

**DELINEATION OF JURISDICTIONAL
WATERS AND RIPARIAN HABITATS
FOR DRY CANYON CREEK,
LOS ANGELES COUNTY, CALIFORNIA**

Prepared for:

UNITED STATES ARMY CORPS OF ENGINEERS

On Behalf of:

MOUNTAINS RESTORATION TRUST

DMEC Mission Statement:

*To provide quality environmental consulting services
with integrity that protect and enhance
the human and natural environment.*

February 2006



**Delineation of Jurisdictional Waters
and Riparian Habitats
for Dry Canyon Creek,
Los Angeles County, California**

Prepared for:

U.S. Army Corps of Engineers
Regulatory Branch, Ventura Field Office
2151 Alessandro Drive, Suite 110
Ventura, California 93001
Contact: John W. Markham, Project Manager - 805/585-2150

On Behalf of:

Mountains Restoration Trust
3815 Old Topanga Canyon Road
Calabasas, California 91302
Contact: Debbie Bruscher - 818/591-1701

Prepared by:

David Magney Environmental Consulting
P.O. Box 1346
Ojai, California 93024-1346
Contact: David L. Magney - 805/646-6045

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TABLE OF CONTENTS

	PAGE
SECTION I. PROJECT DESCRIPTION.....	1
PROJECT LOCATION.....	1
BACKGROUND AND PURPOSE.....	1
SECTION II. ENVIRONMENTAL SETTING.....	4
GENERAL SITE CONDITIONS	4
FLORA.....	4
MAPPED SOIL UNITS	7
Cumulic Haploxerolls Family	7
Balcom Series.....	7
Riverwash.....	7
SECTION III. REGULATORY REQUIREMENTS.....	8
CORPS JURISDICTION	8
CORPS DEFINITION OF WETLANDS.....	9
SECTION IV. METHODOLOGY.....	10
GENERAL APPROACH.....	10
DELINEATING JURISDICTIONAL WATERS, INCLUDING WETLANDS.....	11
JURISDICTIONAL CRITERIA.....	13
Hydrophytic Vegetation	13
Wetland Hydrology	14
Hydric Soils.....	14
SECTION V. RESULTS.....	15
JURISDICTIONAL DETERMINATION	15
Corps Jurisdictional Wetlands.....	15
Corps Jurisdictional Waters of the U.S., Including Wetlands.....	15
CDFG Jurisdictional Wetlands & Riparian Habitats.....	16
Total Jurisdictional Waters and Wetlands	16
RESULTS SUMMARY	17
SECTION VI. ACKNOWLEDGEMENTS	25
SECTION VII. CITATIONS.....	26
REFERENCES.....	26
PERSONAL COMMUNICATIONS	26
APPENDIX A. DRY CANYON CREEK ROUTINE WETLAND DETERMINATION FIELD DATA FORMS.....	27



LIST OF TABLES

TABLE	PAGE
1. Plant Species Observed at the Dry Canyon Creek Project Site	5
2. Jurisdictional Areas by Mountains Restoration Trust Sections	17
3. Surveyed Data Point Results and Wetland Delineation Determinations for the Dry Canyon Creek Project Site.....	18

LIST OF FIGURES

FIGURE	PAGE
1. General Location of the Dry Canyon Creek Project	2
2. Dry Canyon Creek Project Area.....	3
3. Wetland Delineation Transect Plots Surveyed for the Dry Canyon Creek Project Site .	12
4. Dry Canyon Creek Project Site Corps Jurisdictional Wetlands.....	20
5. Dry Canyon Creek Project Site Corps Jurisdictional Waters of the U.S., Including Wetlands	21
6. Dry Canyon Creek Project Site CDFG Jurisdictional Riparian Habitat Area	22
7. Dry Canyon Creek Project Site Corps Jurisdictional Waters (Including Wetlands) and CDFG Jurisdictional Riparian Habitat Area	23
8. Jurisdictional Areas by Mountains Restoration Trust Sections	24

SECTION I. PROJECT DESCRIPTION

PROJECT LOCATION

The Dry Canyon Creek project site is located in the Santa Monica Mountains in western Los Angeles County, and can be found upstream of Arroyo Calabasas and south of the western San Fernando Valley (Figure 1, General Location of the Dry Canyon Creek Project). The project site is at the approximate coordinates of 34°8.0' N latitude and 118°37.5' W longitude, and is at an approximate elevation of 1,050 feet above mean sea level (msl).

The project site consists of Dry Canyon Creek, which runs from south to north; two unnamed tributaries, one from the southeast, and one from the west; and an area called the historic meander, which was once the primary creek, but is now ephemeral. Figure 2, Dry Canyon Creek Project Area, illustrates the properties and the vegetation in the project area. Three properties are shown: Headwaters Corner and Wild Walnut Park are managed by the Mountains Restoration Trust, while the Biaba Property is under negotiation for the acquisition of a conservation easement.

BACKGROUND AND PURPOSE

The Mountains Restoration Trust is planning to restore the wetlands in this area. They have two goals: first, to enhance the existing habitat, and second, to provide an educational opportunity. The Mountains Restoration Trust is seeking funding for this wetlands restoration and hopes to obtain funding from the United States Army Corps of Engineers' (Corps') in-lieu fee mitigation program. In general, this program allows developers to fill certain wetlands if a fee is paid to allow restoration of wetlands elsewhere (the restoration is mandated at a 3:1 ratio of restored wetlands to destroyed wetlands).

In order to apply for funds from this program, the Mountains Restoration Trust must first document the existing conditions at the site. David Magney Environmental Consulting (DMEC) was asked to perform a wetland delineation at the site. In addition, the wetland acreages have been divided into six sections (or project reaches) at the request of the Mountains Restoration Trust. (Figure 8, Jurisdictional Areas by Mountains Restoration Trust Sections shows these sections.)

