carex lanuginosa | | |
| Nebraska Sedge | Carex nebrascensis | | |
| Pointed Broom Sedge | Carex scoparia | | |
| Canada Thistle | Cirsium arvense | × ; | |
| Poison Hemlock | | × | |
| Golden Tickseed | Coreopsis tinctoria X | | |
| Common Teasel | Dipsacus fullonum | | |
| Barnyard Grass | | 1 | |
| Creeping Spikerush | Eleocharis A X X | × | |
| Slender Wheatgrass | Elymus trachycaulus | | |
| Willowherb | Epilobium ciliatum | | |
| Meadow Fescue | Festuca pratensis | | |
| American Mannagrass | Glyceria grandis | | |
| Fox-tail Barley | Hordeum jubatum X | | |
| Jointleaf Rush | Juncus articulatus | | |
| Baltic Rush | Juncus balticus | | |
| Three-stamen Rush | Juncus ensirolius | | |
| Slender Rush | Juncas terrais | | |
| Torrey's Rush | Juncus (orrey) | | |
| Mexican-fireweed | Notifia scoparia | | |
| Common Duckweed | Medina minoralis | | |
| Yellow Sweetclovel | Denicum virgatum | | |
| Switchglass | Palacis arminana Palacis arminana | | |
| Reeucalialy Glass | Phlaum matense | | |
| Unifortity Norroudest Disptain | Plantano lanceolata | | |
| Capada Blingrass | Poa comoressa | | |
| Kentiicky Bliedrass | Poa pratensis | | |
| Curlyton Knotweed | Polygonum lapathifolium | | |
| Gmelin's Buttercin | Ranunculus amelinii | | |
| Woods Rose | Rosa woodsii | | |
| Curk Dock | Rumex crispus | × | |
| Arımleaf Arrowhead | Saoittaria cuneata | | |
| Peach-leaf Willow | Salix amygdaloides | | |
| Sandhar Willow | Salix exique X X X X | × | × |
| Crack Willow | Salix fragilis | | |
| Small-fruit Bulrush | Scirpus microcarpus | | |
| Cloaked Bulrush | Scirpus pallidus X | | |
| Cosmopolitan Bulrush | S | † | 8 |
| Three-square Bulrush | × | × | |
| Soft-stem Bulrush | Scirpus validus X | | |
| Prairie Cordgrass | | | |
| Middle-size Sandspurry | Spergularia media X | | |
| Red Clover | > | | > |
| Narrow-leaf Cattail | folia | ; | < : |
| | | | |

98 × 85 × 84 84B 84C 84D × × × 83 × $|\times|$ 82 $\times \times$ 8 × ×× × 80 $|\times|$ 79B × 29 × 38 37 36 35 \times 33 \times 30 × 29 28 × 27 26 25 × 24 22 22A 23 × × × × × 7 20 19 17 18 × Wetland ID SCIENTIFIC NAME Poa compressa Poa pratensis Polygonum lapathifolium Ranunculus gmelinii Apocynum cannabinum Cirsium arvense
Conium maculatum
Coreopsis tinctoria
Dipsacus fullonum
Echinochloa crusgalli
Eleocharis palustris
Elymus trachycaulus
Epilobium ciliatum
Festuca pratensis Salix exigua
Salix fragilis
Scirpus microcarpus
Scirpus pallidus
Scirpus pallidus
Scirpus pungens
Scirpus validus
Spartina pectinata
Spergularia media
Trifolium pratense
Typha angustifolia Rumex crispus Sagittaria cuneata Salix amygdaloides Phalaris arundinacea Carex lanuginosa Carex nebrascensis Phleum pratense Plantago lanceolata Agrostis stolonifera Asclepias speciosa Melilotus officinalis Sn Juncus articulatus Glyceria grandis Hordeum jubatum Panicum virgatum Juncus ensifolius Agrostis gigantea Bromus japonicu Cardaria draba Kochia scoparia Bromus inermis Carex scoparia Juncus balticus Alisma triviale Juncus tenuis Juncus torreyi Carex emoryi Rosa woodsii **Dominant Plant Species** Alnus incana Lemna minor COMMON NAME Northern Water Plantain Whitetop
Emory's Sedge
Wooly Sedge
Nebraska Sedge
Pointed Broom Sedge
Canada Thistle Middle-size Sandspurry Meadow Fescue American Mannagrass Cosmopolitan Bulrush Three-square Bulrush Soft-stem Bulrush Creeping Spikerush Slender Wheatgrass Willowherb Mexican-fireweed Commion Duckweed Yellow Sweetclover Three-stamen Rush Slender Rush Torrey's Rush Arumleaf Arrowhead Narrow-leaf Cattail Broad-leaf Cattail Creeping Bentgrass Narrowleaf Plantain Kentucky Bluegrass Gmelin's Buttercup Woods Rose Reedcanary Grass Canada Bluegrass Curlytop Knotweed Small-fruit Bulrush Indian Hemp Showy Milkweed Smooth Brome Peach-leaf Willow Prairie Cordgrass Poison Hemlock Golden Tickseed Japanese Brome Cloaked Bulrush Common Teasel Sandbar Willow Barnyard Grass Fox-tail Barley Jointleaf Rush Crack Willow Switchgrass Red Clover Curly Dock Baltic Rush **Grey Alder** Timothy

| COMMON NAME | SCIENTIFIC NAME | | |
|--------------------------------|---|-----------|--------|
| Redtop | Agrostis gigantea X | | |
| Creeping Bentgrass | Agrostis stolonifera | × | |
| Northern Water Plantain | Alisma triviale | | |
| Grey Alder | Alnus incana | | 1 |
| Indian Hemp | Apocynum cannabinum | | - |
| Showy Milkweed | Asclepias speciosa | | |
| Smooth Brome | | | |
| Japanese Brome | Bromus Japonicus | | |
| Whitetop | Cardaria draba | × | |
| Emory's Sedge | | × | |
| Woolly Sedge | Carax nebrascensis | × | |
| Deinfed Droom Codoo | Carax sonaria | | × |
| Politica bivoiri seage | Orienium aruense | × | × |
| Cariada Hisue | Will | | |
| Golden Tickseed | Coreopsis tinctoria | | |
| Common Teasel | Dipsacus fullonum | × | 1 |
| Barnyard Grass | | | + |
| Creeping Spikerush | Eleocharis palustris X X X | × | < < |
| Slender Wheatgrass | sn | | |
| Willowherb | Epilobium ciliatum | | |
| Meadow Fescue | Pestuca praierisis | | |
| American Mannagrass | University of annual XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX | × | |
| FOX-tall balley | | | |
| Solitical Nasi | Juncus balticus | × | × |
| Three-stamen Rush | Juncus ensifolius | | |
| Slender Rush | Juncus tenuis | | × |
| Torrey's Rush | Juncus torreyi | | - |
| Mexican-fireweed | Kochia scoparia | | |
| Common Duckweed | Lemna minor | | - |
| Yellow Sweetclover | Melilotus officinalis | | |
| Switchgrass | Panicum Virgarum | | |
| Keedcanary Grass | Triadals atumitacea Dhlaum prafansa | | |
| Limothy Normaldant Diantain | Plantano lanceolata | | |
| Canada Bliedrass | Poa compressa | | |
| Kentricky Bluegrass | | × | |
| Curlytop Knotweed | Polygonum lapathifolium X | | |
| Gmelin's Buttercup | Rannculus gmelinii | | |
| Woods Rose | | | |
| Curly Dock | Rumex crispus X X | | |
| Arumleaf Arrowhead | | > | |
| Peach-leaf Willow | aloides | > > > | |
| Sandbar Willow | × | < < | |
| Crack Willow | Salix Iraqiiis Soliwa midrocomus | | |
| Small-fruit Buirush | Schous mallidus X | × | |
| Cloaked builds!! | Sh | | |
| Thron causes Bulensh | Scients nundens | × | × |
| Inter-square builds: | Scirous validus | × | |
| Prairie Cordorass | Spartina pectinata | × | |
| Middle-size Sandspurry | Spergularia media | × | |
| Red Clover | Trifolium pratense | | 1 |
| Narrow-leaf Cattail | folia | | |
| | | > > > > : | |

55 56

| COMMON NAME | SCIENTIFIC NAME | |
|--|---|---|
| Redton | Agrostis gigantea X X X X X X X X X | |
| Creening Bentarass | e. | |
| Northern Water Plantain | Alisma triviale X | |
| Grev Alder | Alnus incana | |
| Indian Hemp | Apocynum cannabinum | ^ |
| Showy Milkweed | Asclepias speciosa X | < |
| Smooth Brome | Bromus inermis | |
| Japanese Brome | Bromus japonicus | |
| Whitetop | > | × |
| Emory's Sedge | >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>> | |
| Wooly Sedge | > < > < | > |
| Nebraska Sedge | nsis A | < |
| Pointed Broom Sedge | > | > |
| Canada Thistle | × × × | < |
| Poison Hemlock | Conium maculatum | |
| Golden Tickseed | | > |
| Common Teasel | × × | < |
| Barnyard Grass | | |
| Creeping Spikerush | V V V V V V V V V V V V V V V V V V V | |
| Slender Wheatgrass | Elymus trachycaulus | |
| Willowherb | | |
| Meadow Fescue | < < | |
| American Mannagrass | Glyceria grandis | |
| Fox-tail Barley | | |
| Jointleaf Rush | Sr | > |
| Baltic Rush | < | + |
| Three-stamen Rush | IUS | |
| Slender Rush | Juncus tenuis | |
| Torrey's Rush | Juncus torreyi | |
| Mexican-fireweed | Kochia scoparia | |
| Common Duckweed | Maliotus officinalis | |
| Cuitcharges | Panicum viraatum X | × |
| Switchglass Reedcanary Grass | Phalaris arundinacea X | × |
| Timothy | | |
| Narrowleaf Plantain | Plantago lanceolata X | |
| Canada Bluegrass | | |
| Kentucky Bluegrass | Poa pratensis A A A | |
| Curlytop Knotweed | Polygonum lapathifolium | |
| Gmelin's Buttercup | melinii | > |
| Woods Rose | < | - |
| Curly Dock | Kumex crispus | |
| Arumleaf Arrowhead | Sagittaria cuneata | |
| Peach-leaf Willow | aloldes | × |
| Sandbar Willow | < < < < < < < < < < < < < < < < < < < | < |
| Crack Willow | Salix tragilis | |
| Small-fruit Bulrush | Scirpus microcarpus X | |
| Cloaked Buirush | | |
| Cosmopolitan bullusii | Science numbers X | |
| Illiee-square Dullusii | | |
| Desirio Corderace | Ita | |
| Middle-size Sandsnim | | |
| Red Clover | | |
| Narrow-leaf Cattail | × | |
| The same of the sa | | |

Appendix C2

Dominant Wetland Vegetation Tables for the BNSF

BNSF Railroad

Denver Segment

Redtop

Wetland ID 112

SCIENTIFIC NAME Elaeagnus angustifolia Eleocharis palustris Typha latifolia Veronica americana Veronica catenata Echinochloa crusgalli Phalaris arundinacea Triglochin maritimum Nasturtium officinale Scirpus microcarpus Hecatonia scelerata Phragmites australis Carex nebrascensis Hesperis matronalis Ranunculus gmelinii Salix amygdaloides Agrostis stolonifera Barbarea vulgaris Conium maculatum Coreopsis tinctoria Scirpus paludosus Dipsacus fullonum Epilobium ciliatum Populus deltoides Spartina pectinata Typha angustifolia Agropyron repens Hordeum jubatum Agrostis gigantea Carex lanuginosa Phleum pratense Distichlis spicata Scirpus pungens Scirpus pallidus Cirsium arvense Bromus inermis Scirpus validus Juncus balticus Rumex crispus Juncus tenuis Poa pratensis Carex emoryi Impatiens sp. Salix exigua oecies Lemna Dominant Plant Sp **COMMON NAME** Cosmopolitan Bulrush Three-square Bulrush American Speedwell Pink Water Speedwel Common Duckweed Seaside Arrowgrass Creeping Bentgrass Kentucky Bluegrass Creeping Spikerush Narrow-leaf Cattail **Gmelin's Buttercup** Reedcanary Grass Plains Cottonwood Peach-leaf Willow Small-fruit Bulrush Soft-stem Bulrush Prairie Cordgrass **Broad-leaf Cattail** Nebraska Sedge Golden Tickseed Cloaked Bulrush Common Teasel Creeping Thistle Blister Buttercup Inland Saltgrass Poison Hemlock **Barnyard Grass** Sandbar Willow Emory's Sedge Common Reed Smooth Brome Dame's Rocket Yellow Rocket Wooly Sedge Touch Me Not Russian Olive Fox-tail Barley Slender Rush Quackgrass Watercress Baltic Rush Willowherb **Curly Dock** Timothy

BNSF Railroad

Adams County Segment

5 6 7

က

Wetland ID 1 2

| COMMON NAME | SCIENTIFIC NAME | | | | | | | | - | | - | - | |
|----------------------|--------------------------|---|---|--------|---|--------|---|--------|---|--------|---|---|---|
| Ouackgrass | Agropyron repens | | | | | | | | | | | | |
| Redtop | Agrostis gigantea | | | - | | | | _ | | | | 4 | |
| Creeping Bentgrass | Agrostis stolonifera | | | | | × | | - | × | - | | + | 1 |
| Yellow Rocket | Barbarea vulgaris | | | - | | + | | - | | | | - | _ |
| Smooth Brome | Bromus inermis | | | + | | - | + | + | | | > | 1 | 1 |
| Emory's Sedge | Carex emoryii | × | | × × | | × × | × | < < | | \ \ | < | + | |
| Wooly Sedge | Carex lanuginosa | | | - | | | | | İ | < | > | + | 1 |
| Nebraska Sedge | Carex nebrascensis | | | - | | | | | | - | < | | |
| Common Teasel | Dipsacus fullonum | | | × | | | | | | | | | |
| Creeping Thistle | Cirsium arvense | | | | | | | | | | | | |
| Poison Hemlock | Conium maculatum | | | - | | | 1 | + | | | | - | 1 |
| Golden Tickseed | Coreopsis tinctoria | | | | | | | | 1 | | 1 | - | _ |
| Inland Saltgrass | Distichlis spicata | | | × | | | | - | | | | - | |
| Barnyard Grass | Echinochloa crusgalli | | | 1 | | 1 | | - | 1 | | | - | - |
| Russian Olive | Elaeagnus angustifolia | | | | 1 | 1 | | | | | | + | × |
| Creeping Spikegrass | Eleocharis palustris | | | | | × | | × | | | | + | |
| Willowherb | Epilobíum ciliatum | | | | | - | | | | | 1 | - | 4 |
| Blister Buttercup | Hecatonia scelerata · | | | + | | | | 1 | 1 | | | + | |
| Dame's Rocket | Hesperis matronalis | | | + | | | | - | | | | + | |
| Fox-tail Barley | Hordeum jubatum | | | | 1 | | | + | | | | + | |
| Touch Me Not | Impatiens sp. | | | + | | | | - | | | + | + | > |
| Baltic Rush | Juncus balticus | | | + | | | | | | - | | + | < |
| Slender Rush | Juncus tenuis | | | | | | 1 | | | | | | |
| Common Duckweed | Lemna minor | | | | | 1 | | 1 | | | | + | |
| Watercress | | | ; | + | - | < ; | | , | | | > | 1 | |
| Reedcanary Grass | Phalaris arundinacea X X | | × | × | × | × | | × | | | < | | 4 |
| Timothy | Phleum pratense | | | - | | | | | | | | | - |
| Common Reed | Phragmites australis | | | × | | | + | - | | - | | | |
| Kentucky Bluegrass | Poa pratensis | | | + | 1 | - | | - | | | | + | |
| Plains Cottonwood | Populus deltoides | | | + | | + | | + | | - | 1 | ŀ | - |
| Gmelin's Buttercup | Ranunculus gmelinii | | | + | | | | > | | | > | + | 1 |
| Curly Dock | Rumex crispus | | | + | | | | < | Ī | | < | | |
| Peach-leaf Willow | Salix amygdaloides | | | 1 | | + | | | 1 | , | | > | |
| Sandbar Willow | Salix exigua | × | × | × | | × × | | | | < | | < | 1 |
| Small-fruit Bulrush | Scirpus microcarpus | | | | - | 1 | | | | - | | - | 4 |
| Cloaked Bulrush | Scirpus pallidus | | | + | | | 1 | + | | | | - | 1 |
| Cosmopolitan Bulrush | Scirpus paludosus | | | 1 | | | 1 | + | 1 | × | ; | + | - |
| Three-square Bulrush | Scirpus pungens X | | | 1 | | ľ | | - | ; | + | < | + | 1 |
| Soft-stem Bulrush | Scirpus validus | | | 1 | - | × | | | × | | | + | 1 |
| Prairie Cordgrass | Spartina pectinata | 1 | 1 | | - | - | | | | - | | + | |
| Seaside Arrowgrass | ımı | 1 | × | 1 | + | | | - | + | | | | |
| Narrow-leaf Cattail | folia | + | | × | × | 1 | | | ; | - | | | > |
| Broad-leaf Cattail | Typha latifolia X | × | 1 | 1 | - | × | | | × | < | | < | < |
| American Speedwell | Veronica americana | | | - | | 1 | | + | | - | | + | + |
| Dink Water Speedwell | Veronica catenata | | | | | | | | | _ | | | |

