

Orchard Rd

Grass Hopper

Bn Ranch Rd

Harpers Way

Halsted Rd

American Ave

Friends Rd

Sunset Rd

American Ave

Plymouth Rd

Holstead Rd

Roy Rd

Holstead Rd

04N-04
2.3/2.6

MW-174S1
2.1/2.3

MW-174S1
3.1/3.0

MW-174S2
2.1/2.2

03N-01
3.5/3.6

03N-02
3.0/3.3

MW-130S1
3.7/3.7

MW-130S2
3.5/3.8

MW-131S1
2.9/3.4

1034
0.45/1.2

The 3.1/3.2 µg/L contour is shown as "-, -, -" where inferred and cannot be fully delineated by Second Quarter 2013 monitoring data. Further updates of the outline will be forthcoming as sampling results from new and future monitoring wells are incorporated.

MW-162S1
4.8149

MW-162S2
0.54/1.3

MW-162S3
3.37/ND

MW-161S1
3.0/3.4

MW-161S2
2.4/2.7

MW-161S3
0.9/1.2

MW-154S1
19.6/19.4

MW-154S2
1.6/1.8

MW-136S1
3.2/3.6

MW-136S2
ND/ND

MW-137S1
4.6/5.0

MW-137S2
4.4/5.1

MW-137S3
1.6/2.0

MW-139S1
5.4/5.8

MW-139S2
0.4/ND

MW-140S1
4.4/4.6

MW-140S2
3.7/4.3

MW-140S3
3.1/3.3

MW-142S1
6.4/7.2

MW-142S2
2.0/2.4

MW-142S3
2.8/3.0

MW-113S1
2.8/2.6

MW-113S2
3.0/2.8

MW-113D
ND/ND

MW-111S1
2.6/3.0

MW-111S2
2.3/2.5

MW-111D
ND/ND

MW-124S1
2.1/2.4

MW-124S2
2.4/2.4

MW-124D
ND/ND

MW-108S
2.8/2.7

MW-108D
ND/ND

MW-105S
2.4/2.5

MW-105D
ND/ND

MW-128S1

MW-104S1
3.4/3.2

MW-104S2
3.0/2.9

MW-104D
ND/ND

15-16
0.46/5.5

15-15
0.88/ND

15-02
0.39/ND

MW-175D
2.3/2.6

MW-175S1
4.9/5.0

MW-175S2
3.0/2.9

MW-173D
0.84/1.0

MW-113S1
2.8/2.6

MW-113S2
3.0/2.8

MW-113D
ND/ND

MW-111S1
2.6/3.0

MW-111S2
2.3/2.5

MW-111D
ND/ND

MW-124S1
2.1/2.4

MW-124S2
2.4/2.4

MW-124D
ND/ND

MW-108S
2.8/2.7

MW-108D
ND/ND

MW-105S
2.4/2.5

MW-105D
ND/ND

MW-128S1

MW-104S1
3.4/3.2

MW-104S2
3.0/2.9

MW-104D