Figure 1. General Location of the Dry Canyon Creek Project

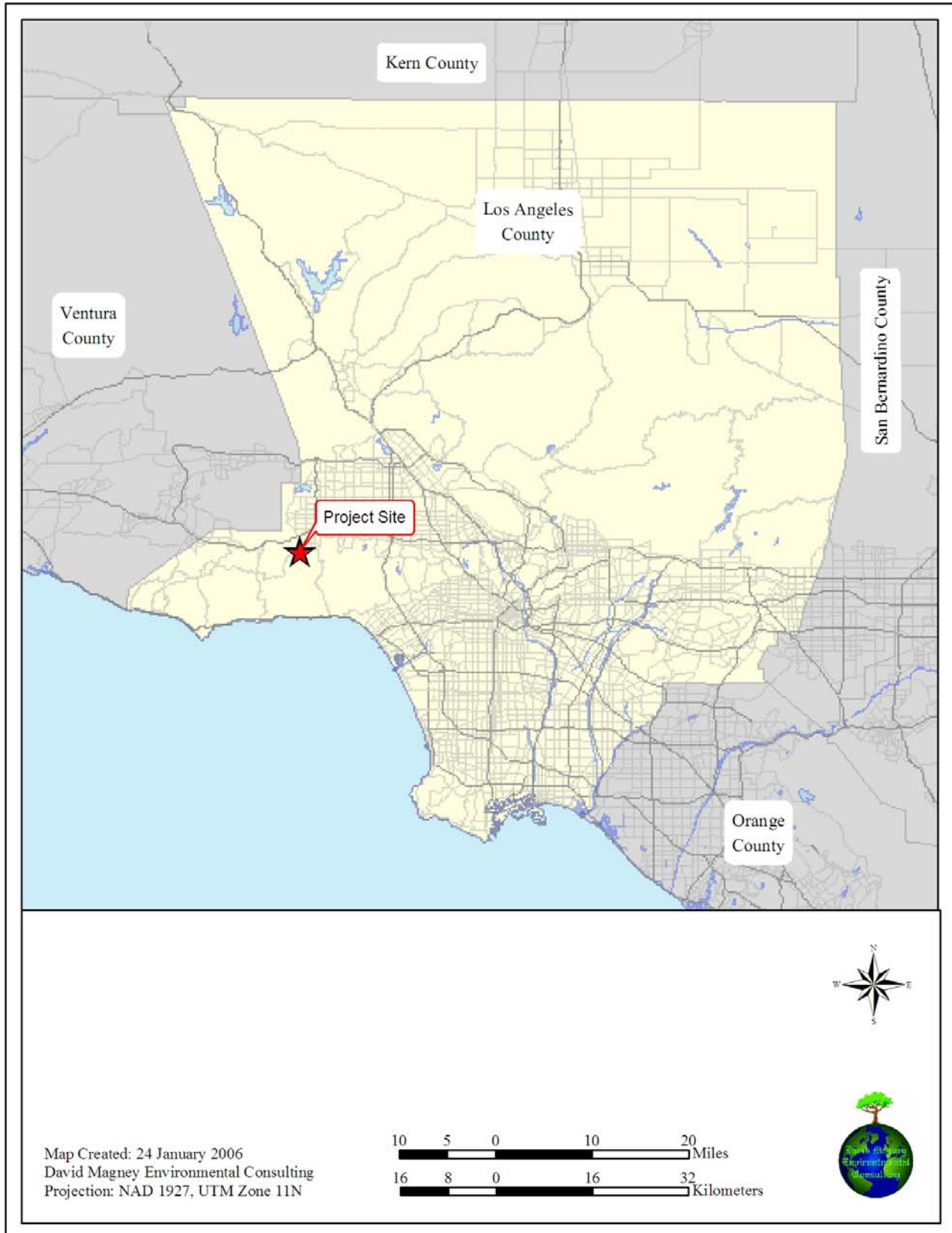
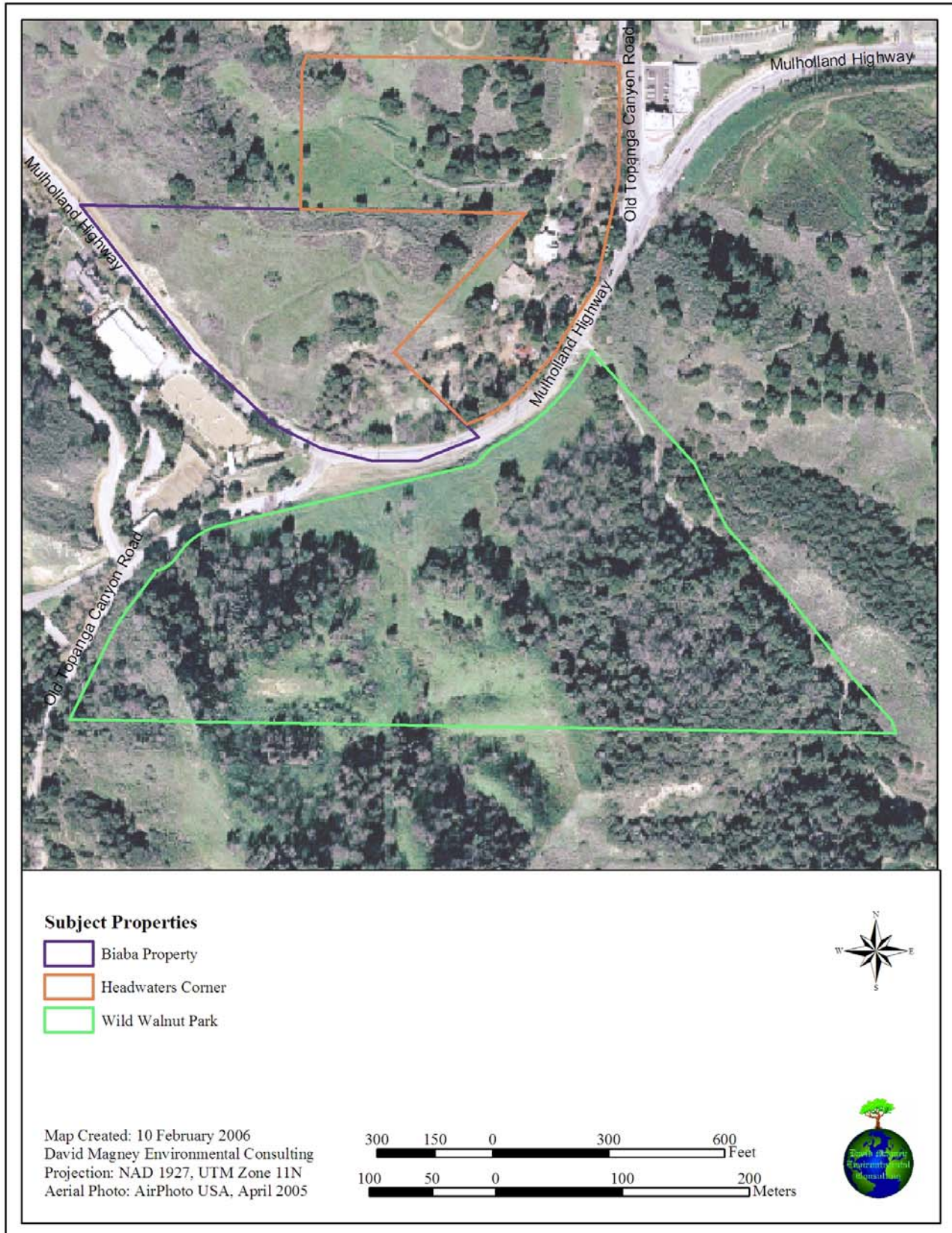


Figure 2. Dry Canyon Creek Project Area



SECTION II. ENVIRONMENTAL SETTING

This section provides the general site conditions, botanical resources, habitat types, and mapped soil units of the Dry Canyon Creek project site.

GENERAL SITE CONDITIONS

The project site is located generally at 1,050 feet above msl with very little variation. The general flora and fauna onsite appear relatively high in species richness and diversity.

Three general habitat types currently exist in the immediate vicinity of the Dry Canyon Creek project site; they are Riverine, Palustrine, and Upland (Cowardin et al. 1979). The Palustrine and Riverine habitats include the plant communities associated with jurisdictional waters of the U.S and the State of California. These habitat types were determined onsite based on field surveys and observations, the wetland delineation results, and aerial photographs.

The following habitats were observed onsite: Riverine Intermittent Streambed, Palustrine Scrub-Shrub Wetland (Mulefat-Mixed Willow Scrub), Palustrine Forested Wetland (Arroyo Willow Riparian Woodland and Coast Live Oak Riparian Woodland), and Upland Habitat (California Annual Grassland Alliance and Coastal Sage Scrub).

During the wetland delineation, the following wildlife species were observed: Pacific Treefrog, Western Fence Lizard, Anna's Hummingbird, California Towhee, Coyote (scat), Painted Lady Butterfly, and European Honey Bee.

FLORA

Various combinations of plants form unique plant communities and wildlife habitats contributing to the landscape of Dry Canyon Creek. All vascular plant species observed and identified during the wetland delineation field surveys are listed in Table 1, Plant Species Observed at the Dry Canyon Creek Project Site. Table 1, which is alphabetized by scientific (botanical) name, includes the common name, growth habit, wetland indicator status, and botanical family name for each species observed onsite.

A total of 64 vascular plants were observed at the project site during the wetland delineation surveys. Several additional plant species are expected onsite, as focused floristic surveys were not conducted. Of those 64 plant species observed onsite, 37 species are native and 27 are introduced species. The ratio of native to nonnative taxa for the project site (58% native to 42% nonnative) is not representative of the ratio for the entire California flora (Hickman 1993) and other smaller regions within California (approximately 75% native to 25% nonnative), but is indicative of a site that has been disturbed.

Twenty-three (23) of the 64 taxa (34%) are considered hydrophytes, as they are assigned a status of at least FAC (facultative species, or equally likely to occur in wetlands or nonwetlands), consisting of 10 FAC, 9 FACW (facultative wetland species, usually found in wetlands), and 4 OBL (obligate wetland species, occurs almost always in wetlands) species (Reed 1988).



Table 1. Plant Species Observed at the Dry Canyon Creek Project Site

Scientific Name ¹	Common Name	Habit ²	WIS ³	Family
<i>Anagallis arvensis</i> *	Scarlet Pimpernel	AH	FAC	Primulaceae
<i>Artemisia californica</i>	California Sagebrush	S	.	Asteraceae
<i>Artemisia douglasiana</i>	Mugwort	PH	FACW	Asteraceae
<i>Baccharis pilularis</i>	Coyote Brush	S	.	Asteraceae
<i>Baccharis salicifolia</i>	Mulefat	S	FACW	Asteraceae
<i>Bromus diandrus</i> *	Ripgut Grass	AG	.	Poaceae
<i>Carduus pycnocephalus</i> *	Italian Thistle	AH	.	Asteraceae
<i>Centaurea melitensis</i> *	Tocalote	AH	.	Asteraceae
<i>Claytonia perfoliata</i> ssp. <i>mexicana</i>	Mexican Miner's Lettuce	AH	FAC	Portulacaceae
<i>Conyza bonariensis</i> *	South American Horseweed	AH	.	Asteraceae
<i>Conyza canadensis</i>	Common Horseweed	AH	FAC	Asteraceae
<i>Cyperus eragrostis</i>	Umbrella-sedge	PH	FACW	Cyperaceae
<i>Erodium cicutarium</i> *	Redstem Filaree	AH	.	Geraniaceae
<i>Erodium moschatum</i> *	Whitestem Filaree	AH	.	Geraniaceae
<i>Eucrypta chrysanthemifolia</i> var. <i>chrysanthemifolia</i>	Common Eucrypta	AH	.	Hydrophyllaceae
<i>Euphorbia pepus</i> *	Spurge	AH	.	Euphorbiaceae
<i>Fraxinus dipetala</i>	California Flowering Ash	T	.	Oleaceae
<i>Fraxinus velutina</i>	Velvet Ash	T	FACW	Oleaceae
<i>Galium aparine</i>	Catchweed Bedstraw	AH	FACU	Rubiaceae
<i>Hazardia squarrosa</i>	Sawtooth Goldenbush	S	.	Asteraceae
<i>Heterotheca grandiflora</i>	Telegraph Weed	PH	.	Asteraceae
<i>Hirschfeldia incana</i> *	Summer Mustard	PH	.	Brassicaceae
<i>Juglans californica</i> var. <i>californica</i>	Southern Calif. Black Walnut	T	FAC	Juglandaceae
<i>Juncus balticus</i> var. <i>mexicanus</i>	Mexican Rush	PH	FACW	Juncaceae
<i>Juncus textilis</i>	Basket Rush	PH	OBL	Juncaceae
<i>Lamium amplexicaule</i> *	Henbit	AH	.	Lamiaceae
<i>Leymus condensatus</i>	Giant Wildrye	PG	FACU	Poaceae

