APPENDIX A

Historic Topographic Maps and Aerial Photos

Northbrook Homes Fairview Site
24850 Fairview Avenue
Hayward, CA 94542

Inquiry Number: 3143080.4
August 08, 2011

EDR Historical Topographic Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Historical Topographic Map Report

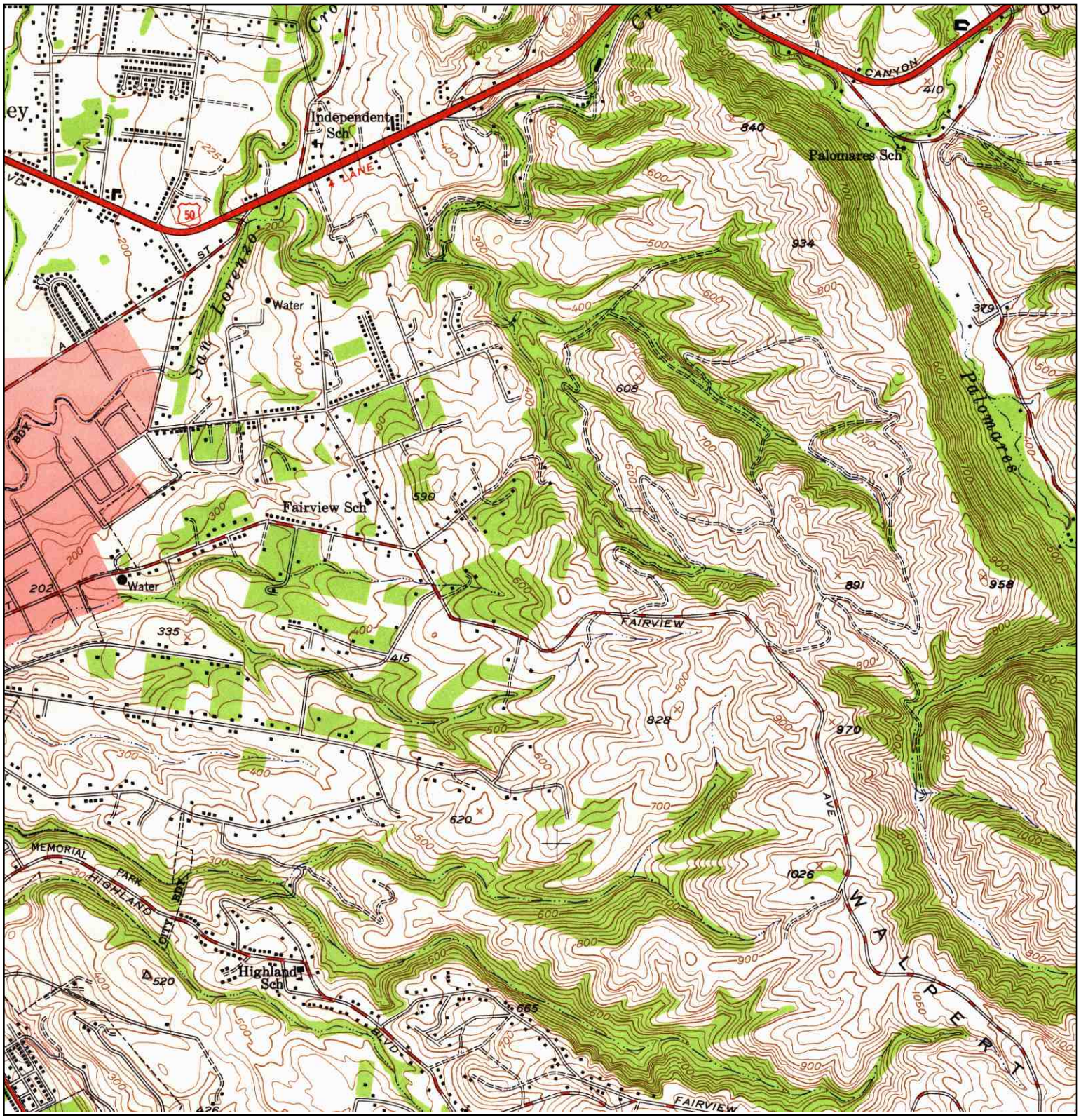
Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Historical Topographic Map

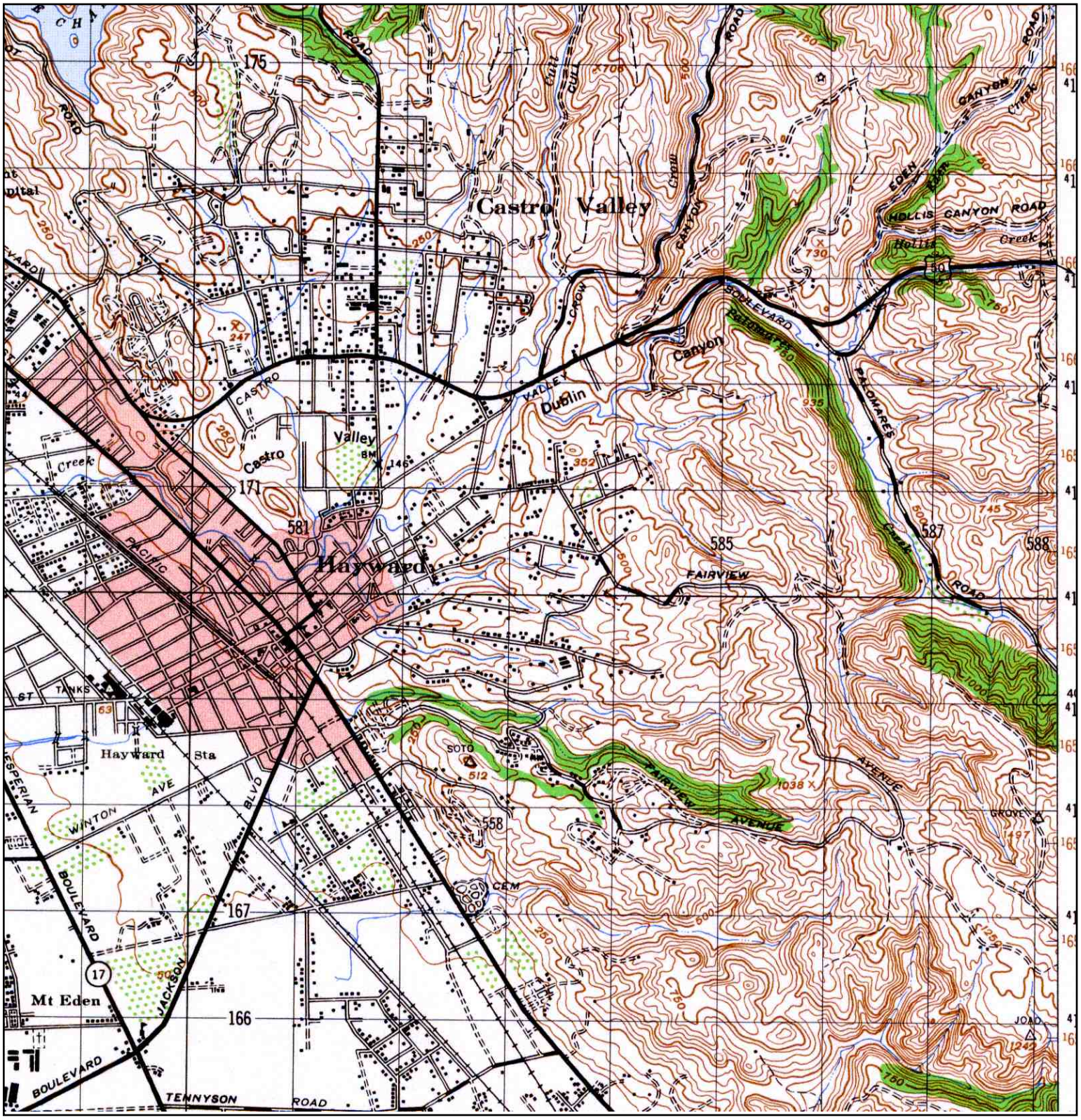
N	TARGET QUAD NAME: HAYWARDS MAP YEAR: 1899 SERIES: 15 SCALE: 1:62500	SITE NAME: Northbrook Homes Fairview Site ADDRESS: 24850 Fairview Avenue Hayward, CA 94542 LAT/LONG: 37.6784 / -122.0425	CLIENT: Lamphier-Gregory CONTACT: Nathaniel Taylor INQUIRY#: 3143080.4 RESEARCH DATE: 08/08/2011

Historical Topographic Map



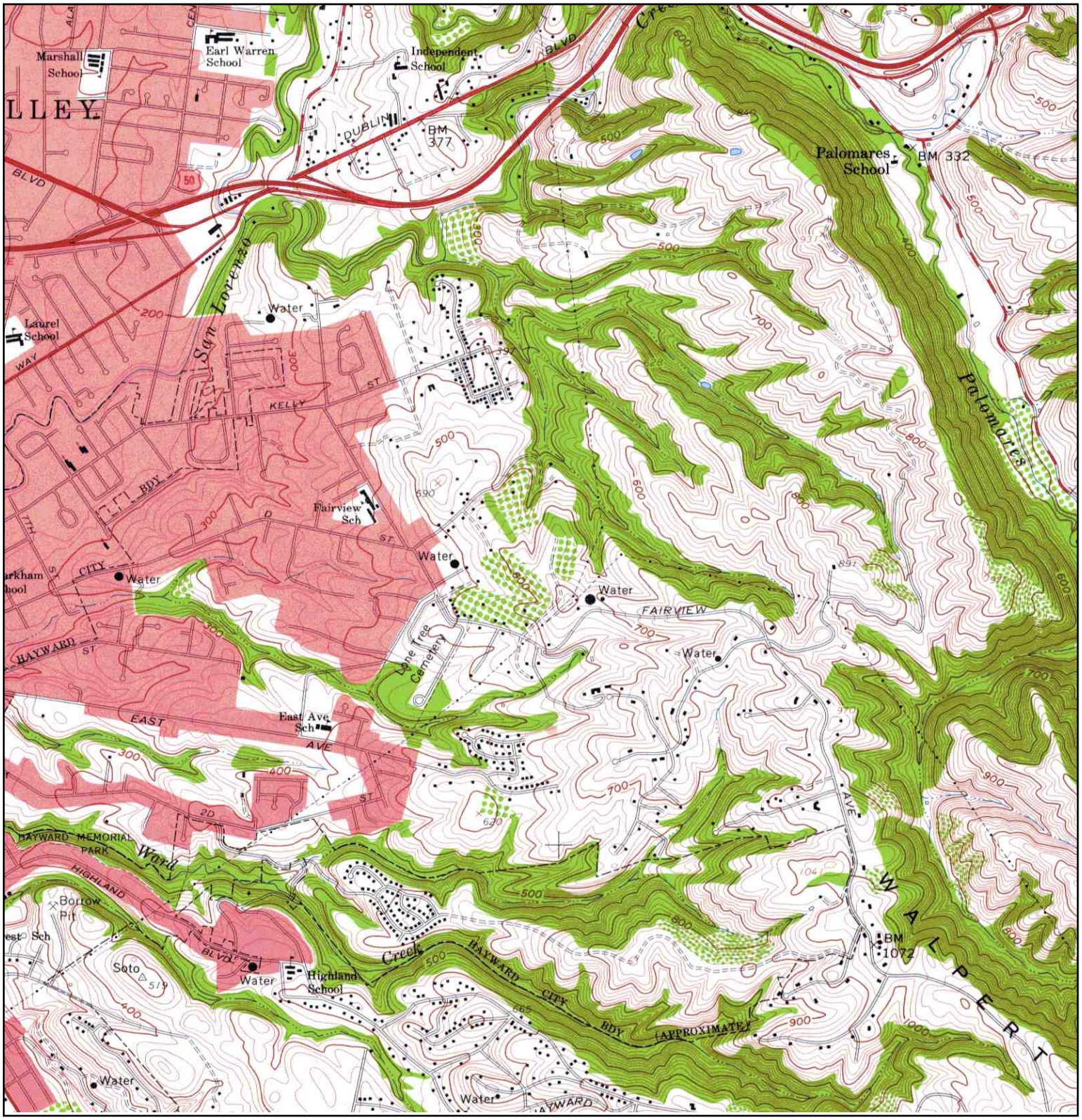
N	TARGET QUAD		SITE NAME:	Northbrook Homes Fairview Site	CLIENT:	Lamphier-Gregory
	NAME:	HAYWARD	ADDRESS:	24850 Fairview Avenue Hayward, CA 94542	CONTACT:	Nathaniel Taylor
	MAP YEAR:	1947	LAT/LONG:	37.6784 / -122.0425	INQUIRY#:	3143080.4
	SERIES:	7.5			RESEARCH DATE:	08/08/2011
	SCALE:	1:24000				

Historical Topographic Map



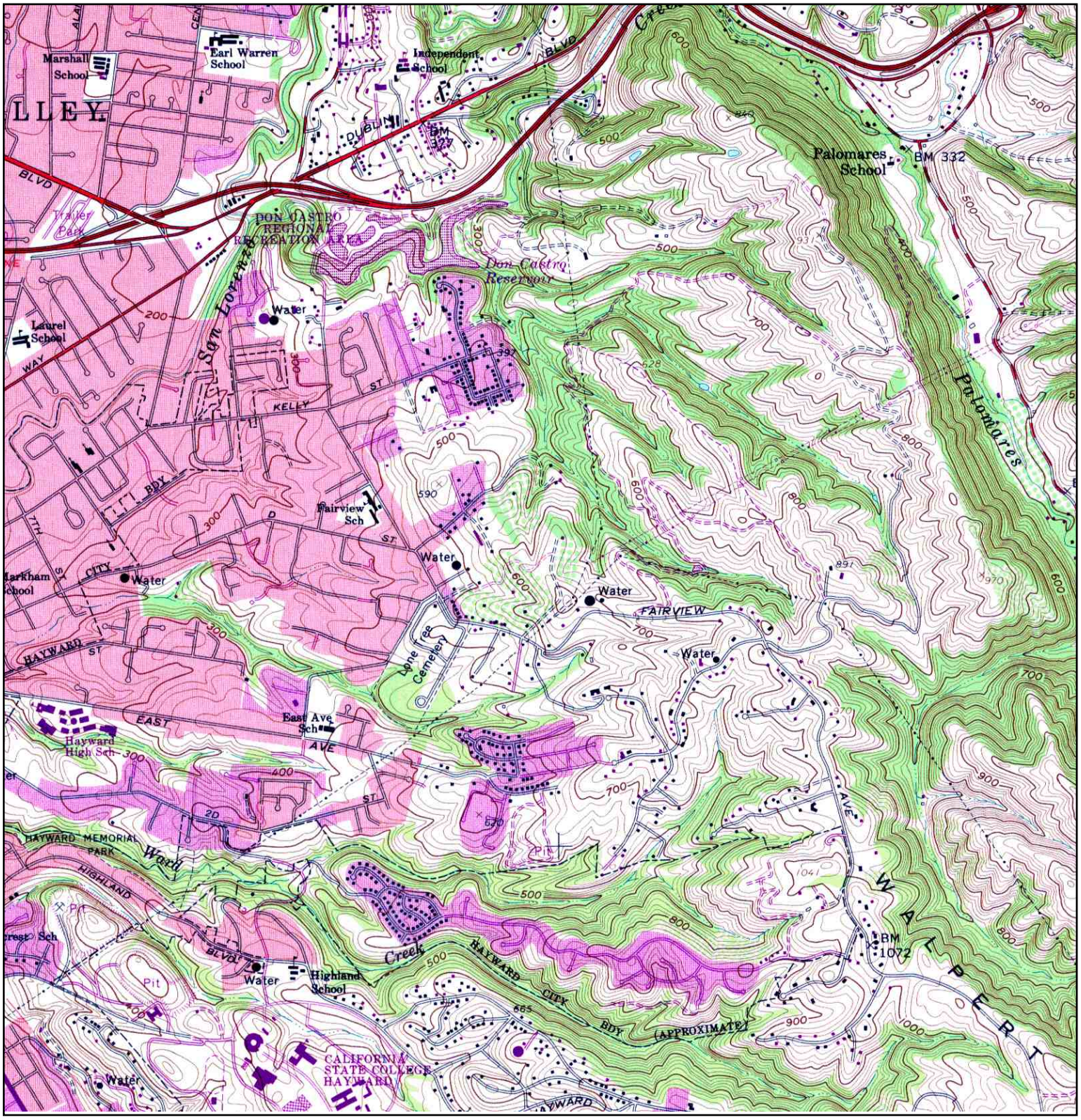
N	TARGET QUAD NAME: HAYWARD MAP YEAR: 1948 SERIES: 15 SCALE: 1:50000	SITE NAME: Northbrook Homes Fairview Site ADDRESS: 24850 Fairview Avenue Hayward, CA 94542 LAT/LONG: 37.6784 / -122.0425	CLIENT: Lamphier-Gregory CONTACT: Nathaniel Taylor INQUIRY#: 3143080.4 RESEARCH DATE: 08/08/2011

Historical Topographic Map



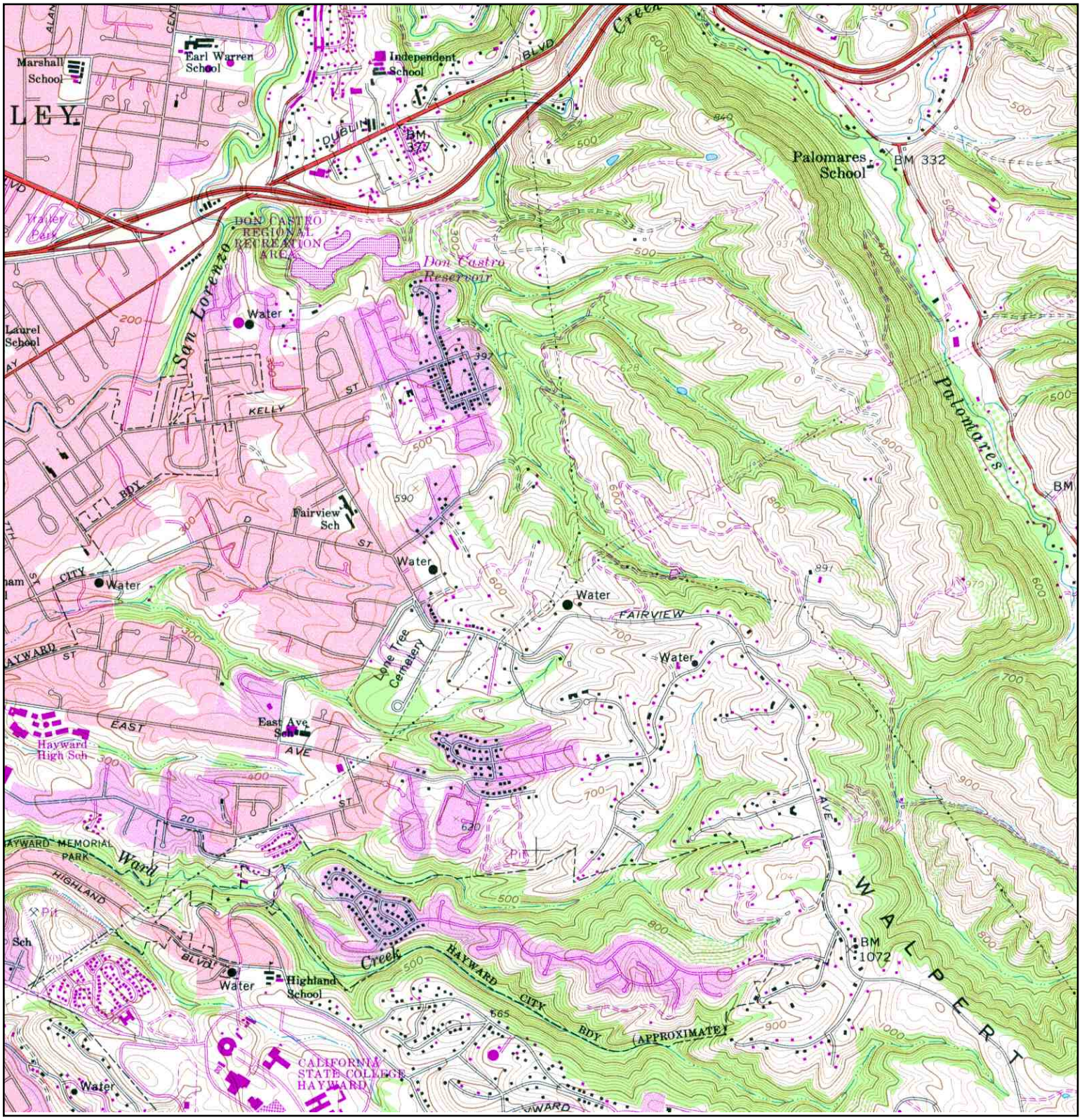
N	TARGET QUAD		SITE NAME:	Northbrook Homes Fairview Site	CLIENT:	Lamphier-Gregory
	NAME:	HAYWARD	ADDRESS:	24850 Fairview Avenue Hayward, CA 94542	CONTACT:	Nathaniel Taylor
	MAP YEAR:	1959	LAT/LONG:	37.6784 / -122.0425	INQUIRY#:	3143080.4
	SERIES:	7.5			RESEARCH DATE:	08/08/2011
	SCALE:	1:24000				

Historical Topographic Map



N	TARGET QUAD NAME: HAYWARD MAP YEAR: 1973 PHOTOREVISED:1959 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Northbrook Homes Fairview Site ADDRESS: 24850 Fairview Avenue Hayward, CA 94542 LAT/LONG: 37.6784 / -122.0425	CLIENT: Lamphier-Gregory CONTACT: Nathaniel Taylor INQUIRY#: 3143080.4 RESEARCH DATE: 08/08/2011

Historical Topographic Map



N	TARGET QUAD		SITE NAME:	Northbrook Homes Fairview Site	CLIENT:	Lamphier-Gregory
	NAME:	HAYWARD			CONTACT:	Nathaniel Taylor
	MAP YEAR:	1980	ADDRESS:	24850 Fairview Avenue	INQUIRY#:	3143080.4
	PHOTOREVISED:	1959		Hayward, CA 94542	RESEARCH DATE:	08/08/2011
	SERIES:	7.5	LAT/LONG:	37.6784 / -122.0425		
	SCALE:	1:24000				

Northbrook Homes Fairview Site
24850 Fairview Avenue
Hayward, CA 94542

Inquiry Number: 3143080.5
August 11, 2011

The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Date EDR Searched Historical Sources:

Aerial Photography August 11, 2011

Target Property:

24850 Fairview Avenue

Hayward, CA 94542

Year	***Scale***	***Details***	***Source***
1939	Aerial Photograph. Scale: 1"=555'	Flight Year: 1939	Fairchild
1946	Aerial Photograph. Scale: 1"=655'	Flight Year: 1946	Jack Ammann
1958	Aerial Photograph. Scale: 1"=555'	Flight Year: 1958	Cartwright
1965	Aerial Photograph. Scale: 1"=333'	Flight Year: 1965	Cartwright
1974	Aerial Photograph. Scale: 1"=601'	Flight Year: 1974	NASA
1982	Aerial Photograph. Scale: 1"=690'	Flight Year: 1982	USGS
1993	Aerial Photograph. Scale: 1"=604'	/Composite DOQQ - acquisition dates: 1993	EDR
1998	Aerial Photograph. Scale: 1"=666'	Flight Year: 1998	USGS
2005	Aerial Photograph. Scale: 1"=604'	Flight Year: 2005	EDR
2006	Aerial Photograph. Scale: 1"=604'	Flight Year: 2006	EDR

EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

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INQUIRY #: 3143080.5
YEAR: 1939
= 555'
N


INQUIRY #: 3143080.5
YEAR: 1946
= 655'
N


INQUIRY #: 3143080.5
YEAR: 1958
= 555'
N


INQUIRY #: 3143080.5
YEAR: 1965
= 333'
N


INQUIRY #: 3143080.5
YEAR: 1974
= 601'
N


INQUIRY #: 3143080.5
YEAR: 1982
= 690'
N


INQUIRY #: 3143080.5
YEAR: 1993
= 604'
N


INQUIRY #: 3143080.5
YEAR: 1998
= 666'
N


INQUIRY #: 3143080.5
YEAR: 2005
= 604'
N


INQUIRY #: 3143080.5
YEAR: 2006
= 604'
N

APPENDIX B

Olberding Environmental, Inc.,
***Biological Resources Analyis Report for the Borel Bank Property*.**

BIOLOGICAL RESOURCES ANALYSIS REPORT

FOR THE

BOREL BANK PROPERTY

CASTRO VALLEY, CALIFORNIA

Prepared for:

NORTHBROOK HOMES, LLC
7020 Koll Center Parkway, Suite 101
Pleasanton, CA 94566

Prepared by:

OLBERDING ENVIRONMENTAL, INC.
Wetland Regulatory Consultants
3170 Crow Canyon Place, Suite 260
San Ramon, California 94583

Phone: (925) 866-2111 ~ FAX (925) 866-2126
Contact: Jeff Olberding

JUNE 2010

TABLE OF CONTENTS

ATTACHMENTS

This report should be cited as: Olberding Environmental, Inc. June 2010. *Biological Resources Analysis Report for the Borel Bank Property, Castro Valley, California.* Prepared for Northbrook Homes, LLC, Pleasanton, California.

SUMMARY

On May 18, 2010, a field reconnaissance investigation of the Borel Bank Property (Property) was conducted for the purpose of identifying sensitive plant and wildlife species, sensitive habitats and potential biological constraints. The survey area for this report incorporates approximately 15 acres located north of Fairview Avenue in Castro Valley, California.

In summary, based on the initial reconnaissance survey, it was found that the Property contains areas that exhibited positive indicators of wetland soils, hydrology and vegetation. A constructed drainage feature (ditch) and areas containing standing water were observed during the May 2010 survey. Photographs are provided in Attachment 3. Based on the results of our reconnaissance survey, the site exhibited criteria used by the U.S. Army Corps of Engineers (Corps) to determine the presence of jurisdictional wetlands/waters. A formal Corps delineation would be required to verify the regulatory status of these features.

Based on suitable habitat types, soil conditions, and California Department of Fish and Game (CDFG) data base occurrences in the vicinity of the site, four special-status plant species were identified as having the potential to occur on the Property. These plants include big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*), Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*), fragrant fritillary (*Fritillaria liliacea*), and most beautiful jewel-flower (*Streptanthus albidus* ssp. *peramoenus*). Two of the four plants species, the Congdon's tarplant and fragrant fritillary, were presumed absent based on the historic nature of the last occurrence in the vicinity of the Property and the large distance separating the last know observation of these plants from the Property. Our May 2010 survey was performed during the recognized blooming period of the big-scale balsamroot and most beautiful jewel-flower. Neither species was observed during this survey. However, in order to document a negative finding, CDFG recommends multiple surveys to be performed over the entire blooming period of each species. June is identified as the last month of the blooming period for both the big-scale balsamroot and most beautiful jewel-flower. It is recommended that an additional survey be performed prior to July to substantiate a negative finding for these two species.

Several special-status bird and raptor species were also determined to have a potential to forage and nest near the site based on suitable habitat types, large trees, and recent occurrences in the vicinity of the Property. Therefore, a nesting bird survey 72 hours prior to the removal of vegetation and/or construction is required to determine absence or presence of nesting bird species. If required, surveys should be performed prior to January to identify any potential nesting trees prior to the birds lying eggs. Once eggs have been laid, a buffer of at least 150 feet must be established around the nest site and the site protected until August 15 or until the young have fledged. Due to the lack of small mammal burrows observed during the survey the Property is considered unsuitable to support the burrowing owl (*Athene cunicularia*). This species was not observed during the survey, nor was any secondary evidence of their occupation, and is presumed absent from the site.

1.0 INTRODUCTION

At the request of Northbrook Homes, LLC, Olberding Environmental has conducted a biological resources analysis of the Property, located within Castro Valley, Alameda County, California. This biological resources analysis includes pertinent literature on relevant background information and habitat characteristics of the site including the California Natural Diversity Database (CNDDB 2010) and the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California, and a review of information related to species of plants and animals that could potentially utilize the described habitats. A field reconnaissance investigation of the Property was conducted on May 18, 2010. This report documents the methods, results and conclusions for the reconnaissance-level surveys associated with the biological resources analysis for the Property.

2.0 LOCATION

The survey area for this study is situated to the northeast of the intersection of Fairview Avenue and Walter Dinos Court. Attachment 1, Figure 1 depicts the regional location of the Property in Alameda County, while Attachment 1, Figure 2 illustrates the vicinity of the Property in relationship to the City of Castro Valley. Attachment 1, Figure 3 identifies the location of the Property on the USGS 7.5 Quadrangle Map for Hayward. An aerial photograph of the Property has been included as Attachment 1, Figure 4.

Access to the Property is attained by taking Interstate 580 West. Take the Castro Valley Exit and turn right. Make a right onto Five Canyons Parkway and follow it for 2.25 miles. Turn right onto Fairview Avenue and continue for 0.75 miles. The Property is situated to the north of Fairview Avenue prior to the intersection with Walter Dinos Court.

3.0 PROPERTY DESCRIPTION

The Property encompasses approximately 15 acres and roughly forms the shape of a rectangle, with the southern edge bound by Fairview Avenue. Elevation ranges on the Property from 567 feet along Fairview Avenue to 683 feet near the middle of the Property and 604 feet at the northern edge. The Property has few flat areas and is comprised predominantly of gently sloping hillsides. A dirt access road is located off of Fairview Avenue between the Property fence line and the residence located west of the Property.

The majority of the Property is composed of grazed, non-native annual grassland. Several pine trees occur on the southern portion of the Property near Fairview Avenue. Many tall eucalyptus trees occur just beyond the Property boundary near the northeast corner of the site. The Property is bound by barbed wire fencing. Several existing homes are located to the east and west of the Property, but the majority of the site is surrounded by open space.

At the time of the survey cows and horses were present on the Property. Three potential seasonal wetlands occur within the Property boundaries. One is located near the northeast corner of the

Property close to the eastern fence line. The second is located along the western fence line where a gate is located along the newly constructed road to the west of the Property. Both of these features are located in topographical depressions. A third potential wetland feature is located on the north facing slope of the hill located adjacent to Fairview Avenue. This feature is a potential wetland seep. A small incised drainage ditch is located along the western fence line parallel to a dirt access road. This ditch transports water in a north to south direction and flattens out prior to the Property boundary at Fairview Avenue.

4.0 REGULATORY SETTING

4.1 Federal Regulatory Setting

4.1.1 Plants and Wildlife

The federal Endangered Species Act (ESA) of 1973 (16 USC 1531 et seq., as amended) prohibits federal agencies from authorizing, permitting, or funding any action that would result in biological jeopardy to a plant or animal species listed as Threatened or Endangered under the Act. Listed species are taxa for which proposed and final rules have been published in the Federal Register (U.S. Fish and Wildlife Service [USFWS], 2009a and 2009b). If a proposed project may jeopardize listed species, Section 7 of the ESA requires consideration of those species through formal consultations with the USFWS. Federal Proposed species (USFWS, 2009c) are species for which a proposed listing as Threatened or Endangered under ESA has been published in the Federal Register. If a proposed project may jeopardize proposed species, Section 7 of the ESA affords consideration of those species through informal conferences with USFWS. The USFWS defines federal Candidate species as "those taxa for which we have on file sufficient information on biological vulnerability and threats to support issuance of a proposed rule to list, but issuance of the proposed rule is precluded by other higher priority listing actions" (USFWS, 2009c). Federal Candidate species are not afforded formal protection, although USFWS encourages other federal agencies to give consideration to Candidate species in environmental planning.

4.1.2 Wetlands/Waters

The federal government, acting through the U.S. Army Corps of Engineers (Corps) and the Environmental Protection Agency (EPA), has jurisdiction over all "waters of the United States" as authorized by §404 of the Clean Water Act (CWA) and §10 of the Rivers and Harbors Act of 1899 (33 CFR Parts 320-330). Properties that cause the discharge of dredged or fill material into waters of the United States require permitting by the Corps. Actions affecting small areas of jurisdictional waters of the United States may qualify for a Nationwide Permit (NWP), provided conditions of the permit are met, such as avoiding impacts to threatened or endangered species or to important cultural sites. Properties that affect larger areas or which do not meet the conditions of an NWP require an Individual Permit. The process for obtaining an Individual Permit requires a detailed alternatives analysis and development of a comprehensive mitigation/monitoring plan.

Waters of the United States are classified as wetlands, navigable waters, or other waters. Wetlands are transitional habitats between upland terrestrial areas and deeper aquatic habitats such as rivers and lakes. Under federal regulation, wetlands are defined 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 conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR Part 328.3[b]). Swamps, marshes, bogs, fens and estuaries are all defined as wetlands, as are seasonally saturated or inundated areas such as vernal pools, alkali wetlands, seeps, and springs. In addition, portions of the riparian habitat along a river or stream may be a wetland where the riparian vegetation is at or below the ordinary high water mark and thus also meets the wetland hydrology and hydric soil criteria.

Navigable waters include all waters subject to the ebb and flow of the tides, including the open ocean, tidal bays, and tidal sloughs. Navigable waters also include some large, non-tidal rivers and lakes, which are important for transportation in commerce. The jurisdictional limit over navigable waters extends laterally to the entire water surface and bed of the waterbody landward to the limits of the mean high tide line. For non-tidal rivers or lakes, which have been designated (by the Corps) to be navigable waters, the limit of jurisdiction along the shoreline is defined by the ordinary high water mark. Other waters refer to waters of the United States other than wetlands or navigable waters. Other waters include streams and ponds, which are generally open water bodies and are not vegetated. Other waters can be perennial or intermittent water bodies and waterways. The Corps regulates other waters to the outward limit of the ordinary high water mark. Streams should exhibit a defined channel, bed and banks to be delineated as other waters.

The Corps does not generally consider "non-tidal drainage and irrigation ditches excavated on dry land" to be jurisdictional waters of the United States (and such ditches would therefore not be regulated by the Corps (33 CFR Parts 320-330, November 13, 1986). Other areas generally not considered jurisdictional waters include: 1) artificially irrigated areas that would revert to upland habitat if the irrigation ceased; 2) artificial lakes and ponds created by excavating and/or diking of dry land to collect and retain water, used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing; 3) waste treatment ponds; 4) ponds formed by construction activities including borrow pits until abandoned; and 5) ponds created for aesthetic reasons such as reflecting or ornamental ponds (33 CFR Part 328.3). However, the preamble also states that "the Corps reserves the right on a case-by-case basis to determine that a particular waterbody within these categories" can be regulated as a jurisdictional water. The EPA also has authority to determine jurisdictional waters of the U.S. on a case-by-case basis. Riparian habitat that is above the ordinary high water mark and does not meet the three-parameter criteria for a wetland, would not be regulated as jurisdictional waters of the United States.

4.1.3 Migratory Bird Treaty Act

Raptors are migratory bird species protected by international treaty under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 C.F.R. 21). Sections 3503, 3503.5, and 3800 of the California Department of Fish and Game Code prohibit the take,

possession, or destruction of birds, their nests or eggs. Implementation of the take provisions requires that Property-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle (March 1 – August 15, annually). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) or the loss of habitat upon which the birds depend is considered "taking" and is potentially punishable by fines and/or imprisonment. Such taking would also violate federal law protecting migratory birds (e.g., MBTA).

4.1.4 The Federal Bald and Golden Eagle Protection Act

Although protected by the Migratory Bird Treaty Act, both the bald eagle and the golden eagle are also protected by the Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. 668-668c). The Bald and Golden Eagle Protection Act, and amended several times since being enacted in 1940, prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald or golden eagles, including their parts, nests, or eggs (USFWS 2010). The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb" (USFWS 2010).

For purposes of these guidelines, "disturb" means: "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior" (USFWS 2010).

In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment (USFWS 2010).

4.2 State Regulatory Setting

4.2.1 Plants and Wildlife

Property permitting and approval requires compliance with California Environmental Quality Act (CEQA), the 1984 California Endangered Species Act (CESA), and the 1977 Native Plant Protection Act (NPPA). The CESA and NPPA authorize the California Fish and Game Commission to designate Endangered, Threatened and Rare species and to regulate the taking of these species (§§2050-2098, Fish & Game Code). The California Code of Regulations (Title 14, §670.5) lists animal species considered Endangered or Threatened by the State.

The Natural Heritage Division of the California Department of Fish and Game (CDFG) administers the state rare species program. The CDFG maintains lists of designated Endangered, Threatened,

and Rare plant and animal species (CDFG, 2009a and 2009b). Listed species either were designated under the NPPA or designated by the Fish and Game Commission. In addition to recognizing three levels of endangerment, the CDFG can afford interim protection to candidate species while they are being reviewed by the Fish and Game Commission.

The CDFG also maintains a list of animal species of special concern (CDFG 2009), most of which are species whose breeding populations in California may face extirpation. Although these species have no legal status, the CDFG recommends considering them during analysis of proposed property impacts to protect declining populations and avoid the need to list them as endangered in the future.

Under provisions of §15380(d) of the CEQA Guidelines, the Property lead agency and CDFG, in making a determination of significance, must treat non-listed plant and animal species as equivalent to listed species if such species satisfy the minimum biological criteria for listing. In general, the CDFG considers plant species on List 1A (Plants Presumed Extinct in California), List 1B (Plants Rare, Threatened, or Endangered in California and elsewhere), or List 2 (Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere) of the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Vascular Plants of California* (Skinner and Pavlik 1994) as qualifying for legal protection under §15380(d). Species on CNPS List 3 or 4 may, but generally do not, qualify for protection under this provision.

Sensitive habitats include riparian corridors, wetlands, habitats for legally protected species and CDFG Species of Special Concern, areas of high biological diversity, areas providing important wildlife habitat, and unusual or regionally restricted habitat types. Habitat types considered sensitive include those listed on the California Natural Diversity Data Base's (CNDDB) working list of "high priority" habitats (i.e., those habitats that are rare or endangered within the borders of California) (Holland, 1986).

4.2.2 Wetlands/Waters

The Regional Water Quality Control Board (RWQCB) regulates activities in wetlands and other waters through §401 of the Clean Water Act. Section 401 requires a state water quality certification for properties subject to 404 regulation. Requirements of the certification include mitigation for loss of wetland habitat. In the San Francisco Bay region, the RWQCB may take the lead over the Corps in determining wetland mitigation requirements. California Fish and Game Code §§1600-1607 require the CDFG be notified of any activity that could affect the bank or bed of any stream that has value to fish and wildlife. Upon notification, the CDFG has the discretion to execute a Streambed Alteration Agreement. The CDFG defines streams as follows:

> *"... a body of water that flows at least periodically...through a bed or channel having banks and supporting fish and other aquatic life. This includes watercourses having a subsurface flow that supports or has supported riparian vegetation."*
> (Stream Bed Alteration Program, California Department of Fish and Game).

In practice, CDFG authority is extended to any "blue line" stream shown on a USGS topographic map, as well as unmapped channels with a definable bank and bed. Wetlands, as defined by the Corps, need not be present for CDFG to exert authority.

4.2.3 California Environmental Quality Act

According to Appendix G of the California Environmental Quality Act (CEQA 2005) Guidelines, the proposed project would have a significant impact on biological resources if it would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

5.0 METHODS OF ANALYSIS FOR GENERAL BIOLOGICAL RESOURCES

A special-status plant and wildlife species database search and review was conducted using the CNDDB and other sources. An additional search was conducted for special-status plants using California Native Plant Society Inventory on-line (CNPS). Special-status species reports were accessed by searching the CNDDB database for the Hayward, Dublin, Niles and Newark USGS 7.5 minute quadrangles, which surround the Property, and by examining those species that have been identified in the vicinity of the Property. The database report identified special-status species known to occur in the region or those that have the potential to occur in the vicinity of the Property. The CNDDB report was used to focus special-status species analysis of the site prior to the reconnaissance surveys.

An Olberding Environmental biologist conducted a reconnaissance-level survey of the Property on May 18, 2010. The survey consisted of walking throughout the Property and evaluating the site and adjacent lands for potential biological resources. Existing conditions, observed plants and wildlife, adjacent land use, soils and potential biological resource constraints were recorded during the visit.

Plant and wildlife species observed within and adjacent to the Property during the reconnaissance survey are included in Attachment 2, Table 1.

The objectives of the field surveys were to determine the potential presence or absence of special-status species habitat listed in the CNDDB database report and to identify any wetland areas that could be potentially regulated by the Corps (CNDDB 2010). In addition, the Olberding Environmental biologist looked for other potential sensitive species or habitats, which may not have been obvious from background database reports or research. Surveys conducted after the growing season or conducted outside of the specific flowering period for a special-status plant cannot conclusively determine the presence or absence of such plant species; therefore, site conditions and habitat type were used to determine potential for occurrence. When suitable habitat was observed to support a special-status plant or animal species it was noted in the discussion for that particular species. Regulatory agencies evaluate the possibility of occurrence based on habitats observed on-site and the degree of connectivity with other special-status animal habitats in the vicinity of the Property. These factors are discussed in each special-status plant or animal section. Potential for occurrence of each special-status or protected plant and animal species was evaluated using the following criteria.

- **Present**: The species has been recorded by CNDDB or other literature as occurring on the Property and/or was observed on the Property during the reconnaissance survey or protocol surveys.
- **May Occur**: The species has been recorded by CNDDB or other literature as occurring within five miles of the Property, and/or was observed within five miles of the Property, and/or suitable habitat for the species is present on the Property or its immediate vicinity.
- **Not Likely to Occur**: The species has historically occurred on or within five miles of the Property, but has no current records. The species occurs within five miles of the Property but only marginally suitable habitat conditions are present. The Property is likely to be used only as incidental foraging habitat or as an occasional migratory corridor.
- **Presumed Absent**: The species will not occur on the Property due to the absence of suitable habitat conditions, and/or the lack of current occurrences. Alternatively if directed or protocol-level surveys were done during the proper occurrence period and the species was not found it will be presumed absent.

Sources consulted for agency status information include USFWS (2009a, 2009b) for federally listed species and CDFG (2009a) for State of California listed species. Based on information from the above sources, Olberding Environmental developed a target list of special-status plants and animals with the potential to occur within or in the vicinity of the Property (Attachment 2, Table 2).

5.1 Soils Evaluation

The soils present on a property may determine if habitat on the site is suitable for certain special-status plants and animals. The host plants of some special-status invertebrates may also require specific soil conditions. In the absence of suitable soil conditions, special-status plants or animals requiring those conditions would be presumed absent. Information regarding soil characteristics for

the Property was obtained by viewing the Natural Resources Conservation Service (NRCS) Web Soil Survey report for the Property (NRCS 2010).

5.2 Plant Survey Methods

The purposes of the botanical surveys were (1) To characterize the habitat types (plant communities) of the study area; (2) to determine whether any suitable habitat for any special-status plant species, occurs within the study area; and (3) to determine whether any sensitive habitat types (wetlands) occur within the study area. Site conditions and plant habitat surveys are important tools in determining the potential occurrence of plants not recorded during surveys (e.g., special-status plants) because presence cannot conclusively be determined if field surveys are conducted after the growing season or conducted outside a specific flowering period.

5.2.1 Review of Literature and Data Sources

Olberding Environmental conducted focused surveys of literature and special-status species databases in order to identify special-status plant species and sensitive habitat types with potential to occur in the study area. Sources reviewed include: CNDDB occurrence records (CNDDB 2010) and CNPS *Inventory* (Skinner and Pavlik 1994) for the Hayward, Dublin, Niles and Newark USGS 7.5 quadrangles; and standard flora (Hickman 1993). From the above sources, a list of special-status plant species with potential to occur in the Property vicinity was developed (Attachment 2, Table 2).

5.2.2 Field Surveys

A biologist from Olberding Environmental conducted a reconnaissance-level survey to determine habitat types and the potential for special-status plants based on the observed habitat types. All vascular plant species that were identifiable at the time of the survey were recorded and identified using keys and descriptions in Hickman (1993).

The habitat types occurring on the Property were characterized according to pre-established categories. In classifying the habitat types on the site, the generalized plant community classification schemes of *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995) were consulted. The final classification and characterization of the habitat types of the study area were based on field observations.

5.3 Wildlife Survey Methods

The purposes of the wildlife surveys were to identify special-status wildlife species and/or potential special-status wildlife habitats within the study area.

5.3.1 Review of Literature and Data Sources

A focused review of literature and data sources was conducted in order to determine which special-status wildlife species had potential to occur in the vicinity of the Property. Current agency status information was obtained from USFWS (2009b, c) for species listed as Threatened or Endangered,

as well as Proposed and Candidate species for listing, under the federal ESA; and from CDFG (2009, 2009b) for species listed as Threatened or Endangered by the state of California under the CESA, or listed as "species of special concern" by CDFG. From the above sources, a list of special-status wildlife species with potential to occur in the Property vicinity was developed (Attachment 2, Table 2).

5.3.2 Field Surveys

General Wildlife Survey – An Olberding Environmental biologist conducted a survey of species habitat within the entire study area, including visible portions of the adjacent properties, on May 18, 2010. The purpose of the habitat survey was to evaluate wildlife habitats and the potential for any protected species to occur on or adjacent to the Property.

Reconnaissance-Level Raptor Survey – A reconnaissance-level raptor survey was conducted in the Property on May 18, 2010. Observation points were established on the periphery of the site to view raptor activity over a fifteen to thirty-minute time period. This survey was conducted with the use of binoculars and notes were taken for each species occurrence. Additionally, utility poles and perch sites in the vicinity of the Property were observed. All raptor activity within and adjacent to the Property was recorded during the reconnaissance-level observation period.

Reconnaissance-Level Burrowing Owl (Athene cunicularia) Survey – Reconnaissance-level burrowing owl (*Athene cunicularia*) surveys were also conducted in the Property on May 18, 2010 to identify potential burrow sites or burrowing owl use of on-site habitat. The general presence and density of suitable burrow sites (e.g., rodent burrows) was evaluated for the Property. Rodent burrows encountered during the site visit were investigated for presence of potential burrowing owl residence. Each potential burrow observed was evaluated for the presence of castings, whitewash, bones, feathers or other signs of burrowing owl habitation. Observations were recorded. Utility poles and any potential perching sites were investigated for signs of castings at the base of the posts.

6.0 RESULTS FOR GENERAL BIOLOGICAL RESOURCES

The search and review of the CNDDB database reports revealed the occurrence of special-status plant and wildlife species that occur in the habitats found within the Property boundaries (CNDDB 2010). The CNDDB database and background data were reviewed for the Hayward, Dublin, Niles and Newark 7.5 minute quadrangles (Attachment 2, Table 2). Those animals listed in Attachment 2, Table 2 were reviewed for their potential to occur on the Property based on general habitat types. Most of the plant and several of the animal species identified by the CNDDB in the quadrangles require a specific habitat microclimate that was found not to occur within the Property.

6.1 Soil Evaluation Results

The NRCS (2010) reports two soil type within the Property. A detailed map of this soil type can be found in Attachment 1, Figure 8. The soils mapped included the following type:

122: Los Osos-Millsholm complex, 9 to 30 percent slopes – The Millsholm series consists of shallow, well drained soils that formed in material weathered from sandstone, mudstone and shale. Millsholm soils are on hills and mountains and have slopes of 5 to 75 percent. The mean annual precipitation is about 25 inches and the mean annual temperature is about 60 degrees F.

A1--0 to 0.5 inches; pale brown (10YR 6/3) light clay loam, brown (10YR 4/3) moist; weak medium platy structure; slightly hard, friable, nonsticky and nonplastic; common fine roots; common fine pores; slightly acid; abrupt smooth boundary. (0 to 1 inch thick)

A2--0.5 to 6 inches; brown (10YR 5/3) clay loam, brown (10YR 4/3) moist; moderate coarse subangular blocky structure; hard, friable, moderately sticky and nonplastic; common fine roots; common fine pores; few shale fragments; neutral; clear smooth boundary. (4 to 10 inches thick)

Bt--6 to 16 inches; brown (10YR 5/3) clay loam, brown (10YR 4/3) moist; moderate coarse subangular blocky structure; hard, friable, moderately sticky and slightly plastic; few fine, many medium and coarse roots; common medium and fine pores; few thin discontinuous clay films; few shale fragments; neutral; clear wavy boundary. (4 to 10 inches thick)

R--16 to 20 inches; brown and grayish brown fractured shale and fine-grained sandstone.

123: Los Osos-Millsholm complex, 30 to 50 percent slopes - The Los Osos series consists of moderately deep, well drained soils that formed in material weathered from sandstone and shale. Los Osos soils are on uplands and have slopes of 5 to 75 percent. The mean annual precipitation is about 25 inches and the mean annual air temperature is about 60 degrees F.

