

# **2011 Groundwater Monitoring Report**

## **Lockheed Martin Tallevast Site**

### **Appendix A -**

### **Validation/Quality Control**

### **Summary and Data Review**

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Lockheed Martin Corporation

Prepared by:

ARCADIS

February 17, 2012

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## ATTACHMENTS

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Attachment 10    Data Review for Lockheed Martin – Tallevast, Tallevast, FL –  
SDG #660-43218

Attachment 11    Data Review for Lockheed Martin – Tallevast, Tallevast, FL –  
SDG #660-43326

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# Acronyms, Abbreviations, and Units of Measurement

BAL	blank action level
COC	contaminant of concern
%D	percent difference
GC/MS	gas chromatography/mass spectrometry
ID	isotope dilution
IRA	interim remedial action
LCS	laboratory control sample
MDL	method detection limit
MS	matrix spike
MSD	matrix spike duplicate
QA/QC	quality assurance/quality control
RL	reporting limit
RPD	relative percent difference
RRF	relative response factor
%RSD	percent relative standard deviation
SDG	sample delivery group
SIM	selective ion monitoring
TCL	target compound list
TIM	total ion monitoring
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound

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# Section 1

# Data Validation/Quality Control Summary

This report summarizes the analytical data and quality assurance/quality control (QA/QC) evaluation associated with the August/September 2011 annual groundwater sampling event at the Lockheed Martin Tallevast Site. A quarterly Interim Remedial Action (IRA) groundwater sampling event was not conducted in August/September 2011; however, all of the monitoring wells in the IRA sampling program are included in the annual sampling program. The groundwater data with any applicable data qualification and data verification reports are summarized in the Sample Delivery Group (SDG) Data Reviews included in Attachments 1 through 11 of this appendix.

The samples from the annual event were analyzed by TestAmerica Laboratories of Tampa, Florida for the site list of volatile organic compounds (VOCs) including 1,4-dioxane. Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8260B Total Ion Monitoring (TIM) for VOCs other than 1,4-dioxane and 8260C selective ion monitoring (SIM) by isotope dilution (ID) for 1,4-dioxane. Data were reviewed and verified in accordance with Organic USEPA National Functional Guidelines (October 1999) and USEPA Region II SOP HW-24, revision 2 (October 2006). Validating Volatile Organic Compounds by SW-846 Method 8260B was also used to supplement the data review process.

The table below summarizes the sample analyses conducted during the annual monitoring activities.

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**TABLE 1. FIELD SAMPLE COLLECTION**

Parameter	Samples	Field Duplicate	Equipment Blanks	Trip Blanks	Total
VOCs	189	10	11	6	216
Total	189	10	11	6	216

Note: Equipment blanks total includes equipment blanks and field blanks.

Laboratory QC samples prepared and analyzed with the field samples included method blanks, site-specific matrix spike (MS) pairs, and laboratory control samples (LCSs). Field QC samples included equipment blanks, field blanks, trip blanks, and field duplicates.

The subsections below present a summary of the results of the data quality review completed by ARCADIS. They also describe the various types of QA/QC parameter deviations identified during the data validation process.

### **1.1 Sample Preservation and Holding Time**

Samples were preserved correctly with hydrochloric acid at the time of collection. All sample analyses were completed within holding time limits.

### **1.2 Gas Chromatograph Instrument Performance**

Mass spectrometer tuning performance was acceptable. System performance and column resolution were acceptable.

### **1.3 Blank Contamination**

Blank samples were used to evaluate the potential introduction of contaminants into the field samples. Method blanks, equipment blanks, field blanks, and trip blanks were prepared and analyzed in conjunction with the field samples to monitor potential contamination impacts during collection, shipment, and analysis. Method blanks were included in each analytical batch to allow for identification of potential interferences associated with the analytical system, reagents, and/or laboratory glassware. Trip blanks were prepared by the laboratory and shipped with sample bottles to the site, then returned to the laboratory in each cooler to evaluate potential impacts to samples

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during transport and storage. Equipment blanks and field blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were detected in the associated QA blanks; however, the associated sample results were greater than the BAL and/or were non-detect, with the exception of acetone in sample location MW-128. Sample results less than the BAL associated with the following sample locations were qualified as listed in the following table.

