# Appendix E: Delineation of Jurisdictional Waters and Wetlands

# E.1 - Wetland Delineation Revisions, Michael Brandman Associates, March 24, 2009

Michael Brandman Associates

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March 24, 2009

Mr. Peck Ha, Regulatory Project Manager
USACE Sacramento District
1325 J Street RN
Sacramento, CA 95814

Subject: **Notice of Revisions to the Diamond Springs Parkway Project Study Area Delineation Map (USACE ID 200900188)**

Mr. Ha:

As requested, this letter revises and requests verification of the delineation map prepared for the Diamond Springs Parkway (DSP) Project study area, located in the unincorporated Missouri Flat area of El Dorado County. The report for this delineation was submitted to you on December 18, 2008 and has been assigned USACE ID 200900188.

On February 19, 2009 you conducted a field verification of the delineation that was attended by Robert Francisco and Deborah Stout of Michael Brandman Associates (MBA). This letter reflects the changes agreed to during the field verification. During the verification you noted differences between the DSP delineation and a previously verified delineation conducted for the El Dorado Trails Project. The two delineations overlap in the north-central portion of the DSP project that parallels the abandoned railroad tracks. The area of overlap runs along the railroad tracks from Old Depot Road southeast approximately 0.2 mile. During the verification, it was generally agreed that the DSP delineation map would be revised to concur with the El Dorado Trails verified delineation map. On March 11, 2009, MBA received the electronic files (.shp format) from Jennifer Maxwell, El Dorado County Department of Transportation. MBA has used these files to update the study area delineation map.

Table 1 below is the revised summary table of delineated features, which effectively replaces the map submitted December 18, 2009. Electronic shape files of the features summarized in Table 1 are contained in the enclosed CD.

**Table 1. Revised Summary Table of Delineated Features**

| Federally Jurisdictional Features | Total Acreage |
|---|---|
| **Waters of the U.S.** | |
| Ephemeral Drainage 1 | <0.01 (207 linear feet) |
| Ephemeral Drainage 2 | <0.01 (86 linear feet) |
| Ephemeral Drainage 3 | 0.04 (537 linear feet) |
| Ephemeral Drainage 4 | 0.10 (454 linear feet) |
| Ephemeral Drainage 4a | 0.03 (294 linear feet) |
| Ephemeral Drainage 5 | 0.01 (204 linear feet) |
| Roadside Ditch 3 | <0.01 (149 linear feet) |
| Roadside Ditch 4 | 0.02 (1,004 linear feet) |

| Federally Jurisdictional Features | Total Acreage |
|---|---|
| Roadside Ditch 5 | 0.03 (1,373 linear feet) |
| **Total Area of Drainages** | **0.23 acre (4,308 linear feet)** |
| **Wetlands** | |
| Seasonal Wetland 1 | 0.04 |
| Seasonal Wetland 2 | 0.03 |
| Seasonal Wetland 3 | 0.10 |
| Seasonal Wetland 4 | 0.01 |
| Seasonal Wetland 5 | <0.01 |
| Seasonal Wetland 6 | 0.03 |
| Seasonal Wetland 7 | 0.06 |
| Seasonal Wetland 8 | 0.02 |
| Seasonal Wetland 9 | 0.06 |
| Wetland Swale 1 | 0.06 (856 linear feet) |
| **Total Acreage of Wetlands** | **0.41 acre (856 linear feet)** |
| **Total Acreage, Federally Jurisdictional Features** | **0.64 (5,164 linear feet)** |
| **Non-Federally Jurisdictional Features** | **Total Acreage** |
| **Drainages** | |
| Roadside Ditch 1 | 0.04 (1,527 linear feet) |
| Roadside Ditch 2 | 0.02 (754 linear feet) |
| Roadside Ditch 6 | 0.02 (994 linear feet) |
| Roadside Ditch 7 | <0.01 (201 linear feet) |
| Roadside Ditch 8 | <0.01 (77 linear feet) |
| Roadside Ditch 9 | <0.01 (161 linear feet) |
| Roadside Ditch 10 | <0.01 (118 linear feet) |
| Roadside Ditch 11 | 0.01 (299 linear feet) |
| **Total Acreage of Drainages** | **0.09 (4,131 linear feet)** |
| **Wetlands** | |
| Fresh Emergent Wetland 1 | 0.02 acre |
| **Total Acreage of Wetlands** | **0.02 acre** |
| **Total Acreage, Non-Federally Jurisdictional Features** | **0.11 (4,131 linear feet)** |

If you have any questions or comments, I can be reached by e-mail (dstout@brandman.com), or by cell phone at 916.955.8641. I look forward to receiving your final verification letter.

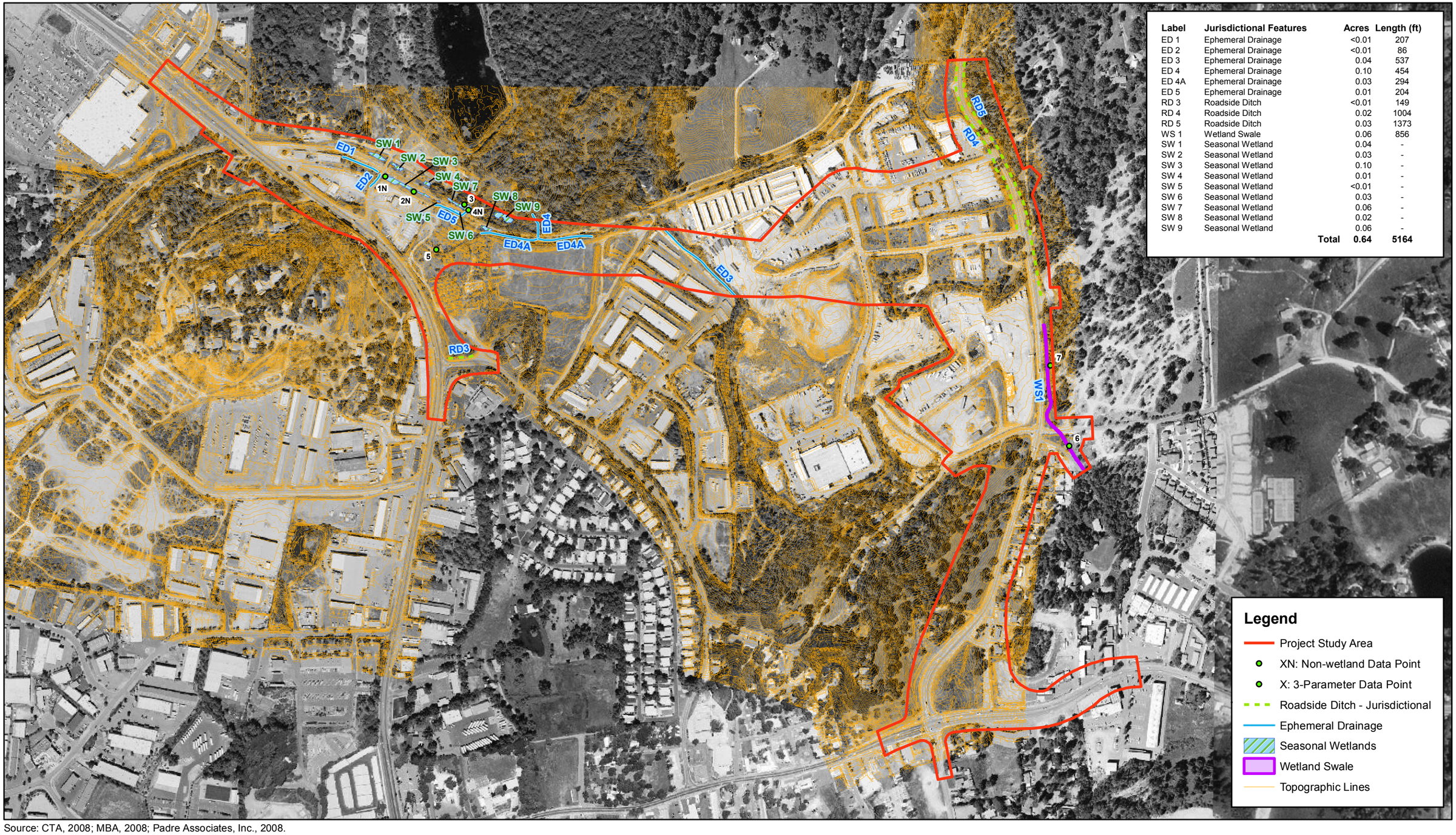
Sincerely,

Deborah Stout

Deborah Stout, Assistant Project Manager
**Michael Brandman Associates**
2000 'O' Street, Suite 200
Sacramento, CA 95811

Enc: Delineation of Jurisdictional Waters and Wetlands (Revised 03/13/09)
CD containing revised shape files

| Label | Jurisdictional Features | Acres | Length (ft) |
|---|---|---|---|
| ED 1 | Ephemeral Drainage | <0.01 | 207 |
| ED 2 | Ephemeral Drainage | <0.01 | 86 |
| ED 3 | Ephemeral Drainage | 0.04 | 537 |
| ED 4 | Ephemeral Drainage | 0.10 | 454 |
| ED 4A | Ephemeral Drainage | 0.03 | 294 |
| ED 5 | Ephemeral Drainage | 0.01 | 204 |
| RD 3 | Roadside Ditch | <0.01 | 149 |
| RD 4 | Roadside Ditch | 0.02 | 1004 |
| RD 5 | Roadside Ditch | 0.03 | 1373 |
| WS 1 | Wetland Swale | 0.06 | 856 |
| SW 1 | Seasonal Wetland | 0.04 | - |
| SW 2 | Seasonal Wetland | 0.03 | - |
| SW 3 | Seasonal Wetland | 0.10 | - |
| SW 4 | Seasonal Wetland | 0.01 | - |
| SW 5 | Seasonal Wetland | <0.01 | - |
| SW 6 | Seasonal Wetland | 0.03 | - |
| SW 7 | Seasonal Wetland | 0.06 | - |
| SW 8 | Seasonal Wetland | 0.02 | - |
| SW 9 | Seasonal Wetland | 0.06 | - |
| | **Total** | **0.64** | **5164** |




Source: CTA, 2008; MBA, 2008; Padre Associates, Inc., 2008.

NORTH

580 290 0 580 1,160 Feet

Michael Brandman Associates

33370003 • 03/31/2009

# Delineation of Jurisdictional Waters and Wetlands

DELINEATED BY: DEBORAH STOUT

EL DORADO COUNTY DOT • DIAMOND SPRINGS PARKWAY PROJECT
WETLAND DELINEATION

# E.2 - Delineation of Jurisidictional Waters and Wetlands, Michael Brandman Associates, October 31, 2008

# Delineation of Jurisdictional Waters and Wetlands
# Diamond Springs Parkway Project
# Missouri Flat Area of Unincorporated
# El Dorado County, California

*Placerville, California,* USGS 7.5-minute Topographic Quadrangle Map
Sections 24 and 25, Township 10N, Range 10E
Sections 19 and 30, Township 30N, Range 11E

Prepared for:

**El Dorado County**
**Department of Transportation**
2850 Fairlane Court
Placerville, California

Contact: Jennifer Maxwell

Prepared by:

**Michael Brandman Associates**
2000 O Street, Suite 200
Sacramento, CA 92408
714.508.4100

Contact: T'Shaka Touré

Michael Brandman Associates

October 31, 2008

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## LIST OF EXHIBITS

## SECTION 1: SUMMARY

**Applicant Name:**
Jennifer Maxwell, P.E.
Senior Engineer, Project Manager
El Dorado County
Department of Transportation
2850 Fairlane Court
Placerville, CA 95667

**Agent Name:**
Michael Brandman Associates
2000 O Street, Suite 200
Sacramento, CA 95811
Contact: T'Shaka Touré, Regulatory Specialist
Phone: 559.497.0310 ext. 1309
Email: ttoure@brandman.com