A--0 to 14 inches; brown (10YR 5/3) loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; moderately acid (pH 6.0); clear smooth boundary. (10 to 16 inches thick)

Btss1--14 to 24 inches; yellowish brown (10YR 5/4) clay, dark yellowish brown (10YR 4/4) moist; weak medium prismatic structure; very hard, very firm, sticky and plastic; few very fine roots; few very fine tubular pores; many moderately thick clay films on faces of peds and lining pores; few slickensides; moderately acid (pH 6.0); gradual wavy boundary. (6 to 12 inches thick)

Btss2--24 to 32 inches; light yellowish brown (10YR 6/4) clay loam, dark yellowish brown (10YR 4/4) moist; massive; very hard, very firm, sticky and plastic; few very fine roots, common very fine tubular pores; many moderately thick clay films lining pores; few slickensides; few manganese concretions; slightly acid (pH 6.5); gradual wavy boundary. (4 to 8 inches thick)

C--32 to 39 inches; pale yellow (2.5Y 7/4) sandy loam, light olive brown (2.5Y 5/4) moist; massive; hard, friable, nonsticky and nonplastic; few manganese stains; neutral (pH 7.0); gradual wavy boundary. (0 to 7 inches thick)

Cr--39 to 43 inches; yellowish brown (10YR 5/4) sandstone, brown (10YR 4/3) moist; many moderately thick clay films and few manganese stains coat fracture faces that are less than 10cm apart and less than 1mm in width.

6.2 Plant Survey Results

6.2.1 Floristic Inventory and Habitat Characterization

In classifying the habitat types on the Property, generalized plant community classification schemes were used (Sawyer and Keeler-Wolf 1995). The final classification and characterization of the habitat types of the study area were based on field observations.

The Property supports three habitat types that consist of non-native grazed annual grassland, drainage ditch and potential seasonal wetland. These habitat types are described in further detail below. A description of the plant species present within these habitat types is provided below. Dominant plant species are noted. A complete list of plant species observed on the Property can be found in Attachment 2, Table 1.

Non-Native Grazed Annual Grassland Habitat

The grassland habitat on the Property is characterized by dominant grass and forb species such as wild oat (*Avena fatua*), foxtail (*Hordeum murinum var. leporinum*), Italian rye grass (*Lolium multiflorum*), soft chess (*Bromus hordeaceous*) and rip gut brome (*Bromus diandrus*). The entirety of the site is currently being grazed.

Drainage Ditch

A small constructed drainage ditch exists along the western Property fence line near Fairview Avenue. This ditch exhibits scouring and is an incised channel feature. The ditch carries water from the hillside slopes to the north south where it flattens out prior to reaching Fairview Avenue.

Potential Seasonal Wetland

Several small areas of potentially seasonal wetland habitat were observed on the Property. These areas contained standing water and vegetation consisted of Italian rye grass (*Lolium multiflorum*) and rabbit's foot grass (*Polypogon monspeliensis*). These areas were located in slight depressions in the topography where due to recent storm events, water has ponded and has formed wetland conditions. One feature is located near the eastern boundary and a second is located near the western boundary. A potential wetland seep is also located on the northern facing hillside slope.

6.2.2 Special-Status Plant Species

Special-status plant species include species listed as Rare, Threatened, or Endangered by the USFWS (2009a) or by the State of California (CDFG 2009a). Federal Proposed and Candidate species (USFWS, 2009b) are also special-status species. Special-status species also include species listed on List 1A, List 1B, or List 2 of the CNPS Inventory (Skinner and Pavlik, 1994; CNPS 2009). All species in the above categories fall under state regulatory authority under the provisions of CEQA, and may also fall under federal regulatory authority. Considered special-status species are species included on List 3 (Plants About Which We Need More Information—A Review List) or List 4 (Plants of Limited Distribution—A Watch List) of the CNPS *Inventory*. These species are considered to be of lower sensitivity and generally do not fall under specific state or federal regulatory authority. Specific mitigation considerations are not generally required for List 3 and List 4 species.

Attachment 2, Table 2 includes a list of special-status plants with the potential to occur within or in the immediate vicinity of the Property based on a review of the USGS 7.5 minute quadrangles for Hayward, Dublin, Niles and Newark. The special-status plant species identified by the CNDDB as potentially occurring on the Property are known to grow only from specific habitat types. The specific habitats or "micro-climate" necessary for many of the plant species to occur are not found within the boundaries of the Property. The habitats necessary for the CNDDB reported plant species consist of valley and foothill grassland, cismontane woodlands, chaparral, playas, chenopod scrub, adobe clay soils, alkaline soils, serpentine soils, sandy soils, gravelly soils, coastal prairie, coastal scrub, coastal dunes, coastal bluff scrub, coastal salt marsh, vernal pools, seeps, meadows and sinks, marshes or swamps, riparian woodlands, on slopes near drainages, closed cone coniferous forest, north coast coniferous forest, redwood forest, lower montane coniferous forest, and broadleafed upland forest.

Occurrences of special-status plants within a five-mile radius of the point roughly representing the center of the Property are described in detail. Occurrence distance from the Property is estimated from this center point (Attachment 1, Figure 6).

Big-Scale Balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*). CNPS List 1B.

Bigscale balsamroot is an annual herb in the *Asteraceae* (Sunflower) family. The stems are finely hairy with whitish to pale green leaves. This species is found in chaparral, cismontane woodland, open grassy slopes, and valley and foothill grassland habitats often in serpentinite outcrops, generally under 4,600 feet in elevation. It's yellow flowers bloom from March through June. This plant can be found in the Sierra Nevada Foothills, Sacramento Valley, San Francisco Bay Area.

This plant was most recently observed in 1997 approximately 4.5 miles northwest of the Property. This plant was not observed during the May 2010 survey and is presumed absent from the Property.

Most Beautiful Jewel-Flower (*Streptanthus albidus ssp. peramoenus*). CNPS List 1B.

Most beautiful jewel-flower is an annual herb in the family *Brassiaceae*, the mustard family. This species is known from observations in Alameda, Contra Costa, Monterey, Santa Clara, and

Stanislaus Counties. It occurs in chaparral, cismontane woodlands, and in valley and foothill grasslands in serpentine soils and its purple flowers bloom between April and June.

This plant was most recently observed in 2003, approximately 2.5 miles south of the Property. This plant was not observed during the May 2010 survey and is presumed absent from the Property.

6.3 Wildlife Survey Results

6.3.1 General Wildlife Species and Habitats

A complete list of wildlife species observed within the Property can be found in Attachment 2, Table 1. Wildlife species commonly occurring within habitat types present on the Property are discussed below:

Non-Native Annual Grassland Habitat

Seeds and vegetation provided by the annual grassland habitat provide an abundance of foraging opportunities for a variety of animals. Mammals that might be expected to occur in this habitat include western gray squirrel (*Sciurus griseus*), black-tailed deer (*Lepus californicus*), and black-tailed jackrabbit (*Lepus californicus*)California vole (*Microtus californicus*), striped skunk (*Mephitis mephitis*), and opossum (*Didelphis virginiana*). Reptiles such as the gopher snake (*Pituophis melanoleuces*) and common garter snake (*Thamnophis sirtalis*) may be present. The western fence lizard (*Scelsporus occidentalis*) was observed along the edges of the Property.

A variety of bird species including black phoebe (*Sayornis nigricans*), house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*), mourning dove (*Zenaida macroura*), western scrub-jay (*Aphelocoma californica*), and Brewer's blackbird (*Spizella breweri*) were observed during the survey. Aerial foragers, including red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), and American crow (*Corvus brachrhynchos*) were also observed.

6.3.2 Special-Status Wildlife Species

Attachment 2, Table 2 includes a list of special-status wildlife species with potential to occur on the Property. Special-status wildlife species include species listed as Rare, Threatened, or Endangered by the USFWS (2009b & 2009c), as well as those species covered by the MBTA, or those species given special protection by the State of California (CDFG 2009b).

The search and review of the CNDDB database reports revealed the occurrence of special-status species that could potentially occur in the non-native annual grassland habitat on the Property. In addition, several state-protected raptors could forage and potentially nest within and adjacent to the Property. Attachment 2, Table 2 provides a summary of the species, their status, and habitat requirements. For the analysis of the site, the following specific discussions on the special-status wildlife included the following species (Attachment 1, Figure 5):

AMPHIBIANS

California Tiger Salamander (*Ambystoma californiense*). Federally Threatened, State Threatened.

Adult California tiger salamanders (CTS) inhabit rolling grassland and oak savannah. Adults spend most of the year in subterranean retreats such as rodent burrows, but may be found on the surface during dispersal to and from breeding sites. The preferred breeding sites are vernal pools and other temporary ponds. However, CTS may use permanent manmade ponds as breeding habitat. CTS adults begin migrating to ponds after the first heavy rains of fall and can be found in or around the breeding ponds during and after winter rainstorm events. In extremely dry years, CTS may not reproduce.

After mating, females lay several small clusters of eggs, which contain from one to over 100 eggs. The eggs are deposited on both emergent and submerged vegetation, as well as submerged detritus. A minimum of ten weeks is required to complete larval development through metamorphosis, at which time the larvae will normally weigh about ten grams. Larvae remaining in pools for a longer time period can grow to much larger sizes. Upon metamorphosis, juvenile CTS migrate in large masses at night from the drying breeding sites to refuge sites. Prior to this migration, the juveniles spend anywhere from a few hours to a few days near the pond margin. Adult CTS are largely opportunistic feeders, preying upon arthropod and annelid species that occur in burrow systems, as well as aquatic invertebrates found within seasonal pools. The larvae feed on aquatic invertebrates and insects, showing a distinct preference for larvae of the Pacific tree frog.

On August 4, 2004, the U.S. Fish and Wildlife Service (USFWS) announced the listing of the CTS as threatened throughout its range with the exception of the Sonoma and Santa Barbara County populations which are listed as endangered (USFWS 2006). On August 23, 2005, the Service designated 199,109 acres of critical habitat in 19 counties for the central California population of the CTS. On August 2, 2005, they proposed 74,223 acres of critical habitat for CTS in Sonoma County, California. This habitat is located in the Santa Rosa Plain in central Sonoma and includes lands bordered on the west by Laguna de Santa Rosa, to the south by Skillman Road, northwest of Petaluma, to the east by foothills, and to the north by Windsor Creek. On December 14, 2005, in a final decision, USFWS designated and excluded 17,418 acres of critical habitat for CTS, so that no critical habitat is being designated for the Sonoma County population.

No occurrences of this species have been made within a five-mile vicinity of the site within the last ten years (Attachment 1, Figure 5). Suitable habitat does not occur on the Property to support this species as the small ponded areas observed contained from 1-3 inches of water. Vernal pools or other temporary breeding ponds do not occur on the Property. Due to these factors, CTS is presumed absent from the Property.

California Red-Legged Frog (*Rana draytonii*). Federally Threatened, California Species of Special Concern.

California red-legged frog (CRLF) was listed as a Federal threatened species on May 31, 1996 (61 FR 25813) and is considered threatened throughout its range. If a proposed property may jeopardize listed species, Section 7 of the ESA requires consideration of those species through formal consultations with the USFWS. Federal Proposed species (USFWS, 2006c) are species for which a proposed listing as Threatened or Endangered under the ESA has been published in the Federal Register. If a proposed property may jeopardize proposed species, Section 7 of the ESA affords consideration of those species through informal conferences with USFWS. On April 13, 2006, USFWS designated critical habitat for the CRLF. In total, approximately 450,288 acres fall within the boundaries of critical habitat designation.

The CRLF is found in lowlands, foothill woodland and grasslands, near marshes, lakes, ponds or other water sources. CRLF require dense shrubby or emergent vegetation closely associated with deep still or slow moving water. Generally CRLF favor intermittent streams with water at least two and a half feet deep and where the shoreline has relatively intact emergent or shoreline vegetation. CRLF is known from streams with relatively low gradients and those waters where introduced fish and bullfrogs are absent. CRLF are known to take refuge upland in small mammal burrows during periods of high water flow. CRLF occurs west of the Sierra Nevada-Cascade and in the Coast Ranges along the entire length of the state.

Several occurrences of this species have been made within the vicinity of the site within the last ten years (Attachment 1, Figure 5). However, despite these recent occurrences, suitable habitat does not occur on the Property to support this species. Permanent, deep breeding ponds or slow moving creeks do not occur on the Property. Other potential breeding habitat was not observed in the vicinity of the Property based on aerial photograph interpretation. In addition, no ground squirrel burrows were observed during the survey that would serve as aestivation habitat for this species. Due to these factors, CRLF is presumed absent from the Property.

REPTILES

Alameda Whipsnake (*Masticophis lateralis euryxanthus*). Federally Threatened, State Threatened.

The Alameda whipsnake is one of two subspecies of the California whipsnake. It is distinguished from the chaparral whipsnake (*M. l. lateralis*) by the broad orange striping on its sides. Adults reach approximately three to five feet in length and show a sooty black to dark brown back, cream colored undersides and pinkish tail. This species is typically found in chaparral, northern coastal sage scrub, and coastal sage habitats; however annual grasslands, oak woodlands, and oak savannah serve as habitat during the breeding season. Egg-laying occurs near scrub habitat on ungrazed grasslands with scattered shrub cover. The known distribution for Alameda whipsnake includes Sobrante Ridge, Oakland Hills, Mount Diablo, the Black Hills, and Wauhab Ridge.

Male and female snakes are active from April to November finding mates. During the breeding season from late March through mid-June, male snakes exhibit more movement throughout their home range, while female snakes remain sedentary from March until egg laying. Females lay a clutch of 6 to 11 eggs, usually in loose soil or under logs or rocks.

There are several listed CNDDB occurrences of the Alameda whipsnake within a five-mile radius of the Project Area within the last 10 years, but due to the sensitivity of the data, the exact location is unknown. Critical habitat for the whipsnake is also present within a 5 mile radius of the Project site. Reconnaissance level surveys of the Property revealed the presence of moderate secondary habitat for the Alameda whipsnake. Due to the unsuitable nature of the annual grassland habitat, the lack of adjacent oak woodland or coastal sage habitats, and the developed nature of the surrounding habitats, the Alameda whipsnake is presumed absent from the Project Area.

BIRDS

Cooper's Hawk (*Accipiter cooperii*). California Species of Special Concern, State Protected. Sharp-Shinned Hawk (*Accipiter striatus*). California Species of Special Concern, State Protected.

The sharp-shinned hawk is a small raptor with short, rounded wings. This hawk has a long tail that is squared-off at tip with prominent corners. This raptor typically flies with several quick, snappy wingbeats and a short glide, but also soars. Its small rounded head does not project far beyond the wings when soaring. The adult sharp-shinned hawk exhibits a red eye, black cap, and a blue-gray back and upperwings. The white breast, belly and underwing coverts are marked by fine, thin, reddish bars.

The Cooper's hawk is quite similar looking to the sharp-shinned hawk, although it is slightly larger in size and has a long rounded tail. Both hawks hunt in woodlands, riparian areas and even densely vegetated urban areas. These raptors capture small birds, rodents and reptiles. They often hunt along the edges of woodlands, shorelines, and riparian habitats where migrating passerines are found. Nesting habitat for these raptors consists of woodlands, coniferous forest, and dense oak woodland adjacent or close to open areas.

Both of these raptors could potentially hunt within the grassland habitat the Property. Potential nest trees occur at the northeast corner of the Property in the form of eucalyptus trees. Pine trees also occur adjacent to the Property where either hawk could establish a nest site.

Burrowing Owl (*Athene cunicularia*). Federal Species of Special Concern, California Species of Special Concern.

The U.S. Fish and Wildlife Service has identified the burrowing owl is as a "candidate" species. Candidate species are animals and plants that may warrant official listing as threatened or endangered, but there is no conclusive data to give them this protection at the present time. As a candidate species, burrowing owls receive no legal protection under the Endangered Species Act (ESA). However, this species does receive some legal protection from the U.S. through the

Migratory Bird Treaty Act, which forbids the destruction of the birds and active nests. In California, the burrowing owl considered a "species of special concern."

Burrowing owls are ground dwelling members of the owl family and are small brown to tan colored birds with bold spots and barring. Burrowing owls generally require open annual grassland habitats in which to nest, but can be found on abandoned lots, roads, airports, and other urban areas. Burrowing owls generally use abandoned California ground squirrel holes for their nesting burrow, but are also known to use pipes or other debris for nesting purposes. Burrowing owls prefer annual grassland habitats with low vegetative cover. The breeding season for burrowing owls occurs from March through August. Burrowing owls often nest in loose colonies about 100 yards apart. They lay three to twelve eggs from mid-May to early June. The female incubates the clutch for about 28 days, while the male provides her with food. The young owls begin appearing at the burrow's entrance two weeks after hatching and leave the nest to hunt for insects on their own after about 45 days. The chicks can fly well at six weeks old.

No recent occurrence of this species has occurred in the vicinity of the Property. The majority of the grassland habitat on the Property is large and free of canopy cover. However, due to the lack of small mammal burrows observed during the survey, and the tall, dense vegetation that covers the site, the Property is considered unsuitable habitat to support the burrowing owl. This species was not observed during the survey and is presumed absent from the site.

Red-Tailed Hawk (*Buteo jamaicensis*). State Protected.

The red-tailed hawk is a large *Buteo* that is distinct due to the red color of its tail feathers in contrast to the brown color of its body. Not all red-tailed hawks exhibit the distinct coloration on their tail and gradations may occur especially in young birds. Red-tailed hawks hunt rodents by soaring over grassland habitat. Nest trees for red-tailed hawks are usually tall trees with a well developed canopy that includes a strong branching structure on which to build a nest.

The red-tailed hawk could potentially nest within the oak trees on the southwest corner of the site or within the pine trees adjacent to the Property. It could also use these trees to perch while foraging on adjacent lands. This species was observed foraging over the Property during the May 2010 survey.

Red-Shouldered Hawk (*Buteo lineatus*). State Protected.

The red-shouldered hawk is a medium-sized, slender *Buteo* with long legs and a long tail and is smaller than the red-tailed hawk. Upperparts are dark with pale spotting, and rusty-reddish feathers on the wing create the distinctive shoulder patch. The tail has several wide, dark bars; the intervening narrow stripes and the tip of the tail are white, and there is variation in the number of tail bars among adults and juveniles. The habitat that the red-shouldered hawk prefers varies from bottomland hardwoods and riparian areas to upland deciduous or mixed deciduous-conifer forest, and almost always includes some form of water, such as a swamp, marsh, river, or pond. In the west, the red-shouldered hawk sometimes occurs in coniferous forests, and has been expanding its

range of occupied habitats to include various woodlands, including stands of eucalyptus trees amid urban sprawl.

The red-shouldered hawk could potentially nest within the eucalyptus trees near the northeast corner of the site or within the pine trees on the edges of the Property. It could also use these trees to perch while foraging on the Property and adjacent lands. This species was not observed during the May 2010 survey. While this species generally prefers to hunt within riparian habitats, it has also been known to forage in grasslands near these areas. For this reason, the red-shouldered hawk has the potential to occur on the Property.

White-Tailed Kite (*Elanus leucurus*). Federal Species of Concern, CDFG: Fully Protected.

The white-tailed kite is falcon-shaped with a long white tail. This raptor has black patches on the shoulders that are highly visible while the bird is flying or perching. White-tailed kites forage in annual grasslands, farmlands, orchards, chaparral, and at the edges of marshes and meadows. They are found nesting in trees and shrubs such as willows (*Salix* sp.), California sycamore (*Platanus racemosa*), and live oak (*Quercus agrifolia*) often near marshes, lakes, rivers, or ponds. This raptor often hovers while inspecting the ground below for prey. Annual grasslands are considered good foraging habitat for white-tailed kites, which will forage in human-impacted areas.

The white-tailed kite could potentially nest within the eucalyptus and pine trees on and adjacent to the Property. This species is also well known to forage within grasslands amid urban sprawl. This species was not observed during the May 2010 survey, but may occur.

American Kestrel (*Falco sparverius*). State Protected.

The American kestrel is the smallest of raptor species and is distinct due to the black barring on its face. The female kestrel is slightly larger than the male bird and is differentiated by its brown and red coloration. The male kestrel is slightly smaller than the female and has gray wing patches near the top of the wing. Kestrels utilize cavities in trees for nesting and hunt small rodents and birds.

Nesting cavities for the American kestrel were not observed within any of the trees on or adjacent to the Property. These trees could, however, be utilized by this species to perch while foraging on the Property and adjacent lands. The American kestrel is also well known to forage within grasslands amid urban sprawl. This species was not observed during the May 2010 survey, but may occur.

MAMMALS

Special-Status Bats

Bats (Order - *Chiroptera*) are the only mammals capable of "true" flight. They are nocturnal feeders and locate their prey which consists of small to medium sized insects by echolocation. Bats consume vast amounts of insects making them very effective pest control agents. They may eat as much as their weight in insects per day. Maternity roosts comprised of only females, may be found in buildings or mine shafts with temperatures up to 40 degrees Celsius and a high percentage of

humidity to ensure rapid growth in the young. Female bats give birth to only one or two young annually and roost in small or large numbers. Males may live singly or in small groups, but scientists are still unsure of the whereabouts of most males in summer.

Special-status bats with the potential to occur on the Property are listed below. Due to the lack of roosting habitat on the Property (rock crevices, caves, tree hollows, abandoned buildings, dense foliage of trees, etc.), the bats with the potential to occur on the Property would use the site for foraging purposes only.

Pallid bat (*Antrozous pallidus*), California Special Concern species

No recent occurrences of the pallid bat have been identified within 5 miles of the Property. Marginally suitable foraging habitats occur throughout the Property for this species. Roosting habitat does not occur on the site. Bat species are presumed absent from the Property due to the lack of recent occurrences and marginal foraging habitat.

7.0 CONCLUSIONS

7.1 Wetlands

Results of the biological resource analysis survey conducted by Olberding Environmental in May 2010 identified several areas within the Property that exhibited positive indicators of wetland soils, hydrology and vegetation. Based on the results of our reconnaissance survey, the site contained the criteria necessary for the Corps to determine wetland status. A formal delineation is required to confirm presence/absence of jurisdictional wetlands.

7.2 Special-Status Plants

Two special-status plant species has the potential to occur on the Property based on the presence of suitable habitats and soil types. These plants include big-scale balsamroot and most beautiful jewel

flower. However, neither plant was observed during the May 2010 survey which occurred during the identified booming period. Both plant species are presumed absent from the site.

7.3 Special-Status Wildlife

Special-Status Amphibians – Several occurrences of CRLF have been made within the vicinity of the site within the last ten years (Attachment 1, Figure 5). However, despite these recent occurrences, suitable habitat does not occur on the Property to support these species. Vernal pools, temporary breeding ponds, and slow moving creeks do not occur on the Property. In addition, no ground squirrel burrows were observed during the survey that would serve as aestivation habitat for either of these species. Due to these factors, both CTS and CRLF are presumed absent from the Property.

Special-Status Reptiles – Despite the marginally suitable habitat that the site provides, the Alameda whipsnake is presumed absent from the Property due to the lack of rock outcrops, small mammal burrows and sage scrub habitat. Despite recent occurrences within the vicinity of the Property, the lack of suitable habitat and the presence of heavy grazing make it unlikely that the Alameda whipsnake is present on the Property.

Foraging or Nesting Raptor Species – The habitats on and adjacent to the Property provide foraging and nesting habitat for the Cooper's hawk, sharp-shinned hawk, red-tailed hawk, red-shouldered hawk, white-tailed kite, and American kestrel. No nests were observed during the May 2010 survey, though a foraging red-tailed hawk was observed foraging over the site.

Due to the lack of small mammal burrows observed during the survey, and the tall, dense vegetation that covers the site, the Property is considered unsuitable habitat to support the burrowing owl. This species was not observed during the survey and is presumed absent from the site.

Special-Status Mammal Species –Marginally suitable foraging habitat occurs on site for bat species. Roosting habitat does not occur on the site. Bat species are presumed absent from the Property due to the lack of recent occurrences and marginal foraging habitat.

8.0 RECOMMENDATIONS

- It is recommended that a jurisdictional delineation be conducted in accordance with U.S. Army Corps of Engineers guidelines. This delineation would determine the boundaries of those features potentially qualifying as jurisdictional wetlands/waters by the Corps and/or Regional Board. If any features fall under the jurisdiction of the Corps or Regional Board, permit applications may be required prior to any site grading or fill of those qualifying features.

- Proposed activities on the Property may result in vegetation removals that could directly destroy nests, eggs, and immature birds, and would remove future nesting habitat for birds, including sensitive species such as migrating songbirds. If impacts to on-site shrubs and trees cannot be avoided, then the removal of this vegetation will occur outside of the breeding season, which is typically between January and July. A nesting bird survey 72 hours prior to the removal of vegetation and/or construction is required to determine absence or presence of nesting bird species. If the survey does not identify any nesting special-status bird species in the area potentially affected by the proposed activity, no further mitigation is required. If nest sites or young are located, a no-disturbance buffer will be established around the active nest. The biologist will consult with CDFG to determine the size of the no-disturbance buffer, which is typically between 150 to 200 feet.

- Pre-construction surveys for raptors would be necessary due to the presence of suitable nesting habitat on and directly adjacent to the Property. The eucalyptus trees, large oak and pine trees surrounding the Property should be surveyed if removal of the trees is to occur after January and prior to July. Surveys are also recommended if grading or construction

traffic is to occur within a 100-foot distance of any known nesting site. If required, surveys should be performed prior to January to identify any potential nesting trees prior to the birds lying eggs. Once eggs have been laid, a buffer of at least 150 feet must be established around the nest site and the site protected until August 15 or until the young have fledged (typically 3 to 4 weeks). A nesting raptor survey 72 hours prior to the removal of vegetation and/or construction is required to determine absence or presence of nesting raptor species.

- Grading and excavation activities could expose soil to increased rates of erosion during construction periods. During construction, runoff from the Property could adversely affect aquatic life within the adjacent water features. Surface water runoff could remove particles of fill or excavated soil from the site, or could erode soil down-gradient, if the flow were not controlled. Deposition of eroded material in adjacent water features could increase turbidity, thereby endangering aquatic life, and reducing wildlife habitat. Implementation of appropriate mitigation measures would ensure that impacts to aquatic organisms would be avoided or minimized. Mitigation measures may include best management practices (BMP's) such as hay bales, silt fencing, placement of straw mulch and hydro seeding of exposed soils after construction as identified in the Storm Water Pollution Prevention Plan (SWPPP).

- Due to the presence of suitable habitat types, soil conditions, and recent occurrences in the vicinity of the Property, two special-status plant species has been identified as having the potential to occur on the Property – big-scale balsamroot and most beautiful jewel flower. It is recommended that a second survey be performed in June or next spring to validate a negative finding for these plants.

9.0 LITERATURE CITED

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ATTACHMENTS

ATTACHMENT 1
FIGURES

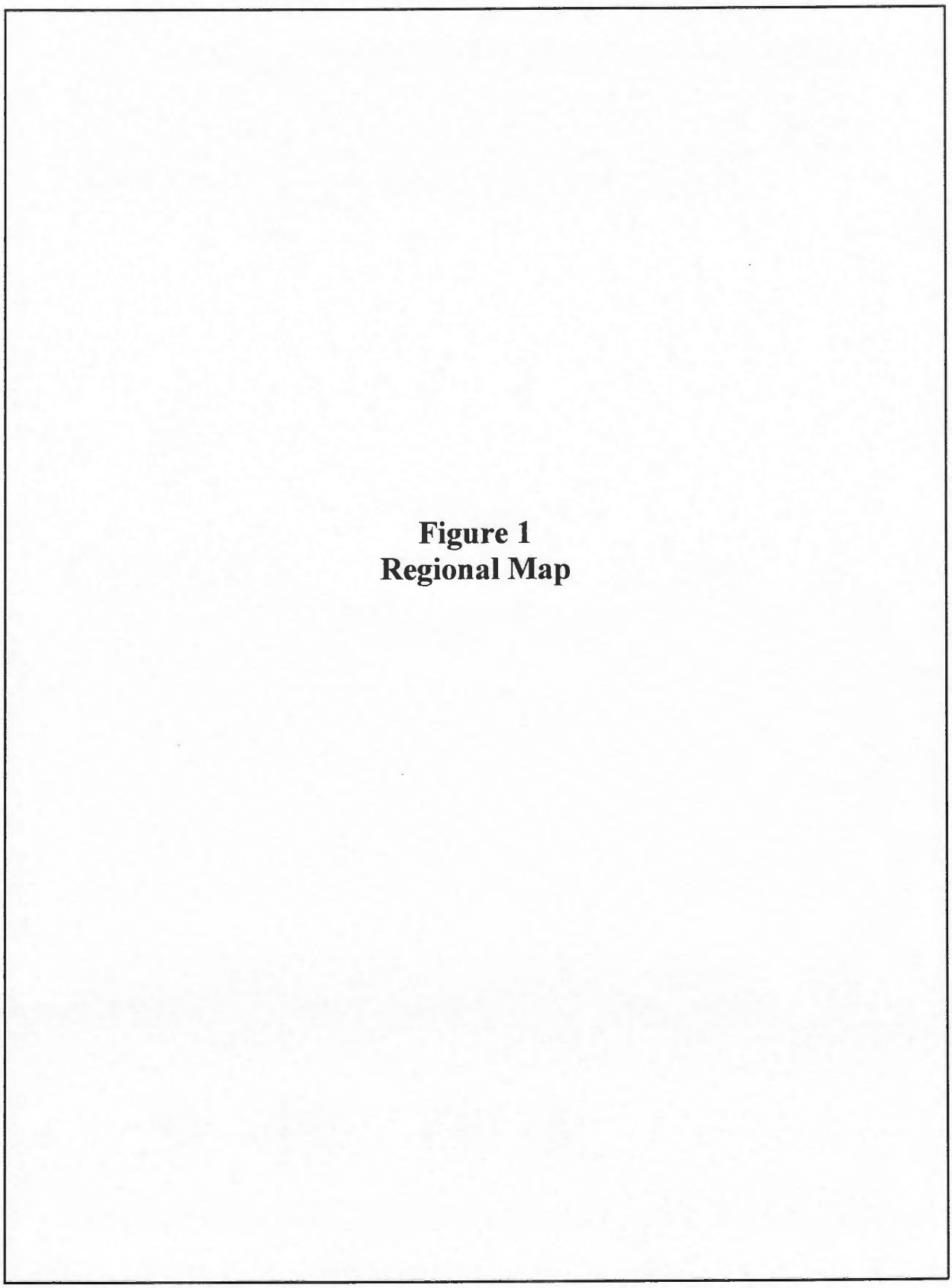

Figure 1
Regional Map

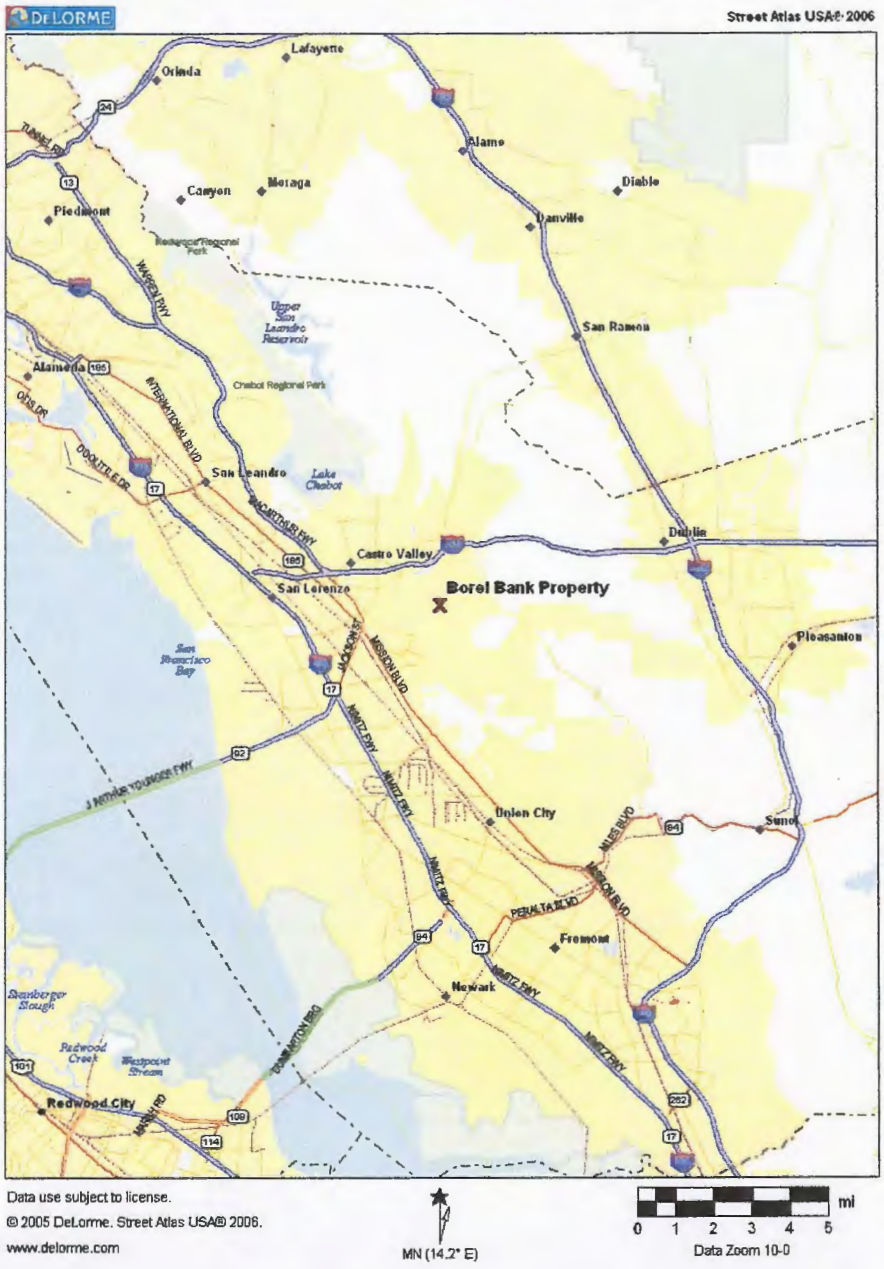

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Figure 1
Regional Map of the Borel Bank Property
Hayward, California

Figure 2
Vicinity Map

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Figure 2
Vicinity Map of the Borel Bank Property
Hayward, California

Figure 3
USGS Quadrangle Map for
Morgan Hill

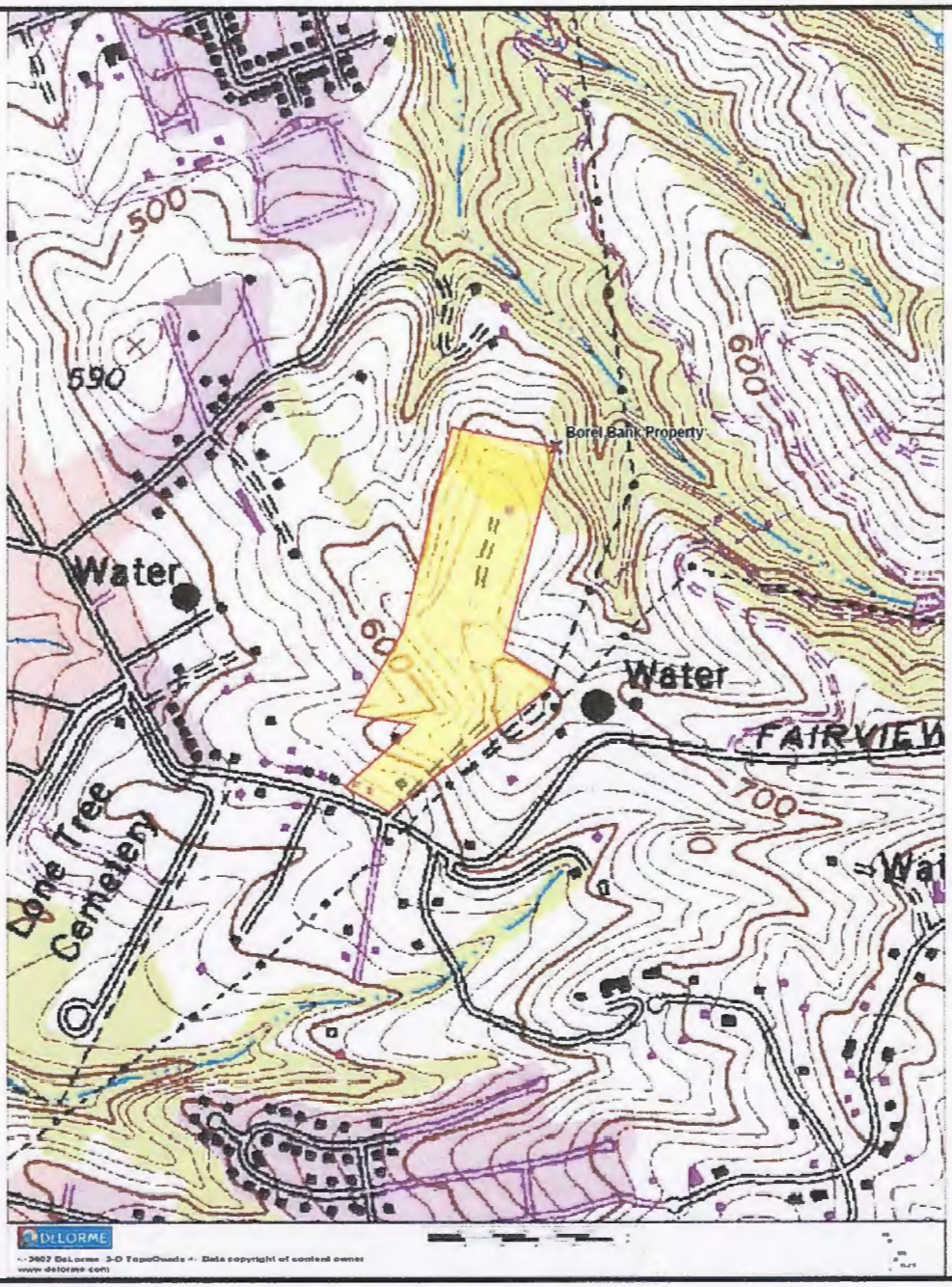

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Figure 3
USGS Quadrangle Map of the Borel Bank Property
Hayward Quadrangle
Hayward, California

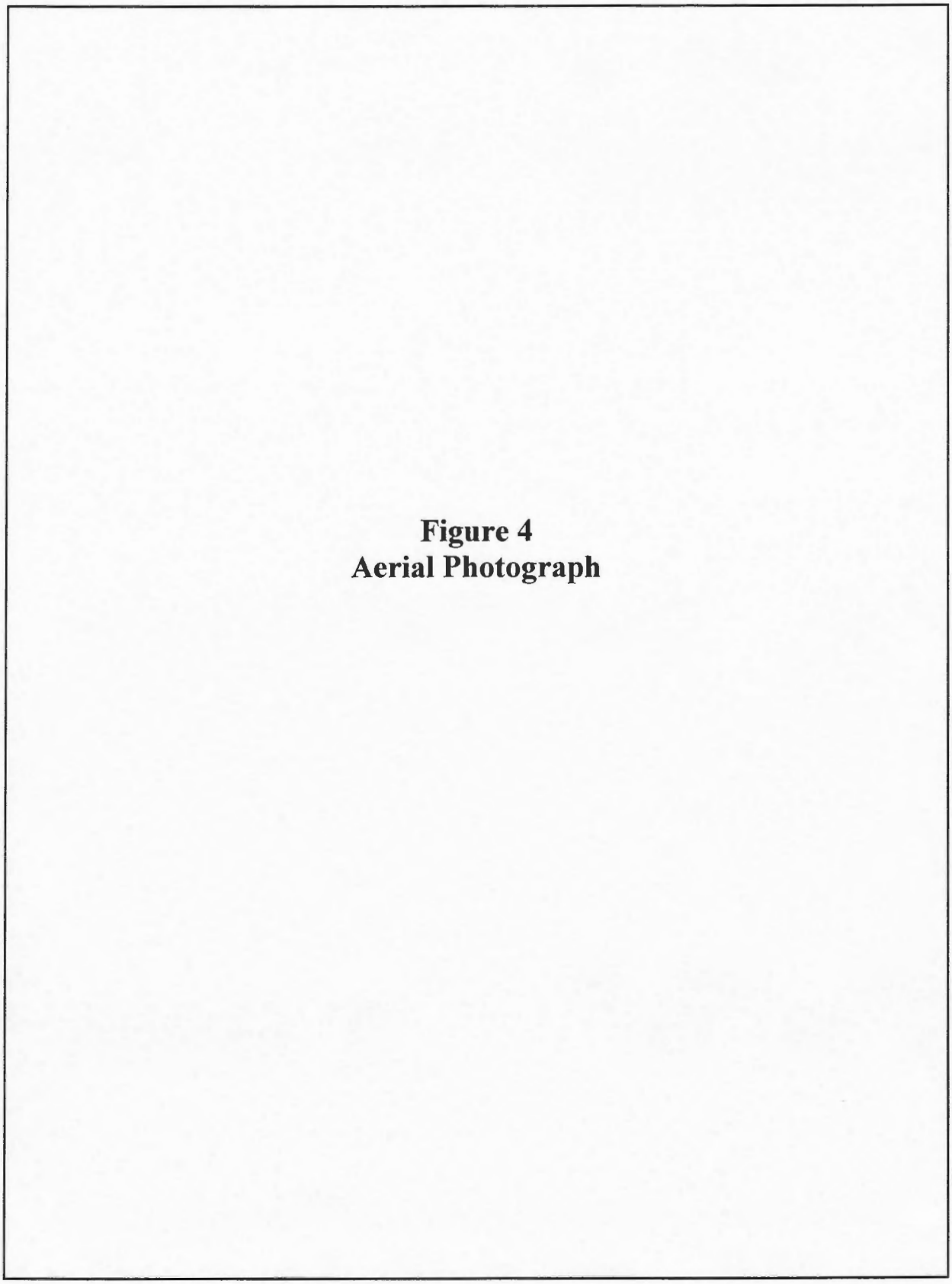

Figure 4
Aerial Photograph

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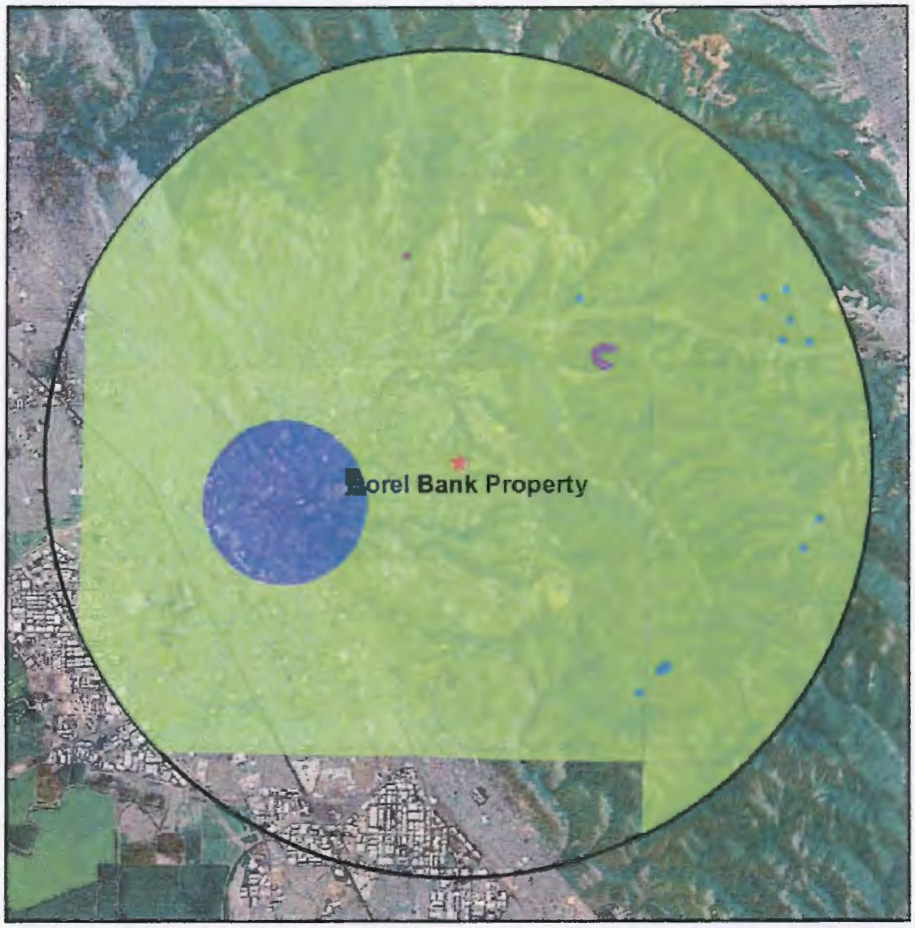
Figure 4
Aerial Photograph of the Borel Bank Property
Hayward, California

Figure 5
CNDDB Map of Special-Status Animals



0 0.5 1 2 3 4 Miles

Special Status Animal Species

- Alameda whipsnake
- California red-legged frog
- San Francisco dusky-footed woodrat
- burrowing owl
- pallid bat
- yellow warbler

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Figure 5
Map of CNDDB Reports of Special-Status Animals within a 5-mile Radius in the Last 10 Years of the Borel Bank Property
Hayward, California

Figure 6
CNDDB Map of Special-Status Plants

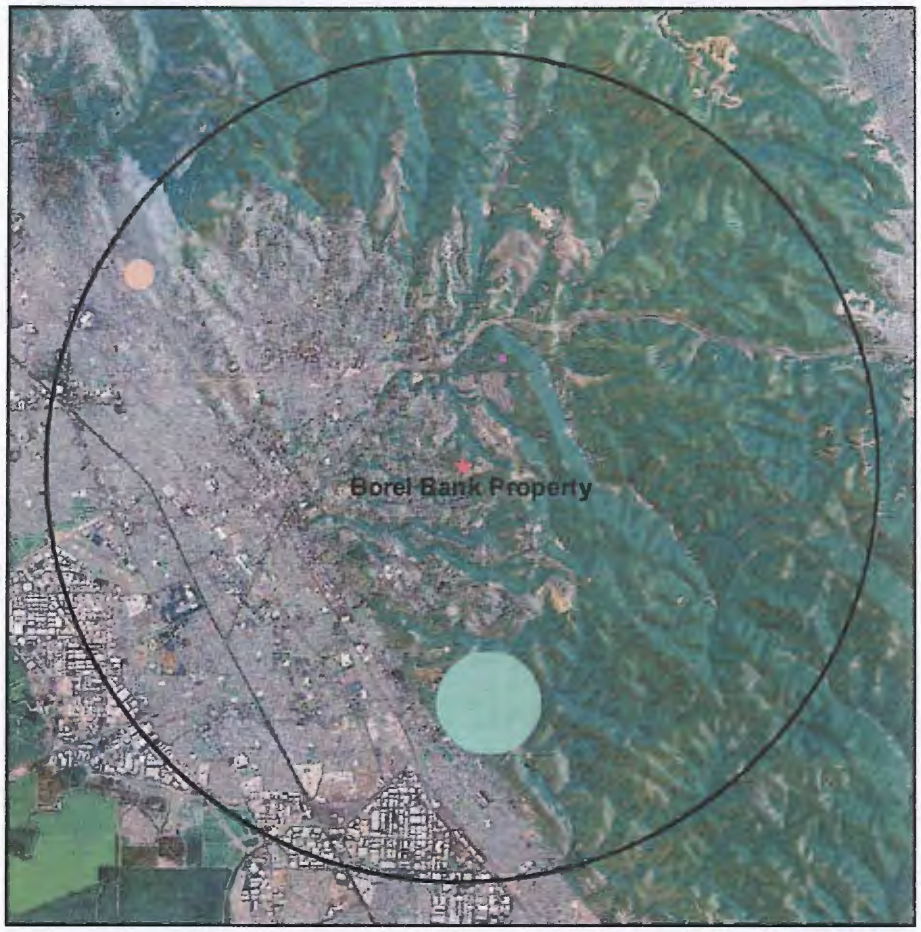

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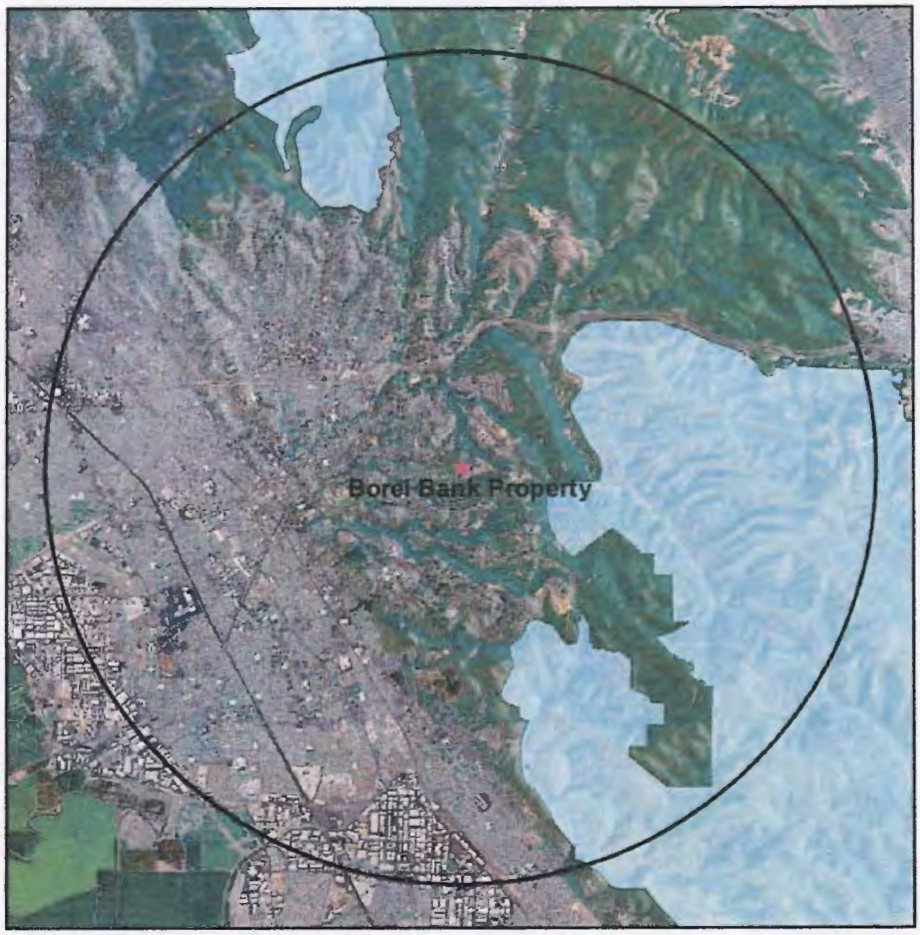
Figure 6
Map of CNDDB Reports of Special-Status Plants within a 5-mile Radius in the Last 10 Years of the Borel Bank Property
Hayward, California

