

**RECEIVED**

2:29 pm, Apr 27, 2009

Alameda County  
Environmental Health

**WORK PLAN FOR  
ADDITIONAL SOIL AND GROUNDWATER INVESTIGATION**

**A&C Auto Service  
186 E. Lewelling Boulevard  
San Lorenzo, California**

**Prepared for  
Mr. Carl Graffenstatte**

**Prepared by  
Sierra Environmental, Inc.**

**April 17, 2009  
Project 09-137.07**



**Sierra Environmental, Inc.**  
*Environmental Consultants*

**April 15, 2009**  
**Project 09-137.07**

**Mr. Carl Graffenstatte**  
**P.O. Box 1295**  
**Eatonville, WA 98328**

**Subject: Work Plan For Additional Soil and Groundwater Investigation, A&C  
Auto Service, 186 E. Lewelling Boulevard, San Lorenzo, California**

**Dear Mr. Graffenstatte:**

Sierra Environmental, Inc. (Sierra) is pleased to submit this work plan describing scope of proposed additional soil and groundwater investigation for the subject property, hereafter, referred to as Site. Site location is shown in Figure 1. Mr. Steven Plunkett of Alameda County Health Care Services Agency (ACHCS) requested the work plan in his letter dated December 29, 2008. Mr. Plunkett requested the followings to be addressed in the work plan:

- Explanation for possible influence of off-site groundwater usage on plume migration pattern.
- Define vertical extent of soil contamination beyond 20 feet below ground surface (bgs) near MW-3.
- Define lateral extent of dissolved phase contamination plume.
- Use environmental screening levels (ESLs) designated for residential in an area where groundwater is or will have beneficial usage.
- Evaluate potential risk of groundwater impact to San Lorenzo Creek.
- Provide extended Site map utilizing aerial photos as base map showing nearby structures and roads.
- Provide non-detect (ND) analytical data in less than laboratory detection limits.

## **SITE BACKGROUND INFORMATION**

Please refer to Appendix A for the Site background information.

---

980 W. Taylor Street  
San Jose, CA 95126  
Phone (408) 971-6758  
Fax (408) 971-6759

---

## **OBJECTIVE**

The objective of the work is to (1) delineate vertical extend of soil contamination near MW-3, and the former underground storage tank (UST) complex, (2) delineate extend of the dissolved gasoline plume in groundwater, and (3) evaluate potential risk of groundwater impact to San Lorenzo Creek.

To achieve the above objectives, Sierra proposes to perform the following tasks:

### **Task 1 - PREFIELD ACTIVITIES**

After obtaining ACHCS approval of this work plan, Sierra will obtain encroachment/property access authorization from private properties located southwest and west of the Site. Sierra will obtain drilling permits from Alameda County Department of Public Work (ACDPW). Sierra will mark boring locations, coordinate with a State-licensed drilling contractor, a State-certified analytical laboratory, ACHCS, ACDPW, and the client to start the field activities. Sierra will prepare a health and safety plan for its employees and sub-contractors. Sierra will notify Underground Services Alert (USA) to clear underground utilities. Sierra will prepare necessary equipment and materials, before starting the drilling activities.

#### **Groundwater Usage in City of Hayward**

In his letter, Mr. Plunket requested clarifications related to groundwater usage in Hayward, and its possible influence on plume migration pattern.

In its September 18, 2007, Subsurface Investigation & SCM report, Sierra indicated that here is very little current use of groundwater in the East Bay Plain for drinking water purposes. However, parts of East Bay Plain may be used for domestic uses in the future. Appendix B presents information related to water supply by source for the city of Hayward. It indicates that no local groundwater is used for drinking. However, there are 5 wells that are standby for emergency usage.

Available private well information identified 19 irrigation, wells within 1-mile radius of the Site. Depths of the wells range 27- 616 feet bgs. The closest wells to the Site are 2 wells located at San Lorenzo High school, within 1/8-mile west/northwest of the Site, and Kawahara Nursery, Inc. located at 16550 Ashland Avenue, approximately 300 feet north/northeast of the Site. The wells at San Lorenzo High school are 610 and 616 feet deep. The well at Kawahara Nursery is 65 feet deep. The influence of groundwater usage of

the deeper wells on shallow groundwater flow pattern at the Site is unlikely. Shallower irrigation wells near the Site such as the one in Kawahara Nursery may have an influence on variation of groundwater flow direction pattern at the Site. However, based on the dissolved contaminant concentrations in groundwater samples collected at and near the Site (Figure 3), dominant groundwater flow direction appears to be toward west/southwest.