**TABLE 2. LOCATIONS WITH QUALIFIED RESULTS LESS THAN BAL**

Sample Locations	Analyte	Sample Result	Qualification
MW-128	Acetone	Detected sample results >RL and <BAL	“UB” at detected sample concentration

RL – Reporting limit

Detailed discussion of the QA blanks evaluation is provided in the data validation reports in the SDG Data Reviews included as Attachments 1 through 11 of this appendix.

## **1.4 Analytical Instrument Calibration**

USEPA SW-846 Method 8260B and 8260C specify percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

### **1.4.1 Initial Calibration Criteria**

All target compounds analyzed by USEPA SW-846 Method 8260B associated with the initial calibration standards must exhibit a %RSD less than the control limit (15 percent) or a correlation coefficient greater than 0.99. The compounds analyzed by USEPA SW-846 Method 8260B TIM



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must exhibit a RRF value greater than the control limit (0.05). The analysis of the target compound 1,4-dioxane performed by USEPA SW-846 Method 8260C SIM by isotope dilution must exhibit a RRF value greater than the control limit (0.005).

#### **1.4.2 Continuing Calibration Criteria**

All target compounds analyzed by USEPA SW-846 Method 8260B associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20 percent) with the exception of 1,4-dioxane, which must exhibit a %D less than the control limit of 50 percent. The compounds analyzed by USEPA SW-846 Method 8260B TIM must exhibit a RRF value greater than the control limit (0.05). The analysis of the target compound 1,4-dioxane performed by USEPA SW-846 Method 8260C SIM by isotope dilution must exhibit a RRF value greater than the control limit (0.005).

#### **1.4.3 Calibration Assessment**

Many Target Compound List (TCL) compounds associated with the continuing calibrations exhibited percent deviations (%D) that were greater than the 20 percent criteria, resulting in the qualification of the associated sample results as estimated using a “J” or “UJ” qualifier, as appropriate. A detailed description of the individual qualification of the data is provided in the SDG Data Reviews included as Attachments 1 through 11 of this appendix.

### **1.5 System Monitoring Compounds**

All samples to be analyzed for organic compounds are spiked with surrogate compounds before sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogates exhibited recoveries within the control limits.

### **1.6 Internal Standard Performance**

Internal standard performance criteria establish the acceptable gas chromatography/mass spectrometry (GC/MS) sensitivity and response stability for every sample analysis. The criteria

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require the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one half (-50%) of the area counts of the associated continuing calibration standard. All internal standard areas and retention times were within established limits. Details of internal standard performance are provided in the SDG Data Reviews included as Attachments 1 through 11 of this appendix.

## **1.7 Laboratory Control Sample Analysis**

LCSs were prepared and analyzed by the laboratory to evaluate method performance and analytical accuracy using chemical standards prepared from a source other than the calibration standards in a clean matrix similar to the field samples included in an analytical batch. The LCSs establish control of the method within the laboratory environment from sample preparation through instrument performance without potential bias from field matrices. Percent recoveries were used to evaluate and qualify associated field samples based on laboratory established control limits.

A few TCL compounds associated with the LCSs exhibited percent recoveries outside of the control limits resulting in the qualification of the associated sample results as estimated using a “J” or “UJ” qualifier, as appropriate. A detailed description of the individual qualification of the data is provided in the SDG Data Reviews included as Attachments 1 through 11 of this appendix.

## **1.8 Matrix Spike Samples**

Laboratory MS and matrix spike duplicate (MSD) analyses were performed to determine precision and accuracy of the analytical method on the site-specific matrix and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. Accuracy was evaluated based on the percent recoveries of the spiked compounds. Precision was based on the relative percent difference (RPD) between the MS and MSD recoveries. The MS/MSD results alone were not used to evaluate the precision and accuracy of data due to a variety of sampling and analytical conditions including heterogeneity of site samples, variability in constituent concentrations, various matrix effects, analytical batching, and sample collection conditions. MS/MSD data were used in conjunction with other available QC information to formulate professional judgments and

to apply qualification relative to the validity and usability of the analytical results. Laboratory established control limits, as defined in the method protocols, were used to evaluate MS/MSD performance. Data qualification was based on professional judgment and overall compliance with control limits.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

**TABLE 3. LOCATIONS WITH MS/MSD RECOVERY OUTSIDE CONTROL LIMITS**

Sample Location	Compound	MS Recovery	MSD Recovery
MW-155	Bromomethane	< LL but > 10%	--
MW-252	Bromomethane	< LL but > 10%	AC
MW-164	Chloroethane	>UL	AC
	1,4-Dioxane	<LL but >10%	<LL but >10%
MW-108	1,1,2-Trichloroethane	>UL	--
	4-Methyl-2-pentanone (MIBK)		
MW-19	Carbon disulfide	AC	>UL

AC – Acceptable  
 UL – Upper control limit  
 LL – Lower control limit

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of a MS/MSD deviation, the sample results are qualified as documented in the table below.