¹ * = Introduced plant species that have become naturalized. + = Planted, exotic ornamental species that have persisted and escaped locally into natural plant communities. Scientific names of the plant species follow Hickman (1993), and Flora of North America Editorial Committee (1993-2005).

² Habit definitions: AG = annual grass; AH = annual herb; PG = perennial grass; PH = perennial herb; PV = perennial vine; S = shrub; T = tree.

³ WIS = Wetland Indicator Status. The following code definitions are according to Reed (1988):
 OBL = obligate wetland species, occurs almost always in wetlands (>99% probability).
 FACW = facultative wetland species, usually found in wetlands (67-99% probability).
 FAC = facultative species, equally likely to occur in wetlands or nonwetlands (34-66% probability).
 FACU = facultative upland species, usually found in nonwetlands (67-99% probability).
 + or - symbols are modifiers that indicate greater or lesser affinity for wetland habitats.
 NI = no indicator has been assigned due to a lack of information to determine indicator status.
 * = a tentative assignment to that indicator status by Reed (1988).
 Parentheses indicate a wetland status as suggested by David L. Magney based on extensive field observations.

Dry Canyon Creek Wetland Delineation, Calabasas, Los Angeles County

DMEC PN: 05-0261

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Scientific Name ¹	Common Name	Habit ²	WIS ³	Family
<i>Malacothrix saxatilis</i> var. <i>tenuifolia</i>	Tenuate Cliff-aster	PH	.	Asteraceae
<i>Malva parviflora</i> *	Cheeseweed	AH	.	Malvaceae
<i>Marah macrocarpus</i> var. <i>macrocarpus</i>	Large-fruited Man-Root	PV	.	Cucurbitaceae
<i>Marrubium vulgare</i> *	White Horehound	S	FAC	Lamiaceae
<i>Medicago polymorpha</i> *	Bur-clover	AH	.	Fabaceae
<i>Mentha spicata</i> var. <i>spicata</i> *	Spearmint	PH	OBL	Lamiaceae
<i>Muhlenbergia rigens</i>	Deer Grass	PG	FACW	Poaceae
<i>Nicotiana glauca</i> *	Tree Tobacco	S	FAC	Solanaceae
<i>Oxalis pes-caprae</i> *	Bermuda Buttercup	PH	.	Oxalidaceae
<i>Pelargonium hortorum</i> +	Fish Geranium	S	.	Geraniaceae
<i>Phacelia cicutaria</i> var. <i>hubbyi</i>	Hubby's Caterpillar Phacelia	AH	.	Hydrophyllaceae
<i>Picris echioides</i> *	Bristly Ox-tongue	AH	FAC*	Asteraceae
<i>Piptatherum miliaceum</i> *	Smilo Grass	PG	.	Poaceae
<i>Prunus ilicifolia</i> ssp. <i>ilicifolia</i>	Hollyleaf Cherry	S	.	Rosaceae
<i>Pseudognaphalium californicum</i>	Green Everlasting	A/BH	.	Asteraceae
<i>Quercus agrifolia</i> var. <i>agrifolia</i>	Coast Live Oak	T	.	Fagaceae
<i>Quercus lobata</i>	Valley Oak	T	FAC*	Fagaceae
<i>Rhamnus ilicifolia</i>	Hollyleaf Redberry	S	.	Rhamnaceae
<i>Rhus ovata</i>	Sugar Bush	S	.	Anacardiaceae
<i>Ribes malvaceum</i>	Chaparral Currant	S	.	Grossulariaceae
<i>Rubus ursinus</i>	California Blackberry	PV	FACW*	Rosaceae
<i>Rumex crispus</i> *	Curly Dock	PH	FACW-	Polygonaceae
<i>Salix lasiolepis</i>	Arroyo Willow	T	FACW	Salicaceae
<i>Sambucus mexicana</i>	Blue Elderberry	S	FAC	Caprifoliaceae
<i>Scirpus californicus</i>	California Bulrush	PH	OBL	Cyperaceae
<i>Senecio vulgaris</i> *	Common Groundsel	AH	NI*	Asteraceae
<i>Silybum marianum</i> *	Milk Thistle	AH	.	Asteraceae
<i>Sonchus asper</i> *	Prickly Sow-thistle	AH	FAC	Asteraceae
<i>Sonchus oleraceus</i> *	Common Sow-thistle	AH	NI*	Asteraceae
<i>Stellaria media</i> *	Common Chickweed	AH	FACU	Caryophyllaceae
<i>Stephanomeria exigua</i>	Stephanomeria	AH	.	Asteraceae
<i>Symphoricarpos mollis</i>	Trailing Snowberry	S	.	Caprifoliaceae
<i>Tecomaria capensis</i> *	Cape Honeysuckle	S	.	Bignoniaceae
<i>Typha domingensis</i>	Narrow-leaved Cattail	PH	OBL	Typhaceae
<i>Urtica dioica</i> ssp. <i>gracilis</i> var. <i>holosericea</i>	Giant Creek Nettle	PH	FACW	Urticaceae
<i>Verbena lasiostachys</i> var. <i>lasiostachys</i>	Western Verbena	AH	FAC-	Verbenaceae
<i>Vinca major</i> *	Greater Periwinkle	PV	.	Apocynaceae



MAPPED SOIL UNITS

The Natural Resource Conservation Service (NRCS) *Soil Survey for the Santa Monica Mountains National Recreation Area* (NRCS, unpublished) mapped the following Dry Canyon Creek project site soils, which are described in the following subsections:

- Cumulic Haploxerolls, 0 to 9 percent slopes; and
- Balcom silty clay loam, 30 to 50 percent slopes.

DMEC's survey of Dry Canyon Creek also noted the following nonsoil, which is also described in the following subsections:

- Riverwash

Cumulic Haploxerolls Family

The Cumulic Haploxerolls soils consist of very deep, well-drained soils that formed alluvium from mixed volcanic and sedimentary rocks. Cumulic Haploxerolls soils are on inset fans. Slopes are 2 to 9 percent. The mean annual precipitation is 14 to 24 inches (360 to 610 millimeters) and the mean annual temperature is 60 to 64 degrees F. (15.5 to 17.5 degrees C.). The frost-free season is 290 to 350 days. Elevations are 10 to 900 feet (3 to 274 meters). Soils of the Cumulic Haploxerolls family are fine-loamy, mixed, thermic Cumulic Haploxerolls. (Wasner, personal communication.)

Balcom Series

The Balcom series consists of moderately deep, well-drained soils that formed in material that weathered from soft, calcareous shale and sandstone. Balcom soils are on hills. Slopes are 9 to 75 percent. The mean annual precipitation is 14 to 18 inches (360 to 457 millimeters) and the mean annual air temperature is 60 to 64 degrees F. (15.5 to 17.5 degrees C.). Frost-free season is 290 to 330 days. Elevations are 886 to 2,100 feet (270 to 640 meters). Soils of the Balcom series are fine-loamy, mixed, superactive, thermic Typic Calcixerepts. (Wasner, personal communication.)

Riverwash

Riverwash generally occurs within the bed of intermittent streams, and consists of highly stratified, water-deposited layers of stony and gravelly sand that contain relatively small amounts of silt and clay. It is characterized as having high permeability, but is present as the result of frequent and regular fluvial processes. Riverwash is frequently inundated during high water flow immediately following storms, when fresh deposits of alluvium are laid down and removed as the result of streambank erosion. Riverwash is subject to frequent disturbance, such as scouring and deposition, and the development and establishment of riparian vegetation is severely limited. It is considered hydric by the NRCS. (Edwards et al. 1970.)

Although Riverwash is a nonsoil, this material is an indicator of hydric soil conditions.