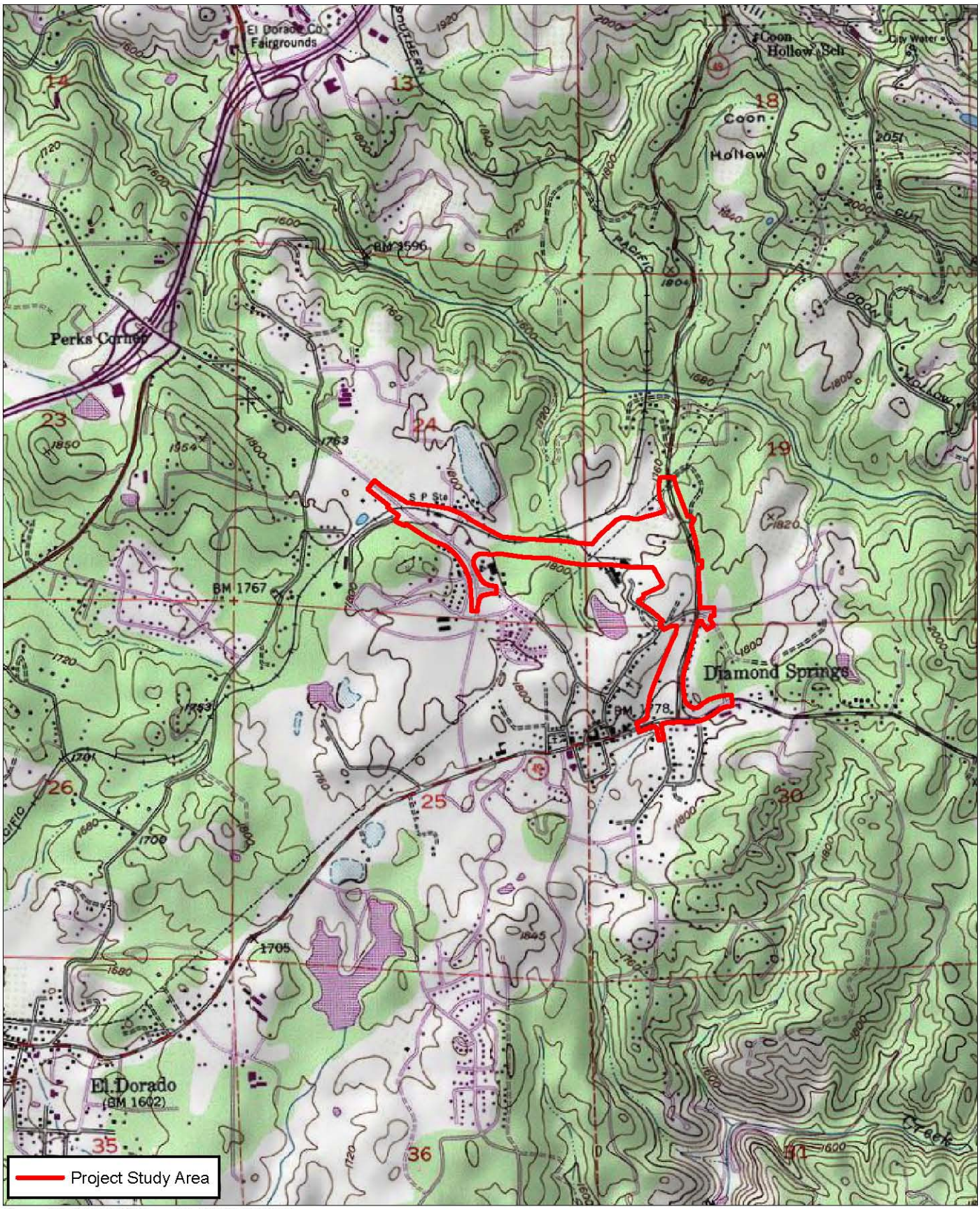
### 1.1 - Introduction

At the request of El Dorado County Department of Transportation (DOT), Michael Brandman Associates (MBA) conducted a jurisdictional delineation for the approximately 93-acre Diamond Springs Parkway Project (project) study area located in the Missouri Flat area of unincorporated El Dorado County, just north of Diamond Springs, California (Exhibit 1). The location of the Project corresponds to Sections 24 and 25, Township 10N, Range 10E; and Sections 19 and 30, Township 30N, Range 11E (Mount Diablo Baseline Meridian [MDBM]) of the *Placerville, California* U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle just northwest of Diamond Springs, El Dorado County, California.

### 1.2 - Results Summary

The study area is relatively linear and crosses roads, industrial and commercial developments, historically mined areas, and residential developments (Exhibit 2). In many areas, historical industrial mining has altered completely the vegetation, soils, and hydrology of the study area; native habitat is restricted to small, linear patches. Much of the native soils have been removed and the remaining substrates are highly compacted, making characterization of the project study area difficult. Just north of the study area, there is broad plain of asphalt underlying a thin layer of soil, most likely placed there during installation of the railroad tracks in the northern portion of the study area. This high degree of disturbance required coordination with project engineers to characterize accurately the hydrology of the study area. There is one natural drainage feature that crosses the center of the study area; this feature is visible on historical topographic maps and aerial photographs (Appendix A).

The delineation of waters of the U.S. identified seven (7) features that are U.S. Army Corps of Engineers (USACE) jurisdictional. These include four (4) ephemeral drainages, two (2) roadside ditches, and one (1) fresh emergent wetland. These features exhibit a "significant nexus" to Weber Creek, a Traditionally Navigable Water (TNW). As such, these features are subject to regulation by the USACE. Total acreage of USACE jurisdictional features is 0.17 acre (3,940 linear feet), of which 0.02 acre consist of wetlands.



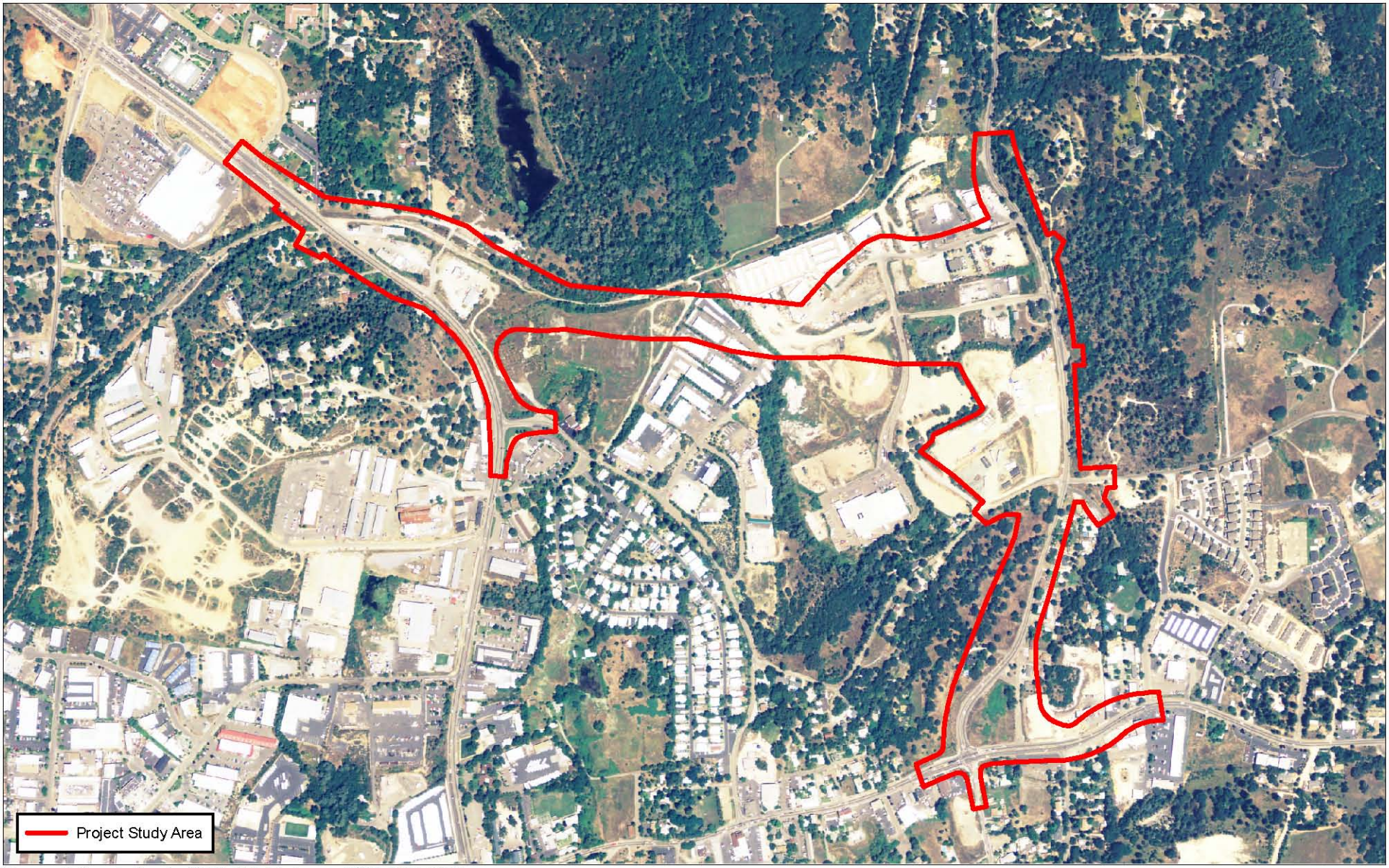

Source: TOPO! USGS Placerville (1973) 7.5' DRG.
Sections 24 and 25, Township 10N, Range 10E; Sections 19 and 30, Township 30N, Range 11E.

NORTH

2,000 1,000 0 2,000
Feet

Michael Brandman Associates

# Exhibit 1
# Vicinity Map and Topographic Base




Source: El Dorado County, 2007; CTA Engineers, 2007; MBA, 2007

Michael Brandman Associates

NORTH

800 400 0 800

Feet

# Exhibit 2
# Aerial Photograph

3337.0003 • 9/2008

EL DORADO DOT • DIAMOND SPRINGS PARKWAY PROJECT
WETLAND DELINEATION

The study area contains 11 features not considered federally jurisdictional. These include nine (9) roadside ditches that do not enter, intersect, or otherwise capture flows from any TNW, Relatively Permanent Water (RPW), or seasonal wetland; therefore, these features do not contain any federally jurisdictional waters. In addition, the study area contains one isolated wetland swale and one fresh emergent wetland that are isolated and, therefore, considered federally non-jurisdictional. Total acreage of non-federally jurisdictional features is 0.18 acre (5,136 linear feet).

# SECTION 2: JURISDICTIONAL METHODOLOGY

## 2.1 - Methodology Statement

This Jurisdictional Delineation was conducted in accordance with regulations set forth in 33 CFR part 328 and the USACE guidance documents referenced below:

- USACE Wetlands Research Program Technical Report Y-87-1 (on-line edition), *Wetlands Delineation Manual*, Environmental Laboratory, 1987 (Wetland Manual).
- USACE *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*, 2006 (Arid Southwest Guidelines).
- USACE *Minimum Standards for Acceptance of Preliminary Wetlands Delineations*, November 30, 2001 (Minimum Standards).
- USACE *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*, December 2006 (Arid West Supplement).
- USACE *Jurisdictional Determination Form Instructional Guidebook*, May 30, 2007 (JD Form Guidebook).
- *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States* (June 5, 2007) (Rapanos Guidance).

## 2.2 - Pre-Survey Investigation

Prior to the field visit, an aerial photograph of the study area was compared with the Placerville, California, U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle map to identify drainage features within the project study area, as indicated from topographic changes or visible drainage patterns. The United States Department of Agriculture (USDA) Soil Survey Map was reviewed to identify all soil series that occur on within the study area.

## 2.3 - Field Investigation

Field investigations were conducted within the project study area by qualified MBA delineators on December 11, 12, and 13, 2007; January 10 and 11, 2008; and March 20, 2008. Data was collected using a Trimble ProXH (GPS) unit capable of sub-foot accuracy. Drainages were mapped onto an aerial photograph and onto paper. Other tools used included a 30-meter tape measure, shovel, Munsell color chart, digital camera, and pin flags.

All surveys were conducted on foot. Potential jurisdictional features were systematically inspected to record existing conditions and to determine the jurisdictional limits. The study area was assessed carefully for surface flow indicators (presence of hydrophytic vegetation, staining, cracked soil,

ponding, etc). The apparent flow regimes and corresponding hydrogeomorphic features were subsequently identified. In non-wetland jurisdictional areas, the lateral extent of USACE jurisdiction was measured at the Ordinary High Water Mark (OHWM). Where appropriate, multiple measurements were recorded at various representative locations along the length of the feature.

Potential wetland areas were assessed to the outer reach of the applicable (hydrophytic) vegetative community or (where vegetation was absent/disturbed) to the natural topographical rim of the depressional feature (whichever was greater). Features previously indicated on aerial photographs (dark/saturated areas, associated riparian vegetation, etc) were field verified during the site visit. Plant species for each vegetative community were identified and given an indicator status as prescribed in the *National List of Plant Species That Occur in Wetlands: 1988 National Summary* (Reed 1988). All data collected were recorded on wetland data forms and evaluated using the 2006 USACE Arid West Regional Guidance (see Appendix B for wetland data forms).

Width and length measurements were entered into Geographical Information System (GIS) Arcview software to identify the location and dimensions of jurisdictional areas. The Arcview application was then used to compute federal jurisdiction in acres. Acreage computations were verified using a 200-scale aerial photograph and field data.

# SECTION 3: ENVIRONMENTAL SETTING

## 3.1 - Location of the Property

The project study area is located approximately 0.4 mile north of Diamond Springs and 1.5 miles east of Highway 50. It is near State Route (SR) 49 to the east, Truck Street to the north, Lime Kiln Road to the south, and Chuckwagon Way to the west. The location corresponds to Sections 24 and 25, Township 10N, Range 10E, and Sections 19 and 30, Township 30N, Range 11E *Placerville, California* USGS 7.5-minute topographic quadrangle (Exhibit 1). The approximate center of the study area has a latitude/longitude corresponding to 38°42'6.61"N and 120°49'6.26"W.

### 3.1.1 - Directions to the Property

From eastbound Highway 50, exit at the Missouri Flat Road exit and travel east (this road turns south after approximately one mile) on Missouri Flat Road for approximately 0.8 mile; this is the western extent of the project study area.

### 3.1.2 - Acreage and Assessor Parcel Numbers (APNs)

The project study area encompasses approximately 93 acres and includes the following Assessor's Parcel Numbers (APNs):

- 051-250-04, 06, 07, 08, 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 30, 31, 32, 33, 37, 39, 42, 46, 48, 54, 55;
- 051-461-05, 10, 11, 12, 37, 46, 54;
- 051-550-47;
- 054-342-15, 20, 23, 25, 27;
- 327-250-14, 16, 34, 35, 37, 38;
- 327-260-05, 06, 25, 28, 39;
- 327-270-03, 04, 08, 18, 26, 27, 31, 43, 46, 48, 49, 50; and
- 327-300-08.
-

## 3.2 - Land Uses

Historical aerial photographs covering a majority of the project study area were reviewed (see Appendix A). The earliest photograph, taken in 1935, indicate scattered areas of active mining, orchard and cropland to the east, and native blue oak-foothill pine habitat in the central portion of the study area. There were few changes in land use until 1984.

The central portion of the study area historically supported an active lime mine prior to 1935 (Appendix A). The remainder of the study area contained undisturbed native blue oak-foothill pine habitat with some orchard to the east. The lime mine was expanded southward sometime between 1952 and 1962; also in the 1952 photograph a second mine is visible along what is now Missouri Flat

Road. However, the period between 1962 and 1984 saw the most significant changes. During this time, much of the area was graded and industrial and commercial developments were constructed.

