

Former Fort Ord Operable Unit 2 Data and Status

HTW BCT, April 11, 2018

Table 1: OU2 GWTP Statistics as of March 31, 2018

Monthly Statistics	Volume Treated (gallons)	Average Flow (gallons per minute)	Percent of Time Online	COC Mass Removed (pounds)
March 2018	18,632,656	417	86.7	1.2
Total since October 1995	7.296 billion			832

Table 2: March 2018 – OU2 Analytical Results at TS-OU2-INJ

COC	Discharge Limit (µg/L)	Analytical Results (µg/L)
		3/13/2018
1,1-dichloroethane (1,1-DCA)	5.0*	0.55
1,2-dichloroethane (1,2-DCA)	0.5	0.23 J
1,2-dichloropropane (1,2-DCP)	0.5	ND (0.25)
Benzene	0.5	ND (0.25)
Carbon tetrachloride (CT)	0.5	ND (0.25)
Chloroform	2.0*	0.33 J
Cis-1,2-dichloroethene (cis-1,2-DCE)	6.0*	0.53
Methylene Chloride	0.5	ND (0.50)
Tetrachloroethene (PCE)	0.5	ND (0.25)
Trichloroethene (TCE)	0.5	ND (0.25)
Vinyl chloride (VC)	0.1	ND (0.05)

Notes:

COC: chemical of concern

µg/L: micrograms per liter

ND: The analyte was not detected above the limit of detection (LOD).

NS: not sampled.

J: Estimated results below the limit of quantitation (LOQ).

TS-OU2-INJ: Injection point of compliance, the OU2 effluent pipeline.

*Discharge limits for low carbon affinity compounds were increased to the Aquifer Cleanup Level (ACL).

Results in **bold** and shaded are concentrations above the ACL

Results in *gray* are ND

March 2018 Key Events for OU2

- Burleson using treated water for irrigation project.
- March 1: OU2 GWTP shutdown for 16 hours due to power outage. EW-OU2-03-180 offline until March 5 due to VFD issue. EW-OU2-06-180 and EW-OU2-16-A offline until March 6 due to PLC/VFD issue.
- March 5-8: First Quarter 2018 Groundwater Monitoring Program.
- March 13: OU2 GWTP shutdown for five hours due to power outage. Western network issues: EW-OU2-02-A pump failure, communications issue at EW-OU2-04-A repaired on March 20, EW-OU2-05-A starter motor failed (replaced and online April 3).
- March 26-29: OU2 GWTP shut down for 78 hours due to JV construction.

April 2018 Key Events for OU2

- Coordinate with JV and Burleson for treated water use.
- Continue to prepare for GWTP decommissioning.
- Coordinate with Sea Haven developer for extraction well surface adjustments at EW-OU2-09-A and EW-OU2-10-A and decommissioning of EW-OU2-08-A.
- Prepare for 2018 well decommissioning of four OU2 A-Aquifer monitoring wells.
- Prepare for 2018 well installation of one new OU2 A-Aquifer monitoring well.