SECTION III. REGULATORY REQUIREMENTS

Wetlands such as freshwater stream channels are considered sensitive and declining by several regulatory agencies including the California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS). Waters of the State are regulated by the CDFG pursuant to Section 1600 *et seq.* of the California Fish and Game Code (Streambed Alteration Agreement). Waters of the U.S., including stream channels and wetlands, fall under the jurisdiction of the Corps and the State Water Resources Control Board (SWRCB) pursuant to Sections 404 and 401 of the Clean Water Act (CWA), respectively.

Several agencies have jurisdiction over, or policies regarding, waters and/or wetlands, including the Corps, SWRCB, and CDFG. Each agency or jurisdiction has slightly different definitions for wetlands or descriptions of their policies regarding them. For the Dry Canyon Creek project, the Corps and SWRCB use the same definition for waters of the U.S. and wetlands. The CDFG uses a broader definition under Section 1600 *et seq.* of California Fish and Game Code.

CORPS JURISDICTION

Waters of the U.S., including wetlands, are under the jurisdiction of the Corps pursuant to Section 404 of the Clean Water Act, and discharging dredge or fill material into waters of the U.S. requires a permit from the Corps. Certain activities are covered under a number of General permits, known as General (Nationwide) Permits. Activities not covered by existing Nationwide Permits require an application for an individual permit from the Corps.

The term "waters of the United States" means:

- “(1) All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to ebb and flow of the tide;
- (2) All interstate waters including interstate wetlands;
- (3) All other waters - such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds – where the use, degradation, or destruction of which could affect interstate or foreign commerce, including any such waters:
 - (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes;
 - (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce;
 - (iii) Which are used, or could be used, for industrial purposes by industries in interstate commerce; or
- (4) Including all impoundments of waters, otherwise defined as waters of the U.S., under the definition;



- (5) Tributaries of waters identified in paragraphs ... (1)-(4) of this section;
- (6) The territorial seas; and
- (7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs ... (1)-(6) of this section.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.

- (8) Waters of the U.S. do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA."

Basically, areas exhibiting clearly defined bed and banks of water courses with evidence of periodic or regular erosion and/or deposition by water are considered to be waters of the U.S., and are under the jurisdiction of the Corps.

CORPS DEFINITION OF WETLANDS

The Corps (Environmental Laboratory 1987) defines wetlands as:

"Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

Specifically, to be a wetland as defined by the Corps, the site must possess the following three general diagnostic environmental characteristics:

1. **Hydrophytic Vegetation.** The prevalent vegetation consists of macrophytes that are typically adapted to areas having hydrologic and soil conditions described in wetland definitions above.
2. **Wetland Hydrology.** The area is inundated either permanently or periodically at mean water depths less than or equal to two meters (6.6 feet), or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation.
3. **Hydric Soil.** Soils are present and have been classified as hydric, or they possess characteristics that are associated with reducing soil conditions.

SECTION IV. METHODOLOGY

This section provides the methods used by DMEC to delineate waters of the U.S., including wetlands, at the Dry Canyon Creek project site. This section includes a discussion of the general delineation approach, lists the references cited and followed for classification of the existing habitats observed onsite (above), and provides a detailed analysis of the wetland delineation criteria assessed by DMEC biologists.

GENERAL APPROACH

DMEC followed Corps methods (described below) to determine the area of the project site that falls under Corps jurisdiction. In addition, CDFG jurisdictional areas were identified pursuant to California Fish and Game Code regulations and state policies. The entire Dry Canyon Creek project site was surveyed for waters of the U.S., including wetlands, to determine the extent of waters and riparian habitat that exists onsite. The project site landscape was evaluated to generally classify the various plant communities that are located in the immediate vicinity of the creek channels, as well as those plant communities inhabiting the surrounding upland areas of the project site.

Current aerial photographs, topographic data, general site observations, and wetland delineation results were used to define jurisdictional boundaries within the project site. Data points (plots) were established in various locations along the creeks of the project site to examine vegetation, hydrology, and soils of each selected site. All plots of the project site were examined according to the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987).

Each plot was examined for the presence or absence of indicators for each of the three wetland criteria (defined above in “Definitions of Wetlands” and below in “Jurisdictional Criteria”) Information on these parameters was recorded on data forms for routine wetland determinations, which are included as Appendix A, Dry Canyon Creek Project Site Routine Wetland Determination Field Data Forms.

Jurisdiction was determined using the following guidelines:

- *Corps jurisdictional wetlands* must possess one or more positive indicators for *each of the three* wetland criteria; i.e.: (1) indicator(s) that the plot area is dominated by hydrophytic vegetation; (2) indicator(s) that wetland hydrology is present; and (3) indicator(s) that hydric soil conditions are present.
- *Corps jurisdictional waters of the U.S.* must possess *one or more positive indicators for the wetland hydrology criterion*, which is indicated predominantly by standing or flowing water and/or a well-defined channel bed and bank.
- *CDFG jurisdictional wetlands* must possess positive indicators for *any one* of the three wetland criteria in order to be considered a wetland pursuant to state regulations.

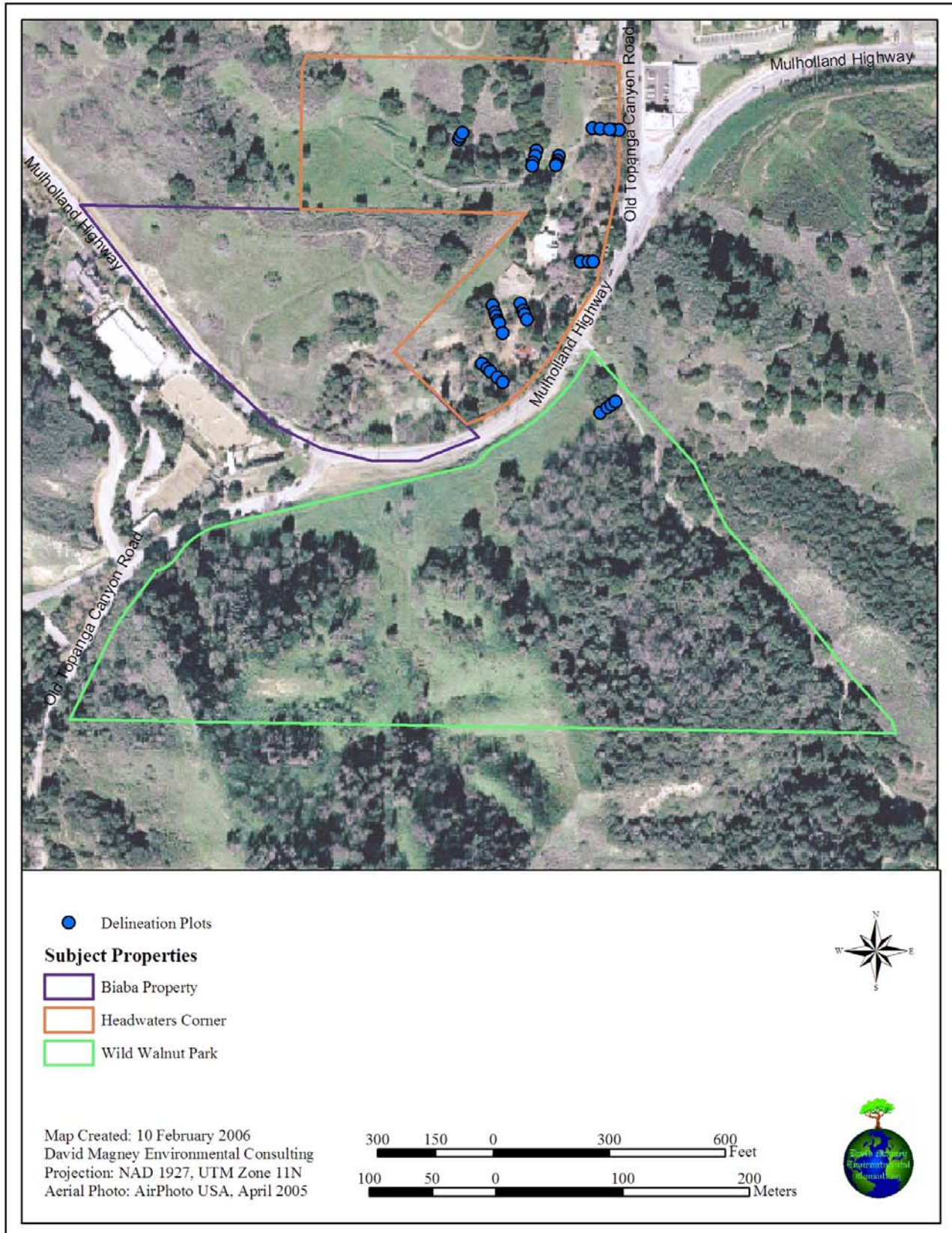
DELINEATING JURISDICTIONAL WATERS, INCLUDING WETLANDS

David Magney, Cher Batchelor, and Teri Reynolds of DMEC performed the delineation of jurisdictional waters and wetlands at the Dry Canyon Creek project site. These biologists gathered data from 38 established plots according to the Corps' 1987 *Manual for Delineating Jurisdictional Wetlands* (Environmental Laboratory 1987). The plots are illustrated on Figure 3, Wetland Delineation Transect Plots Surveyed for the Dry Canyon Creek Project Site. The 38 plots were established along nine transects (A, B, C, D, E, F, G, J and M) across the width of the project site creeks on 11 January 2006. Each plot was surveyed to gather wetland data on vegetation, hydrology, and soils, (defined below in Wetland Criteria) for determining the limits of Corps jurisdiction pursuant to the Clean Water Act, as well as to determine CDFG jurisdiction pursuant to Section 1600 *et seq.* of the California Fish and Game Code. Additional data were gathered at six other transects (H, I, K, L, N, and O); however, data along these transects were not gathered according to the Corps' manual.