## 3.3 - Topography

The project study area was altered significantly by past mining activities and little native topography remains. In general, the study area is level to gently sloping, with some very steep areas where excavation has occurred; these are restricted primarily to the central portion. Average elevation is approximately 1,800 feet above mean sea level (msl).

## 3.4 - Hydrology

### 3.4.1 - Pertinent Hydrogeomorphic Features

The study area is bisected by one major drainage feature (Ephemeral Drainage [ED] 3). This feature is considered an RPW; during the December 11-13, 2007 site visit there were areas of ponding, but the majority of the channel was dry. Flow was first observed on January 10, 2008, four days after a major storm event.

### 3.4.2 - Watershed Description

The project study area is located within the west-central portion of the +7,950-acre Ringold Creek watershed-planning unit (Calwater ID 5144.310203), which is part of the larger Weber Creek Sub-Hydrologic Area (Calwater, 2004). Weber Creek is the principle drainage feature within the study area vicinity. Weber Creek flows west-northwest appropriately 12 miles prior to discharging into the South Fork of the American River Watershed (Hydrologic Unit 18020129). Weber Creek is a combination of step-pool and cascade alluvial-channel morphologies (Montgomery and Buffington 1998) and drains a total watershed area of approximately 97 square miles.

### 3.4.3 - Drainage Pattern

Drainage patterns in the project vicinity are highly modified by existing development and by historical industrial mining activities. In the portions of the study area adjacent to developed roads (i.e., SR 49, Missouri Flat Road, Truck Street), runoff is conveyed through a combination of engineered curb and gutter systems and roadside ditches. Most of these channel water into existing storm drain systems. However, roadside ditches (RDs) along the northern portion of SR 49 (RD4 and RD5) channel water directly in Weber Creek, a TNW.

The central and northwestern portions of the study area are drained primarily by artificial and natural drainages that convey runoff to the north off the area. These drainages include a remnant, ephemeral drainage channel (ED3) in the center of the study area; this drainage is depicted as a dashed blue line on the USGS *Placerville, CA* 7.5-minute topographic quadrangle. It flows north and ultimately discharges into Weber Creek.

### 3.4.4 - Water Source

The central portion of the project study area is located near the outlet of a localized drainage (ED3), which receives surface flows from adjacent developments and barren lands; as well as channeled storm water from systems associated with adjacent developments, generally via PVC pipes inserted in the bank above the OHWM. As a result, surface water within the ED3 is supplied exclusively through runoff from precipitation during the winter and spring months. The channel generally goes dry early in the summer with isolated pools forming in locations that receive irrigation return flows. Hydrology within the remainder of the study area is contributed by runoff during precipitation and nuisance flows and residential, industrial, and commercial developments.

## 3.5 - Field Conditions

### 3.5.1 - Seasonal Climate Variation

The Missouri Flat area is subject to relatively strong seasonal and annual variation in temperature and precipitation. Elevation of the study area is approximately 1,800 feet msl. Average temperatures range from January lows of 32.4 ˚F to July highs of 92.6 ˚F.

Average annual precipitation is approximately 38.5 inches; precipitation falls primarily as rain with most precipitation occurring between the months of October and April and peaking in January, at 6.98 inches. Average total annual snowfall is 2.7 inches, occurring from December through April and peaking in January at 1.2 inches.

### 3.5.2 - Field Conditions at time of Field Investigation

Northern California was experiencing normal conditions and moderate drought in 2007 during the months preceding the delineations and mid-range to moderate drought conditions in early 2008. Table 1 provides weather information for the 2007-2008 calendar year; delineations were conducted in December 2007, January 2008, and March 2008.

**Table 1: Weather Data for 2007-2008**

| Date | Palmer Severity Index |
|---|---|
| January 2007 | Moderate Drought |
| May 2007 | Severe Drought |
| September 2007 | Moderate Drought |
| December 2007 | Moderate Drought |
| January 2008 | Mid-Range |
| February 2008 | Mid-Range |
| March 2008 | Moderate Drought |
| Source: NOAA Palmer Drought Severity Index Long-term Hydrological Conditions | |

## 3.6 - Soils

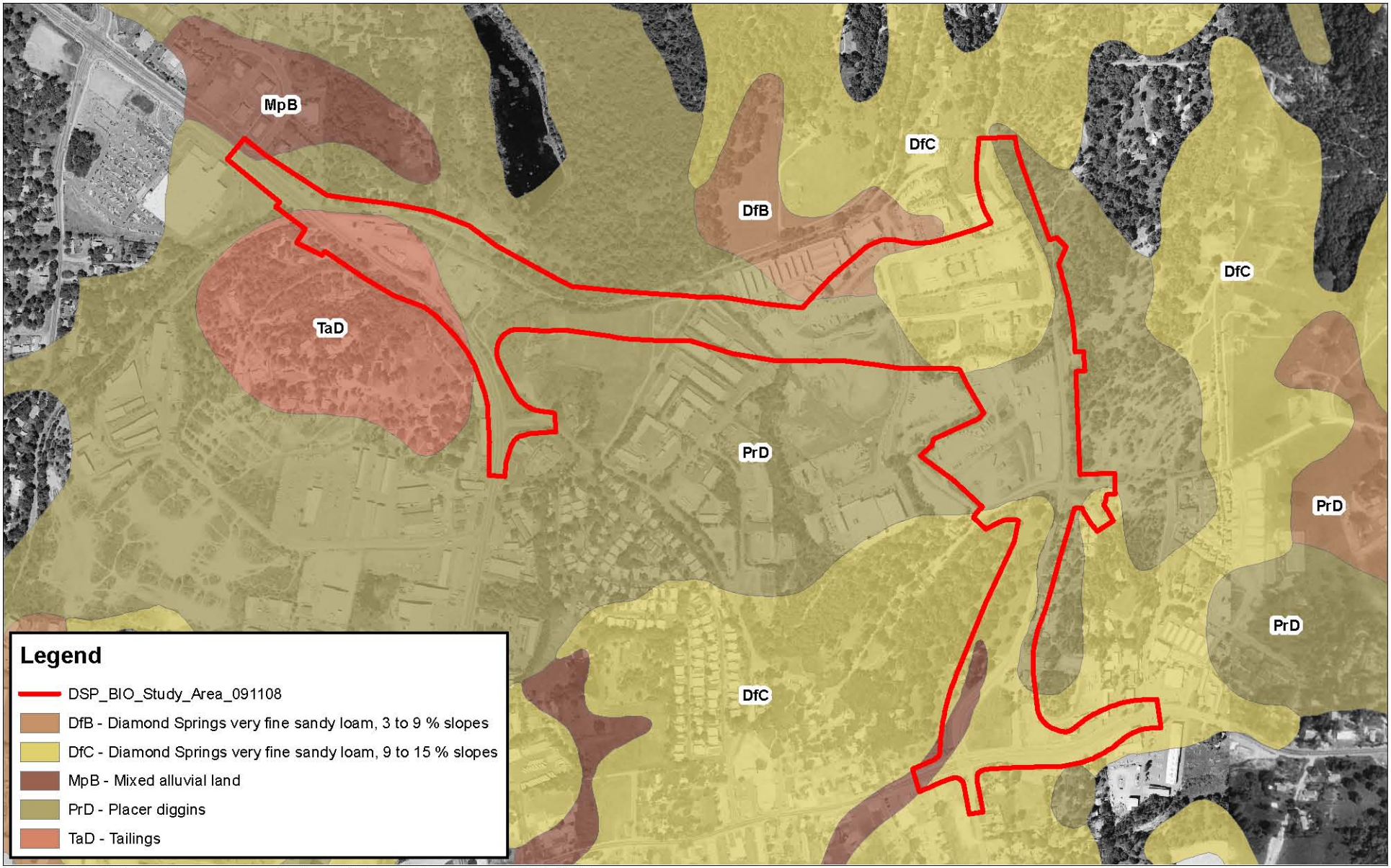
The NRCS Web Soil Survey (Soil Staff undated) shows five (5) soil types mapped within the project study area (Exhibit 3); detailed information about each soil type and its location is summarized in Table 2. Placer diggings (PrD) occur over a majority of the study area, and predominate in the portion that runs east-west between Missouri Flat Road and SR 49. These soils are classified as fine sandy loam with cobbles; the parent material is alluvium derived from mixed sources. Diamond Springs very fine sandy loam, 3 to 9 percent slopes and Diamond Springs very fine sandy loam, 9 to 15 percent slopes (DfC) are restricted to the eastern half of the study area. The parent material is fine-grained, acidic residuum weathered from igneous rock. Mixed alluvial land (MpB) Tailings (TaD) occur in the extreme northwestern portion of the study area west of Missouri Flat Road and are comprised of fragmental material.

**Table 2: Summary of USDA/NRCS Soil Descriptions**

| Code | Soil Series | Mapping Unit | Feature Containing Soil | NRCS Hydric/ Landform | Drainage Class | Parent Material |
|---|---|---|---|---|---|---|
| PrD | Placer Diggings | | All except RD4, RD7, RD7 | Yes, drainage channels | n/a | weathered from granodiorite or tonalite |
| DfB | Diamond Springs | Very fine sandy loam, 3-9% slopes | n/a | No | well drained | fine-grained, acidic residuum weathered from igneous rock |
| DfC | Diamond Springs | Very fine sandy loam, 9-15% slopes | RD4, RD6 | No | well drained | fine-grained, acidic residuum weathered from igneous rock |
| MpB | Mixed alluvial land | | RD7 | Yes, drainageways | somewhat poorly drained | mixed alluvium |
| TaD | Tailings | | n/a | Yes; drainageways, depressions | n/a | fragmental material |

## 3.7 - Vegetation

Vegetation communities within the study area are classified according to *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 2000). This system classifies communities based upon floristic components, which are the plant taxa making up the vegetation of a given area. The floristically-based system classifies communities at the lower units of the series or association, thereby allowing for a finer-scale description of the community and a better understanding of community function. Vegetation communities identified within the study area, the dominant species, and their wetland indicator status (Reed 1988) are described below.




Source: CTA, 2007; El Dorado County, 2005; USDA NRCS Soil Data, and MBA, 2008

NORTH

800 400 0 800

Feet

Michael Brandman Associates

# Exhibit 3
# Soils Map

A majority of the study area is highly compacted and unvegetated because of commercial and industrial development and past industrial mining activities that stripped native soils. Vegetated areas are restricted largely to the eastern boundary of the study area, particularly the southeastern tip; and a small section in the extreme north-central portion of the study area.

The study area contains three plant communities: mixed willow series, mixed oak series, and California annual grassland series. Mixed willow series is associated with Ephemeral Drainage 1 (ED1, Appendix C), which runs southeast to northwest through the central portion of the study area. Overstory species include Fremont cottonwood (*Populus fremontii,* FACW), valley oak (*Quercus lobata,* FAC), arroyo willow (*Salix lasiolepis,* FACW), and black willow (*S. gooddingii;* OBL). Shrub species observed include coyotebrush (*Baccharis pilularis,* NI), Himalayan blackberry (*Rubus discolor,* FACW), giant reed (*Arundo donax* FACW), coffeeberry (*Rhamnus californica,* NI), snowberry (*Symphorocarpos mollis,* NI), and poison oak (*Toxicodendron diversilobum,* NI). Other species include rush (*Juncus* sp.), St. John's wort (*Hypericum perfoliatum,* NI), tall annual willowherb (*Epilobium brachycarpum,* UPL), and sheep sorrel (*Rumex acetosella,* FAC).

Mixed oak series occurs primarily at the edges of the study area, particularly in the north-central portion, the eastern boundary, and the southeastern corner. Overstory species observed within the study area are foothill pine (*Pinus sabiniana,* NI) interior live oak (*Quercus wislizenii,* NI), and valley oak (FAC). Shrub species include whiteleaf manzanita (*Arctostaphylos viscida,* NI), greenleaf manzanita (*A. patula,* NI), California coffeeberry (NI), coyotebrush (NI), toyon (*Heteromeles arbutifolia,* NI), Scotch broom (*Cytisus scoparius,* NI), and Himalayan blackberry (FACW).

California annual grassland series is restricted to disturbed areas and to inclusions within compacted barren portion of the study area. These areas are highly disturbed by development and by past mining activities; the topography is uneven and native soils appear to have been removed. As a result of past disturbance, much of this habitat is sparsely vegetated by non-native, ruderal plant species. Species observed include clover (*Trifolium* sp.), vetch (*Vicia* sp.), narrowleaf plantain (*Plantago lanceolata,* FAC), curly dock (*Rumex crispus,* FACW), vinegar weed (*Trichostema lanceolatum,* NI), Fitch's tarweed (*Hemizonia fitchii,* NI), burr clover (*Medicago polymorpha,* NI), woolly mullein (*Verbascum thlapsus,* NI), canary grass (*Phalaris* sp.), dogtail grass (*Cynosurus echinatus,* NI), white sweet clover (*Melilotus alba,* FACU), Spanish lotus (*Lotus purshianus,* NI), bird's-foot trefoil (*Lotus corniculatus,* FAC), prickly lettuce (*Lactuca serriola,* FAC), and elegant madia (*Madia elegans,* NI). Ponded inclusions within this habitat support narrowleaf cattail (*Typha angustifolia,* OBL), nut sedge (*Cyperus eragrostis,* OBL), hyssop loosestrife (*Lythrum hyssopifolium,* FACW), and barnyard grass (*Echinochloa crus-galli,* FACW).

## SECTION 4: RATIONALE FOR JURISDICTIONAL DETERMINATION

The following section provides a summary of features delineated within the study area. These features are depicted on an oversized map provided in Appendix C. Wetland data forms are provided in Appendix B. Table 3 summarizes areas all delineated features within the study area.