Westminster Segment

| | Wetland ID | 22 | 23 24 | 4 25 | 26 | 27 | 28 | 29 2 | 29A 29B | B 30 | 34 | 32 |
|----------------------|------------------------|-----|-------|----------|----|-----|----|------|----------|------|-----|----|
| Do | Dominant Plant Species | | | | | | | 1 | | | | 1 |
| COMMON NAME | SCIENTIFIC NAME | | - | - | | | | - | - | - | | |
| Quackgrass | Agropyron repens | | | - | | | | + | 1 | - | | |
| Redtop | Agrostis gigantea | | | | - | 1 | | + | | - | | |
| Creeping Bentgrass | Agrostis stolonifera | | 7 | × | - | | | | | | | |
| Yellow Rocket | Barbarea vulgaris | | | | 1 | | | | | 4 | | |
| Smooth Brome | Bromus inermis | | 1 | | | | | + | | - | | |
| Emory's Sedge | Carex emoryii | | × | \times | | | 1 | + | + | 1 | | |
| Wooly Sedge | Carex lanuginosa | | + | - | | | | | - | - | | |
| Nebraska Sedge | Carex nebrascensis | | + | - | | | × | + | - | - | | |
| Common Teasel | Dipsacus fullonum | | 1 | | | | | 1 | - ; | | | Î |
| Creeping Thistle | Cirsium arvense | | - | | _ | | 1 | 1 | \times | _ | | |
| Poison Hemlock | Conium maculatum | | | 1 | | | 1 | | - | - | | |
| Golden Tickseed | Coreopsis tinctoria | | | | | | | | + | - | | |
| Inland Saltgrass | Distichlis spicata | | - | - | | | | | | | | |
| Barnvard Grass | Echinochloa crusgalli | | | | | | | | | | | |
| Russian Olive | Elaeagnus angustifolia | | | | | | | | | _ | | 1 |
| Creeping Spikerush | Eleocharis palustris | | | × | | | × | + | - | 1 | | |
| Willowherb | Epilobium ciliatum | | 1 | + | | | | | + | | | |
| Blister Buttercup | Hecatonia scelerata | | | - | | | | 1 | | - | | |
| Dame's Rocket | Hesperis matronalis | | | | | | | + | - | | | 1 |
| Fox-tail Barley | Hordeum jubatum | | | | 4 | | 1 | 1 | × | | | |
| Touch Me Not | Impatiens sp. | | | + | _ | | 1 | | - | | | |
| Baltic Rush | Juncus balticus | | - | | _ | | | | 1 | | | |
| Slender Rush | Juncus tenuis | | + | + | - | | 1 | + | + | | | |
| Common Duckweed | Lemna minor | | + | + | 4 | | | + | 1 | | | |
| Watercress | Nasturtium officinale | | | - | - | | | | - | - | 1 | |
| Reedcanary Grass | Phalaris arundinacea | | - | × | | | | | + | × | × | |
| Timothy | Phleum pratense | | - | | - | | | - | + | 4 | | |
| Common Reed | Phragmites australis | | 1 | | - | | 1 | 1 | + | _ | | |
| Kentucky Bluegrass | Poa pratensis | | | | | | 1 | + | + | - | | |
| Plains Cottonwood | Populus deltoides | | | + | - | | × | 1 | - | - | | |
| Gmelin's Buttercup | Ranunculus gmelinii | | + | + | | | | | | | | |
| Curly Dock | Rumex crispus | | 1 | + | × | | | 1 | × | - | | |
| Peach-leaf Willow | Salix amygdaloides | | | | | | | | - | - | | |
| Sandbar Willow | Salix exigua | × | × | × | | × | × | × | + | × | | |
| Small-fruit Bulrush | Scirpus microcarpus | | | - | | | | | - | | | |
| Cloaked Bulrush | Scirpus pallidus | | 1 | - | | | | 1 | \times | | | |
| Cosmopolitan Bulrush | Scirpus paludosus | | | | | | | 1 | + | 4 | | |
| Three-square Bulrush | Scirpus pungens | | | | - | | 1 | 1 | × | | | |
| Soft-stem Bulrush | Scirpus validus | | | | - | | | × | 1 | 1 | × | |
| Prairie Cordgrass | Spartina pectinata | | | + | - | | | | + | - | | |
| Seaside Arrowgrass | Triglochin maritimum | | | + | | - | 1 | 1 | + | | ; | |
| Narrow-leaf Cattail | Typha angustifolia | | 1 | 1 | | × : | | 1 | - 1 | 1 | × : | } |
| Broad-leaf Cattail | Typha latifolia | | × | | × | × | × | × | × - | | × | × |
| American Speedwell | Veronica americana | | | | | | | | | | | |
| Dint Mater Chapding | Veronica catenata | (4) | | | | | | - | | | | |

Broomfield Segment

| | Wellally | 3 | | | 2 | | | | | |
|-----------------------|------------------------|---|---|--------|---|---|---|---|-----|-------|
| Q | Dominant Plant Species | | | | П | | | | | |
| COMMON NAME | SCIENTIFIC NAME | | | | - | | | | | - |
| Quackgrass | Agropyron repens | | 1 | 1 | - | | | | | |
| Redtop | | | | | | | | | t | - |
| Creeping Bentgrass | Agrostis stolonifera | | 1 | + | - | | | | T | |
| Yellow Rocket | Barbarea vulgaris | | + | + | + | | | | | |
| Smooth Brome | Bromus inermis | | + | + | + | | | | 1 | - |
| Emory's Sedge | Carex emoryii | | × | ^ × | × | | | 1 | | - |
| Wooly Sedge | Carex lanuginosa | | 1 | | | | | | Ì | - |
| Nebraska Sedge | Carex nebrascensis | | 1 | | | | | | + | |
| Common Teasel | Dipsacus fullonum | | + | + | - | | | 1 | 1 | - |
| Creeping Thistle | Cirsium arvense | | + | 1 | - | | | 1 | 1 | |
| Poison Hemlock | Conium maculatum | | 1 | | | | | | | - |
| Golden Tickseed | Coreopsis tinctoria | | | | - | | | | | |
| Inland Saltgrass | Distichlis spicata | | | | | | | 1 | | |
| Barnyard Grass | Echinochloa crusgalli | | | + | | | | | + | |
| Russian Olive | Elaeagnus angustifolia | | 1 | | | | | | | |
| Creeping Spikegrass | Eleocharis palustris | | | × | - | | × | | | - |
| Willowherb | Epilobium ciliatum | | | + | - | | | | | - |
| Blister Buttercup | Hecatonia scelerata | | 1 | + | - | | | | | - |
| Dame's Rocket | Hesperis matronalis | | | 1 | | | | | + | - |
| Fox-tail Barley | Hordeum jubatum | | | + | - | | | | 1 | |
| Touch Me Not | Impatiens sp. | | | | | | | | t | |
| Baltic Rush | Juncus balticus | | 1 | 1 | × | × | | T | | - |
| Slender Rush | Juncus tenuis | | 1 | | + | | | | - | |
| Common Duckweed | Lemna minor | | | t | 1 | | | Ī | Ť | - |
| Watercress | Nasturtium officinale | | | 1 | - | 1 | ; | | + | 1 |
| Reedcanary Grass | Phalaris arundinacea | | 1 | + | | | < | | < | < |
| Timothy | Phleum pratense | | | | - | | | | 1 | - |
| Common Reed | Phragmites australis | | | + | + | | | İ | - | - |
| Kentucky Bluegrass | Poa pratensis | | | 1 | + | 1 | | | t | - |
| Plains Cottonwood | Populus deltoides | | | 1 | + | | | | | 1 |
| Gmelin's Buttercup | Ranunculus gmelinii | | 1 | + | + | | | | + | k |
| Curly Dock | Rumex crispus | 1 | × | + | + | | | | 1 | + |
| Peach-leaf Willow | Salix amygdaloides | | 1 | + | + | 1 | | | + | - |
| Sandbar Willow | Salix exigua | × | | | × | × | | | 1 | × |
| Small-fruit Bulrush | Scirpus microcarpus | | | - | - | 4 | | | | - |
| Cloaked Bulrush | Scirpus pallidus | | T | + | + | - | | | 1 | + |
| Cosmopolitan Bulrush | Scirpus paludosus | | | - 1 | - | - | | | 1 | - |
| Three-square Bulrush | Scirpus pungens | | | - | × | | | | 1 | |
| Soft-stem Bulrush | Scirpus validus | | | × | - | 1 | | | | 1 |
| Prairie Cordgrass | Spartina pectinata | | | + | - | - | | | 1 | |
| Seaside Arrowgrass | Triglochin maritimum | | | | | | | | 1 | |
| Narrow-leaf Cattail | Typha angustifolia | | 1 | - | + | - | : | ; | × : | ; |
| Broad-leaf Cattail | Typha latifolia | × | T | × | × | × | × | × | × | × |
| American Speedwell | Veronica americana | | | | + | _ | | | | |
| Diel. Mater Cooperall | Veronica catenata | | | _ | _ | _ | | | | - |

BNSF Railroad

Superior/Louisville Segment

Creeping Bentgrass

Quackgrass

Redtop

Yellow Rocket

Smooth Brome Emory's Sedge Nebraska Sedge Common Teasel

Wooly Sedge

Creeping Thistle

Golden Tickseed Inland Saltgrass

Barnyard Grass

Russian Olive

Poison Hemlock

56

55 54 53 \times 52 $\times | \times | \times$ 51 × 20 × 49 48 × 47 × 46 45 $\times \times$ 44 44B × × \times 43 × 42 41 Wetland ID SCIENTIFIC NAME Elaeagnus angustifolia Eleocharis palustris Triglochin maritimum Echinochloa crusgalli Phalaris arundinacea Scirpus microcarpus Nasturtium officinale Phragmites australis Ranunculus gmelinii Hecatonia scelerata Hesperis matronalis Salix amygdaloides Carex nebrascensis Conium maculatum Agrostis gigantea Agrostis stolonifera Dipsacus fullonum paludosus Spartina pectinata Coreopsis tinctoria Distichlis spicata Scirpus pungens Scirpus validus Epilobium ciliatum Populus deltoides Agropyron repens Barbarea vulgaris Hordeum jubatum pratense Carex lanuginosa pallidus Cirsium arvense Rumex crispus **Bromus inermis** Juncus balticus Poa pratensis Juncus tenuis Salix exigua Carex emoryii Impatiens sp. Lemna minor Dominant Plant Species Scirpus Phleum I Scirpus Scirpus, **COMMON NAME**

Creeping Spikegrass

Blister Buttercup

Willowherb

Dame's Rocket Fox-tail Barley Touch Me Not Common Duckweed

Slender Rush

Baltic Rush

Reedcanary Grass

Watercress

Kentucky Bluegrass

Common Reed

Timothy

Gmelin's Buttercup

Peach-leaf Willow

Curly Dock

Plains Cottonwood

 $\times | \times$

×

×

 $\times \times$

 $\times \times$

Veronica americana Veronica catenata

American Speedwell Pink Water Speedwell

Seaside Arrowgrass

Narrow-leaf Cattail

Broad-leaf Cattail

Cosmopolitan Bulrush Three-square Bulrush

Soft-stem Bulrush

Prairie Cordgrass

Small-fruit Buirush

Sandbar Willow

Cloaked Bulrush

Typha angustifolia

Typha latifolia

×

Boulder Segment

| | winnt Dlant Couring | | | | | | | | | | | | | | | | | | | |
|----------------------|------------------------|---|---|---|--------|---|---|----|---|---|---|---|---|---|---|----------|-------------|---|------|-----|
| COMMON NAME | SCIENTIFIC NAME | | | | | | | g. | | | | | | | | | | | | |
| Ouschases | Agropyron repens | | | | _ | | | | | - | | | | | | _ | | | | |
| Redtop | Agrostis gigantea | | | | | | | | | | | | | | | | | | | |
| Creeping Bentgrass | Agrostis stolonifera | | | | | | - | | | | | | | | | + | | | | 1 |
| Yellow Rocket | Barbarea vulgaris | | | | | + | | | | | | | + | | | + | 1 | | | + |
| Smooth Brome | Bromus inermis | + | × | | | | + | | | - | | | + | | 1 | | | | 1 | - |
| Emory's Sedge | Carex emoryii | × | × | × | | | × | × | | × | | | × | | × | × | - | | × | × : |
| Wooly Sedge | Carex lanuginosa | | | | × | | × | | | | | | | | | | | | | |
| Nebraska Sedge | Carex nebrascensis | | | | | | | | | | | Ì | | | | | | | | 1 |
| Common Teasel | Dipsacus fullonum | | | | | | | | | 1 | | | | | | | | | - | 1 |
| Creeping Thistle | Cirsium arvense | | | | | | | | | | | | | | | | | | | 1 |
| Poison Hemfock | Conium maculatum | | | | | | | | | | | | | | | | | | | |
| Golden Tickseed | Coreopsis tinctoria | | | | | | | | | | | | | | | | | | | 1 |
| Inland Saltgrass | Distichlis spicata | | | | | | | | | - | | | | | | | | | 1 | |
| Barnyard Grass | Echinochloa crusgalli | | | | | | | | | | | | | | | | | | | |
| Russian Olive | Elaeagnus angustifolia | | - | | | | | | | | | | | | | | | | | |
| Creeping Spikerush | Eleocharis palustris | | | | | | | | | | | | | | | | | | 1 | 1 |
| Willowherb | Epilobium ciliatum | | | | 4 | | | | | | | | | | | + | - | | | 1 |
| Blister Buttercup | Hecatonia scelerata | | | | | | | | | | | | | | | 1 | | | 1 | |
| Dame's Rocket | Hesperis matronalis | | | | | | | | | | | | | | | | | | 1 | 1 |
| Fox-tail Barley | Hordeum jubatum | | | | | | | | | | | | | | | | - | | 1 | |
| Touch-Me-Not | Impatiens sp. | | | | | | | | | - | | | | | | | _ | | 1 | |
| Baltic Rush | Juncus balticus | | | | | | | | | | | | × | | | × | | | 1 | |
| Slender Rush | Juncus tenuis | | | | | × | | | | - | 1 | | | | | | - | | 1 | |
| Common Duckweed | Lemna minor | | | | | | | | | | | | | | 1 | 1 | + | | 10.1 | T |
| Watercress | Nasturtium officinale | | - | 1 | | ; | - | ; | | | | | | | | - | - | | | |
| Reedcanary Grass | Phalaris arundinacea | | | × | - | × | | × | | | | | | | | × | + | | × | × |
| Timothy | Phleum pratense | | 7 | 1 | | | | | | | | 1 | | 1 | + | + | 1 | | | 1 |
| Common Reed | Phragmites australis | | - | | | | | | | | | | - | | 1 | + | + | | | T |
| Kentucky Bluegrass | Poa pratensis | | | | | 1 | + | | | | - | | | | | - | | | 71 | |
| Plains Cottonwood | Populus deltoides | | + | | | | | | | + | | | | | | | | | | |
| Gmelin's Buttercup | Ranunculus gmelinii | | | | | - | | | | 1 | | | | | | | | > | | |
| Curly Dock | Rumex crispus | | | | | | | | | × | | | | | | | | < | | |
| Peach-leaf Willow | Salix amygdaloides | | - | | + | | | | | | | | | | | - | - | | | |
| Sandbar Willow | Salix exigua | | | | × | | 1 | | | × | × | | × | | | × | < | | | |
| Small-fruit Bulrush | Scirpus microcarpus | | | | | | | | | - | | | | | 1 | - | | | + | 1 |
| Cloaked Bulrush | Scirpus pallidus | | | | | | | | 6 | | | | | | × | 1 | - | | | |
| Cosmopolitan Bulrush | Scirpus paludosus | | | | | | | | | | | | | | | | - | | | |
| Three-square Bulrush | Scirpus pungens | | | | | | | | | | | | | | | 1 | | | | |
| Soft-stem Bulrush | Scirpus validus | | | | | | | | | | | | × | | | 1 | - | | | |
| Prairie Cordgrass | Spartina pectinata | | | | | | | | | × | | | | | | | | | 1 | |
| Seaside Arrowgrass | Triglochin maritimum | | - | | | | - | | | - | | | | | 1 | 7 | - | | Ť | 1 |
| Narrow-leaf Cattail | Veronica americana | | 1 | 7 | × : | + | | | ; | | | | > | | > | × | | > | | 1 |
| Broad-leaf Cattail | Typha latifolia | | | × | × × | × | × | | × | - | | | < | | < | | | < | | + |
| American Speedwell | Veronica americana | | | | | | | | | | | | | | | | _ | | | |
| | | | | | | | | | | | | | | | | | | | | |

Boulder Segment

86

26

96

94 95

92 93

89 90 91

| COMMON NAME | SCIENTIFIC NAME | | | - | | | | | | | | | | | | | | |
|----------------------|------------------------|---|---|---|---|---|---|---|--------|----|---|---|----|---|---|---|---|---|
| Quackgrass | Agropyron repens | | | | | | | | | | | | | | | | | L |
| Redtop | Agrostis gigantea | | | | | | | | | | | | | | | | | |
| Creeping Bentgrass | Agrostis stolonifera | | | | | | | - | | × | | | | | | 5 | | |
| Yellow Rocket | Barbarea vulgaris | | | | | | | | | | | | | | | | | |
| Smooth Brome | Bromus inermis | | | | | | | | | | | | × | | | | | |
| Emory's Sedge | Carex emoryii | × | × | | | × | × | | | | × | × | × | | | × | | |
| Wooly Sedge | Carex lanuginosa | × | × | | × | | | × | | | | | | | | × | | |
| Nebraska Sedge | Carex nebrascensis | | | | | | - | | | | | | | | | ^ | | |
| Common Teasel | Dipsacus fullonum | | | | | | | | | | | | | | | × | | |
| Creeping Thistle | Cirsium arvense | 4 | | | | | | | | | | | × | | | _ | | |
| Poison Hemlock | Conium maculatum | | | | | × | × | | | | | | | | | | | |
| Golden Tickseed | Coreopsis tinctoria | | | | | | 8 | | | | | | | | | | | |
| Inland Saltgrass | Distichlis spicata | | | | | | | | | | | | | | | | | |
| Barnyard Grass | Echinochloa crusgalli | | | | | | | | | | | | | | | | | |
| Russian Olive | Elaeagnus angustifolia | | | | | | | | | | | | | | | | | |
| Creeping Spikerush | Eleocharis palustris | | | | | × | | | | | | | | × | | | | |
| Willowherb | Epilobium ciliatum | | | | | | | | | | | | | | | | | |
| Blister Buttercup | Hecatonia scelerata | | | | | | | | | | | | | | | | | |
| Dame's Rocket | Hesperis matronalis | | | | | | × | | | | | | | | | | | |
| Fox-tail Barley | Hordeum jubatum | | | | | | | | | 54 | | | | | | | | |
| Touch-Me-Not | Impatiens sp. | | × | | | | | | | | | | | | | | | |
| Baltic Rush | Juncus balticus | | | | | × | | | | | | | | | | | | |
| Slender Rush | Juncus tenuis | | | | | | | | | | | | | | | | | |
| Common Duckweed | Lemna minor | | | | | | | | | | | | | × | | | | |
| Watercress | Nasturtium officinale | | | | | + | + | | - | - | | - | | - | | × | | |
| Reedcanary Grass | Phalaris arundinacea | × | × | × | | × | × | × | ^ × | × | × | × | | × | | × | × | × |
| Timothy | Phleum pratense | | | | | | | | | | | | | | | | | |
| Common Reed | Phragmites australis | | | | | | | | | | | | | | | | | |
| Kentucky Bluegrass | Poa pratensis | | | | | | | | | | | | | | | × | | |
| Plains Cottonwood | Populus deltoides | | | | | | | | | | | | | | | | | |
| Gmelin's Buttercup | Ranunculus gmelinii | | | | | | | | | | | | | | | | | |
| Curly Dock | Rumex crispus | | | | | | | | | | | | | | | | | |
| Peach-leaf Willow | Salix amygdaloides | | | | | | | | | | | | | | | | | |
| Sandbar Willow | Salix exigua | × | × | × | × | × | × | | × | J | × | × | | × | | × | × | × |
| Small-fruit Bulrush | Scirpus microcarpus | | | | × | | | | | | | | | | | | | |
| Cloaked Bulrush | Scirpus pallidus | | | | | | | | | | | | | | | × | | |
| Cosmopolitan Bulrush | Scirpus paludosus | | | | | | | | | | | | | | | | | |
| Three-square Bulrush | Scirpus pungens | | | | | | | | | | | | × | | × | | | |
| Soft-stem Bulrush | Scirpus validus | | | | | | | | | × | × | | | | | | | |
| Prairie Cordgrass | Spartina pectinata | | | | | | | | | | | | | | | | | |
| Seaside Arrowgrass | Triglochin maritimum | | | | | | | | | | | | | | | | | |
| Narrow-leaf Cattail | Veronica americana | | × | - | × | | | | | × | | | -1 | - | | | | |
| Broad-leaf Cattail | Typha latifolia | | × | × | | | | | | × | × | | × | × | × | × | | × |
| American Speedwell | Veronica americana | | | | | | | | | | | | | _ | | | | |
| Disk Motor Chooping | | | | | | | | | | | | | | | | - | | |