DMEC biologists also collected data for site floristics, habitat types, and wildlife resources within the entire boundaries of the project site, including documenting any special-status species that may have been observed or detected onsite. Data collected during the wetland delineation are provided as Appendix A, Dry Canyon Creek Routine Wetland Determination Field Data Forms, at the end of this report.

Delineation data points were collected using Garmin eTrex GPS units; stream thalwegs were determined by interpreting topographic data. Jurisdictional waters were delineated by interpretation of all available data. Analysis and cartography was performed using ESRI ArcView 3.3 and ArcView 8.2 Geographic Information System (GIS) software.

Figure 3. Wetland Delineation Transect Plots Surveyed for the Dry Canyon Creek Project





JURISDICTIONAL CRITERIA

The Corps, under Section 404 of the Clean Water Act, defines a *wetland* as possessing the following three general diagnostic environmental characteristics during the growing season: (1) hydrophytic vegetation, (2) wetland hydrology, and (3) hydric soils. The Corps requires that at least one indicator for each of the three wetland criteria be present in order for an area in question to be considered a jurisdictional wetland.

The Corps requires that at least one indicator for wetland hydrology be present in order for an area in question to be considered jurisdictional waters of the U.S.

The CDFG requires that only one of these three criteria (any one) be satisfied in order for an area in question to be considered a jurisdictional wetland for the purpose of California state regulations.

These wetland criteria are discussed in detail below.

Hydrophytic Vegetation

The first parameter necessary for consideration of jurisdictional status is hydrophytic vegetation; for the criterion to be satisfied, the vegetation must be dominated by hydrophytic plant species. Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present (or plants typically adapted to growing in areas possessing hydrologic conditions and saturated soils) (Environmental Laboratory 1987). Emphasis is placed on the assemblage of plant species that exert a controlling influence on the character of the plant community, rather than on indicator species. Vegetation is considered to be hydrophytic when more than 50 percent of the dominant plant species of all vegetative strata (or those species making up at least 20 percent of relative cover) have a Wetland Indicator Status of Facultative (FAC), Facultative Wetland (FACW), or Obligate Wetland (OBL) according to the *National List of Wetland Plants* (Reed 1988). Reed (1988) defines FAC species as equally likely to occur in wetlands or nonwetlands (34-66% probability), FACW species as usually found in wetlands (67-99% probability), and OBL species as occurring almost always in wetlands (>99% probability).

All plant species observed at each plot were recorded on field data forms, and the percent relative cover and Wetland Indicator Status of each species was indicated. All species at a particular plot are considered dominant species if they have a percent relative cover value of 20 percent or more. More than 50 percent of the dominant plant species (those assigned a 20 percent relative cover or more) at each plot had to possess a Wetland Indicator Status of FAC, FACW, or OBL in order for DMEC to determine that a plot is dominated by hydrophytic vegetation in the field.

Wetland Hydrology

The second parameter necessary for jurisdictional consideration is wetland hydrology. This criterion is met if (1) an area is inundated permanently or periodically, (2) has soil saturated to the surface at some time during the growing season of the prevalent vegetation, and/or (3) the area at least shows evidence of drainage patterns (well-defined bed and banks) (Environmental Laboratory 1987). Areas with evident characteristics of wetland hydrology are those where the presence of water has an overriding influence on characteristics of vegetation and soils due to anaerobic and reducing conditions, respectively. Hydrology of the selected locations within the study area was evaluated through direct observation of primary and/or secondary indicators of wetland hydrology. Primary wetland hydrology indicators (only one required for wetland hydrology to be present) include: inundated, saturated in upper 12 inches, water marks, drift lines, sediment deposits, and/or drainage patterns in wetlands. Secondary wetland hydrology indicators (two required for wetland hydrology to be present) include: oxidized root channels in the upper 12 inches of the soil profile, water-stained leaves, local soil survey data, or FAC-Neutral Test (where greater than 50% of the dominant plant species must be FAC+ or wetter).

At least one of the primary indicators of wetland hydrology, or at least two of the secondary indicators of wetland hydrology, must exist at each plot in order to determine that a plot has indicators of wetland hydrology.

Hydric Soils

The third and final parameter necessary for consideration of jurisdictional status is hydric soils; for the criterion to be satisfied, indicators of hydric soils must be present. Positive indicators of hydric soils include: soils consisting of thick organic layers, gleying, or low chroma soil matrix; or existing materials possessing characteristics that are associated with reducing soil conditions. In accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), soil pits were examined at several selected locations (plots) within Dry Canyon Creek project site. Soils were generally determined to be hydric if they possessed thick organic layers, gleying, or low chroma soil matrix (chroma of 2 or less with bright mottles, or matrix chroma of 1 or less). Soils data collected at each plot onsite include profile depth, soil color (or matrix color [moist]), mottle color, mottle abundance and contrast, soil texture, and hydric indicators (or evidence of soil saturation for a long duration).

Although Riverwash is a nonsoil, this material is an indicator of hydric soil conditions, which was observed at several plots throughout the Dry Canyon Creek project site.



SECTION V. RESULTS

This section provides a discussion of the findings of the wetland delineation and presents the determination of Corps jurisdictional waters of the U.S. (including wetlands) and the determination of CDFG jurisdictional wetlands and riparian habitat currently present at the Dry Canyon Creek project site. The results are based on and are supported by findings at each surveyed data point for each of the three wetland criteria.

JURISDICTIONAL DETERMINATION

All data were collected in the field by determining the presence or absence of each of the three wetland parameters. Table 3, Surveyed Data Point Results and Wetland Delineation Determinations for the Dry Canyon Creek Project Site, presents the results of the field wetland delineation, which was conducted according to the *Corps of Engineers Wetlands Delineation Manual*. Table 3 provides the transect letter, plot number, and field determinations for all three wetland criteria (vegetation, hydrology, and soils) for each of the 38 sampling plots. Data for the 38 sampling plots were supplemented with data gathered along additional transects.

Corps Jurisdictional Wetlands

The total Corps jurisdictional wetlands area onsite is approximately 0.69 acre.

The total Corps jurisdictional wetlands area on Mountains Restoration Trust properties is approximately 0.53 acre.

Corps jurisdictional wetland has the most stringent criteria of the three types of jurisdictional areas. All three wetland criteria must be met for an area to be considered Corps wetlands. Of the 38 plots surveyed onsite, eight (8) plots were determined to meet the criteria for Corps jurisdictional wetlands, pursuant to Section 404 of the Clean Water Act. Figure 4, Dry Canyon Creek Project Site Corps Jurisdictional Wetlands, illustrates the Corps jurisdictional wetlands area and wetland plots as determined from the field wetland delineation survey and interpretation of topographic data and aerial photographs.

Corps Jurisdictional Waters of the U.S., Including Wetlands

The total Corps jurisdictional waters, including wetlands, onsite is approximately 1.19 acres.

The total Corps jurisdictional waters, including wetlands, on Mountains Restoration Trust properties is approximately 0.99 acre.

Corps jurisdictional waters of the U.S. always includes Corps Jurisdictional Wetlands, but may also include other areas that qualify as Waters of the U.S. but do not qualify as wetlands. Only one criterion, the wetland hydrology criterion, must be met for an area to be considered Corps jurisdictional waters of the U.S. Of the 38 plots surveyed onsite, sixteen (16) plots were determined to meet the criteria for Corps jurisdictional waters of the U.S., pursuant to Section 404 of the Clean Water Act. Figure 5, Dry Canyon Creek Project Site Corps Jurisdictional Waters of the U.S., Including Wetlands, illustrates the Corps jurisdictional area and waters of the U.S. plots as

determined from the field wetland delineation survey and interpretation of topographic data and aerial photographs.