## **Task 2 - PROPOSED ADDITIONAL SUBSURFACE INVESTIGATION**

### **Delineate vertical Extent of the Soil Contamination At The Source Areas**

In his letter, Mr. Plunket indicated that up to 110 mg/kg total petroleum hydrocarbons as gasoline (TPHG) was detected in the soil samples collected at 19.5 feet bgs at monitoring well MW-3. Consequently, he requested to define extend of soil contamination in the source area, below 20 feet bgs. Sierra does not have the information related to soil contamination conditions at the monitoring wells as they were constructed by CET. However, available information to Sierra indicates that up to 4,000 mg/kg TPHG was detected in the soil samples collected from beneath the former gasoline tanks at the Site. During its May 15 and 29, 2007, soil and groundwater sampling at and near the Site, Sierra encountered shallow groundwater at 16-20 feet bgs. Therefore, vertical extend of soil contamination in the source areas is to the saturated zone. However, Sierra does no have accurate and up-to-date information related to the concentrations of contaminants in unsaturated zone at the source areas (former UST excavation and MW-3). Therefore, Sierra proposes to advance one boring (SB-7) at the former UST, and one (SB-8) near MW-3 (former pump island area) to characterize soil condition in these areas. The depth of the borings will be approximately 20-25 feet, or within 5 feet through the saturated zone. The proposed boring locations are shown in Figure 3.

Sierra proposes using a Geoprobe™ direct push equipment for soil sampling at SB-7 and SB-8. The boring locations are shown in Figure 3. Geoprobe™ is mounted on a truck. The drilling equipment consists of a hollow barrel (4 feet long) lined with a clean plastic tube (also 4-foot long) and attached to steel rods. The barrel penetrates into the soil by a hydraulic hammer. After collecting soil in the plastic tubes, Sierra will inspect the soil for any odor or stain, and its physical characteristics will be documented in boring logs. They will also be screened with photo ionization detector (PID) for presence

of volatile petroleum hydrocarbons. Sierra will submit soil samples collected at 5-foot intervals starting 5 feet bgs to the saturated zone for chemical analysis. Approximately 6 inches of the plastic tube will be cut, sealed with Teflon<sup>®</sup> tape and plastic end caps, labeled, and placed on ice in a cooler, before being delivered to analytical laboratory.

### **Delineate Lateral Extent of the Groundwater Contamination**

The 2007 subsurface investigation results showed no impact to groundwater east and south of the former UST complex (soil boring SB-2 and SB-4). Additionally, analytical results for water samples collected from MW-1 located northwest of the former UST area also show little or no impact in groundwater of this area. However, historical soil borings located west and southwest of the source areas shown higher concentrations of the gasoline constituents (Figure 3) suggesting that dominant groundwater flow direction at and near the Site is toward west/southwest. Therefore, Sierra proposes to use direct push drilling method to collect grab groundwater samples at off-site borings advanced west and southwest of the Site along the dominant groundwater flow directions.

Sierra will also use a Geoprobe<sup>™</sup> direct push equipment for groundwater sampling at 5 off-site soil borings (SB-9 through SB-13). The boring locations are shown in Figure 3. The soil sampling procedures will be the same as explained above. However, Sierra does not anticipate encountering contamination in unsaturated zone in the off-site soil borings. Therefore, Sierra will not collect any soil samples for chemical analysis. Otherwise, if contamination will be encountered in this zone, Sierra will collect soil sample(s) for chemical analysis.

Sierra will collect a grab groundwater sample from each boring for chemical analysis. The borings will be advanced to approximately 20-25 feet bgs extending to the saturated zone. A hollow shaft with an adjustable cone or 1-inch diameter slotted and solid PVC pipe will be used to collect the groundwater samples. After reaching groundwater, the shaft will be pulled up where a separation between the shaft and the cone allowed for groundwater to enter into a stainless steel perforated barrel in the shaft, or PVC pipes will be inserted into the boring to collect groundwater for sampling. A Teflon<sup>®</sup> tube equipped with a small ball valve at the tip of the tube, acting as bailer, will be placed inside of the perforated pipe to collect groundwater samples. The groundwater will be collected by making up and down motions on the Teflon<sup>®</sup> tube. After collection, the groundwater from each well will be transferred into clean volatile organic analysis (VOA) vials and 1-liter amber glass jars. The vials will be sealed with Teflon<sup>®</sup>-septum

screw caps; the glass jars will be sealed with Teflon®-lined plastic screw caps, labeled, placed in a cooler, and delivered to laboratory with chain-of-custody documentation.

After collecting the soil (if any) and groundwater samples, driller will seal the borings with Portland cement grout.

All Geoprobe® and sampling equipment will be washed with Liquinox® (a phosphate-free laboratory detergent) and rinsed with clean tap water at each sampling interval.

### **Task 3 - LABORATORY TESTING AND CHEMICAL ANALYSIS**

Soil and groundwater samples will be analyzed for TPHG using the United State Environmental Protection Agency (EPA) method 8260B, GC-MS. They will also be analyzed for, benzene, toluene, ethylbenzene, and xylenes (BTEX), and the fuel oxygenates also using EPA method 8260B. Sierra will also have the samples analyzed for total petroleum hydrocarbons as diesel (TPHD) using modified EPA method 8015.

The samples will be analyzed by an independent State-certified analytical laboratory.

### **Task 4 - REPORT PREPARATION AND SUBMITTAL**

Sierra will prepare a report documenting the field observations, and include soil boring logs, the analytical results, and recommendations. Sierra will use the results in comparison with the environmental screening levels (ESLs) designated for residential in an area where groundwater is or will have beneficial usage. Sierra will evaluate potential risk of groundwater impact to San Lorenzo Creek, and will provide non-detect (ND) analytical data in the form of less than laboratory detection limits.