Appendix D
Observed Wetland Vegetation Table

Plants Identified in Wetlands for the US 36 EIS Project

| Common Name | Scientific Name | Indicator Status ¹ | Dominant in US 36 Wetlands | Dominant in BNSF Wetlands |
|----------------------------|----------------------------------|----------------------------------|----------------------------------|---------------------------------|
| Quackgrass | Agropyron repens | FAC | | X |
| Redtop | Agrostis gigantea | FACW | X | X |
| Bentgrass, Creeping | Agrostis stolonifera | FAC+ | X | X |
| Water Plantain, Northern | Alisma triviale | OBL | X | |
| Alder, Grey | Alnus incana | NO (FACW) | X | |
| Leadplant | Amorpha fruticosa | OBL | | |
| Indian hemp | Apocynum cannabinum | FAC | X | |
| Milkweed, Swamp | Asclepias incarnata | OBL | | |
| Milkweed, Showy | Asclepias speciosa | FAC | X | |
| Rocket, Yellow | Barbarea vulgaris | FAC | | X |
| Brome, Smooth | Bromus inermis | NL | X | X |
| Whitetop | Cardaria draba | NL | X | |
| Sedge, Emory's | Carex emoryi | OBL | X | X |
| Sedge, Wooly | Carex lanuginosa | OBL | X | X |
| Sedge, Nebraska | Carex nebrascensis | OBL | X | X |
| Sedge, Pointed Broom | Carex scoparia | FACW | X | |
| Sedge, Fox | Carex vulpinoidea | OBL | | |
| Goosefoot, White | Chenopodium album | FAC | | |
| Thistle, Creeping | Cirsium arvense | FACU | X | X |
| Hemlock, Poison | Conium maculatum | FACW | X | X |
| Tickseed, Golden | Coreopsis tinctoria | FAC | X | X |
| Yellow Bedstraw | Galium verum | NL | | |
| Hound's Tongue | Cynoglossum officinale | NL | | |
| Orchardgrass | Dactylis glomerata | FACU | | |
| Teasel, Common | Dipsacus fullonum | NI | X | X |
| Teasel, Cutleaf | Dipsacus laciniatus | NL | | |
| Saltgrass, Inland | Distichlis spicata | FACW | | |
| Grass, Barnyard | Echinochloa crusgalli | FACW | | X |
| Olive, Russian | Elaeagnus angustifolia | FAC | | X |
| Spikerush, Creeping | Eleocharis palustris | OBL | X | X |
| Squirreltail | Elymus longifolius | FACU | | |
| Wheatgrass, Slender | Elymus trachycaulus | FACU | X | |
| Willowherb, Hairy | Epilobium ciliatum | OBL | | |
| Scouring-rush, Smooth | Equisetum laevigatum | FACW | | |
| Spurge, Leafy | Euphorbia esula | NL | | |
| Fescue, Meadow | Festuca pratensis | FAC | X | |
| Ash, Green | Fraxinus pensylvanica | FACW | 21 | |
| Velvetweed | Gaura parviflora | NI | | |
| Mannagrass, American | Glyceria grandis | NL NL | Х | |
| Buttercup, Blister | Hecatonia scelerata | OBL | A | X |
| Sunflower, Nuttall's | Helianthus nuttallii | FAC | | 1 |
| Dame's Rocket | Hesperis matronalis | NL NL | | X |
| | | FACW | X | A |
| Barley, Fox-tail Hydrangea | Hordeum jubatum Hydrangea sp. | NL | ^ | |

| Touch-Me-Not | Impatiens capensis | FACW | 2- | X |
|------------------------------|--|-------------------|----|---|
| Rush, Jointleaf | Juncus articulatus | NO (OBL) | X | |
| Rush, Baltic Juncus balticus | | OBL | X | X |
| | Rush, Three-stamen Juncus ensifolius | | X | |
| Rush, Slender | Juncus tenuis | NO (FACW+) FAC | X | |
| Rush, Torrey's | Juncus torreyi | FACW | X | |
| Mexican-fireweed | Kochia scoparia | FACU | X | |
| Duckweed, Common | Lemna minor | OBL | X | |
| Toadflax, Butter and Eggs | Linaria vulgaris | NL | | |
| Sweetclover, Yellow | Melilotus officinale | FACU | | |
| Mint, Field | Mentha arvensis | FACW | | |
| Muhly, Alkali | Muhlenbergia asperifolia | FACW | | |
| Watercress | Nasturtium officinale | OBL | | X |
| Evening-primrose | Oenothera villosa | FAC | | 1 |
| Switchgrass | Panicum virgatum | FAC | X | |
| Wheatgrass, Western | Pascopyrum smithii | FACU | A | |
| Grass, Reed Canary | Phalaris arundinacea | FACW+ | X | X |
| | | FACU | X | X |
| Timothy | Phleum pratense | | A | X |
| Reed, Common | Phragmites australis | FACW | X | |
| Plantain, Narrowleaf | Plantago lanceolata | FAC | | |
| Bluegrass, Kentucky | Poa pratensis | FACU | X | |
| Knotweed, Prostrate | Polygonum aviculare | FACW | | |
| Knotweed, Curlytop | Polygonum lapathifolium | OBL | X | |
| Grass, Annual Rabbit-Foot | Polypogon monspeliensis | OBL | | |
| Cottonwood, Plains | Populus deltoides | FAC | | X |
| Chokecherry | Prunus virginiana | FACU | | |
| Buttercup, Gmelin's | Ranunculus gmelinii | FACW | X | X |
| Currant, Golden | Ribes aureum | NO (FAC-) | | |
| Rose, Wood's | Rosa woodsii | FACU | X | |
| Dock, Curly | Rumex crispus | FACW | X | X |
| Arrowhead, Arumleaf | Sagittaria cuneata | OBL | | |
| Willow, Peach-leaf | Salix amygdaloides | FACW | X | X |
| Willow, Missouri River | Salix eriocephala | FACW | | |
| Willow, Sandbar | Salix exigua | OBL | X | X |
| Willow, Crack | Salix fragilis | FAC | X | |
| Bulrush, Small-fruit | Scirpus microcarpus | OBL | X | X |
| Bulrush, Cloaked | Scirpus pallidus | OBL | X | X |
| Bulrush, Cosmopolitan | Scirpus paludosus | NI | | X |
| Bulrush, Three-square | Scirpus pungens | OBL | X | X |
| Bulrush, Soft-stem | Scirpus validus | OBL | X | X |
| False Solomon's Seal | Smilacina racemosa | FAC | 7 | |
| Goldenrod, Canada | Solidago canadensis | FACU | | |
| Cordgrass, Prairie | Spartina pectinata | FACW | X | X |
| Sandspurry, Middle-size | Spergularia media | NO (FACU) | X | |
| Snowberry | Symphoricarpos occidentalis | NL NL | | |
| Saltcedar | Tamarix ramosissima | FACW | | |
| Dandelion, Common | Taraxacum officinale | FACU | | |
| Meadow Rue, | Thalictrum polygamum | NO (NO) | | |
| Wheatgrass, Tall | Thinopyrum ponticum | NL NL | | |
| Clover, Red | Trifolium pratense | FACU | X | |
| | Trijotium pratense Triglochin maritimum | OBL | A | X |
| Arrowgrass, Seaside | | OBL | X | X |
| Cattail, Narrow-leaf | Typha angustifolia | | X | X |
| Cattail, Broad-leaf | Typha latifolia | OBL | Λ | Λ |

| Elm, Siberian | Ulmus pumila | NL | |
|---|---------------------|-----|---|
| Mullein, Moth | Verbascum blattaria | UPL | |
| Speedwell, American Veronica americana | | OBL | X |
| Speedwell, Pink Water Veronica catenata | | OBL | X |
| Cocklebur | Xanthium strumarium | FAC | |

Indicator status based on national indicators for Region 5 developed by Reed (1988). OBL = obligate wetland species, >99% probability of occurring in a wetland; FACW = facultative wetland species, 67-99% probability of occurring in a wetland; FAC = facultative species, 34-66% probability of occurring in a wetland; FACU = facultative upland species, <33% probability of occurring in a wetland. If the species is not included in Reed (1988) then the designation NL, Not Listed, is shown. If insufficient data were available to determine the indicator status of a species, then NI, No Indicator, is shown. If a species does not occur in Region 5 then NO, nonoccurrence, is shown with the indicator status for Region 8 in parenthesis. A positive (+) indicates a frequency of occurrence toward the higher end of the category (more frequently found in wetlands) and a negative (-) indicates a frequency of occurrence toward the lower end of the category (less frequently found in wetlands).