Figure 7
USFWS Designated Critical Habitat Locations



0 0.5 1 2 3 4 Miles

Critical Habitat

Alameda Whipsnake

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Figure 7
USFWS Designated Critical Habitat Locations Near the Borel Bank Property
Hayward, California

Figure 8
Soils Map

Santa Clara County, California		
Map Unit Symbol	**Percentage within Property**	**Map Unit Name**
122	34.8%	Los-Osos – Millsholm complex; 9-30% slopes
123	62.2%	Los-Osos – Millsholm complex; 30-50% slopes
128	3%	Millsholm silt loam; 30-50%

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Figure 8
Natural Resources Conservation Service Soil Series Map for the Borel Bank Property
Hayward, California

ATTACHMENT 2
TABLES

Table 1
Plant and Wildlife Species Observed
Within/Adjacent to the Survey Area

Table 1 Plant and Wildlife Species Observed Within/Adjacent to the Survey Area	
Scientific Name	**Common Name**
Plant Species Observed	
Avena fatua	Wild oat
Baccharis pilularis	Coyote brush
Brassica nigra	Black mustard
Bromus diandrus	Ripgut brome
Bromus hordeaceous	Soft chess
Bromus madritensis ssp. rubens	Red brome
Cirsium vulgare	Italian thistle
Erodium cicutarium	Red-stemmed filaree
Eucalyptus globulus	Blue-gum eucalyptus
Hordeum murinum var. leporinum	Foxtail
Lolium multiflorum	Italian rye grass
Pinus sp.	Pine trees
Plantago lanceolata	English plantain
Polypogon monspeliensis	Rabbit's foot grass
Quercus agrifolia	Coast live oak
Raphanus raphanistrum	Wild radish
Rumex crispus	Curly dock
Trifolium sp.	Clover
Vicia sativa ssp. *nigra*	Common vetch
Animal Species Observed	
Birds	
Aphelocoma californica	Western scrub-jay
Ardea alba	Great egret
Buteo jamaicensis	Red-tailed hawk
Carpodacus mexicanus	House finch
Cathartes aura	Turkey vulture
Corvus brachyrhynchos	American crow
Euphagus cyanocephalus	Brewer's blackbird
Mimus polyglottos	Northern mocking bird
Passer domesticus	House sparrow
Psaltriparus minimus	Bushtit
Sayornis nigricans	Black phoebe
Turdus migratorius	American robin
Zenaida macroura	Mourning dove
Mammals	
Bos Taurus	Domestic cow
Equus caballus	Horse
Peromyscus sp.	Field mouse
Sciurus griseus	Western gray squirrel
Reptiles	
Sceloporus occidentalis	Western fence lizard

Table 2
Special-Status Species for the Hayward, Dublin, Niles and Newark 7.5 Minute Quadrangle Maps

Table 2
Special-Status Species for the Hayward, Dublin, Niles, and Newark 7.5 Minute Quadrangle Maps[1]

Common Name/ Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
PLANTS					
Alkali Milk-Vetch (*Astragalus tener* var. *tener*)	-/-/1B	March – June	Playas, valley and foothill grasslands in adobe clay soils, and vernal pools in alkaline soils.	No	Presumed Absent
San Joaquin Spearscale (*Atriplex joaquiniana*)	-/-/1B	April – October	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland in alkaline soils.	No	Presumed Absent
Big-Scale Balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*)	-/-/1B	March – June	Chaparral, cismontane woodland, and valley and foothills grasslands, sometimes in serpentinite outcrops.	May Occur	Presumed Absent
Chaparral Harebell (*Campanula exigua*)	-/-/1B	May – June	Chaparral, in rocky, usually serpentine soils.	No	Presumed Absent
Congdon's Tarplant (*Centromadia parryi* ssp. *congdonii*)	-/-/1B	June – November	Valley and foothill grasslands in alkaline soils.	Low	Presumed Absent
Santa Clara Red Ribbons (*Clarkia concinna* ssp. *automixa*)	-/-/4	May – June	Cismontane woodland, chaparral, on slopes and near drainages.	No	Presumed Absent
Fragrant Fritillary (*Fritillaria liliacea*)	-/-/1B	February – April	Cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grasslands, often in serpentine soils.	Low	Presumed Absent
Diablo Helianthella (*Helianthella castanea*)	-/-/1B	March – June	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Usually in chaparral/oak woodland interface in rocky, azonal soils, often in partial shade.	No	Presumed Absent
Santa Cruz Tarplant (*Holocarpha macradenia*)	T/E/1B	June – October	Coastal prairie, coastal scrub, and valley and foothill grasslands, often with clay, sandy soils; often with non-natives.	No	Presumed Absent

Table 2
Special-Status Species for the Hayward, Dublin, Niles, and Newark 7.5 Minute Quadrangle Maps[1]

Common Name/ Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Contra Costa Goldfields (*Lasthenia conjugens*)	E/-/1B	March – June	Valley and foothill grassland, cismontane woodland, and vernal pools, swales, and low depressions in open grassy areas.	No	Presumed Absent
Hairless Popcorn-Flower (*Plagiobothrys glaber*)	-/-/1A	March – May	Meadows and seeps, marshes and swamps, coastal salt marshes and alkaline meadows.	No	Presumed Absent
Oregon Polemonium (*Polemonium carneum*)	-/-/2	April – September	Coastal prairie, coastal scrub, and lower montane coniferous forest from 0-1830 meters in elevation.	No	Presumed Absent
Slender-Leaved Pondweed (*Potamogeton filiformis*)	-/-/2	May – July	Assorted freshwater marshes and swamps. Shallow, clear water of lakes and drainage channels.	No	Presumed Absent
Most Beautiful Jewel-Flower (*Streptanthus albidus* ssp. *peramoenus*)	-/-/1B	April – June	Chaparral, cismontane woodland, and valley and foothill grasslands in serpentine soils on ridges and slopes.	May Occur	Presumed Absent
INVERTEBRATES					
Monarch Butterfly (*Danaus plexippus*) WINTER ROOSTS	-/-/-	October – March	Winter roosts along coast from northern Mendocino to Baja California, Mexico. Roosts in wind-protected groves of eucalyptus, Monterey pine, and cypress with nectar and water sources nearby.	Low	Presumed Absent
California Linderiella (*Linderiella occidentalis*)	SOC/-/-	December – May (dependent on the timing of winter and spring rains)	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity and conductivity.	No	Presumed Absent
Lum's Micro-Blind Harvestman (*Microcina lumi*)	-/-/-	Resident	Xeric habitats in the San Francisco Bay region, beneath serpentine rocks in grassland.	No	Presumed Absent
FISH					

Table 2
Special-Status Species for the Hayward, Dublin, Niles, and Newark 7.5 Minute Quadrangle Maps[1]

Common Name/ Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Steelhead Central California Coast ESU (*Oncorhynchus mykiss irideus*)	T/-/SC	Spawning in spring (December to April). Fry emerge from gravel spawning beds 5 to 7 weeks later.	From Russian River, south to Soquel Creek and to, but not including Pajaro River, also San Francisco and San Pablo Bay basins. Spawning occurs in cool streams with low turbidity, and suitable sites for egg deposition.	No	Presumed Absent
AMPHIBIANS					
California Tiger Salamander (*Ambystoma californiense*)	T/T/-	Aquatic Surveys - Once each in March, April, and May with at least 10 days between surveys. Upland Surveys - 20 nights of surveying under proper conditions beginning October 15 and ending March 15.	Vernal pools, swales and depressions for breeding, needs underground refugia for hibernation.	No	Presumed Absent
California Red-Legged Frog (*Rana draytonii*)	T/-/SC	May 1 – November 1	Lowlands and foothills in or near permanent deep water with dense, shrubby or emergent riparian habitat. Requires 11-20 weeks of permanent water for breeding and larval development. Must have access to aestivation habitat.	Low	Presumed Absent
REPTILES					
Western Pond Turtle (*Actinemys marmorata*)	-/-/SC	March – October	Aquatic turtle needs permanent water in ponds, streams, irrigation ditches. Nests on sandy banks or grassy fields.	No	Presumed Absent

Table 2
Special-Status Species for the Hayward, Dublin, Niles, and Newark 7.5 Minute Quadrangle Maps[1]

Common Name/ Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Alameda Whipsnake (*Masticophis lateralis euryxanthus*)	T/T/-	Year-round resident	Valley-foothill hardwood habitat of the coast ranges between Monterey and north San Francisco Bay areas. Inhabits south-facing slopes and ravines where shrubs form a vegetative mosaic with oak trees and grasses.	Low	Presumed Absent
BIRDS					
Cooper's Hawk (*Accipiter cooperii*)	-/CP/SC	February – August	Oak woodlands, coniferous forests, riparian corridors. Often hunts on edges between habitats.	Low	Not Likely to Occur
Sharp-Shinned Hawk (*Accipiter striatus*)	-/CP/SC	February – August	Oak woodlands, coniferous forests, riparian corridors. Often hunts on edges between habitats. (Nesting) Ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers riparian areas. North-facing slopes with plucking perches are critical requirements. Nests usually within 275 feet of water.	Low	Not Likely to Occur
Tricolored Blackbird (*Agelaius tricolor*)	SOC/-/SC	February – August	Nesting within seasonal wetland marshes, blackberry brambles or other protected substrates. Forages in annual grassland and wetland habitats.	Low	Not Likely to Occur
Golden Eagle (*Aquila chrysaetos*)	-/CP/SC	February – August	Nests in cliff-walled canyons and tall trees in open areas. (Nesting and wintering) Rolling foothills mountain areas, sage-juniper flats, and desert.	Low	Not Likely to Occur
Great Egret (*Ardea alba*) ROOKERIES	-/-/-	February – August	(Rookery) Colonial nester in large trees; rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	Low	Foraging Only
Great Blue Heron (*Ardea herodias*) ROOKERIES	-/-/-	February – August	(Rookery) Nests in tall trees in close proximity to foraging areas such as marshes and streams.	Low	Foraging Only

Table 2
Special-Status Species for the Hayward, Dublin, Niles, and Newark 7.5 Minute Quadrangle Maps[1]

Common Name/ Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Burrowing Owl (*Athene cunicularia*)	SOC/-/SC	February – August	Dry open annual or perennial grassland, desert and scrubland. Uses abandoned mammal burrows for nesting.	Low	Not Likely to Occur
Red-Tailed Hawk (*Buteo jamaicensis*)	-/CP/-	February – August	Various grassland habitats, urban land, oak woodlands with grassland for foraging.	Present	Present
Red-Shouldered Hawk (*Buteo lineatus*)	-/CP/-	February – August	Forages in variety of semi-developed habitats including orchards. Forages in woodlands and riparian areas. Nests in riparian habitat but also eucalyptus groves.	Low	May Occur
Western Snowy Plover (*Charadrius alexandrinus nivosus*)	T/-/SC	February – August	Sandy beaches, salt pond levees, shores of large alkali lakes. Requires sandy, gravelly, or friable soils for nesting.	No	Presumed Absent
Northern Harrier (*Circus cyaneus*)	-/-/SC	February – August	Nests in grasslands and marshlands, ground nesting bird. (Nesting) Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Low	May Occur
Yellow Warbler (*Dendroica petechia brewsteri*)	-/-/SC	February – August	(Nesting) Riparian plant associations, prefers willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging. Also nests in montane shrubbery in open conifer forests.	No	Presumed Absent
Snowy Egret (*Egretta thula*) ROOKERIES	-/-/-	February – August	(Rookery) Colonial nester, with nest sites situated in protected beds of dense tules. Rookery sites situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes.	No	Presumed Absent
White-Tailed Kite (*Elanus leucurus*)	SOC/CP/FP	February – August	Various grassland habitats, urban land, oak woodlands with grassland for foraging.	Low	May Occur

Table 2
Special-Status Species for the Hayward, Dublin, Niles, and Newark 7.5 Minute Quadrangle Maps[1]

Common Name/ Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
California Horned Lark (*Eremophila alpestris actia*)	-/-/SC	February – August	Short-grass prairie, bald hills, mountain meadows, open coastal plains, fallow grain fields, and alkali flats. Prefer open terrain where they construct nests on the ground, often in sparsely vegetated areas.	Low	Not Likely to Occur
American Kestrel (*Falco sparverius*)	-/CP/-	February – August	Various grassland habitats, urban land, oak woodlands with grassland for foraging.	Low	Not Likely to Occur
Saltmarsh Common Yellowthroat (*Geothlypis trichas sinuosa*)	SOC/-/SC	February – August	Fresh and saltwater marshes of the San Francisco Bay area. Forages in thick, continuous vegetation down to water surface. Nests in tall grasses, tule patches, and willows.	No	Presumed Absent
California Black Rail (*Laterallus jamaicensis coturniculus*)	SOC/T/FP	February – August	Occurs in tidal salt-marsh with heavy pickleweed growth. Mainly inhabits salt-marshes bordering larger bays. Also in fresh and brackish marshes, all at low elevation.	No	Presumed Absent
Alameda Song Sparrow (*Melospiza melodia pusillula*)	-/-/SC	February – August	Resident of salt marshes bordering south arm of San Francisco Bay, inhabits *Salicornia* marshes, nests low in *Grindelia* bushes (high enough to escape high tides) and in *Salicornia.*	No	Presumed Absent
California Clapper Rail (*Rallus longirostris obsoletus*)	E/E/-	February – August	Salt to brackish-water marshes with tidal sloughs in San Francisco Bay area. Found in dense pickleweed.	No	Presumed Absent
Bank Swallow (*Riparia riparia*)	SOC/T/-	February – August	Nests in colonies in riparian or other lowland habitats. Nest is constructed in vertical bank or cliff with fine sandy soils near streams, rivers, lakes or ocean.	No	Presumed Absent

Table 2
Special-Status Species for the Hayward, Dublin, Niles, and Newark 7.5 Minute Quadrangle Maps[1]

Common Name/ Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
California Least Tern (*Sternula antillarum browni*)	E/E/-	February – August	(Nesting colony) Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, land fills, or paved areas.	No	Presumed Absent
MAMMALS					
Pallid Bat (*Antrozous pallidus*)	-/-/SC	N/A	Forages in grasslands, shrublands, deserts, forests, and woodlands. Most common in open, dry habitats. Roosts in rock crevices, caves, tree hollows, and buildings. Roosts must protect bats from high temperatures; very sensitive to disturbance of roosting sites.	Low	Foraging Only
Western Mastiff Bat (*Eumops perotis californicus*)	-/-/SC	Resident	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	No	Presumed Absent
Hoary Bat (*Lasiurus cinereus*)	-/-/SC	Resident	Prefers open habitats or habitat mosaics with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees near water. Feeds mainly on moths.	No	Presumed Absent
Yuma Myotis (*Myotis yumanensis*)	-/-/SC	Resident	Optimal habitats are open forests and woodlands with sources of water over which to feed. Maternal colonies occur in caves, mines, buildings or crevices.	No	Presumed Absent
San Francisco Dusky-Footed Woodrat (*Neotoma fuscipes annectens*)	-/-/SC	Resident	Forest habitats of moderate canopy and moderate to dense understory, may prefer chaparral and redwood habitats. Nests constructed of grass, leaves, sticks, feathers, etc. Population may be limited by availability of nest materials.	Low	Presumed Absent

Table 2
Special-Status Species for the Hayward, Dublin, Niles, and Newark 7.5 Minute Quadrangle Maps[1]

Common Name/ Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Salt-Marsh Harvest Mouse (*Reithrodontomys raviventris*)	E/E/FP	Resident	Middle marsh habitat dominated by pickleweed. Only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is primary habitat. Do not burrow, build loosely organized nests. Require higher areas for flood escape.	No	Presumed Absent
Salt-Marsh Wandering Shrew (*Sorex vagrans halicoetes*)	SOC/-/SC	Resident	Salt marshes of the southern arm of San Francisco Bay, medium high marsh 6-8 feet above sea level where abundant driftwood is scattered among *Salicornia*.	No	Presumed Absent
American Badger (*Taxidea taxus*)	-/-/SC	Resident	Shrub, forest, and herbaceous habitats with friable soils to dig burrows. Need open, uncultivated ground. Prey on fossorial mammals.	No	Presumed Absent
San Joaquin Kit Fox (*Vulpes macrotis mutica*)	E/T/-	Resident	Annual grasslands or grassy stages with scattered shrubby vegetation. Needs loose soils for burrowing.	No	Presumed Absent

1. Special-status plants and animals as reported by the California Natural Diversity Data Base, California Native Plant Society, and other background research May 2010.
2. Order of Codes for Plants - Fed/State/CNPS
Order of Codes for Animals - Fed/State/CDFG
Codes:
SOC - Federal Species of Concern
SC - California Species of Special Concern
E - Federally/State Listed as an Endangered Species
T - Federally/State Listed as a Threatened Species
C - Species listed as a Candidate for Federal Threatened or Endangered Status
R - Rare
D - Delisted
CP- California protected
FP - State Fully Protected
DFG: SC California Special Concern species
1B - California Native Plant Society considers the plant Rare, Threatened, or Endangered in California and elsewhere.
1A - CNPS Plants presumed extinct in California.
2 - CNPS Plants Rare, Threatened or Endangered in California, but more common elsewhere.
3 - CNPS Plants on a review list to find more information about a particular species.
4 - CNPS Plants of limited distribution - a watch list.

ATTACHMENT 3
SITE PHOTOGRAPHS

Photo 1. View to the south of the incised drainage ditch along the western fence line.

Photo 2. View of the non-native annual grassland habitat near the southeastern portion of the Property.

Olberding Environmental, Inc.
Borel Bank Property – May 2010

Photo 3. View to the east of the tall eucalyptus trees that occur just past the Property boundary.

Photo 4. View of the small potential seasonal wetland located near the western Property boundary.

Photo 5. View of the grazed non-native annual grassland habitat that occurs on the eastern sloping hillside.

Photo 6. View to the south of the hillside containing the potential seasonal wetland seep.

Olberding Environmental, Inc.
Borel Bank Property – May 2010

APPENDIX C

Zander Associates, Letter from Leslie Zander addressed to Nat Taylor, Lamphier-Gregory entitled *Wetland Review Borel Bank Property Castro Valley, California*,

October 5, 2011

ZANDER ASSOCIATES

Environmental Consultants

October 5, 2011

Nat Taylor
Lamphier-Gregory
1944 Embarcadero
Oakland, CA 94606

Wetland Review
Borel Bank Property
Castro Valley, California

Dear Nat:

At your request, I have reviewed background documents for and conducted a site visit on the Borel Bank Property in Castro Valley, California to provide my opinion regarding the potential presence of jurisdictional wetlands. This letter summarizes the results of my review.

The primary background document reviewed was the "Biological Resources Analysis Report for the Borel Bank Property" prepared by Olberding Environmental, Inc., dated June 2010. Other documents consulted include the National Resource Conservation Service Web Soil Survey for the property and Hydric Soils List for Alameda County, the National Wetlands Inventory (U.S. Fish and Wildlife Service), and Weather Underground for historical precipitation records. My site visit was conducted on September 29, 2011.

The biological report prepared by Olberding Environmental identifies "several small areas of potentially seasonal wetland habitat…" on the property. These areas were identified as such based on presence of standing water at the time of the site visit and plants including *Lolium multiflorum* and *Polypogon monspeliensis.* In the Summary provided on page 1 of the report, it also states that positive indicators of wetland soils were found in these areas but there are no data included supporting that statement.

The site visit for the Olberding report was conducted on May 18, 2010; this was during a storm event that measured over 0.2 inch of precipitation and it followed an event one week earlier in which little over 0.1 inch of rain fell. This could account for the areas of standing water that were observed. The plants noted in the features are not necessarily characteristic of wetlands in our region. *Lolium multiflorum* is currently listed as a Facultative (FAC) on the National Wetland Plant List meaning that it is equally likely to occur in wetland and upland areas. The current revision to the NWPL is recommending that this species be listed as upland, because it is so widespread in California. *Polypogon monspeliensis* is listed Facultative Wetland (FACW); it usually occurs in wetlands, but occasionally is found in non-wetlands and it also is common throughout moist habitats in the greater Bay Area. There is a detailed description of the soils

4460 Redwood Hwy, Suite 16-240 *telephone: (415) 897-8781*
San Rafael, CA 94903 *fax: (415) 814-4125*

mapped on the property included in the report but there is no information on which, if any, field indicators of hydric soil were observed in the potential wetland features. None of the soil series mapped on the property is listed as hydric on the Hydric Soils List for Alameda County.

The Olberding report identifies three potential wetland features based on the previously described criteria; one feature is located near the eastern boundary, a second is located near the western boundary, and a third is a potential wetland seep located on the northern facing hillside slope. None of these features is described in detail and there is no map included in the report identifying their location. The report also describes a small constructed drainage ditch along the western property fence line stating that it exhibits scouring and has an incised channel.

On September 29, 2011, I visited the property to locate and further evaluate the conditions of the features identified by Olberding. I did not observe any potential wetland areas on the property during my site visit. The feature reported near the eastern property fence line was not found. The eastern fenceline follows the edge of a relatively flat knoll for most its length but follows a slope to the north in the northeastern portion and slopes to the south in the southeastern portion of the site. Both of these slopes are relatively steep and the gradient continues offsite so it is unlikely that water ponds for long periods of time in these areas. I did not observe any microtopographic depressions, remnant hydrophytic vegetation, or other signs of potential wetlands along the eastern property boundary.

No potential wetland features were observed near the western boundary. The western boundary does cross a relatively steep bowl area where hillside runoff could collect at the bottom during storm events. However, the gradient continues less steeply offsite and ends at a detention basin constructed adjacent to a cul-de-sac so if water were to pond in the bottom of the bowl, it likely wouldn't remain for long periods following the storm. The vegetation at the bottom of the bowl near the property boundary consists primarily of upland grasses and herb with scattered shrubs of cotoneaster, coyote brush and coffeeberry in the vicinity. Some remnants of *Polypogon* were observed in the area but it is not the predominant species. The soils are dry, even in color and texture, and do not exhibit any hydric soil field indicators (e.g. depleted matrix, redox dark surface, redox depressions). No signs of ponding (e.g. matted vegetation, algal matting, cracked soils) were observed here. This could be the area that was identified as the potential wetland feature near the western boundary in the Olberding report.

The third feature, a hillside seep, was also not found. This feature was reported to be on the northern facing hillside slope; however, the photograph of the seep included in the report (Photo 6) suggests that it is on the west-facing slope of the bowl area described in the previous paragraph. I did not identify any wetland vegetation on the slopes of the bowl nor did I observe any hillside seeps anywhere on the property during my site visit. If seeps were present, they would have been easy to detect at this time of year because of the marked contrast in vegetation between green, water-fed plants and the dried annual grasses that dominate the site.

The "constructed drainage ditch" identified along the western property boundary does not appear to be constructed nor does it appear to convey drainage through the site. Rather, it appears to be an erosional gully formed likely as a result of water running downhill during storm events. I did

not observe an incised channel and the feature stops a good distance upslope from where the property meets Fairview Avenue. Also, there is no culvert at Fairview Avenue that would indicate drainage from the property needs to be directed offsite. Even looking at the photograph of the drainage that is provided in the Olberding report, it is difficult to see an incised channel feature. Instead, it looks like a gully that is heavily vegetated with annual grasses similar to the remainder of the slope and even after rain events (assuming the photograph was taken during the May 18, 2010 site visit) there is little evidence of flow through the area.

Based on review of the background data and results of my field reconnaissance, it is my opinion that there are no areas on the Borel Bank Property that meet U.S. Army Corps of Engineers (Corps) wetland criteria and therefore a formal jurisdictional determination is not necessary.

Should you have any questions regarding the results of my review, please don't hesitate to call me.

Sincerely,

Leslie Zander

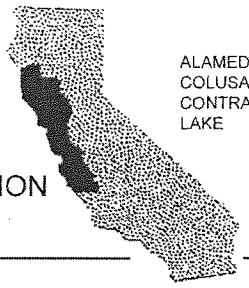
Leslie Zander
Principal Biologist

APPENDIX D

Northwest Information Center

Record Search Results for the Proposed Fairview District Development Project, Alameda County

CALIFORNIA
HISTORICAL
RESOURCES
INFORMATION
SYSTEM



ALAMEDA
COLUSA
CONTRA COSTA
LAKE
MARIN
MENDOCINO
MONTEREY
NAPA
SAN BENITO
SAN FRANCISCO
SAN MATEO
SANTA CLARA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, California 94928-3609
Tel: 707.588.8455
Email: leigh.jordan@sonoma.edu
http://www.sonoma.edu/nwic

August 11, 2011 NWIC File No.: 11-0130

Nathaniel Taylor
Lamphier Gregory
1944 Embarcadero
Oakland, CA 94606

Re: Record search results for the proposed Fairview District development project, Alameda County.

Dear Mr. Taylor:

Per your request received by our office on 4 August 2011, a records search was conducted for the above referenced project by reviewing pertinent Northwest Information Center (NWIC) base maps that reference cultural resources records and reports, historic-period maps, and literature for Alameda County. Please note that use of the term cultural resources includes archaeological resources and historical buildings and/or structures.

Review of this information indicates that there has been no record of any cultural resources studies that cover the Fairview District project area. This project area contains no recorded archaeological resources. Local, state and federal inventories include no recorded buildings or structures within the proposed project area. In addition to these inventories, the NWIC base maps show no recorded buildings or structures.

At the time of Euroamerican contact the Native Americans that lived in the area were speakers of a dialect of the Costanoan/Ohlone language, part of the Utian language family (Levy 1978:485). There are no Native American resources in or adjacent to the proposed project area referenced in the ethnographic literature.

Based on an evaluation of the environmental setting and features associated with known sites, Native American resources in this part of Alameda County have been found in close proximity to sources of water (including perennial and intermittent streams and springs), near ecotones, and along principal ridgelines. The Fairview District project area contains several favorable midslope terraces and is located in the transition zone from the bay flats to Walpert Ridge. Given the similarity of these environmental factors, there is a moderate potential of identifying unrecorded Native American resources in the proposed Fairview District project area.

Review of historical literature and maps gave no indication of the possibility of historic-period archaeological resources within the Fairview District project area. With

this in mind, there is a low potential of identifying unrecorded historic-period archaeological resources in the proposed Fairview District project area.

The 1915 Hayward USGS 15-minute topographic quadrangle fails to depict any buildings or structures within the Fairview District project area; therefore, there is a low possibility of identifying any buildings or structures 45 years or older within the project area.

RECOMMENDATIONS:

1) There is a moderate possibility of identifying Native American archaeological resources and a low possibility of identifying historic-period archaeological resources in the project area. We recommend a qualified archaeologist conduct further archival and field study to identify cultural resources. Field study may include, but is not limited to, pedestrian survey, hand auger sampling, shovel test units, or geoarchaeological analyses as well as other common methods used to identify the presence of archaeological resources. Please refer to the list of consultants who meet the Secretary of Interior's Standards at http://www.chrisinfo.org.

3) Review for possible historic-period buildings or structures has included only those sources listed in the attached bibliography and should not be considered comprehensive.

4) If archaeological resources are encountered **during construction,** work should be temporarily halted in the vicinity of the discovered materials and workers should avoid altering the materials and their context until a qualified professional archaeologist has evaluated the situation and provided appropriate recommendations. Project personnel should not collect cultural resources. Native American resources include chert or obsidian flakes, projectile points, mortars, and pestles; and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic-period resources include stone or adobe foundations or walls; structures and remains with square nails; and refuse deposits or bottle dumps, often located in old wells or privies.

5) It is recommended that any identified cultural resources be recorded on DPR 523 historic resource recordation forms, available online from the Office of Historic Preservation's website: http://ohp.parks.ca.gov/default.asp?page_id=1069

Thank you for using our services. Please contact this office if you have any questions, (707) 588-8455.

Sincerely,

Bryan Much
Assistant Coordinator

LITERATURE REVIEWED

In addition to archaeological maps and site records on file at the Historical Resources Information System, Northwest Information Center, the following literature was reviewed:

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1988 *Five Views: An Ethnic Sites Survey for California.* State of California Department of Parks and Recreation and Office of Historic Preservation, Sacramento.

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**Note that the Office of Historic Preservation's *Historic Properties Directory* includes National Register, State Registered Landmarks, California Points of Historical Interest, and the California Register of Historical Resources as well as Certified Local Government surveys that have undergone Section 106 review.

APPENDIX E

Berlogar Geotechnical Consultants,

Preliminary Geotechnical Investigation, Borel Bank Properties Residential Subdivision Fairview Avenue, Hayward California

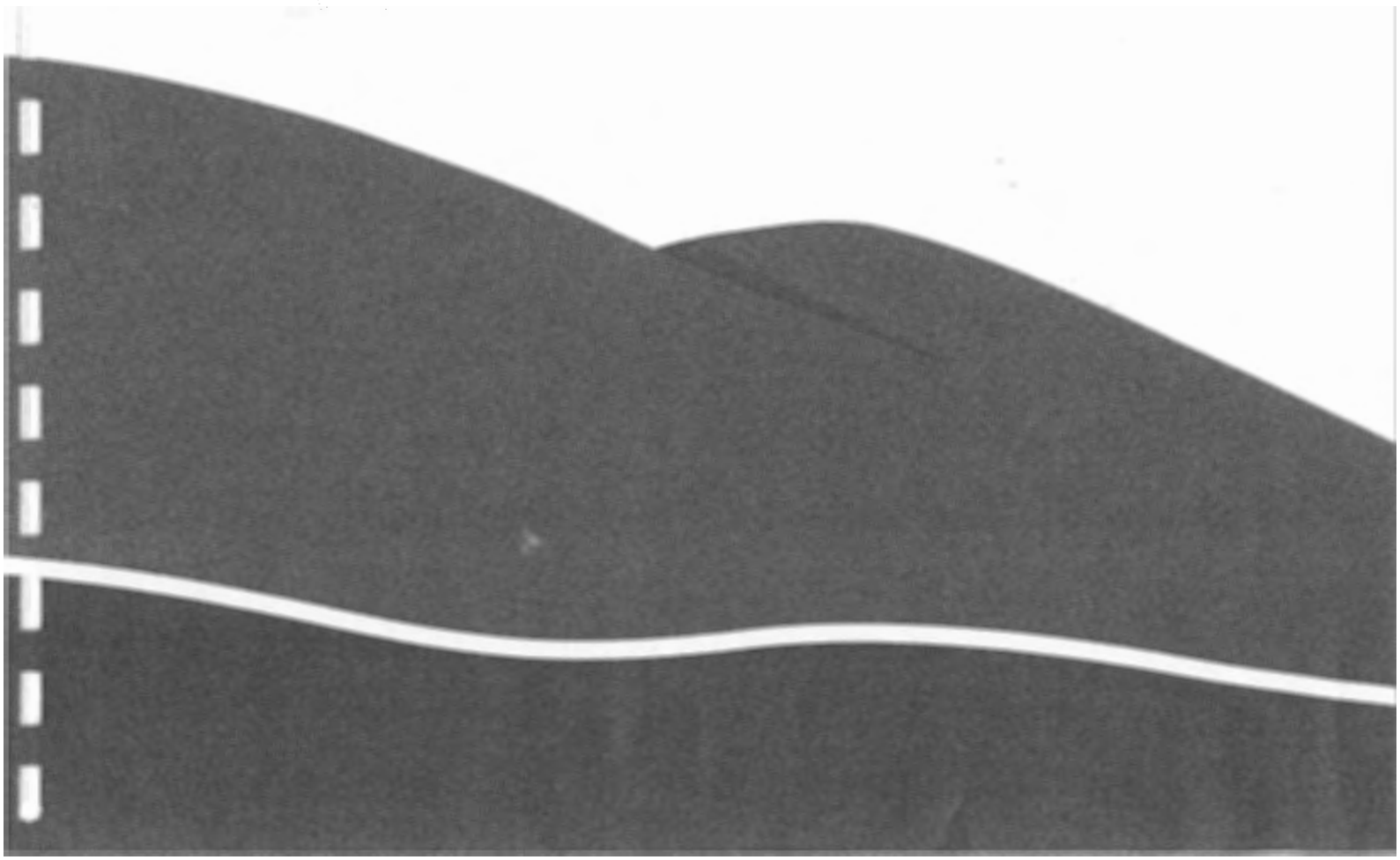
BGC

BERLOGAR
GEOTECHNICAL
CONSULTANTS

SOIL ENGINEERS
ENGINEERING GEOLOGISTS

PRELIMINARY GEOTECHNICAL INVESTIGATION
BOREL BANK PROPERTIES RESIDENTIAL SUBDIVISION
FAIRVIEW AVENUE
HAYWARD, CALIFORNIA

FOR
NORTHBROOK HOMES, LLC
July 8, 2010



July 8, 2010
Job No. 3255.100

BGC
BERLOGAR
GEOTECHNICAL
CONSULTANTS

Mr. Gary Brooks
Northbrook Homes, LLC
7020 Koll Center Parkway, Suite 101
Pleasanton, California 94566

Subject: Preliminary Geotechnical Investigation
Borel Bank Properties Residential Subdivision
Fairview Avenue
Hayward, California

Dear Mr. Brooks:

This report presents the results of our preliminary geotechnical investigation for a proposed 18-lot single-family residential subdivision in Hayward, California. Plate 1, Vicinity Map, shows the locations of the site. We expect the one and two-story residences will be supported on shallow foundations. The residential development will include cuts and fill up to about 20 feet deep. A new road will be constructed up from Fairview Avenue to access the development. A detention basin is proposed in the southwest corner of the property.

PURPOSE AND SCOPE OF SERVICES

The purpose of this preliminary investigation was to investigate the site soil, bedrock and groundwater conditions and to evaluate the feasibility of planned development from a geotechnical engineering standpoint. Our scope of services included:

1. Review of published maps and literature pertinent to the site and vicinity,
2. Reviewing existing geotechnical and geologic reports pertaining to the site,
3. Excavating and logging exploratory test pits,
4. Preliminary geotechnical engineering and geologic analysis,
5. Providing preliminary grading, retaining wall and foundation recommendations, and
6. Preparation of this report.

SITE CONDITIONS

SURFACE CONDITIONS

The approximate 10.1-acre, roughly rectangular-shaped site is located on the north side of Fairview Avenue as shown on Plate 2, Site Plan. The site is currently accessed from Fairview Avenue on the

south and from Karina Street on the west. A high knob is located in the south-central portion of the site with an elevation of about 710 feet MSL. The site slopes down from the knob in three directions: towards the northeast to 610 feet MSL, to the west to 600 ft MSL, and to the southwest to Fairview Avenue at about 560 ft MSL. The northwestern boundary abuts Karina Street along a ridgeline. A PG&E electric transmission tower easement runs northeasterly outside the eastern property boundary.

SUBSURFACE CONDITIONS

Eight test pits between 4 to 13 feet deep were excavated at the site on May 11, 2010. The test pits indicate that the site is underlain by a thin soil layer over Panoche shale and sandstone bedrock with colluvium over bedrock in the drainage swales as shown on the Site Plan. The soil mantling the bedrock was about 2 to 3 feet thick over the sandstone and 4 to 5 feet thick over the shale. The soil overlying the bedrock generally consisted of gray brown, moist, stiff silty and sandy clay. A sliver fill consisting of a mixture of sand, gravel, and silty clay was encountered in the upper foot of TP-2. Graphic test pit logs are contained on Plates 3 and 4.

Colluvium interpreted to be more than about 5 feet thick is shown on Plate 2, Site Plan. Colluvial soil encountered in TP-1 was about 10 feet thick over the bedrock and consisted of gray-brown, medium stiff to stiff, moist to wet sandy and silty clay. TP-4 was excavated to a depth of 13 feet and encountered moist to wet, stiff, silty and clayey sand colluvium. Bedrock was not exposed at the bottom of TP-4.

Panoche sandstone covers half the site in the higher elevation ridges and knobs and Panoche shale was encountered in the northern, lower lying portion of the site. The sandstone was found to be light gray brown, moderately hard to hard, highly weathered, moderately fractured, with fine to medium-grained sand particles. The Panoche shale material encountered in TP-3, TP-5, and TP-6 was found to be gray-brown, friable, highly weathered, highly fractured shale and sandstone. The strike and dip of bedding, where visible in the test pits, were obtained and are shown on the Site Plan. The bedrock has been folded, sheared, and deformed in this area due to the proximal Hayward fault. As such, bedding orientation varies throughout the site.

GROUNDWATER

Groundwater was not encountered in the test pits.

GEOLOGIC HAZARDS

LANDSLIDES

Mapped landslides at the sites were not found in the geologic literature in our files and we did not find evidence of active landslides during our field exploration.

EARTHQUAKES

The site is not located within a designated State of California Earthquake Fault Zone for active faults. We did not observe signs of active faults during our field exploration. Hence, the potential for surface fault rupture at the site is low. The peak ground acceleration at this site (37.6778 degrees latitude and -122.0426 degrees longitude) according to the California Geologic Survey website is 0.686 g.

LIQUEFACTION AND DYNAMIC COMPACTION

Liquefaction is the temporary transformation of saturated, loose cohesionless soils into a viscous liquid during strong ground shaking from a major earthquake. The site is underlain by clayey soils and bedrock. Therefore, the risk of liquefaction at the site is believed to be low. Dynamic compaction is the densification of dry, loose sandy soil above the water table. Loose, relatively clean sandy soil was not encountered in the test pits and borings, hence, the potential for dynamic compaction is considered to be low.

SOIL CORROSIVITY

A soil sample from TP-4 was submitted to CERCO Analytical, a California state certified laboratory, for corrosion testing. The test results and a brief evaluation by CERCO are attached. The soil was found to be mildly corrosive to buried steel and iron. The soil was not found to be corrosive to concrete in contact with the ground.

PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

GENERAL

From a geotechnical engineering standpoint, the proposed development appears to be feasible at the site, provided the preliminary conclusions and recommendations contained in this report are followed as project planning advances. The preliminary conclusions and recommendations are not adequate for final project design; therefore, a design-level geotechnical investigation should be performed to provide conclusions and recommendations for the design and construction of the project.

EXISTING COLLUVIUM

Two areas of colluvium are present at the site as shown on Plate 2, Site Plan. The colluvium on the south end of the project is located in an area of cut and fill grading, and the north end colluvium covers areas of graded fill and undisturbed ground. Colluvial soil within the development limits will likely have to be removed and replaced as engineered fill. A keyway and keyway drains will be required along the property boundary for the southern colluvial area at the proposed detention basin. A keyway and keyway drains may be needed for the northern colluvial zone in the proposed fill area. The keyway would be constructed within the proposed fill area along the boundary of the proposed

fill and undeveloped zone. The keyways may need to be internally reinforced with geogrid. Benching and intermediate subdrains will also be required (see Plate 5, Typical Subdrain Details).

HARD SANDSTONE BEDROCK

Our experience in the general area indicates that hard concretions of sandstone are present in the Panoche sandstone that are likely to be very difficult to excavate. Overexcavation should be considered during mass grading for deep utilities and street utility corridors in cut areas due to the potentially hard rock. Oversized rock will be generated and may need to be buried in deep fill, utilized for landscaping or removed from the site. The design level geotechnical investigation will need to address the potential for hard rock excavation during mass grading and underground utility trenching.

CUT/FILL TRANSITION LOTS

Overexcavation of the cut portion of cut and fill transition lots will be necessary to reduce the potential for differential settlement of the residences.

CUTSLOPE STABILITY

The bedding in the underlying bedrock is not oriented adversely in relation to the proposed grading plan. Our experience indicates that cuts in the sandstone may be relatively stable. Temporary cut slope stability in the sheared shale and sandstone in the central portion of the site will need to be addressed in the design level report.

EXISTING UNDOCUMENTED FILL

A sliver fill was encountered in TP-2. This fill material appears likely to be removed by cut grading in this area. If other areas of undocumented fill are encountered, the fill material would need to be removed and replaced as engineered fill.

EXPANSIVE SOIL

We performed Atterberg Limits tests on two clayey soil samples obtained from the site. The results are shown on the Test Pit logs. The Plasticity Index was found to be 6 and 9 with a corresponding Liquid Limit of 22 and 25. Hence, the soil at the site appears to have low expansion potential.

SITE PREPARATION AND GRADING

We anticipate that recommendations for site preparation and grading will be typical for residential projects in the vicinity. Detailed recommendations for clearing and stripping, over-excavation of the existing fill, subgrade preparation, selection and evaluation of fill material, relative compaction and moisture conditioning of fill materials, benching and subdrainage of fill should be provided in the future design-level geotechnical investigation.

OVEREXCAVATION RECOMMENDATIONS

The two areas of colluvium located within the development boundary, where not removed by mass grading, should be overexcavated and replaced as engineered fill. We expect the colluvium to be up to 20 feet thick in pockets with an average thickness of about 10 feet. Colluvium exposed in cut slopes will need to removed and built back as engineered fill slopes.

Overexcavation will likely be needed in cut and fill transition areas to reduce potential differential settlement. Due to the potentially hard sandstone bedrock in the southern half of the site, utility corridors in cut areas may need to be overexcavated during mass grading. It would be easier to overexcavate hard rock during large mass grading with heavy equipment rather than during utility trench installation with backhoes or excavators. Oversized rock generated during mass grading may be buried in deep fill areas, used in landscaping, or removed from the site.

CUT AND FILL SLOPES

On a preliminary basis, we recommend the following cut and fill slope inclinations.

- Cut and fill slopes up to 10 feet high can be inclined at 2H:1V.
- Cut slopes over 10 feet high in sandstone can be inclined at 2H:1V.
- Fill slopes over 10 feet high constructed with clayey soil should be inclined at 3H:1V
- Fill slopes over 10 feet high constructed with sandy soil can be inclined at 2H:1V.
- Cut and fill slopes more than 30 feet high should be evaluated further.

KEYWAYS

A keyway is recommended for the base of slopes located in the two areas of colluvium (see Site Plan). A keyway in colluvium may be required along the western property boundary at the detention basin location and above the northeastern swale along the grading limits. These keyways may need to be internally reinforced with geogrid.

SUBDRAINAGE

Subdrains may be required for rebuilt cut slopes, intermediate benches and keyways (see Plate 5, Typical Subdrain Details). We also recommend edge underdrains for streets in pavement areas as shown on Roadway Underdrain, Plate 6. Subdrains should consist of perforated PVC pipe conforming to ASTM Designation D 2751, Type SDR 35. Subdrain pipes should have two rows of holes and should be installed with holes facing downward. Subdrain pipes should be at least 6 inches in diameter. Subdrain pipes should be underlain and surrounded by at least 6 inches of Caltrans Class 2 permeable material, as defined in Section 68-1.025 of the State of California Standard Specification (May 2006). Subdrain systems should discharge into storm drain structures, where possible, or other suitable surface discharge points.

FOUNDATION CONSIDERATIONS

It is our opinion that, from a geotechnical engineering standpoint, the proposed houses be supported on post-tension concrete slab foundations. The PT slabs should be designed in accordance with the 2007 CBC requirements and to accommodate potential differential settlement from differential fill settlement.

CORROSION CONSIDERATIONS

A sample of soil was submitted CERCO Analytical laboratories for corrosivity testing. The results of the tests will be presented once the testing in completed.

SEISMIC DESIGN PARAMETERS

It is likely that the site will be subjected to strong ground shaking from at least one moderate to severe earthquake during the life span of the project. According to the United States Geological Survey, Earthquake Ground Motion Parameters program, version 5.0.9a dated 10-21-09, the following 2007 CBC seismic design parameters should be incorporated in the structural design of the proposed buildings (for a site located at 37.6778 degrees latitude and -122.0426 degrees longitude).

Site Class	**C**
Mapped Spectral Acceleration for Short Periods, S_s, for Site Class B with 5% damping	1.786 g
Mapped Spectral Acceleration for 1-second Period, S_1, for Site Class B with 5% damping	0.665 g
SM_s for Site Class C	1.786 g
SM_1 for Site Class C	0.864 g
SD_s for Site Class C	1.191 g
SD_1 for Site Class C	0.576 g

PRELIMINARY PAVEMENT SECTIONS

Pavement analyses are based upon an assumed resistance R-value of 10, which we expect to be representative of final pavement subgrade materials. We recommend the following preliminary pavement sections based on the Caltrans Design Method for Flexible Pavement.

Design Parameters		**Thickness (inches)**	
Traffic Index	R-Value	Asphalt Concrete	Class 2 Aggregate Base
4½	10	3	7
5	10	3	9
6	10	4	10

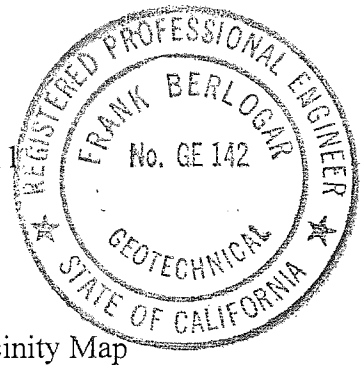
LIMITATIONS

The preliminary conclusions and recommendations of this report are based upon the information provided to us regarding the proposed residential development, subsurface conditions encountered at the test pit locations, our site reconnaissance, and professional judgment. The locations of the test pits were determined in the field by estimating from topographic and cultural features, and are to be considered approximate only. Site conditions are described in the text as they were observed during our site reconnaissance in the spring of 2010, and are not necessarily representative of such conditions at other locations and times. This study has been conducted in accordance with current professional geotechnical engineering and engineering geologic standards; no other warranty is expressed or implied.

We trust this provides the necessary information. If you have any questions, please contact the undersigned at (925) 484-0220. Thank you for the opportunity of providing professional services for you.