Sierra will submitted the report to the client and representative of the ACHCS. Sierra will also convert the report to electronic format and submit to the State GeoTracker database.

Sierra will discuss data gaps (if any) and make recommendations.

Please feel welcome to call us if you have questions.

**Very Truly Yours,**  
**Sierra Environmental, Inc.**



APR 22 - 2009

**Reza Baradaran, PE, GE**

A large, stylized handwritten signature in black ink, which appears to read "Mitch Hajlaghal".

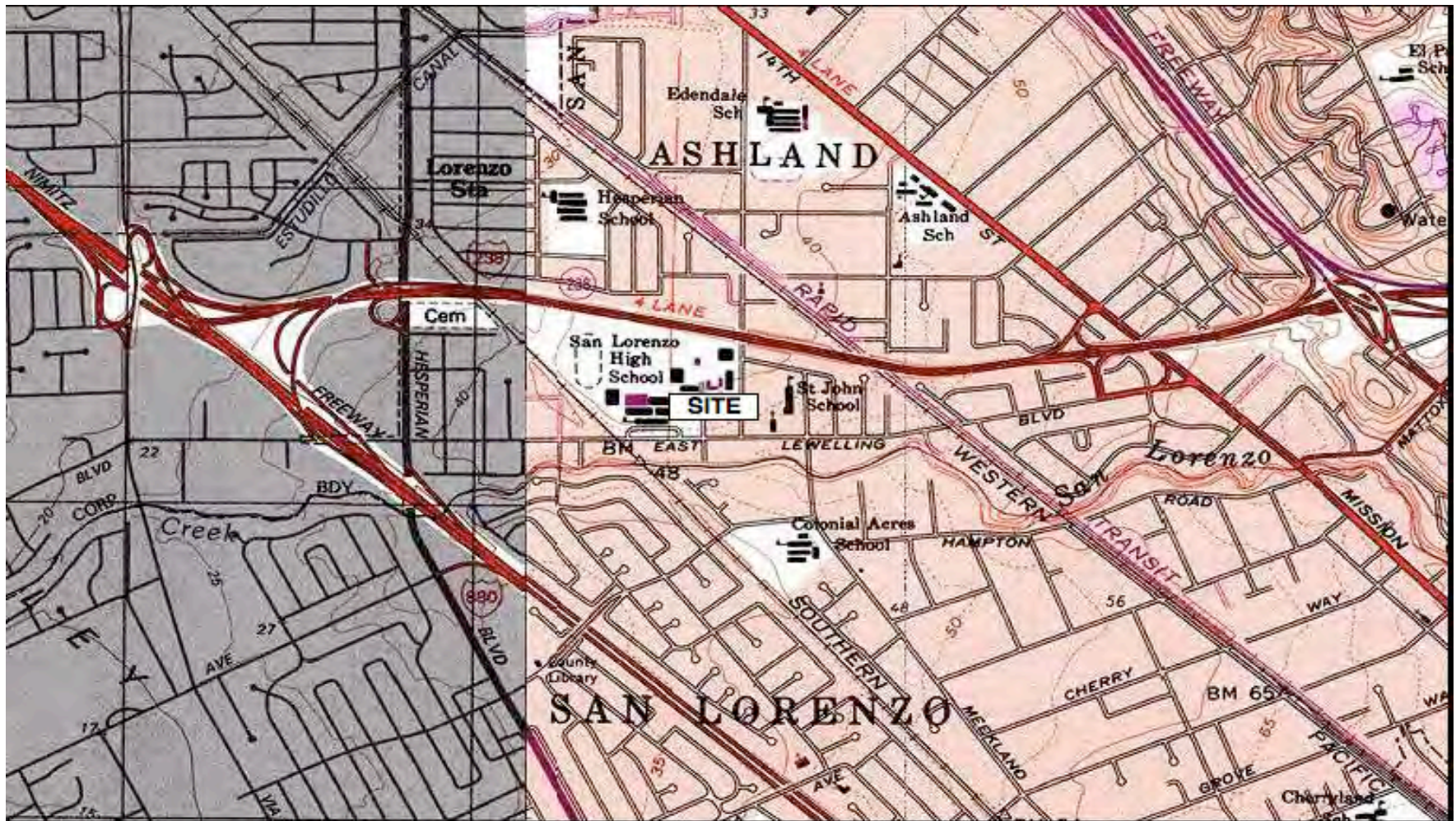
**Mitch Hajlaghal, REA II, CAC**  
**Principal**

Enclosures:

Figure 1	-	Site Location
Figure 2	-	On-Site Groundwater Monitoring Wells Locations
Figure 3	-	Proposed Soil Boring Locations
Appendix A	-	Site Background Information
Appendix B	-	Water Supply By Source For The City Of Hayward

CC: Mr. Steven Plunkett, ACHCS (1 Copy)





TN ★ MN  
15°

0 0.5 1 MILE  
0 1000 FEET 0 500 1000 METERS

Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)