Appendix E1
Wetland And Other Waters Photographs for May 17, 2004



Photo 1, Wetland 1



Photo 2, Wetland 2

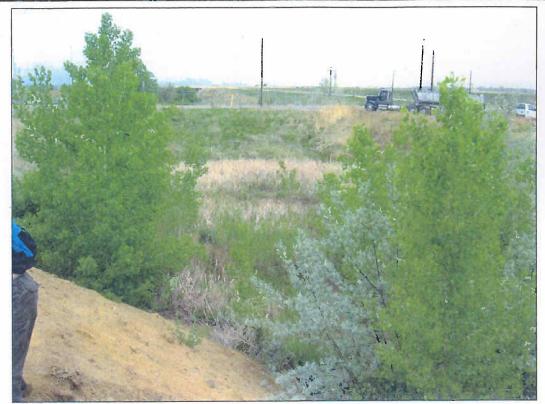


Photo 3, Wetland 3



Photo 4, Wetland 3



Photo 5, Wetland 4



Photo 6, Wetland 6



Photo 7, Wetland 7



Photo 8, Wetland 7

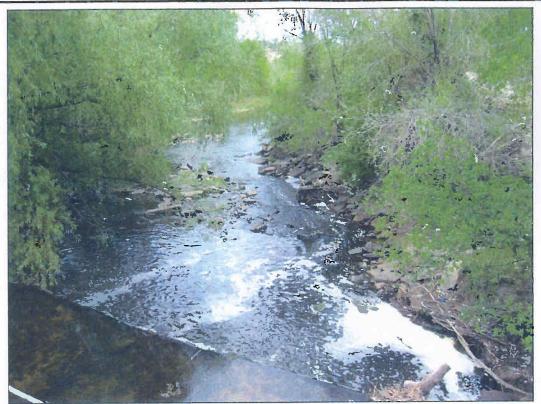


Photo 9, Wetland 7

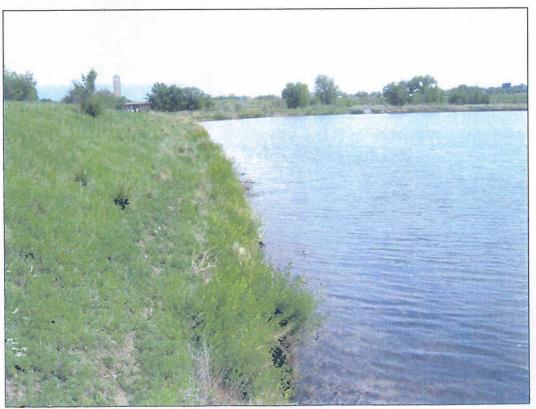


Photo 10, Wetland 8

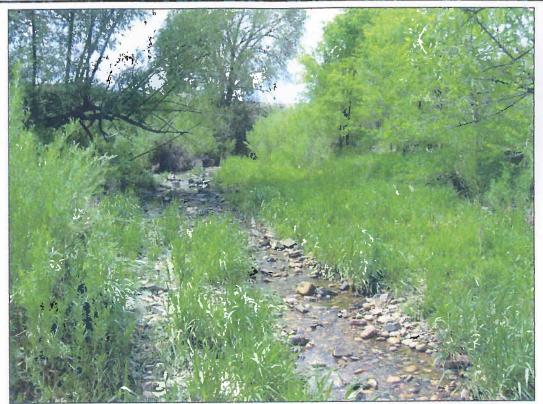


Photo 11, Wetland 7

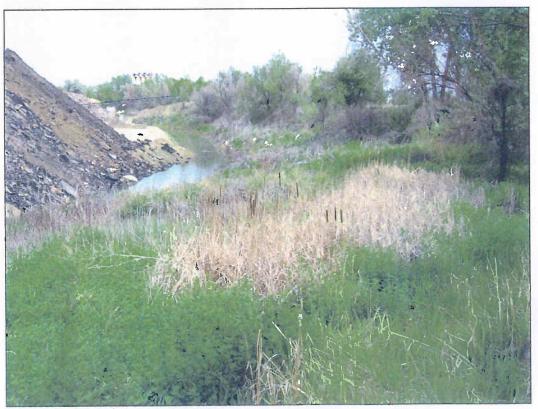


Photo 12, Wetland 9



Photo 13, Wetland 10



Photo 14, Wetland 11

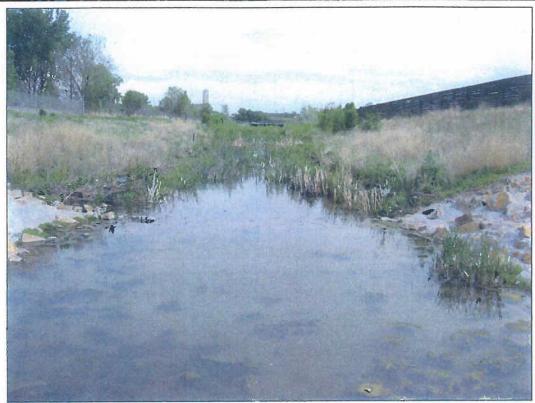


Photo 15, Wetland 11



Photo 16, Wetland 10



Photo 17, Wetland 10



Photo 18, Wetland 12



Photo 19, Wetland 13

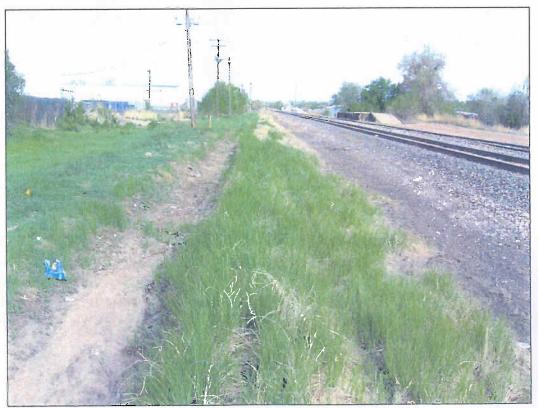


Photo 20, Wetland 14

Appendix E2
Wetland And Other Waters Photographs for May 18, 2004



Photo 21, Wetland 10

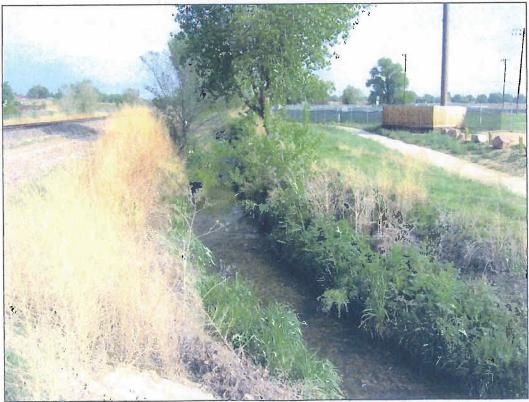


Photo 22, Wetland 10



Photo 23, Wetland 15



Photo 24, Wetland 16



Photo 25, Wetland 16



Photo 26, Wetland 17

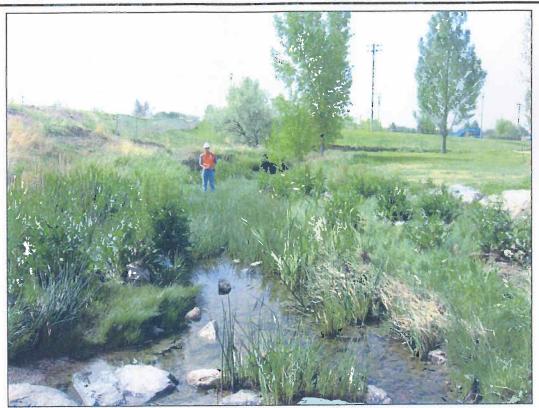


Photo 27, Wetland 18

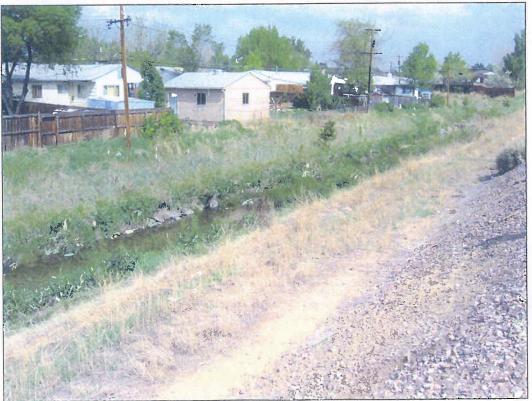


Photo 28, Wetland 18

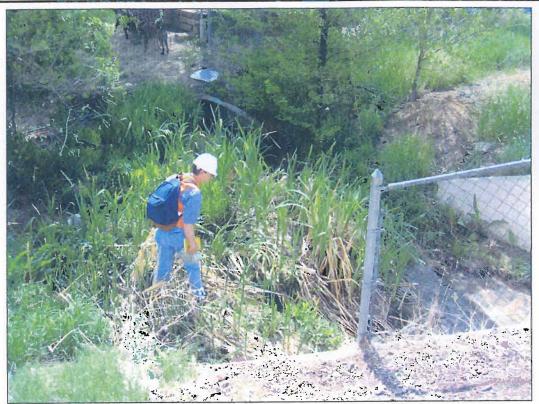


Photo 29, Wetland 19

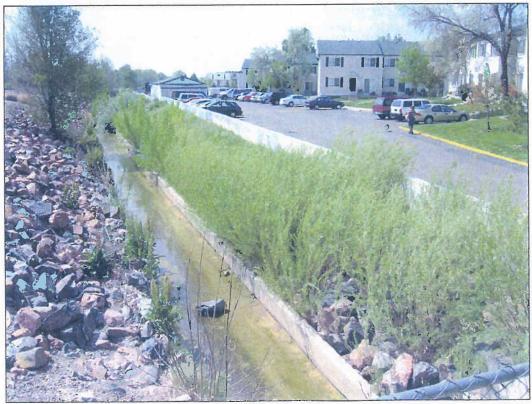


Photo 30, Wetland 20



Photo 31, Wetland 20



Photo 32, Wetland 21



Photo 33, Wetland 21



Photo 34, Wetland 20



Photo 35, Wetland 22



Photo 36, Wetland 23



Photo 37, Wetland 23



Photo 38, Wetland 24





Photo 39, Wetland 25



Photo 40, Wetland 25



Photo 41, Wetland 25



Photo 42, Wetland 26



Photo 43, Wetland 27



Photo 44, Wetland 27



Photo 45, Wetland 28



Photo 46, Wetland 28

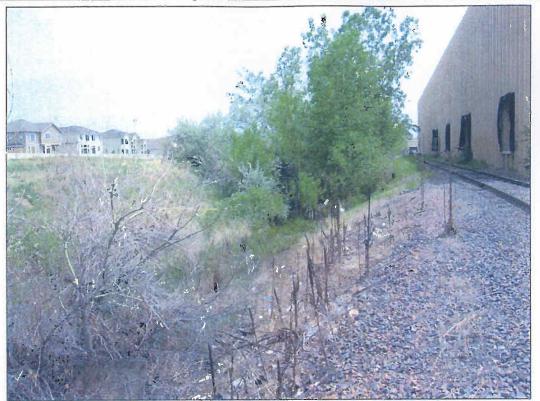


Photo 47, Wetland 28



Photo 48, Wetland 28



Photo 49, Wetland 28



Photo 50, Wetland 28



Photo 51, Wetland 28

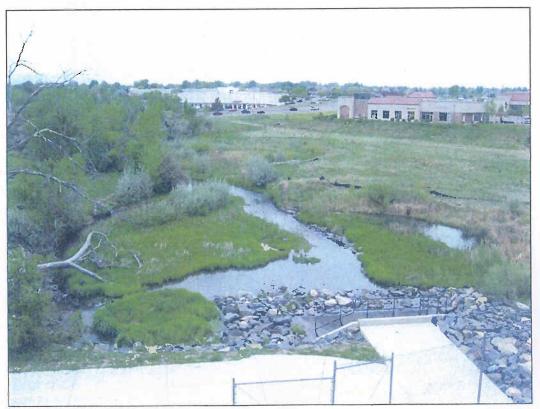


Photo 52, Wetland 29





Photo 53, Wetland 29



Photo 54, Wetland 29A



Photo 55, Wetland 30

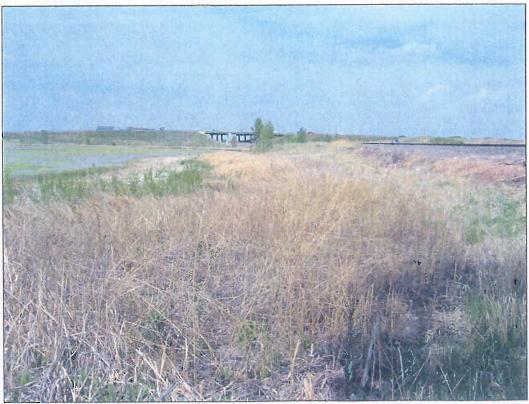


Photo 56, Wetland 31

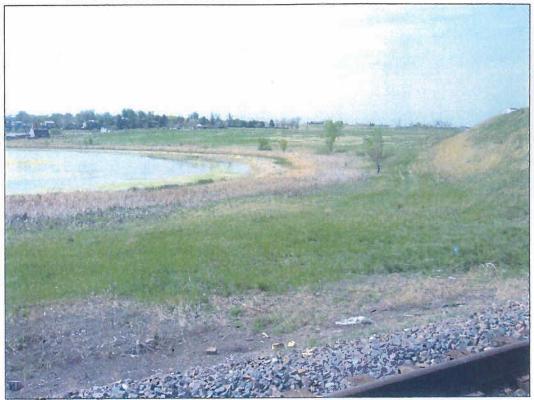


Photo 57, Wetland 31



Photo 58, Wetland 32

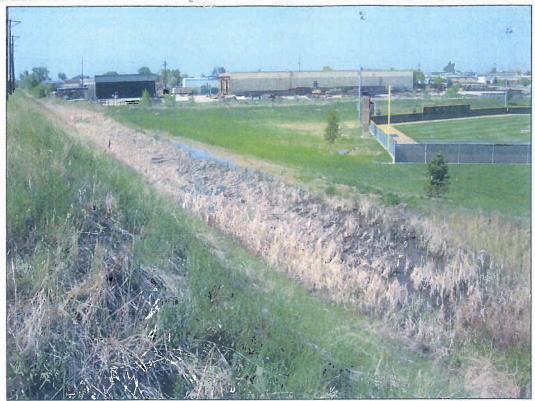


Photo 59, Wetland 33

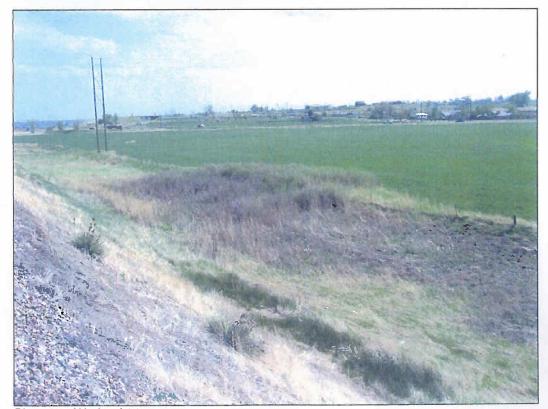


Photo 60, Wetland 33



Photo 61, Wetland 34



Photo 62, Wetland 35

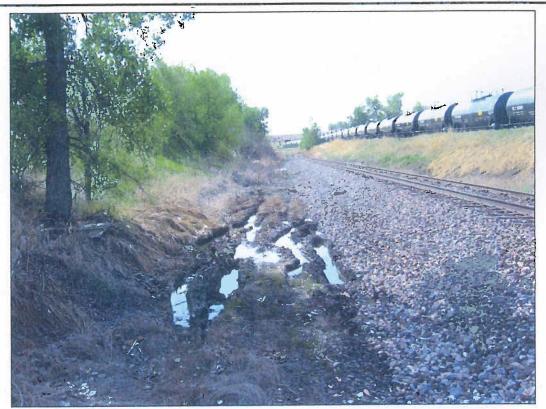


Photo 63, Wetland 36

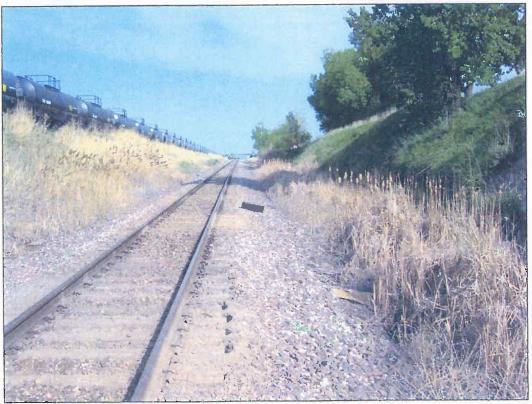


Photo 64, Wetland 36

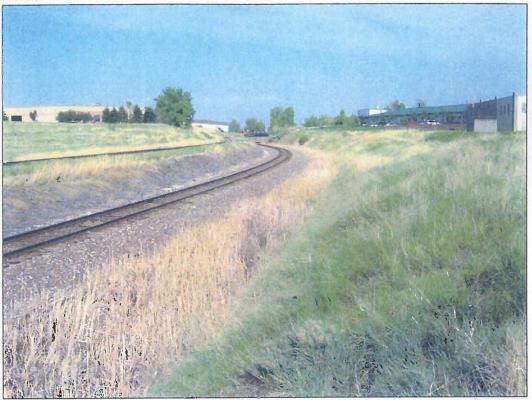


Photo 65, Wetland 36

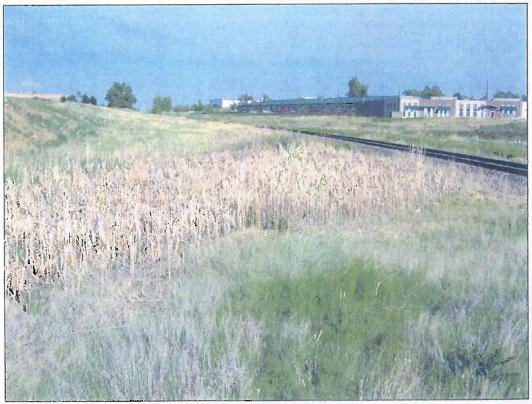


Photo 66, Wetland 37

Appendix E3
Wetland And Other Waters Photographs for May 19, 2004



Photo 67, Wetland 38

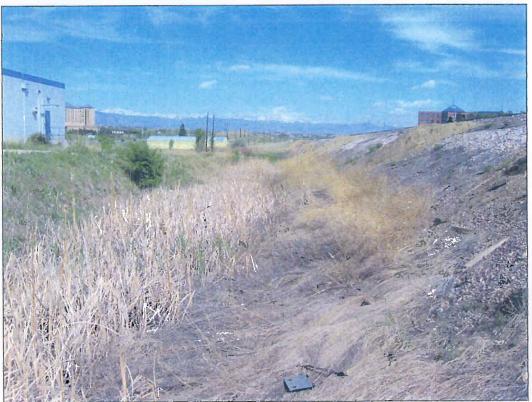


Photo 68, Wetland 38

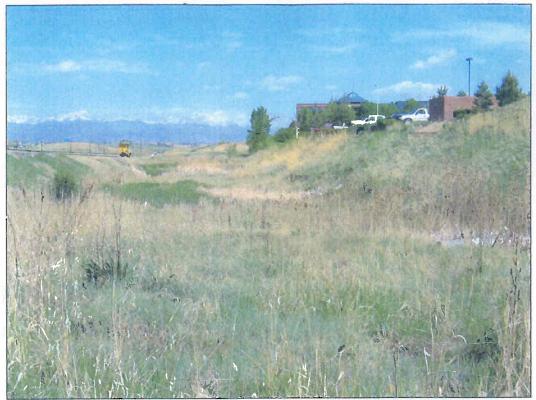


Photo 69, Wetland 39

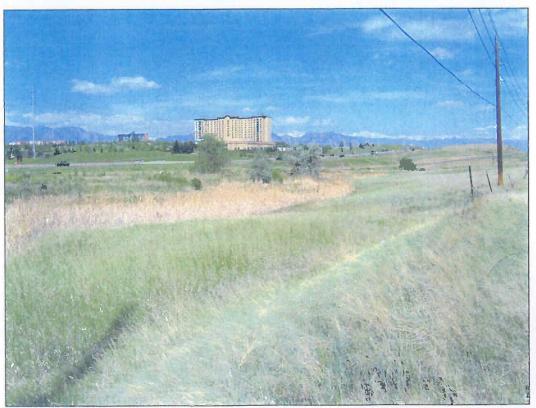


Photo 70, Wetland 38

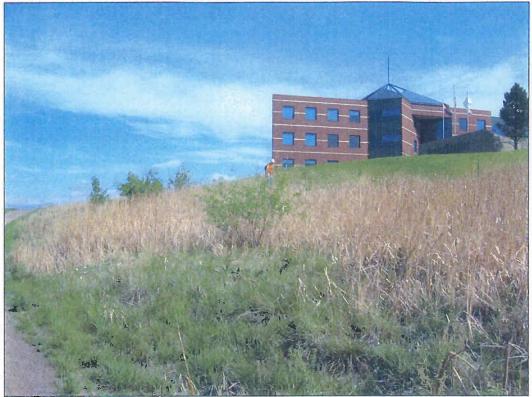


Photo 71, Wetland 40

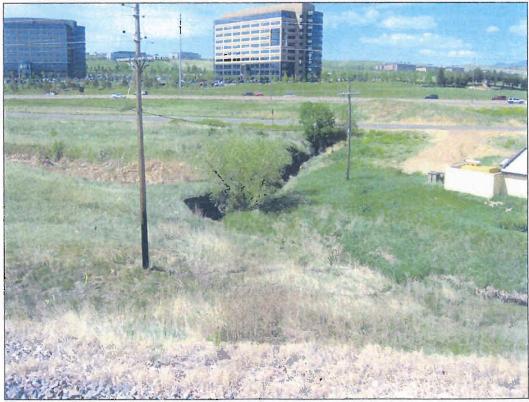


Photo 72, Wetland 41

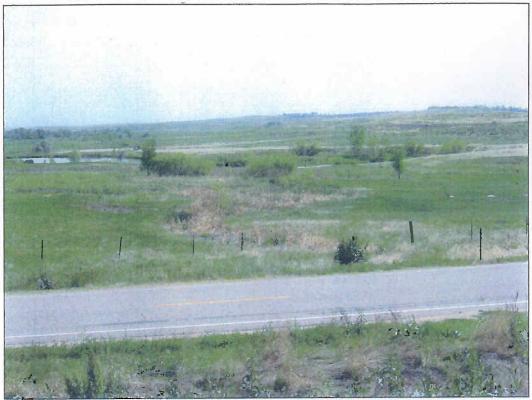


Photo 73, Wetland 42

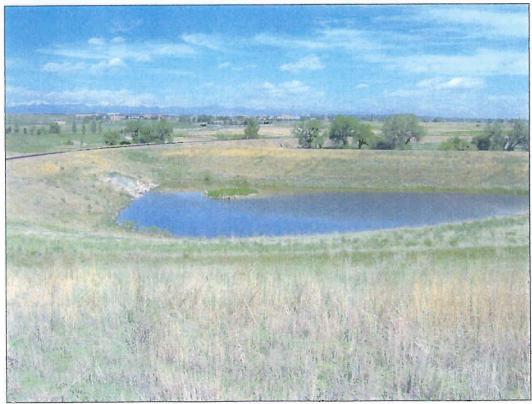


Photo 74, Wetland 43



Photo 75, Wetland 43



Photo 76, Wetland 44



Photo 77, Wetland 44

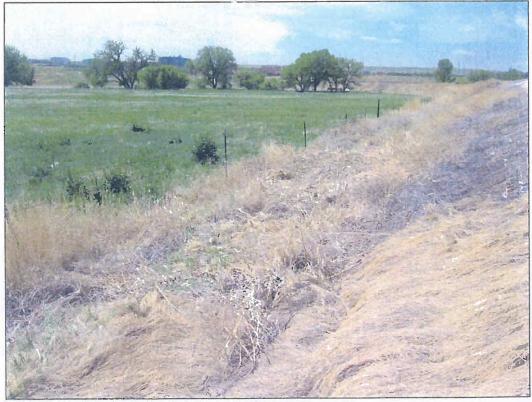