**Table 3: Summary of Delineated Features**

| Federally Jurisdictional Features | Total Acreage |
|---|---|
| **Drainages** | |
| Ephemeral Drainage 1 | 0.05 (754 linear feet) |
| Ephemeral Drainage 2 | <0.01 (86 linear feet) |
| Ephemeral Drainage 3 | 0.04 (537 linear feet) |
| Ephemeral Drainage 4 | 0.01 (186 linear feet) |
| Roadside Ditch 4 | 0.02 (1,004 linear feet) |
| Roadside Ditch 5 | 0.03 (1,373 linear feet) |
| **Total Acreage of Drainages** | **0.15 (3,940 linear feet)** |
| **Wetlands** | |
| Fresh Emergent Wetland 1 | 0.02 acre |
| **Total Acreage of Wetlands** | **0.02 acre** |
| **Total Acreage, Federally Jurisdictional Features** | **0.17 (3,940 linear feet)** |
| **Non-Federally Jurisdictional Features** | **Total Acreage** |
| **Drainages** | |
| Roadside Ditch 1 | 0.04 (1,527 linear feet) |
| Roadside Ditch 2 | 0.02 (754 linear feet) |
| Roadside Ditch 3 | <0.01 (149 linear feet) |
| Roadside Ditch 6 | 0.02 (994 linear feet) |
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| Roadside Ditch 8 | <0.01 (77 linear feet) |
| Roadside Ditch 9 | <0.01 (161 linear feet) |
| Roadside Ditch 10 | <0.01 (118 linear feet) |
| Roadside Ditch 11 | 0.01 (299 linear feet) |
| | **0.10 (4,280 linear feet)** |
| **Wetlands** | |
| Wetland Swale 1 | 0.06 (856 linear feet) |
| Fresh Emergent Wetland 2 | 0.02 acre |
| **Total Acreage of Wetlands** | **0.08 acre (856 linear feet)** |
| **Total Acreage, Non-Federally Jurisdictional Features** | **0.18 (5,136 linear feet)** |

## 4.1 - Federally Jurisdictional Features

### 4.1.1 - Ephemeral Drainage 1

Ephemeral Drainage 1 (ED1) is located in the northwestern portion of the study area and flows northwest to southeast along the base of elevated, abandoned railroad tracks (Photograph 1, Appendix D). Flows originate in the northwest from localized runoff, including runoff from the proximate section of Missouri Flat Road to the south. ED1 flows east, enters a culvert beneath Old Depot Road, and broadens to support sparse patches of narrow-leaf cattail and other emergent vegetation. ED1 discharges into a federally-jurisdictional fresh emergent wetland (FEW1) after crossing beneath a bridged section of the railroad tracks. ED1 shows obvious bed and bank and destruction of vegetation throughout its length of 754 linear feet. The width of this feature varies between 1 and 9 feet, with an average width of approximately 3 feet. ED1 is contained entirely within the study area.

#### Jurisdictional Determination

ED1 exhibits bed and bank and destruction of vegetation. During high flow events, ED1, via FEW 1, likely discharges into Ephemeral Drainage 5 (ED5), which ultimately flows into Weber Creek, a TNW. Therefore, this feature is considered federally jurisdictional. USACE jurisdictional area within ED1 is 0.05 acre (754 linear feet).

### 4.1.2 - Ephemeral Drainage 2

Ephemeral Drainage 2 (ED2) is tributary to ED1. ED2 collects proximate surface flows from the intersection of Old Depot Road and Missouri Flat Road and carries them approximately 86 feet before intersecting with ED1. ED2 shows obvious bed and bank and destruction of vegetation throughout its length. Feature width varies from 1 to 3 feet, with an average width of 2 feet. This feature occurs entirely within the study area.

#### Jurisdictional Determination

ED2 exhibits bed and bank and destruction of vegetation. ED2 is tributary to ED1. During high flow events, ED1, via FEW 1, likely discharges into ED5, which ultimately flows into Weber Creek, a TNW. Therefore, ED2 is considered federally jurisdictional. USACE jurisdictional area within ED2 is <0.01 acre (86 linear feet).

### 4.1.3 - Ephemeral Drainage 3

Ephemeral Drainage 3 (ED3) is an RPW that originates just south of the central portion of the study area (Photograph 2, Appendix D). The majority of flows enter ED3 through storm water drainage systems that initiate at neighboring industrial and commercial developments. Storm water and nuisance flows from these developments are channeled into on-site systems within these developments, which then discharge into ED3 via PVC pipes extending into the bank several feet above the OHWM. In addition to these channeled sources of storm water, ED3 also receives surface

flows from the proximate developments/barren areas. The width of ED3 varies from 1 to 3 feet, with an average width of 2 feet. Based upon the USGS topographic map, ED3 continues north for approximately 0.4 mile and enters Weber Creek, a TNW.

Where ED3 originates south of the study area it is a deeply incised, broad, silt-lined basin with very steep, well-vegetated banks. In addition to the presence of water, OHWM indicators include shelving, litter, debris, watermarks, and aerial adventitious roots on tree trunks. ED3 is disturbed; it is lined with relatively barren post-industrial land and industrial and commercial development. During the field visits trash was observed throughout the length of ED3, including discarded oil containers, household refuse, and 50-gallon drums.

During the last several months of 2007, additional water entered ED3 as the result of a leaking underground water main servicing Gold Key Storage, which borders the study area on the northwest. Water exiting the broken water main traveled approximately 500 feet and entered ED3 beneath tree roots. According to Rick Siegel, Maintenance Supervisor at Gold Key Storage, the leak was discovered and repaired in December 2007 (Siegel, pers comm. 2008).

ED3 is visible on historic topographic maps dating back to 1893 (EDR 2007). In 1893, ED3 is shown as a solid-line feature suggesting it may have been a perennial feature. In subsequent maps (1949, 1950, 1973) it is shown as a dashed-line feature, suggesting that between 1893 and 1949 it became more ephemeral in nature. ED3 is also visible on aerial photographs dating back to 1935, at which time it was flanked by oak woodland habitat (EDR 2007). By 1952, a lime plant had been developed up to the eastern bank. By 1984, ED3 was flanked by development and mining activities.

#### Jurisdictional Determination

ED3 is an RPW that exhibits a "significant nexus" to Weber Creek, a TNW and is, therefore, under the jurisdiction of the USACE and not subject to significant nexus evaluation under the Rapanos Guidance. USACE jurisdictional area within ED3 is 0.04 acre (537 linear feet).

### 4.1.4 - Ephemeral Drainage 4

Ephemeral Drainage 4 (ED4) is in the central portion of the study area (Photograph 5, Appendix D). This feature originates underground to the south beneath a barren excavated area, and surfaces via a culvert within an elevated levee-type structure. This feature flows northeast out of the study area and, during periods of heavy precipitation, flows within ED4 likely enter Weber Creek to the north, a TNW. ED4 also receives sheet flows from ED1 and FEW1, which lie to the west. Vegetation where ED4 exits the study area is a combination of mixed oak and mixed willow series; there is a strong riparian component. ED4 exhibits bed and bank, OHWM, and destruction of vegetation throughout its length. The width of ED4 varies from 1 to 3 feet, with an average width of 2 feet.

### Jurisdictional Determination

ED4 exhibits bed and bank, OHWM and destruction of vegetation. During high flow events, ED4 enters Weber Creek, a TNW. Because ED4 exhibits a significant nexus to Weber Creek, ED4 is considered federally jurisdictional. USACE jurisdictional area within ED4 is 0.01 acre (186 linear feet).

### 4.1.5 - Roadside Ditches 4 and 5

Roadside Ditches 4 (RD4) and RD5 are narrow, unvegetated drainages located along SR 49 in the northeastern corner of the study area (Photograph 6, Appendix D). These features drain north to Weber Creek, a TNW. They exhibit a narrow bed and bank and OHWM throughout their lengths. They are 1 foot wide throughout the study area.

### Jurisdictional Determination

RD4 and RD5 exhibit narrow bed and bank and OHWM. These feature flow north directly into Weber creek, a TNW. Therefore, these feature are considered federally jurisdictional. USACE jurisdictional area within RD4 is 0.02 acre (1,004 linear feet), and within RD5 is 0.03 acre (1,373 linear feet).

### 4.1.6 - Fresh Emergent Wetland 1

Fresh Emergent Wetland 1 (FEW1) is located in the northwestern portion of the study area at the terminus of ED1 (Photograph 3, Appendix D). It is a low-lying feature at the northern base of the railroad tracks. It receives flows directly from ED1 as well as surface flows from adjacent uplands to the north and west. FEW1 was ponded during the field delineation conducted in January. Dominant plants in this feature include narrow-leaf cattail, nutsedge (*Cyperus eragrostis*), and Baltic rush (*Juncus balticus*).

### Jurisdictional Determination

During periods of heavy precipitation sheet flows from FEW1 enter ED4, which flows into Weber Creek, a TNW. Wetland data forms are provided in Appendix B. Because FEW1 exhibits a significant nexus to Weber Creek, it is considered federally jurisdictional. USACE jurisdictional area within FEW1 is 0.02 acre.

## 4.2 - Non-Federally Jurisdictional Features

### 4.2.1 - Roadside Ditch 1

Roadside Ditch 1 (RD1) borders Missouri Flat Road on the south and is located in the western portion of the study area. It is a narrow, unvegetated ditch that drains Missouri Flat Road and captures nuisance flows from commercial developments located immediately to the south. At its southern terminus, RD1 enters the existing storm drain system. All non-jurisdictional roadside ditches, including RD1, are approximately 1 foot wide throughout the study area.

### Jurisdictional Determination

RD1 does not enter, intersect, or otherwise capture flows from any TNW, RPW, or seasonal wetland; therefore, this feature does not contain any federally jurisdictional waters. In addition, post-Rapanos guidance provided by USACE (June 5, 2007) indicates that USACE generally will not assert jurisdiction over roadside ditches excavated wholly in and draining only uplands, and that do not carry relatively permanent flows. Therefore, this feature is considered non-federally jurisdictional. Total area of RD1 is 0.04 acre (1,527 linear feet).

## 4.2.2 - Roadside Ditch 2

Roadside Ditch 2 (RD2) is located at the east-central boundary of the study area along the western edge of SR 49. It is a narrow, unvegetated ditch that drains SR 49 and captures nuisance flows from industrial developments located immediately to the west. At its southern terminus, RD2 enters the existing storm drain system.

### Jurisdictional Determination

RD2 does not enter, intersect, or otherwise capture flows from any TNW, RPW, or seasonal wetland; therefore, this feature does not contain any federally jurisdictional waters. In addition, post-Rapanos guidance provided by USACE (June 5, 2007) indicates that USACE generally will not assert jurisdiction over roadside ditches excavated wholly in and draining only uplands, and that do not carry relatively permanent flows. Therefore, this feature is considered non-federally jurisdictional. Total area of RD2 is 0.02 acre (754 linear feet).

## 4.2.3 - Roadside Ditch 3

Roadside Ditch 3 (RD3) is located in the southwestern corner of the study area at the intersection of Missouri Flat road and China Garden Road. RD3 drains proximate sections of China Garden Road to the south and Missouri Flat Road to the west. RD3 flows east and enters a large fresh emergent wetland located outside of the study area. This fresh emergent wetland appears to be isolated. There is riparian vegetation associated with RD3 including Fremont cottonwood, Himalayan blackberry, and arroyo willow.

### Jurisdictional Determination

RD3 does not enter, intersect, or otherwise capture flows from any TNW, RPW, or seasonal wetland; therefore, this feature does not contain any federally jurisdictional waters. In addition, post-Rapanos guidance provided by USACE (June 5, 2007) indicates that USACE generally will not assert jurisdiction over roadside ditches excavated wholly in and draining only uplands, and that do not carry relatively permanent flows. Therefore, this feature is considered non-federally jurisdictional. Total area of RD3 is <0.01 acre (149 linear feet).

### 4.2.4 - Roadside Ditch 6

Roadside Ditch 6 (RD6) is located in the southeastern portion of the study area along the western side of SR 49. It is a shallow, unvegetated ditch that exhibits bed and bank and destruction of vegetation. RD6 drains SR 49 and undeveloped uplands to the west. RD6 originates just south of Lime Kiln Road and enter the existing storm drain system just north of Pleasant Valley Road.

#### Jurisdictional Determination

RD6 does not enter, intersect, or otherwise capture flows from any TNW, RPW, or seasonal wetland; therefore, this feature does not contain any federally jurisdictional waters. In addition, post-Rapanos guidance provided by USACE (June 5, 2007) indicates that USACE generally will not assert jurisdiction over roadside ditches excavated wholly in and draining only uplands, and that do not carry relatively permanent flows. Therefore, this feature is considered non-federally jurisdictional. Total area of RD6 is 0.02 acre (994 linear feet).

### 4.2.5 - Roadside Ditch 7

Roadside Ditch 7 (RD7) is located at the extreme southern corner of the study area just west of the intersection of SR 49 and Pleasant Valley Road. It is a shallow, unvegetated ditch that exhibits bed and bank and destruction of vegetation. RD7 drains Pleasant Valley Road and development to the north, and discharges into the existing storm drain system.

#### Jurisdictional Determination

RD7 does not enter, intersect, or otherwise capture flows from any TNW, RPW, or seasonal wetland; therefore, this feature does not contain any federally jurisdictional waters. In addition, post-Rapanos guidance provided by USACE (June 5, 2007) indicates that USACE generally will not assert jurisdiction over roadside ditches excavated wholly in and draining only uplands, and that do not carry relatively permanent flows. Therefore, this feature is considered non-federally jurisdictional. Total area of RD7 is <0.01 acre (201 linear feet).

### 4.2.6 - Roadside Ditch 8

Roadside Ditch 8 (RD8) is a very small drainage located in the central portion of the study area at the intersection of Bradley Drive and Throwita Way (Photograph 4, Appendix D). It is a shallow, unvegetated ditch that exhibits bed and bank and destruction of vegetation; RD8 continues south where it loses bed and bank characteristics and transitions into an upland swale. RD8 drains Throwita Way and Bradley Drive discharges at its northern end into the existing storm drain system.