**SIERRA ENVIRONMENTAL, INC.**  
*Environmental Consultants*

980 W. Taylor Street, San Jose, CA 95126  
Phone [408] 971-6758 • Fax [408] 971-6759

### SITE LOCATION MAP

Work Plan For Additional Soil And Groundwater Investigation  
**A&C Auto Service**

**186 E. Lewelling Boulevard • San Lorenzo • California**

**FIGURE**

**1**

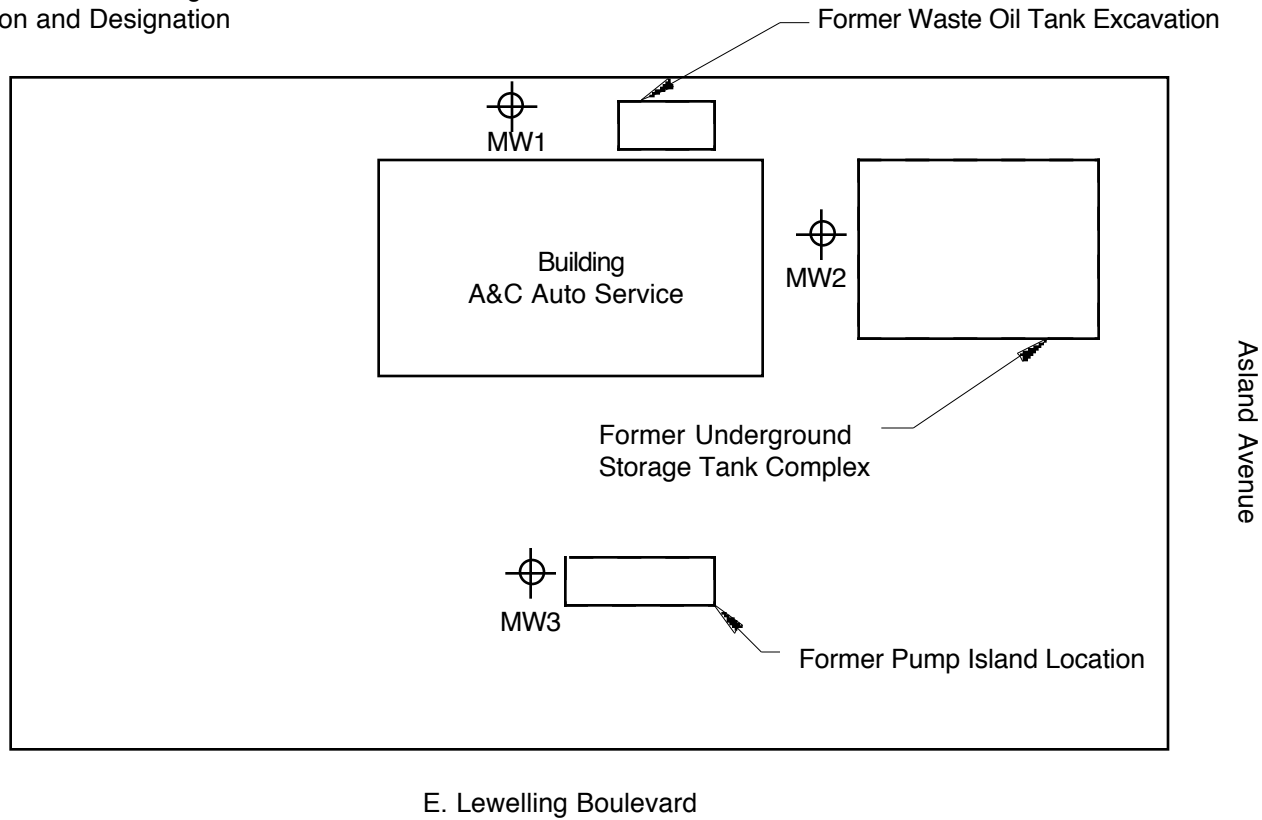
April 15 2009  
Project 09-137.07



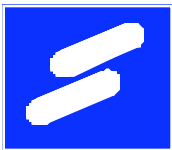
**LEGEND**

 MW1

Groundwater Monitoring Well  
Location and Designation



Approximate Scale: 1" = 20'