Photo 78, Wetland 45



Photo 79, Wetland 46

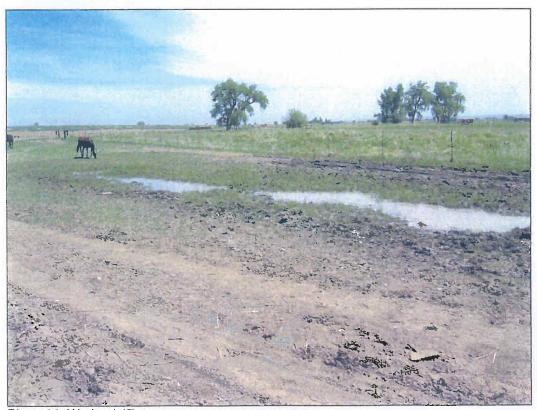


Photo 80, Wetland 47

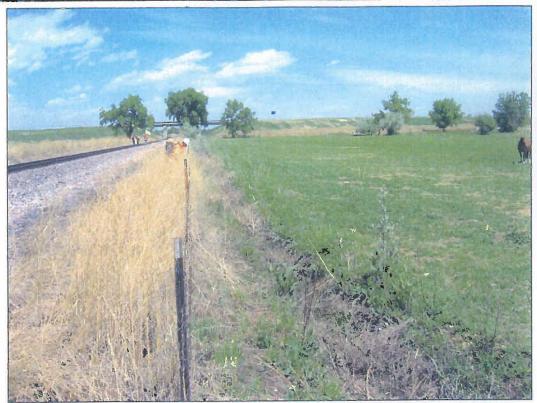


Photo 81, Wetland 48



Photo 82, Wetland 48



Photo 83, Wetland 48



Photo 84, Wetland 49



Photo 85, Wetland 50



Photo 86, Wetland 51



Photo 88, Wetland 52

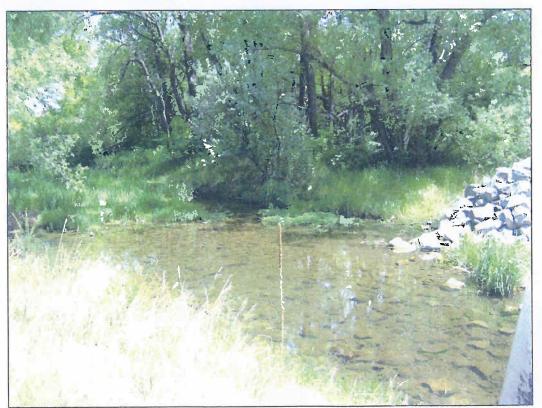


Photo 89, Wetland 52



Photo 90, Other Water 53A



Photo 91, Wetland 53

Appendix E4
Wetland And Other Waters Photographs for May 20, 2004





Photo 1, Wetland 53



Photo 2



Photo 3, Wetland 55



Photo 4, Wetland 56

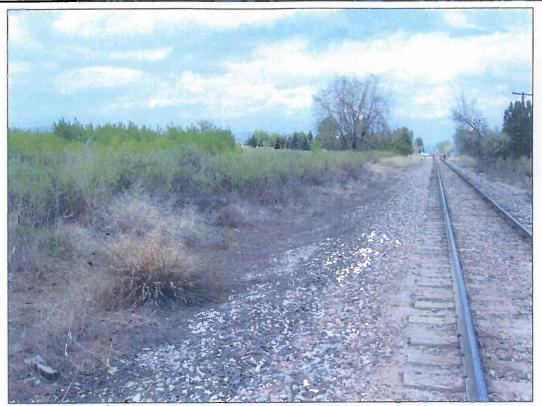


Photo 5, Wetland 56



Photo 6, Wetland 57



Photo 7, Wetland 57



Photo 8, Wetland 58



Photo 9, Wetland 59



Photo 10, Wetland 59



Photo 11, Wetland 60



Photo 12, Wetland 60



Photo 13, Wetland 60

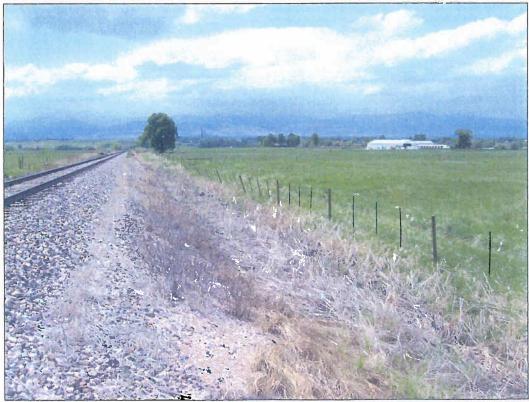


Photo 14, Wetland 61





Photo 15, Wetland 62



Photo 16, Wetland 62

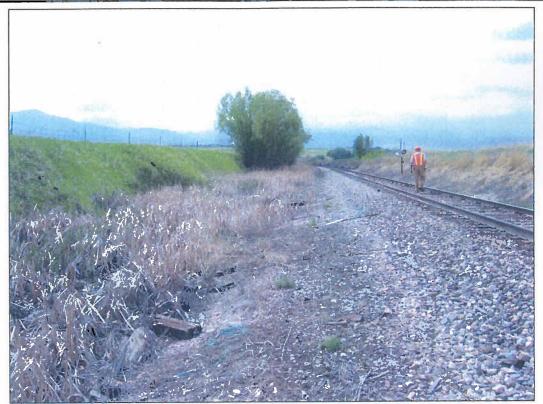


Photo 17, Wetland 63



Photo 18, Wetland 63

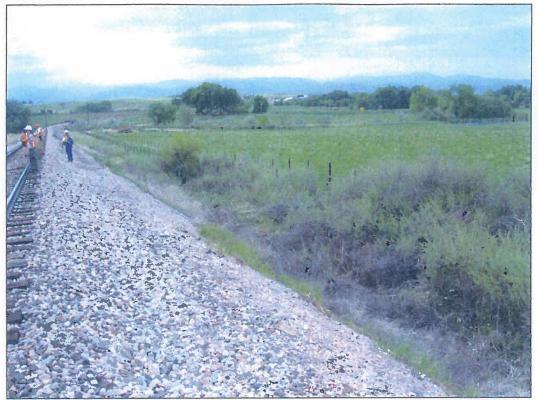


Photo 19, Wetland 63



Photo 20, Wetland 64



Photo 21, Wetland 64

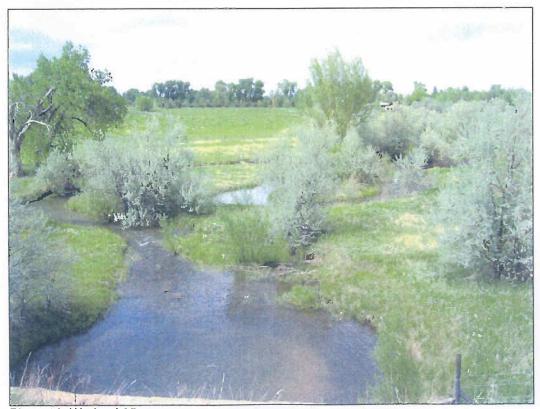


Photo 22, Wetland 65





Photo 23, Wetland 65



Photo 24, Wetland 66

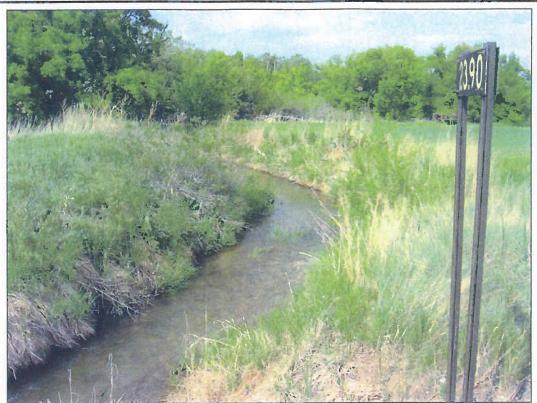


Photo 25, Wetland 67

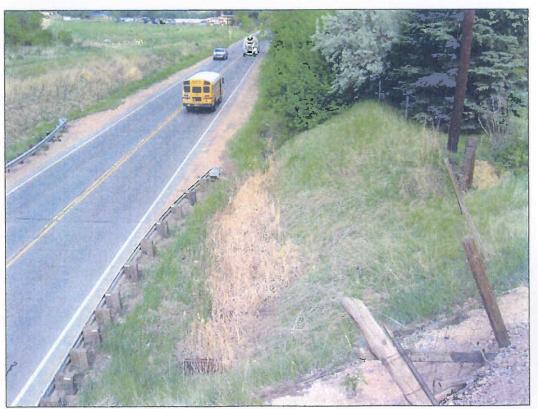


Photo 26, Wetland 68

Appendix E5
Wetland And Other Waters Photographs for May 24, 2004



Photo 1, Wetland 69



Photo 2, Wetland 72

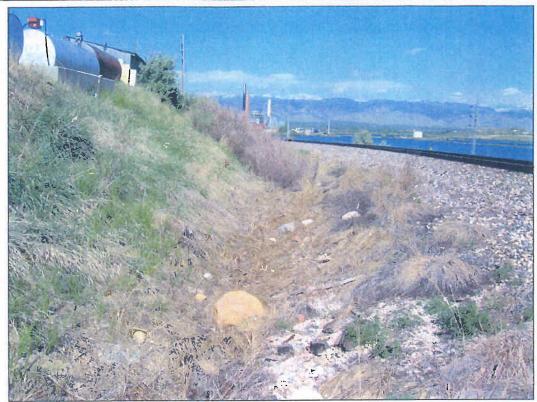


Photo 3, Wetland 71

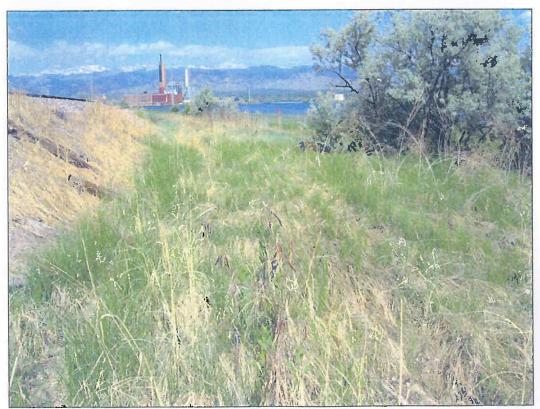


Photo 4, Wetland 71

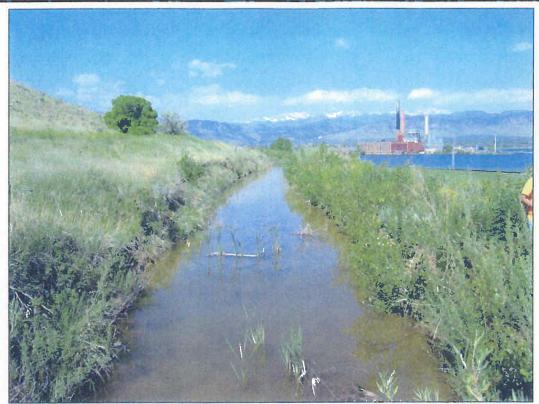


Photo 6, Wetland 72



Photo 7 Wetland 73



Photo 8, Wetland 74

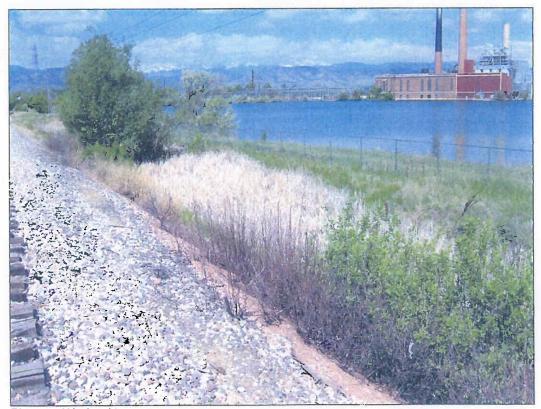


Photo 9, Wetland 75

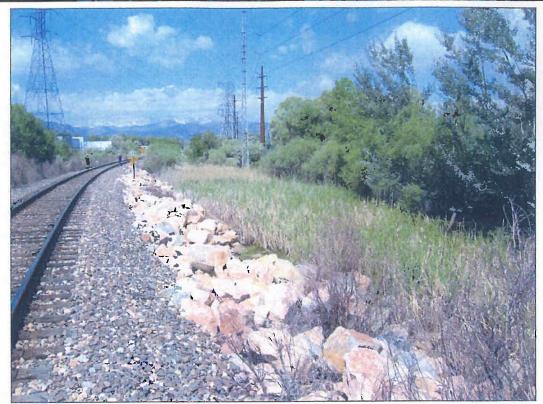


Photo 10, Wetland 75

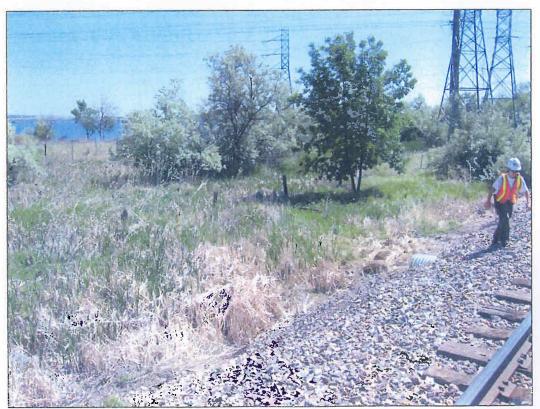


Photo 11, Wetland 75



Photo 12, Wetland 77

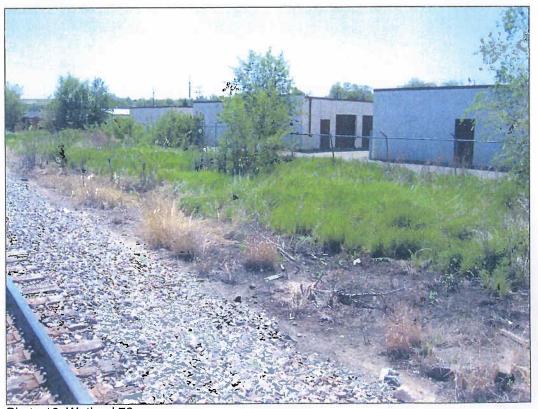


Photo 13, Wetland 78



Photo 14, Wetland 77



Photo 15, Wetland 79

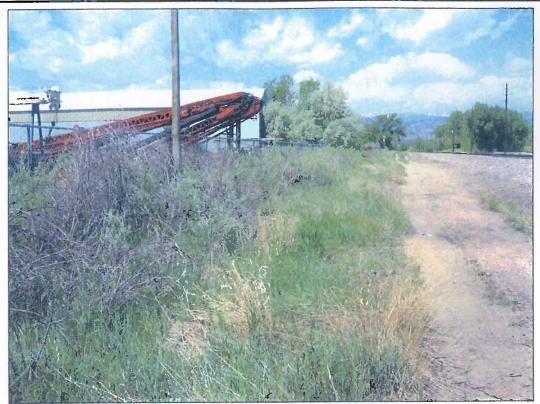


Photo 16, Wetland 80



Photo 17, Wetland 81

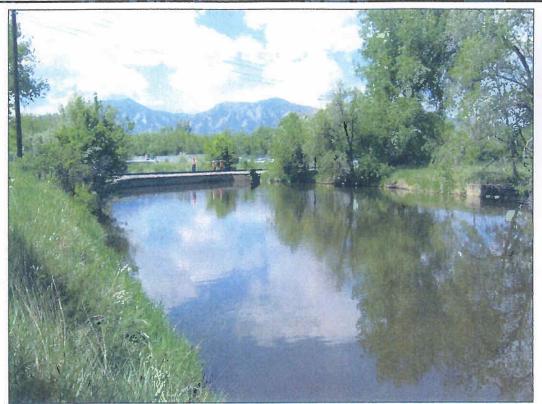


Photo 18, Wetland 82



Photo 19, Wetland 83

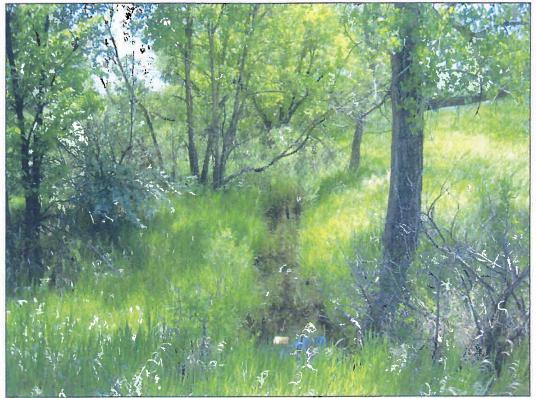


Photo 20, Wetland 84

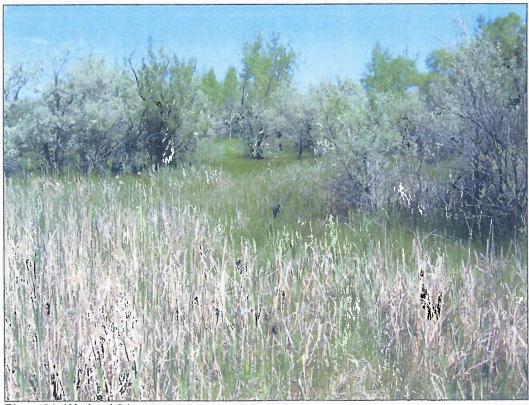


Photo 21, Wetland 84

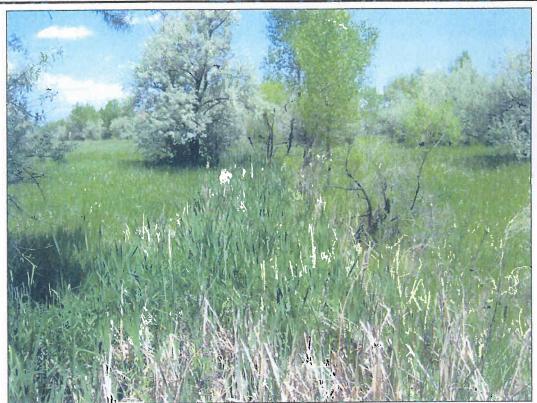


Photo 22, Wetland 84



Photo23, Wetland 85



Photo 24, Wetland 85

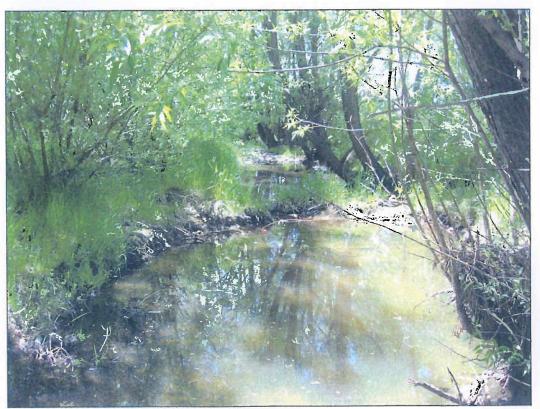


Photo 25, Wetland 85

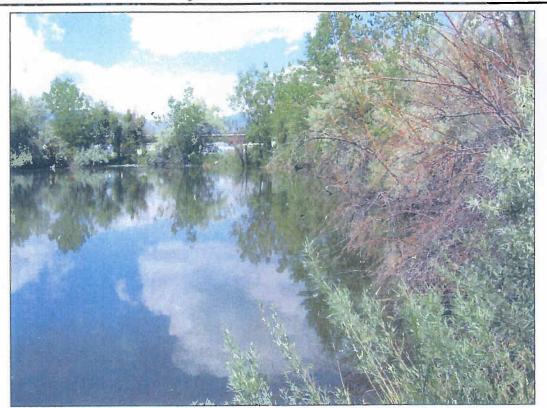


Photo 26, Wetland 86



Photo 27, Wetland 86



Photo 28, Wetland 87



Photo 29, Wetland 88

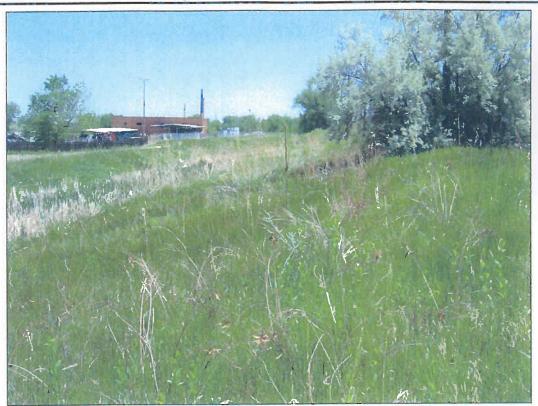


Photo 30, Wetland 87

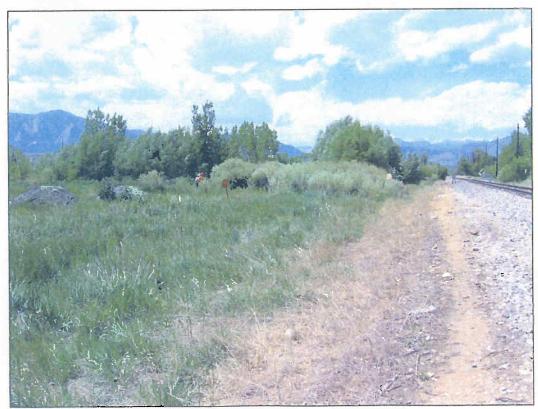


Photo 31, Wetland 88

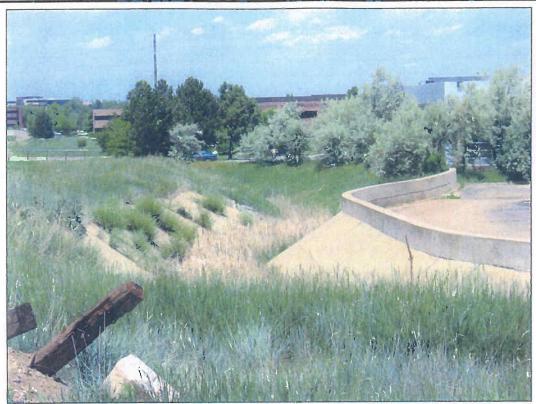


Photo 32, Wetland 87



Photo 33, Wetland 89



Photo 34, Wetland 89

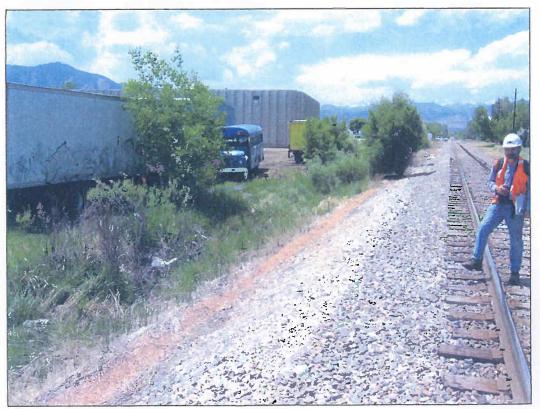


Photo 35, Wetland 90



Photo 36, Wetland 91



Photo 37, Wetland 93



Photo 38, Wetland 92



Photo 39, Wetland 92



Photo 40, Wetland 92

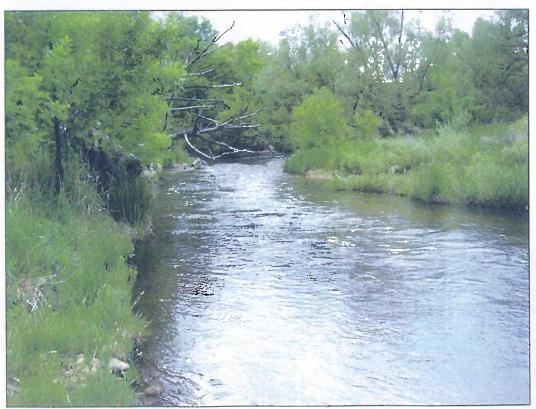


Photo 41, Wetland 94

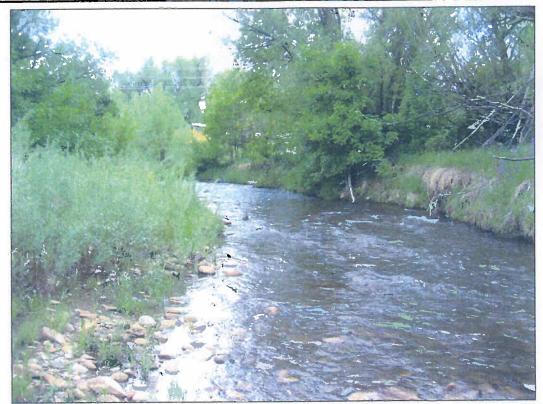