Table 3. OU2 A-Aquifer Select Extraction/Monitoring Well Data

OU2 Hydraulic Zone ¹	Well Identification ²	Select COC Concentrations (µg/L)									
		4Q 2017					1Q 2018*				
		TCE	PCE	1,1-DCA	1,2-DCA	VC	TCE	PCE	1,1-DCA	1,2-DCA	VC
ACL:		5.0	3.0	5.0	0.5	0.1	5.0	3.0	5.0	0.5	0.1
1	EW-OU2-16-A	4.1	3.0	9.0	3.3	1.1	3.0	2.9	7.5	2.3	0.88
1	MW-OU2-02-A	0.33 J	2.0	6.8	1.7	8.3	0.18 J	2.4	7.0	1.4	10.5
1	MW-OU2-73-A	ND (0.25)	0.87	8.5	1.5	11.6	ND (0.25)	1.2	5.8	1.0	11.4
1	MW-OU2-44-A	8.3	10.3	19.9	6.0	1.2	5.9	7.8	17.1	4.5	0.94
2	EW-OU2-15-A	NS	NS	NS	NS	NS	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.05)
2	MW-OU2-27-A	ND (0.25)	2.8	0.23 J	ND (0.25)	ND (0.05)	ND (0.25)	2.9	0.22 J	ND (0.25)	ND (0.05)
3	EW-OU2-09-A	0.28 J	0.30 J	0.14 J	0.32 J	ND (0.05)	0.25 J	0.27 J	0.10 J	0.24 J	ND (0.05)
3	EW-OU2-10-A	2.2	1.2	0.92	0.96	ND (0.05)	1.9	1.1	0.75	0.87	ND (0.05)
3	EW-OU2-12-A	7.4	4.2	7.4	1.3	0.14	7.3	3.8	6.2	1.5	0.13
3	EW-OU2-13-A	7.9	2.5	2.1	4.0	ND (0.05)	7.4	2.4	1.8	3.6	ND (0.05)
3	MW-OU2-25-A	1.1	0.47 J	0.52	0.58	ND (0.05)	1.0	0.37 J	0.44 J	0.44 J	ND (0.05)
3	MW-OU2-75-A	2.7	4.8	5.1	ND (0.25)	ND (0.05)	2.7	5.3	6.2	ND (0.25)	ND (0.05)
3	MW-OU2-81-A	8.5	13.4	4.8	0.15 J	ND (0.05)	10.1	12.2	4.3	0.16 J	ND (0.05)
4	EW-OU2-02-A	0.42 J	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.05)	0.41 J	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.05)
4	EW-OU2-04-A	1.6	ND (0.25)	ND (0.25)	ND (0.25)	ND (0.05)	1.6	ND (0.25)	0.10 J	ND (0.25)	ND (0.05)
4	EW-OU2-05-A	4.6	0.24 J	0.25 J	ND (0.25)	ND (0.05)	4.3	0.24 J	0.24 J	ND (0.25)	ND (0.05)
4	EW-OU2-06-A	3.3	0.32 J	0.18 J	ND (0.25)	ND (0.05)	3.0	0.29 J	0.15 J	ND (0.25)	ND (0.05)
4	MW-OU2-04-A	4.2	0.70	0.34 J	0.13 J	ND (0.05)	4.2	0.62	0.32 J	0.13 J	ND (0.05)
4	MW-OU2-06AR	1.6	0.46 J	0.15 J	0.18 J	ND (0.05)	1.4	0.65	0.18 J	0.23 J	ND (0.05)
4	MW-OU2-40-A	6.1	0.45 J	0.42 J	0.11 J	ND (0.05)	4.6	0.46 J	0.32 J	ND (0.25)	ND (0.05)
N/A	MW-OU2-08-A	7.2	6.3	24.6	0.59	0.41	6.1	5.0	21.9	0.69 J	0.46

Table 4. OU2 Upper 180-Foot Select Extraction/Monitoring Well Data

OU2 Hydraulic Zone ¹	Well Identification ²	TCE Concentration (µg/L)	
		4Q 2017	1Q 2018*
ACL:		5.0	
5	EW-OU2-01-180	11.3	11.8
5	MW-OU2-43-180	3.4	4.7
6	EW-OU2-03-180	9.8	8.8
6	MW-OU2-50-180	11.1	10.0
7	EW-OU2-06-180	6.5	5.3
7	MW-OU2-81-180	8.0	7.1
7	MW-OU2-44-180	18.5	15.5
9	MW-OU2-06-180R2	3.2	2.8

Notes:

ACL: Aquifer Cleanup Level

COC: chemical of concern

1,2-DCA: 1,2-dichloroethane

TCE: trichloroethene

PCE: tetrachloroethene

1,1-DCA: 1,1-dichloroethane

µg/L: micrograms per liter

NS: not sampled

ND: The analyte was not detected above the detection limit.

J: Estimated result with a high (+) or low (-) bias.

¹ Hydraulic zones are identified in the Groundwater QAPP.

² Extraction wells not listed have met the QAPP decision rules to no longer operate.