#### Jurisdictional Determination

RD8 does not enter, intersect, or otherwise capture flows from any TNW, RPW, or seasonal wetland; therefore, this feature does not contain any federally jurisdictional waters. In addition, post-Rapanos guidance provided by USACE (June 5, 2007) indicates that USACE generally will not assert jurisdiction over roadside ditches excavated wholly in and draining only uplands, and that do not

carry relatively permanent flows. Therefore, this feature is considered non-federally jurisdictional. Total area of RD8 is <0.01 acre (77 linear feet).

### 4.2.7 - Roadside Ditch 9

Roadside Ditch 9 (RD9) is located in the east-central boundary of the study area along the eastern side of SR 49. It is a shallow, unvegetated ditch that exhibits bed and bank and destruction of vegetation. RD9 is the northernmost extent of WS1; it drains SR 49 and adjacent uplands and channels them south into WS1.

#### Jurisdictional Determination

RD9 does not enter, intersect, or otherwise capture flows from any TNW, RPW, or seasonal wetland; therefore, this feature does not contain any federally jurisdictional waters. In addition, post-Rapanos guidance provided by USACE (June 5, 2007) indicates that USACE generally will not assert jurisdiction over roadside ditches excavated wholly in and draining only uplands, and that do not carry relatively permanent flows. Therefore, this feature is considered non-federally jurisdictional. Total area of RD9 is <0.01 acre (161 linear feet).

### 4.2.8 - Roadside Ditch 10

Roadside Ditch 10 (RD10) is located in the central portion of the study area along the southern edge of Truck Street at the intersection with Throwita Way. It is a shallow, unvegetated ditch that exhibits bed and bank and destruction of vegetation. RD10 captures flows from Truck Street and channels them east. RD10 terminates at Throwita Way where it enters the existing storm drain system.

#### Jurisdictional Determination

RD10 does not enter, intersect, or otherwise capture flows from any TNW, RPW, or seasonal wetland; therefore, this feature does not contain any federally jurisdictional waters. In addition, post-Rapanos guidance provided by USACE (June 5, 2007) indicates that USACE generally will not assert jurisdiction over roadside ditches excavated wholly in and draining only uplands, and that do not carry relatively permanent flows. Therefore, this feature is considered non-federally jurisdictional. Total area of RD10 is <0.01 acre (118 linear feet).

### 4.2.9 - Roadside Ditch 11

Roadside Ditch 11 (RD11) is located in the central portion of the study area along the eastern edge of an unnamed dirt road. The road is located just west of Gold Key Storage. RD11 is a relatively shallow channel that exhibits weak bed and bank for approximately 52 feet; total length of this feature is 298 feet. RD11 flows southwest to northeast and ends where it enters a buried, vertical concrete culvert. It is assumed that from here water enters the existing storm water drainage system.

#### Jurisdictional Determination

RD11 does not enter, intersect, or otherwise capture flows from any TNW, RPW, or seasonal wetland; therefore, this feature does not contain any federally jurisdictional waters. In addition, post-

Rapanos guidance provided by USACE (June 5, 2007) indicates that USACE generally will not assert jurisdiction over roadside ditches excavated wholly in and draining only uplands, and that do not carry relatively permanent flows. Therefore, this feature is considered non-federally jurisdictional. Total area of RD11 is 0.01 acre (299 linear feet).

### 4.2.10 - Wetland Swale 1

Wetland Swale 1 (WS1) is located at the east-central edge of the study area on the east side of SR 49 (Photograph 7, Appendix D). WS1 is a relatively wide and deep drainage that flows south. It receives flows from adjacent uplands and from SR 49. This feature was ponded during the January and March field delineation. Vegetation associated with WS1 includes callitriche (*Callitriche heterophylla*), mannagrass (*Glyceria declinata*), and curly dock. WS1 terminates outside of the study area at the eastern end of Happy Lane, which is associated with rural residences. WS1 ranges from approximately 2 to 3.5 feet wide, with an average width of 3 feet.

#### Jurisdictional Determination

WS1 receives flows from the surrounding uplands. It does not intercept flows from or discharge into any federally jurisdictional wetlands or other waters. Therefore, WS1 is considered non-federally jurisdictional. The area within WS1 is 0.06 acre (856 linear feet).

### 4.2.11 - Fresh Emergent Wetland 2

Fresh Emergent Wetland 2 (FEW2) is located in the western portion of the study area (Photograph 8, Appendix D). FEW2 is an excavated pit that is in an area that was historically mined. FEW2 was ponded during the March field delineation. Water enters FEW2 from the surrounding, sparsely vegetated uplands; there is no outlet from this feature. Plants associated with FEW2 include arroyo willow, curly dock, and spikerush. There was significant fresh algal matting at the drying edges of FEW2 during the March 2008 field delineation.

#### Jurisdictional Determination

FEW2 is an isolated depression with no outlet, and is not adjacent to any other waters or wetlands. Therefore, this feature is considered non-federally jurisdictional. Total area of FEW2 is 0.02 acre.

## SECTION 5: SUMMARY OF FINDINGS

The delineation of waters of the U.S. identified seven (7) features that are USACE jurisdictional. These include four (4) ephemeral drainages, two (2) roadside ditches, and one (1) fresh emergent wetland. These features exhibit a "significant nexus" to Weber Creek, a TNW. As such, these features are subject to regulation by the USACE. Total acreage of USACE jurisdictional features is 0.17 acre (3,940 linear feet), of which 0.02 acre is wetlands.

The study area contains 11 features not considered federally jurisdictional. They include nine (9) roadside ditches that do not enter, intersect, or otherwise capture flows from any TNW, RPW, or seasonal wetland; therefore, these features do not contain any federally jurisdictional waters. There is also one isolated wetland swale and one fresh emergent wetland that are isolated and, therefore, considered federally non-jurisdictional. Total acreage of non-federally jurisdictional features is 0.18 acre (5,136 linear feet).

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# Appendix A: Historical Topographic Maps and Aerial Photography

# The EDR Aerial Photo Decade Package

**Lyndeman Property**
**Throwita Way**
**Placerville, CA 95667**

**Inquiry Number: 2018466.5**

**August 30, 2007**

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## Date EDR Searched Historical Sources:

Aerial Photography August 30, 2007

## Target Property:

Throwita Way

Placerville, CA 95667

| ***Year*** | ***Scale*** | ***Details*** | ***Source*** |
|---|---|---|---|
| 1935 | Aerial Photograph. Scale: 1"=166' | Flight Year: 1935<br>Best Copy Available from original source | Wallace |
| 1952 | Aerial Photograph. Scale: 1"=555' | Flight Year: 1952 | Robinson |
| 1962 | Aerial Photograph. Scale: 1"=555' | Flight Year: 1962 | Cartwright |
| 1984 | Aerial Photograph. Scale: 1"=690' | Flight Year: 1984 | WSA |
| 1993 | Aerial Photograph. Scale: 1"=666' | Flight Year: 1993 | USGS |
| 1998 | Aerial Photograph. Scale: 1"=666' | Flight Year: 1998 | USGS |


INQUIRY #: 2018466.5
YEAR: 1935
= 166'
N
EDR Environmental Data Resources Inc


INQUIRY #: 2018466.5
YEAR: 1952
= 555'
N
EDR Environmental Data Resources Inc


INQUIRY #: 2018466.5
YEAR: 1962
= 555'
N


INQUIRY #: 2018466.5
YEAR: 1984
= 690'
N
EDR Environmental Data Resources Inc


INQUIRY #: 2018466.5
YEAR: 1993
= 666'
N


INQUIRY #: 2018466.5
YEAR: 1998
= 666'
N

# EDR Historical Topographic Map Report

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**Inquiry Number: 2018466.4**

**August 30, 2007**

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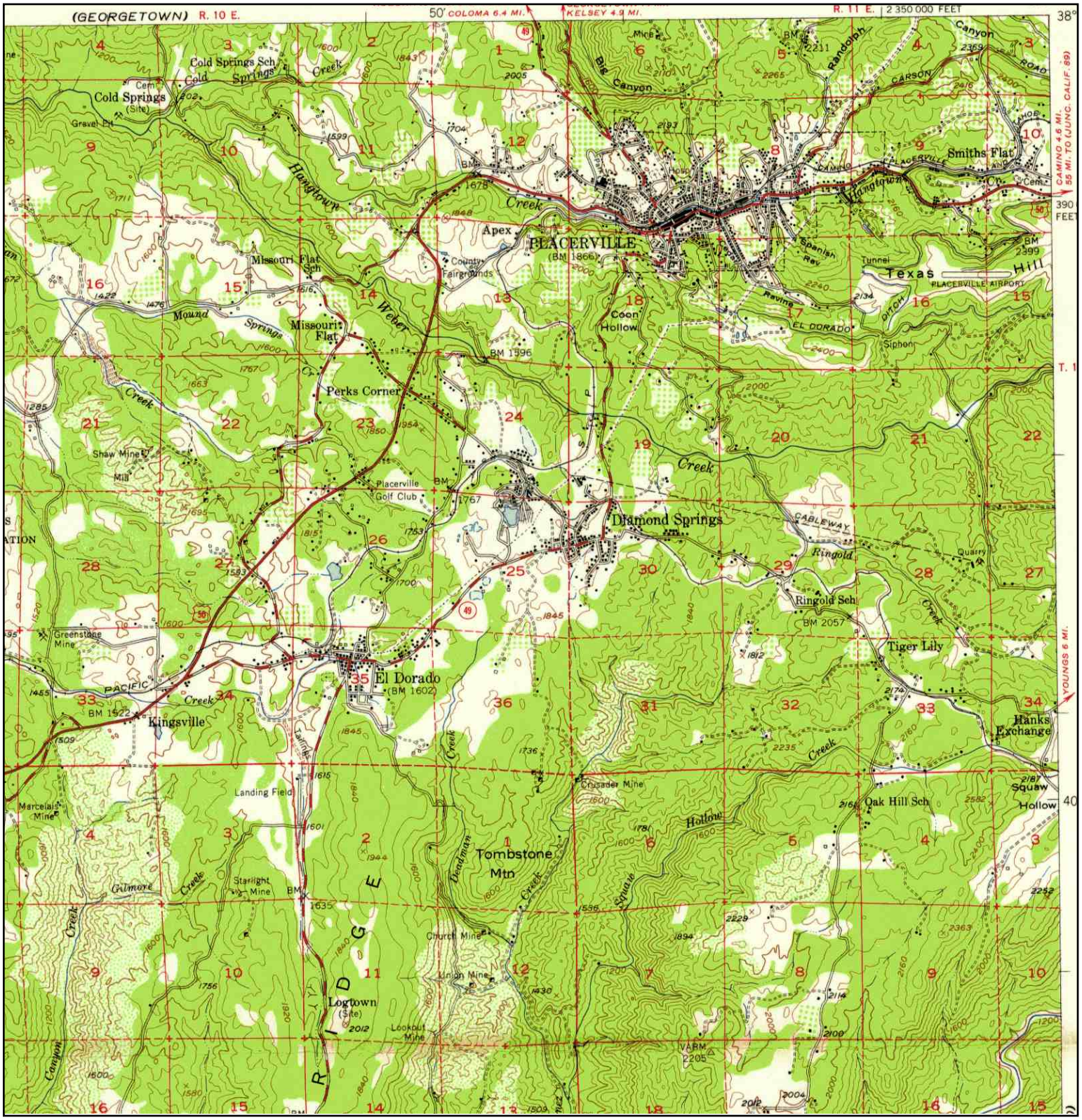
# Historical Topographic Map

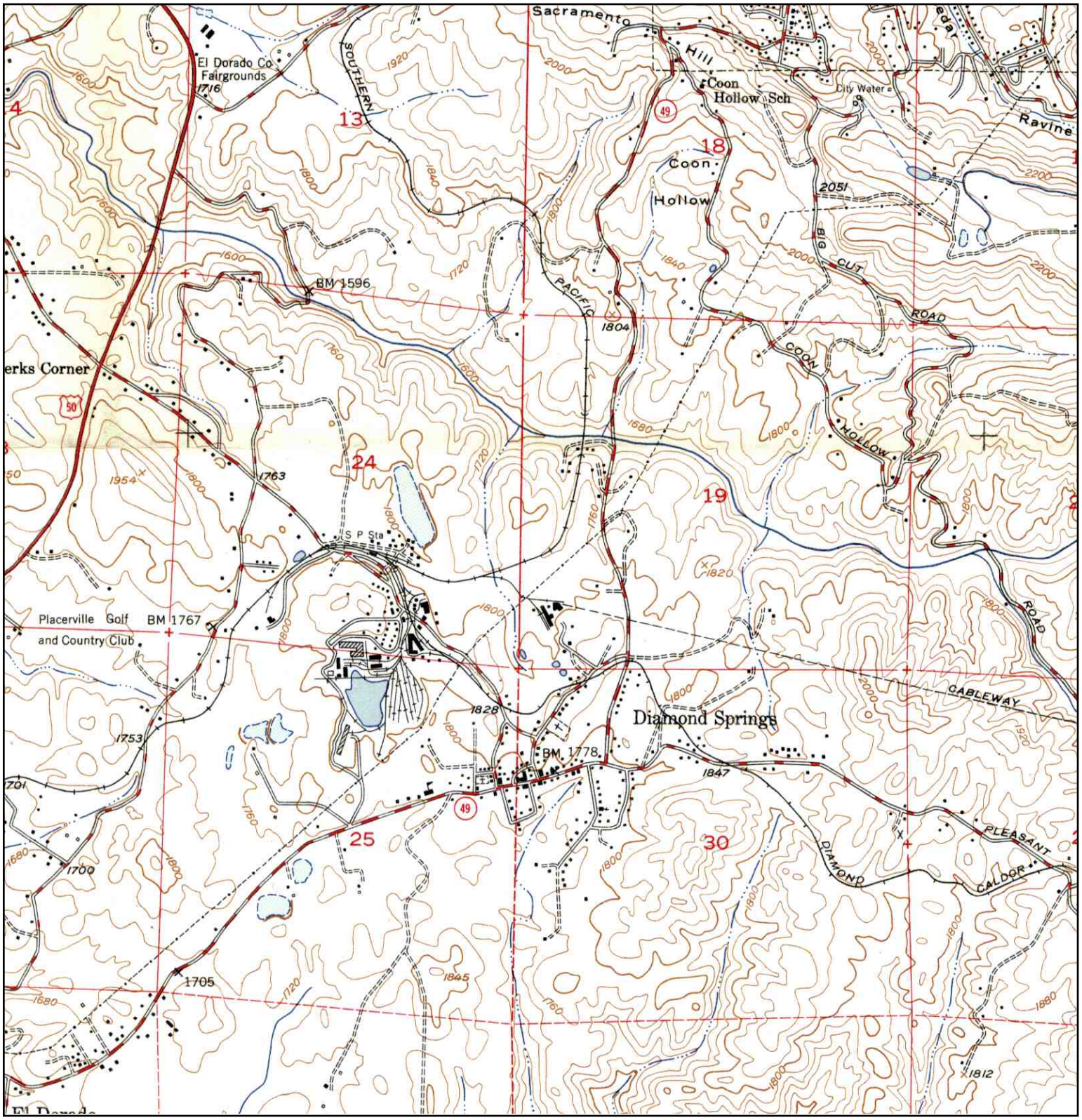

| | | | |
|---|---|---|---|
| N | TARGET QUAD<br>NAME: PLACERVILLE<br>MAP YEAR: 1893<br><br>SERIES: 30<br>SCALE: 1:125000 | SITE NAME: Lyndeman Property<br>ADDRESS: Throwita Way<br>Placerville, CA 95667<br>LAT/LONG: 38.7008 / 120.8159 | CLIENT: Youngdahl Consulting Group<br>CONTACT: Laurie Israel<br>INQUIRY#: 2018466.4<br>RESEARCH DATE: 08/30/2007 |