ND/ND

MW-142S1
6.4/7.2

MW-142S2
2.0/2.4

MW-142S3
2.8/3.0

MW-139S1
5.4/5.8

MW-139S2
0.4/ND

MW-140S1
4.4/4.6

MW-140S2
3.7/4.3

MW-140S3
3.1/3.3

MW-137S1
4.6/5.0

MW-137S2
4.4/5.1

MW-137S3
1.6/2.0

MW-136S1
3.2/3.6

MW-136S2
ND/ND

MW-154S1
19.6/19.4

MW-154S2
1.6/1.8

MW-161S1
3.0/3.4

MW-161S2
2.4/2.7

MW-161S3
0.9/1.2

MW-162S1
4.8149

MW-162S2
0.54/1.3

MW-162S3
3.37/ND

MW-174S1
2.1/2.3

MW-174S2
2.1/2.2

MW-174S3
3.1/3.0

MW-175S1
4.9/5.0

MW-175S2
3.0/2.9

MW-175D
2.3/2.6

MW-131S1
2.9/3.4

MW-130S1
3.7/3.7

MW-130S2
3.5/3.8

MW-133S1
7.7/7.8

MW-133S2
0.22/ND

MW-138S1
4.9/5.5

MW-138S2
4.3/4.8

MW-112
ND/ND

MW-108S
2.8/2.7

MW-108D
ND/ND

MW-105S
2.4/2.5

MW-105D
ND/ND

MW-128S1

MW-104S1
3.4/3.2

MW-104S2
3.0/2.9

MW-104D
ND/ND

MW-142S1
6.4/7.2

MW-142S2
2.0/2.4

MW-142S3
2.8/3.0

MW-139S1
5.4/5.8

MW-139S2
0.4/ND

MW-140S1
4.4/4.6

MW-140S2
3.7/4.3

MW-140S3
3.1/3.3

MW-137S1
4.6/5.0

MW-137S2
4.4/5.1

MW-137S3
1.6/2.0

MW-136S1
3.2/3.6

MW-136S2
ND/ND

MW-154S1
19.6/19.4

MW-154S2
1.6/1.8

MW-161S1
3.0/3.4

MW-161S2
2.4/2.7

MW-161S3
0.9/1.2

MW-162S1
4.8149

MW-162S2
0.54/1.3

MW-162S3
3.37/ND

MW-174S1
2.1/2.3

MW-174S2
2.1/2.2

MW-174S3
3.1/3.0

MW-175S1
4.9/5.0

MW-175S2
3.0/2.9

MW-175D
2.3/2.6

MW-131S1
2.9/3.4

MW-130S1
3.7/3.7

MW-130S2
3.5/3.8

MW-133S1
7.7/7.8

MW-133S2
0.22/ND

MW-138S1
4.9/5.5

MW-138S2
4.3/4.8

MW-112
ND/ND

MW-108S
2.8/2.7

MW-108D
ND/ND

MW-105S
2.4/2.5

MW-105D
ND/ND

MW-128S1

MW-104S1
3.4/3.2

MW-104S2
3.0/2.9

MW-104D
ND/ND

MW-142S1
6.4/7.2

MW-142S2
2.0/2.4

MW-142S3
2.8/3.0

MW-139S1
5.4/5.8

MW-139S2
0.4/ND

MW-140S1
4.4/4.6

MW-140S2
3.7/4.3