Results in **bold** and shaded are concentrations above the ACL

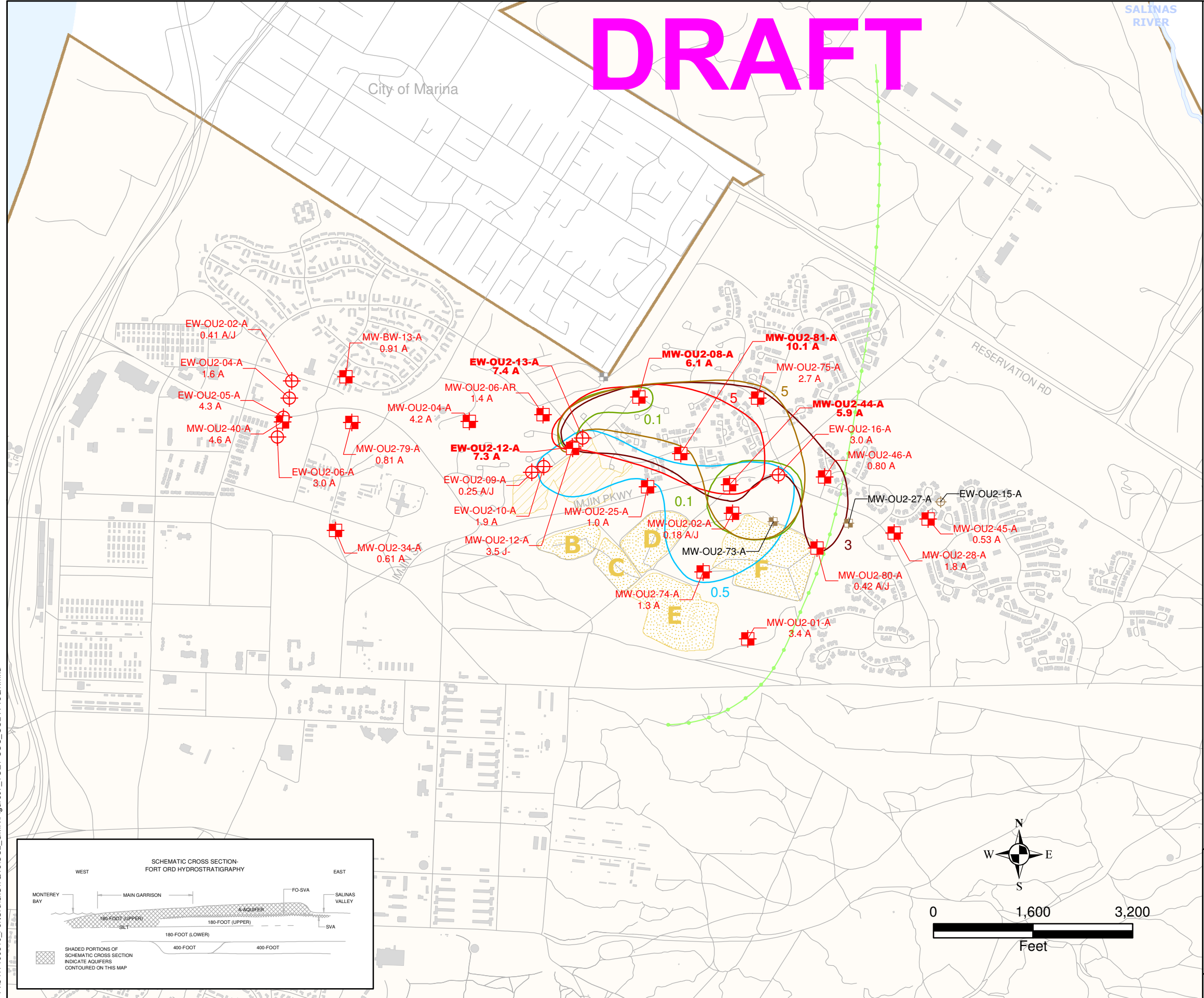
Results in gray are ND

Results in brackets from a second deeper passive diffusion bag

* Preliminary results



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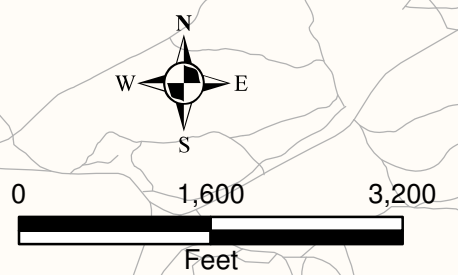
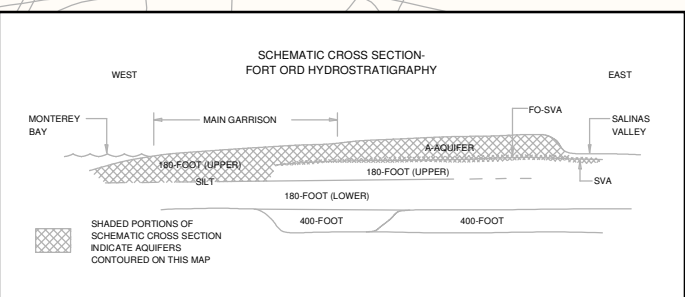