CDFG Jurisdictional Wetlands & Riparian Habitats

The total CDFG jurisdictional wetlands and riparian habitat area onsite is approximately 2.67 acres.

The total CDFG jurisdictional wetlands and riparian habitat area on Mountains Restoration Trust properties is approximately 2.40 acres.

CDFG jurisdictional wetlands and riparian habitats is the most inclusive of the three types of jurisdictional areas. At least one wetland criterion must be met for an area to fall under CDFG jurisdiction, but it may be any one of the three criteria: hydrophytic vegetation, wetland hydrology, or hydric soils. Of the 38 plots surveyed onsite, 22 were determined to meet the criteria for CDFG jurisdictional wetlands and riparian habitats. Figure 6, Dry Canyon Creek Project Site CDFG Jurisdictional Riparian Habitat Area, illustrates the delineated boundaries of CDFG jurisdictional wetlands and riparian habitats as determined from the field wetland delineation survey and interpretation of topographic data and aerial photographs.

Total Jurisdictional Waters and Wetlands

The total area of all wetland habitat onsite is approximately 2.67 acres.

The total area of all wetland habitat on Mountains Restoration Trust properties is approximately 2.40 acres.

Since CDFG jurisdictional wetlands and riparian habitats is the most inclusive of the three types of jurisdictional areas, the total area of all Jurisdictional Waters and Wetlands is the same as the area of the CDFG jurisdictional wetlands. Figure 7, Dry Canyon Creek Project Site Corps Jurisdictional Waters (Including Wetlands) and CDFG Jurisdictional Riparian Habitat Area, illustrates the three types of jurisdictional area.



RESULTS SUMMARY

The Mountains Restoration Trust specifically requested that the wetlands delineation be divided into sections for their administrative convenience. Figure 8, Jurisdictional Areas by Mountains Restoration Trust Sections shows these divisions, while Table 2, Jurisdictional Areas by Mountains Restoration Trust Sections, summarizes the results.

Table 2. Jurisdictional Areas by Mountains Restoration Trust Sections

Section	Corps Wetlands (acres)	Corps Waters (acres)	CDFG Riparian (acres)
1	0.04	0.19	0.29
2	0.17	0.23	0.73
3	0.12	0.17	0.53
4	0.18	0.28	0.49
6	0.02	0.13	0.36
Subtotal	0.53	0.99	2.40
5	0.17	0.20	0.27
Total	0.69	1.19	2.67



Table 3. Surveyed Data Point Results and Wetland Delineation Determinations for the Dry Canyon Creek Project Site

Transect	Plot	Wetland Criteria Determinations			Jurisdiction Determinations		
		<i>Hydrophytic Veg</i>	<i>Hydrology</i>	<i>Hydric Soils</i>	<i>Corps Waters</i>	<i>Corps Wetland</i>	<i>Riparian (CDFG)</i>
A	1	NO	NO	NO	NO	NO	NO
A	2	NO	YES	YES	YES	NO	YES
A	3	NO	NO	NO	NO	NO	YES ⁴
B	1	NO	NO	NO	NO	NO	NO
B	2	NO	YES	NO	YES	NO	YES
B	3	NO	YES	NO	YES	NO	YES
B	4	NO	NO	NO	NO	NO	NO
C	1	NO	NO	NO	NO	NO	NO
C	2	NO	NO	NO	NO	NO	NO
C	3	NO	YES	YES	YES	NO	YES
C	4	NO	NO	NO	NO	NO	NO
D	1	NO	NO	NO	NO	NO	NO
D	2	YES	NO	NO	NO	NO	YES
D	3	YES	YES	YES	YES	YES	YES
D	4	YES	YES	YES	YES	YES	YES
D	5	YES	NO	YES	NO	NO	YES
E	1	NO	NO	NO	NO	NO	NO
E	2	NO	YES	YES	YES	NO	YES
E	3	NO	NO	NO	NO	NO	NO
F	1	YES	NO	NO	NO	NO	YES
F	2	YES	YES	YES	YES	YES	YES
F	3	NO	YES	YES	YES	NO	YES
F	4	NO	NO	YES	NO	NO	YES
G	1	NO	NO	NO	NO	NO	NO
G	2	NO	YES	YES	YES	NO	YES
G	3	YES	YES	YES	YES	YES	YES
G	4	YES	YES	YES	YES	YES	YES
G	5	YES	YES	YES	YES	YES	YES
G	6	YES	NO	NO	NO	NO	YES
J	1	NO	NO	NO	NO	NO	NO
J	2	NO	YES	NO	YES	NO	YES
J	3	YES	YES	YES	YES	YES	YES

⁴ Plot A3 falls under CDFG jurisdiction based on its location (1) within a well-defined bed and banks, and (2) under oak riparian woodland. Although Plot A3 does not have positive indicators for any of the three (Corps) wetland criteria (hydrophytic vegetation, hydrology, and/or hydric soils), it is determined to be within CDFG jurisdiction based on its location within the well-defined bed and banks of Dry Canyon Creek only. (Plot A3 does not fall under Corps jurisdiction because its location is higher on the bank, above the water marks and drift lines.) In addition, Plot A3 is under the canopy of Coast Live Oak-Valley Oak Riparian Woodland. According to Reed's (1988) wetland indicator status, these species are not considered hydrophytic. However, since these species form a riparian plant community, this plot falls within CDFG jurisdiction.

Dry Canyon Creek Wetland Delineation, Calabasas, Los Angeles County

DMEC PN: 05-0261

February 2006



Transect	Plot	Wetland Criteria Determinations			Jurisdiction Determinations		
		<i>Hydrophytic Veg</i>	<i>Hydrology</i>	<i>Hydric Soils</i>	<i>Corps Waters</i>	<i>Corps Wetland</i>	<i>Riparian (CDFG)</i>
J	4	NO	NO	NO	NO	NO	NO
J	5	NO	NO	NO	NO	NO	NO
M	1	NO	NO	NO	NO	NO	NO
M	2	NO	NO	YES	NO	NO	YES
M	3	YES	YES	YES	YES	YES	YES
M	4	NO	NO	NO	NO	NO	NO

Figure 4. Dry Canyon Creek Project Site Corps Jurisdictional Wetlands

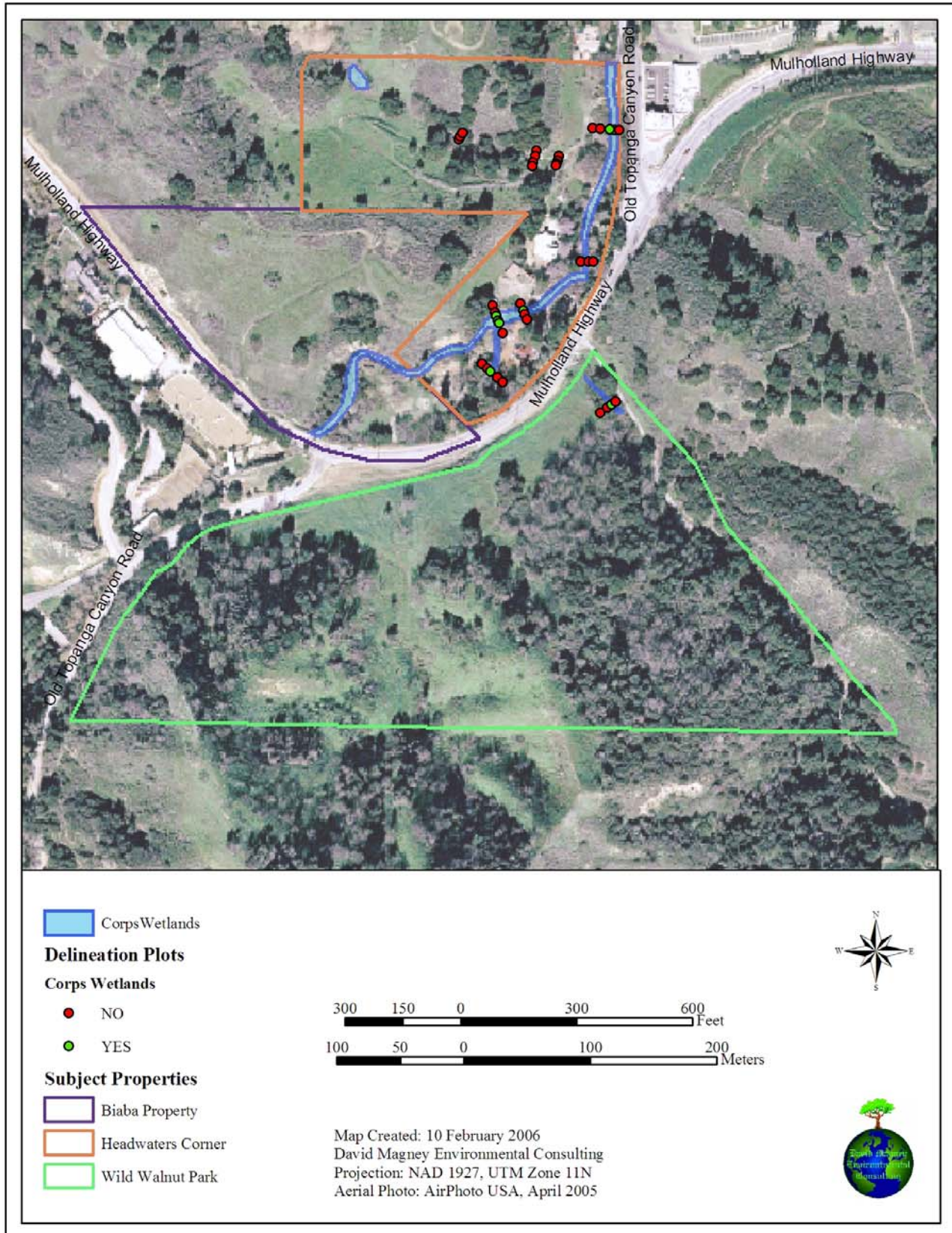


Figure 5. Dry Canyon Creek Project Site Corps Jurisdictional Waters of the U.S., Including Wetlands