Respectfully submitted,

BERLOGAR GEOTECHNICAL CONSULTANTS



Frank Berlogar
GE 142, Exp. 9/30/11

WRS/FB:jmb

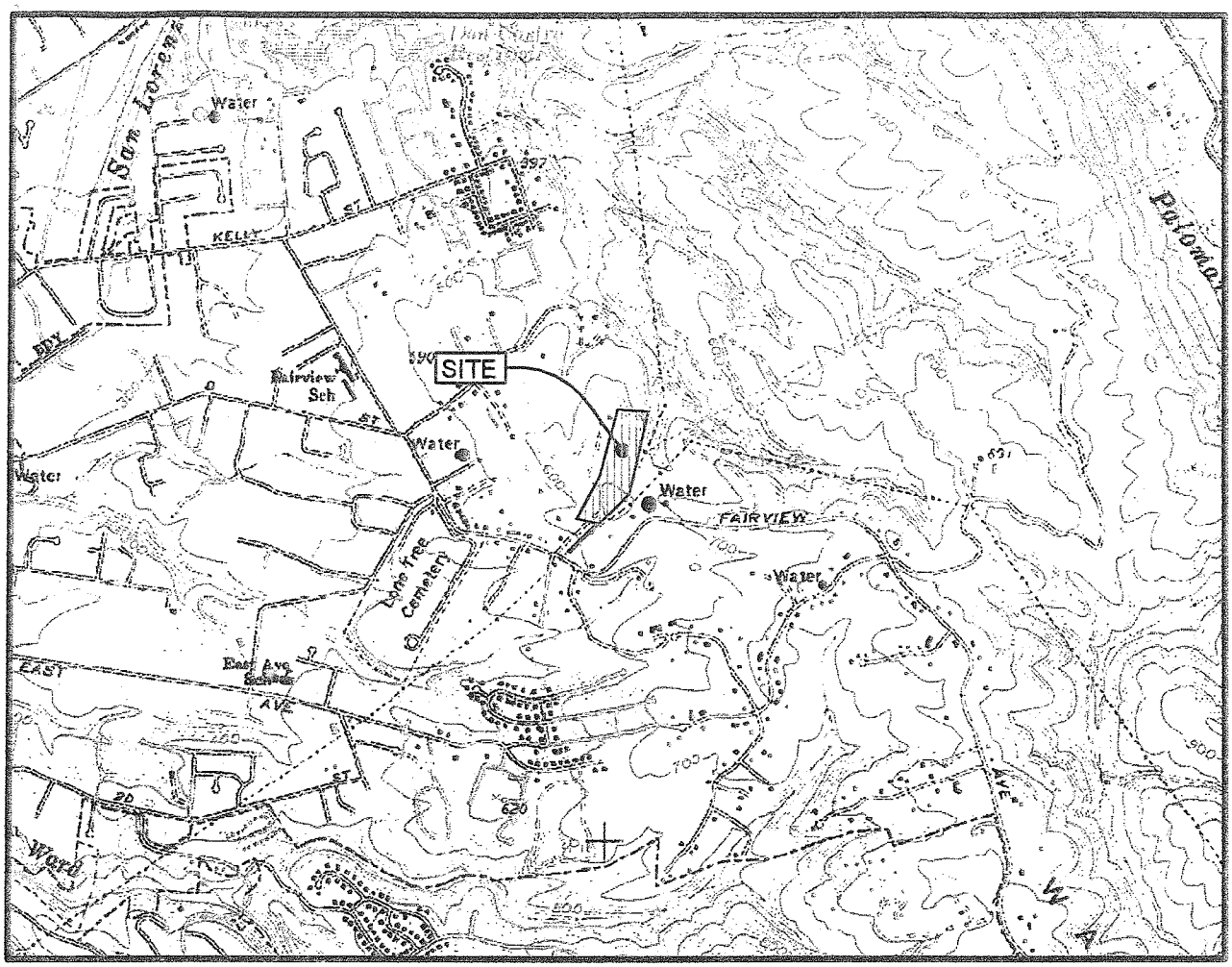
Attachments:

Plate 1 – Vicinity Map
Plate 2 – Site Plan
Plates 3 and 4 – Test Pit Logs
Plate 5 – Typical Subdrain Details
Plate 6 – Roadway Underdrain
CERCO Corrosivity Test Results, 2 pages

Copies: Addressee (6)

3255.100/23011.doc

JOB NUMBER: 3255.100 DATE: 5-21-10 BY: CC



0 2000'

1"=2000'

VICINITY MAP

BOREL BANK RESIDENTIAL SUBDIVISION

CASTRO VALLEY, CALIFORNIA

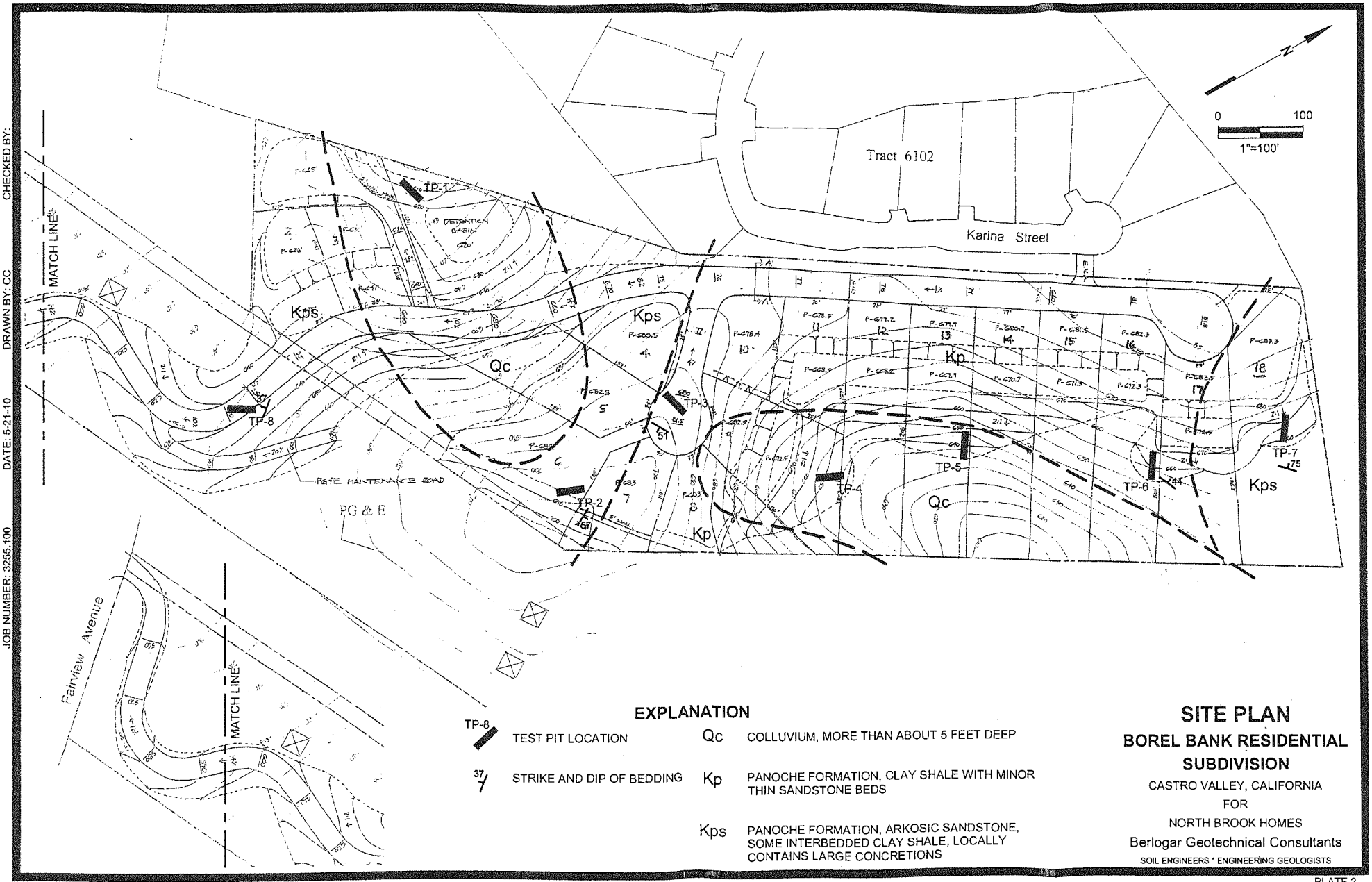
FOR

NORTH BROOK HOMES

7/1/2010 8:52:44 AM

BASE: PORTION OF U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE, HAYWARD, CALIFORNIA, PHOTOREVISED 1980, AT A SCALE OF 1:24,000.

PLATE 1



JOB NUMBER: 3255.100 DATE: 5-21-10 DRAWN BY: CC CHECKED BY:

7/1/2010 8:53:15 AM

EXPLANATION

TP-8 — TEST PIT LOCATION

37/ — STRIKE AND DIP OF BEDDING

Qc — COLLUVIUM, MORE THAN ABOUT 5 FEET DEEP

Kp — PANOCHE FORMATION, CLAY SHALE WITH MINOR THIN SANDSTONE BEDS

Kps — PANOCHE FORMATION, ARKOSIC SANDSTONE, SOME INTERBEDDED CLAY SHALE, LOCALLY CONTAINS LARGE CONCRETIONS

SITE PLAN

BOREL BANK RESIDENTIAL SUBDIVISION

CASTRO VALLEY, CALIFORNIA

FOR

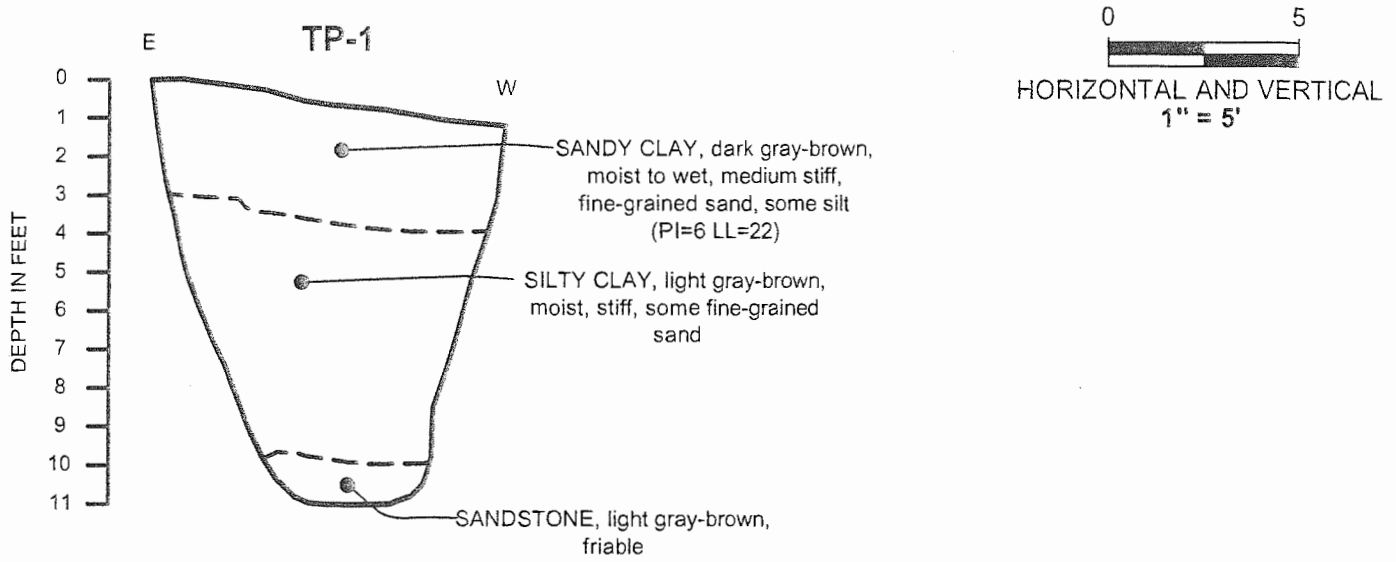
NORTH BROOK HOMES

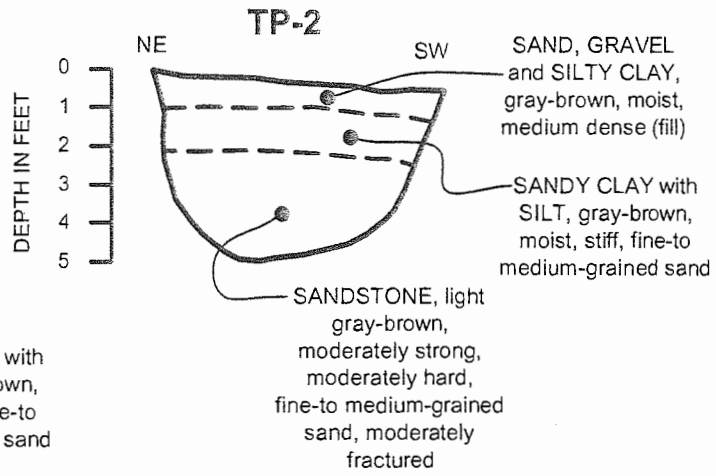
Berlogar Geotechnical Consultants

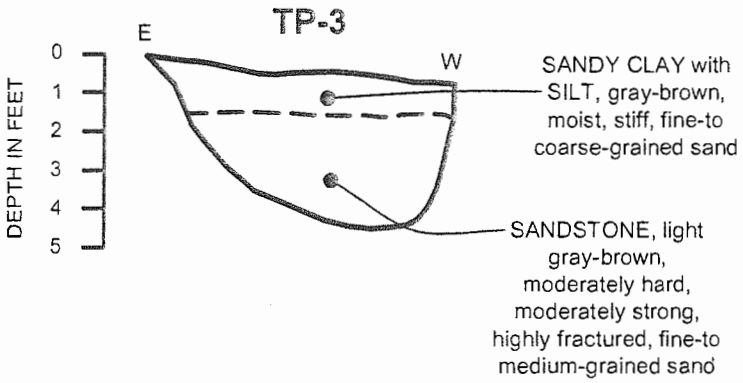
SOIL ENGINEERS * ENGINEERING GEOLOGISTS

BASE: PRELIMINARY SITE PLAN PREPARED BY, RJA DATED, 4-13-10

PLATE 2



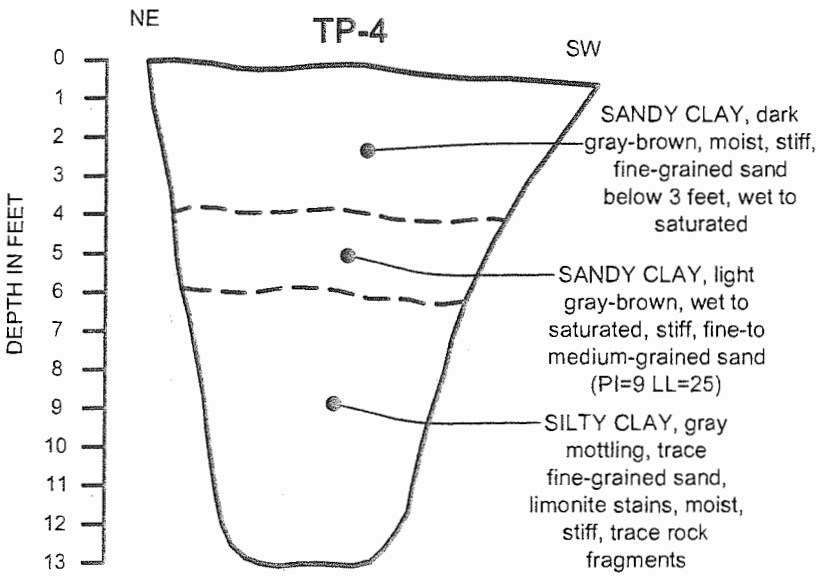




EXPLANATION

GROUND SURFACE AND TEST PIT LIMITS

GELOGIC CONTACT



GRAPHIC TEST PIT LOGS TP-1 THROUGH TP-4

BOREL BANK RESIDENTIAL SUBDIVISION

CASTRO VALLEY, CALIFORNIA

FOR

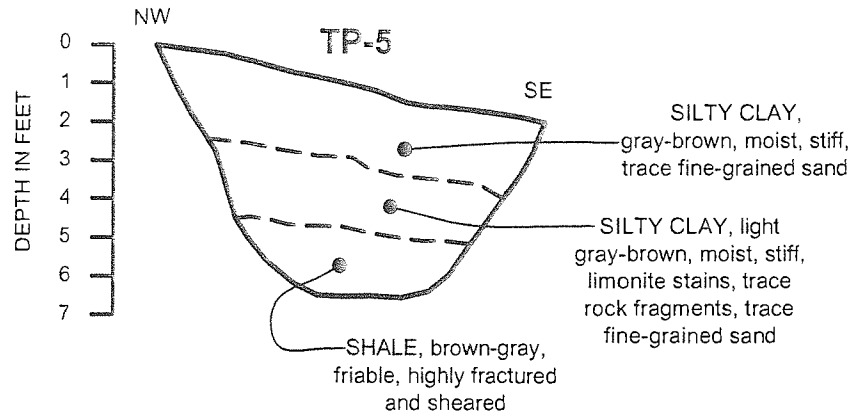
NORTH BROOK HOMES

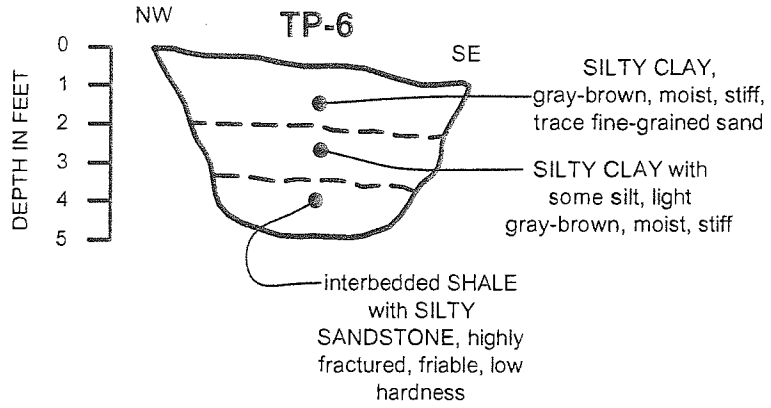
Berlogar Geotechnical Consultants

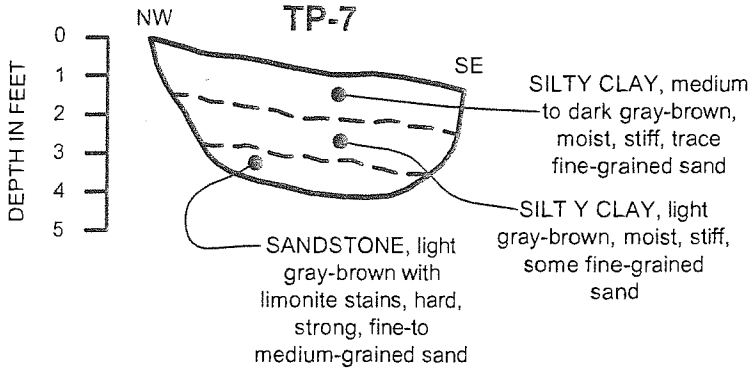
SOIL ENGINEERS * ENGINEERING GEOLOGISTS

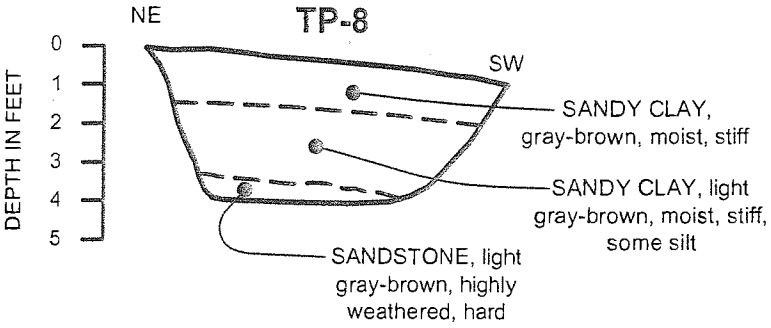
0 5

HORIZONTAL AND VERTICAL
1" = 5'









EXPLANATION

GROUND SURFACE AND TEST PIT LIMITS

GELOGIC CONTACT

GRAPHIC TEST PIT LOGS TP-5 THROUGH TP-8

BOREL BANK RESIDENTIAL SUBDIVISION

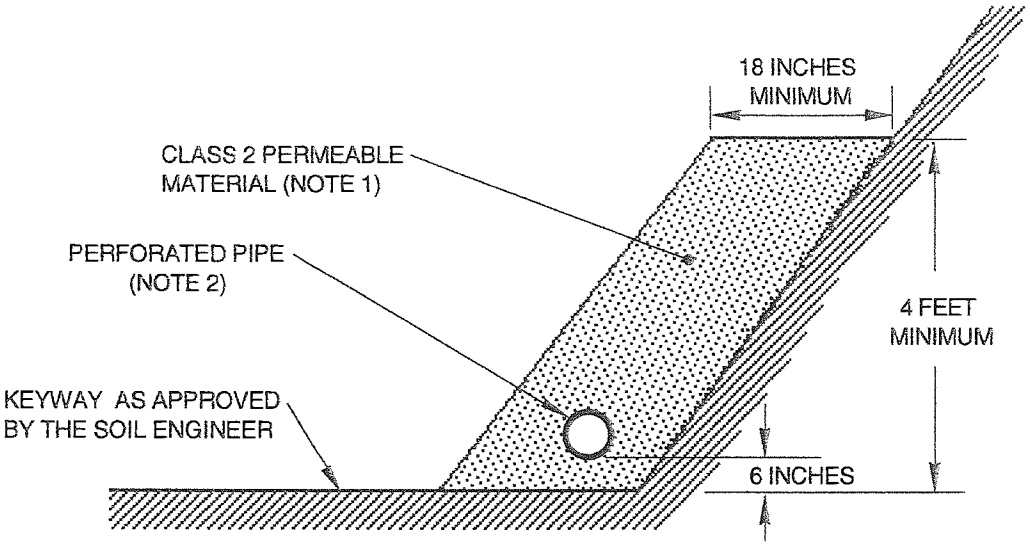
CASTRO VALLEY, CALIFORNIA

FOR

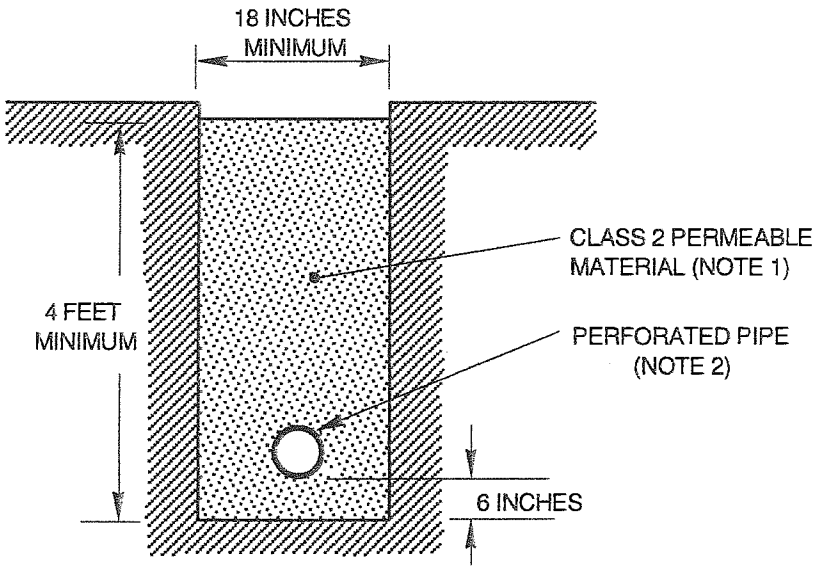
NORTH BROOK HOMES

Berlogar Geotechnical Consultants

SOIL ENGINEERS * ENGINEERING GEOLOGISTS



KEYWAY SUBDRAIN



COLLECTOR SUBDRAIN

NOTES:

1. CLASS 2 PERMEABLE MATERIAL AS GIVEN IN SECTION 68 - 1.025, STATE OF CALIFORNIA STANDARD SPECIFICATIONS, JULY, 2006 EDITION.

2. PERFORATED PIPE PLACED PERFORATIONS DOWN, PVC PIPE WITH A MINIMUM DIAMETER OF SIX (6) INCHES, CONFORMING TO ASTM D-3034 SDR 35, FOR DEPTHS LESS THAN 30 FEET, AND SDR 23.5 FOR THE DEPTHS GREATER THAN 30 FEET.

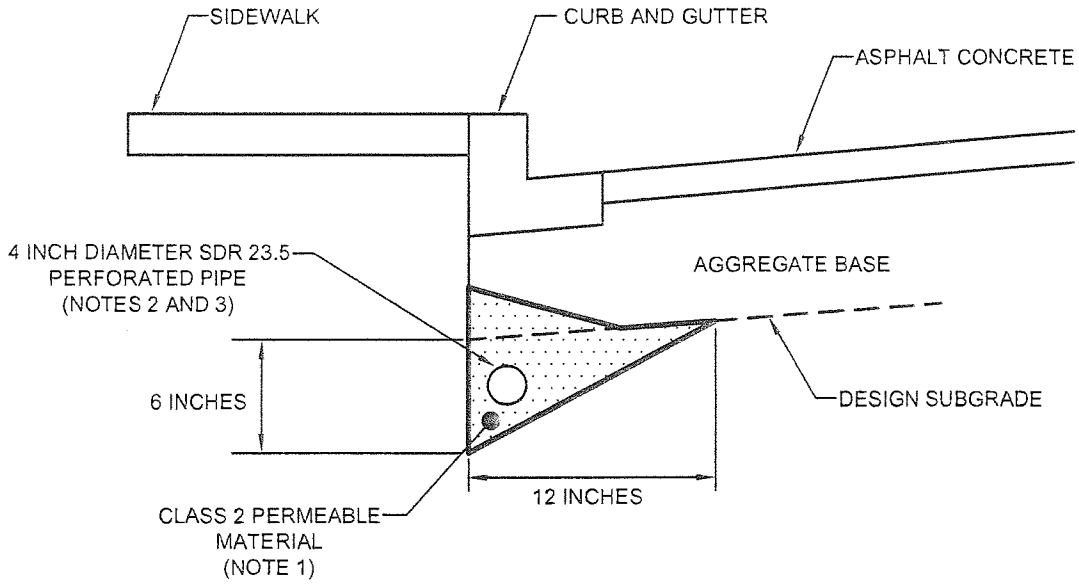
TYPICAL SUBDRAIN DETAILS

BY: CC

DATE: 5-21-10

JOB NUMBER: 3255.100

PLATE 5



NOTES:

1. CLASS 2 PERMEABLE MATERIAL AS GIVEN IN SECTION 68-1.025, STATE OF CALIFORNIA STANDARD SPECIFICATIONS.

2. PERFORATED PIPE TO BE PLACED WITH PERFORATIONS DOWN AND SURROUNDED BY AT LEAST 2 INCHES OF CLASS 2 PERMEABLE MATERIAL.

3. PERFORATED PIPE TO DISCHARGE INTO EACH CATCH BASIN / DRAINAGE INLET.

SCALE N.T.S.

ROADWAY UNDERDRAIN

California State Certified Laboratory No. 2153

CERCO analytical
1100 Willow Pass Court, Suite A
Concord, CA 94520-1006
925 462 2771 Fax. 925 462 2775
www.cercoanalytical.com

10 June 2010

Job No.1005222
Cust. No.10598

Mr. Bill Stevens
Berlogar Geotechnical Consultants
5587 Sunol Blvd.
Pleasanton, CA 94566

Subject: Project No.: 3255.100
Project Name: Hayward
Corrosivity Analysis – ASTM Test Methods with Brief Evaluation

Dear Mr. Stevens:

Pursuant to your request, CERCO Analytical has analyzed the soil sample submitted on May 27, 2010. Based on the analytical results, a brief corrosivity evaluation is enclosed for your consideration.

Based upon the resistivity measurement, this sample is classified as "mildly corrosive". All buried iron, steel, cast iron, ductile iron, galvanized steel and dielectric coated steel or iron should be properly protected against corrosion depending upon the critical nature of the structure. All buried metallic pressure piping such as ductile iron firewater pipelines should be protected against corrosion.

The chloride ion concentration reflects none detected with a detection limit of 15 mg/kg.

The sulfate ion concentration reflects none detected with a detection limit of 15 mg/kg.

The pH of the soil is 6.5 which does not present corrosion problems for buried iron, steel, mortar-coated steel and reinforced concrete structures.

The redox potential is 440-mV, which is indicative of aerobic soil conditions.

This corrosivity evaluation is based on general corrosion engineering standards and is non-specific in nature. For specific long-term corrosion control design recommendations or consultation, please call *JDH Corrosion Consultants, Inc. at (925) 927-6630.*

We appreciate the opportunity of working with you on this project. If you have any questions, or if you require further information, please do not hesitate to contact us.

Very truly yours,
CERCO ANALYTICAL, INC.

J. Darby Howard, Jr., P.E.
President

JDH/jdl
Enclosure

California State Certified Laboratory No. 2153

CERCO analytical
1100 Willow Pass Court, Suite A
Concord, CA 94520-1006
925 462 2771 Fax: 925 462 2775
www.cercoanalytical.com

Client: Berlogar Geotechnical Consultants
Client's Project No.: 3255.100
Client's Project Name: Hayward
Date Sampled: 15-May-10
Date Received: 27-May-10
Matrix: Soil
Authorization: Chain of Custody

Date of Report: 10-Jun-2010

Job/Sample No.	Sample I.D.	Redox (mV)	pH	Conductivity (umhos/cm)*	Resistivity (100% Saturation) (ohms-cm)	Sulfide (mg/kg)*	Chloride (mg/kg)*	Sulfate (mg/kg)*
1005222-001	TP-4	440	6.5	-	12,000	-	N.D.	N.D.

Method:	ASTM D1498	ASTM D4972	ASTM D1125M	ASTM G57	ASTM D4658M	ASTM D4327	ASTM D4327
Detection Limit:	-	-	10	-	50	15	15
Date Analyzed:	8-Jun-2010	8-Jun-2010	-	8-Jun-2010	-	8-Jun-2010	8-Jun-2010

Cheryl McMillen
Laboratory Director

* Results Reported on "As Received" Basis

N.D. - None Detected

Quality Control Summary - All laboratory quality control parameters were found to be within established limits

APPENDIX F

Environmental Data Resources (EDR),

The EDR Radius Map™ Report with GeoCheck,

Prepared for the Northbrook Homes Fairview Site, 24850 Fairview Avenue, Hayward, CA 94542

Northbrook Homes Fairview Site
24850 Fairview Avenue
Hayward, CA 94542

Inquiry Number: 3143080.2s
August 08, 2011

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

24850 FAIRVIEW AVENUE
HAYWARD, CA 94542

COORDINATES

Latitude (North):	37.678400 - 37° 40' 42.2''
Longitude (West):	122.042500 - 122° 2' 33.0''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	584434.8
UTM Y (Meters):	4170360.2
Elevation:	657 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	37122-F1 HAYWARD, CA
Most Recent Revision:	1980

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	2006, 2005
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List

EXECUTIVE SUMMARY

Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

CERCLIS ---------- Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ---------- Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP ---------- CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ---------- State Response Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Solid Waste Information System

State and tribal leaking storage tank lists

SLIC ---------- Statewide SLIC Cases
INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

UST ---------- Active UST Facilities

AST ---- Aboveground Petroleum Storage Tank Facilities
INDIAN UST ---- Underground Storage Tanks on Indian Land
FEMA UST ---- Underground Storage Tank Listing

State and tribal voluntary cleanup sites

VCP ---- Voluntary Cleanup Program Properties
INDIAN VCP ---- Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9 ---- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---- Open Dump Inventory
WMUDS/SWAT ---- Waste Management Unit Database
SWRCY ---- Recycler Database
HAULERS ---- Registered Waste Tire Haulers Listing
INDIAN ODI ---- Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ---- Clandestine Drug Labs
HIST Cal-Sites ---- Historical Calsites Database
SCH ---- School Property Evaluation Program
Toxic Pits ---- Toxic Pits Cleanup Act Sites
CDL ---- Clandestine Drug Labs
US HIST CDL ---- National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

CA FID UST ---- Facility Inventory Database
SWEEPS UST ---- SWEEPS UST Listing

Local Land Records

LIENS 2 ---- CERCLA Lien Information
LUCIS ---- Land Use Control Information System
LIENS ---- Environmental Liens Listing
DEED ---- Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ---- Hazardous Materials Information Reporting System
CHMIRS ---- California Hazardous Material Incident Report System
LDS ---- Land Disposal Sites Listing
MCS ---- Military Cleanup Sites Listing

Other Ascertainable Records

RCRA-NonGen ---- RCRA - Non Generators

EXECUTIVE SUMMARY

DOT OPS	Incident and Accident Data
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
CA BOND EXP. PLAN	Bond Expenditure Plan
WDS	Waste Discharge System
NPDES	NPDES Permits Listing
Cortese	"Cortese" Hazardous Waste & Substances Sites List
Notify 65	Proposition 65 Records
DRYCLEANERS	Cleaner Facilities
WIP	Well Investigation Program Case List
HAZNET	Facility and Manifest Data
EMI	Emissions Inventory Data
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
FINANCIAL ASSURANCE	Financial Assurance Information Listing
PCB TRANSFORMER	PCB Transformer Registration Database
PROC	Certified Processors Database
MWMP	Medical Waste Management Program Listing
COAL ASH DOE	Sleam-Electric Plan Operation Data

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants	EDR Proprietary Manufactured Gas Plants
EDR Historical Auto Stations	EDR Proprietary Historic Gas Stations
EDR Historical Cleaners	EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 06/15/2011 has revealed that there is 1 ENVIROSTOR site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
HIGHLAND TRAILS	***25329 SECOND STREET***	***SW 1/2 - 1 (0.649 mi.)***	***4***	***11***
Status: No Further Action				

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 06/20/2011 has revealed that there is 1 LUST site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
FAIRVIEW FIRE DEPARTMENT	***24200 FAIRVIEW AVE***	***WNW 1/4 - 1/2 (0.326 mi.)***	***A3***	***9***
Status: Completed - Case Closed				

Alameda County CS: A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

A review of the Alameda County CS list, as provided by EDR, and dated 04/12/2011 has revealed that there is 1 Alameda County CS site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
FAIRVIEW FIRE DEPARTMENT	***24200 FAIRVIEW AVE***	***WNW 1/4 - 1/2 (0.326 mi.)***	***A3***	***9***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Registered Storage Tanks

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there is 1 HIST UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
LONE TREE CEMETERY	*24591 FAIRVIEW AVE*	*WNW 1/8 - 1/4 (0.213 mi.)*	*1*	*8*

Other Ascertainable Records

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES].

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there is 1 HIST CORTESE site within approximately 0.5 miles of the target property.

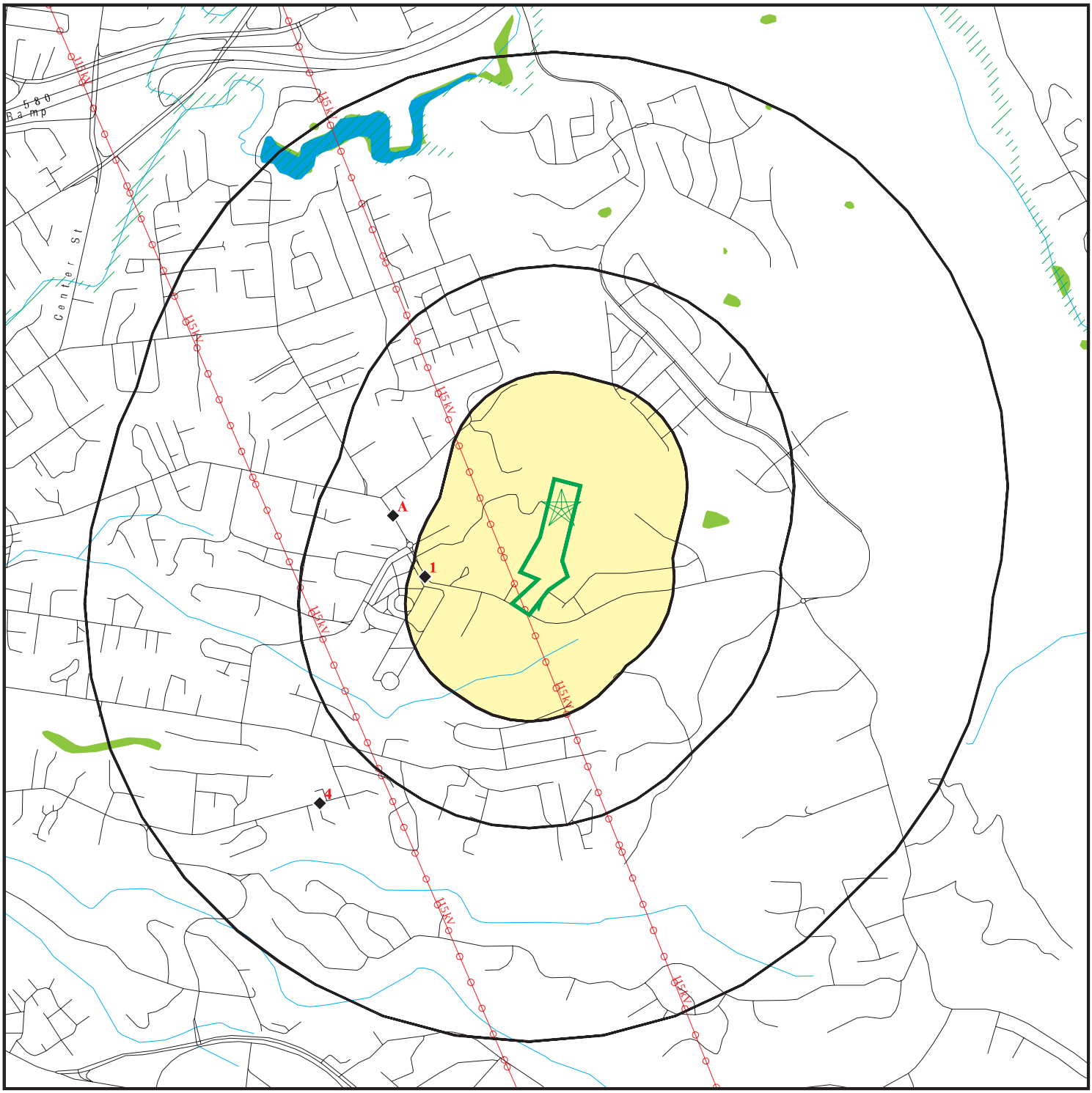
Lower Elevation	Address	Direction / Distance	Map ID	Page
FAIRVIEW FIRE DEPARTMENT	*24200 FAIRVIEW*	*WNW 1/4 - 1/2 (0.326 mi.)*	*A2*	*8*

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 3 records.

Site Name	Database(s)
EDEN ROCK PROPS	CERC-NFRAP
ARDEN ROAD PROPERTY	CERC-NFRAP
BAY CITIES RUBBISH DSPL CO	CERC-NFRAP

OVERVIEW MAP - 3143080.2s

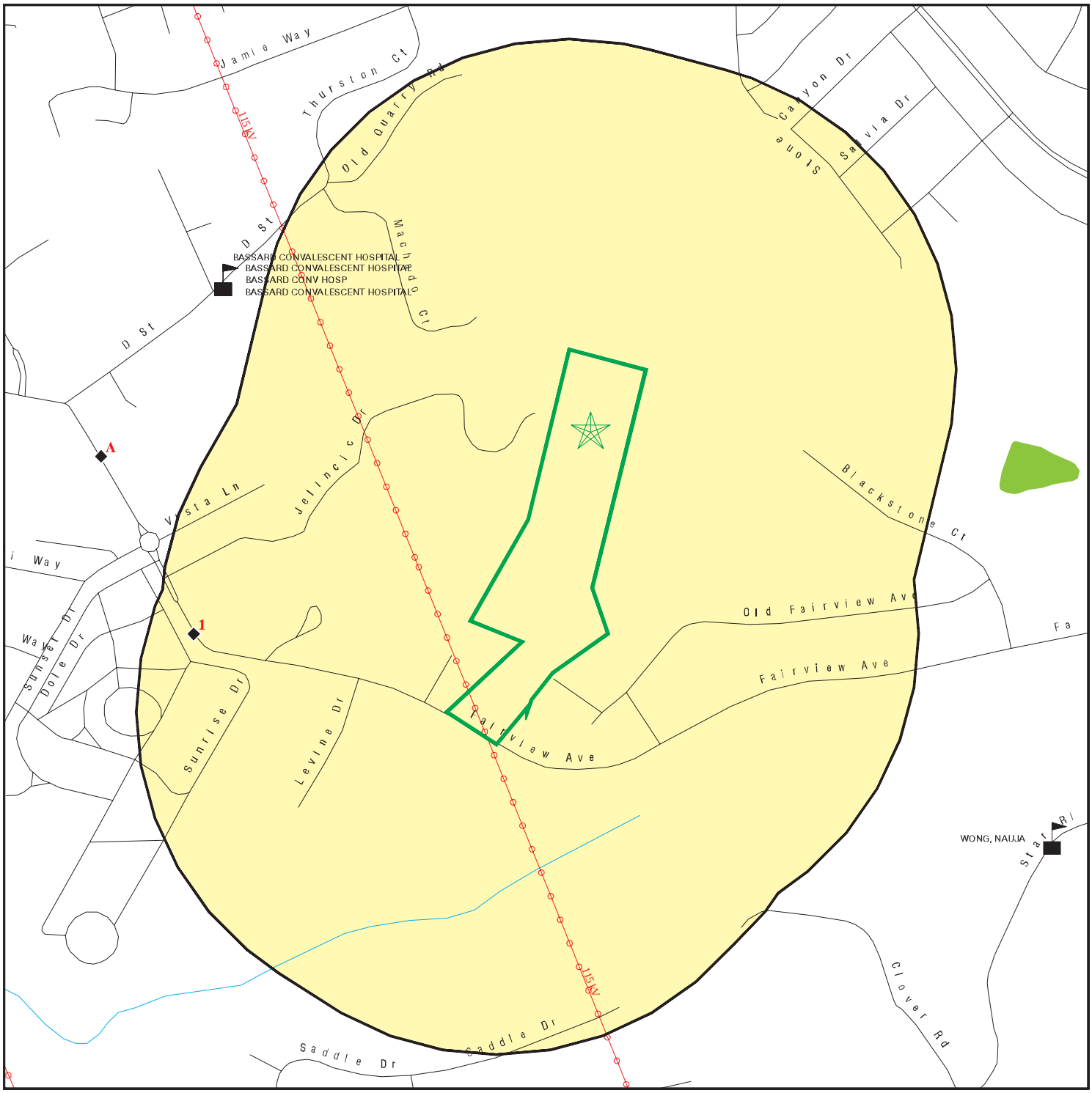


- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Northbrook Homes Fairview Site ADDRESS: 24850 Fairview Avenue Hayward CA 94542 LAT/LONG: 37.6784 / 122.0425	CLIENT: Lamphier-Gregory CONTACT: Nathaniel Taylor INQUIRY #: 3143080.2s DATE: August 08, 2011 7:05 pm

DETAIL MAP - 3143080.2s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Northbrook Homes Fairview Site	CLIENT: Lamphier-Gregory
ADDRESS: 24850 Fairview Avenue Hayward CA 94542	CONTACT: Nathaniel Taylor INQUIRY #: 3143080.2s
LAT/LONG: 37.6784 / 122.0425	DATE: August 08, 2011 7:06 pm

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL		1.000	0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS		0.500	0	0	0	NR	NR	0
FEDERAL FACILITY		1.000	0	0	0	0	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP		0.500	0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS		1.000	0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF		0.500	0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG		0.250	0	0	NR	NR	NR	0
RCRA-SQG		0.250	0	0	NR	NR	NR	0
RCRA-CESQG		0.250	0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
Federal ERNS list								
ERNS		TP	NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE		1.000	0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR		1.000	0	0	0	1	NR	1
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF		0.500	0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST		0.500	0	0	1	NR	NR	1
SLIC		0.500	0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Alameda County CS		0.500	0	0	1	NR	NR	1
INDIAN LUST		0.500	0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST		0.250	0	0	NR	NR	NR	0
AST		0.250	0	0	NR	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
FEMA UST		0.250	0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP		0.500	0	0	0	NR	NR	0
INDIAN VCP		0.500	0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
WMUDS/SWAT		0.500	0	0	0	NR	NR	0
SWRCY		0.500	0	0	0	NR	NR	0
HAULERS		TP	NR	NR	NR	NR	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL		TP	NR	NR	NR	NR	NR	0
HIST Cal-Sites		1.000	0	0	0	0	NR	0
SCH		0.250	0	0	NR	NR	NR	0
Toxic Pits		1.000	0	0	0	0	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
US HIST CDL		TP	NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA FID UST		0.250	0	0	NR	NR	NR	0
HIST UST		0.250	0	1	NR	NR	NR	1
SWEEPS UST		0.250	0	0	NR	NR	NR	0
Local Land Records								
LIENS 2		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
LIENS		TP	NR	NR	NR	NR	NR	0
DEED		0.500	0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS		TP	NR	NR	NR	NR	NR	0
CHMIRS		TP	NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LDS		TP	NR	NR	NR	NR	NR	0
MCS		TP	NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen		0.250	0	0	NR	NR	NR	0
DOT OPS		TP	NR	NR	NR	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN		1.000	0	0	0	0	NR	0
WDS		TP	NR	NR	NR	NR	NR	0
NPDES		TP	NR	NR	NR	NR	NR	0
Cortese		0.500	0	0	0	NR	NR	0
HIST CORTESE		0.500	0	0	1	NR	NR	1
Notify 65		1.000	0	0	0	0	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
WIP		0.250	0	0	NR	NR	NR	0
HAZNET		TP	NR	NR	NR	NR	NR	0
EMI		TP	NR	NR	NR	NR	NR	0
INDIAN RESERV		1.000	0	0	0	0	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
HWP		1.000	0	0	0	0	NR	0
HWT		0.250	0	0	NR	NR	NR	0
COAL ASH EPA		0.500	0	0	0	NR	NR	0
FINANCIAL ASSURANCE		TP	NR	NR	NR	NR	NR	0
PCB TRANSFORMER		TP	NR	NR	NR	NR	NR	0
PROC		0.500	0	0	0	NR	NR	0
MWMP		0.250	0	0	NR	NR	NR	0
COAL ASH DOE		TP	NR	NR	NR	NR	NR	0
EDR PROPRIETARY RECORDS								
EDR Proprietary Records								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0
EDR Historical Auto Stations		0.250	0	0	NR	NR	NR	0
EDR Historical Cleaners		0.250	0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
WNW
1/8-1/4
0.213 mi.
1125 ft.

LONE TREE CEMETERY
24591 FAIRVIEW AVE
HAYWARD, CA 94542

HIST UST **U001597028**
HAZNET **N/A**

Relative:
Lower

Actual:
495 ft.

HIST UST:

Region:	STATE
Facility ID:	00000056968
Facility Type:	Other
Other Type:	CEMETERY
Total Tanks:	0001
Contact Name:	ALAN C. JENSEN
Telephone:	4155821274
Owner Name:	LONE TREE CEMETERY ASSOCIATION
Owner Address:	24591 FAIRVIEW AVE.
Owner City,St,Zip:	HAYWARD, CA 94542
Tank Num:	001
Container Num:	1
Year Installed:	1971
Tank Capacity:	00000550
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	Not reported
Leak Detection:	None

HAZNET:

Year:	2001
Gepaid:	CAL000180126
Contact:	THOMAS GRATNY GEN MGR
Telephone:	5105821274
Mailing Name:	Not reported
Mailing Address:	24591 FAIRVIEW AVE
Mailing City,St,Zip:	HAYWARD, CA 945420000
Gen County:	Alameda
TSD EPA ID:	Not reported
TSD County:	Santa Clara
Waste Category:	Unspecified oil-containing waste
Disposal Method:	H01
Tons:	0.1
Facility County:	Not reported

A2
WNW
1/4-1/2
0.326 mi.
1719 ft.

FAIRVIEW FIRE DEPARTMENT
24200 FAIRVIEW
HAYWARD, CA 94541

HIST CORTESE **S103956979**
HAZNET **N/A**

Site 1 of 2 in cluster A

Relative:
Lower

Actual:
449 ft.

CORTESE:

Region:	CORTESE
Facility County Code:	1
Reg By:	LTNKA
Reg Id:	01-2494

HAZNET:

Year:	1998
Gepaid:	CAC002127672
Contact:	CITY OF HAYWARD

FAIRVIEW FIRE DEPARTMENT (Continued) **S103956979**

Telephone:	5107326444
Mailing Name:	Not reported
Mailing Address:	24200 FAIRVIEW AVE
Mailing City,St,Zip:	HAYWARD, CA 945410000
Gen County:	1
TSD EPA ID:	CAD009466392
TSD County:	7
Waste Category:	Other empty containers 30 gallons or more
Disposal Method:	D99
Tons:	.1500
Facility County:	1

A3 **FAIRVIEW FIRE DEPARTMENT** **LUST** **U001596984**
WNW **24200 FAIRVIEW AVE** **Alameda County CS** **N/A**
1/4-1/2 **HAYWARD, CA 94541** **HIST UST**
0.326 mi.
1719 ft. **Site 2 of 2 in cluster A**

Relative:
Lower

Actual:
449 ft.