EXPLANATION

- Monitoring Well with TCE Detection
- Extraction Well with TCE Detection
- Well ID - Bold When ACL Exceeded (* Indicates: Sample result not used for contouring)
- TCE Concentration (µg/L) and validation/lab qualifier. Bold when concentration exceeds the ACL.
- Monitoring Well with COC ACL Exceedance (not TCE)
- Extraction Well with COC ACL Exceedance (not TCE)
- Monitoring Well TCE Not Detected, and No Other COC ACL Exceedances
- Extraction Well TCE Not Detected, and No Other COC ACL Exceedances
- Monitoring Well Not Sampled This Quarter
- Extraction Well Not Sampled This Quarter
- Chemical of Concern (COC) Aquifer Cleanup Level (ACL) Exceedance Contour in µg/L**
- 5 Trichlorethene (TCE)
- 3 Tetrachloroethene (PCE)
- 5 1,1-Dichloroethane (1,1-DCA)
- 0.5 1,2-Dichloroethane (1,2-DCA)
- 0.1 Vinyl chloride (VC)
- Approximate Extent of Landfill Areas**
- OU2 Landfill Areas B through F
- Area A (clean closed)
- Approximate Location of a Groundwater Divide
- Roads
- Facilities
- Former Fort Ord Boundary

NOTES:

- (1) Samples were collected between March 5 and 8, 2019.
- (2) Contours are based on one interpretation of the data that were available at the time this report was prepared; other interpretations may be possible.
- (3) Contours based on highest value obtained from multiple bags where applicable.
- (4) Contours near wells not sampled this quarter are inferred from previous analytical data.



TCE CONCENTRATIONS AND OTHER COC ACL EXCEEDANCES
A-AQUIFER
Operable Unit 2
First Quarter 2018
Groundwater Monitoring and Treatment System Report
Former Fort Ord, California