MW-140S3
3.1/3.3

MW-137S1
4.6/5.0

MW-137S2
4.4/5.1

MW-137S3
1.6/2.0

MW-136S1
3.2/3.6

MW-136S2
ND/ND

MW-154S1
19.6/19.4

MW-154S2
1.6/1.8

MW-161S1
3.0/3.4

MW-161S2
2.4/2.7

MW-161S3
0.9/1.2

MW-162S1
4.8149

MW-162S2
0.54/1.3

MW-162S3
3.37/ND

MW-174S1
2.1/2.3

MW-174S2
2.1/2.2

MW-174S3
3.1/3.0

MW-175S1
4.9/5.0

MW-175S2
3.0/2.9

MW-175D
2.3/2.6

MW-131S1
2.9/3.4

MW-130S1
3.7/3.7

MW-130S2
3.5/3.8

MW-133S1
7.7/7.8

MW-133S2
0.22/ND

MW-138S1
4.9/5.5

MW-138S2
4.3/4.8

MW-112
ND/ND

MW-108S
2.8/2.7

MW-108D
ND/ND

MW-105S
2.4/2.5

MW-105D
ND/ND

MW-128S1

MW-104S1
3.4/3.2

MW-104S2
3.0/2.9

MW-104D
ND/ND

MW-142S1
6.4/7.2

MW-142S2
2.0/2.4

MW-142S3
2.8/3.0

MW-139S1
5.4/5.8

MW-139S2
0.4/ND

MW-140S1
4.4/4.6

MW-140S2
3.7/4.3

MW-140S3
3.1/3.3

MW-137S1
4.6/5.0

MW-137S2
4.4/5.1

MW-137S3
1.6/2.0

MW-136S1
3.2/3.6

MW-136S2
ND/ND

MW-154S1
19.6/19.4

MW-154S2
1.6/1.8

MW-161S1
3.0/3.4

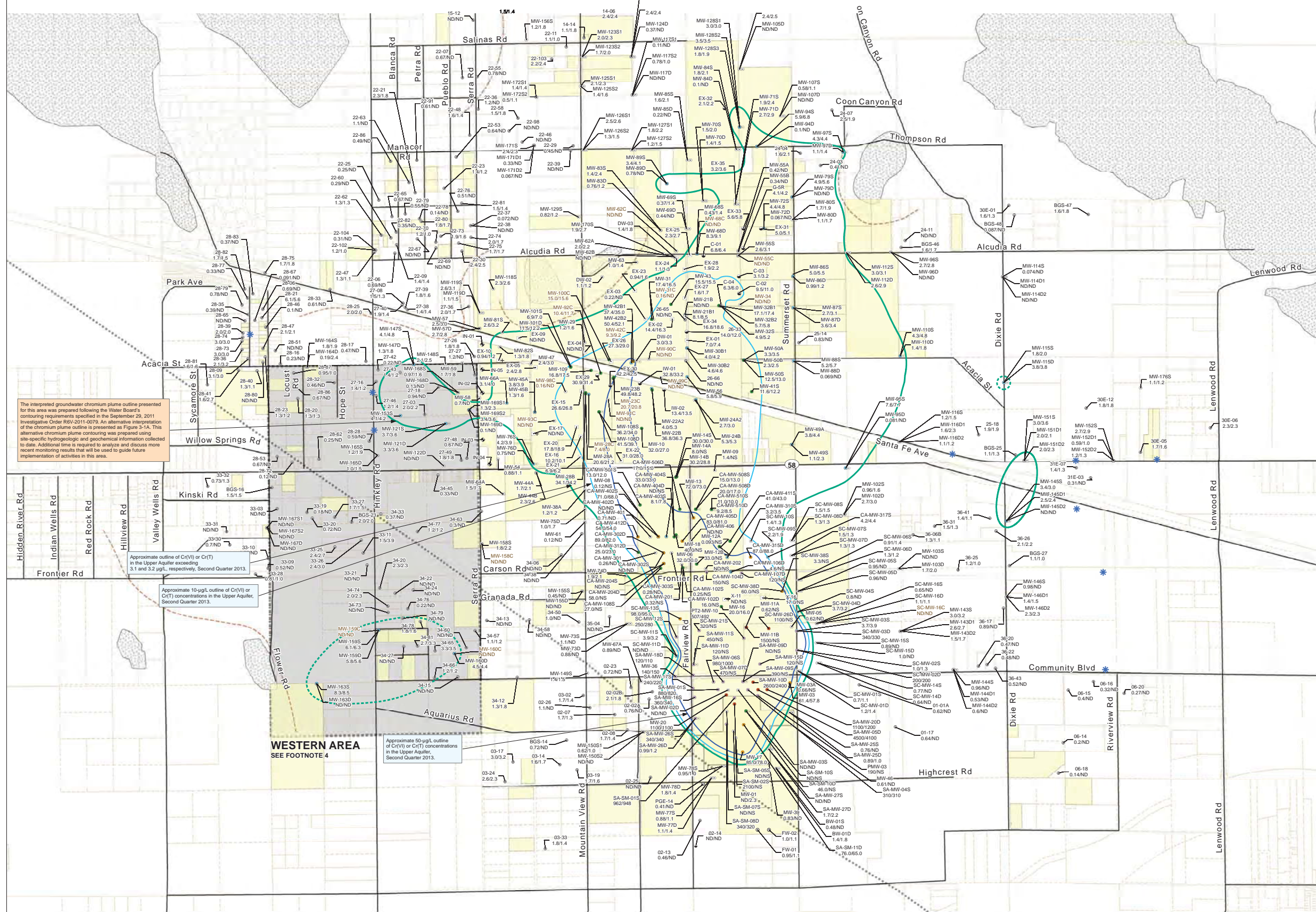
MW-161S2
2.4/2.7

MW-161S3
0.9/1.2

MW-162S1
4.8149

MW-162S2
0.54/1.3

MW-162S3
3.37/ND



The interpreted groundwater chromium plume outline presented for this area was prepared following the Water Board's contouring requirements specified in the September 29, 2011 Investigative Order RW-2011-0079. An alternative interpretation of the chromium plume outline is presented as Figure 3-1A. This alternative chromium plume contouring was prepared using site-specific hydrogeologic and geochemical information collected to date. Additional time is required to analyze and discuss more recent monitoring results that will be used to guide future implementation of activities in this area.