**SIERRA ENVIRONMENTAL, INC.**  
*Environmental Consultants*

980 W. Taylor Street, San Jose, CA 95126  
Phone [408]971-6758 • Fax [408] 971-6759

**Groundwater Monitoring Well Locations**

**Work Plan For Additional Soil And Groundwater Investigation  
A & C Auto Service**

**186 E. Lewelling Boulevard, San Lorenzo,**

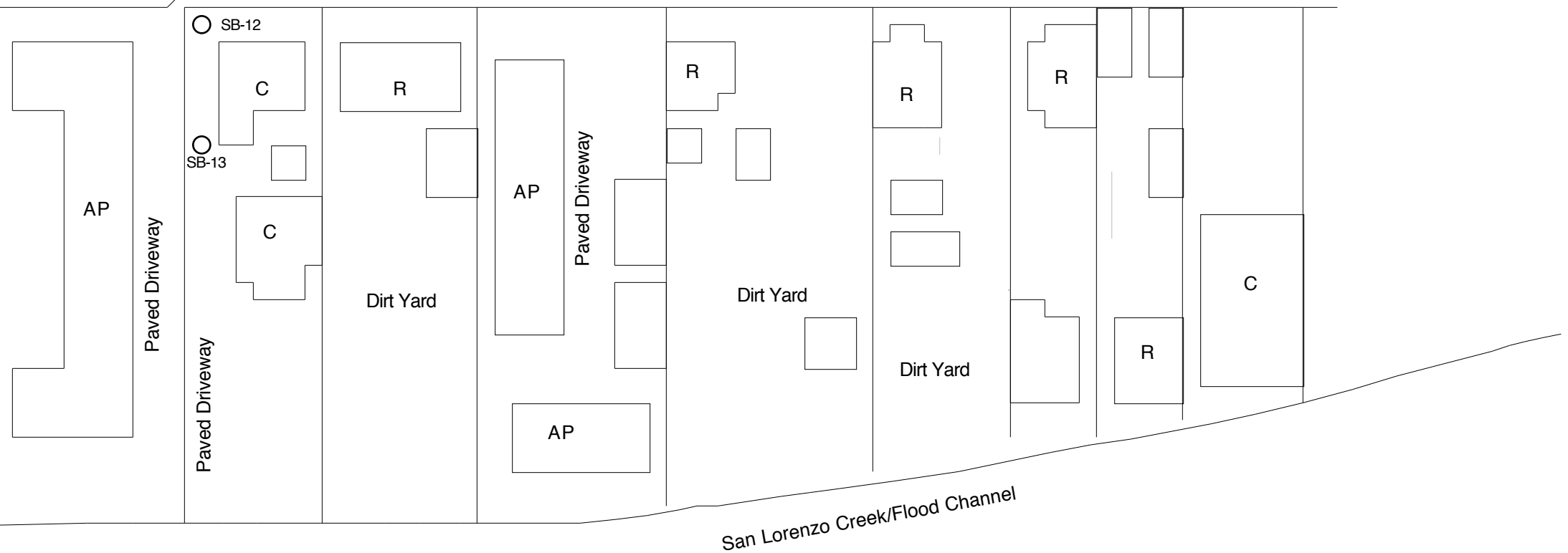
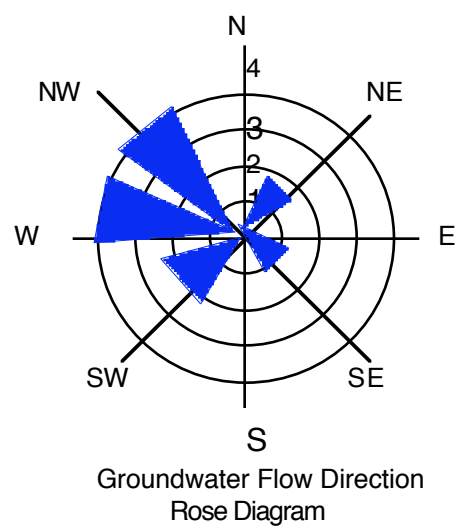
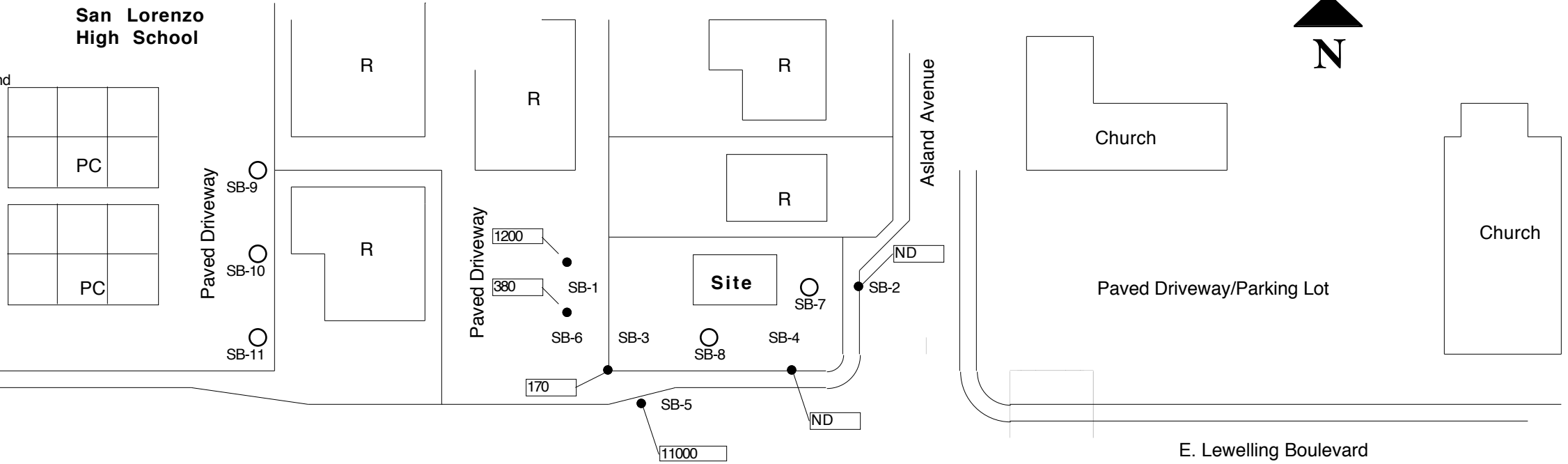
**FIGURE**