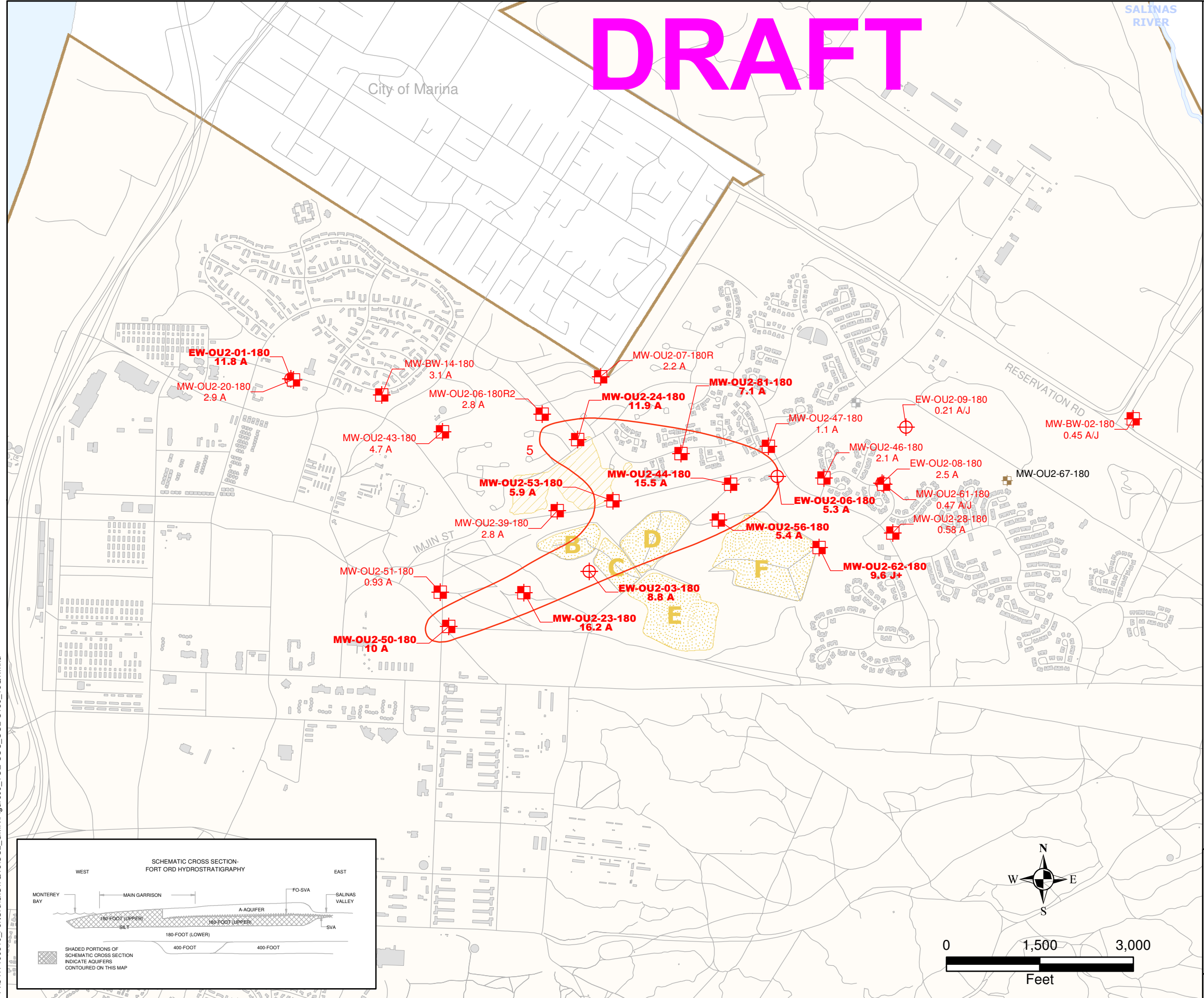
Figure 7

Date: 4/2018

Project No. 8417190510

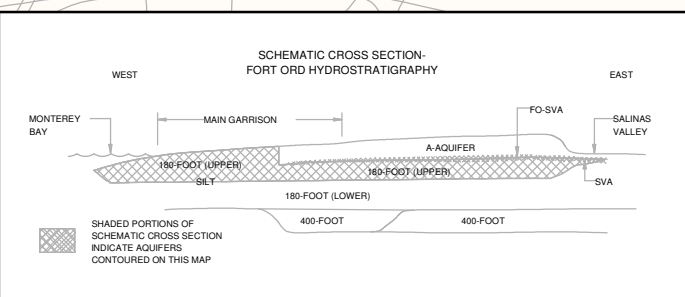
Friday, April 27, 2018 11:31:13 AM thomas.hunt
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EXPLANATION	
	Monitoring Well with TCE Detection
	Extraction Well with TCE Detection
	Well ID - Bold When ACL Exceeded (* Indicates: Sample result not used for contouring)
	TCE concentration (µg/L) and validation/lab qualifier Bold when concentration exceeds the ACL.
	Monitoring Well TCE Not Detected, and No Other COC ACL Exceedances
	Extraction Well TCE Not Detected, and No Other COC ACL Exceedances
	Monitoring Well Not Sampled This Quarter
	Extraction Well Not Sampled This Quarter
Chemical of Concern (COC) Aquifer Cleanup Level (ACL) Exceedance Contour in µg/L	
	5 Trichlorethene (TCE)
Approximate extent of Fort Ord Landfill Areas	
	OU2 Landfill Areas B through F
	Area A (clean closed)
	Roads
	Facilities
	Former Fort Ord Boundary

- NOTES:
- (1) Samples were collected between March 6 and 8, 2018.
 - (2) Contours are based on one interpretation of the data that were available at the time this report was prepared; other interpretations may be possible.
 - (3) Contours based on highest value obtained from multiple bags where applicable.
 - (4) Contours near wells not sampled this quarter are inferred from previous analytical data.



TCE CONCENTRATIONS AND OTHER COC ACL EXCEEDANCES UPPER 180-FOOT AQUIFER Operable Unit 2 First Quarter 2108 Groundwater Monitoring and Treatment System Report Former Fort Ord, California



Figure 9

Date: 4/2018 Project No. 8417190510

Thursday, April 26, 2018 1:46:57 PM thomas.hunt P:\8417190510_FortOrd\GIS\190510\OU2_GMR\Figure09_TCE-COC_OU2-U180_1801.mxd

Table 5: OU2 Well Decommissioning 2018*

Well ID	Aquifer	Notes
MW-OU2-33-A	A	Well installed in 1992. Last sampled in 2002, TCE always ND, currently used for DTW but not needed.
MW-OU2-36-A	A	Well installed in 1993. Last sampled in 2002, TCE always below ACL, currently used for DTW but not needed.
MW-OU2-59-A	A	Well installed in 1997. Not in sensitive habitat area (near southern FONR). Last sampled in 2012, TCE always below ACL, currently used for DTW but not needed.
MW-OU2-60-A	A	Well installed in 1997. Last sampled in 2011, TCE always below ACL, currently used for DTW but not needed.