# Historical Topographic Map



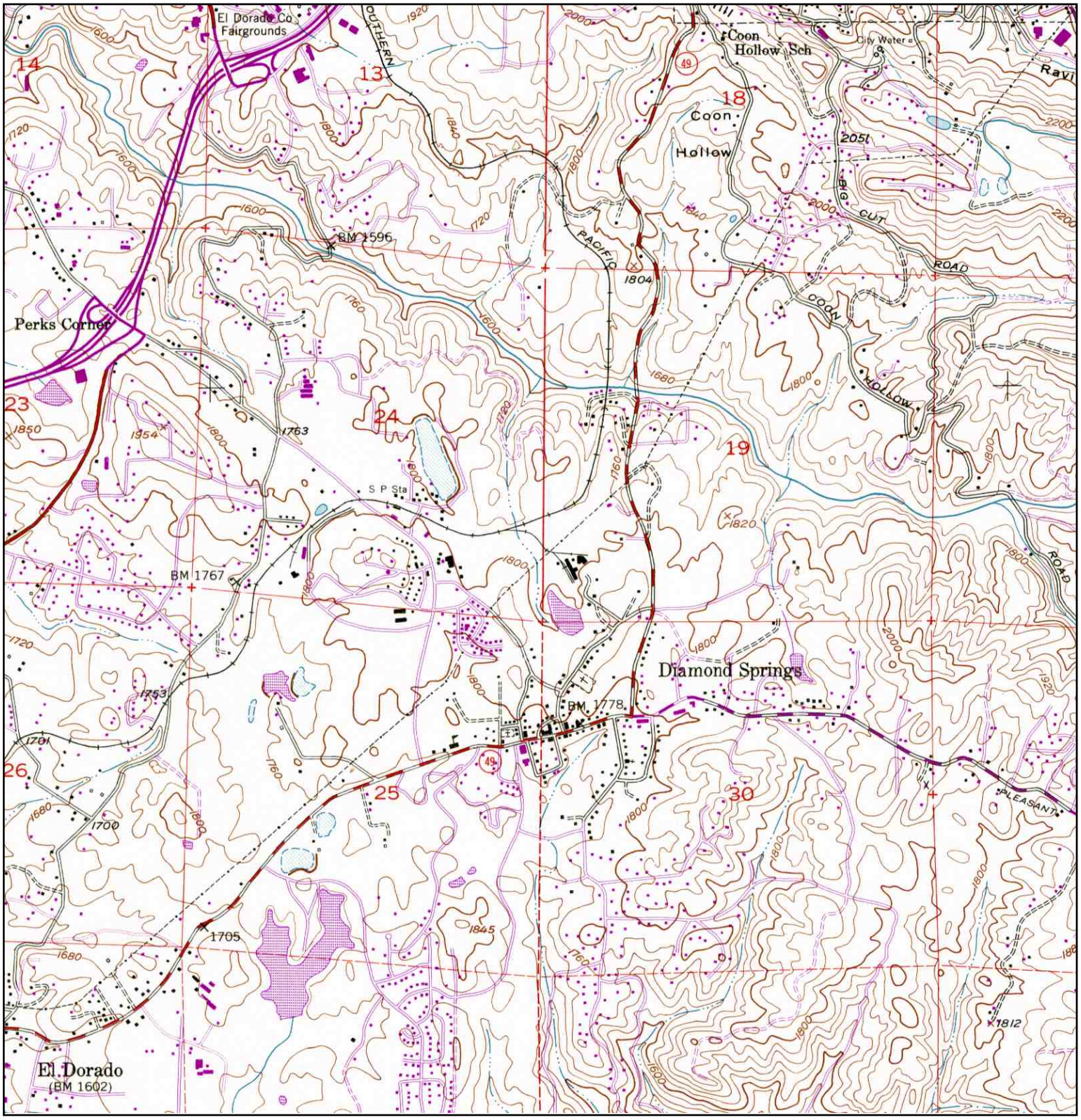

| | | | |
|---|---|---|---|
| N | TARGET QUAD<br>NAME: PLACERVILLE<br>MAP YEAR: 1949<br><br>SERIES: 15<br>SCALE: 1:62500 | SITE NAME: Lyndeman Property<br>ADDRESS: Throwita Way<br>Placerville, CA 95667<br>LAT/LONG: 38.7008 / 120.8159 | CLIENT: Youngdahl Consulting Group<br>CONTACT: Laurie Israel<br>INQUIRY#: 2018466.4<br>RESEARCH DATE: 08/30/2007 |

# Historical Topographic Map




| | | | |
|---|---|---|---|
| N | TARGET QUAD<br>NAME: PLACERVILLE<br>MAP YEAR: 1950<br><br>SERIES: 7.5<br>SCALE: 1:24000 | SITE NAME: Lyndeman Property<br>ADDRESS: Throwita Way<br>Placerville, CA 95667<br>LAT/LONG: 38.7008 / 120.8159 | CLIENT: Youngdahl Consulting Group<br>CONTACT: Laurie Israel<br>INQUIRY#: 2018466.4<br>RESEARCH DATE: 08/30/2007 |

# Historical Topographic Map




| N | | | |
|---|---|---|---|
| | TARGET QUAD<br>NAME: PLACERVILLE<br>MAP YEAR: 1973<br>PHOTOREVISED FROM:1949<br>SERIES: 7.5<br>SCALE: 1:24000 | SITE NAME: Lyndeman Property<br>ADDRESS: Throwita Way<br>Placerville, CA 95667<br>LAT/LONG: 38.7008 / 120.8159 | CLIENT: Youngdahl Consulting Group<br>CONTACT: Laurie Israel<br>INQUIRY#: 2018466.4<br>RESEARCH DATE: 08/30/2007 |

# Appendix B: Wetlands Data Forms

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project Site: **Diamond Springs Parkway** City/County: **El Dorado** Sampling Date: **1/10/2008**

Applicant/Owner: **El Dorado County Dept. of Transportation** State: **CA** Sampling Point: **1N**

Investigator(s): **T. Toure, D. Stout** Section, Township, Range: **10N 10E Section 24**

Landform (hillslope, terrace,etc): Local relief (concave, conves, none): **Concave** Slope (%) **Jan-00**

Subregion (LRR): **C** Lat: **38 42 10.92** Long: **120 49 24.96** Datum:

Soil Map Unit Name: **Placer Diggings** NWI Classification: **n/a**

Are Climatic / hydrological conditions on the site typical this time of Year? Yes: ☑ No: ☐ (If no, explain in Remarks.)

Are: Vegetation: ☑ Soil: ☑ or Hydrology ☑ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are: Vegetation: ☐ Soil: ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

| | | |
|---|---|---|
| **Hydrophytic Vegetation Present?** | Yes ☑ | No ☐ |
| **Hydric Soil Present?** | Yes ☐ | No ☑ |
| **Wetland Hydrology Present?** | Yes ☑ | No ☐ |

**Is the Sampled Area within a Wetland?** Yes ☐ No ☑

**Remarks:**

Feature is a low-lying, linear swale adjacent to elevated railroad tracks to the north and development to the south. Sparsely vegetated and ponded to a depth of approximately 4 inches. Meets vegetation and hydrology criteria; does not meets soils criter

**VEGETATION**

| Tree Stratum (Use scientific names) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | | | |
| **Sapling/Shrub Stratum** | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | | | |
| **Herb Stratum** | | | |
| 1. **Typha angustifolia** | 10 | Yes | OBL |
| 2. **Juncus balticus** | 5 | Yes | OBL |
| 3. **Cyperus eragrostis** | 2 | No | OBL |
| 4. **Cynodon dactylon** | 2 | No | FAC |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 19 | | |
| **Woody Vine Stratum** | | | |
| 1. | | | |
| 2. | | | |
| Total Cover: | | | |

% Bare Ground in Herb Stratum: 81 % Cover of Biotic Crust:

**Dominance Test worksheet:**

Number of Dominant Species That are OBL FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100.0%** (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by | |
|---|---|---|---|
| OBL species | 17 | x 1 = | 17 |
| FACW species | 0 | x 2 = | 0 |
| FAC species | 2 | x 3 = | 6 |
| FACU species | 0 | x 4 = | 0 |
| UPL species | 0 | x 5 = | 0 |
| Column Totals: | 19 (A) | | 23 (B) |

Prevalence Index = B/A = **1.21**

**Hydrophytic Vegetation Indicatore:**

- ☑ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicator if hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ☑ No ☐

**Remarks:**

Feature is dominated by hydrophytes. Meets vegetation criteria.

## SOIL

Sampling Point: **1N**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (Inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Redox Features Type | Redox Features Loc | Redox Features % | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 0-14 | 2.5Y 3/3 | 100 | | | | | | clay loam | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix [2] Location: PL=Pore Lining, RC=Root Channel, M=Matrixc

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted)**

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depresssions (F8)
- ☐ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** Yes ☐ No ☑

**Remarks**

Soils are high chroma with no redox features present. Does not meet soils criteria.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ☑ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☑ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation on Aerial Imagery (B7)
- ☐ Water-stained Leaves (B8)
- ☐ Biotic Crust (B10)
- ☐ Aquatic Invertebrates (B11)
- ☐ Crayfish Burows (B12)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C2)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soil (C6)
- ☐ Muck Surface (C7)
- ☐ Saturation on Aerial Imagery (C8)
- ☐ Shallow Aquitard (D4)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more is required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B9)
- ☐ Dry Season Water Table (C3)
- ☐ Salt Depostis (C5)
- ☐ Mud Casts (C9)
- ☐ FAC-Neutral Test (D7)

**Field Observations:**

| | | | | | |
|---|---|---|---|---|---|
| Surface Water Present? | Yes ☑ | No ☐ | Depth (inches): | 4 | |
| Water Table Present? | Yes ☐ | No ☐ | Depth (inches): | | |
| Saturation Present? (includes capillary fringe) | Yes ☑ | No ☐ | Depth (inches): | 0 | |

**Wetland Hydrology Present?** Yes ☑ No ☐

**Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:**

Feature is ponded to depth of approximately 4 inches. Meets hydrology criteria.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project Site: **Diamond Springs Parkway** City/County: **El Dorado** Sampling Date: **1/10/2008**

Applicant/Owner: **El Dorado County Dept. of Transportation** State: **CA** Sampling Point: **2N**

Investigator(s): **T. Toure, D. Stout** Section, Township, Range: **10N 10E Section 24**

Landform (hillslope, terrace,etc): Local relief (concave, conves, none): **Concave** Slope (%) **Jan-00**

Subregion (LRR): **C** Lat: **38 42 10.46** Long: **120 49 23.95** Datum:

Soil Map Unit Name: **Placer Diggings** NWI Classification: **n/a**

Are Climatic / hydrological conditions on the site typical this time of Year? Yes: ☑ No: ☐ (If no, explain in Remarks.)

Are: Vegetation: ☑ Soil: ☑ or Hydrology ☑ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are: Vegetation: ☐ Soil: ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

| | | |
|---|---|---|
| **Hydrophytic Vegetation Present?** | Yes ☑ | No ☐ |
| **Hydric Soil Present?** | Yes ☐ | No ☑ |
| **Wetland Hydrology Present?** | Yes ☑ | No ☐ |

**Is the Sampled Area within a Wetland?** Yes ☐ No ☑

**Remarks:**

Feature is a low-lying swale between rail road track to the north and development to the south. Meets vegetation and hydrology criteria; does not meet soils criteria. Feature is not a wetland.