**2**

April 15, 2009  
Project 09-137.07

**LEGEND**

- SB1 Historical Soil Boring Location and Designation (Sierra 2007)
- SB7 Proposed Soil Boring Location and Designation
- 170 Concentration of Gasoline in Groundwater in ppb
- R Residential
- AP Apartment Complex
- C Commercial/Retail
- PC Portable Classroom



Base Map: Google Aerial Photograph 2009

Approximate Scale: 0' 35' 70' 140'



**SIERRA ENVIRONMENTAL, INC.**  
*Environmental Consultants*  
 980 W. Taylor Street, San Jose, CA 95126  
 Phone [408]971-6758 • Fax [408] 971-6759

**Proposed Soil Boring Locations**

**Additional Subsurface Investigation  
 A&C Auto Service**

**186 E. Lewelling Boulevard, San Lorenzo, California, 94580**

**FIGURE**

**3**

April 15, 2009  
 Project 09-137.07

**Appendix A**  
**SITE BACKGROUND INFORMATION**

## **SITE BACKGROUND INFORMATION**

The Site is located in a mixed residential/commercial zoning of San Lorenzo, California. It is bounded by Lewelling Boulevard on the south and Ashland Avenue on the east. A single-family residential property and Luxury Townhomes complex are situated north and west of the Site, respectively.

Presently, three groundwater monitoring wells (MW1 through MW3) exist at the Site. Table I summarizes Site's groundwater data.

On September 5, 1990, three underground storage tanks (USTs) were removed from the Site. The USTs consisted of two 4,000-gallon gasoline and one 350-gallon waste oil tanks. The approximate locations of the USTs are shown in Figure 2. After removal, four soil samples were collected from beneath the gasoline tanks. One soil sample was also collected from beneath the waste oil tank.

Up to 4,000 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHG) and 1.3 ppm benzene were detected in the soil samples collected from beneath the gasoline tanks.

On June 14 and 15, 1994, CET Environmental Services, Inc. (CET) constructed groundwater monitoring wells MW1, MW2, and MW3 to evaluate groundwater condition beneath the Site. CET performed the last groundwater monitoring event on September 11, 1995. The results "Third Quarter 1995 Groundwater Monitoring Report" indicated that groundwater depths ranged 15.37 to 16.20 feet below top of well casings with a west/northwesterly flow direction. Analytical results showed 0.05 ppm, 39 ppm, and 49 ppm TPHG in groundwater samples collected from MW1 through MW3, respectively.

Sierra understands that CET performed an off-site precision soil and groundwater sampling as part of delineating groundwater impact at the Site on October 17, 1995. According to Plate 2 provided by CET, up to 21 ppm TPHG and 0.088 ppm benzene were detected in the groundwater samples collected off-site, near or at Lewelling Boulevard during this sampling event. Sierra could not obtain a copy of the CET report for this sampling event, because Ms. Young has not paid CET's invoices.

On April 16, 1999, Sierra performed one groundwater monitoring episode at the Site. During 2001 Sierra performed 4 quarterly groundwater monitoring events at the Site. Analytical results are presented in Table II.

On March 29 and April 2, 2007, Sierra redeveloped, purged, and sampled the existing monitoring wells (MW1, MW2, and MW3) at the Site. Depth of groundwater ranged approximately 13.7 to 14.0 below top of the well casings with a west/northwesterly flow direction. Sierra collected groundwater samples MW-1, MW-2, and MW-3 from the wells for chemical analysis. The analytical results are presented in Table II.

Sierra had Muir Consulting, Inc. (MCI) to survey the wellheads and obtain horizontal and vertical controls for the monitoring wells at the Site. Sierra uploaded the information to Geotracker.

On September 18, 2007, Sierra prepared a Subsurface Investigation & Site Conceptual Model summarizing the followings:

- No diesel, benzene, or MTBE was detected in the soil and groundwater samples collected at the Site
- Groundwater flow direction varies at the Site, possibly due to extraction and irrigation wells in the general area as well as San Lorenzo creek streambed running south, southeast, and southwest of the Site: dominant groundwater flow direction in the area, however, is toward west/southwest
- COC has shown a fluctuating concentration trend in the groundwater beneath the Site with the highest COC concentrations in MW2 and MW3, however, its concentration has not been delineated west/southwest and northwest of the Site, toward San Lorenzo creek and the most recent groundwater flow direction
- San Lorenzo creek was identified as the sensitive receptors near the Site
- Gasoline concentration in groundwater sample collected from off-site boring SB5 exceeds ESL for aquatic habitat goal
- No man made conduits extending below ground water level exist near the Site.