Notes:

* Sampling no longer conducted and water levels unnecessary as listed in the OU2 Annual Report.
 ACL: aquifer cleanup level
 DTW: depth to water
 FONR: Fort Ord Natural Reserve
 ND: not detected
 TCE: trichloroethene

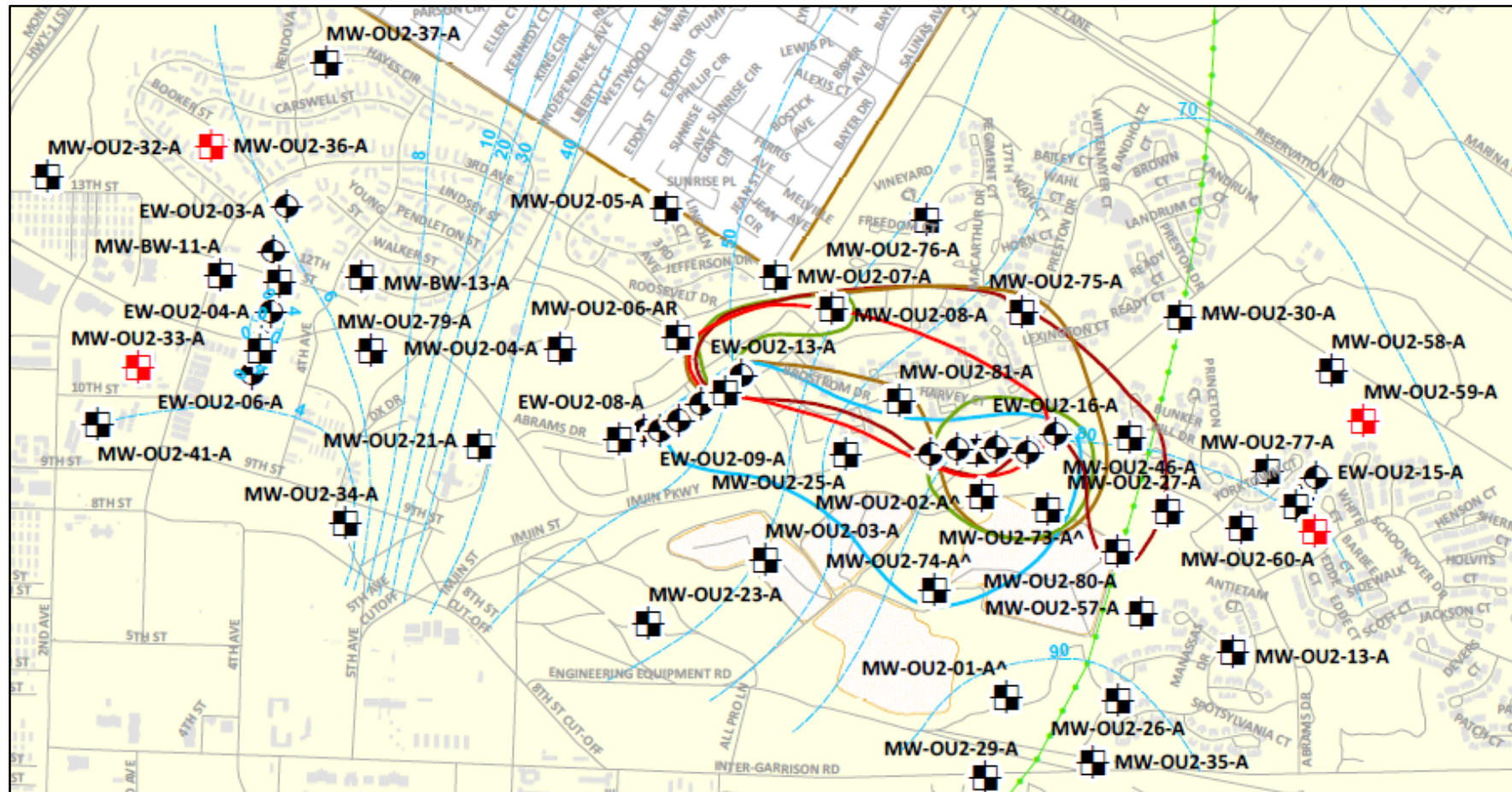
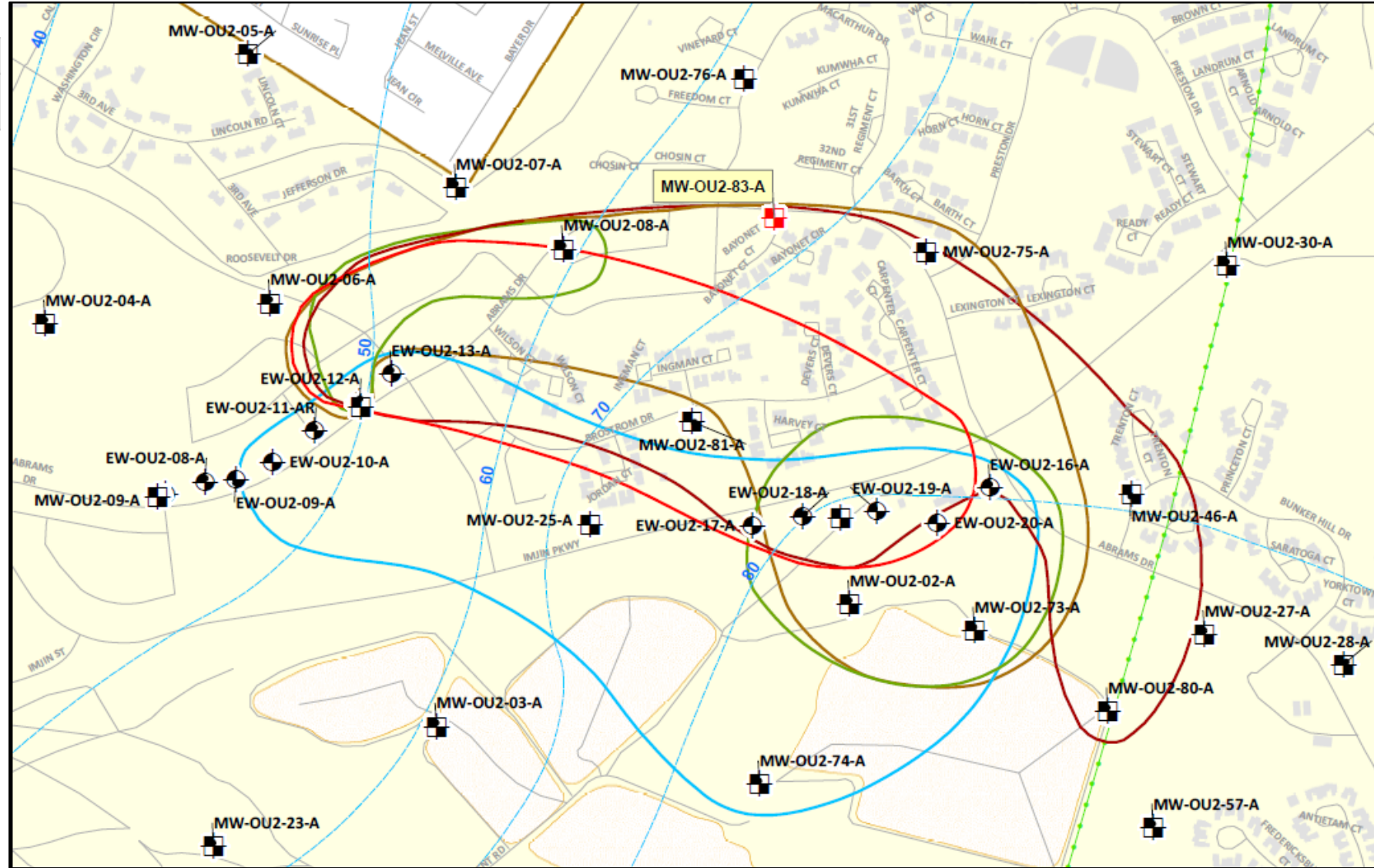


Table 6: OU2 Well Installation 2018

Tentative Well ID	Aquifer	Notes
MW-OU2-83-A	A	Fills data gap between MW-OU2-08-A and -75-A



Ahtna