**VEGETATION**

| Tree Stratum (Use scientific names) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | | | |
| **Sapling/Shrub Stratum** | | | |
| 1. **Salix lasiolepis** | 2 | Yes | FACW |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 2 | | |
| **Herb Stratum** | | | |
| 1. **Juncus balticus** | 95 | Yes | OBL |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 95 | | |
| **Woody Vine Stratum** | | | |
| 1. | | | |
| 2. | | | |
| Total Cover: | | | |

% Bare Ground in Herb Stratum: 5 % Cover of Biotic Crust:

**Dominance Test worksheet:**

Number of Dominant Species That are OBL FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100.0%** (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by | |
|---|---|---|---|
| OBL species | 95 | x 1 = | 95 |
| FACW species | 2 | x 2 = | 4 |
| FAC species | 0 | x 3 = | 0 |
| FACU species | 0 | x 4 = | 0 |
| UPL species | 0 | x 5 = | 0 |
| Column Totals: | 97 (A) | | 99 (B) |

Prevalence Index = B/A = **1.02**

**Hydrophytic Vegetation Indicatore:**

- ☑ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicator if hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ☑ No ☐

**Remarks:**

Feature is dominated by hydrophytes. Meets vegetation criteria.

## SOIL

Sampling Point: **2N**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (Inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Redox Features Type | Redox Features Loc | Redox Features % | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 0-12 | 2.5Y 4/3 | 100 | | | | | | sandy loam | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix [2] Location: PL=Pore Lining, RC=Root Channel, M=Matrixc

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted)**

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depresssions (F8)
- ☐ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ☐ **No** ☑

**Remarks**

Soils are high chroma with no redox features. Does not meet soils criteria.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ☑ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☑ Water Marks (B1) (**Nonriverine**)
- ☑ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation on Aerial Imagery (B7)
- ☐ Water-stained Leaves (B8)
- ☐ Biotic Crust (B10)
- ☐ Aquatic Invertebrates (B11)
- ☐ Crayfish Burows (B12)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C2)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soil (C6)
- ☐ Muck Surface (C7)
- ☐ Saturation on Aerial Imagery (C8)
- ☐ Shallow Aquitard (D4)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more is required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B9)
- ☐ Dry Season Water Table (C3)
- ☐ Salt Depostis (C5)
- ☐ Mud Casts (C9)
- ☐ FAC-Neutral Test (D7)

**Field Observations:**

| | | | | | |
|---|---|---|---|---|---|
| Surface Water Present? | **Yes** ☑ | **No** ☐ | **Depth (inches):** | 1 | |
| Water Table Present? | **Yes** ☐ | **No** ☐ | **Depth (inches):** | | |
| Saturation Present? (includes capillary fringe) | **Yes** ☑ | **No** ☐ | **Depth (inches):** | 0 | |

**Wetland Hydrology Present?** **Yes** ☑ **No** ☐

**Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:**

Feature ponded to a depth of approximately 1 inch. Meets hydrology criteria.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project Site: **Diamond Springs Parkway** City/County: **El Dorado** Sampling Date: **1/10/2008**

Applicant/Owner: **El Dorado County Dept. of Transportation** State: **CA** Sampling Point: **3**

Investigator(s): **T. Toure, D. Stout** Section, Township, Range: **10N 10E Section 24**

Landform (hillslope, terrace,etc): Local relief (concave, conves, none): **Concave** Slope (%) **Jan-00**

Subregion (LRR): **C** Lat: **38 42 10.46** Long: **120 49 23.95** Datum:

Soil Map Unit Name: **Placer Diggings** NWI Classification: **n/a**

Are Climatic / hydrological conditions on the site typical this time of Year? Yes: ☐ No: ☐ (If no, explain in Remarks.)

Are: Vegetation: ☑ Soil: ☑ or Hydrology ☑ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are: Vegetation: ☐ Soil: ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

| | | |
|---|---|---|
| **Hydrophytic Vegetation Present?** | Yes ☑ | No ☐ |
| **Hydric Soil Present?** | Yes ☑ | No ☐ |
| **Wetland Hydrology Present?** | Yes ☑ | No ☐ |

**Is the Sampled Area within a Wetland?** Yes ☑ No ☐

**Remarks:**

Feature is a fresh emergent wetland situated below elevated rail road tracks. Contiguous with data points 1N and 2N. Meets vegetation, soils, and hydrololgy criteria. Feature is a wetland.

**VEGETATION**

| Tree Stratum (Use scientific names) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | | | |
| **Sapling/Shrub Stratum** | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | | | |
| **Herb Stratum** | | | |
| 1. **Juncus balticus** | 50 | Yes | OBL |
| 2. **Typha angustifolia** | 30 | Yes | OBL |
| 3. **Lolium multiflorum** | 15 | No | FAC |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 95 | | |
| **Woody Vine Stratum** | | | |
| 1. | | | |
| 2. | | | |
| Total Cover: | | | |

% Bare Ground in Herb Stratum: 5 % Cover of Biotic Crust:

**Dominance Test worksheet:**

Number of Dominant Species That are OBL FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100.0%** (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by | |
|---|---|---|---|
| OBL species | 80 | x 1 = | 80 |
| FACW species | 0 | x 2 = | 0 |
| FAC species | 15 | x 3 = | 45 |
| FACU species | 0 | x 4 = | 0 |
| UPL species | 0 | x 5 = | 0 |
| Column Totals: | 95 (A) | | 125 (B) |

Prevalence Index = B/A = **1.32**

**Hydrophytic Vegetation Indicatore:**

☑ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicator if hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ☑ No ☐

**Remarks:**

## SOIL

Sampling Point: **3**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (Inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Redox Features Type | Redox Features Loc | Redox Features % | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 0-12 | 2.5Y 4/2 | 95 | 5YR 4/6 | 5 | C | M | | clay loam | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix [2] Location: PL=Pore Lining, RC=Root Channel, M=Matrixc

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted)**

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depresssions (F8)
- ☐ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ☑ **No** ☐

**Remarks**

Soils low chroma with redox concentrations present. Meets hydric criteria F3.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ☑ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation on Aerial Imagery (B7)
- ☑ Water-stained Leaves (B8)
- ☑ Biotic Crust (B10)
- ☐ Aquatic Invertebrates (B11)
- ☐ Crayfish Burows (B12)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C2)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soil (C6)
- ☐ Muck Surface (C7)
- ☐ Saturation on Aerial Imagery (C8)
- ☐ Shallow Aquitard (D4)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more is required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B9)
- ☐ Dry Season Water Table (C3)
- ☐ Salt Depostis (C5)
- ☐ Mud Casts (C9)
- ☐ FAC-Neutral Test (D7)

**Field Observations:**

| | | | | | |
|---|---|---|---|---|---|
| Surface Water Present? | **Yes** ☑ | **No** ☐ | **Depth (inches):** | 2 | |
| Water Table Present? | **Yes** ☐ | **No** ☐ | **Depth (inches):** | | |
| Saturation Present? (includes capillary fringe) | **Yes** ☑ | **No** ☐ | **Depth (inches):** | 0 | |

**Wetland Hydrology Present?** **Yes** ☑ **No** ☐

**Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:**

Feature ponded to a depth of approximately 2 inches at center. Soils saturated throughout. Meets hydrology criteria.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project Site: **Diamond Springs Parkway** City/County: **El Dorado** Sampling Date: **1/10/2008**

Applicant/Owner: **El Dorado County Dept. of Transportation** State: **CA** Sampling Point: **4N**

Investigator(s): **T. Toure, D. Stout** Section, Township, Range: **10N 10E Section 24**

Landform (hillslope, terrace,etc): Local relief (concave, conves, none): **None** Slope (%) **Jan-00**

Subregion (LRR): **C** Lat: **38 42 9.37** Long: **120 49 19.80** Datum:

Soil Map Unit Name: **Placer Diggings** NWI Classification: **n/a**

Are Climatic / hydrological conditions on the site typical this time of Year? Yes: ☑ No: ☐ (If no, explain in Remarks.)

Are: Vegetation: ☑ Soil: ☑ or Hydrology ☑ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are: Vegetation: ☐ Soil: ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

| | | |
|---|---|---|
| **Hydrophytic Vegetation Present?** | Yes ☑ | No ☐ |
| **Hydric Soil Present?** | Yes ☐ | No ☑ |
| **Wetland Hydrology Present?** | Yes ☑ | No ☐ |

**Is the Sampled Area within a Wetland?** Yes ☐ No ☑

**Remarks:**

Upland to Data Point 3. Located at the edge of a fresh emergent wetland. Meets vegetation and hydrology criteria.; does not meet soils criteria. Area is not a wetland.

**VEGETATION**

| Tree Stratum (Use scientific names) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. **Quercus wislizenii** | 30 | Yes | UPL |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 30 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. **Rubus discolor** | 20 | Yes | FACW |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 20 | | |
| **Herb Stratum** | | | |
| 1. **Lolium multiflorum** | 70 | Yes | FAC |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 70 | | |
| **Woody Vine Stratum** | | | |
| 1. | | | |
| 2. | | | |
| Total Cover: | | | |

% Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust:

**Dominance Test worksheet:**

Number of Dominant Species That are OBL FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **66.7%** (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by | |
|---|---|---|---|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 20 | x 2 = | 40 |
| FAC species | 70 | x 3 = | 210 |
| FACU species | 0 | x 4 = | 0 |
| UPL species | 30 | x 5 = | 150 |
| Column Totals: | 120 (A) | | 400 (B) |

Prevalence Index = B/A = **3.33**

**Hydrophytic Vegetation Indicatore:**

- ☑ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicator if hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ☑ No ☐

**Remarks:**

## SOIL

Sampling Point: **4N**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (Inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Redox Features Type | Redox Features Loc | Redox Features % | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 0-12 | 2.5Y 4/2 | 100 | | | | | | clay loam | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix [2] Location: PL=Pore Lining, RC=Root Channel, M=Matrixc

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted)**

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depresssions (F8)
- ☐ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ☐ **No** ☑

**Remarks**

Soils are relatively high chroma with no redox features present. Does not meet soils criteria.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☑ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation on Aerial Imagery (B7)
- ☑ Water-stained Leaves (B8)
- ☐ Biotic Crust (B10)
- ☐ Aquatic Invertebrates (B11)
- ☐ Crayfish Burows (B12)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C2)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soil (C6)
- ☐ Muck Surface (C7)
- ☐ Saturation on Aerial Imagery (C8)
- ☐ Shallow Aquitard (D4)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more is required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B9)
- ☐ Dry Season Water Table (C3)
- ☐ Salt Depostis (C5)
- ☐ Mud Casts (C9)
- ☐ FAC-Neutral Test (D7)

**Field Observations:**

| | | | | | | |
|---|---|---|---|---|---|---|
| Surface Water Present? | **Yes** | ☐ | **No** | ☑ | **Depth (inches):** | |
| Water Table Present? | **Yes** | ☐ | **No** | ☐ | **Depth (inches):** | |
| Saturation Present? (includes capillary fringe) | **Yes** | ☑ | **No** | ☐ | **Depth (inches):** | 0 |

**Wetland Hydrology Present?** **Yes** ☑ **No** ☐

**Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:**

Area is saturated to the surface and exhibits some sediment deposits and water-stained leaves. Meets hydrology criteria.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project Site: **Diamond Springs Parkway** City/County: **El Dorado** Sampling Date: **3/20/2008**

Applicant/Owner: **El Dorado County Dept. of Transportation** State: **CA** Sampling Point: **5**

Investigator(s): **D. Stout** Section, Township, Range: **10N 10E Section 24**

Landform (hillslope, terrace,etc): Local relief (concave, conves, none): **Concave** Slope (%) **Mar-00**

Subregion (LRR): **C** Lat: **38 42 07** Long: **120 49 27** Datum:

Soil Map Unit Name: **Placer Diggings** NWI Classification: **n/a**

Are Climatic / hydrological conditions on the site typical this time of Year? Yes: ☑ No: ☐ (If no, explain in Remarks.)

Are: Vegetation: ☑ Soil: ☑ or Hydrology ☑ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are: Vegetation: ☐ Soil: ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

| | | |
|---|---|---|
| **Hydrophytic Vegetation Present?** | **Yes** ☑ | **No** ☐ |
| **Hydric Soil Present?** | **Yes** ☑ | **No** ☐ |
| **Wetland Hydrology Present?** | **Yes** ☑ | **No** ☐ |

**Is the Sampled Area within a Wetland?** **Yes** ☑ **No** ☐

**Remarks:**

Area around feature was industrially mined. Feature is a seasonal wetland located in an excavated pit. Native soils, vegetation, and hydrology no longer present. Features meets wetland criteria.

**VEGETATION**

| Tree Stratum (Use scientific names) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | | | |
| **Sapling/Shrub Stratum** | | | |
| 1. **Salix lasiolepis** | 5 | Yes | FACW |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 5 | | |
| **Herb Stratum** | | | |
| 1. **Eleocharis macrostachya** | 5 | Yes | OBL |
| 2. **Glyceria sp.** | 3 | Yes | OBL |
| 3. **Rumex crispus** | 1 | No | FACW |
| 4. **Xanthium strumarium** | 1 | No | FAC |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 10 | | |
| **Woody Vine Stratum** | | | |
| 1. | | | |
| 2. | | | |
| Total Cover: | | | |

% Bare Ground in Herb Stratum: % Cover of Biotic Crust:

**Dominance Test worksheet:**

Number of Dominant Species That are OBL FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100.0%** (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by | |
|---|---|---|---|
| OBL species | 8 | x 1 = | 8 |
| FACW species | 6 | x 2 = | 12 |
| FAC species | 1 | x 3 = | 3 |
| FACU species | 0 | x 4 = | 0 |
| UPL species | 0 | x 5 = | 0 |
| Column Totals: | 15 (A) | | 23 (B) |

Prevalence Index = B/A = **1.53**

**Hydrophytic Vegetation Indicatore:**

- ☑ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicator if hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** **Yes** ☑ **No** ☐

**Remarks:**

Feature is dominated largely by OBL plant species. Deepest portion of feature unvegetated. Meets vegetation criteria.