**TABLE I  
GROUNDWATER ELEVATION DATA**

Well ID	Measurement Date	Well Casing Diameter (in)	Well Casing Elevation (ft)	Depth to Water <sup>1</sup> (ft)	Water Table <sup>2</sup> Elevation (ft)	Groundwater Flow Direction
MW1	6-23-94	2	44.88	17.37	27.51	NW
	3-15-95			13.47	31.41	W-SW
	6-01-95			13.35	31.53	W-NW
	9-11-95			15.37	29.51	W-NW
	4-16-99			12.05	32.83	SE
	3-21-01			13.59	31.29	NW
	6-26-01			14.72	30.16	NE
	9-18-01			15.98	28.90	NW
	12-31-01			13.92	30.96	NW
4-02-07	44.91	13.77	31.14	W-NW		
MW2	6-23-94	2	45.26	16.75	28.51	NW
	3-15-95			13.74	31.52	W-SW
	6-1-95			13.52	31.74	W-NW
	9-11-95			15.58	29.68	SE
	3-21-01			13.81	31.45	NW
	6-26-01			15.55	29.71	NE
	9-18-01			16.22	29.04	NW
	12-31-01			14.22	31.04	NW
	12-31-01			13.92	30.96	NW
4-02-07	45.31	14.00	31.31	W-NW		
MW3	6-23-94	2	45.81	16.55	29.26	NW
	3-15-95			14.43	31.38	W-SW
	6-1-95			14.16	31.65	W-NW
	9-11-95			16.20	29.61	SE
	3-21-01			14.44	31.37	NW
	6-26-01			14.97	30.84	NE
	9-18-01			16.82	28.99	NW
	12-31-01			14.91	30.90	NW
	4-02-07			45.85	14.61	31.24

1. Depths to groundwater were measured to the top of the well casings
2. Water table elevations were measured in relation to the mean sea level (MSL)

NOTE: Top of the well casings was surveyed relative to a known benchmark referenced to mean sea level (MSL) by CET, and Muir Consulting, Inc.

**TABLE II  
ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES**

Sample ID/Location	Sample Date	TPHG <sup>1</sup> µg/l	TPHD <sup>2</sup> µg/l	Benzene µg/l	Toluene µg/l	Ethylbenzene µg/l	Xylenes µg/l	MTBE <sup>3</sup> µg/l	Lead µg/l
MW1/ MW-1	6-23-94	3600	NA <sup>4</sup>	<0.5	<0.5	7.2	2.6	NA	71
	3-15-95	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
	6-1-95	100	NA	<0.5	<0.5	<0.5	<0.5	NA	
	9-11-95	50	NA	<0.5	<0.5	<0.5	<0.5	NA	
	4-16-99	160	NA	ND <sup>5</sup>	ND	ND	ND	ND	
	3-21-01	ND	NA	ND	ND	ND	ND	ND	
	6-26-01	ND	NA	ND	ND	ND	ND	ND	
	9-18-01	82	NA	ND	ND	2.1	ND	ND	
	12-31-01	ND	NA	ND	ND	ND	ND	ND	
	4-2-07	ND	ND	ND	ND	ND	ND	ND	
MW2/ MW-2	6-23-94	71000	NA	310	710	2600	4600	NA	ND
	3-15-95	35000	NA	150	1000	2100	10000	NA	
	6-1-95	49000	NA	210	1300	2900	11000	NA	
	9-11-95	39000	NA	150	1000	2900	13000	NA	
	4-16-99	50000	NA	25	110	1900	8000	ND	
	3-21-01	22000	NA	ND	52	1300	3700	ND	
	6-26-01	15000	NA	ND	ND	910	2100	ND	
	9-18-01	14000	NA	ND	ND	1,000	2,000	ND	
	12-31-01	24000	NA	ND	ND	1,600	4,000	ND	
	4-2-07	3200	ND	ND	ND	21	20	ND	
MW3/ MW-3	6-23-94	93000	NA	550	130	3300	7500	NA	29
	3-15-95	46000	NA	330	94	3800	10000	NA	
	6-1-95	42000	NA	270	230	3400	10000	NA	
	9-11-95	49000	NA	190	330	4000	12000	NA	
	4-16-99	16000	NA	10	ND	2300	940	ND	
	3-21-01	12000	NA	ND	28	2000	ND	ND	
	6-26-01	14000	NA	ND	ND	2100	ND	ND	
	9-18-01	13000	NA	ND	ND	1.5	ND	ND	
	12-31-01	3900	NA	8.1	12	640	13	ND	
	4-2-07	12000	ND	ND	ND	18	27	ND	

1. TPHG = Total Petroleum Hydrocarbons as Gasoline
2. TPHD = Total Petroleum Hydrocarbons as Diesel
3. MTBE = Methyl-tertiary-Butyl Ether
4. NA = Not Analyzed
5. ND = Below Laboratory Detection Limit

**Appendix B**  
**WATER SUPPLY BY SOURCE FOR THE CITY OF HAYWARD**

## City of Hayward

Public Works Department - Utilities Division  
 777 B Street  
 Hayward, California 94541  
 Phone: (510) 583-4727 Fax: (510) 583-3610  
 Web: www.hayward-ca.gov

### Service Area

The City of Hayward is located in south Alameda County on the eastern shore of the San Francisco Bay.