Approximate outline of Cr(VI) or Cr(T) in the Upper Aquifer exceeding 3.1 and 3.2 µg/L, respectively, Second Quarter 2013.

Approximate 10 µg/L outline of Cr(VI) or Cr(T) concentrations in the Upper Aquifer, Second Quarter 2013.

Approximate 50 µg/L outline of Cr(VI) or Cr(T) concentrations in the Upper Aquifer, Second Quarter 2013.

- LEGEND:**
- Groundwater monitoring well
 - Agricultural supply well
 - Domestic supply well
 - Other supply well
 - Groundwater extraction well (active)
 - Multiple test well, or inactive
 - Extraction/injection well
 - Freshwater injection well
 - PG&E-owned property
 - PG&E Compressor Station
 - County parcels
 - Transmission lines
 - Approximate limit of saturated alluvium upper aquifer
 - Approximate location of Lockhart Fault; fault trace is inferred, and there is no surface expression (Stamos et al., 2001)
 - Bedrock exposed at ground surface
 - Western area

MW-77S	Well ID	Well ID	Well ID
0.88/1.1	Cr(VI)/Cr(T) concentrations in µg/L, maximum of primary and duplicate samples during Second Quarter 2013 sampling.	µg/L	µg/L
ABBREVIATIONS:			
µg/L	micrograms per liter	µg/L	µg/L
Cr(VI)	hexavalent chromium	Cr(T)	total dissolved chromium
IRZ	In Situ Reactive Zone	NS	not sampled
ND	not detected		
NS	not sampled		
Groundwater Cr(VI) concentrations in monitoring wells:			
● More than 1,000 µg/L	● 10 to 50 µg/L	● 100 to 1,000 µg/L	● 3.1 to 10 µg/L
● 50 to 100 µg/L	● Less than 3.1 µg/L or ND		

- NOTES:**
- Chromium results are shown for site-wide Groundwater Monitoring Program and domestic wells sampled in the Second Quarter (April through June) 2013 monitoring period. Second Quarter 2013 results for selected IRZ monitoring wells are shown to aid in plume mapping. For wells sampled multiple times during the reporting period, the most recent results are shown.
 - The concentration contours are based on Second Quarter 2013 chromium results for the groundwater monitoring and extraction wells that are completed in the shallow zone and deep zone of the Upper Aquifer as noted on Figures 3-2 and 3-3. Results for domestic wells and Lower Aquifer monitoring wells (brown-colored labels) were not used for chromium plume contouring.
 - Concentration contours represent the maximum extent of either Cr(VI) or Cr(T) at any depth within the Upper Aquifer based on Second Quarter 2013 chromium results. Some chromium results for wells within the 50-, 10-, and 3.1/3.2-µg/L chromium contours are less than the contoured concentrations.
 - An evaluation of available hydrogeologic and groundwater quality data for the shaded Western Area shown on this figure was included in the January 14, 2013, document titled *Conceptual Site Model for Groundwater Flow and the Occurrence of Chromium in Groundwater of the Western Area Report* (CH2MHILL and Stantec, 2013). The findings of the January 14 report indicate that groundwater in the Western Area contains naturally occurring chromium.
- * Monitoring well MW-154S1 is completed in low permeability sediments across the water table. This well purges dry during sampling and is very slow to recharge. Groundwater samples from this well may not be representative of the groundwater conditions in the Upper Aquifer as sampled in other wells in this area.

FIGURE 3-1B
CHROMIUM RESULTS FOR SECOND QUARTER 2013 GROUNDWATER MONITORING AND DOMESTIC WELL SAMPLING AND COMPLIANCE MAXIMUM PLUME OUTLINE IN UPPER AQUIFER
 SECOND QUARTER 2013 GROUNDWATER MONITORING REPORT AND DOMESTIC WELL RESULTS
 SITE-WIDE GROUNDWATER MONITORING PROGRAM
 PACIFIC GAS AND ELECTRIC COMPANY
 HINKLEY COMPRESSOR STATION
 HINKLEY, CALIFORNIA