LUST:

Region:	STATE
Global Id:	T0600102295
Latitude:	37.6780929
Longitude:	-122.049415
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	2000-03-09 00:00:00
Lead Agency:	ALAMEDA COUNTY LOP
Case Worker:	SOS
Local Agency:	ALAMEDA COUNTY LOP
RB Case Number:	01-2494
LOC Case Number:	RO0000846
File Location:	Stored electronically as an E-file
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Diesel
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

LUST:

Global Id:	T0600102295
Contact Type:	Regional Board Caseworker
Contact Name:	Cherie McCaulou
Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)
Address:	1515 CLAY STREET, SUITE 1400
City:	OAKLAND
Email:	cmccaulou@waterboards.ca.gov
Phone Number:	Not reported

Global Id:	T0600102295
Contact Type:	Local Agency Caseworker
Contact Name:	SCOTT SEERY
Organization Name:	ALAMEDA COUNTY LOP
Address:	1131 HARBOR BAY PARKWAY
City:	ALAMEDA
Email:	Not reported
Phone Number:	Not reported

FAIRVIEW FIRE DEPARTMENT (Continued) **U001596984**

LUST:
Global Id: T0600102295
Action Type: Other
Date: 1950-01-01 00:00:00
Action: Leak Reported

Global Id: T0600102295
Action Type: REMEDIATION
Date: 1950-01-01 00:00:00
Action: Remove free product

LUST REG 2:
Region: 2
Facility Id: 01-2494
Facility Status: Case Closed
Case Number: 4115
How Discovered: Tank Closure
Leak Cause: UNK
Leak Source: UNK
Date Leak Confirmed: 5/13/1999
Oversight Program: LUST
Prelim. Site Assesment Wokplan Submitted: Not reported
Preliminary Site Assesment Began: Not reported
Pollution Characterization Began: Not reported
Pollution Remediation Plan Submitted: Not reported
Date Remediation Action Underway: Not reported
Date Post Remedial Action Monitoring Began: Not reported

Alameda County CS:
Status: Case Closed
Record Id: RO0000846
PE: 5602

HIST UST:
Region: STATE
Facility ID: 00000030103
Facility Type: Other
Other Type: FIRE DEPARTMENT
Total Tanks: 0001
Contact Name: CHIEF YUNGHANS
Telephone: 4158816056
Owner Name: FAIRVIEW FIRE PROTECTION DISTR
Owner Address: 24200 FAIRVIEW AVENUE
Owner City,St,Zip: HAYWARD, CA 94541

Tank Num: 001
Container Num: 1
Year Installed: 1975
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Tank Construction: Not reported
Leak Detection: Visual

4
SW
1/2-1
0.649 mi.
3426 ft.

HIGHLAND TRAILS
25329 SECOND STREET
HAYWARD, CA 94541

VCP **S108484727**
ENVIROSTOR **N/A**

Relative:
Lower

Actual:
440 ft.

VCP:

Facility ID:	60000612
Site Type:	Voluntary Cleanup
Site Type Detail:	Voluntary Cleanup
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	7.1
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Mitigation And Brownfield Reuse Program
Project Manager:	XAVIER BRYANT
Supervisor:	Denise Tsuji
Division Branch:	Cleanup Berkeley
Site Code:	201739
Assembly:	20
Senate:	10
Special Programs Code:	Not reported
Status:	No Further Action
Status Date:	2007-07-12 00:00:00
Restricted Use:	NO
Funding:	Responsible Party
Lat/Long:	37.668173416589603 / -122.05177084685801
APN:	0425-160-006-01, 0425-160-006-02, 0425-160-006-02, 0425-160-007-01, 425-160-7-8
Past Use:	AGRICULTURAL - LIVESTOCK, ILLEGAL DUMPING
Potential COC:	30001, 30024, 3002502
Confirmed COC:	30024,30001,3002502
Potential Description:	SOIL
Alias Name:	Creekside Highlands
Alias Type:	Alternate Name
Alias Name:	Van Eeghen Property
Alias Type:	Alternate Name
Alias Name:	0425-160-006-01
Alias Type:	APN
Alias Name:	0425-160-006-02
Alias Type:	APN
Alias Name:	0425-160-006-02
Alias Type:	APN
Alias Name:	0425-160-007-01
Alias Type:	APN
Alias Name:	425-160-7-8
Alias Type:	APN
Alias Name:	Vesting Tentative Tract Map TR-7270
Alias Type:	Former Project ID
Alias Name:	110033613953
Alias Type:	EPA (FRS #)
Alias Name:	201739
Alias Type:	Project Code (Site Code)
Alias Name:	60000611
Alias Type:	Envirostor ID Number
Alias Name:	60000612
Alias Type:	Envirostor ID Number

HIGHLAND TRAILS (Continued) **S108484727**

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Report
Completed Date:	2004-04-29 00:00:00
Comments:	Groundwater Report submitted as part of the historical file. Report was not prepared for or approved by DTSC.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Report
Completed Date:	2007-07-12 00:00:00
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Application
Completed Date:	2007-04-11 00:00:00
Comments:	Project was assigned to DTSC through the MOA process.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1
Completed Date:	2000-07-13 00:00:00
Comments:	Phase I submitted to DTSC as part of the historical file. Document was not prepared for DTSC.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Report
Completed Date:	2000-09-19 00:00:00
Comments:	Phase II Report submitted as part of the historical file. Report was not prepared for or approved by DTSC.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Report
Completed Date:	2000-08-22 00:00:00
Comments:	Soil Sampling Report submitted as part of the historical file. Report was not prepared for or approved by DTSC.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Voluntary Cleanup Agreement
Completed Date:	2007-05-08 00:00:00
Comments:	VCA executed.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	CEQA - Initial Study/ Environmental Impact Report
Completed Date:	2006-02-28 00:00:00
Comments:	EIR completed prior to Oversight Agreement with DTSC.

Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported

HIGHLAND TRAILS (Continued) **S108484727**

Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

ENVIROSTOR:
Site Type: Voluntary Cleanup
Site Type Detailed: Voluntary Cleanup
Acres: 7.1
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: XAVIER BRYANT
Supervisor: Denise Tsuji
Division Branch: Cleanup Berkeley
Facility ID: 60000612
Site Code: 201739
Assembly: 20
Senate: 10
Special Program: Not reported
Status: No Further Action
Status Date: 2007-07-12 00:00:00
Restricted Use: NO
Site Mgmt. Req.: NONE SPECIFIED
Funding: Responsible Party
Latitude: 37.668173416589603
Longitude: -122.05177084685801
APN: 0425-160-006-01, 0425-160-006-02, 0425-160-006-02, 0425-160-007-01, 425-160-7-8
Past Use: AGRICULTURAL - LIVESTOCK, ILLEGAL DUMPING
Potential COC: 30001, 30024, 3002502
Confirmed COC: 30024,30001,3002502
Potential Description: SOIL
Alias Name: Creekside Highlands
Alias Type: Alternate Name
Alias Name: Van Eeghen Property
Alias Type: Alternate Name
Alias Name: 0425-160-006-01
Alias Type: APN
Alias Name: 0425-160-006-02
Alias Type: APN
Alias Name: 0425-160-006-02
Alias Type: APN
Alias Name: 0425-160-007-01
Alias Type: APN
Alias Name: 425-160-7-8
Alias Type: APN
Alias Name: Vesting Tentative Tract Map TR-7270
Alias Type: Former Project ID
Alias Name: 110033613953
Alias Type: EPA (FRS #)
Alias Name: 201739
Alias Type: Project Code (Site Code)
Alias Name: 60000611
Alias Type: Envirostor ID Number
Alias Name: 60000612

HIGHLAND TRAILS (Continued) **S108484727**

Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 2004-04-29 00:00:00
Comments: Groundwater Report submitted as part of the historical file. Report was not prepared for or approved by DTSC.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 2007-07-12 00:00:00
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Application
Completed Date: 2007-04-11 00:00:00
Comments: Project was assigned to DTSC through the MOA process.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 2000-07-13 00:00:00
Comments: Phase I submitted to DTSC as part of the historical file. Document was not prepared for DTSC.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 2000-09-19 00:00:00
Comments: Phase II Report submitted as part of the historical file. Report was not prepared for or approved by DTSC.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 2000-08-22 00:00:00
Comments: Soil Sampling Report submitted as part of the historical file. Report was not prepared for or approved by DTSC.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 2007-05-08 00:00:00
Comments: VCA executed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Initial Study/ Environmental Impact Report
Completed Date: 2006-02-28 00:00:00
Comments: EIR completed prior to Oversight Agreement with DTSC.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported

HIGHLAND TRAILS (Continued) **S108484727**

Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

Count: 3 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
HAYWARD	1003879390	EDEN ROCK PROPS	3146, 3167 & 3191 CORPORATE PL	94541	CERC-NFRAP
HAYWARD	1003879275	ARDEN ROAD PROPERTY	ARDEN RD	94541	CERC-NFRAP
HAYWARD	1003878524	BAY CITIES RUBBISH DSPL CO	FOOT OF W WINTON AVE	94541	CERC-NFRAP

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 03/31/2011
Date Data Arrived at EDR: 04/13/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 62

Source: EPA
Telephone: N/A
Last EDR Contact: 07/12/2011
Next Scheduled EDR Contact: 10/24/2011
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 03/31/2011
Date Data Arrived at EDR: 04/13/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 62

Source: EPA
Telephone: N/A
Last EDR Contact: 07/12/2011
Next Scheduled EDR Contact: 10/24/2011
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 05/16/2011
Next Scheduled EDR Contact: 08/29/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 03/31/2011
Date Data Arrived at EDR: 04/13/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 62

Source: EPA
Telephone: N/A
Last EDR Contact: 07/12/2011
Next Scheduled EDR Contact: 10/24/2011
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/25/2011
Date Data Arrived at EDR: 03/01/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 62

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 06/14/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPAa??s Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 12/10/2010
Date Data Arrived at EDR: 01/11/2011
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/15/2011
Next Scheduled EDR Contact: 10/24/2011
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 02/25/2011
Date Data Arrived at EDR: 03/01/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 62

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 06/14/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/09/2011
Date Data Arrived at EDR: 03/15/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 91

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/16/2011
Next Scheduled EDR Contact: 08/29/2011
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 07/07/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 07/07/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 07/07/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 07/07/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/16/2011
Date Data Arrived at EDR: 03/25/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 09/26/2011
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/16/2011
Date Data Arrived at EDR: 03/25/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 09/26/2011
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 04/05/2011
Date Data Arrived at EDR: 04/05/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 70

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 07/05/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 06/16/2011
Date Made Active in Reports: 07/15/2011
Number of Days to Update: 29

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 06/16/2011
Next Scheduled EDR Contact: 08/22/2011
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 06/16/2011
Date Made Active in Reports: 07/15/2011
Number of Days to Update: 29

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 06/16/2011
Next Scheduled EDR Contact: 08/22/2011
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/23/2011
Date Data Arrived at EDR: 05/24/2011
Date Made Active in Reports: 06/15/2011
Number of Days to Update: 22

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 05/24/2011
Next Scheduled EDR Contact: 09/05/2011
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 06/27/2011
Next Scheduled EDR Contact: 10/10/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 06/13/2011
Next Scheduled EDR Contact: 09/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 06/13/2011
Next Scheduled EDR Contact: 09/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Quarterly

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 06/06/2011
Next Scheduled EDR Contact: 09/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 06/20/2011
Next Scheduled EDR Contact: 09/05/2011
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST: Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 06/20/2011
Date Data Arrived at EDR: 06/21/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 17

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 06/21/2011
Next Scheduled EDR Contact: 10/03/2011
Data Release Frequency: Quarterly

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Varies

SLIC: Statewide SLIC Cases

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 06/20/2011
Date Data Arrived at EDR: 06/21/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 17

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/21/2011
Next Scheduled EDR Contact: 10/03/2011
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 06/20/2011
Next Scheduled EDR Contact: 09/05/2011
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 06/13/2011
Next Scheduled EDR Contact: 09/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 05/16/2011
Next Scheduled EDR Contact: 08/29/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 05/16/2011
Next Scheduled EDR Contact: 08/29/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 06/13/2011
Next Scheduled EDR Contact: 09/13/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 05/17/2011
Date Data Arrived at EDR: 05/19/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 26
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 05/20/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 25
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/02/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 05/16/2011
Date Data Arrived at EDR: 05/17/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 28
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Quarterly

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 05/10/2011
Date Data Arrived at EDR: 05/11/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 34
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 03/03/2011
Date Data Arrived at EDR: 03/18/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 45
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Semi-Annually

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/31/2011
Date Data Arrived at EDR: 02/01/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 48
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 11/04/2009
Date Data Arrived at EDR: 05/04/2010
Date Made Active in Reports: 07/07/2010
Number of Days to Update: 64
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 08/02/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

State and tribal registered storage tank lists

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 06/20/2011
Date Data Arrived at EDR: 06/21/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 17

Source: SWRCB
Telephone: 916-480-1028
Last EDR Contact: 06/21/2011
Next Scheduled EDR Contact: 10/03/2011
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
Registered Aboveground Storage Tanks.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 916-341-5712
Last EDR Contact: 07/08/2011
Next Scheduled EDR Contact: 10/24/2011
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 05/17/2011
Date Data Arrived at EDR: 05/19/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 26

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 05/18/2011
Date Data Arrived at EDR: 05/26/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 19

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 05/16/2011
Date Data Arrived at EDR: 05/17/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 28

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/01/2011
Date Data Arrived at EDR: 06/01/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 13

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 08/02/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/10/2011
Date Data Arrived at EDR: 05/11/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 34

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 01/01/2011
Date Data Arrived at EDR: 02/23/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 68

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 03/03/2011
Date Data Arrived at EDR: 03/18/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 45

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 05/04/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 41

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/02/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 06/16/2011
Date Made Active in Reports: 07/15/2011
Number of Days to Update: 29

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 06/16/2011
Next Scheduled EDR Contact: 08/22/2011
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 02/25/2011
Date Data Arrived at EDR: 04/05/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 70

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 07/05/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 03/29/2011
Date Data Arrived at EDR: 03/29/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/27/2011
Next Scheduled EDR Contact: 10/10/2011
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 06/27/2011
Next Scheduled EDR Contact: 10/10/2011
Data Release Frequency: No Update Planned

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 05/16/2011
Next Scheduled EDR Contact: 08/29/2011
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 06/01/2011
Date Data Arrived at EDR: 06/21/2011
Date Made Active in Reports: 07/15/2011
Number of Days to Update: 24

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/21/2011
Next Scheduled EDR Contact: 10/03/2011
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 05/24/2011
Date Data Arrived at EDR: 05/24/2011
Date Made Active in Reports: 06/15/2011
Number of Days to Update: 22

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 05/24/2011
Next Scheduled EDR Contact: 09/05/2011
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 02/02/2011
Date Data Arrived at EDR: 03/17/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 46

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 06/07/2011
Next Scheduled EDR Contact: 09/19/2011
Data Release Frequency: Quarterly

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 06/16/2011
Date Made Active in Reports: 07/15/2011
Number of Days to Update: 29

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 06/16/2011
Next Scheduled EDR Contact: 08/22/2011
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 03/04/2011
Date Made Active in Reports: 03/24/2011
Number of Days to Update: 20

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 8
Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 06/06/2011
Next Scheduled EDR Contact: 09/19/2011
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18
Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWEEPS UST: SWEEPS UST Listing
Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35
Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 02/04/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 87
Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

LUCIS: Land Use Control Information System
LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31
Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 07/11/2011
Next Scheduled EDR Contact: 09/05/2011
Data Release Frequency: Varies

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 06/28/2011
Date Data Arrived at EDR: 06/29/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 9
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 06/27/2011
Next Scheduled EDR Contact: 09/26/2011
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 06/13/2011
Date Data Arrived at EDR: 06/14/2011
Date Made Active in Reports: 07/15/2011
Number of Days to Update: 31

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 06/14/2011
Next Scheduled EDR Contact: 09/26/2011
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 01/05/2011
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 51

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 07/05/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Annually

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 05/03/2011
Date Made Active in Reports: 06/15/2011
Number of Days to Update: 43

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 06/20/2011
Date Data Arrived at EDR: 06/21/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 17

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/21/2011
Next Scheduled EDR Contact: 10/03/2011
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 06/20/2011
Date Data Arrived at EDR: 06/21/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 17

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/21/2011
Next Scheduled EDR Contact: 10/03/2011
Data Release Frequency: Quarterly

Other Ascertainable Records

RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/15/2011
Date Data Arrived at EDR: 07/07/2011
Date Made Active in Reports: 08/08/2011
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 07/07/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/12/2011
Date Data Arrived at EDR: 02/11/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 05/11/2011
Next Scheduled EDR Contact: 08/22/2011
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/22/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 08/12/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 112

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 06/14/2011
Next Scheduled EDR Contact: 09/26/2011
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 04/05/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 70

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 02/25/2011
Date Data Arrived at EDR: 03/16/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 5

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 06/15/2011
Next Scheduled EDR Contact: 09/26/2011
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/21/2010
Date Made Active in Reports: 01/28/2011
Number of Days to Update: 99

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 06/02/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/08/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 06/08/2011
Next Scheduled EDR Contact: 09/19/2011
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/17/2010
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 94

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/27/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/30/2011
Next Scheduled EDR Contact: 10/10/2011
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 05/27/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 05/27/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 08/03/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 01/07/2011
Date Data Arrived at EDR: 01/21/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 59

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 06/27/2011
Next Scheduled EDR Contact: 10/10/2011
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/01/2010
Date Data Arrived at EDR: 11/10/2010
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 98

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/22/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/18/2010
Date Data Arrived at EDR: 04/06/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 51

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 06/13/2011
Next Scheduled EDR Contact: 09/26/2011
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/11/2011
Date Data Arrived at EDR: 01/13/2011
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 07/12/2011
Next Scheduled EDR Contact: 10/24/2011
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/14/2010
Date Data Arrived at EDR: 04/16/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 41

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 06/14/2011
Next Scheduled EDR Contact: 09/26/2011
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 03/01/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 62

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 05/27/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Biennially

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 06/13/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Quarterly

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 05/24/2011
Date Data Arrived at EDR: 05/24/2011
Date Made Active in Reports: 06/15/2011
Number of Days to Update: 22

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 05/24/2011
Next Scheduled EDR Contact: 09/05/2011
Data Release Frequency: Quarterly

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency.

Date of Government Version: 07/01/2011
Date Data Arrived at EDR: 07/01/2011
Date Made Active in Reports: 07/15/2011
Number of Days to Update: 14

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES].

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 06/27/2011
Next Scheduled EDR Contact: 10/10/2011
Data Release Frequency: No Update Planned

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 09/15/2010
Date Data Arrived at EDR: 09/16/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 13

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 06/13/2011
Next Scheduled EDR Contact: 09/26/2011
Data Release Frequency: Annually

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/07/2010
Date Made Active in Reports: 08/12/2010
Number of Days to Update: 36

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 07/19/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 10/18/2010
Number of Days to Update: 19

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 06/30/2011
Next Scheduled EDR Contact: 10/10/2011
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/22/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 07/15/2011
Next Scheduled EDR Contact: 11/07/2011
Data Release Frequency: Varies

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 06/01/2011
Date Data Arrived at EDR: 06/21/2011
Date Made Active in Reports: 07/15/2011
Number of Days to Update: 24
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/21/2011
Next Scheduled EDR Contact: 10/03/2011
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 06/09/2011
Date Data Arrived at EDR: 06/16/2011
Date Made Active in Reports: 07/15/2011
Number of Days to Update: 29
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 06/14/2011
Next Scheduled EDR Contact: 09/26/2011
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 08/17/2010
Date Data Arrived at EDR: 01/03/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 77
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/14/2011
Next Scheduled EDR Contact: 09/26/2011
Data Release Frequency: Varies

HWT: Registered Hazardous Waste Transporter Database
A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 04/19/2011
Date Data Arrived at EDR: 04/19/2011
Date Made Active in Reports: 05/12/2011
Number of Days to Update: 23
Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 07/19/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Quarterly

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/09/2010
Date Data Arrived at EDR: 08/11/2010
Date Made Active in Reports: 08/20/2010
Number of Days to Update: 9
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 06/03/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Quarterly

FINANCIAL ASSURANCE 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 03/15/2011
Date Data Arrived at EDR: 03/16/2011
Date Made Active in Reports: 04/26/2011
Number of Days to Update: 41

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 07/22/2011
Next Scheduled EDR Contact: 09/05/2011
Data Release Frequency: Varies

FINANCIAL ASSURANCE 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 03/01/2007
Date Data Arrived at EDR: 06/01/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 28

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 08/05/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/22/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: N/A

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 01/01/2008
Date Data Arrived at EDR: 02/18/2009
Date Made Active in Reports: 05/29/2009
Number of Days to Update: 100

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/05/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Historical Auto Stations: EDR Proprietary Historic Gas Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Historical Cleaners: EDR Proprietary Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 04/12/2011
Date Data Arrived at EDR: 04/15/2011
Date Made Active in Reports: 05/12/2011
Number of Days to Update: 27

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 04/12/2011
Date Data Arrived at EDR: 04/15/2011
Date Made Active in Reports: 05/18/2011
Number of Days to Update: 33

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Semi-Annually

BUTTE COUNTY:

CUPA Facility Listing

Cupa facility list.

Date of Government Version: 03/29/2011
Date Data Arrived at EDR: 04/20/2011
Date Made Active in Reports: 05/17/2011
Number of Days to Update: 27

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Varies

COLUSA COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 12/01/2010
Date Data Arrived at EDR: 04/20/2011
Date Made Active in Reports: 05/17/2011
Number of Days to Update: 27

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Varies

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 06/13/2011
Date Data Arrived at EDR: 06/14/2011
Date Made Active in Reports: 07/15/2011
Number of Days to Update: 31

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 06/13/2011
Next Scheduled EDR Contact: 08/22/2011
Data Release Frequency: Semi-Annually

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 03/28/2011
Date Data Arrived at EDR: 05/13/2011
Date Made Active in Reports: 06/15/2011
Number of Days to Update: 33

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 04/15/2011
Date Data Arrived at EDR: 04/19/2011
Date Made Active in Reports: 05/12/2011
Number of Days to Update: 23

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

HUMBOLDT COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 02/08/2011
Date Data Arrived at EDR: 03/03/2011
Date Made Active in Reports: 03/24/2011
Number of Days to Update: 21

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 06/30/2011
Next Scheduled EDR Contact: 10/10/2011
Data Release Frequency: Varies

INYO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility List
Cupa facility list.

Date of Government Version: 06/13/2011
Date Data Arrived at EDR: 06/14/2011
Date Made Active in Reports: 07/19/2011
Number of Days to Update: 35

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 06/13/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 29

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 06/16/2011
Next Scheduled EDR Contact: 08/29/2011
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List
A listing of sites included in the county?s Certified Unified Program Agency database. California?s Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 06/09/2011
Date Data Arrived at EDR: 06/09/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 29

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 05/31/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 03/28/2011
Next Scheduled EDR Contact: 10/10/2011
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 03/31/2011
Date Data Arrived at EDR: 06/09/2011
Date Made Active in Reports: 06/15/2011
Number of Days to Update: 6

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/25/2011
Date Data Arrived at EDR: 04/28/2011
Date Made Active in Reports: 05/17/2011
Number of Days to Update: 19

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 07/27/2011
Next Scheduled EDR Contact: 11/07/2011
Data Release Frequency: Varies

City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 05/24/2011
Next Scheduled EDR Contact: 09/05/2011
Data Release Frequency: Varies

Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 02/09/2011
Date Data Arrived at EDR: 02/09/2011
Date Made Active in Reports: 03/04/2011
Number of Days to Update: 23

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 07/22/2011
Next Scheduled EDR Contact: 11/07/2011
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 02/03/2011
Date Data Arrived at EDR: 02/08/2011
Date Made Active in Reports: 03/03/2011
Number of Days to Update: 23

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 07/25/2011
Next Scheduled EDR Contact: 11/07/2011
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 05/02/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Annually

City of Torrance Underground Storage Tank

Underground storage tank sites located in the city of Torrance.

Date of Government Version: 04/18/2011
Date Data Arrived at EDR: 04/20/2011
Date Made Active in Reports: 05/18/2011
Number of Days to Update: 28

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA Facility List

A listing of sites included in the county?s Certified Unified Program Agency database. California?s Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 06/07/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 30

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 05/31/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 04/15/2011
Date Data Arrived at EDR: 04/26/2011
Date Made Active in Reports: 05/18/2011
Number of Days to Update: 22

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 07/11/2011
Next Scheduled EDR Contact: 10/24/2011
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 06/06/2011
Date Data Arrived at EDR: 06/06/2011
Date Made Active in Reports: 06/15/2011
Number of Days to Update: 9

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 05/31/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 01/20/2011
Date Data Arrived at EDR: 03/03/2011
Date Made Active in Reports: 03/24/2011
Number of Days to Update: 21

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 06/20/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 07/09/2008
Date Data Arrived at EDR: 07/09/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 22

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 03/07/2011
Next Scheduled EDR Contact: 06/20/2011
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 06/06/2011
Next Scheduled EDR Contact: 09/19/2011
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 03/04/2011
Date Data Arrived at EDR: 05/12/2011
Date Made Active in Reports: 06/23/2011
Number of Days to Update: 42

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 05/02/2011
Date Data Arrived at EDR: 05/20/2011
Date Made Active in Reports: 06/15/2011
Number of Days to Update: 26

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/16/2011
Next Scheduled EDR Contact: 08/29/2011
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 05/05/2011
Date Data Arrived at EDR: 05/20/2011
Date Made Active in Reports: 06/15/2011
Number of Days to Update: 26

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/16/2011
Next Scheduled EDR Contact: 08/29/2011
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 05/05/2011
Date Data Arrived at EDR: 05/17/2011
Date Made Active in Reports: 06/20/2011
Number of Days to Update: 34

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/17/2011
Next Scheduled EDR Contact: 08/29/2011
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 06/20/2011
Date Data Arrived at EDR: 06/21/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 17

Source: Placer County Health and Human Services
Telephone: 530-889-7312
Last EDR Contact: 06/13/2011
Next Scheduled EDR Contact: 09/26/2011
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 04/26/2011
Date Data Arrived at EDR: 04/28/2011
Date Made Active in Reports: 05/17/2011
Number of Days to Update: 19

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/27/2011
Next Scheduled EDR Contact: 10/10/2011
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 04/26/2011
Date Data Arrived at EDR: 04/28/2011
Date Made Active in Reports: 05/18/2011
Number of Days to Update: 20

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/27/2011
Next Scheduled EDR Contact: 10/10/2011
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 02/07/2011
Date Data Arrived at EDR: 04/28/2011
Date Made Active in Reports: 05/17/2011
Number of Days to Update: 19

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/08/2011
Next Scheduled EDR Contact: 10/24/2011
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/07/2011
Date Data Arrived at EDR: 04/29/2011
Date Made Active in Reports: 05/17/2011
Number of Days to Update: 18

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/08/2011
Next Scheduled EDR Contact: 10/24/2011
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 06/09/2011
Date Data Arrived at EDR: 06/09/2011
Date Made Active in Reports: 06/15/2011
Number of Days to Update: 6

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 05/16/2011
Next Scheduled EDR Contact: 08/29/2011
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database
The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 09/09/2010
Date Data Arrived at EDR: 09/15/2010
Date Made Active in Reports: 09/29/2010
Number of Days to Update: 14

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 06/17/2011
Next Scheduled EDR Contact: 09/26/2011
Data Release Frequency: Quarterly

Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 10/01/2010
Date Data Arrived at EDR: 11/16/2010
Date Made Active in Reports: 01/25/2011
Number of Days to Update: 70
Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Varies

Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24
Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 06/14/2011
Next Scheduled EDR Contact: 09/26/2011
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 05/16/2011
Next Scheduled EDR Contact: 08/16/2011
Data Release Frequency: Quarterly

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 03/10/2011
Date Made Active in Reports: 03/15/2011
Number of Days to Update: 5
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 05/31/2011
Next Scheduled EDR Contact: 08/29/2011
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/27/2011
Date Data Arrived at EDR: 06/29/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 9
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 06/27/2011
Next Scheduled EDR Contact: 10/10/2011
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 05/31/2011
Date Data Arrived at EDR: 05/31/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 38
Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 05/31/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 04/19/2011
Date Data Arrived at EDR: 04/20/2011
Date Made Active in Reports: 05/17/2011
Number of Days to Update: 27
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/20/2011
Next Scheduled EDR Contact: 09/05/2011
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 06/20/2011
Date Data Arrived at EDR: 06/21/2011
Date Made Active in Reports: 07/15/2011
Number of Days to Update: 24
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/20/2011
Next Scheduled EDR Contact: 09/05/2011
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 11/22/2010
Date Data Arrived at EDR: 03/03/2011
Date Made Active in Reports: 03/24/2011
Number of Days to Update: 21
Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 06/29/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Varies

SANTA CLARA COUNTY:

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22
Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 05/29/2009
Date Data Arrived at EDR: 06/01/2009
Date Made Active in Reports: 06/15/2009
Number of Days to Update: 14
Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 07/20/2011
Next Scheduled EDR Contact: 09/19/2011
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 08/31/2009
Date Data Arrived at EDR: 08/31/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 18
Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 06/13/2011
Next Scheduled EDR Contact: 08/29/2011
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List
CUPA facility listing.

Date of Government Version: 05/31/2011
Date Data Arrived at EDR: 05/31/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 38

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 05/31/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 05/31/2011
Date Data Arrived at EDR: 05/31/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 38

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 05/31/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/09/2011
Date Data Arrived at EDR: 06/29/2011
Date Made Active in Reports: 07/08/2011
Number of Days to Update: 9

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/20/2011
Next Scheduled EDR Contact: 09/05/2011
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 06/09/2011
Date Data Arrived at EDR: 07/01/2011
Date Made Active in Reports: 07/13/2011
Number of Days to Update: 12

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/20/2011
Next Scheduled EDR Contact: 09/05/2011
Data Release Frequency: Quarterly

SONOMA COUNTY:

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 04/05/2011
Date Data Arrived at EDR: 04/06/2011
Date Made Active in Reports: 05/12/2011
Number of Days to Update: 36

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 07/05/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 06/13/2011
Date Data Arrived at EDR: 06/14/2011
Date Made Active in Reports: 07/13/2011
Number of Days to Update: 29

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 06/13/2011
Next Scheduled EDR Contact: 09/26/2011
Data Release Frequency: Semi-Annually

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 04/26/2011
Date Data Arrived at EDR: 06/14/2011
Date Made Active in Reports: 07/15/2011
Number of Days to Update: 31

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 05/24/2011
Next Scheduled EDR Contact: 09/05/2011
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 04/01/2011
Date Data Arrived at EDR: 04/07/2011
Date Made Active in Reports: 05/12/2011
Number of Days to Update: 35

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 10/24/2011
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 05/24/2011
Next Scheduled EDR Contact: 09/05/2011
Data Release Frequency: Quarterly

Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 04/26/2011
Date Data Arrived at EDR: 05/03/2011
Date Made Active in Reports: 06/15/2011
Number of Days to Update: 43

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 05/25/2011
Date Data Arrived at EDR: 06/21/2011
Date Made Active in Reports: 07/13/2011
Number of Days to Update: 22

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/21/2011
Next Scheduled EDR Contact: 10/03/2011
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 04/26/2011
Date Data Arrived at EDR: 05/03/2011
Date Made Active in Reports: 06/20/2011
Number of Days to Update: 48

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 07/25/2011
Next Scheduled EDR Contact: 10/24/2011
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 05/12/2011
Date Made Active in Reports: 06/15/2011
Number of Days to Update: 34

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 09/11/2009
Number of Days to Update: 16

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/26/2011
Next Scheduled EDR Contact: 09/05/2011
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/22/2010
Date Made Active in Reports: 08/26/2010
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/20/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 05/12/2011
Date Made Active in Reports: 05/24/2011
Number of Days to Update: 12

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/12/2011
Next Scheduled EDR Contact: 08/22/2011
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 12/01/2009
Date Made Active in Reports: 12/14/2009
Number of Days to Update: 13

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/15/2011
Next Scheduled EDR Contact: 10/10/2011
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2010
Date Data Arrived at EDR: 06/24/2011
Date Made Active in Reports: 06/30/2011
Number of Days to Update: 6

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/31/2011
Next Scheduled EDR Contact: 09/12/2011
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 07/06/2010
Date Made Active in Reports: 07/26/2010
Number of Days to Update: 20

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/20/2011
Next Scheduled EDR Contact: 10/03/2011
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

NORTHBROOK HOMES FAIRVIEW SITE
24850 FAIRVIEW AVENUE
HAYWARD, CA 94542

TARGET PROPERTY COORDINATES

Latitude (North):	37.67840 - 37° 40' 42.2''
Longitude (West):	122.0425 - 122° 2' 33.0''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	584434.8
UTM Y (Meters):	4170360.2
Elevation:	657 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	37122-F1 HAYWARD, CA
Most Recent Revision:	1980

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

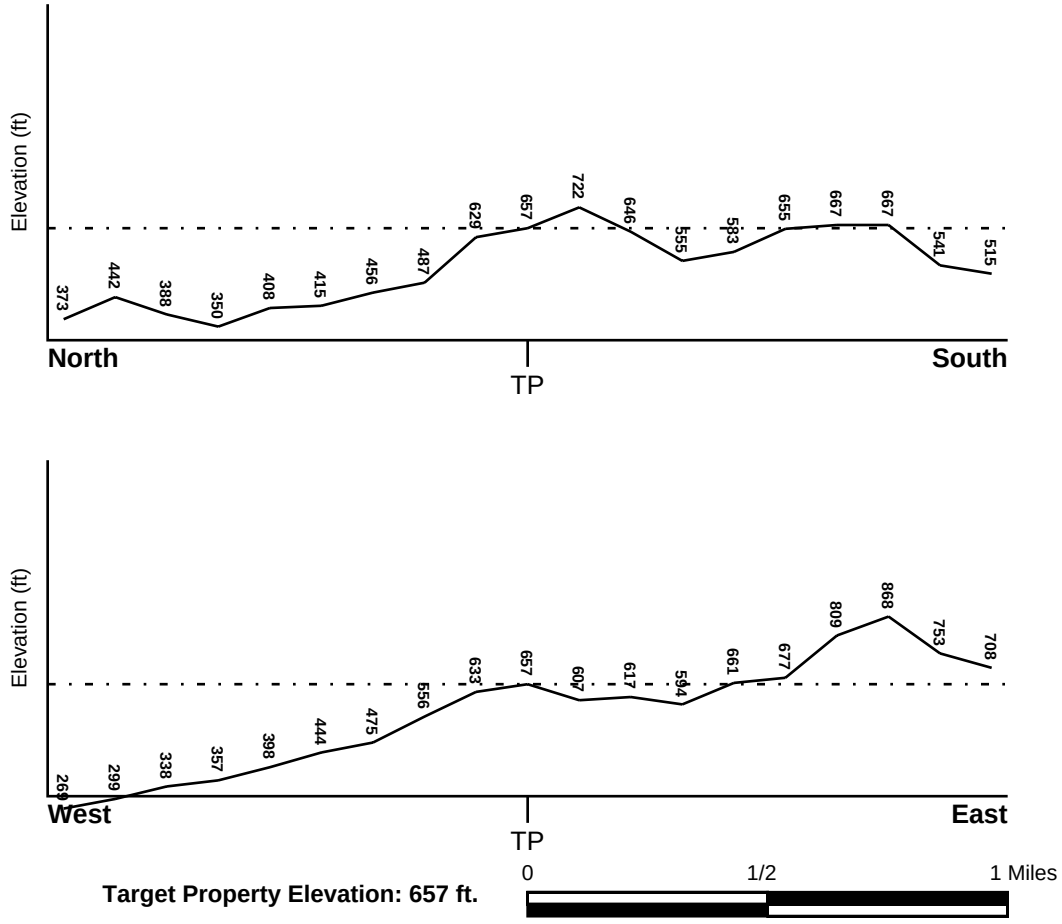
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NNW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
ALAMEDA, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 06001C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
HAYWARD	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

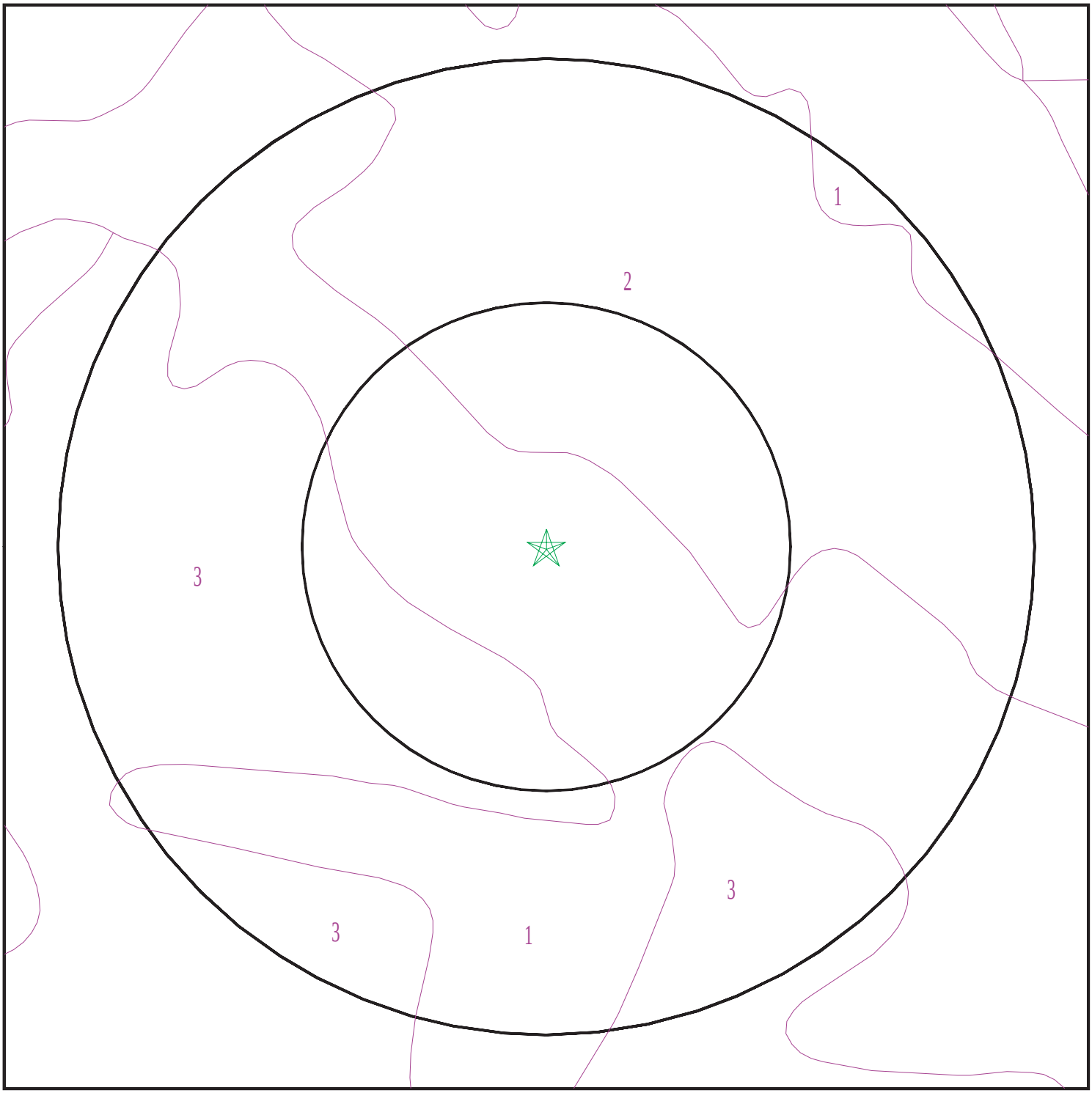
Era:	Mesozoic
System:	Cretaceous
Series:	Upper Cretaceous
Code:	uK *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 3143080.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Northbrook Homes Fairview Site	CLIENT:	Lamphier-Gregory
ADDRESS:	24850 Fairview Avenue Hayward CA 94542	CONTACT:	Nathaniel Taylor
		INQUIRY #:	3143080.2s
LAT/LONG:	37.6784 / 122.0425	DATE:	August 08, 2011 7:06 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Los Osos

Soil Surface Texture: silty clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 51 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0 Min: 0	Max: Min:
2	7 inches	29 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0 Min: 0	Max: Min:
3	29 inches	33 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0 Min: 0	Max: Min:

Soil Map ID: 2

Soil Component Name: Millsholm

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 51 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	20 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0 Min: 0	Max: Min:
2	20 inches	24 inches	unweathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0 Min: 0	Max: Min:

Soil Map ID: 3

Soil Component Name: Los Osos

Soil Surface Texture: silty clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 51 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0 Min: 0	Max: Min:
2	7 inches	29 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0 Min: 0	Max: Min:
3	29 inches	33 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0 Min: 0	Max: Min:

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

No PWS System Found

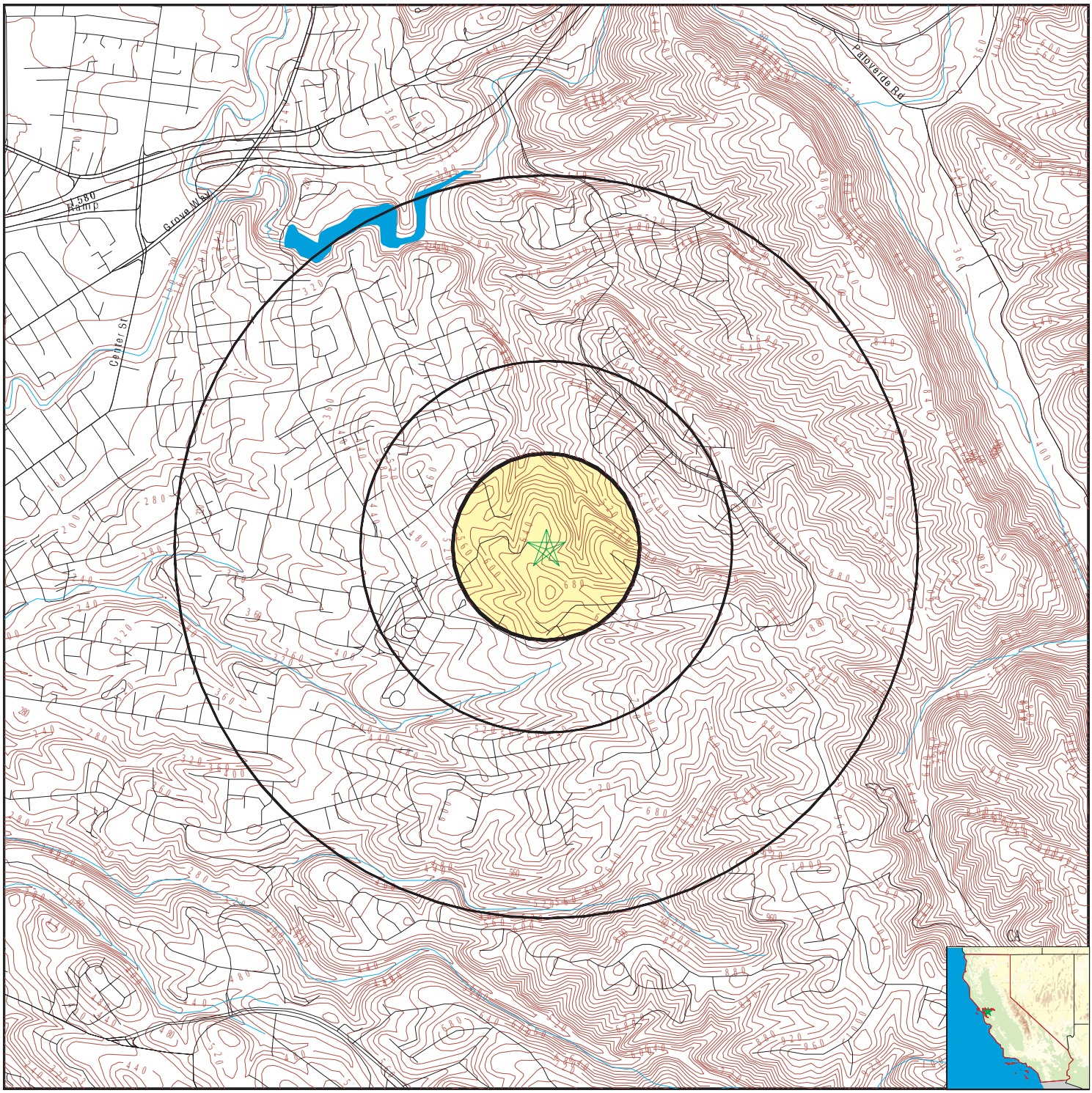
Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

No Wells Found

PHYSICAL SETTING SOURCE MAP - 3143080.2s



0 1/4 1/2 1 Miles

- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	Northbrook Homes Fairview Site	CLIENT:	Lamphier-Gregory
ADDRESS:	24850 Fairview Avenue Hayward CA 94542	CONTACT:	Nathaniel Taylor
		INQUIRY #:	3143080.2s
LAT/LONG:	37.6784 / 122.0425	DATE:	August 08, 2011 7:06 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
94542	3	0

Federal EPA Radon Zone for ALAMEDA County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for ALAMEDA COUNTY, CA

Number of sites tested: 49

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.776 pCi/L	100%	0%	0%
Living Area - 2nd Floor	-0.400 pCi/L	100%	0%	0%
Basement	1.338 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Health Services
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

APPENDIX G

Ruggeri, Jensen Azar,
Hydrology and Hydraulics Calculations for Tract 8057 – Lerob LLC, Alameda County, California

Hydrology and Hydraulics Calculations

for

Tract 8057 - Lerob LLC
Alameda County, California

Prepared by:

RUGGERI-JENSEN-AZAR
ENGINEERS • PLANNERS • SURVEYORS
4690 Chabot Drive, Suite 200
Pleasanton, CA 94588
(925) 227-9100

August 26, 2010

Storm Drain System Calculations

Storm Frequency 10 & 15 years

Open & Closed System Calculations

Alameda County Method

Mean Annual Precipitation = 23.00 inches | 091093 | Project:Lerob LLC

Free Board Requirement = 1.75 feet | tract 8057 | Design :Jared Frey

File = G:\Job2009\091093\Hydro\Pond-Sys | Date: 08-27-2010 Time: 08:28:42am

TLW_Hydr | Hydrology | Hydraulics | Page 1 of 6 -- version 2.01f

Pt. #	Area Descr.	dA base (Acres)	"C"	"C" G.	Slope	Sum A (Acres)	Sum dCA (Acres)	Time of Conc.	Inten. "n"	Q CiA (cfs)	#/=Dia/ SS Width (in./ft.)	Sf Sp	Length Dn (ft.)	Vel. (fps)	Sect Time (min)	Frict Loss (ft.)	Minor Loss (ft.)	HGL (ft.)	MTC HGL+ F.B.	Plan T.C. F.L.	Flow Cond. to Pt.
DI1		1.77	0.80	1.42		1.77	1.42	7.0	2.72								0.10	672.90	674.65	677.00	EB
			0.80	1.00					0.014	3.85	1= 18.0	0.0016	278	2.2	2.1	0.43				672.00	
												0.0050	0.80	4.0	1.2						DI2
DI2		2.41	0.80	1.93		4.18	3.34	8.2	2.52								0.45	672.17	673.92	678.40	SS*
			0.80	1.00					0.014	8.43	1= 18.0	0.0075	200	4.8	0.7	1.49				670.60	
												0.1000	1.12	14.9	0.2						OUT1

Beginning Water Surface = 623.25

Storm Frequency 10 & 15 years

Junction Loss Calculations

Alameda County Method

Mean Annual Precipitation = 23.00 inches | 091093 | Project:Lerob LLC

Free Board Requirement = 1.75 feet | tract 8057 | Design :Jared Frey

File = G:\Job2009\091093\Hydro\Pond-Sys | Date: 08-27-2010 Time: 08:28:42am

TLW_Hydr | Hydrology | Hydraulics | Page 2 of 6 -- version 2.01f

Point	Q2	CA2	a2		Q2^2 Cos(0) / a2 g	Q1	CA1	a1	th1	Q1^2 Cos(Th1) / a1 g	(a2 + a1) / 2	
	Q3	CA3	a3	th3	Q3^2 Cos(Th3) / a3 g	Q4	CA4	a4	th4	Q4^2 Cos(Th4) / a4 g		Hj
	(cfs)	(Acres)	(sq ft)	(deg)	(feet)	(cfs)	(Acres)	(sq ft)	(deg)	(feet)	(sq ft)	(feet)
DI1	3.85	1.42	0.96									0.00
DI2	8.43	3.34	0.57		0.00	3.57	1.42	0.96	0.0	0.41	0.76	0.00

Storm Frequency 10 & 15 years

Bend & Entry Loss Calculations

Alameda County Method

Mean Annual Precipitation = 23.00 inches | 091093 | Project:Lerob LLC

Free Board Requirement = 1.75 feet | tract 8057 | Design :Jared Frey

File = G:\Job2009\091093\Hydro\Pond-Sys | Date: 08-27-2010 Time: 08:28:42am

TLW_Hydr | Hydrology | Hydraulics | Page 3 of 6 -- version 2.01f

Point	Rad.	B/Dia	Vel.	Hb	Ht	Point	Rad.	B/Dia	Vel.	Hb	Ht
DI1	0.0	18.00	4.0	0.00	0.10	DI2	0.0	18.00	14.9	0.00	0.00

Storm Frequency 10 & 15 years

Expansion & Contraction Loss Calculations

Alameda County Method

Point	a-in	a-out	Vel.	He	Hc	Point	a-in	a-out	Vel.	He	Hc
DI1	0.00	0.00	0.0	0.00	0.00	DI2	0.75	0.75	14.9	0.00	0.00

Storm Frequency 10 & 15 years

Orifice Loss Calculations @ Sub to Super Transitions

Alameda County Method

Mean Annual Precipitation = 23.00 inches | 091093 | Project:Lerob LLC

Free Board Requirement = 1.75 feet | tract 8057 | Design :Jared Frey

File = G:\Job2009\091093\Hydro\Pond-Sys | Date: 08-27-2010 Time: 08:28:42am

Point	d-in	d-out	V-In	V-out	Ho	Point	d-in	d-out	V-in	V-out	Hc
DI1	Does Not Apply				0.00	DI2	1.50	1.12	2.2	14.9	0.45