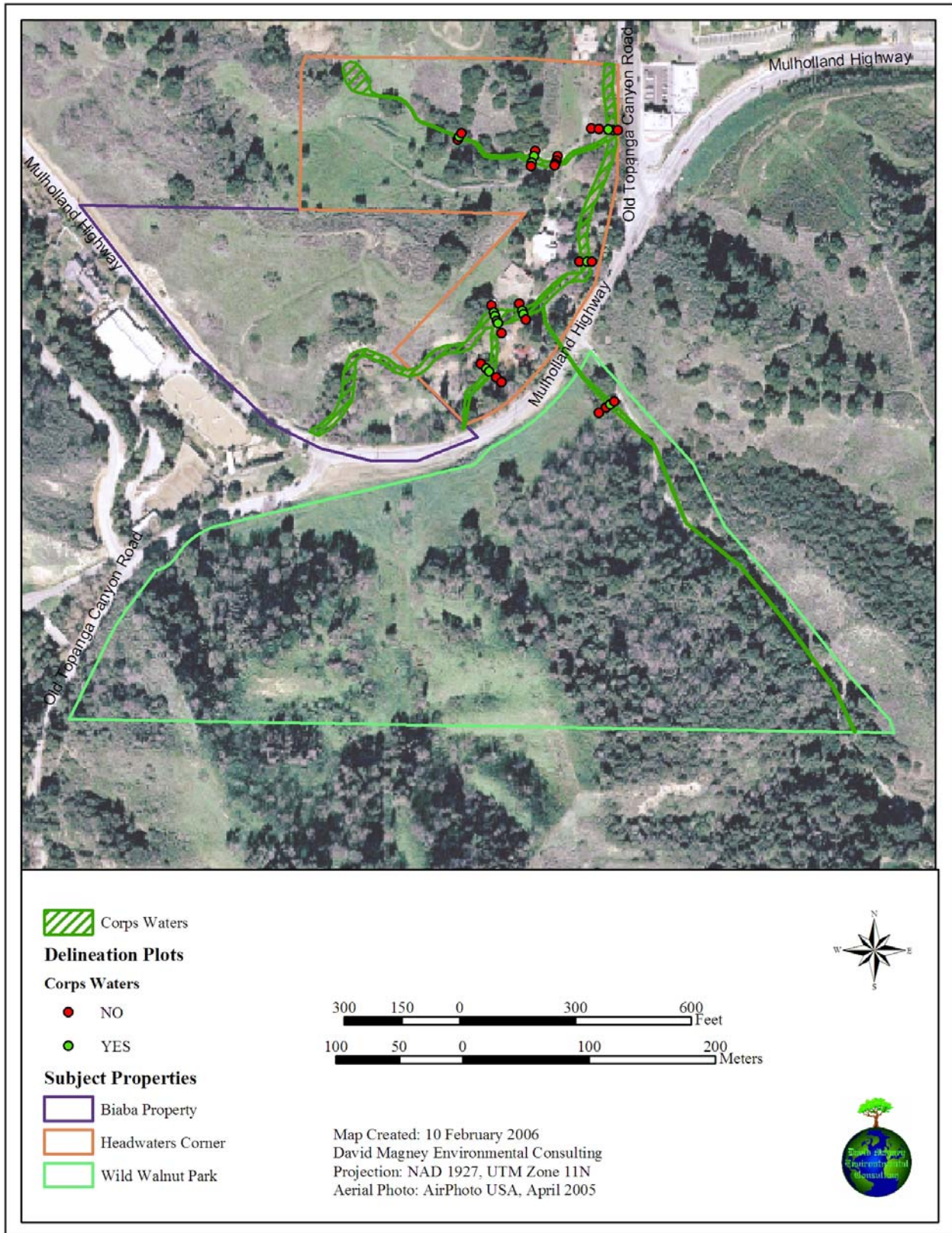


Figure 6. Dry Canyon Creek Project Site CDFG Jurisdictional Riparian Habitat Area

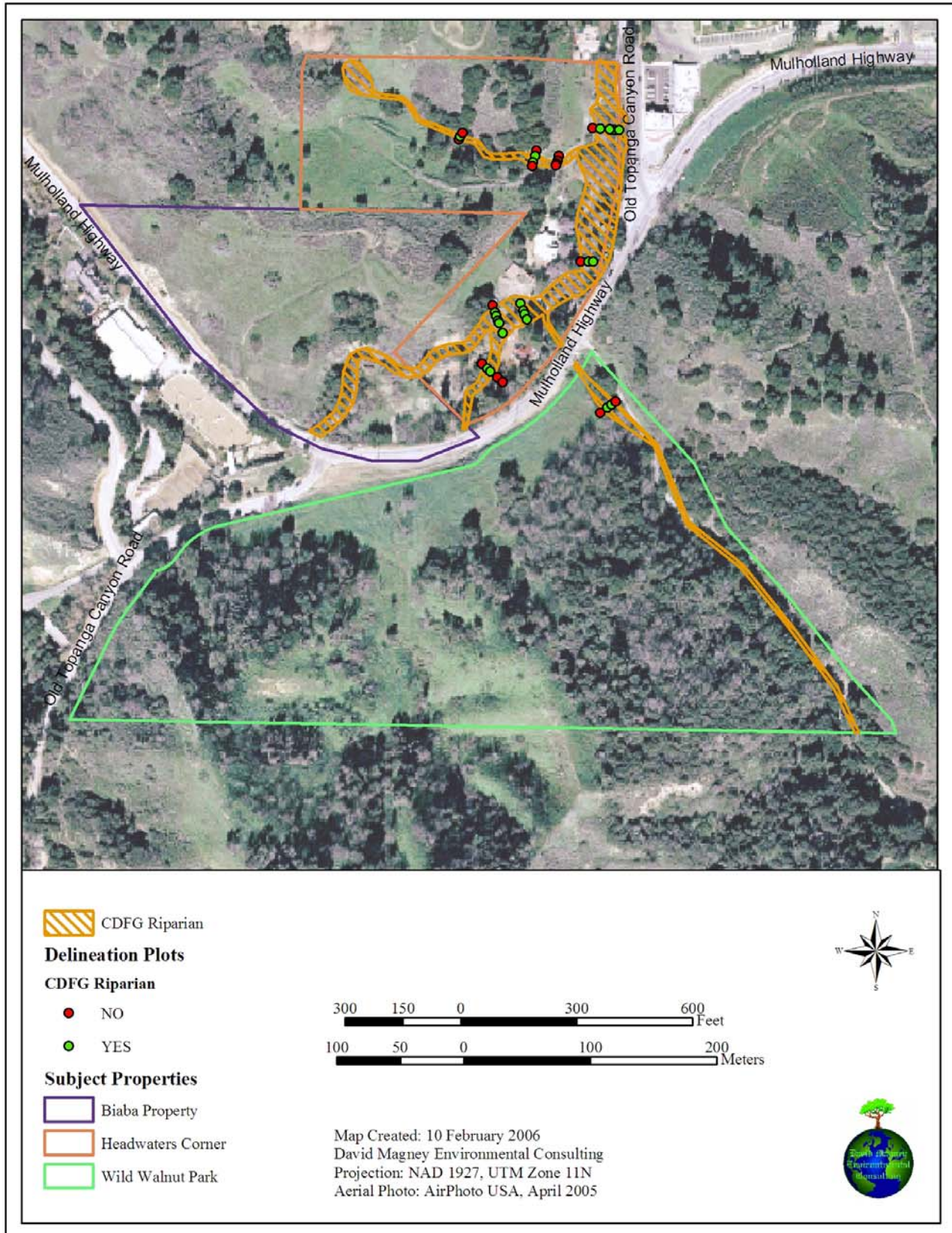


Figure 7. Dry Canyon Creek Project Site Corps Jurisdictional Waters (Including Wetlands) and CDFG Jurisdictional Riparian Habitat Area