### System

#### Profile

Area Size	62.5 square miles
Service Population	147,845
Number of Accounts	31,929
Number of SFPUC Connections	2
Connections To SFPUC Mains	BDPL 1 and 2
Avg. Day Demand (mgd)	18.24
Avg. Day Purchases From SFPUC (mgd)	18.24
% Demand Met With SFPUC Supplies	100%
Maximum Local Water Production (mgd)	0
Alternative Supply Sources	Local Groundwater (Emergency Use Only)
Interties With Other Agencies	ACWD, EBMUD
Local Storage (mg)	28.1
Days of Storage	1.4 - All zones can meet the 8 hr criteria either separately or by pumping from zones with excess capacity. Well water could be used in an emergency.

### Summary

The City of Hayward obtains its entire water supply from the SFPUC at two turnouts, one at the Irvington Portal and one at the Newark valve lot. The distribution system consists of 5 main pressure zones, 14 water storage tanks, 5 pump stations delivering water to the upper pressure zones, Decoto, Hesperian, Walpert and Garin pump stations, Skywest pump station and transmission system, 5 emergency supply wells, transmission system pressure reducing valves, and pressure zone reducing valves.

There is a storage tank located within each pressure zone, with pump stations to deliver water to the higher elevation zones. Water is delivered to the 250 pressure zone from SFPUC with sufficient pressure under most conditions. Storage is located in the eastern portion of the City, east of Mission Blvd. The Decoto pump station boosts pressure in the 250 zone when necessary. BDPL 1 is the source of drinking water on the western side of the City under normal conditions. Five emergency wells are located west of Mission Blvd., as are two of the City's three emergency interties.

## Water Supply and Demand

Supply by Source	Actual FY 03-04 (ccf)	Actual FY 04-05 (ccf)	Actual FY 05-06 (ccf)	Actual FY 06-07 (ccf)
San Francisco Water	9,587,525	9,030,652	8,761,512	8,901,286
Local Groundwater	0	0	0	0
Surface Water	0	0	0	0
Recycled Water	0	0	0	0
Other - EBMUD & ACWD (Temporary supplies)	0	0	162,551	0
<b>Total</b>	<b>9,587,525</b>	<b>9,030,652</b>	<b>8,924,063</b>	<b>8,901,286</b>
<b>mgd equivalent</b>	<b>19.65</b>	<b>18.51</b>	<b>18.29</b>	<b>18.24</b>

### Demand by Sector

Residential	5,152,845	5,029,483	4,982,982	5,191,902
Commercial/Industrial	2,481,308	2,492,490	2,354,074	2,477,346
Other	950,224	596,639	594,869	655,734
Unaccounted for*	1,003,148	912,040	992,138	576,304
<b>Total</b>	<b>9,587,525</b>	<b>9,030,652</b>	<b>8,924,063</b>	<b>8,901,286</b>
<b>mgd equivalent</b>	<b>19.65</b>	<b>18.51</b>	<b>18.29</b>	<b>18.24</b>

Per Capita Use	Actual FY 03-04 (gpcpd)	Actual FY 04-05 (gpcpd)	Actual FY 05-06 (gpcpd)	Actual FY 06-07 (gpcpd)
Residential	73	71	70	72
Gross	136	127	125	123

\*Increase in unaccounted for water in 2003-04 is assumed to be due in part to changes and delays in meter reading cycles, which have caused discrepancies in the amount of water purchased vs. the amount billed to customers during the same period. The City implemented a system-wide leak detection survey and repair project in 2006-07.

## Facilities and Distribution

### Storage Reservoirs

Designation	Type	Capacity (gallons)	Designation	Type	Capacity (gallons)
Treeview	Concrete	3,000,000	250 West	Concrete	500,000
Maitland	Concrete	1,000,000	Highland 500	Concrete	3,000,000
North Walpert	Concrete	1,500,000	Highland 750	Steel	4,400,000
South Walpert	Steel	5,300,000	Highland 1000	Steel	1,000,000
D Street	Concrete	1,000,000	Highland 1285	Steel	1,800,000
High School	Concrete	1,000,000	Garin Hills	Steel	1,250,000
250 East	Concrete	500,000	Highland 1530	Steel	2,900,000
<b>Total</b>					<b>28,150,000</b>



**Wells**

<b>Name</b>	<b>Capacity (mgd)</b>	<b>Status</b>
Well A	1.7	Standby (Emergency)
Well B	2.9	Standby (Emergency)
Well C	4.6	Standby (Emergency)
Well D	1.4	Standby (Emergency)
Well E	3.0	Standby (Emergency)
<b>Total</b>	<b>13.6</b>	

**Interties**

<b>Name</b>	<b>No.</b>	<b>Diameter (In.)</b>
EBMUD	3	12, 10, West A Street Pump Station
ACWD	1	12