Open & Closed System Summary

Alameda County Method

Mean Annual Precipitation = 23.00 inches
Free Board Requirement = 1.75 feet
File = G:\Job2009\091093\Hydro\Pond-Sys
TLW_Hydr Hydrology Hydraulics

091093
tract 8057

Project:Lerob LLC
Design :Jared Frey
Date: 08-27-2010 Time: 08:28:42am

Pt	Area	Q	Vel	F.L.	Dn	Dc	HGL	EGL	MTC	Plan TC	Flow	Net.
DI1		3.85	4.01	672.00	0.80	0.75	672.90	673.15	674.65	677.00	EB	DI2
DI2		8.43	14.86	670.60	1.12	1.12	672.17	675.60	673.92	678.40	SS*	OUT1

Storm Frequency 10 & 15 years

Open & Closed System Calculations

Alameda County Method

Mean Annual Precipitation = 23.00 inches | 091093 | Project:Lerob LLC

Free Board Requirement = 1.75 feet | tract 8057 | Design :Jared Frey

File = G:\Job2009\091093\Hydro\Pond2 | Date: 08-27-2010 Time: 08:35:01am

TLW_Hydr | Hydrology | Hydraulics | Page 1 of 6 -- version 2.01f

Pt. #	Area Descr.	dA base (Acres)	"C"	"C"	G.Slope	Sum A (Acres)	Sum dCA (Acres)	Time of Conc.	Inten. "n"	Q CiA (cfs)	#/=Dia/ SS Width (in./ft.)	Sf Sp	Length Dn (ft.)	Vel. (fps)	Sect Time (min)	Frict Loss (ft.)	Minor Loss (ft.)	HGL (ft.)	MTC HGL+ F.B.	Plan T.C. F.L.	Flow Cond. to Pt.
DI3		0.59	0.60		0.35	0.59	0.35	5.0	3.18								0.42	640.62	642.37	645.00	EB*
			0.50	1.00					0.014	1.12	1= 18.0	0.0001	102	0.6	2.7	0.01				640.00	
												0.0980	0.20	8.2	0.2						DI4
DI4		0.05	0.87		0.04	0.64	0.40	5.2	3.12								0.43	630.64	632.39	635.00	PM*
			0.90	1.00					0.014	1.23	1= 18.0	0.0002	40	0.7	1.0	0.01				630.00	
												0.1000	0.21	8.5	0.1						OUT2

Beginning Water Surface = 623.25

Storm Frequency 10 & 15 years

Junction Loss Calculations

Alameda County Method

Mean Annual Precipitation = 23.00 inches | 091093 | Project:Lerob LLC

Free Board Requirement = 1.75 feet | tract 8057 | Design :Jared Frey

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Point	Q2	CA2	a2		Q2^2 Cos(0) / a2 g	Q1	CA1	a1	th1	Q1^2 Cos(Th1) / a1 g	(a2 + a1) / 2	
	Q3	CA3	a3	th3	Q3^2 Cos(Th3) / a3 g	Q4	CA4	a4	th4	Q4^2 Cos(Th4) / a4 g		Hj
	(cfs)	(Acres)	(sq ft)	(deg)	(feet)	(cfs)	(Acres)	(sq ft)	(deg)	(feet)	(sq ft)	(feet)
DI3	1.12	0.35	0.14									0.00
DI4	1.23	0.40	0.15		0.33	1.10	0.35	0.14	0.0	0.27	0.14	0.43

Storm Frequency 10 & 15 years

Bend & Entry Loss Calculations

Alameda County Method

Mean Annual Precipitation = 23.00 inches | 091093 | Project:Lerob LLC

Free Board Requirement = 1.75 feet | tract 8057 | Design :Jared Frey

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TLW_Hydr | Hydrology | Hydraulics | Page 3 of 6 -- version 2.01f

Point	Rad.	B/Dia	Vel.	Hb	Ht	Point	Rad.	B/Dia	Vel.	Hb	Ht
DI3	0.0	18.00	8.2	0.00	0.42	DI4	0.0	18.00	8.5	0.00	0.00

Storm Frequency 10 & 15 years

Expansion & Contraction Loss Calculations

Alameda County Method

Mean Annual Precipitation = 23.00 inches | 091093 | Project:Lerob LLC

Free Board Requirement = 1.75 feet | tract 8057 | Design :Jared Frey

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Point	a-in	a-out	Vel.	He	Hc	Point	a-in	a-out	Vel.	He	Hc
DI3	0.00	0.00	0.0	0.00	0.00	DI4	0.38	0.38	8.5	0.11	0.08

Storm Frequency 10 & 15 years

Orifice Loss Calculations @ Sub to Super Transitions

Alameda County Method

Mean Annual Precipitation = 23.00 inches | 091093 | Project:Lerob LLC

Free Board Requirement = 1.75 feet | tract 8057 | Design :Jared Frey

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Point	d-in	d-out	V-In	V-out	Ho	Point	d-in	d-out	V-in	V-out	Hc
DI3	Does Not Apply				0.00	DI4	Does Not Apply				0.00

Storm Frequency 10 & 15 years

Open & Closed System Summary

Alameda County Method

Mean Annual Precipitation = 23.00 inches | 091093 | Project:Lerob LLC

Free Board Requirement = 1.75 feet | tract 8057 | Design :Jared Frey

File = G:\Job2009\091093\Hydro\Pond2 | Date: 08-27-2010 Time: 08:35:01am

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Pt	Area	Q	Vel	F.L.	Dn	Dc	HGL	EGL	MTC	Plan TC	Flow	Net.
DI3		1.12	8.20	640.00	0.20	0.39	640.62	641.66	642.37	645.00	EB*	DI4
DI4		1.23	8.49	630.00	0.21	0.42	630.64	631.76	632.39	635.00	PM*	OUT2

Storm Frequency 10 & 15 years

Open & Closed System Calculations

Alameda County Method

Mean Annual Precipitation = 23.00 inches | 091093 | Project:Lerob LLC

Free Board Requirement = 1.75 feet | tract 8057 | Design :Jared Frey

File = G:\Job2009\091093\Hydro\Fairview | Date: 08-27-2010 Time: 08:35:41am

TLW_Hydr | Hydrology | Hydraulics | Page 1 of 6 -- version 2.01f

Pt. #	Area Descr. (Acres)	dA base	"C"	G.Slope	dCA	Sum A (Acres)	Sum dCA (Acres)	Time of Conc.	Inten. "n"	Q CiA (cfs)	#/=Dia/ SS (in./ft.)	Width	Sf Sp	Length Dn (ft.)	Vel. (fps)	Sect Time (min)	Frict Loss (ft.)	Minor Loss (ft.)	HGL (ft.)	MTC HGL+ F.B.	Plan T.C. F.L.	Flow Cond. to Pt.
DI5	1.50	0.57	0.85	1.50	0.85	10.0	2.29										0.00	615.37	617.12	620.00	BW
		0.50	1.00				0.014	1.95	1= 12.0	0.0035	30	2.5	0.2	0.10					615.00	
										0.0170	Does not apply										DI6
DI6	1.05	0.57	0.60	2.55	1.45	10.2	2.26										0.00	615.27	617.02	620.00	PM*
		0.50	1.00				0.014	3.27	1= 12.0	0.0098	125	4.2	0.5	1.22					614.50	
										0.1960	0.77	15.0	0.1								DI7
DI7	0.30	0.57	0.17	2.85	1.62	10.3	2.25										0.00	590.33	592.08	595.00	BW
		0.50	1.00				0.014	3.64	1= 18.0	0.0014	74	2.1	0.6	0.10					590.00	
										0.0068	Does not apply										MH8
MH8	0.00	0.56	0.00	2.85	1.62	10.9	2.19										0.00	590.23	591.98	595.00	EB*
		0.50	1.00				0.014	3.64	1= 18.0	0.0014	65	2.1	0.5	0.09					589.50	
										0.1461	0.73	13.4	0.1								MH9
MH9	0.00	0.56	0.00	2.85	1.62	11.0	2.18										0.66	580.95	582.70	585.00	PM*
		0.50	1.00				0.014	3.64	1= 18.0	0.0014	65	2.1	0.5	0.09					580.00	
										0.2000	0.29	15.0	0.1								DI10
DI10	0.24	0.72	0.17	3.09	1.79	11.1	2.17										0.51	567.83	569.58	572.00	EB*
		0.70	1.00				0.014	3.88	1= 18.0	0.0016	125	2.2	0.9	0.20					567.00	
										0.1520	0.32	13.8	0.2								DI11
DI11	0.60	0.56	0.34	3.69	2.13	11.3	2.15										0.00	547.90	549.65	552.00	BW
		0.50	1.00				0.014	4.58	1= 18.0	0.0022	90	2.6	0.6	0.20					547.00	
										0.0050	Does not apply										EX01

Beginning Water Surface = 547.70

Storm Frequency 10 & 15 years

Junction Loss Calculations

Alameda County Method

ean Annual Precipitation = 23.00 inches | 091093 | Project:Lerob LLC

Free Board Requirement = 1.75 feet | tract 8057 | Design :Jared Frey

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Point	Q2 / Q3 (cfs)	CA2 / CA3 (Acres)	a2 / a3 (sq ft)	th3 (deg)	Q2^2 Cos(0) / a2 g + Q3^2 Cos(Th3) / a3 g (feet)	Q1 / Q4 (cfs)	CA1 / CA4 (Acres)	a1 / a4 (sq ft)	th1 / th4 (deg)	Q1^2 Cos(Th1) / a1 g + Q4^2 Cos(Th4) / a4 g (feet)	(a2 + a1) / 2 (sq ft)	Hj (feet)
I5	1.95	0.85	0.79									0.00
I6	3.27	1.45	0.22		0.00	1.93	0.85	0.79	0.0	0.15	0.50	0.00
DI7	3.64	1.62	1.77		0.23	3.26	1.45	0.22	0.0	1.51	0.99	0.00
MH8	3.64	1.62	0.27		0.00	3.64	1.62	1.77	0.0	0.23	1.02	0.00
MH9	3.64	1.62	0.24		1.69	3.64	1.62	0.27	0.0	1.52	0.26	0.66
DI10	3.88	1.79	0.28		1.67	3.51	1.62	0.24	0.0	1.57	0.26	0.38
DI11	4.58	2.13	1.77		0.37	3.85	1.79	0.28	0.0	1.64	1.02	0.00

Storm Frequency 10 & 15 years

Bend & Entry Loss Calculations

Alameda County Method

Mean Annual Precipitation = 23.00 inches | 091093 | Project:Lerob LLC

Free Board Requirement = 1.75 feet | tract 8057 | Design :Jared Frey

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Point	Rad.	B/Dia	Vel.	Hb	Ht	Point	Rad.	B/Dia	Vel.	Hb	Ht
DI5	0.0	12.00	2.5	0.00	0.04	DI6	0.0	12.00	15.0	0.00	0.00
DI7	0.0	18.00	2.1	0.00	0.00	MH8	0.0	18.00	13.4	0.00	0.00
MH9	0.0	18.00	15.0	0.00	0.00	DI10	0.0	18.00	13.8	0.00	0.00
DI11	0.0	18.00	2.6	0.00	0.00						

Storm Frequency 10 & 15 years

Expansion & Contraction Loss Calculations

Alameda County Method

Mean Annual Precipitation = 23.00 inches | 091093 | Project:Lerob LLC

Free Board Requirement = 1.75 feet | tract 8057 | Design :Jared Frey

File = G:\Job2009\091093\Hydro\Fairview | Date: 08-27-2010 Time: 08:35:41am

TLW_Hydr | Hydrology | Hydraulics | Page 4 of 6 -- version 2.01f

Point	a-in	a-out	Vel.	He	Hc	Point	a-in	a-out	Vel.	He	Hc
DI5	0.00	0.00	0.0	0.00	0.00	DI6	0.47	0.89	15.0	0.00	0.00
DI7	1.33	0.91	15.0	0.01	0.01	MH8	0.52	1.33	13.4	0.00	0.00
MH9	0.49	0.49	15.0	0.31	0.28	DI10	0.53	0.53	13.8	0.27	0.24
DI11	1.33	1.05	13.8	0.01	0.01						

Storm Frequency 10 & 15 years

Orifice Loss Calculations @ Sub to Super Transitions

Alameda County Method

Mean Annual Precipitation = 23.00 inches | 091093 | Project:Lerob LLC

Free Board Requirement = 1.75 feet | tract 8057 | Design :Jared Frey

File = G:\Job2009\091093\Hydro\Fairview | Date: 08-27-2010 Time: 08:35:41am

TLW_Hydr | Hydrology | Hydraulics | Page 5 of 6 -- version 2.01f

Point	d-in	d-out	V-In	V-out	Ho	Point	d-in	d-out	V-in	V-out	Hc
DI5	Does Not Apply				0.00	DI6	1.00	0.77	2.5	15.0	0.19
DI7	Does Not Apply				0.00	MH8	1.50	0.73	2.1	13.4	0.72
MH9	Does Not Apply				0.00	DI10	Does Not Apply				0.00
DI11	Does Not Apply				0.00						

Storm Frequency 10 & 15 years

Open & Closed System Summary

Alameda County Method

Mean Annual Precipitation = 23.00 inches | 091093 | Project:Lerob LLC

Free Board Requirement = 1.75 feet | tract 8057 | Design :Jared Frey

File = G:\Job2009\091093\Hydro\Fairview | | Date: 08-27-2010 Time: 08:35:41am

TLW_Hydr | Hydrology | Hydraulics | Page 6 of 6 -- version 2.01f

Pt	Area	Q	Vel	F.L.	Dn	Dc	HGL	EGL	MTC	Plan TC	Flow	Net.
DI5		1.95	2.48	615.00	N/A	N/A	615.37	615.47	617.12	620.00	BW	DI6
DI6		3.27	14.97	614.50	0.77	0.77	615.27	618.75	617.02	620.00	PM*	DI7
DI7		3.64	2.06	590.00	N/A	N/A	590.33	590.40	592.08	595.00	BW	MH8
MH8		3.64	13.41	589.50	0.73	0.73	590.23	593.02	591.98	595.00	EB*	MH9
MH9		3.64	14.97	580.00	0.29	0.73	580.95	584.43	582.70	585.00	PM*	DI10
DI10		3.88	13.85	567.00	0.32	0.75	567.83	570.81	569.58	572.00	EB*	DI11
DI11		4.58	2.59	547.00	N/A	N/A	547.90	548.00	549.65	552.00	BW	EX01

Detention System Calculations

Bay Area Hydrology Model
PROJECT REPORT

Project Name: 091093
Site Address: FAIRVIEW
City : ALAMEDA COUNTY
Report Date : 8/26/2010
Gage : NRWARK
Data Start : 1959/10/01
Data End : 2003/09/30
Precip Scale: 1.62
BAHM Version:

PREDEVELOPED LAND USE

Name : Basin 1
Bypass: No

GroundWater: No

Pervious Land Use	Acres
C D,Grass,Very(>20%)	10.5

Impervious Land Use	Acres

Element Flows To:

Surface	Interflow	Groundwater

Name : Basin 1
Bypass: No

GroundWater: No

Pervious Land Use	Acres
C D,Grass,Ste(10-20)	2.9

Impervious Land Use	Acres
Roads,Flat(0-5%)	2

Element Flows To:

Surface	Interflow	Groundwater
Trapezoidal Pond 1,	Trapezoidal Pond 1,	

Name : Trapezoidal Pond 1
Bottom Length: 80ft.

Bottom Width: 19ft.
Depth : 1.75ft.
Volume at riser head : 0.0725ft.
Infiltration On
Infiltration rate : 0.01
Infiltration saftey factor : 0
Side slope 1: 3.5 To 1
Side slope 2: 3.5 To 1
Side slope 3: 3.5 To 1
Side slope 4: 3.5 To 1
Discharge Structure
Riser Height: 1.5 ft.
Riser Diameter: 12 in.
Orifice 1 Diameter: 5.4 in. **Elevation:** 0 ft.
Orifice 1 Diameter: 7 in. **Elevation:** 0.5 ft.
Orifice 1 Diameter: 8.5 in. **Elevation:** 1.15 ft.

Element Flows To:
Outlet 1 **Outlet 2**

Pond Hydraulic Table

Stage(ft)	Area(acr)	Volume(acr-ft)	Dschrg(cfs)	Infilt(cfs)
621.5	0.035	0.000	0.000	0.000
621.5	0.035	0.001	0.107	0.000
621.5	0.036	0.001	0.151	0.000
621.6	0.036	0.002	0.185	0.000
621.6	0.036	0.003	0.214	0.000
621.6	0.036	0.003	0.239	0.000
621.6	0.037	0.004	0.262	0.000
621.6	0.037	0.005	0.283	0.000
621.7	0.037	0.006	0.302	0.000
621.7	0.038	0.006	0.320	0.000
621.7	0.038	0.007	0.338	0.000
621.7	0.038	0.008	0.354	0.000
621.7	0.039	0.009	0.370	0.000
621.8	0.039	0.009	0.385	0.000
621.8	0.039	0.010	0.400	0.000
621.8	0.040	0.011	0.414	0.000
621.8	0.040	0.012	0.427	0.000
621.8	0.040	0.012	0.440	0.000
621.9	0.041	0.013	0.453	0.000
621.9	0.041	0.014	0.466	0.000
621.9	0.041	0.015	0.478	0.000
621.9	0.042	0.016	0.489	0.000
621.9	0.042	0.016	0.501	0.000
621.9	0.042	0.017	0.512	0.000
622.0	0.043	0.018	0.523	0.000
622.0	0.043	0.019	0.534	0.000
622.0	0.043	0.020	0.640	0.000
622.0	0.044	0.021	0.758	0.000
622.0	0.044	0.021	0.836	0.000
622.1	0.044	0.022	0.900	0.000
622.1	0.045	0.023	0.956	0.000
622.1	0.045	0.024	1.007	0.000

622.1	0.045	0.025	1.054	0.000
622.1	0.046	0.026	1.098	0.000
622.2	0.046	0.027	1.139	0.000
622.2	0.046	0.028	1.179	0.000
622.2	0.047	0.028	1.216	0.000
622.2	0.047	0.029	1.252	0.000
622.2	0.047	0.030	1.287	0.000
622.3	0.048	0.031	1.321	0.000
622.3	0.048	0.032	1.354	0.000
622.3	0.048	0.033	1.385	0.000
622.3	0.049	0.034	1.416	0.000
622.3	0.049	0.035	1.446	0.000
622.4	0.049	0.036	1.476	0.000
622.4	0.050	0.037	1.504	0.000
622.4	0.050	0.038	1.533	0.000
622.4	0.050	0.039	1.560	0.000
622.4	0.051	0.040	1.587	0.000
622.5	0.051	0.041	1.614	0.000
622.5	0.051	0.042	1.640	0.000
622.5	0.052	0.043	1.665	0.000
622.5	0.052	0.044	1.690	0.000
622.5	0.052	0.045	1.715	0.000
622.6	0.053	0.046	1.739	0.000
622.6	0.053	0.047	1.763	0.000
622.6	0.054	0.048	1.787	0.000
622.6	0.054	0.049	1.810	0.000
622.6	0.054	0.050	1.833	0.000
622.6	0.055	0.051	1.856	0.000
622.7	0.055	0.052	2.123	0.000
622.7	0.055	0.053	2.261	0.000
622.7	0.056	0.054	2.369	0.000
622.7	0.056	0.055	2.463	0.000
622.7	0.056	0.056	2.548	0.000
622.8	0.057	0.058	2.626	0.000
622.8	0.057	0.059	2.699	0.000
622.8	0.058	0.060	2.769	0.000
622.8	0.058	0.061	2.835	0.000
622.8	0.058	0.062	2.899	0.000
622.9	0.059	0.063	2.960	0.000
622.9	0.059	0.064	3.019	0.000
622.9	0.059	0.065	3.076	0.000
622.9	0.060	0.067	3.131	0.000
622.9	0.060	0.068	3.186	0.000
623.0	0.060	0.069	3.238	0.000
623.0	0.061	0.070	3.290	0.000
623.0	0.061	0.071	3.340	0.000
623.0	0.062	0.073	3.411	0.000
623.0	0.062	0.074	3.505	0.000
623.1	0.062	0.075	3.613	0.000
623.1	0.063	0.076	3.733	0.000
623.1	0.063	0.077	3.861	0.000
623.1	0.063	0.079	3.998	0.000
623.1	0.064	0.080	4.142	0.000
623.2	0.064	0.081	4.293	0.000
623.2	0.065	0.082	4.451	0.000
623.2	0.065	0.084	4.615	0.000
623.2	0.065	0.085	4.784	0.000

623.2	0.066	0.086	4.959	0.000
623.3	0.066	0.087	5.139	0.000
623.3	0.067	0.089	5.324	0.000

Name : Basin 2
Bypass: No

GroundWater: No

Pervious Land Use	Acres
C D,Grass,Ste(10-20)	5.2

Impervious Land Use	Acres
Roads,Steep(10-20%)	0.4

Element Flows To:

Surface	Interflow	Groundwater

MITIGATED LAND USE

ANALYSIS RESULTS

Flow Frequency Return Periods for Predeveloped. POC #1

Return Period	Flow(cfs)
2 year	5.622014
5 year	8.70082
10 year	11.234711
25 year	18.712078

Flow Frequency Return Periods for Mitigated. POC #1

Return Period	Flow(cfs)
2 year	5.022926
5 year	8.02103
10 year	10.334128
25 year	16.482356

Yearly Peaks for Predeveloped and Mitigated. POC #1

Year	Predeveloped	Mitigated
1961	7.498	6.143
1962	7.856	7.165
1963	10.346	9.607
1964	15.389	15.207
1965	8.610	8.021
1966	3.664	2.924
1967	6.975	5.539
1968	18.643	16.281
1969	5.695	4.572
1970	8.978	9.265

1971	3.904	3.795
1972	6.599	6.722
1973	2.231	1.596
1974	10.823	10.843
1975	5.747	5.494
1976	10.184	8.654
1977	0.915	0.649
1978	1.823	1.312
1979	6.752	6.787
1980	7.458	6.081
1981	5.552	4.518
1982	2.935	2.448
1983	11.750	9.927
1984	5.858	5.708
1985	6.900	5.738
1986	3.930	3.450
1987	4.391	3.574
1988	3.319	3.247
1989	4.326	3.801
1990	2.972	2.958
1991	3.173	2.402
1992	4.699	3.381
1993	8.701	7.200
1994	5.907	5.689
1995	2.659	2.425
1996	19.266	18.095
1997	4.321	3.494
1998	5.540	5.638
1999	6.441	6.262
2000	3.597	2.741
2001	3.718	3.738
2002	3.476	2.610
2003	3.056	2.709
2004	6.299	6.055

Ranked Yearly Peaks for Predeveloped and Mitigated. POC #1

Rank	Predeveloped	Mitigated
1	19.2663	18.0948
2	18.6428	16.2808
3	15.3889	15.2073
4	11.7496	10.8431
5	10.8228	9.9270
6	10.3461	9.6073
7	10.1843	9.2653
8	8.9785	8.6545
9	8.7008	8.0210
10	8.6098	7.2004
11	7.8556	7.1649
12	7.4985	6.7865
13	7.4581	6.7221
14	6.9746	6.2616
15	6.8996	6.1433
16	6.7522	6.0811
17	6.5987	6.0549
18	6.4410	5.7385
19	6.2986	5.7075

20	5.9074	5.6891
21	5.8579	5.6377
22	5.7473	5.5390
23	5.6950	5.4944
24	5.5523	4.5720
25	5.5401	4.5183
26	4.6986	3.8009
27	4.3911	3.7948
28	4.3259	3.7377
29	4.3207	3.5741
30	3.9297	3.4939
31	3.9039	3.4496
32	3.7183	3.3807
33	3.6640	3.2474
34	3.5968	2.9585
35	3.4765	2.9242
36	3.3188	2.7407
37	3.1728	2.7094
38	3.0561	2.6096
39	2.9724	2.4480
40	2.9349	2.4253
41	2.6587	2.4023
42	2.2313	1.5965
43	1.8229	1.3117
44	0.9151	0.6488

POC #1
The Facility PASSED

The Facility PASSED.

Flow(CFS)	Predev	Dev	Percentage	Pass/Fail
0.5622	2349	2591	110	Pass
0.6700	2066	2204	106	Pass
0.7778	1847	1862	100	Pass
0.8856	1632	1626	99	Pass
0.9934	1449	1413	97	Pass
1.1012	1284	1232	95	Pass
1.2090	1150	1087	94	Pass
1.3168	1029	987	95	Pass
1.4246	910	882	96	Pass
1.5324	809	781	96	Pass
1.6402	731	698	95	Pass
1.7480	656	627	95	Pass
1.8558	590	575	97	Pass
1.9636	542	514	94	Pass
2.0714	501	469	93	Pass
2.1792	471	418	88	Pass
2.2871	430	376	87	Pass
2.3949	395	336	85	Pass
2.5027	359	301	83	Pass
2.6105	321	263	81	Pass
2.7183	293	241	82	Pass
2.8261	259	216	83	Pass
2.9339	243	197	81	Pass
3.0417	227	187	82	Pass

3.1495	212	166	78	Pass
3.2573	198	156	78	Pass
3.3651	179	143	79	Pass
3.4729	163	132	80	Pass
3.5807	155	124	80	Pass
3.6885	142	114	80	Pass
3.7963	132	107	81	Pass
3.9041	126	95	75	Pass
4.0119	113	90	79	Pass
4.1197	106	86	81	Pass
4.2275	97	80	82	Pass
4.3353	92	76	82	Pass
4.4431	87	74	85	Pass
4.5509	84	68	80	Pass
4.6587	82	64	78	Pass
4.7665	75	59	78	Pass
4.8743	72	59	81	Pass
4.9821	65	55	84	Pass
5.0899	64	53	82	Pass
5.1977	60	48	80	Pass
5.3055	55	47	85	Pass
5.4133	52	45	86	Pass
5.5211	49	44	89	Pass
5.6289	47	43	91	Pass
5.7368	46	40	86	Pass
5.8446	43	38	88	Pass
5.9524	40	36	90	Pass
6.0602	38	34	89	Pass
6.1680	37	31	83	Pass
6.2758	36	26	72	Pass
6.3836	33	26	78	Pass
6.4914	30	26	86	Pass
6.5992	28	26	92	Pass
6.7070	27	23	85	Pass
6.8148	25	21	84	Pass
6.9226	24	21	87	Pass
7.0304	23	20	86	Pass
7.1382	22	20	90	Pass
7.2460	22	15	68	Pass
7.3538	22	15	68	Pass
7.4616	21	14	66	Pass
7.5694	20	14	70	Pass
7.6772	19	14	73	Pass
7.7850	18	14	77	Pass
7.8928	17	14	82	Pass
8.0006	17	14	82	Pass
8.1084	16	11	68	Pass
8.2162	16	11	68	Pass
8.3240	16	11	68	Pass
8.4318	16	11	68	Pass
8.5396	15	11	73	Pass
8.6474	13	11	84	Pass
8.7552	11	10	90	Pass
8.8630	11	9	81	Pass
8.9708	10	9	90	Pass
9.0786	9	9	100	Pass
9.1865	9	9	100	Pass

9.2943	9	8	88	Pass
9.4021	9	8	88	Pass
9.5099	9	8	88	Pass
9.6177	9	7	77	Pass
9.7255	8	7	87	Pass
9.8333	8	7	87	Pass
9.9411	8	6	75	Pass
10.0489	8	6	75	Pass
10.1567	8	6	75	Pass
10.2645	7	6	85	Pass
10.3723	6	6	100	Pass
10.4801	6	6	100	Pass
10.5879	6	6	100	Pass
10.6957	6	6	100	Pass
10.8035	5	5	100	Pass
10.9113	4	4	100	Pass
11.0191	4	4	100	Pass
11.1269	4	4	100	Pass
11.2347	4	4	100	Pass

Perlnd and Implnd Changes

No changes have been made.

APPENDIX H

TJKM Transportation Consultants,
Traffic Impact Study for the
Residential Developments at Bassard Tract #7303 and Fairview LLC Tract 7921

TJKM
Transportation
Consultants

Vision That Moves Your Community

Draft Report

Traffic Impact Study for the Residential Developments at Bassard Tract #7303 and Fairview LLC Tract #7921

In the County of Alameda

November 9, 2009

Pleasanton
Fresno
Sacramento
Santa Rosa

www.tjkm.com

Table of Contents

List of Appendices

Introduction and Summary

Introduction

This report presents the results of TJKM's traffic impact analysis for the proposed residential developments at Bassard Tract #7303 and Fairview LLC Tract #7921 in the Fairview area, near the City of Hayward, in the County of Alameda. Bassard Tract #7303 is located on the south side of 'D' Street, near Carlson Court, while Fairview LLC Tract #7921 is located on the northeast side of Fairview Avenue, near Levine Drive.

The developer of Bassard Tract #7303 is proposing to build approximately 16 single-family homes that would have access to 'D' Street by a proposed development driveway. The developer of Fairview LLC Tract #7921 is proposing to build approximately 13 single-family homes that would have access to Fairview Avenue at the existing intersection with Levine Drive. The development sites and their vicinities are shown in Figure 1.

The purpose of this traffic study is to evaluate the potential traffic impacts on the adjacent roadway network resulting from the proposed residential developments at Bassard Tract #7303 and Fairview LLC Tract #7921 and to determine potential improvement measures.

Traffic operations were evaluated at the following five study intersections that were selected by County staff:

1. 'D' Street and Maud Avenue
2. Fairview Avenue and 'D' Street
3. Fairview Avenue and Jelincic Drive
4. Fairview Avenue and Levine Drive
5. Fairview Avenue and Five Canyons Parkway and Star Ridge Road

An intersection level of service (LOS) analysis was performed for the study intersections for the following two scenarios:

1. *Existing Conditions* (Scenario 1) – This scenario evaluates the study intersections based on existing traffic counts and field surveys.
2. *Existing Conditions plus Proposed Development plus Other Development* (Scenario 2) – This scenario is similar to the *Existing Conditions* scenario, with the addition of traffic from the proposed residential developments at Bassard Tract #7303 and Fairview LLC Tract #7921. This scenario also includes traffic from potential other developments in the surrounding area.

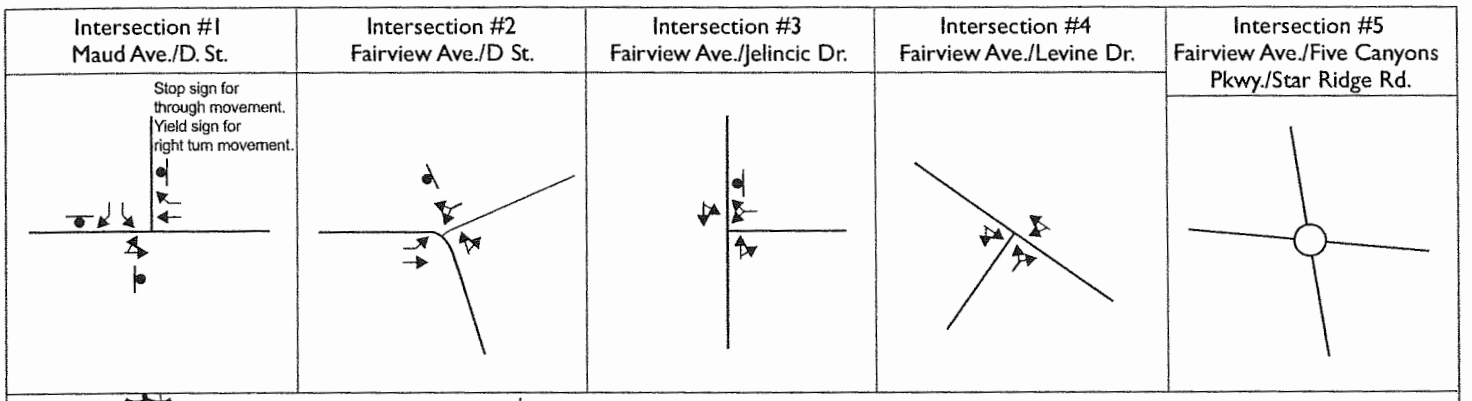
In addition, increases in weekday daily traffic resulting with the proposed developments and potential other developments were analyzed for the following study roadway segments:

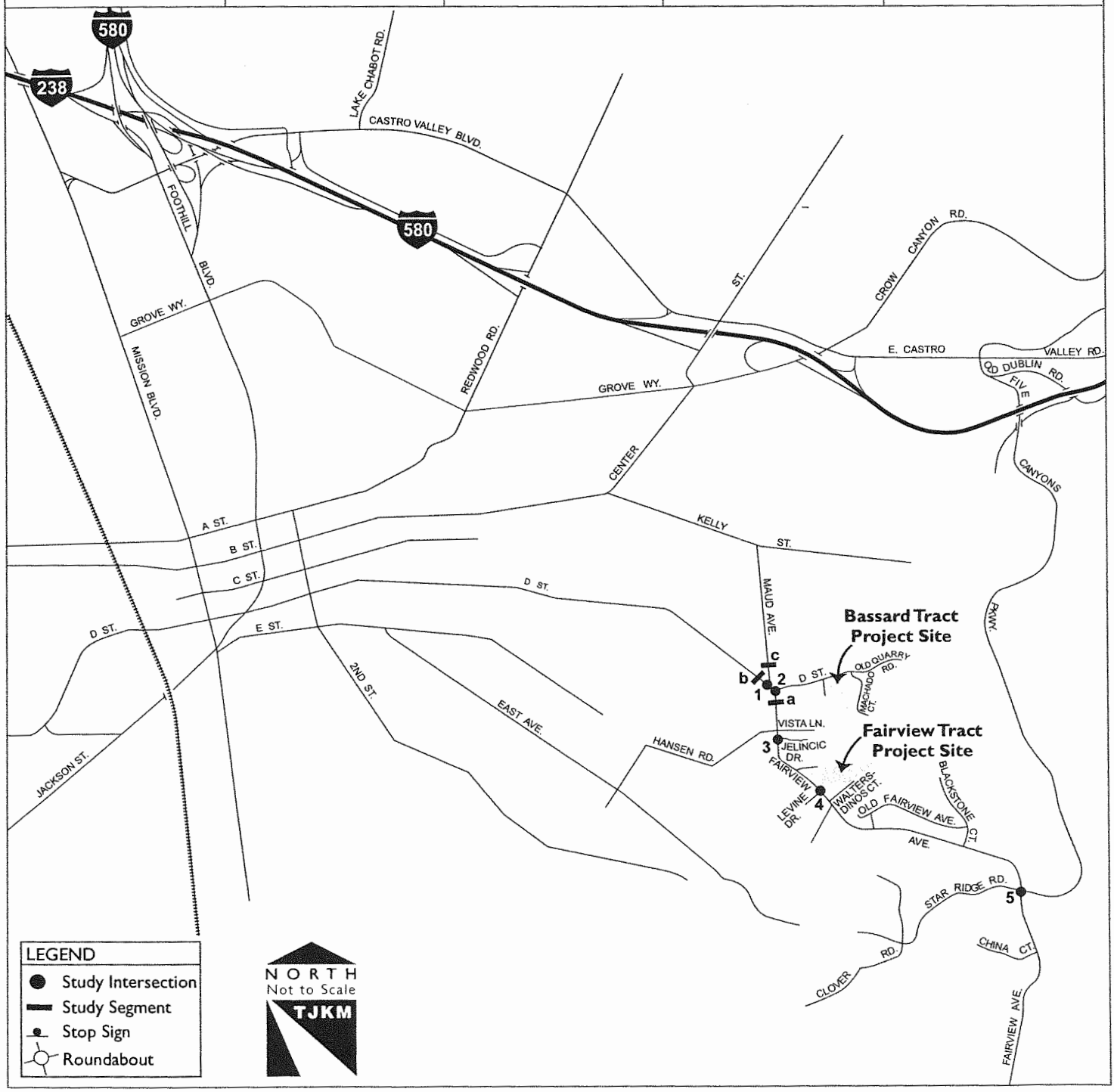
1. Fairview Avenue, south of 'D' Street
2. 'D' Street, west of Maud Avenue
3. Maud Avenue, north of 'D' Street

Alameda County - Bassard Tract #7303 and Fairview LLC Tract #7921 Traffic Study

Vicinity Map and Intersection Lane Geometry and Traffic Control

Figure 1





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Existing Conditions (Scenario 1)

Roadway Network

'D' Street is an east-west arterial that extends eastward from Winton Avenue, through the City of Hayward, and into the Fairview area of the County of Alameda. At the Bassard Tract #7303 project site, 'D' Street is a two-lane two-way street running through a residential neighborhood.

Fairview Avenue is a northwest-southeast collector street that extends from 'D' Street, through the Fairview area of the County of Alameda, until it reaches Hayward Boulevard in the northwest part of the City of Hayward. At the Fairview LLC Tract #7921 project site, Fairview Avenue is a two-lane two-way roadway striped to prohibit passing in both directions.

Maud Avenue is a two-way collector street that extends from Kelly Street to 'D' Street.

Intersection Geometrics and Traffic Control

The intersection of 'D' Street and Maud Avenue is an unsignalized intersection with three approaches. All of the intersection movements are stop controlled except for the westbound right-turn movement from 'D' Street, which is controlled by a yield sign. The westbound approach on 'D' Street and the southbound approach on Maud Avenue have two lanes entering the intersection, while the eastbound approach on 'D' Street has one lane entering the intersection.

The intersection of Fairview Avenue and 'D' Street is an unsignalized intersection with three approaches. The minor street approach, which is the westbound approach on 'D' Street, is stop controlled. A left-turn pocket and a continuing through lane are provided for eastbound traffic on 'D' Street, while one lane in each direction is designated on the other approaches.

The intersection of Fairview Avenue and Jelincic Drive is an unsignalized intersection with three approaches. The minor street approach, the westbound approach on Jelincic Drive, is stop controlled. Traffic on all approaches is designated to one lane in each direction.

The intersection of Fairview Avenue and Levine Drive is an unsignalized intersection with three approaches. The minor approach, the northbound approach on Levine Drive, yields to the major approaches. Traffic on all approaches is designated to one lane in each direction.

The intersection of Fairview Avenue, Five Canyons Parkway, and Star Ridge Road is a one-lane roundabout.

The lane geometry and traffic control is shown in Figure 1 for each study intersection.

Traffic Volumes

Existing traffic volume counts at the study intersections and along the study roadway segments were taken during September 2009. The turning movement volumes for the study intersections were taken during the typical a.m. peak period, between 7:00 a.m. and 9:00 a.m., and during the typical p.m. peak period, between 4:00 p.m. and 6:00 p.m., on Tuesday, September 15th. The traffic volumes for each study roadway segment were taken over a continuous 72-hour period, from 12:00 a.m. on a Tuesday through the end of the following Thursday, starting on either September 15th or September 22nd. The existing traffic volumes are included in Appendix C and summarized in Figure 2.

Level of Service Analysis

Table 1 presents a summary of the peak hour level of service analysis for each of the study intersections for the *Existing Conditions* (Scenario 1). Level of service worksheets are provided in Appendix D.

Table 1: Peak Hour Intersection Delay and Levels of Service – Scenario 1

ID	Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
			Delay	LOS	Delay	LOS
1	'D' Street / Maud Avenue	All-Way Stop	8.7	A	9.3	A
2	Fairview Avenue / 'D' Street	Minor Street Approach Stop	11.5	B	9.9	A
3	Fairview Avenue / Jelincic Drive	Minor Street Approach Stop	10.0	B	9.0	A
4	Fairview Avenue / Levine Drive	Minor Approach Yields	10.3	B	10.1	A
5	Fairview Avenue / Five Canyons Parkway / Star Ridge Road	Roundabout	7.6	A	8.4	A

Note: Delay = Average Delay in seconds per vehicle
LOS = Level of Service
The delay and LOS at the all-way stop controlled intersection are for the overall intersection performance.
The delay and LOS at intersections with stop or yield control on the minor approach are for the worst-case minor approach.
The delay and LOS at the roundabout intersection are for the overall intersection performance.

For *Existing Conditions* (Scenario 1), all of the five study intersections operate at acceptable levels of service.

Table III: Weekday Daily Trip Generation for Proposed Development

Project	*Land Use (ITE Code)*	*Size*	*Weekday Daily*				
			Rate	*In: Out*	*In*	*Out*	*Total*
Bassard Tract #7303	Single-Family Detached Housing (210)	16 Units	9.57	50:50	77	77	154
Fairview LLC Tract #7921	Single-Family Detached Housing (210)	13 Units	9.57	50:50	62	62	124
Proposed Development Total		**29 Units**			**139**	**139**	**278**

Trip Distribution and Trip Assignment

Trip distribution determines the proportions of the total vehicles generated by a project that are expected to travel between the project site and various destinations outside the project area. Trip assignment determines the various routes that vehicles are expected to take while travelling between the project site and each destination. For the proposed developments, the trip distribution and assignment were determined based on existing turning movements and TJKM's knowledge of the study area. The trip distribution and assignment for the proposed developments are shown in Figure 3.

Increase in Weekday Daily Traffic

For the three study roadway segments, comparisons between the existing weekday daily traffic and the weekday daily traffic generated by the proposed developments are shown in Table IV. All traffic volumes include traffic in both directions.

Table IV: Weekday Daily Traffic Comparison for Proposed Development

Study Roadway	*Traffic Volumes under Existing Conditions (Trips)*	*Traffic Volumes due to Proposed Developments (Trips)*			*Percent Increase Due to Proposed Developments*
		Bassard Tract #7303	*Fairview LLC Tract #7921*	*Total*	
Fairview Avenue (South of 'D' Street)	4836	15	112	127	2.6%
'D' Street (West of Maud Avenue)	5615	62	50	112	2.0%
Maud Avenue (North of 'D' Street)	6542	77	62	139	2.1%

The increase in weekday daily traffic resulting with the proposed developments is less than three percent, and thus considered to be less than significant, for all study roadway segments.

Existing Conditions plus Proposed Development plus Other Development (Scenario 2)

Other Development Description

Information regarding potential development in the area surrounding the proposed developments at Bassard Tract #7303 and Fairview LLC Tract #7921 was provided by the County of Alameda. The County also provided information regarding the maximum build-out allowed by zoning restrictions for these potential other developments. Although maximum build-out would be unlikely due to substantial slopes of the terrain, the expected parking needs, and the access issues that would affect development on the vacant parcels considered, the maximum density was assumed for this analysis, resulting in assumed additional development of 91 units.

Trip Generation

Trip generation for the potential other developments was determined using "trip generation per dwelling unit" rates obtained from *Trip Generation*, 8th Edition, published by ITE. If maximum density were reached at the parcels being considered, the additional development of 91 units would generate a total of 70 trips during the a.m. peak hour, 91 trips during the p.m. peak hour, and 878 average weekday daily trips. The locations and trip generation for the additional development during the peak hours are summarized in Table V. The average daily weekday trip generation is summarized in Table VI.

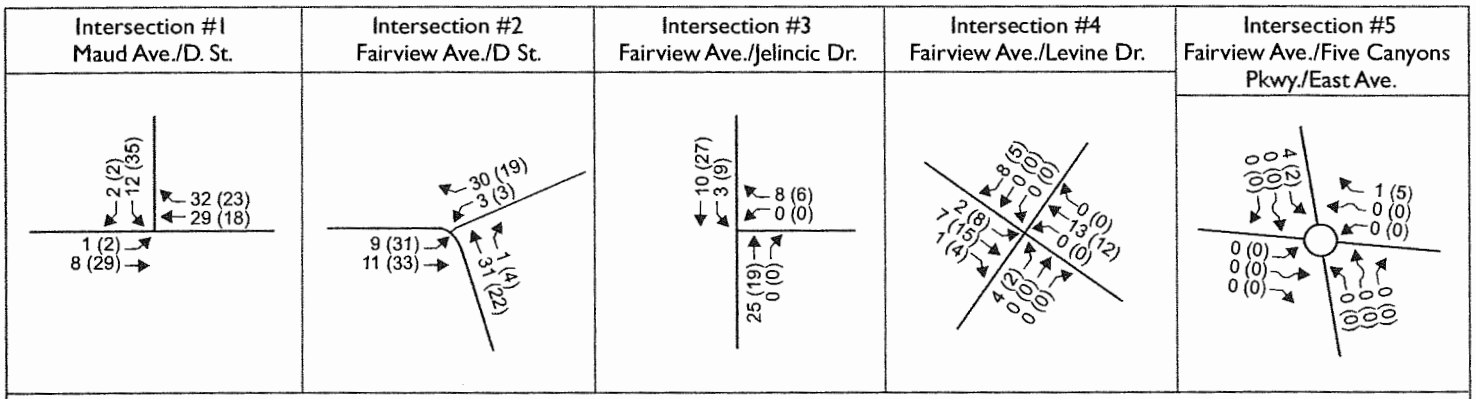
Table V: Peak Hour Trip Generation for Other Development

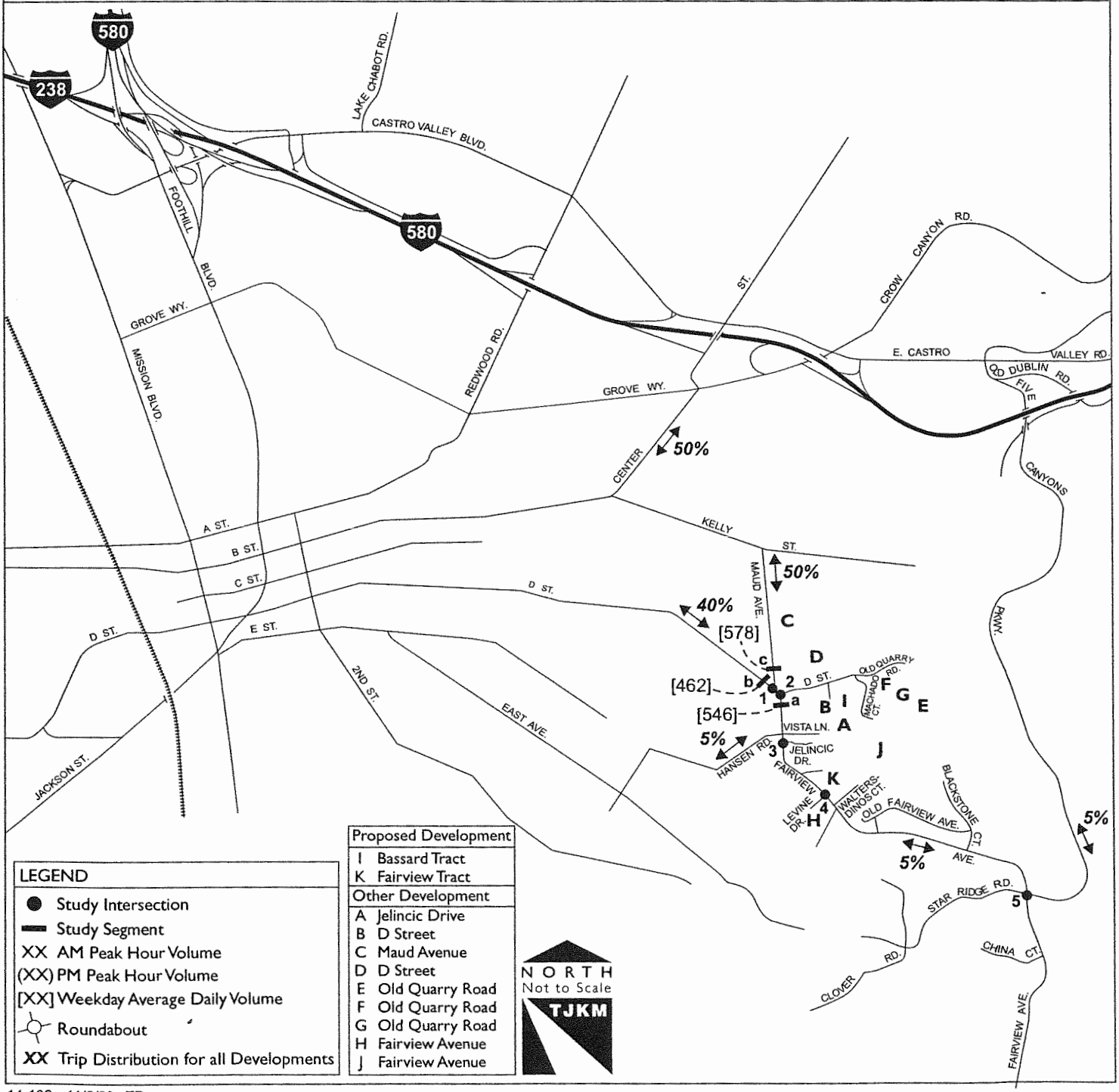
Figure 4 Symbol	*Parcel Location*	*Size*	*A.M. Peak Hour*					*P.M. Peak Hour*				
			Rate	*In: Out*	*In*	*Out*	*Total*	*Rate*	*In: Out*	*In*	*Out*	*Total*
A	Jelincic Dr., east of Fairview Ave.	15 Units	0.75	25:75	3	8	11	1.01	63:37	9	6	15
B	'D' St., east of Fairview Ave.	10 Units	0.75	25:75	2	6	8	1.01	63:37	6	4	10
C	Maud Ave., north of 'D' St.	8 Units	0.75	25:75	1	5	6	1.01	63:37	5	3	8
D	'D' St., east of Fairview Ave.	8 Units	0.75	25:75	1	5	6	1.01	63:37	5	3	8
E	Old Quarry Rd., east of Fairview Ave. at 'D' St.	11 Units	0.75	25:75	2	6	8	1.01	63:37	7	4	11
F	Old Quarry Rd., east of Fairview Ave. at 'D' St.	2 Units	0.75	25:75	0	2	2	1.01	63:37	1	1	2
G	Old Quarry Rd., east of Fairview Ave. at 'D' St.	9 Units	0.75	25:75	2	5	7	1.01	63:37	6	3	9
H	Fairview Ave., southeast of Levine Dr. at Fairview Ave.	6 Units	0.75	25:75	1	4	5	1.01	63:37	4	2	6
J	Fairview Ave., east of Levine Dr.	22 Units	0.75	25:75	4	13	17	1.01	63:37	14	8	22
Other Development Total		**91 Units**			**16**	**54**	**70**			**57**	**34**	**91**

Note: Single-Family Detached Housing Land Use (ITE Code 210) was assumed for all developments.