Photo 42, Wetland 94

Appendix E6
Wetland And Other Waters Photographs for May 28, 2004



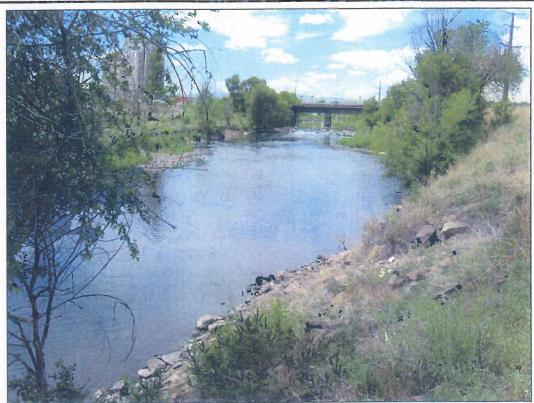


Photo 1, Wetland 112

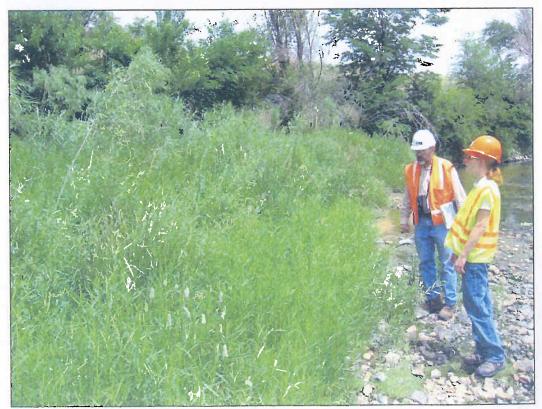


Photo 2, Wetland 112

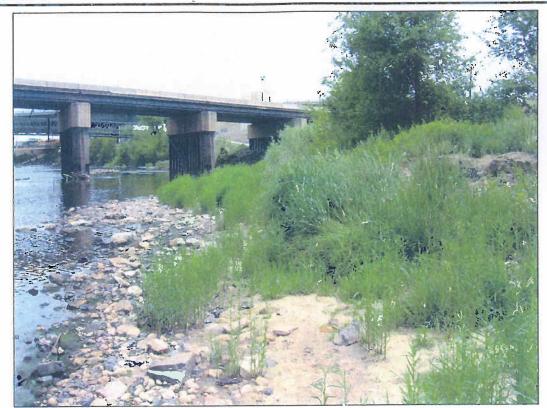


Photo 3, Wetland 112

Appendix E7
Wetland And Other Waters Photographs for June 2, 2004

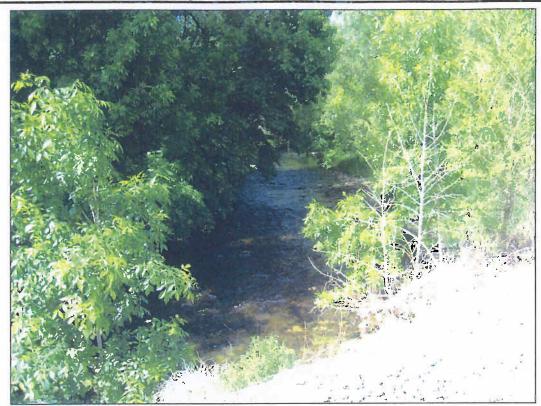


Photo 1, Wetland 94

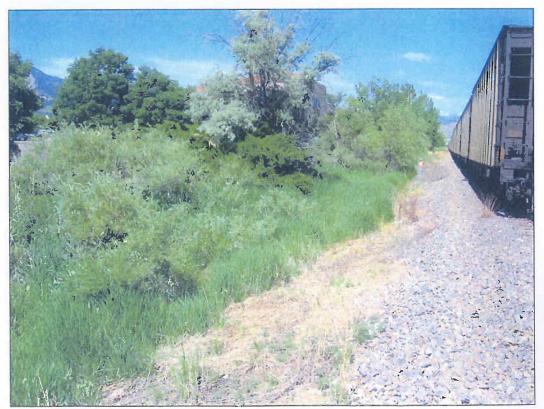


Photo 2, Wetland 95



Photo 3, Wetland 96



Photo 4, Wetland 97



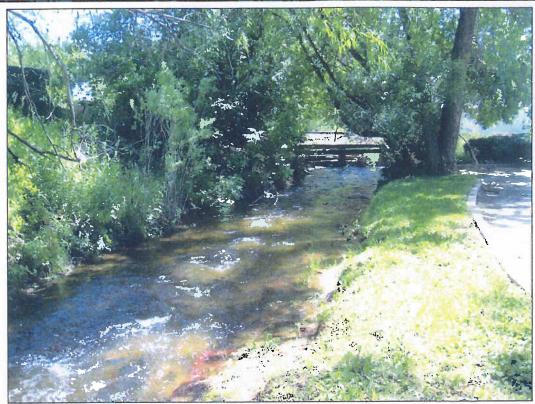


Photo 5, Wetland 97



Photo 6, Wetland 98



Photo 7, Wetland 99

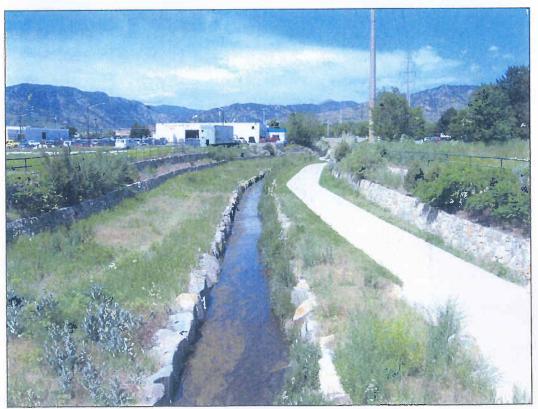


Photo 8, Wetland 99



Photo 9, Wetland 100

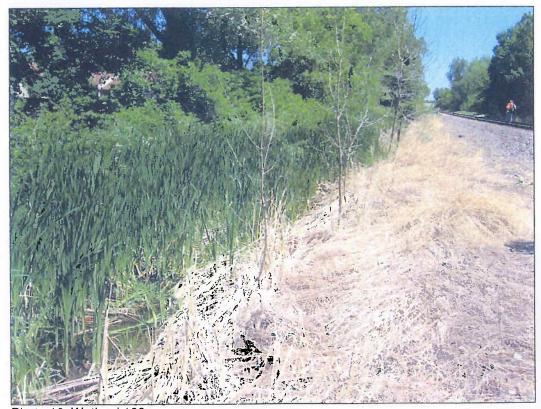


Photo 10, Wetland 100

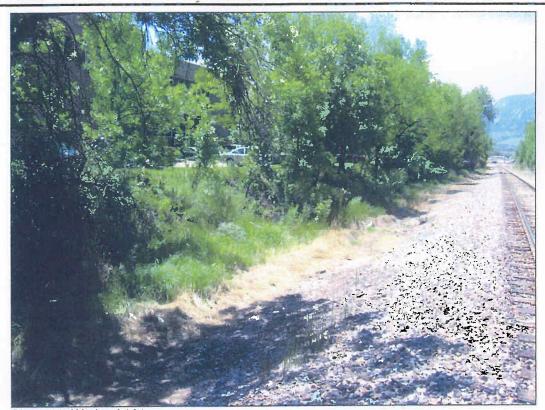


Photo 11, Wetland 101



Photo 12, Wetland 103

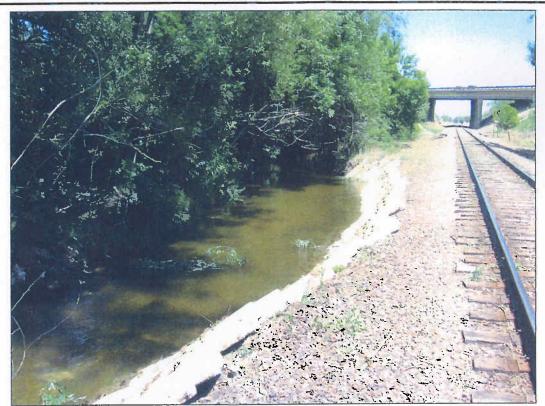


Photo 13, Wetland 103



Photo 14, Wetland 102



Photo 15, Wetland 103



Photo 16, Wetland 104



Photo 17, Wetland 104



Photo 18, Wetland 105

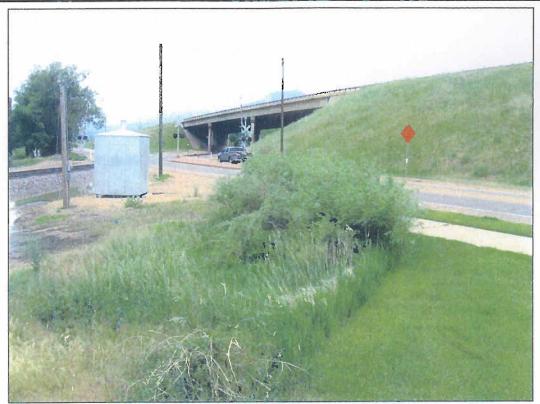


Photo 19, Wetland 105



Photo 20, Wetland 106



Photo 21, Wetland 107

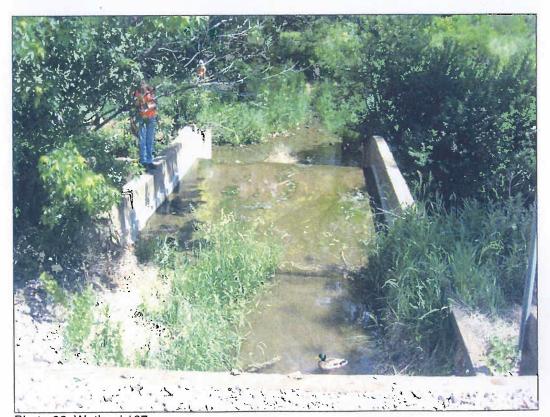


Photo 22, Wetland 107

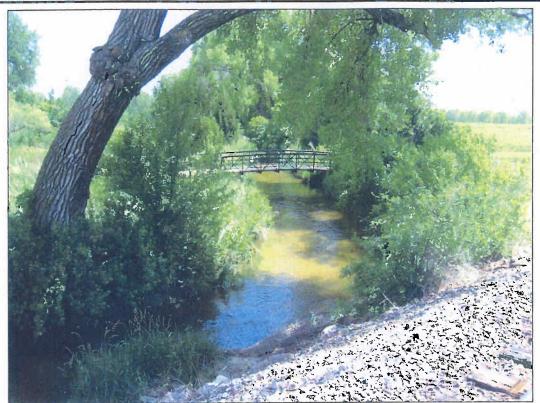


Photo 23, Wetland 109

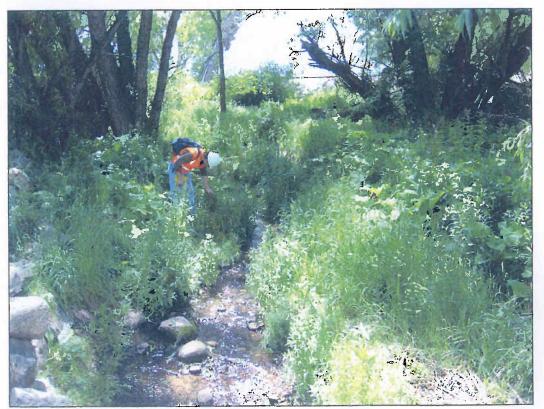


Photo 24, Wetland 107



Photo 25, Wetland 107



Photo 26, Wetland 109



Photo 27, Wetland 108



Photo 28, Wetland 108



Photo 29, Wetland 108

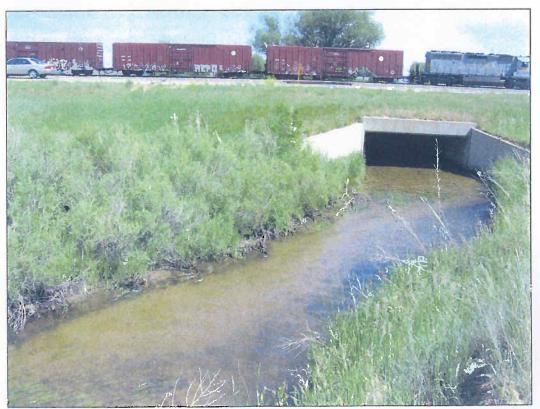


Photo 30, Wetland 109



Photo 31, Wetland 109



Photo 32, Wetland 110





Photo 33, Wetland 111A



Photo 34, Wetland 111



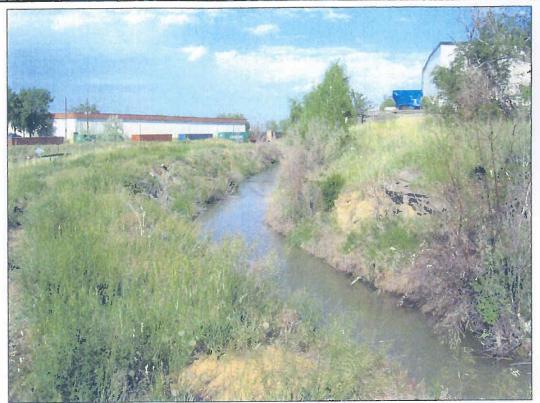


Photo 35, Wetland 111

Appendix E8
Wetland And Other Waters Photographs for June 3, 2004





Photo 1, Wetland 1



Photo 2, Wetland 2



Photo 3 Wetland 3



Photo 4, Wetland 4



Photo 5, Wetland 4



Photo 6, Wetland 5



Photo 7, Wetland 6



Photo 8, Wetland 6





Photo 9, Wetland 7



Photo 10, Wetland 8



Photo 11, Wetland 9



Photo 12, Wetland 6





Photo 13, Wetland 6



Photo 14, Wetland 11



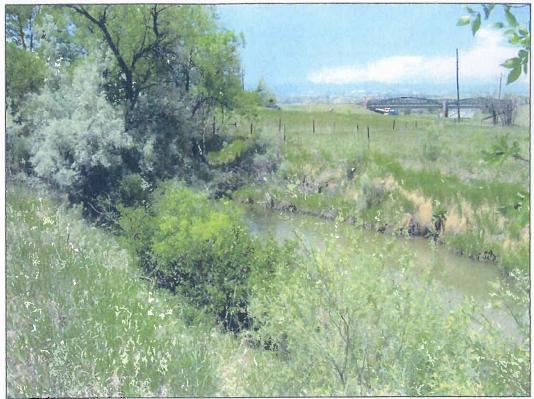


Photo 15, Wetland 12



Photo 16, Wetland 13



Photo 17, Wetland 14



Photo 18, Wetland 88





Photo 19, Wetland 88



Photo 20, Wetland 16



Photo 21, Wetland 17

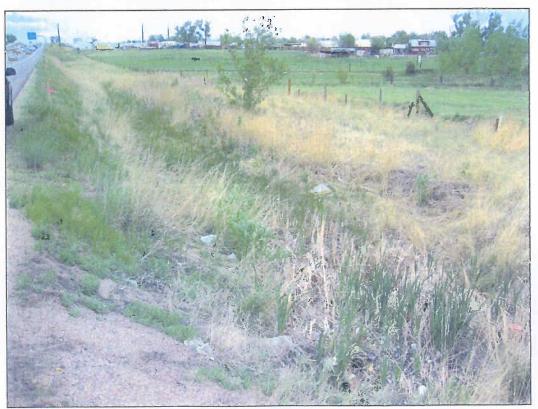


Photo 22, Wetland 18



Photo 23, Wetland 19



Photo 24, Wetland 20





Photo 25, Wetland 21



Photo 26, Wetland 22

Appendix E9
Wetland And Other Waters Photographs for June 4, 2004

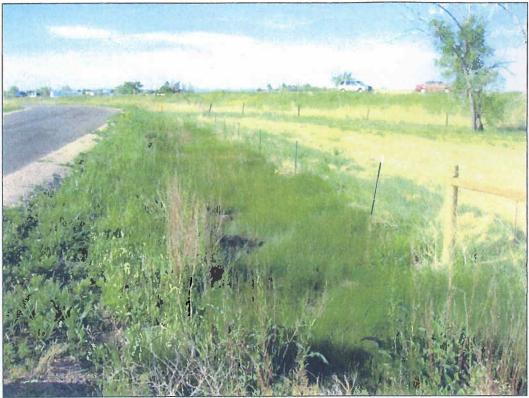


Photo 27, Wetland 23



Photo 28, Wetland 24



Photo 29, Wetland 25



Photo 30, Wetland 26



Photo 31, Wetland 27

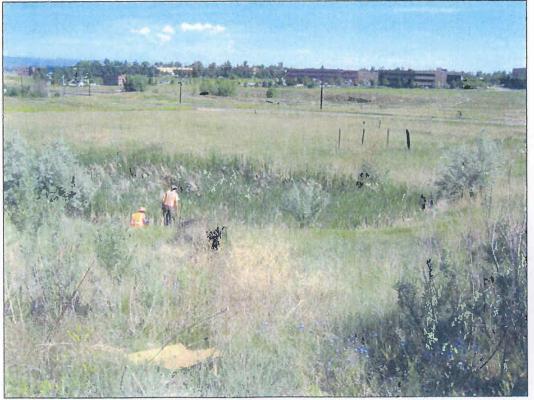


Photo 32, Wetland 28



Photo 34, Wetland 30



Photo 36, Wetland 31





Photo 37, Wetland 32



Photo 38, Other Water 34





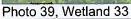




Photo 40, Wetland 35



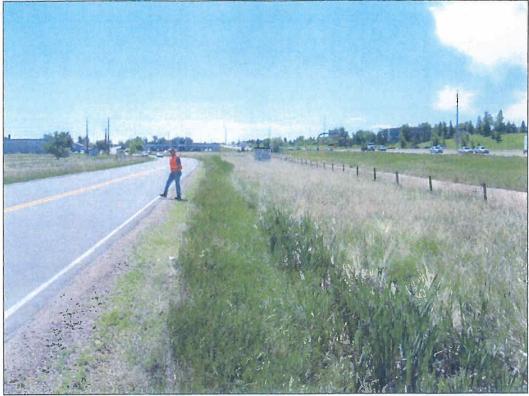


Photo 41, Wetland 36



Photo 42, Wetland 37



Photo 43, Wetland 38



Photo 44, Wetland 39



Photo 45, Wetland 39



Photo 46, Wetland 40



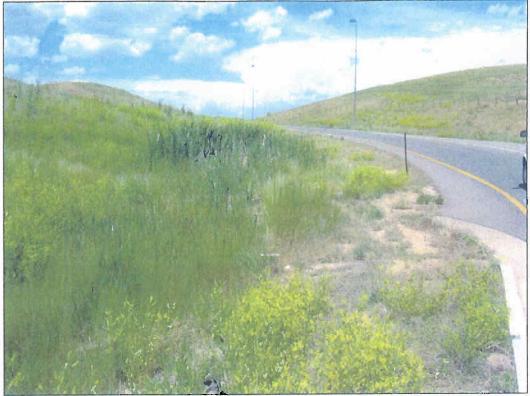


Photo 47, Wetland 41