## SOIL

Sampling Point: 5

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (Inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Redox Features Type | Redox Features Loc | Redox Features % | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix [2] Location: PL=Pore Lining, RC=Root Channel, M=Matrixc

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted)**

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depresssions (F8)
- ☐ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** Yes ☑ No ☐

**Remarks**

Soils not sampled. Feature is ponded to a depth of approximately 18 inches. Invertebrates and tadpoles present.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ☑ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☑ Water Marks (B1) (**Nonriverine**)
- ☑ Sediment Deposits (B2) (**Nonriverine**)
- ☑ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation on Aerial Imagery (B7)
- ☑ Water-stained Leaves (B8)
- ☑ Biotic Crust (B10)
- ☑ Aquatic Invertebrates (B11)
- ☐ Crayfish Burows (B12)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C2)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soil (C6)
- ☐ Muck Surface (C7)
- ☐ Saturation on Aerial Imagery (C8)
- ☐ Shallow Aquitard (D4)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more is required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B9)
- ☐ Dry Season Water Table (C3)
- ☐ Salt Depostis (C5)
- ☐ Mud Casts (C9)
- ☐ FAC-Neutral Test (D7)

**Field Observations:**

| | | | | | | |
|---|---|---|---|---|---|---|
| Surface Water Present? | Yes | ☑ | No | ☐ | Depth (inches): | 18 |
| Water Table Present? | Yes | ☐ | No | ☐ | Depth (inches): | |
| Saturation Present? (includes capillary fringe) | Yes | ☑ | No | ☐ | Depth (inches): | 0 |

**Wetland Hydrology Present?** Yes ☑ No ☐

**Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:**

Feature is ponded to a depth of approximately 18 inches. Fresh algal matting present at water edge where water is receding. Many invertebrates and tadpoles are present. Meets hydrology criteria.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project Site: **Diamond Springs Parkway** City/County: **El Dorado** Sampling Date: **3/20/2008**

Applicant/Owner: **El Dorado County Dept. of Transportation** State: **CA** Sampling Point: **6**

Investigator(s): **D. Stout** Section, Township, Range: **30N 11E Section 19**

Landform (hillslope, terrace,etc): Local relief (concave, conves, none): **concave** Slope (%) **Mar-00**

Subregion (LRR): **C** Lat: **38 41 56.11** Long: **120 48 38.55** Datum:

Soil Map Unit Name: **Placer Diggings** NWI Classification: **n/a**

Are Climatic / hydrological conditions on the site typical this time of Year? Yes: ☑ No: ☐ (If no, explain in Remarks.)

Are: Vegetation: ☐ Soil: ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are: Vegetation: ☐ Soil: ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

| | | |
|---|---|---|
| **Hydrophytic Vegetation Present?** | Yes ☑ | No ☐ |
| **Hydric Soil Present?** | Yes ☑ | No ☐ |
| **Wetland Hydrology Present?** | Yes ☑ | No ☐ |

**Is the Sampled Area within a Wetland?** Yes ☑ No ☐

**Remarks:**

Feature is a linear, vegetated ditch that is ponded where sampled to approximately 9 inches. Average width is 40 inches. Invertebrates and tadpoles present. Meets wetland criteria.

**VEGETATION**

| Tree Stratum (Use scientific names) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | | | |
| **Sapling/Shrub Stratum** | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | | | |
| **Herb Stratum** | | | |
| 1. **Callitriche heterophylla** | 25 | Yes | OBL |
| 2. **Glyceria sp.** | 10 | Yes | OBL |
| 3. **Ranunculus bonariensis** | 10 | Yes | OBL |
| 4. **Unk. Annual grass** | 10 | Yes | FAC |
| 5. **Rumex crispus** | 2 | No | FACW |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 57 | | |
| **Woody Vine Stratum** | | | |
| 1. | | | |
| 2. | | | |
| Total Cover: | | | |

% Bare Ground in Herb Stratum: % Cover of Biotic Crust:

**Dominance Test worksheet:**

Number of Dominant Species That are OBL FACW, or FAC: 4 (A)

Total Number of Dominant Species Across all Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100.0%** (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by | |
|---|---|---|---|
| OBL species | 45 | x 1 = | 45 |
| FACW species | 2 | x 2 = | 4 |
| FAC species | 10 | x 3 = | 30 |
| FACU species | 0 | x 4 = | 0 |
| UPL species | 0 | x 5 = | 0 |
| Column Totals: | 57 (A) | | 79 (B) |

Prevalence Index = B/A = **1.39**

**Hydrophytic Vegetation Indicatore:**

- ☑ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicator if hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ☑ No ☐

**Remarks:**

Feature is dominated by OBL hydrophytes. Meets vegetation criteria.

## SOIL

Sampling Point: 6

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (Inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Redox Features Type | Redox Features Loc | Redox Features % | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |
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| | | | | | | | | | |
| | | | | | | | | | |

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix [2] Location: PL=Pore Lining, RC=Root Channel, M=Matrixc

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted)**

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depresssions (F8)
- ☐ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** Yes ☑ No ☐

**Remarks**

Soils not sampled. Feature ponded to depth of approximately 9 inches. Invertebrates and tadpoles present.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ☑ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation on Aerial Imagery (B7)
- ☐ Water-stained Leaves (B8)
- ☐ Biotic Crust (B10)
- ☑ Aquatic Invertebrates (B11)
- ☐ Crayfish Burows (B12)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C2)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soil (C6)
- ☐ Muck Surface (C7)
- ☐ Saturation on Aerial Imagery (C8)
- ☐ Shallow Aquitard (D4)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more is required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B9)
- ☐ Dry Season Water Table (C3)
- ☐ Salt Depostis (C5)
- ☐ Mud Casts (C9)
- ☐ FAC-Neutral Test (D7)

**Field Observations:**

| | | | | | |
|---|---|---|---|---|---|
| Surface Water Present? | Yes ☑ | No ☐ | Depth (inches): | 9 | |
| Water Table Present? | Yes ☐ | No ☐ | Depth (inches): | | |
| Saturation Present? (includes capillary fringe) | Yes ☐ | No ☐ | Depth (inches): | | |

**Wetland Hydrology Present?** Yes ☑ No ☐

**Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:**

Feature is ponded to a depth of 9 inches any many aquatic inverts and tadpoles are present. Meets hydrology criteria.

# WETLAND DETERMINATION DATA FORM - Arid West Region

Project Site: **Diamond Springs Parkway** City/County: **El Dorado** Sampling Date: **3/20/2008**

Applicant/Owner: **El Dorado County Dept. of Transportation** State: **CA** Sampling Point: **7**

Investigator(s): **D. Stout** Section, Township, Range: **30N 11E Section 19**

Landform (hillslope, terrace,etc): Local relief (concave, conves, none): **concave** Slope (%) **Mar-00**

Subregion (LRR): **C** Lat: **38 41 56.11** Long: **120 48 38.55** Datum:

Soil Map Unit Name: **Placer Diggings** NWI Classification: **n/a**

Are Climatic / hydrological conditions on the site typical this time of Year? Yes: ☑ No: ☐ (If no, explain in Remarks.)

Are: Vegetation: ☐ Soil: ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are: Vegetation: ☐ Soil: ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in remarks)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

| | | |
|---|---|---|
| **Hydrophytic Vegetation Present?** | Yes ☑ | No ☐ |
| **Hydric Soil Present?** | Yes ☑ | No ☐ |
| **Wetland Hydrology Present?** | Yes ☑ | No ☐ |

**Is the Sampled Area within a Wetland?** Yes ☑ No ☐

**Remarks:**

Sampled area is north of Data Point 6 near northern end of linear ditch. No standing water is present, but feature is saturated here to the surface. Meets vegetation, soils, and hydrology criteria. Feature is a wetland.

**VEGETATION**

| Tree Stratum (Use scientific names) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | | | |
| **Sapling/Shrub Stratum** | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | | | |
| **Herb Stratum** | | | |
| 1. **Lolium multiflorum** | 70 | Yes | FAC |
| 2. **Ranunculus muricatus** | 10 | No | FACW |
| 3. **Geranium dissectum** | 5 | No | UPL |
| 4. **Rumex crispus** | 3 | No | FACW |
| 5. **Claytonia perfoliata** | 3 | No | FAC |
| 6. **Vicia americana** | 3 | No | UPL |
| 7. **Cerastium glomeratum** | 1 | No | UPL |
| 8. | | | |
| Total Cover: | 95 | | |
| **Woody Vine Stratum** | | | |
| 1. | | | |
| 2. | | | |
| Total Cover: | | | |

% Bare Ground in Herb Stratum: % Cover of Biotic Crust: 5

**Dominance Test worksheet:**

Number of Dominant Species That are OBL FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: **100.0%** (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by | |
|---|---|---|---|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 13 | x 2 = | 26 |
| FAC species | 73 | x 3 = | 219 |
| FACU species | 0 | x 4 = | 0 |
| UPL species | 9 | x 5 = | 45 |
| Column Totals: | 95 (A) | | 290 (B) |

Prevalence Index = B/A = **3.05**

**Hydrophytic Vegetation Indicatore:**

☑ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicator if hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ☑ No ☐

**Remarks:**

Feature is dominated by hydrophytes. Meets vegetation criteria.

## SOIL

Sampling Point: 7

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (Inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Redox Features Type | Redox Features Loc | Redox Features % | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 0-8.5 | 2.5Y 5/2 | 65 | 5YR 4/6 | 35 | C | M | | Clay | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix [2] Location: PL=Pore Lining, RC=Root Channel, M=Matrixc

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted)**

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depresssions (F8)
- ☐ Vernal Pools (F9)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** Yes ☑ No ☐

**Remarks**

Soils are highly depleted. Matrix is low chroma with many redox features. Meets soils criteria.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☑ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation on Aerial Imagery (B7)
- ☑ Water-stained Leaves (B8)
- ☑ Biotic Crust (B10)
- ☐ Aquatic Invertebrates (B11)
- ☐ Crayfish Burows (B12)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C2)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soil (C6)
- ☐ Muck Surface (C7)
- ☐ Saturation on Aerial Imagery (C8)
- ☐ Shallow Aquitard (D4)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more is required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B9)
- ☐ Dry Season Water Table (C3)
- ☐ Salt Depostis (C5)
- ☐ Mud Casts (C9)
- ☐ FAC-Neutral Test (D7)

**Field Observations:**

Surface Water Present? **Yes** ☐ **No** ☑ **Depth (inches):** _____

Water Table Present? **Yes** ☐ **No** ☑ **Depth (inches):** _____

Saturation Present? (includes capillary fringe) **Yes** ☑ **No** ☐ **Depth (inches):** 0

**Wetland Hydrology Present?** Yes ☑ No ☐

**Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:**

Feature is saturated to surface and exhibits fresh algal matting. Meets hydrology criteria.

# Appendix C: Delineation of Jurisdictional Waters and Wetlands

| Label | Jurisdictional Features | Acres | Length (ft) |
|---|---|---|---|
| ED1 | Ephemeral Drainage | 0.05 | 754 |
| ED2 | Ephemeral Drainage | <0.01 | 86 |
| ED3 | Ephemeral Drainage | 0.04 | 537 |
| ED4 | Ephemeral Drainage | 0.01 | 186 |
| FEW1 | Fresh Emergent Wetland | 0.02 | |
| RD4 | Roadside Ditch | 0.02 | 1004 |
| RD5 | Roadside Ditch | 0.03 | 1373 |
| | **Total** | **0.17** | **3940** |

| Label | Non-Jurisdictional Features | Acres | Length (ft) |
|---|---|---|---|
| FEW2 | Fresh Emergent Wetland | 0.02 | |
| RD1 | Roadside Ditch | 0.04 | 1527 |
| RD2 | Roadside Ditch | 0.02 | 754 |
| RD3 | Roadside Ditch | <0.01 | 149 |
| RD6 | Roadside Ditch | 0.02 | 994 |
| RD7 | Roadside Ditch | <0.01 | 201 |
| RD8 | Roadside Ditch | <0.01 | 77 |
| RD9 | Roadside Ditch | <0.01 | 161 |
| RD10 | Roadside Ditch | <0.01 | 118 |
| RD11 | Roadside Ditch | 0.01 | 299 |
| WS1 | Wetland Swale | 0.06 | 856 |
| | **Total** | **0.18** | **5136** |

**Legend**

- Project Study Area
- XN: Non-wetland Data Point
- X: 3-Parameter Data Point
- Fresh Emergent Wetland
- Roadside Ditch - Jurisdictional
- Roadside Ditch - Non-Jurisdictional
- Ephemeral Drainage
- Wetland Swale
- Topographic Lines

Source: CTA, 2008; MBA, 2008

NORTH

500 250 0 500 Feet

Michael Brandman Associates

33370003 • 09/2008

# Appendix C
## Delineation of Jurisdictional Waters and Wetlands

# Appendix D: Site Photographs

**Photograph 1:** View of Ephemeral Drainage 1 (ED1), looking east from Old Depot Road. Photograph taken January 8, 2008.

**Photograph 2:** View of Ephemeral Drainage 3 (ED3), looking south near the southern end of the feature. Photograph taken January 8, 2008.

Source: MBA, 2008.

**Photograph 3:** View of Fresh Emergent Wetland 1 (FEW1) looking northeast from the southwestern edge of the feature. Photograph taken December 7, 2007.

**Photograph 4:** View of Roadside Ditch 8 (RD8) west-southwest. Photograph taken January 8, 2008.

Source: MBA, 2008.

**Photograph 5:** View of outlet of Ephemeral Drainage 4 (ED4). Shows culvert beneath dirt road that discharges water into wooded area in the northern portion of the Project Site. Photograph taken January 8, 2008.

**Photograph 6.** View of Roadside Ditch 4 (RD4), looking south from the northern edge of the feature. Photograph taken December 7, 2008.

Source: MBA, 2007 and 2008.

**Photograph 7:** View of Fresh Wetland Swale 1 (WS1), looking southeast from the portion of the feature south of Black Rice Road. Photograph taken March 28, 2008.

**Photograph 8:** View of Fresh Emergent Wetland 2 (FEW2) looking north. Photograph taken March 23, 2008.

Source: MBA, 2008.