Alameda County - Bassard Tract #7303 and Fairview LLC Tract #7921 Traffic Study
Proposed Development + Other Development Trip Distribution and Assignment

Figure 4





Level of Service Analysis

Table VIII presents a summary of the peak hour level of service analysis for each of the study intersections for the *Existing Conditions* (Scenario 1) and the *Existing Conditions plus Proposed Development plus Other Development* (Scenario 2). Level of service worksheets are provided in Appendix E.

Table VIII: Peak Hour Intersection Delay and Levels of Service – Scenarios 1 and 2

ID	Intersection	Control	Scenario 1 Existing Conditions				Scenario 2 Existing Conditions + Proposed Development + Other Development			
			A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	'D' Street / Maud Avenue	All-Way Stop	8.7	A	9.3	A	9.0	A	10.1	B
2	Fairview Avenue / 'D' Street	Minor Street Approach Stop	11.5	B	9.9	A	12.5	B	10.7	B
3	Fairview Avenue / Jelincic Drive	Minor Street Approach Stop	10.0	B	9.0	A	10.4	B	9.2	A
4	Fairview Avenue / Levine Drive	Minor Approaches Stop or Yield	10.3	B	10.1	A	11.5	B	10.9	B
5	Fairview Avenue / Five Canyons Parkway / Star Ridge Road	Roundabout	7.6	A	8.4	A	7.6	A	8.4	A

Note: Delay = Average Delay in seconds per vehicle
LOS = Level of Service
The delay and LOS at the all-way stop controlled intersection are for the overall intersection performance.
The delay and LOS at intersections with stop or yield control on the minor approaches are for the worst-case minor approach.
The delay and LOS at the roundabout intersection are for the overall intersection performance.

For *Existing Conditions plus Proposed Development plus Other Development* (Scenario 2), all of the five study intersections operate at acceptable levels of service.

Increase in Daily Traffic

For the three study roadway segments, comparisons between the weekday traffic under existing conditions and the weekday traffic generated by the proposed and potential other developments are shown in Table IX. All traffic volumes include traffic in both directions.

Table IX: Weekday Daily Traffic Comparison for Proposed plus Other Development

Study Roadway	Traffic Volumes under Existing Conditions (Trips)	Traffic Volumes due to Proposed Developments plus Other Development (Trips)			Percent Increase Due to All Developments
		Proposed	Other	Total	
Fairview Avenue (South of 'D' Street)	4836	127	419	546	11.3%
'D' Street (West of Maud Avenue)	5615	112	350	462	8.2%
Maud Avenue (North of 'D' Street)	6542	139	439	578	8.8%

Study Participants and References

TJKM Transportation Consultants

Rich Haygood, P.E., T.E.	Project Manager
Travis Richards	Project Engineer
Jeffrey Lacap	Project Engineer
Geri Foley	Graphics
Margie Pfaff	Word Processing

Others

John Bates	County of Alameda
Jana Beatty	County of Alameda
Jeff Bonekemper	County of Alameda

References

Trip Generation, 8th Edition, Institute of Transportation Engineers, 2008.

Countywide Transportation Plan, Alameda County Congestion Management Agency, 2008.

APPENDIX A
LEVEL OF SERVICE

The description and procedures for calculating capacity and level of service (LOS) are found in Transportation Research Board, *Highway Capacity Manual 2000*. *Highway Capacity Manual 2000* represents the latest research on capacity and quality of service for transportation facilities.

Quality of service requires quantitative measures to characterize operational conditions within a traffic stream. LOS is a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.

Six levels of service are defined for each type of facility that has analysis procedures available. Letters designate each level, from A to F, with LOS A representing the best operating conditions and LOS F the worst. Each LOS represents a range of operating conditions and the driver's perception of these conditions. Safety is not included in the measures that establish service levels.

A general description of service levels for various types of facilities is shown in Table A-I

Table A-I: Level of Service Description

Facility Type	***Uninterrupted Flow***	***Interrupted Flow***
	Freeways Multi-lane Highways Two-lane Highways Urban Streets	Signalized Intersections Unsignalized Intersections Two-way Stop Control All-way Stop Control
LOS		
A	Free-flow	Very low delay.
B	Stable flow. Presence of other users noticeable.	Low delay.
C	Stable flow. Comfort and convenience starts to decline.	Acceptable delay.
D	High-density stable flow.	Tolerable delay.
E	Unstable flow.	Limit of acceptable delay.
F	Forced or breakdown flow.	Unacceptable delay

Source: *Highway Capacity Manual 2000*

Urban Streets

The term "urban streets" refers to urban arterials and collectors, including those in downtown areas.

Arterial streets are roads that primarily serve longer through trips. However, providing access to abutting commercial and residential land uses is also an important function of arterials.
Collector streets provide both land access and traffic circulation within residential, commercial and industrial areas. Their access function is more important than that of arterials, and unlike arterials their operation is not always dominated by traffic signals.

Downtown streets are signalized facilities that often resemble arterials. They not only move through traffic but also provide access to local businesses for passenger cars, transit buses, and trucks.

Once classified, the urban street is divided into segments for analysis. An urban street segment is a one-way section of street encompassing a series of blocks or links terminating at a signalized intersection. Adjacent segments of urban streets may be combined to form larger street sections, provided that the segments have similar demand flows and characteristics.

Levels of service are related to the average travel speed of vehicles along the urban street segment or section.

Travel times for existing conditions are obtained by field measurements. The maximum-car technique is used. The vehicle is driven at the posted speed limit unless impeded by actual traffic conditions. In the maximum-car technique, a safe level of vehicular operation is maintained by observing proper following distances and by changing speeds at reasonable rates of acceleration and deceleration. The maximum-car technique provides the best base for measuring traffic performance.

An observer records the travel time and locations and duration of delay. The beginning and ending points are the centers of intersections. Delays include times waiting in queues at signalized intersections. The travel speed is determined by dividing the length of the segment by the travel time. Once the travel speed on the arterial is determined, the LOS is found by comparing the speed to the criteria in Table A-IV. LOS criteria vary for the different classifications of urban street, reflecting differences in driver expectations.

Table A-II: Functional and Design Categories for Urban Streets

Criterion	***Functional Category***			
	Principal Arterial		***Minor Arterial***	
Mobility function	Very important		Important	
Access function	Very minor		Substantial	
Points connected	Freeways, important activity centers, major traffic generators		Principal arterials	
Predominant trips served	Relatively long trips between major points and through trips entering, leaving, and passing through city		Trips of moderate length within relatively small geographical areas	
Criterion	***Design Category***			
	High-Speed	***Suburban***	***Intermediate***	***Urban***
Driveway access density	Very low density	Low density	Moderate density	High density
Arterial type	Multilane divided; undivided or two-lane with shoulders	Multilane divided: undivided or two-lane with shoulders	Multilane divided or undivided; one way, two lane	Undivided one way; two way, two or more lanes
Parking	No	No	Some	Usually
Separate left-turn lanes	Yes	Yes	Usually	Some
Signals per mile	0.5 to 2	1 to 5	4 to 10	6 to 12
Speed limits	45 to 55 mph	40 to 45 mph	30 to 40 mph	25 to 35 mph
Pedestrian activity	Very little	Little	Some	Usually
Roadside development	Low density	Low to medium density	Medium to moderate density	High density

Source: *Highway Capacity Manual 2000*

Two-Way Stop Controlled Intersections

Two-way stop controlled intersections in which stop signs are used to assign the right-of-way, are the most prevalent type of intersection in the United States. At two-way stop-controlled intersections the stop-controlled approaches are referred as the minor street approaches and can be either public streets or private driveways. The approaches that are not controlled by stop signs are referred to as the major street approaches.

The capacity of movements subject to delay are determined using the "critical gap" method of capacity analysis. Expected average control delay based on movement volume and movement capacity is calculated. A LOS designation is given to the expected control delay for each minor movement. LOS is not defined for the intersection as a whole. Control delay is the increased time of travel for a vehicle approaching and passing through a stop-controlled intersection, compared with a free-flow vehicle if it were not required to slow or stop at the intersection. A description of levels of service for two-way stop-controlled intersections is found in Table A-VI.

Table A-VI: Description of Level of Service for Two-Way Stop Controlled Intersections

LOS	*Description*
A	Very low control delay less than 10 seconds per vehicle for each movement subject to delay.
B	Low control delay greater than 10 and up to 15 seconds per vehicle for each movement subject to delay.
C	Acceptable control delay greater than 15 and up to 25 seconds per vehicle for each movement subject to delay.
D	Tolerable control delay greater than 25 and up to 35 seconds per vehicle for each movement subject to delay.
E	Limit of tolerable control delay greater than 35 and up to 50 seconds per vehicle for each movement subject to delay.
F	Unacceptable control delay in excess of 50 seconds per vehicle for each movement subject to delay.

Source: *Highway Capacity Manual 2000*

APPENDIX B
LEVEL OF SERVICE
ROUNDABOUT INTERSECTION SUPPLEMENT

The software package SIDRA INTERSECTION (ver4.0) was used to analyze the study roundabout intersection. SIDRA uses advance gap acceptance techniques to analyze the roundabout capacity and performance based on empirical models. SIDRA's methodology provides that the capacity and performance of a roundabout are controlled by both driver behavior and the roundabout geometry, i.e. the inscribed circle diameter, circulatory width, and entry and exit radii. Using these and other factors, SIDRA determines the applicable gap-acceptance parameter. Adhering to HCM thresholds for a signalized intersection, the delay and LOS are calculated for each approach of the roundabout and the overall intersection.

Reference: SIDRA INTERSECTION User Guide, July 2007

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Groups Printed- Vehicles

	MAUD AVE Southbound					D ST Westbound					Northbound					D ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	27	0	12	0	39	34	29	0	0	63	0	0	0	0	0	0	13	17	0	30	132
07:15 AM	36	0	15	0	51	30	34	0	0	64	0	0	0	0	0	0	9	14	0	23	138
07:30 AM	39	0	28	0	67	43	49	0	0	92	0	0	0	0	0	0	7	32	0	39	198
07:45 AM	71	0	33	0	104	48	45	0	0	93	0	0	0	0	0	0	16	41	0	57	254
Total	173	0	88	0	261	155	157	0	0	312	0	0	0	0	0	0	45	104	0	149	722
08:00 AM	50	0	53	0	103	31	33	0	0	64	0	0	0	0	0	0	25	20	0	45	212
08:15 AM	28	0	36	0	64	37	34	0	0	71	0	0	0	0	0	0	23	26	0	49	184
08:30 AM	30	0	56	0	86	45	45	0	0	90	0	0	0	0	0	0	24	13	0	37	213
08:45 AM	24	0	28	0	52	57	39	0	0	96	0	0	0	0	0	0	10	12	0	22	170
Total	132	0	173	0	305	170	151	0	0	321	0	0	0	0	0	0	82	71	0	153	779
Grand Total	305	0	261	0	566	325	308	0	0	633	0	0	0	0	0	0	127	175	0	302	1501
Apprch %	53.9	0	46.1	0		51.3	48.7	0	0		0	0	0	0		0	42.1	57.9	0		
Total %	20.3	0	17.4	0	37.7	21.7	20.5	0	0	42.2	0	0	0	0	0	0	8.5	11.7	0	20.1	

	MAUD AVE Southbound					D ST Westbound					Northbound					D ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	71	0	33	0	104	48	45	0	0	93	0	0	0	0	0	0	16	41	0	57	254
08:00 AM	50	0	53	0	103	31	33	0	0	64	0	0	0	0	0	0	25	20	0	45	212
08:15 AM	28	0	36	0	64	37	34	0	0	71	0	0	0	0	0	0	23	26	0	49	184
08:30 AM	30	0	56	0	86	45	45	0	0	90	0	0	0	0	0	0	24	13	0	37	213
Total Volume	179	0	178	0	357	161	157	0	0	318	0	0	0	0	0	0	88	100	0	188	863
% App. Total	50.1	0	49.9	0		50.6	49.4	0	0		0	0	0	0		0	46.8	53.2	0		
PHF	.630	.000	.795	.000	.858	.839	.872	.000	.000	.855	.000	.000	.000	.000	.000	.000	.880	.610	.000	.825	.849

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	MAUD AVE Southbound					D ST Westbound					Northbound					D ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	21	0	23	0	44	20	20	0	0	40	0	0	0	0	0	0	21	30	0	51	135
04:15 PM	30	0	34	0	64	34	19	0	0	53	0	0	0	0	0	0	24	27	0	51	168
04:30 PM	28	0	30	0	58	25	21	0	0	46	0	0	0	0	0	0	21	33	0	54	158
04:45 PM	22	0	27	0	49	26	17	0	0	43	0	0	0	0	0	0	20	27	0	47	139
Total	101	0	114	0	215	105	77	0	0	182	0	0	0	0	0	0	86	117	0	203	600
05:00 PM	26	0	33	0	59	26	21	0	0	47	0	0	0	0	0	0	39	28	0	67	173
05:15 PM	25	0	31	0	56	33	21	0	0	54	0	0	0	0	0	0	36	39	0	75	185
05:30 PM	34	0	37	0	71	37	29	0	0	66	0	0	0	0	0	0	41	48	0	89	226
05:45 PM	34	0	36	0	70	30	22	0	0	52	0	0	0	0	0	0	33	57	0	90	212
Total	119	0	137	0	256	126	93	0	0	219	0	0	0	0	0	0	149	172	0	321	796
Grand Total	220	0	251	0	471	231	170	0	0	401	0	0	0	0	0	0	235	289	0	524	1396
Apprch %	46.7	0	53.3	0		57.6	42.4	0	0		0	0	0	0		0	44.8	55.2	0		
Total %	15.8	0	18	0	33.7	16.5	12.2	0	0	28.7	0	0	0	0	0	0	16.8	20.7	0	37.5	

	MAUD AVE Southbound					D ST Westbound					Northbound					D ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	26	0	33	0	59	26	21	0	0	47	0	0	0	0	0	0	39	28	0	67	173
05:15 PM	25	0	31	0	56	33	21	0	0	54	0	0	0	0	0	0	36	39	0	75	185
05:30 PM	34	0	37	0	71	37	29	0	0	66	0	0	0	0	0	0	41	48	0	89	226
05:45 PM	34	0	36	0	70	30	22	0	0	52	0	0	0	0	0	0	33	57	0	90	212
Total Volume	119	0	137	0	256	126	93	0	0	219	0	0	0	0	0	0	149	172	0	321	796
% App. Total	46.5	0	53.5	0		57.5	42.5	0	0		0	0	0	0		0	46.4	53.6	0		
PHF	.875	.000	.926	.000	.901	.851	.802	.000	.000	.830	.000	.000	.000	.000	.000	.000	.909	.754	.000	.892	.881

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	FAIRVIEW AVE Southbound					JELINCIC DR Westbound					FAIRVIEW AVE Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	13	1	0	14	1	0	0	0	1	0	27	0	0	27	0	0	0	0	0	42
07:15 AM	0	12	0	0	12	2	0	0	0	2	1	32	0	0	33	0	0	0	0	0	47
07:30 AM	0	16	1	0	17	5	0	0	0	5	0	63	0	0	63	0	0	0	0	0	85
07:45 AM	0	13	1	0	14	3	0	0	0	3	0	39	0	0	39	0	0	0	0	0	56
Total	0	54	3	0	57	11	0	0	0	11	1	161	0	0	162	0	0	0	0	0	230
08:00 AM	0	40	2	0	42	2	0	0	0	2	0	34	0	0	34	0	0	0	0	0	78
08:15 AM	0	26	0	0	26	0	0	0	0	0	0	53	0	0	53	0	0	0	0	0	79
08:30 AM	0	21	0	0	21	3	0	0	0	3	0	45	0	0	45	0	0	0	0	0	69
08:45 AM	0	15	1	0	16	0	0	0	0	0	0	42	0	0	42	0	0	0	0	0	58
Total	0	102	3	0	105	5	0	0	0	5	0	174	0	0	174	0	0	0	0	0	284
Grand Total	0	156	6	0	162	16	0	0	0	16	1	335	0	0	336	0	0	0	0	0	514
Apprch %	0	96.3	3.7	0		100	0	0	0		0.3	99.7	0	0		0	0	0	0		
Total %	0	30.4	1.2	0	31.5	3.1	0	0	0	3.1	0.2	65.2	0	0	65.4	0	0	0	0	0	

	FAIRVIEW AVE Southbound					JELINCIC DR Westbound					FAIRVIEW AVE Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	16	1	0	17	5	0	0	0	5	0	63	0	0	63	0	0	0	0	0	85
07:45 AM	0	13	1	0	14	3	0	0	0	3	0	39	0	0	39	0	0	0	0	0	56
08:00 AM	0	40	2	0	42	2	0	0	0	2	0	34	0	0	34	0	0	0	0	0	78
08:15 AM	0	26	0	0	26	0	0	0	0	0	0	53	0	0	53	0	0	0	0	0	79
Total Volume	0	95	4	0	99	10	0	0	0	10	0	189	0	0	189	0	0	0	0	0	298
% App. Total	0	96	4	0		100	0	0	0		0	100	0	0		0	0	0	0		
PHF	.000	.594	.500	.000	.589	.500	.000	.000	.000	.500	.000	.750	.000	.000	.750	.000	.000	.000	.000	.000	.876

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	FAIRVIEW AVE Southbound					JELINCIC DR Westbound					FAIRVIEW AVE Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	31	1	0	32	0	0	0	0	0	0	26	0	0	26	0	0	0	0	0	58
04:15 PM	0	28	1	0	29	2	0	0	0	2	0	22	0	0	22	0	0	0	0	0	53
04:30 PM	0	29	1	0	30	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	49
04:45 PM	0	32	2	0	34	0	0	1	0	1	0	29	0	0	29	0	0	0	0	0	64
Total	0	120	5	0	125	2	0	1	0	3	0	96	0	0	96	0	0	0	0	0	224
05:00 PM	0	42	1	0	43	2	0	0	0	2	0	22	0	0	22	0	0	0	0	0	67
05:15 PM	0	37	3	0	40	1	0	0	0	1	0	29	0	0	29	0	0	0	0	0	70
05:30 PM	0	33	2	0	35	2	0	0	0	2	0	29	0	0	29	0	0	0	0	0	66
05:45 PM	0	45	0	0	45	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	68
Total	0	157	6	0	163	5	0	0	0	5	0	103	0	0	103	0	0	0	0	0	271
Grand Total	0	277	11	0	288	7	0	1	0	8	0	199	0	0	199	0	0	0	0	0	495
Apprch %	0	96.2	3.8	0		87.5	0	12.5	0		0	100	0	0		0	0	0	0		
Total %	0	56	2.2	0	58.2	1.4	0	0.2	0	1.6	0	40.2	0	0	40.2	0	0	0	0	0	

	FAIRVIEW AVE Southbound					JELINCIC DR Westbound					FAIRVIEW AVE Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	42	1	0	43	2	0	0	0	2	0	22	0	0	22	0	0	0	0	0	67
05:15 PM	0	37	3	0	40	1	0	0	0	1	0	29	0	0	29	0	0	0	0	0	70
05:30 PM	0	33	2	0	35	2	0	0	0	2	0	29	0	0	29	0	0	0	0	0	66
05:45 PM	0	45	0	0	45	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	68
Total Volume	0	157	6	0	163	5	0	0	0	5	0	103	0	0	103	0	0	0	0	0	271
% App. Total	0	96.3	3.7	0		100	0	0	0		0	100	0	0		0	0	0	0		
PHF	.000	.872	.500	.000	.906	.625	.000	.000	.000	.625	.000	.888	.000	.000	.888	.000	.000	.000	.000	.000	.968

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	FAIRVIEW AVE Southbound					Westbound					FAIRVIEW AVE Northbound					LEVINE DR Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	2	12	0	0	14	0	0	0	0	0	0	24	0	0	24	0	0	3	0	3	41
07:15 AM	0	14	0	0	14	0	0	0	0	0	0	29	1	0	30	0	0	0	0	0	44
07:30 AM	0	19	0	0	19	0	0	0	0	0	0	60	0	0	60	0	0	1	0	1	80
07:45 AM	0	21	0	0	21	0	0	0	0	0	0	38	0	0	38	1	0	2	0	3	62
Total	2	66	0	0	68	0	0	0	0	0	0	151	1	0	152	1	0	6	0	7	227
08:00 AM	0	30	0	0	30	0	0	0	0	0	0	35	0	0	35	0	0	0	0	0	65
08:15 AM	0	35	0	0	35	0	0	0	0	0	0	44	0	0	44	0	0	0	0	0	79
08:30 AM	0	20	0	0	20	0	0	0	0	0	0	47	0	0	47	0	0	0	0	0	67
08:45 AM	0	18	0	0	18	0	0	0	0	0	0	42	1	0	43	0	0	0	0	0	61
Total	0	103	0	0	103	0	0	0	0	0	0	168	1	0	169	0	0	0	0	0	272
Grand Total	2	169	0	0	171	0	0	0	0	0	0	319	2	0	321	1	0	6	0	7	499
Apprch %	1.2	98.8	0	0		0	0	0	0		0	99.4	0.6	0		14.3	0	85.7	0		
Total %	0.4	33.9	0	0	34.3	0	0	0	0	0	0	63.9	0.4	0	64.3	0.2	0	1.2	0	1.4	

	FAIRVIEW AVE Southbound					Westbound					FAIRVIEW AVE Northbound					LEVINE DR Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	19	0	0	19	0	0	0	0	0	0	60	0	0	60	0	0	1	0	1	80
07:45 AM	0	21	0	0	21	0	0	0	0	0	0	38	0	0	38	1	0	2	0	3	62
08:00 AM	0	30	0	0	30	0	0	0	0	0	0	35	0	0	35	0	0	0	0	0	65
08:15 AM	0	35	0	0	35	0	0	0	0	0	0	44	0	0	44	0	0	0	0	0	79
Total Volume	0	105	0	0	105	0	0	0	0	0	0	177	0	0	177	1	0	3	0	4	286
% App. Total	0	100	0	0		0	0	0	0		0	100	0	0		25	0	75	0		
PHF	.000	.750	.000	.000	.750	.000	.000	.000	.000	.000	.000	.738	.000	.000	.738	.250	.000	.375	.000	.333	.894

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	FAIRVIEW AVE Southbound					Westbound					FAIRVIEW AVE Northbound					LEVINE DR Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	26	0	0	26	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	51
04:15 PM	0	25	0	0	25	0	0	0	0	0	0	20	0	0	20	1	0	0	0	1	46
04:30 PM	0	24	0	0	24	0	0	0	0	0	0	22	0	0	22	0	0	1	0	1	47
04:45 PM	1	31	0	0	32	0	0	0	0	0	0	27	1	0	28	0	0	0	0	0	60
Total	1	106	0	0	107	0	0	0	0	0	0	94	1	0	95	1	0	1	0	2	204
05:00 PM	1	39	0	0	40	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	64
05:15 PM	0	37	0	0	37	0	0	0	0	0	0	34	0	0	34	0	0	0	0	0	71
05:30 PM	0	33	0	0	33	0	0	0	0	0	0	31	0	0	31	0	0	1	0	1	65
05:45 PM	0	43	0	0	43	0	0	0	0	0	0	22	0	0	22	0	0	2	0	2	67
Total	1	152	0	0	153	0	0	0	0	0	0	111	0	0	111	0	0	3	0	3	267
Grand Total	2	258	0	0	260	0	0	0	0	0	0	205	1	0	206	1	0	4	0	5	471
Apprch %	0.8	99.2	0	0		0	0	0	0		0	99.5	0.5	0		20	0	80	0		
Total %	0.4	54.8	0	0	55.2	0	0	0	0	0	0	43.5	0.2	0	43.7	0.2	0	0.8	0	1.1	

	FAIRVIEW AVE Southbound					Westbound					FAIRVIEW AVE Northbound					LEVINE DR Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	1	39	0	0	40	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	64
05:15 PM	0	37	0	0	37	0	0	0	0	0	0	34	0	0	34	0	0	0	0	0	71
05:30 PM	0	33	0	0	33	0	0	0	0	0	0	31	0	0	31	0	0	1	0	1	65
05:45 PM	0	43	0	0	43	0	0	0	0	0	0	22	0	0	22	0	0	2	0	2	67
Total Volume	1	152	0	0	153	0	0	0	0	0	0	111	0	0	111	0	0	3	0	3	267
% App. Total	0.7	99.3	0	0		0	0	0	0		0	100	0	0		0	0	100	0		
PHF	.250	.884	.000	.000	.890	.000	.000	.000	.000	.000	.000	.816	.000	.000	.816	.000	.000	.375	.000	.375	.940

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Groups Printed- Vehicles

	Southbound					D ST Westbound					FAIRVIEW AVE Northbound					D ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	18	1	0	19	0	0	49	0	49	17	10	0	0	27	95
07:15 AM	0	0	0	0	0	0	13	4	0	17	0	0	49	0	49	17	2	0	0	19	85
07:30 AM	0	0	0	0	0	0	16	3	0	19	2	0	78	0	80	30	3	0	0	33	132
07:45 AM	0	0	0	0	0	0	15	0	0	15	0	0	79	0	79	44	5	0	0	49	143
Total	0	0	0	0	0	0	62	8	0	70	2	0	255	0	257	108	20	0	0	128	455
08:00 AM	0	0	0	0	0	0	6	2	0	8	0	0	62	0	62	71	7	0	0	78	148
08:15 AM	0	0	0	0	0	0	10	0	0	10	2	0	57	0	59	54	6	0	0	60	129
08:30 AM	0	0	0	0	0	0	11	2	0	13	0	0	82	0	82	75	8	0	0	83	178
08:45 AM	0	0	0	0	0	0	8	0	0	8	3	0	91	0	94	36	1	0	0	37	139
Total	0	0	0	0	0	0	35	4	0	39	5	0	292	0	297	236	22	0	0	258	594
Grand Total	0	0	0	0	0	0	97	12	0	109	7	0	547	0	554	344	42	0	0	386	1049
Apprch %	0	0	0	0		0	89	11	0		1.3	0	98.7	0		89.1	10.9	0	0		
Total %	0	0	0	0	0	0	9.2	1.1	0	10.4	0.7	0	52.1	0	52.8	32.8	4	0	0	36.8	

	Southbound					D ST Westbound					FAIRVIEW AVE Northbound					D ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	0	0	0	0	0	15	0	0	15	0	0	79	0	79	44	5	0	0	49	143
08:00 AM	0	0	0	0	0	0	6	2	0	8	0	0	62	0	62	71	7	0	0	78	148
08:15 AM	0	0	0	0	0	0	10	0	0	10	2	0	57	0	59	54	6	0	0	60	129
08:30 AM	0	0	0	0	0	0	11	2	0	13	0	0	82	0	82	75	8	0	0	83	178
Total Volume	0	0	0	0	0	0	42	4	0	46	2	0	280	0	282	244	26	0	0	270	598
% App. Total	0	0	0	0		0	91.3	8.7	0		0.7	0	99.3	0		90.4	9.6	0	0		
PHF	.000	.000	.000	.000	.000	.000	.700	.500	.000	.767	.250	.000	.854	.000	.860	.813	.813	.000	.000	.813	.840

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Groups Printed- Vehicles

	Southbound					D ST Westbound					FAIRVIEW AVE Northbound					D ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	5	1	0	6	3	0	37	0	40	39	9	0	0	48	94
04:15 PM	0	0	0	0	0	0	8	1	0	9	0	0	41	0	41	47	8	0	0	55	105
04:30 PM	0	0	0	0	0	0	6	0	0	6	1	0	36	0	37	44	10	0	0	54	97
04:45 PM	0	0	0	0	0	0	10	1	0	11	0	0	38	0	38	37	7	0	0	44	93
Total	0	0	0	0	0	0	29	3	0	32	4	0	152	0	156	167	34	0	0	201	389
05:00 PM	0	0	0	0	0	0	5	0	0	5	5	0	31	0	36	59	7	0	0	66	107
05:15 PM	0	0	0	0	0	0	11	0	0	11	1	0	43	0	44	57	12	0	0	69	124
05:30 PM	0	0	0	0	0	0	7	0	0	7	0	0	57	0	57	62	14	0	0	76	140
05:45 PM	0	0	0	0	0	0	8	0	0	8	2	0	46	0	48	59	12	0	0	71	127
Total	0	0	0	0	0	0	31	0	0	31	8	0	177	0	185	237	45	0	0	282	498
Grand Total	0	0	0	0	0	0	60	3	0	63	12	0	329	0	341	404	79	0	0	483	887
Apprch %	0	0	0	0		0	95.2	4.8	0		3.5	0	96.5	0		83.6	16.4	0	0		
Total %	0	0	0	0	0	0	6.8	0.3	0	7.1	1.4	0	37.1	0	38.4	45.5	8.9	0	0	54.5	

	Southbound					D ST Westbound					FAIRVIEW AVE Northbound					D ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	0	0	0	0	5	0	0	5	5	0	31	0	36	59	7	0	0	66	107
05:15 PM	0	0	0	0	0	0	11	0	0	11	1	0	43	0	44	57	12	0	0	69	124
05:30 PM	0	0	0	0	0	0	7	0	0	7	0	0	57	0	57	62	14	0	0	76	140
05:45 PM	0	0	0	0	0	0	8	0	0	8	2	0	46	0	48	59	12	0	0	71	127
Total Volume	0	0	0	0	0	0	31	0	0	31	8	0	177	0	185	237	45	0	0	282	498
% App. Total	0	0	0	0		0	100	0	0		4.3	0	95.7	0		84	16	0	0		
PHF	.000	.000	.000	.000	.000	.000	.705	.000	.000	.705	.400	.000	.776	.000	.811	.956	.804	.000	.000	.928	.889

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	FAIRVIEW AVE Southbound					FIVE CANYONS PKWY Westbound					FAIRVIEW AVE Northbound					STAR RIDGE RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	5	7	0	12	15	1	13	0	29	28	4	0	0	32	2	2	3	0	7	80
07:15 AM	2	6	6	0	14	38	0	19	0	57	45	13	0	0	58	3	6	3	0	12	141
07:30 AM	0	6	18	0	24	22	1	25	0	48	23	9	1	0	33	0	6	6	0	12	117
07:45 AM	2	20	10	0	32	22	2	30	0	54	30	8	1	0	39	3	2	4	0	9	134
Total	4	37	41	0	82	97	4	87	0	188	126	34	2	0	162	8	16	16	0	40	472
08:00 AM	3	23	7	0	33	23	3	25	0	51	33	18	0	0	51	1	4	2	0	7	142
08:15 AM	1	14	5	0	20	18	2	23	0	43	30	18	0	0	48	0	5	8	0	13	124
08:30 AM	4	9	6	0	19	19	1	14	0	34	30	19	0	0	49	1	1	4	0	6	108
08:45 AM	0	5	7	0	12	21	3	15	0	39	30	7	1	0	38	0	2	0	0	2	91
Total	8	51	25	0	84	81	9	77	0	167	123	62	1	0	186	2	12	14	0	28	465
Grand Total	12	88	66	0	166	178	13	164	0	355	249	96	3	0	348	10	28	30	0	68	937
Apprch %	7.2	53	39.8	0		50.1	3.7	46.2	0		71.6	27.6	0.9	0		14.7	41.2	44.1	0		
Total %	1.3	9.4	7	0	17.7	19	1.4	17.5	0	37.9	26.6	10.2	0.3	0	37.1	1.1	3	3.2	0	7.3	

	FAIRVIEW AVE Southbound					FIVE CANYONS PKWY Westbound					FAIRVIEW AVE Northbound					STAR RIDGE RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	2	6	6	0	14	38	0	19	0	57	45	13	0	0	58	3	6	3	0	12	141
07:30 AM	0	6	18	0	24	22	1	25	0	48	23	9	1	0	33	0	6	6	0	12	117
07:45 AM	2	20	10	0	32	22	2	30	0	54	30	8	1	0	39	3	2	4	0	9	134
08:00 AM	3	23	7	0	33	23	3	25	0	51	33	18	0	0	51	1	4	2	0	7	142
Total Volume	7	55	41	0	103	105	6	99	0	210	131	48	2	0	181	7	18	15	0	40	534
% App. Total	6.8	53.4	39.8	0		50	2.9	47.1	0		72.4	26.5	1.1	0		17.5	45	37.5	0		
PHF	.583	.598	.569	.000	.780	.691	.500	.825	.000	.921	.728	.667	.500	.000	.780	.583	.750	.625	.000	.833	.940

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	FAIRVIEW AVE Southbound					FIVE CANYONS PKWY Westbound					FAIRVIEW AVE Northbound					STAR RIDGE RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	6	11	10	0	27	13	3	24	0	40	28	14	1	0	43	0	1	2	0	3	113
04:15 PM	4	6	11	0	21	10	3	24	0	37	20	6	4	0	30	1	3	2	0	6	94
04:30 PM	3	9	11	0	23	10	4	29	0	43	27	5	0	0	32	0	3	3	0	6	104
04:45 PM	1	11	15	0	27	18	5	31	0	54	25	10	2	0	37	1	5	3	0	9	127
Total	14	37	47	0	98	51	15	108	0	174	100	35	7	0	142	2	12	10	0	24	438
05:00 PM	7	12	20	0	39	7	7	23	0	37	26	13	2	0	41	0	3	1	0	4	121
05:15 PM	3	12	18	0	33	15	3	26	0	44	19	12	1	0	32	0	2	3	0	5	114
05:30 PM	3	14	20	0	37	14	1	48	0	63	27	12	1	0	40	1	4	5	0	10	150
05:45 PM	6	18	12	0	36	12	3	38	0	53	21	4	0	0	25	0	2	4	0	6	120
Total	19	56	70	0	145	48	14	135	0	197	93	41	4	0	138	1	11	13	0	25	505
Grand Total	33	93	117	0	243	99	29	243	0	371	193	76	11	0	280	3	23	23	0	49	943
Apprch %	13.6	38.3	48.1	0		26.7	7.8	65.5	0		68.9	27.1	3.9	0		6.1	46.9	46.9	0		
Total %	3.5	9.9	12.4	0	25.8	10.5	3.1	25.8	0	39.3	20.5	8.1	1.2	0	29.7	0.3	2.4	2.4	0	5.2	

	FAIRVIEW AVE Southbound					FIVE CANYONS PKWY Westbound					FAIRVIEW AVE Northbound					STAR RIDGE RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	1	11	15	0	27	18	5	31	0	54	25	10	2	0	37	1	5	3	0	9	127
05:00 PM	7	12	20	0	39	7	7	23	0	37	26	13	2	0	41	0	3	1	0	4	121
05:15 PM	3	12	18	0	33	15	3	26	0	44	19	12	1	0	32	0	2	3	0	5	114
05:30 PM	3	14	20	0	37	14	1	48	0	63	27	12	1	0	40	1	4	5	0	10	150
Total Volume	14	49	73	0	136	54	16	128	0	198	97	47	6	0	150	2	14	12	0	28	512
% App. Total	10.3	36	53.7	0		27.3	8.1	64.6	0		64.7	31.3	4	0		7.1	50	42.9	0		
PHF	.500	.875	.913	.000	.872	.750	.571	.667	.000	.786	.898	.904	.750	.000	.915	.500	.700	.600	.000	.700	.853

Traffic Data Service
Vehicle Counts

VehicleCount-2019 -- English (ENU)

Datasets:

Site:	**[1N] NB FAIRVIEW AVE S/O D ST**
Direction:	7 - North bound A>B, South bound B>A., **Lane:** 0
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	North (bound)
Separation:	All - (Headway)
Name:	Factory default profile
Scheme:	Vehicle classification (Scheme F)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)

* Tuesday, September 22, 2009 - Total=2388, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
5	**8**	**3**	**8**	**22**	**44**	**125**	**250**	**256**	**144**	**117**	**125**	**102**	**114**	**140**	**176**	**132**	**155**	**142**	**131**	**78**	**56**	**38**	**17**	
1	2	0	2	4	7	20	48	**70**	41	33	34	30	22	28	34	**38**	37	40	43	19	17	18	5	5
1	2	0	3	7	7	29	62	**66**	37	33	30	30	31	35	**34**	31	49	35	35	20	14	8	4	3
1	1	1	0	7	15	35	**71**	57	34	24	24	18	30	41	**64**	31	35	38	29	24	14	5	4	0
2	3	2	3	4	15	41	**69**	63	32	27	37	24	31	36	**44**	32	34	29	24	15	11	7	4	2

AM Peak 0730 - 0830 (276), AM PHF=0.97 PM Peak 1515 - 1615 (180), PM PHF=0.70

* Wednesday, September 23, 2009 - Total=2477, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
10	**5**	**6**	**11**	**21**	**37**	**105**	**254**	**237**	**178**	**115**	**130**	**120**	**157**	**137**	**141**	**132**	**190**	**166**	**137**	**62**	**78**	**30**	**18**	
5	2	0	3	2	5	16	46	**65**	57	38	32	29	47	34	32	29	**49**	48	46	25	18	10	7	3
3	1	2	0	4	4	18	**63**	59	48	27	32	32	36	35	45	40	**47**	40	38	11	30	8	5	2
0	0	3	1	8	17	31	**73**	55	34	24	30	23	41	39	33	33	**48**	42	30	18	12	5	4	0
2	2	1	7	7	11	40	**72**	58	39	26	36	36	33	29	31	30	**46**	36	23	8	18	7	2	0

AM Peak 0715 - 0815 (273), AM PHF=0.93 PM Peak 1700 - 1800 (190), PM PHF=0.97

* Thursday, September 24, 2009 - Total=2404, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
5	**6**	**7**	**8**	**17**	**42**	**116**	**249**	**224**	**132**	**113**	**117**	**109**	**111**	**146**	**158**	**155**	**178**	**156**	**140**	**100**	**56**	**38**	**21**	
3	1	1	1	2	6	17	48	**63**	41	33	33	26	24	32	29	46	35	**50**	35	34	19	10	3	6
2	2	2	1	4	13	27	**52**	48	34	30	37	28	29	36	38	49	**41**	38	32	22	16	10	8	5
0	2	3	2	3	7	33	**77**	59	30	22	19	28	29	27	45	35	**42**	30	38	25	12	10	6	2
0	1	1	4	8	16	39	**72**	54	27	28	28	27	29	51	46	25	**60**	38	35	19	9	8	4	3

AM Peak 0715 - 0815 (264), AM PHF=0.86 PM Peak 1715 - 1815 (193), PM PHF=0.80

Traffic Data Service
Vehicle Counts

VehicleCount-2022 -- English (ENU)

Datasets:

Site:	**[2E] EB D ST W/O MAUD AVE**
Direction:	6 - West bound A>B, East bound B>A., **Lane:** 0
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	5 - 100 mph.
Direction:	East (bound)
Separation:	All - (Headway)
Name:	Factory default profile
Scheme:	Vehicle classification (Scheme F)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)

* Tuesday, September 15, 2009 - Total=2668, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
13	**16**	**12**	**8**	**6**	**11**	**48**	**148**	**141**	**96**	**84**	**120**	**124**	**134**	**168**	**179**	**219**	**323**	**205**	**239**	**133**	**117**	**72**	**52**	
4	4	3	2	3	3	6	28	**41**	29	23	32	31	33	27	47	54	**68**	55	51	44	30	19	16	8
3	3	4	4	0	1	3	15	**44**	26	22	40	33	33	43	37	57	**74**	53	65	27	49	20	15	12
2	3	2	1	2	3	18	**44**	33	17	22	20	26	34	44	44	53	**88**	45	67	29	18	17	15	4
4	6	3	1	1	4	21	**61**	23	24	17	28	34	34	54	51	55	**93**	52	56	33	20	16	6	5

AM Peak 0730 - 0830 (190), AM PHF=0.78 PM Peak 1700 - 1800 (323), PM PHF=0.87

* Wednesday, September 16, 2009 - Total=2732, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
29	**13**	**11**	**8**	**6**	**14**	**41**	**140**	**165**	**95**	**87**	**116**	**134**	**158**	**169**	**185**	**217**	**271**	**250**	**211**	**161**	**117**	**89**	**45**	
8	5	3	1	3	2	3	21	**45**	17	20	30	28	42	31	41	47	**72**	65	48	48	27	27	17	7
12	1	4	2	1	4	12	28	**51**	29	22	31	38	41	31	49	38	**60**	66	65	45	40	19	10	14
4	3	1	3	2	3	6	**47**	37	30	18	22	30	35	43	44	62	**77**	48	57	30	29	24	11	6
5	4	3	2	0	5	20	**44**	32	19	27	33	38	40	64	51	**70**	62	71	41	38	21	19	7	4

AM Peak 0730 - 0830 (187), AM PHF=0.92 PM Peak 1645 - 1745 (279), PM PHF=0.91

* Thursday, September 17, 2009 - Total=2773, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
31	**13**	**15**	**7**	**6**	**18**	**46**	**120**	**169**	**102**	**88**	**113**	**125**	**156**	**193**	**200**	**229**	**266**	**226**	**202**	**194**	**96**	**97**	**61**	
7	4	6	2	3	4	6	29	**41**	34	21	33	41	24	33	55	52	**57**	49	62	44	33	26	26	3
14	3	6	2	1	4	10	18	**57**	19	23	26	27	44	39	39	50	**76**	59	55	54	22	32	11	7
6	5	1	3	2	3	11	28	**36**	25	19	24	29	46	58	52	65	**66**	67	36	53	22	24	11	12
4	1	2	0	0	7	19	**45**	35	24	25	30	28	42	63	54	62	**67**	51	49	43	19	15	13	2

AM Peak 0745 - 0845 (179), AM PHF=0.79 PM Peak 1700 - 1800 (266), PM PHF=0.88

Traffic Data Service
Event Counts

EventCount-2023 -- English (ENU)

Datasets:

Site:	**[3N] NB MAUD AVE N/O D ST**
Input A:	1 - North bound. - Added to totals. (1)
Input B:	3 - South bound. - Excluded from totals. (0)
Name:	Factory default profile
Scheme:	Count events divided by two.
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)

* Tuesday, September 22, 2009=2897, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
26	**5**	**5**	**8**	**17**	**22**	**100**	**254**	**212**	**133**	**99**	**139**	**147**	**114**	**186**	**213**	**214**	**269**	**232**	**182**	**124**	**90**	**62**	**44**	
13	3	2	1	2	6	14	37	**65**	38	29	40	43	30	38	47	59	56	**73**	62	23	23	15	15	9
6	0	3	2	6	1	25	57	**58**	33	34	33	41	23	47	43	53	**76**	58	44	37	18	20	14	7
3	0	0	2	6	8	25	**77**	43	29	14	23	35	29	54	74	61	**78**	54	42	35	31	16	10	3
4	2	0	3	3	7	36	**83**	46	33	22	43	28	32	47	49	41	**59**	47	34	29	18	11	5	5

AM Peak 0730 - 0830 (283), AM PHF=0.85 PM Peak 1715 - 1815 (286), PM PHF=0.92

* Wednesday, September 23, 2009=3182, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
24	**11**	**7**	**8**	**13**	**27**	**105**	**272**	**224**	**144**	**124**	**151**	**170**	**183**	**160**	**198**	**213**	**284**	**314**	**197**	**113**	**140**	**58**	**42**	
9	4	2	1	2	4	17	43	**57**	40	34	38	50	51	33	48	49	65	**68**	53	33	28	24	14	6
7	2	2	2	2	6	20	58	**64**	41	26	45	36	42	36	44	61	62	**88**	46	38	51	9	12	4
3	2	2	2	3	9	26	**77**	52	30	29	27	44	42	46	48	54	76	**81**	52	25	35	11	6	4
5	3	1	3	6	8	42	**94**	51	33	35	41	40	48	45	58	49	**81**	77	46	17	26	14	10	5

AM Peak 0730 - 0830 (292), AM PHF=0.78 PM Peak 1745 - 1845 (318), PM PHF=0.90

* Thursday, September 24, 2009=3038, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
19	**14**	**5**	**6**	**12**	**33**	**101**	**244**	**205**	**106**	**133**	**158**	**131**	**126**	**190**	**220**	**232**	**273**	**238**	**172**	**162**	**142**	**75**	**41**	
6	4	1	1	0	7	17	42	**54**	34	34	37	40	34	37	47	61	49	**62**	49	52	38	18	14	6
4	3	0	3	5	11	24	**45**	42	25	37	47	38	30	44	54	66	**70**	56	54	48	42	28	11	10
4	2	2	1	2	4	22	**82**	52	28	32	29	34	29	55	53	50	**84**	57	41	37	39	19	12	3
5	5	2	1	5	11	38	**75**	57	19	30	45	19	33	54	66	55	**70**	63	28	25	23	10	4	5

AM Peak 0715 - 0815 (256), AM PHF=0.78 PM Peak 1715 - 1815 (286), PM PHF=0.85

Appendix D – Level of Service Worksheets: Existing Conditions (Scenario 1)

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	26	244	280	2	4	42
Peak Hour Factor	0.81	0.81	0.86	0.86	0.77	0.77
Hourly flow rate (vph)	32	301	326	2	5	55
Pedestrians		20	20		20	
Lane Width (ft)		11.5	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		2	2		2	
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	348				732	367
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	348				732	367
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				99	92
cM capacity (veh/h)	1191				365	657

Direction, Lane #	EB 1	EB 2	WB 1	SW 1
Volume Total	32	301	328	60
Volume Left	32	0	0	5
Volume Right	0	0	2	55
cSH	1191	1700	1700	614
Volume to Capacity	0.03	0.18	0.19	0.10
Queue Length 95th (ft)	2	0	0	8
Control Delay (s)	8.1	0.0	0.0	11.5
Lane LOS	A			B
Approach Delay (s)	0.8		0.0	11.5
Approach LOS				B

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Yield	
Grade	0%			0%	10%	
Volume (veh/h)	105	0	0	177	5	5
Peak Hour Factor	0.75	0.75	0.74	0.74	0.33	0.33
Hourly flow rate (vph)	140	0	0	239	15	15
Pedestrians	10			10	10	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			1	1	
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			150		399	160
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			150		399	160
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		97	98
cM capacity (veh/h)			1419		595	870

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	140	239	30
Volume Left	0	0	15
Volume Right	0	0	15
cSH	1700	1419	707
Volume to Capacity	0.08	0.00	0.04
Queue Length 95th (ft)	0	0	3
Control Delay (s)	0.0	0.0	10.3
Lane LOS			B
Approach Delay (s)	0.0	0.0	10.3
Approach LOS			B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	22.2%	ICU Level of Service	A
Analysis Period (min)	15		

DETAILED OUTPUT

Site: New Site - 1

Fairview Avenue/Five Canyon Parkway/Star Ridge Road
Existing Conditions: AM Peak
Roundabout

Roundabouts

Roundabout Basic Parameters
Site:New Site - 1

Intersection ID: 5
Roundabout

Cent Island Diam ft	Circ Width ft	Insc Diam. ft	No.of Circ. Lanes	No.of Entry Lanes	Av.Ent Lane Width ft	Circulating/Exiting Stream Flow veh/h	%HV	Adjust. Flow pcu/h	%Exit Incl.	Cap. Constr. Effect	O-D Factor
South: Fairview Avenue											
Environment Factor: 1.20					Entry/Circulating Flow Adjustment: Medium						
68	16	100	1	1	12.00	79	2.0	80	0	N	0.996
East: Five Canyons Road											
Environment Factor: 1.20					Entry/Circulating Flow Adjustment: Medium						
68	16	100	1	1	13.00	69	2.0	71	0	N	0.996
North: Fairview Avenue											
Environment Factor: 1.20					Entry/Circulating Flow Adjustment: Medium						
68	16	100	1	1	11.00	114	2.0	116	0	N	0.993
West: Star Ridge Road											
Environment Factor: 1.20					Entry/Circulating Flow Adjustment: Medium						
68	16	100	1	1	12.00	207	2.0	212	0	N	0.991

Roundabout Capacity Model: SIDRA Standard

Roundabout Gap Acceptance Parameters
Site:New Site - 1

Intersection ID: 5
Roundabout

Turn	Lane No.	Lane Type	Circulating/Exiting Stream Flow Rate pcu/h	Aver Speed mph	Aver In-Bnch Dist ft	Headway sec	Prop Bunched	Critical Gap Hdwy sec	Dist ft	Foll-up Headway sec
South: Fairview Avenue										
Environment Factor: 1.20					Entry/Circulating Flow Adjustment: Medium					
Left	1	Dominant	80	15.4	1013.5	2.00	0.093	6.10	138.0	2.98
Thru	1	Dominant	80	15.4	1013.5	2.00	0.093	6.22	140.5	3.04
Right	1	Dominant	80	15.4	1013.5	2.00	0.093	6.23	140.8	3.04
East: Five Canyons Road										
Environment Factor: 1.20					Entry/Circulating Flow Adjustment: Medium					
Left	1	Dominant	71	19.2	1435.7	2.00	0.082	5.81	163.4	2.98
Thru	1	Dominant	71	19.2	1435.7	2.00	0.082	5.80	163.1	2.98
Right	1	Dominant	71	19.2	1435.7	2.00	0.082	5.81	163.4	2.98
North: Fairview Avenue										
Environment Factor: 1.20					Entry/Circulating Flow Adjustment: Medium					
Left	1	Dominant	116	14.0	636.2	2.00	0.132	6.83	140.2	3.20
Thru	1	Dominant	116	14.0	636.2	2.00	0.132	6.83	140.2	3.20
Right	1	Dominant	116	14.0	636.2	2.00	0.132	6.83	140.2	3.20
West: Star Ridge Road										

4R R	7	2.0	114	2.0	116	64	0.85	631	100	0.116
West: Star Ridge Road										
5L L	16	2.0	207	2.0	212	323	0.85	1621	100	0.049
2T T	19	2.0	207	2.0	212	388	0.85	1622	100	0.049
2R R	7	2.0	207	2.0	212	151	0.85	1624	100	0.049

* Maximum degree of saturation

Lanes

Lane Performance
Site:New Site - 1

Intersection ID: 5
Roundabout

Lane No.	Flow veh/h	Cap veh/h	Deg. Satn x	Aver. Delay sec	Eff. Stop Rate	Queue 95% Back veh	Queue 95% Back ft	Lane Length ft
South: Fairview Avenue								
1 LTR	193	1063	0.181	6.3	0.51	1.3	32.9	500.0
East: Five Canyons Road								
1 LTR	223	1104	0.202	9.0	0.60	1.4	35.6	500.0
North: Fairview Avenue								
1 LTR	110	948	0.116	7.1	0.53	0.8	20.8	500.0
West: Star Ridge Road								
1 LTR	43	862	0.049	6.7	0.56	0.3	7.8	500.0

Lane Flow and Capacity Information
Site:New Site - 1

Intersection ID: 5
Roundabout

Lane No.	Dem Flow (veh/h) Lef	Thru	Rig	Tot	Min Cap veh/h	Tot Cap veh/h	Deg. Satn x	Lane Util %
South: Fairview Avenue								
1 LTR	2	51	139	193	150	1063	0.181	100
East: Five Canyons Road								
1 LTR	105	6	112	223	150	1104	0.202	100
North: Fairview Avenue								
1 LTR	44	59	7	110	110	948	0.116	100
West: Star Ridge Road								
1 LTR	16	19	7	43	43	862	0.049	100

The capacity value for priority and continuous movements is obtained by adjusting the basic saturation flow for heavy vehicle and turning vehicle effects. Saturation flow scale applies if specified.