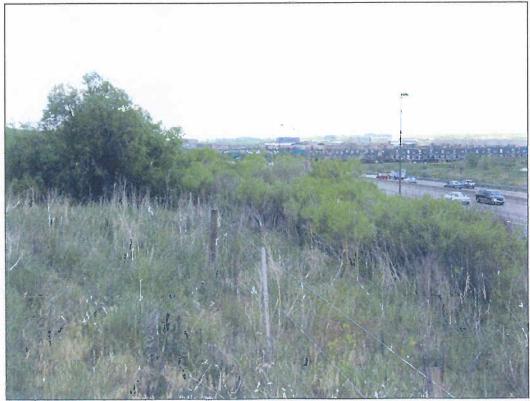


Photo 48, Wetland 42



Photo 49, Wetland 44

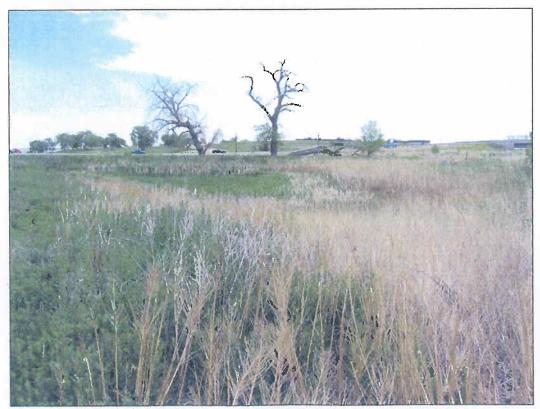


Photo 50, Wetland 43





Photo 51, Wetland 44



Photo 52, Wetland 45





Photo 53, Wetland 46



Photo 54, Wetland 46





Photo 55, Wetland 46



Photo 56, Wetland 47





Photo 57, Wetland 48



Photo 58, Wetland 49



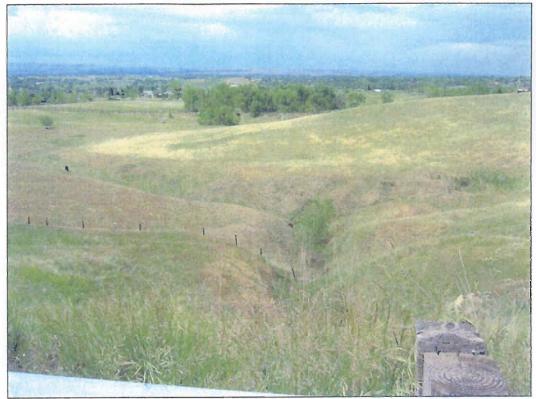


Photo 59, Other Water 50



Photo 60, Wetland 51





Photo 61, Wetland 52

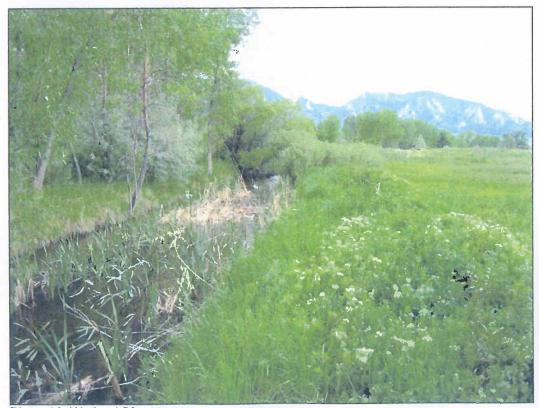


Photo 62, Wetland 53





Photo 63, Wetland 53

Appendix E10
Wetland And Other Waters Photographs for June 9, 2004



Photo 1, Wetland 54



Photo 2, Wetland 55



Photo 3, Wetland 55



Photo 4, Wetland 56



Photo 5, Wetland 56

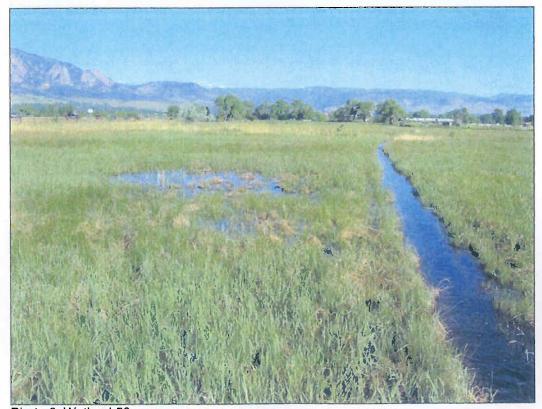


Photo 6, Wetland 56

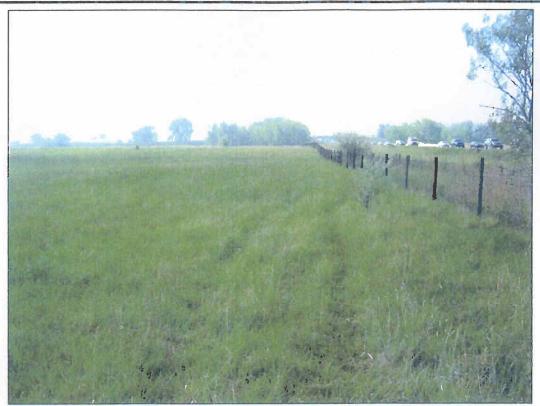


Photo 7, Wetland 56

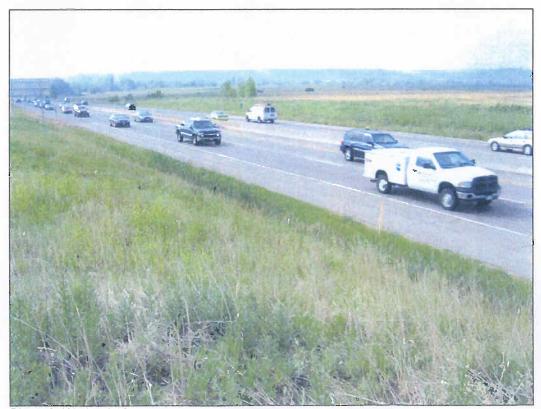


Photo 8, Wetland 58



Photo 9, Wetland 57



Photo 10, Wetland 59



Photo 11, Wetland 59

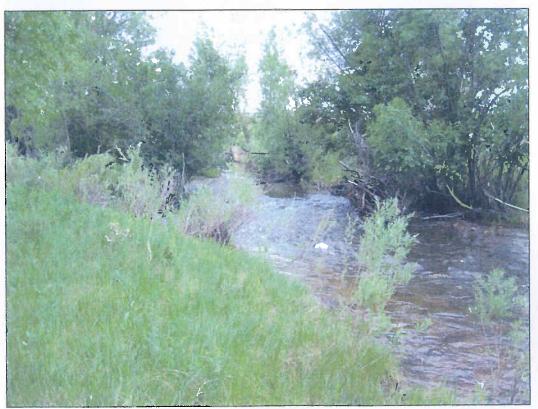


Photo 12, Wetland 59



Photo 13, Wetland 59

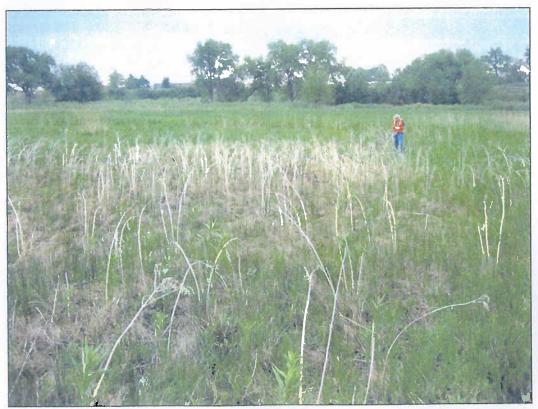


Photo 14, Wetland 60





Photo 15, Wetland 60



Photo 16, Wetland 60



Photo 17, Wetland 61



Photo 18, Wetland 61



Photo 19, Wetland 60



Photo 20, Wetland 62





Photo 21, Wetland 63



Photo 22, Wetland 63A



Photo 23, Wetland 61



Photo 24, Other Water 23



Photo 25, Wetland 64



Photo 26, Wetland 60



Photo 27, Wetland 60



Photo 28

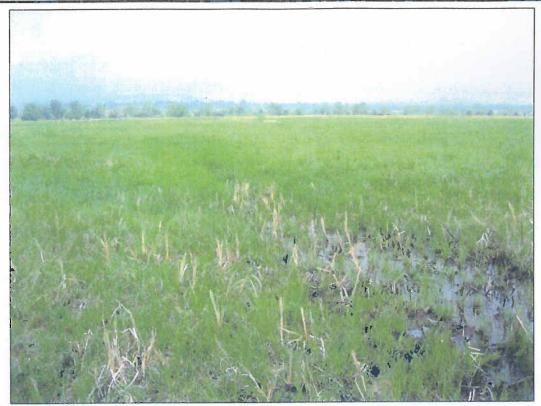


Photo 29



Photo 30, Wetland 60



Photo 31, Wetland 60

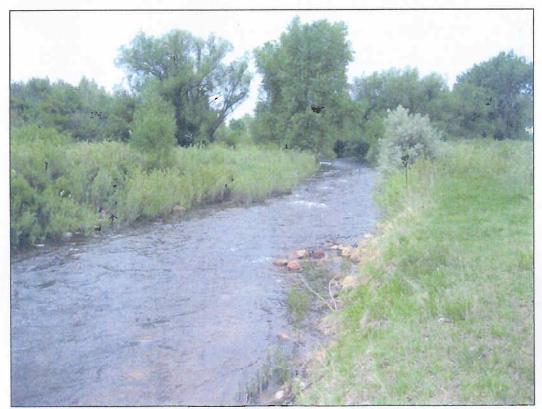


Photo 32, Wetland 59



Photo 33, Wetland 59



Photo 34, Wetland 57

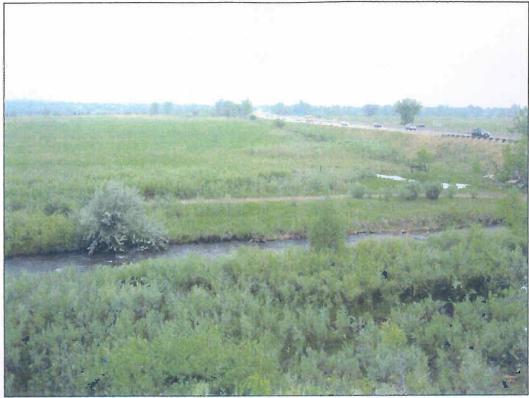


Photo 35, Wetland 59



Photo 36, Wetland 57



Photo 37, Wetland 57



Photo 38, Wetland 8A



Photo 39, Wetland 6



Photo 40, Wetland 6

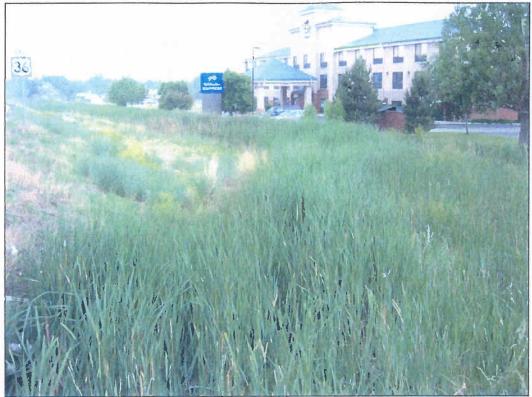


Photo 41, Wetland 5



Photo 42, Wetland 65



Photo 43, Wetland 6



Photo 44, Wetland 6





Photo 45, Wetland 66



Photo 46, Wetland 67

Appendix E11
Wetland And Other Waters Photographs for June 10, 2004



Photo 47, Wetland 56



Photo 48, Wetland 56



Photo 49, Wetland 56



Photo 50, Wetland 56

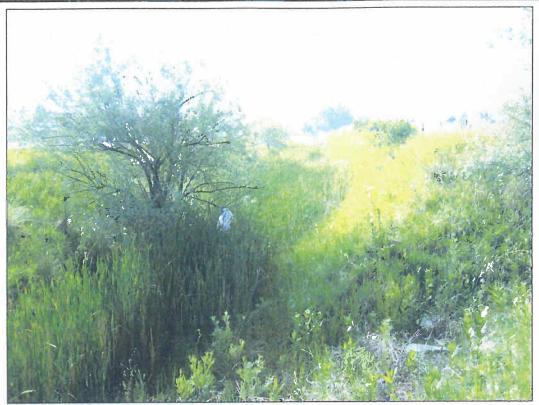


Photo 51, Wetland 54



Photo 52, Wetland 53



Photo 53, Wetland 53

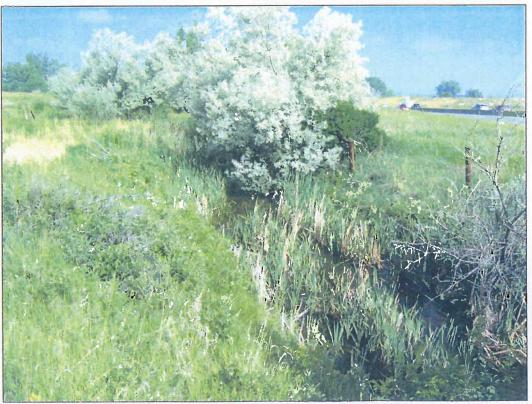


Photo 54, Wetland 53



Photo 55, Wetland 68



Photo 56, Wetland 68



Photo 57, Wetland 69



Photo 58, Wetland 69



Photo 59, Wetland 52

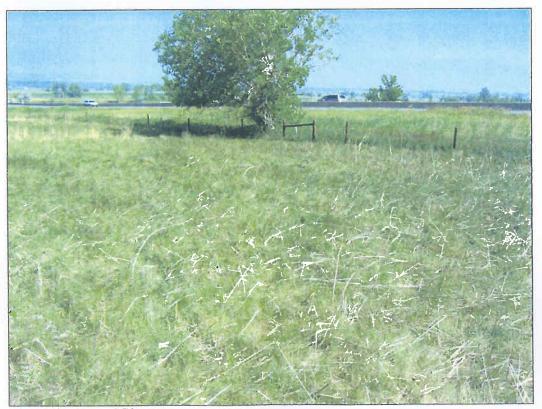


Photo 60, Wetland 70



Photo 61, Wetland 70

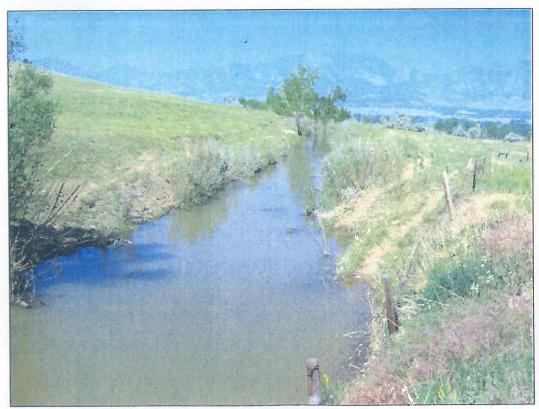


Photo 62, Wetland 51



Photo 63, Wetland 47

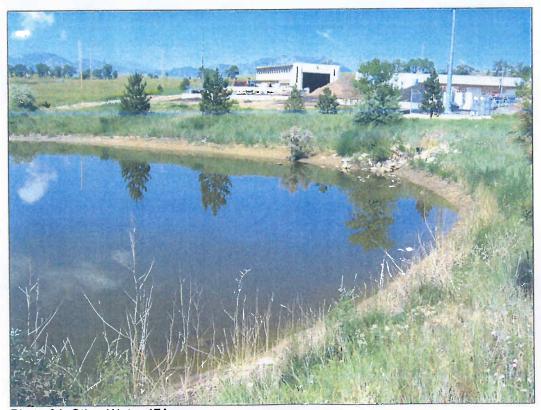


Photo 64, Other Water 47A



Photo 65, Wetland 71



Photo 66, Wetland 46

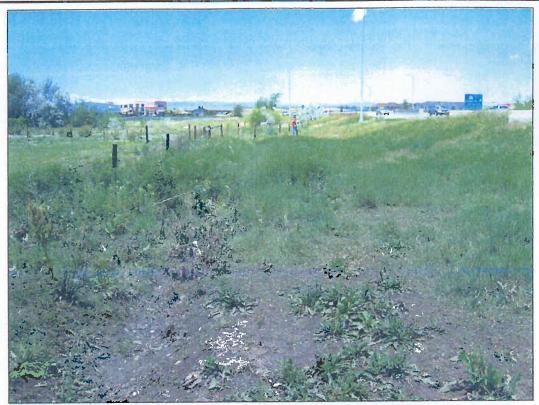


Photo 67, Wetland 72



Photo 68, Other Water 45



Photo 69, Wetland 73

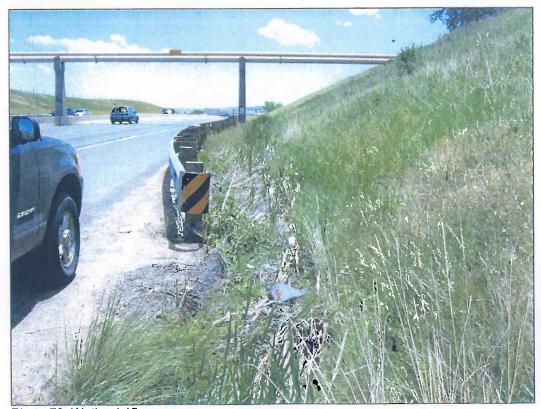


Photo 70, Wetland 45



Photo 71, Wetland 74



Photo 72, Wetland 44



Photo 73, Wetland 75

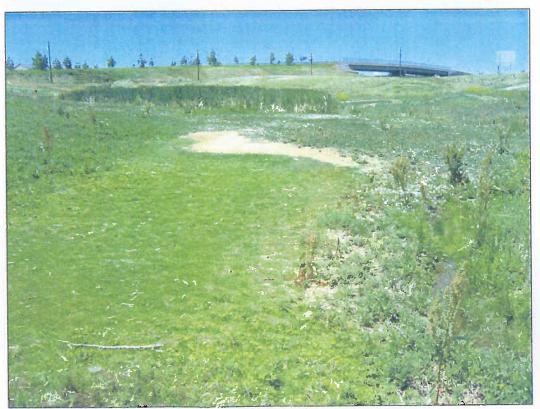


Photo 74, Wetland 75

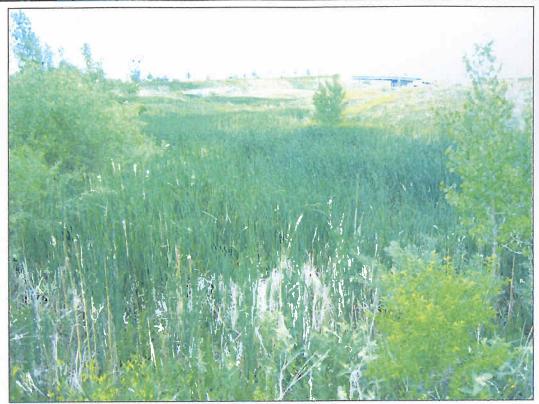


Photo 75, Wetland 75



Photo 76, Wetland 75



Photo 77, Wetland 75