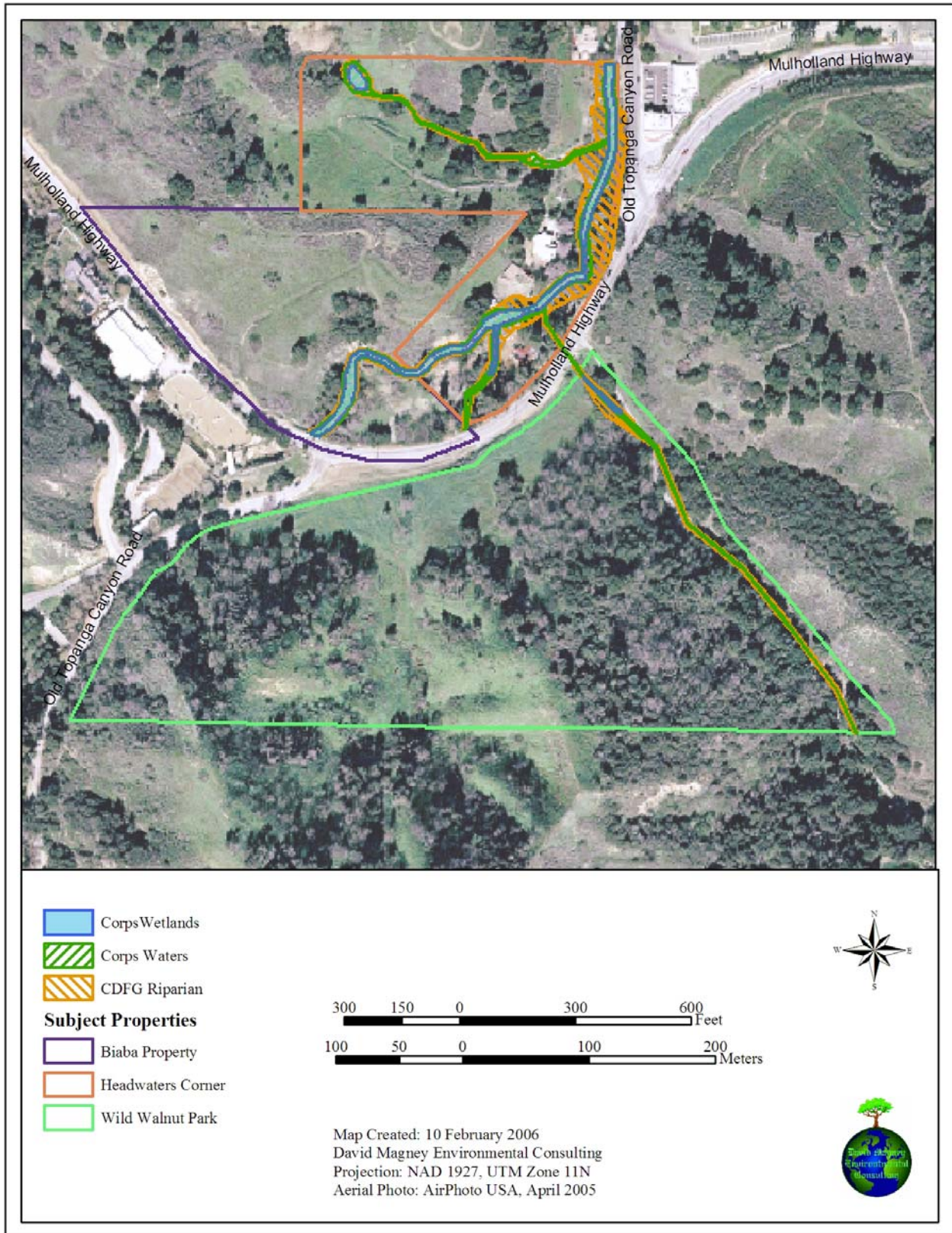
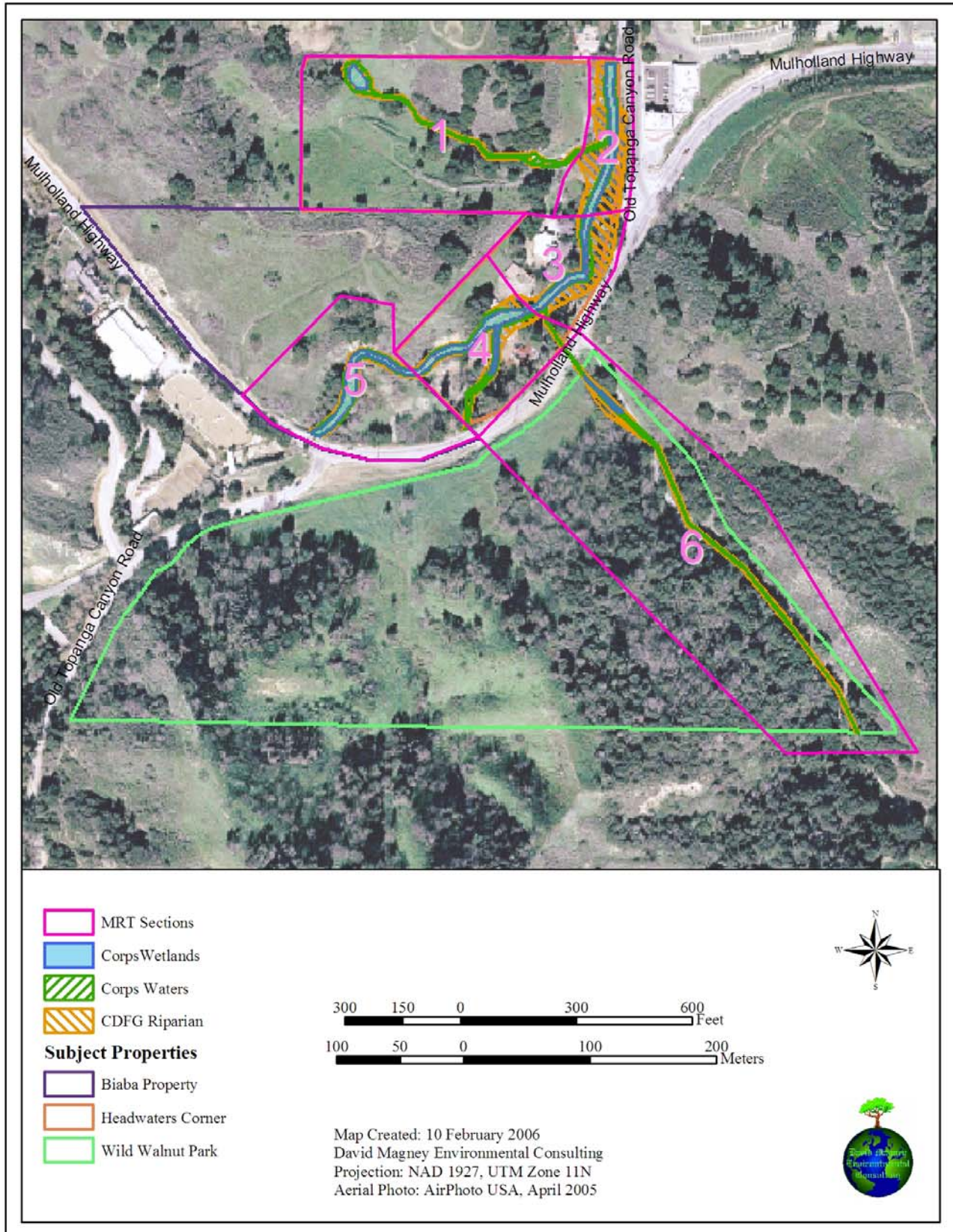


Figure 8. Jurisdictional Areas by Mountains Restoration Trust Sections





SECTION VI. ACKNOWLEDGEMENTS

This delineation of jurisdictional waters and riparian habitats report was written by Cher Batchelor and Teri Reynolds, and David Magney (project manager) edited the report. Mr. Magney, Ms. Batchelor, and Ms. Reynolds conducted the wetland delineation onsite. Mr. Magney and Ms. Reynolds prepared the GIS database and graphics for this report. Mr. Magney and Ms. Reynolds calculated the area for all jurisdictional areas (waters and wetlands).

SECTION VII. CITATIONS

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PERSONAL COMMUNICATIONS

- Alan Wasner, Natural Resources Conservation Service, email correspondence of January 2006 (Alan.Wasner@ca.usda.gov) regarding the *Soil Survey of the Santa Monica Mountains National Recreation Area*.

APPENDIX A.
DRY CANYON CREEK ROUTINE
WETLAND DETERMINATION FIELD DATA FORMS