Flow Rates and Demand Analysis

Movement Definitions and Flow Rates (O-D)

Flow Rates (Total Vehicles and Percent Heavy)
Site:New Site - 1

Intersection ID: 5
Roundabout

Mov ID	Left Total	Left %HV	Through Total	Through %HV	Right Total	Right %HV
Demand flows in veh/h as used by the program						
South: Fairview Avenue						
3L L	2	2.0	0	0.0	0	0.0
8T T	0	0.0	51	2.0	0	0.0
8R R	0	0.0	0	0.0	139	2.0
East: Five Canyons Road						
1L L	105	2.0	0	0.0	0	0.0
6T T	0	0.0	6	2.0	0	0.0
6R R	0	0.0	0	0.0	112	2.0
North: Fairview Avenue						
7L L	44	2.0	0	0.0	0	0.0
4T T	0	0.0	59	2.0	0	0.0
4R R	0	0.0	0	0.0	7	2.0
West: Star Ridge Road						
5L L	16	2.0	0	0.0	0	0.0
2T T	0	0.0	19	2.0	0	0.0
2R R	0	0.0	0	0.0	7	2.0

Unit Time for Volumes = 60 minutes
Peak Flow Period = 15 minutes
Flow Rates include effects of Flow Scale and Peak Flow Factor

Other

Model Settings
Site:New Site - 1

Intersection ID: 5
Roundabout

* Basic Parameters:
  Intersection Type: Roundabout
  Driving on the right-hand side of the road
  Input data specified in US units
  Model Defaults: US HCM (US)
  Peak Flow Period (for performance): 15 minutes
  Unit time (for volumes): 60 minutes.
  HCM Delay Model option selected
  HCM Queue Model option selected
  Level of Service based on: Delay (HCM method)
  Queue percentile: 95%

Diagnostics
Site:New Site - 1

HCM Unsignalized Intersection Capacity Analysis
1: D St & Maud Ave

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	172	149	93	126	137	119
Peak Hour Factor	0.89	0.89	0.83	0.83	0.90	0.90
Hourly flow rate (vph)	193	167	112	152	152	132

Direction, Lane #	EB 1	WB 1	WB 2	SB 1	SB 2
Volume Total (vph)	361	112	152	152	132
Volume Left (vph)	193	0	0	152	0
Volume Right (vph)	0	0	152	0	132
Hadj (s)	0.14	0.03	-0.57	0.23	-0.57
Departure Headway (s)	4.6	4.8	3.2	5.3	3.2
Degree Utilization, x	0.46	0.15	0.13	0.22	0.12
Capacity (veh/h)	759	709	1121	636	1121
Control Delay (s)	11.5	8.6	6.7	9.8	6.6
Approach Delay (s)	11.5	7.5		8.3	
Approach LOS	B	A		A	

Intersection Summary				
Delay	9.3			
HCM Level of Service	A			
Intersection Capacity Utilization	41.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	5	103	0	6	157
Peak Hour Factor	0.63	0.63	0.89	0.89	0.91	0.91
Hourly flow rate (vph)	0	8	116	0	7	173
Pedestrians	10		10			10
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	1		1			1
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	321	136			126	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	321	136			126	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	658	898			1449	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	8	116	179
Volume Left	0	0	7
Volume Right	8	0	0
cSH	898	1700	1449
Volume to Capacity	0.01	0.07	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.0	0.0	0.3
Lane LOS	A		A
Approach Delay (s)	9.0	0.0	0.3
Approach LOS	A		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	26.0%	ICU Level of Service	A
Analysis Period (min)	15		

MOVEMENT SUMMARY

Site: New Site - 1

Fairview Avenue/Five Canyon Parkway/Star Ridge Road
Existing Conditions: PM Peak
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South		Fairview Avenue			8.5	LOS A	1.3	33.3	0.36	0.69	19.7
8T	T	55	2.0	0.182	3.9	LOS A	1.3	33.3	0.36	0.37	22.4
8R	R	114	2.0	0.182	7.7	LOS A	1.3	33.3	0.36	0.59	23.0
Approach		176	2.0	0.182	6.5	LOS A	1.3	33.3	0.36	0.52	22.7
East		Five Canyons Road									
1L	L	151	2.0	0.214	11.0	LOS B	1.5	38.5	0.27	0.67	21.2
6T	T	19	2.0	0.214	5.5	LOS A	1.5	38.5	0.27	0.39	23.9
6R	R	64	2.0	0.214	7.6	LOS A	1.5	38.5	0.27	0.56	23.3
Approach		233	2.0	0.214	9.6	LOS B	1.5	38.5	0.27	0.61	21.8
North		Fairview Avenue									
7L	L	86	2.0	0.183	12.0	LOS B	1.3	34.1	0.46	0.72	21.2
4T	T	58	2.0	0.182	4.6	LOS A	1.3	34.1	0.46	0.44	21.5
4R	R	16	2.0	0.183	7.9	LOS A	1.3	34.1	0.46	0.67	19.9
Approach		160	2.0	0.183	8.9	LOS B	1.3	34.1	0.46	0.61	21.2
West		Star Ridge Road									
5L	L	14	2.0	0.042	9.9	LOS A	0.3	6.7	0.49	0.72	18.5
2T	T	16	2.0	0.042	4.9	LOS A	0.3	6.7	0.49	0.45	22.1
2R	R	2	2.0	0.042	8.5	LOS A	0.3	6.7	0.49	0.68	18.8
Approach		33	2.0	0.042	7.3	LOS A	0.3	6.7	0.49	0.58	20.2
All Vehicles		602	2.0	0.214	8.4	LOS A	1.5	38.5	0.36	0.59	21.8

Level of Service (Aver. Int. Delay): LOS A. Based on average delay for all vehicle movements. LOS Method: Delay (HCM).
Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (HCM).
Approach LOS values are based on the worst delay for any vehicle movement.
Roundabout LOS Method: Same as Signalised Intersections.
Roundabout Capacity Model: SIDRA Standard.

SIDRA INTERSECTION

Environment Factor: 1.20 Entry/Circulating Flow Adjustment: Medium

Left	1	Dominant	300	15.1	264.9	2.00	0.306	6.17	136.1	3.13
Thru	1	Dominant	300	15.1	264.9	2.00	0.306	6.17	136.1	3.13
Right	1	Dominant	300	15.1	264.9	2.00	0.306	6.04	133.4	3.07

Roundabout Capacity Model: SIDRA Standard

Dist (Distance): Spacing, i.e. distance between the front ends of two successive vehicles across all lanes in the circulating or exiting stream

Roundabout Pedestrian Effects
Site:New Site - 1

Intersection ID: 5
Roundabout

ROUNDABOUT ENTRY

Turn	Pedestrian Flow Rate	Circulating Flow Rate	Adjustment Factor
East: Five Canyons Road			
Left	5	78	0.999
Thru	5	78	0.999
Right	5	78	0.999

ROUNDABOUT EXIT

Pedestrian Flow Rate (ped/h)	Conflict Zone Length (ft)	Critical Gap (sec)	Follow-up Headway (sec)	Exit Lane Capacity (veh/h)	Total Exit Flow (veh/h)	Average Exit Flow (veh/h/lane)
East: Five Canyons Road						
5	12.00	3.00	2.00	1795	216	216

Movements

Movement Capacity Parameters
Site:New Site - 1

Intersection ID: 5
Roundabout

Mov ID		Demand Flow veh/h	HV %	Opposing Movement Flow veh/h	HV %	Adjust. Flow pcu/h	Total Cap. veh/h	Prac. Deg. Satn xp	Prac. Spare Cap. %	Lane Util %	Deg. Satn x
South: Fairview Avenue											
3L	L	7	2.0	116	2.0	119	39	0.85	370	100	0.181
8T	T	55	2.0	116	2.0	119	304	0.85	367	100	0.182
8R	R	114	2.0	116	2.0	119	628	0.85	368	100	0.182
East: Five Canyons Road											
1L	L	151	2.0	76	2.0	78	704	0.85	297	100	0.214*
6T	T	19	2.0	76	2.0	78	88	0.85	297	100	0.214*
6R	R	64	2.0	76	2.0	78	297	0.85	297	100	0.214*
North: Fairview Avenue											
7L	L	86	2.0	176	2.0	180	470	0.85	365	100	0.183
4T	T	58	2.0	176	2.0	180	316	0.85	366	100	0.182

Site:New Site - 1

Intersection ID: 5
Roundabout

From Approach	To Approach	Mov ID	Turn	Flow Rate LV	Flow Rate HV	Flow Scale Fixed	Flow Scale Var	Peak Flow Factor
South: Fairview Avenue								
	East	8R	Right	112	2	1.00	1.00	0.85
	North	8T	Thru	54	1	1.00	1.00	0.85
	West	3L	Left	7	0	1.00	1.00	0.85
East: Five Canyons Road								
	South	1L	Left	148	3	1.00	1.00	0.85
	North	6R	Right	62	1	1.00	1.00	0.85
	West	6T	Thru	18	0	1.00	1.00	0.85
North: Fairview Avenue								
	South	4T	Thru	56	1	1.00	1.00	0.85
	East	7L	Left	84	2	1.00	1.00	0.85
	West	4R	Right	16	0	1.00	1.00	0.85
West: Star Ridge Road								
	South	2R	Right	2	0	1.00	1.00	0.85
	East	2T	Thru	16	0	1.00	1.00	0.85
	North	5L	Left	14	0	1.00	1.00	0.85

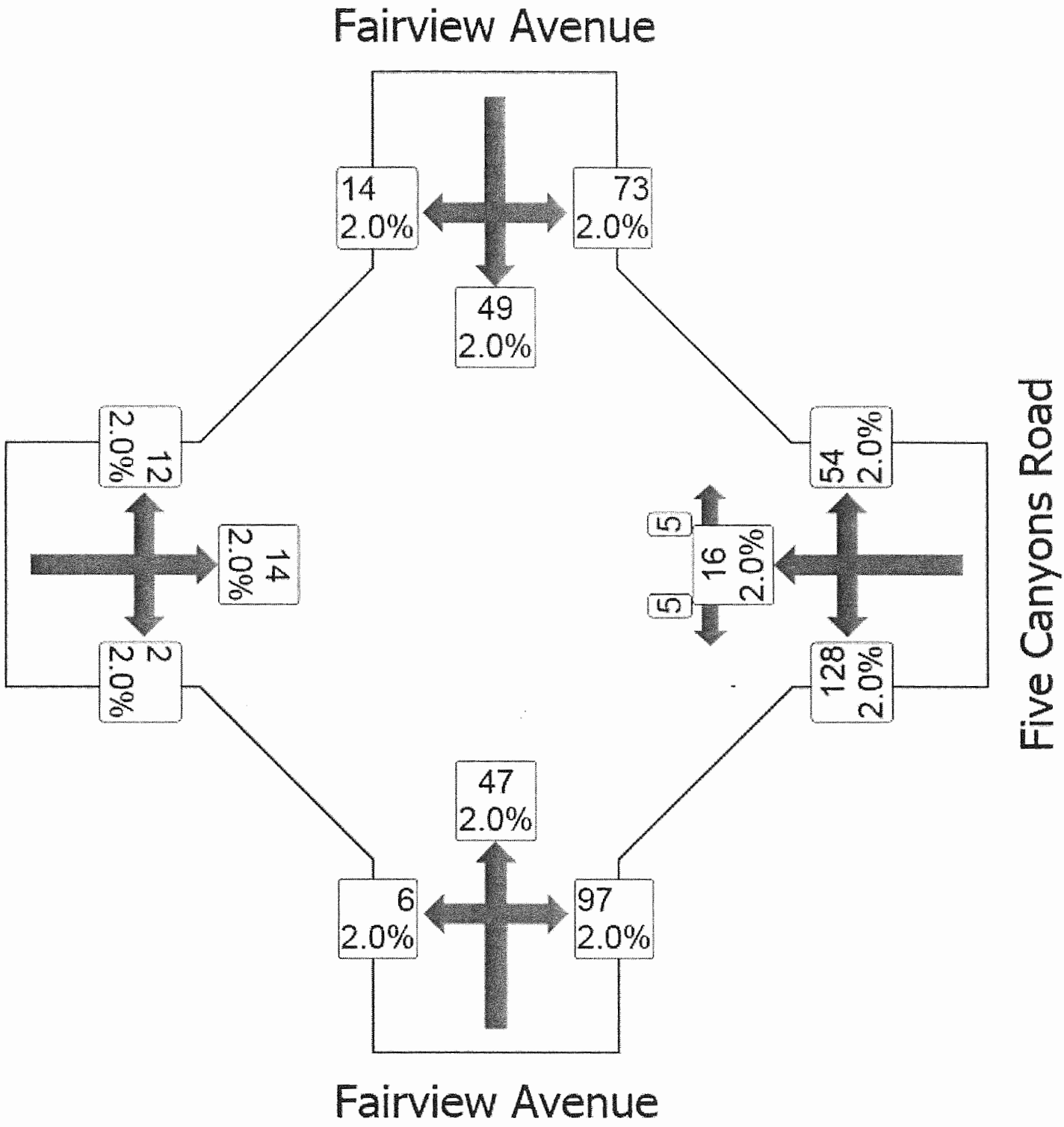
Unit Time for Volumes = 60 minutes
Peak Flow Period = 15 minutes
Flow Rates include effects of Flow Scale and Peak Flow Factor

Flow Rates (Separate Light and Heavy Vehicles)
Site:New Site - 1

Intersection ID: 5
Roundabout

Mov ID	Left		Through		Right	
	LV	HV	LV	HV	LV	HV
Demand flows in veh/h as used by the program						
South: Fairview Avenue						
3L L	7	0	0	0	0	0
8T T	0	0	54	1	0	0
8R R	0	0	0	0	112	2
East: Five Canyons Road						
1L L	148	3	0	0	0	0
6T T	0	0	18	0	0	0
6R R	0	0	0	0	62	1
North: Fairview Avenue						
7L L	84	2	0	0	0	0
4T T	0	0	56	1	0	0
4R R	0	0	0	0	16	0
West: Star Ridge Road						
5L L	14	0	0	0	0	0
2T T	0	0	16	0	0	0
2R R	0	0	0	0	2	0

Unit Time for Volumes = 60 minutes
Peak Flow Period = 15 minutes
Flow Rates include effects of Flow Scale and Peak Flow Factor


Fairview Avenue
14
2.0%
73
2.0%
49
2.0%
Star Ridge Road
12
2.0%
14
2.0%
2
2.0%
Five Canyons Road
54
2.0%
5
16
2.0%
5
128
2.0%
47
2.0%
6
2.0%
97
2.0%
Fairview Avenue

HCM Unsignalized Intersection Capacity Analysis
1: D St & Maud Ave

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	101	96	186	193	190	181
Peak Hour Factor	0.83	0.83	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	122	116	216	224	221	210

Direction, Lane #	EB 1	WB 1	WB 2	SB 1	SB 2
Volume Total (vph)	237	216	224	221	210
Volume Left (vph)	122	0	0	221	0
Volume Right (vph)	0	0	224	0	210
Hadj (s)	0.14	0.03	-0.57	0.23	-0.57
Departure Headway (s)	4.9	4.9	3.2	5.3	3.2
Degree Utilization, x	0.33	0.29	0.20	0.32	0.19
Capacity (veh/h)	694	699	1121	643	1121
Control Delay (s)	10.3	9.9	7.0	10.7	6.9
Approach Delay (s)	10.3	8.4		8.9	
Approach LOS	B	A		A	

Intersection Summary				
Delay	9.0			
HCM Level of Service	A			
Intersection Capacity Utilization	44.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	15%		0%			0%
Volume (veh/h)	0	18	214	0	7	105
Peak Hour Factor	0.50	0.50	0.75	0.75	0.59	0.59
Hourly flow rate (vph)	0	36	285	0	12	178
Pedestrians	15		15			15
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	1		1			1
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	517	315			300	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	517	315			300	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	95			99	
cM capacity (veh/h)	499	706			1245	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	36	285	190
Volume Left	0	0	12
Volume Right	36	0	0
cSH	706	1700	1245
Volume to Capacity	0.05	0.17	0.01
Queue Length 95th (ft)	4	0	1
Control Delay (s)	10.4	0.0	0.6
Lane LOS	B		A
Approach Delay (s)	10.4	0.0	0.6
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	26.0%	ICU Level of Service	A
Analysis Period (min)	15		

MOVEMENT SUMMARY

Site: New Site - 1

Fairview Avenue/Five Canyon Parkway/Star Ridge Road
Existing plus Proposed Development plus Other Development: AM Peak
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South		Fairview Avenue									
8T	T	51	2.0	0.183	3.5	LOS A	1.3	33.2	0.29	0.33	22.9
8R	R	139	2.0	0.183	7.3	LOS A	1.3	33.2	0.29	0.57	23.2
Approach		193	2.0	0.183	6.3	LOS A	1.3	33.2	0.29	0.51	23.1
East		Five Canyons Road									
1L	L	105	2.0	0.203	10.9	LOS B	1.4	35.8	0.25	0.66	21.2
6T	T	6	2.0	0.206	5.4	LOS A	1.4	35.8	0.25	0.38	24.2
6R	R	113	2.0	0.203	7.5	LOS A	1.4	35.8	0.25	0.55	23.4
Approach		224	2.0	0.203	9.0	LOS B	1.4	35.8	0.25	0.60	22.2
North		Fairview Avenue									
7L	L	48	2.0	0.120	11.3	LOS B	0.9	21.7	0.35	0.72	21.7
4T	T	59	2.0	0.120	3.9	LOS A	0.9	21.7	0.35	0.36	22.5
4R	R	7	2.0	0.120	7.5	LOS A	0.9	21.7	0.35	0.69	20.2
Approach		114	2.0	0.120	7.3	LOS B	0.9	21.7	0.35	0.54	22.0
West		Star Ridge Road									
5L	L	16	2.0	0.050	9.3	LOS A	0.3	7.9	0.42	0.70	18.8
2T	T	19	2.0	0.050	4.3	LOS A	0.3	7.9	0.42	0.40	22.4
2R	R	7	2.0	0.050	7.8	LOS A	0.3	7.9	0.42	0.66	19.2
Approach		43	2.0	0.050	6.8	LOS A	0.3	7.9	0.42	0.56	20.4
All Vehicles		573	2.0	0.206	7.6	LOS A	1.4	35.8	0.30	0.55	22.3

Level of Service (Aver. Int. Delay): LOS A. Based on average delay for all vehicle movements. LOS Method: Delay (HCM).
Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (HCM).
Approach LOS values are based on the worst delay for any vehicle movement.
Roundabout LOS Method: Same as Signalised Intersections.
Roundabout Capacity Model: SIDRA Standard.

SIDRA INTERSECTION

Environment Factor: 1.20 Entry/Circulating Flow Adjustment: Medium

Left	1	Dominant	216	15.7	383.0	2.00	0.231	6.32	145.1	3.16
Thru	1	Dominant	216	15.7	383.0	2.00	0.231	6.32	145.1	3.16
Right	1	Dominant	216	15.7	383.0	2.00	0.231	6.32	145.1	3.16

Roundabout Capacity Model: SIDRA Standard

Dist (Distance): Spacing, i.e. distance between the front ends of two successive vehicles across all lanes in the circulating or exiting stream

Roundabout Pedestrian Effects
Site:New Site - 1

Intersection ID: 5
Roundabout

ROUNDABOUT ENTRY

Turn	Pedestrian Flow Rate	Circulating Flow Rate	Adjustment Factor
East: Five Canyons Road			
Left	5	71	0.999
Thru	5	71	0.999
Right	5	71	0.999

ROUNDABOUT EXIT

Pedestrian Flow Rate (ped/h)	Conflict Zone Length (ft)	Critical Gap (sec)	Follow-up Headway (sec)	Exit Lane Capacity (veh/h)	Total Exit Flow (veh/h)	Average Exit Flow (veh/h/lane)
East: Five Canyons Road						
5	12.00	3.00	2.00	1795	206	206

Movements

Movement Capacity Parameters
Site:New Site - 1

Intersection ID: 5
Roundabout

Mov ID		Demand Flow veh/h	HV %	Opposing Movement Flow veh/h	HV %	Adjust. Flow pcu/h	Total Cap. veh/h	Prac. Deg. Satn xp	Prac. Spare Cap. %	Lane Util %	Deg. Satn x
South: Fairview Avenue											
3L	L	2	2.0	83	2.0	85	12	0.85	379	100	0.177
8T	T	51	2.0	83	2.0	85	279	0.85	364	100	0.183
8R	R	139	2.0	83	2.0	85	762	0.85	365	100	0.183
East: Five Canyons Road											
1L	L	105	2.0	69	2.0	71	518	0.85	318	100	0.203
6T	T	6	2.0	69	2.0	71	31	0.85	313	100	0.206*
6R	R	113	2.0	69	2.0	71	555	0.85	318	100	0.203
North: Fairview Avenue											
7L	L	48	2.0	114	2.0	116	399	0.85	608	100	0.120
4T	T	59	2.0	114	2.0	116	487	0.85	607	100	0.120

Site:New Site - 1

Intersection ID: 5
Roundabout

From Approach	To Approach	Mov ID	Turn	Flow Rate LV	Flow Rate HV	Flow Scale Fixed	Flow Scale Var	Peak Flow Factor
South: Fairview Avenue								
	East	8R	Right	137	3	1.00	1.00	0.94
	North	8T	Thru	50	1	1.00	1.00	0.94
	West	3L	Left	2	0	1.00	1.00	0.94
East: Five Canyons Road								
	South	1L	Left	103	2	1.00	1.00	0.94
	North	6R	Right	111	2	1.00	1.00	0.94
	West	6T	Thru	6	0	1.00	1.00	0.94
North: Fairview Avenue								
	South	4T	Thru	57	1	1.00	1.00	0.94
	East	7L	Left	47	1	1.00	1.00	0.94
	West	4R	Right	7	0	1.00	1.00	0.94
West: Star Ridge Road								
	South	2R	Right	7	0	1.00	1.00	0.94
	East	2T	Thru	19	0	1.00	1.00	0.94
	North	5L	Left	16	0	1.00	1.00	0.94

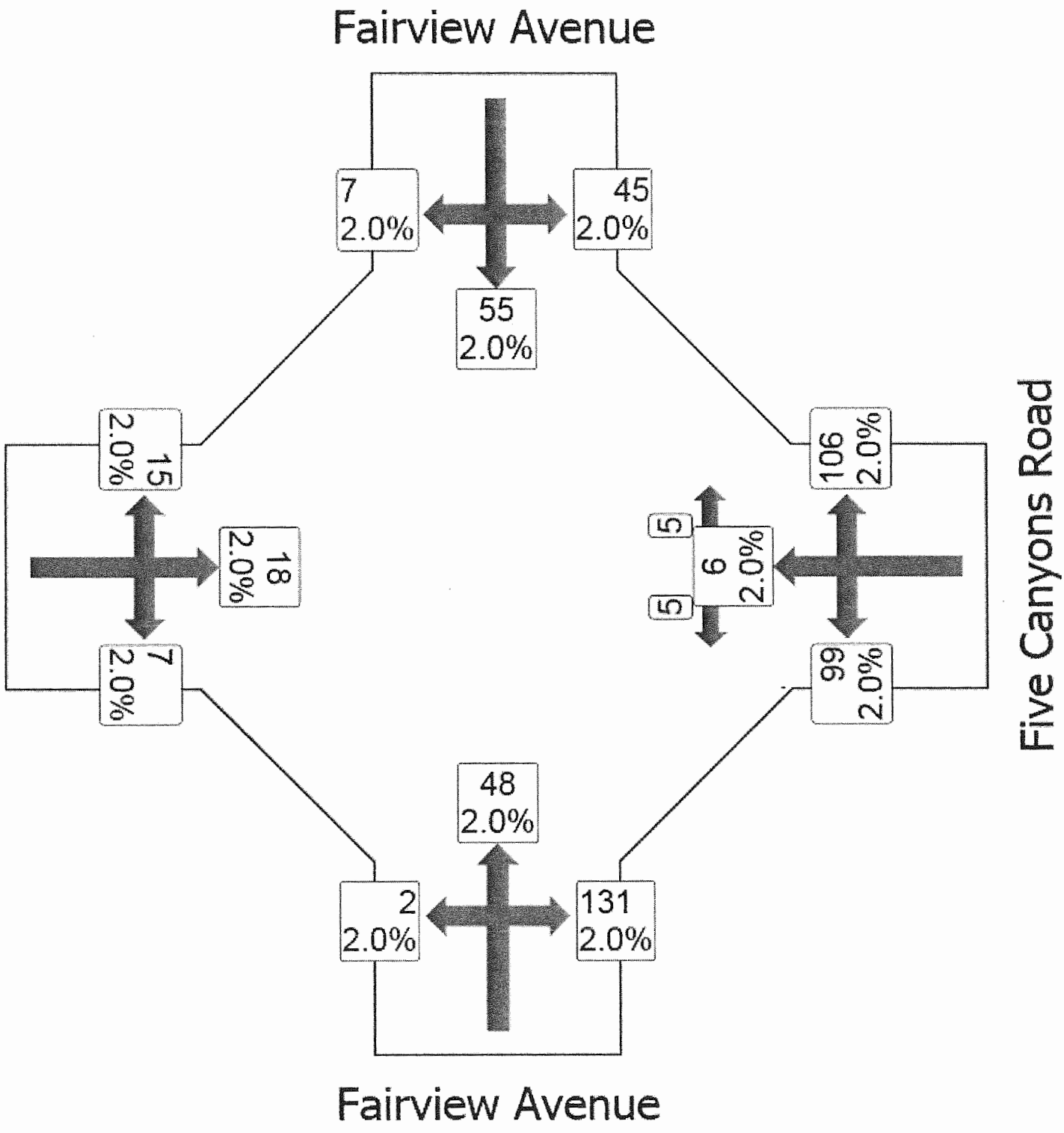
Unit Time for Volumes = 60 minutes
Peak Flow Period = 15 minutes
Flow Rates include effects of Flow Scale and Peak Flow Factor

Flow Rates (Separate Light and Heavy Vehicles)
Site:New Site - 1

Intersection ID: 5
Roundabout

Mov ID	Left		Through		Right	
	LV	HV	LV	HV	LV	HV
Demand flows in veh/h as used by the program						
South: Fairview Avenue						
3L L	2	0	0	0	0	0
8T T	0	0	50	1	0	0
8R R	0	0	0	0	137	3
East: Five Canyons Road						
1L L	103	2	0	0	0	0
6T T	0	0	6	0	0	0
6R R	0	0	0	0	111	2
North: Fairview Avenue						
7L L	47	1	0	0	0	0
4T T	0	0	57	1	0	0
4R R	0	0	0	0	7	0
West: Star Ridge Road						
5L L	16	0	0	0	0	0
2T T	0	0	19	0	0	0
2R R	0	0	0	0	7	0

Unit Time for Volumes = 60 minutes
Peak Flow Period = 15 minutes
Flow Rates include effects of Flow Scale and Peak Flow Factor


Fairview Avenue
7
2.0%
45
2.0%
55
2.0%
Star Ridge Road
15
2.0%
18
2.0%
7
2.0%
106
2.0%
5
6
2.0%
5
99
2.0%
Five Canyons Road
48
2.0%
2
2.0%
131
2.0%
Fairview Avenue

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	76	270	199	12	3	50
Peak Hour Factor	0.93	0.93	0.81	0.81	0.71	0.71
Hourly flow rate (vph)	82	290	246	15	4	70
Pedestrians		12	12		12	
Lane Width (ft)		11.5	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		1	1		1	
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	272				731	277
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	272				731	277
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				99	91
cM capacity (veh/h)	1278				357	747

Direction, Lane #	EB 1	EB 2	WB 1	SW 1
Volume Total	82	290	260	75
Volume Left	82	0	0	4
Volume Right	0	0	15	70
cSH	1278	1700	1700	703
Volume to Capacity	0.06	0.17	0.15	0.11
Queue Length 95th (ft)	5	0	0	9
Control Delay (s)	8.0	0.0	0.0	10.7
Lane LOS	A			B
Approach Delay (s)	1.8		0.0	10.7
Approach LOS				B

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	33.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Yield			Yield	
Grade		0%			0%			0%			0%	
Volume (veh/h)	8	167	9	5	123	0	7	0	5	0	0	5
Peak Hour Factor	0.92	0.89	0.89	0.82	0.82	0.92	0.38	0.92	0.38	0.92	0.92	0.92
Hourly flow rate (vph)	9	188	10	6	150	0	18	0	13	0	0	5
Pedestrians		6			6			6				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		1			1			1				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	150			204			390	378	205	391	383	156
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	150			204			390	378	205	391	383	156
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			97	100	98	100	100	99
cM capacity (veh/h)	1431			1361			554	545	828	549	542	885

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	206	156	32	5
Volume Left	9	6	18	0
Volume Right	10	0	13	5
cSH	1431	1361	642	885
Volume to Capacity	0.01	0.00	0.05	0.01
Queue Length 95th (ft)	0	0	4	0
Control Delay (s)	0.4	0.3	10.9	9.1
Lane LOS	A	A	B	A
Approach Delay (s)	0.4	0.3	10.9	9.1
Approach LOS			B	A

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		

DETAILED OUTPUT

Site: New Site - 1

Fairview Avenue/Five Canyon Parkway/Star Ridge Road
Existing plus Proposed Development plus Other Development: PM Peak
Roundabout

Roundabouts

Roundabout Basic Parameters
Site:New Site - 1

Intersection ID: 5
Roundabout

Cent Island Diam	Circ Width	Insc Diam.	No.of Circ. Lanes	No.of Entry Lanes	Av.Ent Lane Width	Circulating/Exiting Stream Flow	%HV	Adjust. Flow	%Exit Incl.	Cap. Constr. Effect	O-D Factor
ft	ft	ft			ft	veh/h		pcu/h			
South: Fairview Avenue Environment Factor: 1.20 Entry/Circulating Flow Adjustment: Medium											
68	16	100	1	1	12.00	119	2.0	121	0	N	0.990
East: Five Canyons Road Environment Factor: 1.20 Entry/Circulating Flow Adjustment: Medium											
68	16	100	1	1	13.00	76	2.0	78	0	N	0.994
North: Fairview Avenue Environment Factor: 1.20 Entry/Circulating Flow Adjustment: Medium											
68	16	100	1	1	11.00	176	2.0	180	0	N	0.989
West: Star Ridge Road Environment Factor: 1.20 Entry/Circulating Flow Adjustment: Medium											
68	16	100	1	1	12.00	296	2.0	302	0	N	0.984

Roundabout Capacity Model: SIDRA Standard

Roundabout Gap Acceptance Parameters
Site:New Site - 1

Intersection ID: 5
Roundabout

Turn	Lane No.	Lane Type	Circulating/Exiting Stream Flow Rate pcu/h	Aver Speed mph	Aver In-Bnch Dist ft	Headway sec	Prop Bunched	Critical Gap Hdwy sec	Dist ft	Foll-up Headway sec
South: Fairview Avenue Environment Factor: 1.20 Entry/Circulating Flow Adjustment: Medium										
Left	1	Dominant	121	14.6	636.8	2.00	0.137	6.39	137.0	3.14
Thru	1	Dominant	121	14.6	636.8	2.00	0.137	6.38	136.8	3.14
Right	1	Dominant	121	14.6	636.8	2.00	0.137	6.39	137.0	3.14
East: Five Canyons Road Environment Factor: 1.20 Entry/Circulating Flow Adjustment: Medium										
Left	1	Dominant	78	19.1	1290.3	2.00	0.091	5.81	162.4	2.99
Thru	1	Dominant	78	19.1	1290.3	2.00	0.091	5.80	162.2	2.98
Right	1	Dominant	78	19.1	1290.3	2.00	0.091	5.81	162.4	2.99
North: Fairview Avenue Environment Factor: 1.20 Entry/Circulating Flow Adjustment: Medium										
Left	1	Dominant	180	14.4	421.6	2.00	0.196	6.71	141.5	3.17
Thru	1	Dominant	180	14.4	421.6	2.00	0.196	6.71	141.5	3.17
Right	1	Dominant	180	14.4	421.6	2.00	0.196	6.71	141.5	3.17
West: Star Ridge Road										

4R R	16	2.0	176	2.0	180	89	0.85	359	100	0.185
West: Star Ridge Road										
5L L	14	2.0	296	2.0	302	336	0.85	1923	100	0.042
2T T	16	2.0	296	2.0	302	392	0.85	1923	100	0.042
2R R	2	2.0	296	2.0	302	56	0.85	1923	100	0.042

* Maximum degree of saturation

Lanes

Lane Performance
Site:New Site - 1

Intersection ID: 5
Roundabout

Lane No.	Flow veh/h	Cap veh/h	Deg. Satn x	Aver. Delay sec	Eff. Stop Rate	Queue 95% Back veh	Queue 95% Back ft	Lane Length ft
South: Fairview Avenue								
1 LTR	176	967	0.182	6.6	0.52	1.3	33.4	500.0
East: Five Canyons Road								
1 LTR	239	1091	0.219	9.6	0.61	1.6	39.7	500.0
North: Fairview Avenue								
1 LTR	162	876	0.185	9.0	0.62	1.4	34.7	500.0
West: Star Ridge Road								
1 LTR	33	783	0.042	7.3	0.59	0.3	6.7	500.0

Lane Flow and Capacity Information
Site:New Site - 1

Intersection ID: 5
Roundabout

Lane No.	Dem Flow (veh/h) Lef	Thru	Rig	Tot	Min Cap veh/h	Tot Cap veh/h	Deg. Satn x	Lane Util %
South: Fairview Avenue								
1 LTR	7	55	114	176	150	967	0.182	100
East: Five Canyons Road								
1 LTR	151	19	69	239	150	1091	0.219	100
North: Fairview Avenue								
1 LTR	88	58	16	162	150	876	0.185	100
West: Star Ridge Road								
1 LTR	14	16	2	33	33	783	0.042	100

The capacity value for priority and continuous movements is obtained by adjusting the basic saturation flow for heavy vehicle and turning vehicle effects. Saturation flow scale applies if specified.

Flow Rates and Demand Analysis

Movement Definitions and Flow Rates (O-D)

Flow Rates (Total Vehicles and Percent Heavy)
Site:New Site - 1

Intersection ID: 5
Roundabout

Mov ID		Left Total	Left %HV	Through Total	Through %HV	Right Total	Right %HV
Demand flows in veh/h as used by the program							
South: Fairview Avenue							
3L	L	7	2.0	0	0.0	0	0.0
8T	T	0	0.0	55	2.0	0	0.0
8R	R	0	0.0	0	0.0	114	2.0
East: Five Canyons Road							
1L	L	151	2.0	0	0.0	0	0.0
6T	T	0	0.0	19	2.0	0	0.0
6R	R	0	0.0	0	0.0	69	2.0
North: Fairview Avenue							
7L	L	88	2.0	0	0.0	0	0.0
4T	T	0	0.0	58	2.0	0	0.0
4R	R	0	0.0	0	0.0	16	2.0
West: Star Ridge Road							
5L	L	14	2.0	0	0.0	0	0.0
2T	T	0	0.0	16	2.0	0	0.0
2R	R	0	0.0	0	0.0	2	2.0

Unit Time for Volumes = 60 minutes
Peak Flow Period = 15 minutes
Flow Rates include effects of Flow Scale and Peak Flow Factor

Other

Model Settings
Site:New Site - 1

Intersection ID: 5
Roundabout

* Basic Parameters:
  Intersection Type: Roundabout
  Driving on the right-hand side of the road
  Input data specified in US units
  Model Defaults: US HCM (US)
  Peak Flow Period (for performance): 15 minutes
  Unit time (for volumes): 60 minutes.
  HCM Delay Model option selected
  HCM Queue Model option selected
  Level of Service based on: Delay (HCM method)
  Queue percentile: 95%

Diagnostics
Site:New Site - 1

APPENDIX I

TJKM Transportation Consultants

Letter Report Re: Sight Distance Evaluation on Fairview Avenue at the Project Driveway

TJKM

Vision That Moves Your Community

Transportation
Consultants

August 10, 2010

Mr. Jared Frey, P.E.
Project Engineer, RJA
4690 Chabot Drive, Suite 200
Pleasanton, CA, 94588

Subject: Sight Distance Evaluation on Fairview Avenue at the Project Driveway in Castro Valley

Dear Mr. Frey,

TJKM has completed an evaluation of the sight distance at the proposed project driveway on Fairview Avenue in Castro Valley.

Background

The purpose of this letter report is to provide an evaluation of the sight distance at the proposed project driveway on Fairview Avenue.

Fairview Avenue is a two-lane roadway traveling in the east west direction at the driveway. The westbound direction has a down grade of 6 to 10 percent. The roadway width varies from about 24 to 28 feet wide with curb and gutter on the side opposite the project frontage. The project frontage has a dirt shoulder.

The existing speed limit is 30 miles per hour (mph). An electronic speed radar sign is installed near the proposed project driveway for the westbound traffic traveling around the curve and the down grade.

Fairview Avenue has several driveways along the road to the east and to the west of the project driveway on both sides of the road.

The stopping sight distance required for 30 mph speed is 200 feet based on the Caltrans Highway Design Manual. The distance is increased by 20 percent for downgrades of greater than 3 percent. For the project driveway, the stopping sight distance based on the Highway Design Manual is 240 feet for the westbound down grade approach.

Summary of Findings

Based on an evaluation of the sight distance at the proposed project driveway, the findings are as listed below.

- Under existing conditions, the sight distance exceeds the requirement of 240 feet based on the Highway Design Manual.
- The sight distance from the project driveway of westbound traffic is measured to be about 330 feet.
- The sight distance from the project driveway of eastbound traffic is measured to be about 450 feet.

Pleasanton
3875 Hopyard Road
Suite 200
Pleasanton, CA
94588-8526
925.463.0611
925.463.3690 fax

Fresno
516 W. Shaw Avenue
Suite 200
Fresno, CA
93704-2515
559.325.7530
559.221.4940 fax

Sacramento
980 Ninth Street
16th Floor
Sacramento, CA
95814-2736
916.449.9095

Santa Rosa
1400 N. Dutton Avenue
Suite 21
Santa Rosa, CA
95401-4643
707.575.5800
707.575.5888 fax

tjkm@tjkm.com
www.tjkm.com

In the first photo, the proposed location of the project driveway is at the far left edge at the asphalt driveway. The view is uphill and shows the downgrade and the curves that limit the sight distance at the top of the hill. The second photo shows the downhill view with the proposed driveway not quite in view.

Evaluation

TJKM made field observations and measurements at the project location during the afternoon on August 5, 2010. Photos were taken of Fairview Avenue both in the eastbound direction and westbound direction. Field measurements were made for sight distances for both directions from the project driveway.

The posted 30 mph speed limit appears to be appropriate from the observed traffic speeds of cars during the afternoon for both directions on Fairview Avenue. The electronic speed radar sign for westbound traffic seems to be effective to alert drivers of their speeds traveling around the curve and the down grade.

The measured sight distance from the proposed driveway of westbound traffic is about 330 feet where the road curves on the downgrade.

The measured sight distance from the proposed driveway of the eastbound traffic is about 450 feet. The driveway for homes with street numbers 24779 and 24783 is about 380 feet from the project.

Thank you for the opportunity to provide this evaluation. Please contact us with your comments and/or questions.

Sincerely,

Stephen Au, P.E.
Project Manager

Jeff Lacap
Project Engineer

APPENDIX J

East Bay Municipal Utilities District (EBMUD)

"Will Serve" Letter

,

EAST BAY
MUNICIPAL UTILITY DISTRICT

SENT by E-MAIL – ntaylor@lamphier-gregory.com

August 18, 2011

Nathaniel H. Taylor
Lamphier-Gregory
1944 Embarcadero
Oakland, CA 94606

Re: 24850 Fairview Avenue, Hayward (approximate)
APN#: 417-260-004 and 417-270-009

Dear Mr. Taylor:

Water service to the subject property will be available contingent upon compliance with the District's Regulations governing water service and Schedule of Rates and Charges.

If you have any questions, please call me at (510) 287-1008.

Sincerely,

Sara Cleveland

SARA CLEVELAND
Administrative Secretary II
New Business Office

/spc

Appendix K:

Nelda Metheny, Consulting Arborist, letter to Gary Brooks, Northbrook Homes,

Protected Trees, Tract 8057, Alameda Co.

August 25, 2011

Gary Brooks
Northbrook Homes
4456 Black Ave., Suite 200
Pleasanton, CA 94566

Subject: Protected Trees, Tract 8057, Alameda Co.

Dear Gary,
You asked that we inspect the vegetation at the subject site and determine if there were any trees that require protection during development of the property. We visited the site on Aug. 23. Following is a summary of our findings.

The Fairview Area Specific Plan (adopted by the County Board of Supervisors Sept 14, 1997) protects large, mature trees that are defined as: trees "native to this area of California" that are 20" or greater in diameter and introduced species 30" or greater in diameter measured at 4.5 feet above ground level.

There are three trees that meet the definition for protected trees: three mature Monterey cypress (*Cupressus macrocarpa*) (photos 1 and 2). While native to California, they are not native to this area. These trees are located on the south end of the property. The Preliminary Grading Plan (RJA Aug. 1, 2011) indicates Street A will be placed between the tree in photo 1 and the group in photo 2. The graded slope is through the trunk of the failed tree and will remove it. To preserve the two trees on the west side of the road, adjust the grading so that natural grade is maintained within the dripline of the group.

Photo 1: 35" Monterey cypress has failed and should be removed.

Photo 2: Two Monterey cypress trees, 30" and 37" in diameter.

Outside the east property line several feet there is a group of large, mature blue gums (Eucalyptus globulus) (Photo 3). These would be impacted by grading for Street A. I recommend adjusting the grading so that natural grade is maintained within the driplines of these trees.

Specifications for tree protection and care during grading and construction can be prepared upon request.

The Fairview Area Specific Plan requires replacement of the one Monterey cypress that will be removed with at least five 15 gallon sized trees or one boxed, native specimen tree. The species, location and method of installation must be approved by County Planning Director.

Sincerely,

Nelda Matheny
Consulting Arborist

Photo 3: Off-site blue gums.

Appendix L:

Letter from Leslie Zander, Zander Associates and Jeff Olberding, Olberding Environmental, Inc., to Nat Taylor, Lamphier-Gregory re: *Wetland Review Follow Up Borel Bank Property Fairview District, Alameda County,* February 16, 2012.

ZANDER ASSOCIATES

Environmental Consultants

February 16, 2012

Nat Taylor
Lamphier-Gregory
1944 Embarcadero
Oakland, CA 94606

Wetland Review Follow Up
Borel Bank Property
Fairview District, Alameda County

Dear Nat:

Yesterday, Jeff Olberding and I met on the Borel Bank Property in the Fairview District of Alameda County, California to look for and further describe the potential seasonal wetland areas that were identified in the Biological Resources Analysis Report prepared for the property by Olberding Environmental, Inc. June, 2010. The purpose of our visit was to first, confirm the presence of potential seasonal wetlands and second, if present, map and measure the extent of the potential wetland.

We found one area of ponded water at the top of the property near Karina Street within proposed Lot 9. This presumably is the seasonal wetland feature near the western property boundary that is referenced in the June 2010 report. The area is underlain by fill and no vegetation was present within the ponded area but grasses are germinating around the perimeter. The area measures approximately 18 feet by 60 feet (1,080 square feet). Further examination of the ponded area later in the growing season will provide data necessary to determine whether or not it may be subject to U.S. Army Corps of Engineers' jurisdiction. However, for purposes of the IS/MND, we can require a determination be made prior to initiation of construction and if it is a jurisdictional wetland, recommend mitigation. Mitigation could be provided through re-creation of similar habitat in areas to remain open on the site.

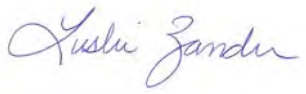
Jeff and I did not observe the other two seasonal wetland features referenced in the June 2010 report; the one near the eastern property boundary and the wetland seep on the northern facing hillside. In the northeastern portion of the property, there is a relatively steep swale that slopes towards the east and eventually heads offsite (vicinity of Lots 10 and 11). There is no defined channel in this swale and we did not observe any wetland areas in this feature. Just offsite and to the east, the swale flattens out a little and hits a dirt road that runs around the headwater of a steeply incised channel associated with a tributary to one of the main drainages on the Five Canyons property to the north. The swale is not directly connected to this drainage. There are large eucalyptus, some Monterey pine and bay trees in this area, none of which are rooted on the Borel Bank property.

4460 Redwood Hwy, Suite 16-240 *telephone: (415) 897-8781*
San Rafael, CA 94903 *fax: (415) 814-4125*

The ditch/erosional gully that occurs on the PG&E property where the access road for the project is proposed was also examined during our site visit. Jeff and I agreed that this feature measures approximately 1.5 feet in width for a distance of approximately 80 linear feet. It appears this area will not be disturbed for construction of the project and therefore the question of whether or not it may be subject to Corps jurisdiction does not need to be resolved for the IS/MND. No mitigation for this feature is necessary.

Should you have any questions regarding the results of out site visit yesterday or my recommendations provided herein, please don't hesitate to call me.

Sincerely,



Leslie Zander
Principal Biologist

Reviewed and Accepted:

Jeff Olberding
Olberding Environmental, Inc.