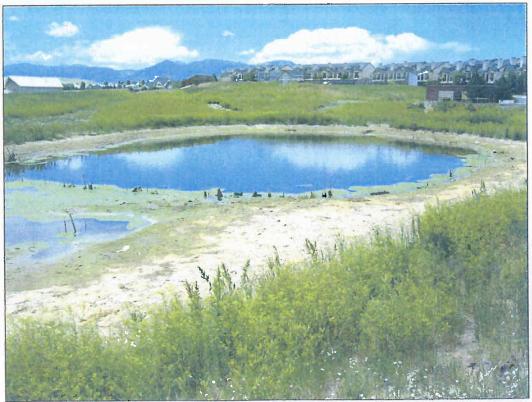


Photo 78, Wetland 76

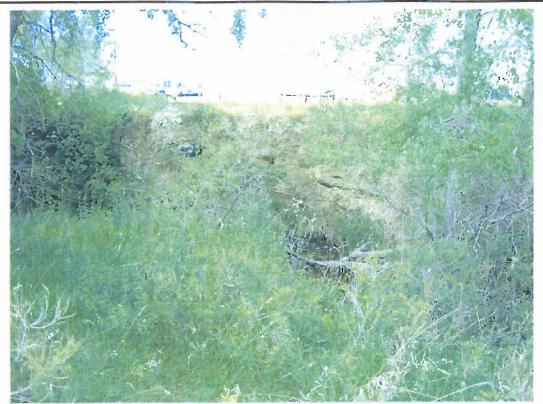


Photo 79, Wetland 75



Photo 80, Wetland 75

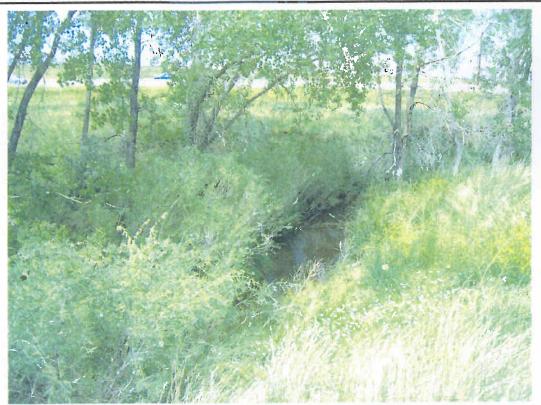


Photo 81, Wetland 75



Photo 82, Wetland 75



Photo 83, Wetland 77



Photo 84, Wetland 75



Photo 85, Wetland 75

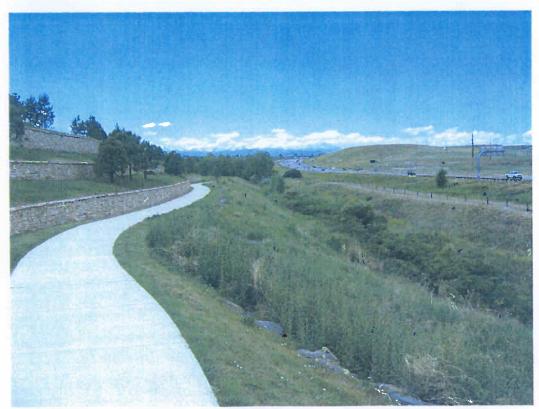


Photo 86, Wetland 75

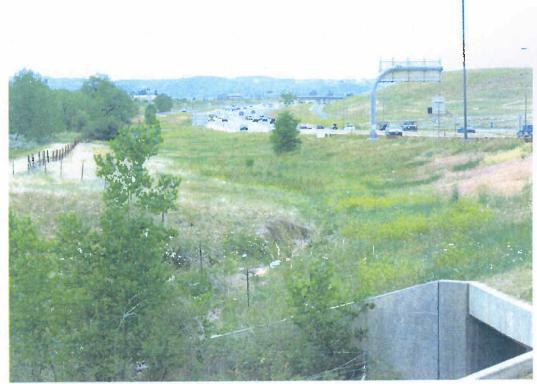


Photo 87, Wetland 78



Photo 88, Wetland 79



Photo 89, Wetland 80



Photo 90, Wetland 81



Photo 91, Wetland 81



Photo 92, Wetland 81



Photo 93, Wetland 81



Photo 94, Wetland 82



Photo 95, Wetland 82



Photo 96, Wetland 82



Photo 97, Wetland 84



Photo 98, Wetland 84



Photo 99, Wetland 82



Photo 100, Wetland 83



Photo 101, Wetland 84

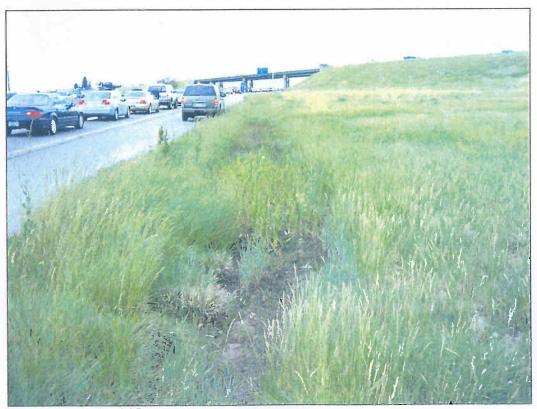


Photo 102, Wetland 85



Photo 103, Wetland 86



Photo 104, Wetland 86

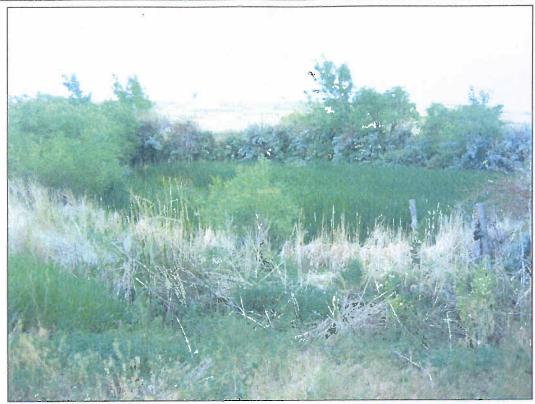


Photo 105, Wetland 87



Photo 106, Wetland 86



Photo 107, Wetland 86



Photo 108, Wetland 86

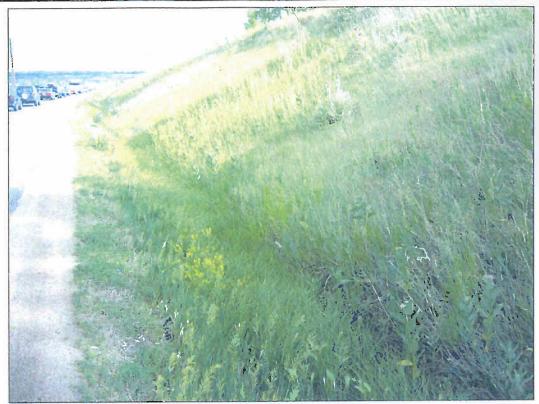


Photo 109, Wetland 86

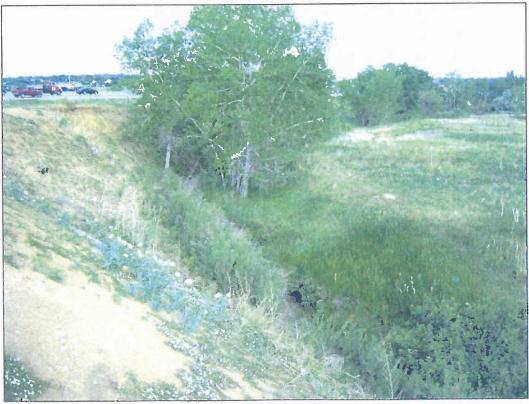


Photo 110, Wetland 88

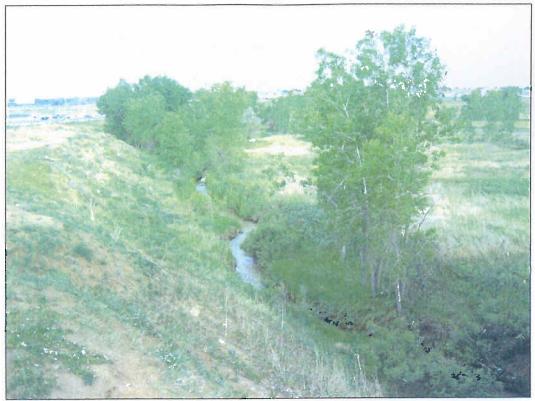


Photo 111, Wetland 88



Photo 112, Wetland 88



Photo 113, Wetland 89



Photo 114, Wetland 90



Photo 115, Wetland 91

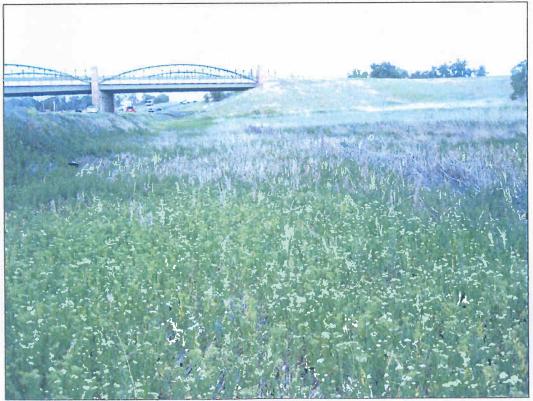


Photo 116, Wetland 91



Photo 117, Wetland 92

Appendix E12 Wetland And Other Waters Photographs for June 28, 2004

URS



Photo 1, Wetland 47



Photo 2, Wetland 48



Photo 3, Wetland 65

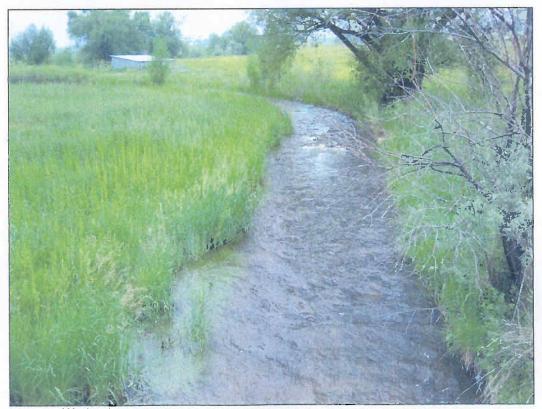


Photo 4, Wetland 65



Photo 5, Wetland 65A



Photo 6, Wetland 44B



Photo 7, Wetland 20

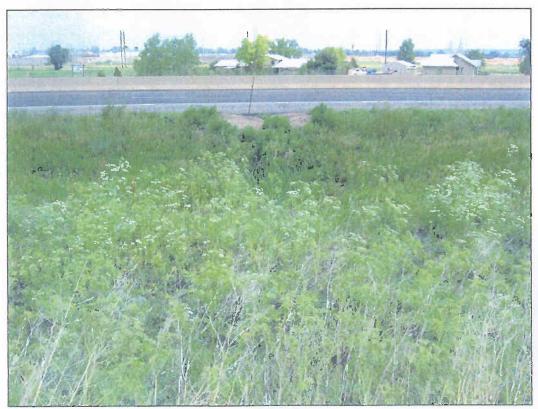


Photo 8, Wetland 18



Photo 9, Wetland 18



Photo 11, Wetland 8C



Photo 12, Wetland 67

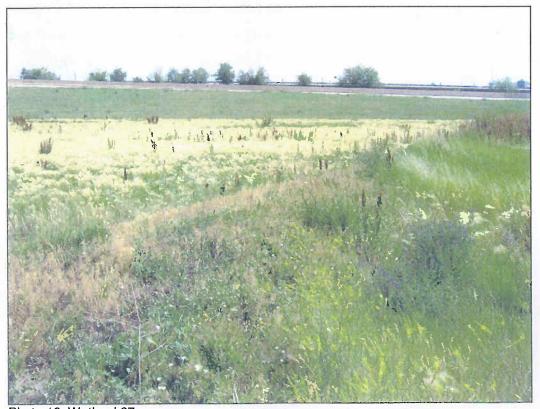


Photo 13, Wetland 67



Photo 15, Wetland 67

Appendix E13
Wetland And Other Waters Photographs for July 2, 2004



Photo 5, Wetland 63A



Photo 6, Wetland 62



Photo 8, Wetland 1-4



Photo 9, Wetland 1-5



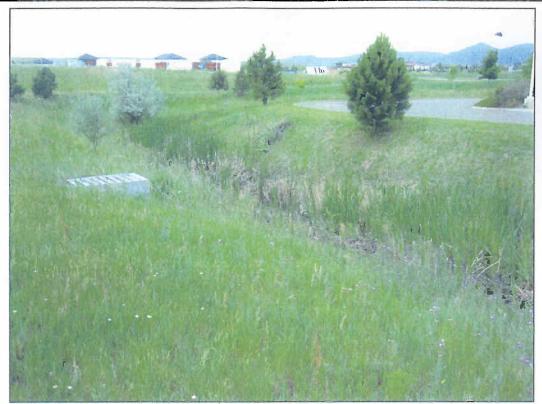


Photo 10, Wetland 47

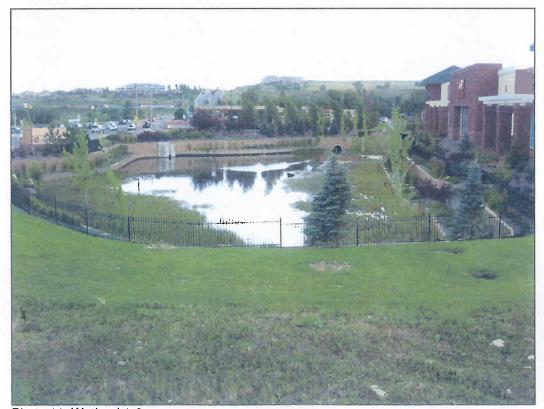


Photo 11, Wetland 1-6

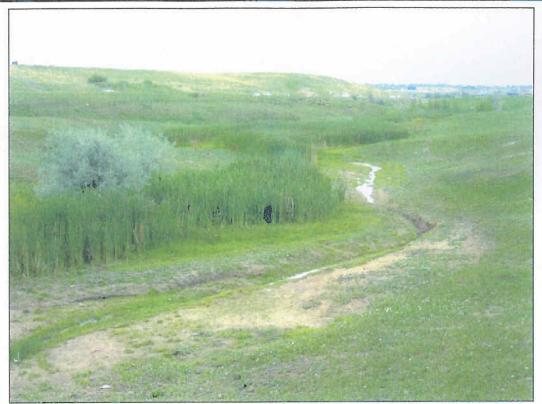


Photo 13, Wetland 75

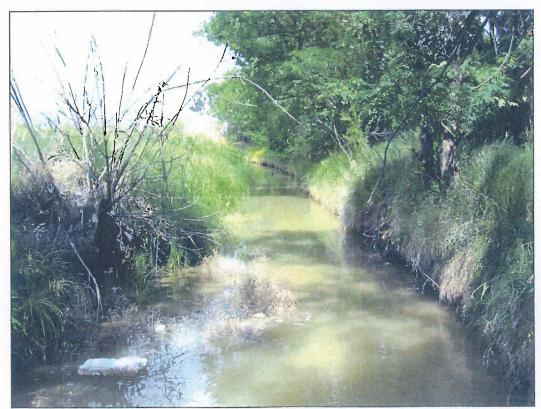


Photo 14, Wetland 86

Appendix E14
Wetland And Other Waters Photographs for July 15, 2004



Photo1, Wetland 56



Photo 2, Wetland 55

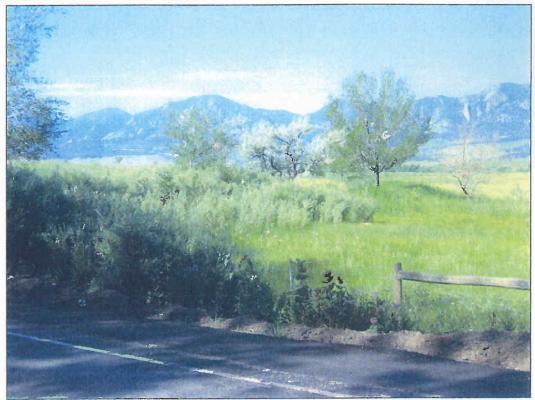


Photo 3, Wetland 53



Photo 4, Wetland 75

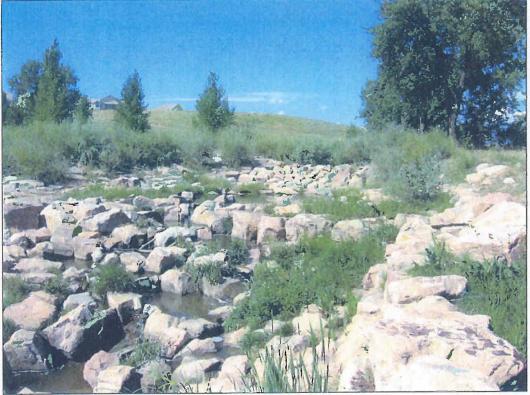


Photo 5, Wetland 75



Photo 6, Wetland 75



Photo 7, Wetland 75



Photo 9, Wetland 79B





Photo 10, Wetland 39

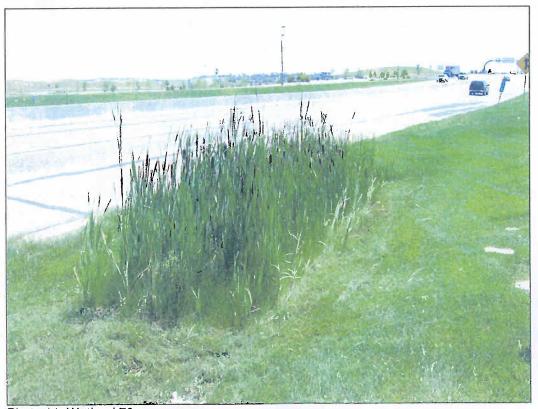


Photo 11, Wetland 79





Photo 12, Wetland 86

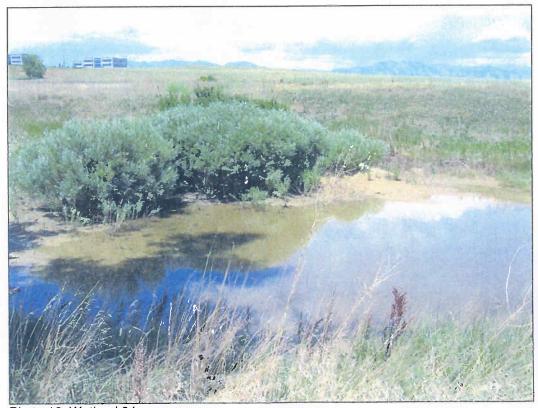


Photo 13, Wetland 84



Photo 15, Wetland 84B



Photo 16, Wetland 84B



Photo 17, Wetland 84C



Photo 18, Wetland 86



Photo 19, Wetland 84D



Photo 20, Wetland 22

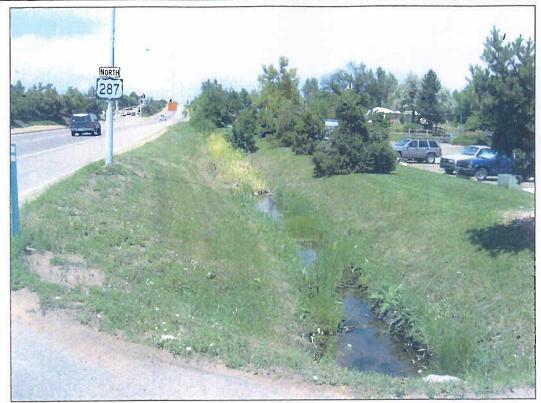


Photo 21, Wetland 22A

Appendix E15
Wetland And Other Waters Photographs for July 16, 2004



Photo 23, Wetland 11B



Photo 24, Wetland 11C



Photo 26, Wetland 6



Photo 27, Wetland 6