**TABLE 4. MS/MSD RECOVERY EVALUATION CRITERIA**

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration (D). > the upper control limit (UL)	Detect	No action
	Non-detect	No action

Sample locations associated with MS/MSD recoveries exhibiting an RPD greater than the control limit are presented in the following table.

**TABLE 5. LOCATIONS WITH MS/MSD RPD OUTSIDE CONTROL LIMITS**

Sample Location	Compound
MW-143	Carbon disulfide
	Dichlorodifluoromethane
MW-252	Bromomethane
	Chloroethane
MW-164	Chloroethane
MW-169	Chloroethane

The criteria used to evaluate the RPD between the MS/MSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

**TABLE 6. MS/MSD RPD EVALUATION CRITERIA**

Control Limit	Sample Result	Qualification
> UL	Non-detect	J
	Detect	J

Detailed discussion of the matrix spike evaluation is provided in the data validation reports in the SDG Data Reviews included as Attachments 1 through 11 of this appendix.

## 1.9 Field Duplicates

Site-specific precision was also monitored through the collection of field duplicates at the rate of approximately one per 20 field samples. Duplicate samples are defined as samples collected simultaneously from the location under identical conditions. Duplicate aqueous sample pairs were collected by filling bottles for the parent sample and bottles for the duplicate sample in immediate succession. Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50 percent for water matrices is applied to the RPD between the parent sample and the field duplicate. Field duplicate sample identifications and their associated parent samples are listed in the table below.

**TABLE 7. FIELD DUPLICATE SAMPLES**

Sample ID	Parent Sample	Sample Collection Date	Sample Delivery Group
Dup-01-08172011	MW-81	8/17/2011	660-43022
Dup-02-08182011	MW-77	8/18/2011	660-43021
Dup-03-08222011	MW-29	8/22/2011	660-43068
Dup04-08222011	MW-27	8/22/2011	660-43068
Dup-05-08232011	MW-64	8/23/2011	660-43179
Dup-06A-08232011	MW-44	8/23/2011	660-43178
Dup-06-08242011	MW-98	8/24/2011	660-43178
Dup-07-082511	MW-82	8/25/2011	660-43179
Dup-08-08302011	PZ-LSAS-1	8/30/2011	660-43326
Dup-PW-01-08312011	8005 15 <sup>th</sup> St E	8/31/2011	660-43326

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All field duplicate RPDs for values above the quantitative reporting limits were within the 50 percent control limit for this sampling event, with the exception of the compounds 1,1-dichloroethane and cis-1,2-dichloroethene associated with sample locations PZ-LSAS-1 and Dup-08-08302011. The associated sample results for these compounds were qualified as estimated. Detailed discussion of the field duplicates evaluation is provided in the data validation reports in the SDG Data Reviews included as Attachments 1 through 11 of this appendix.

### **1.10 System Performance**

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

### **1.11 Data Quality Assessment Conclusion**

All contaminant of concern (COC) data associated with the August/September 2011 annual and IRA sampling events are usable for the intended purpose. Overall, the quality control data, as defined in the USEPA SW-846 Method 8260B/8260C and laboratory performance criteria, were within the guidelines specified in the method with the exception of those deviations specifically mentioned in this review.

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## Section 2

# References

United States Environmental Protection Agency (USEPA). 1999. Organic USEPA National Functional Guidelines. October 1999.

USEPA. 2006. USEPA Region II SOP HW-24, Revision 2 (October 2006) Validating Volatile Organic Compounds by SW-846 Method 8260B.

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**APPENDIX B – WATER LEVEL AND GROUNDWATER SAMPLING  
LOGS**



Southeast Quadrant and RR ROW

Names: Steve Leverette  
 Diane Champagne  
 Date: 8-15-11 & 8/16/11

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
yes	MW-90	RR N of Talle by northernmost house	USAS	8/16/11	2.83	0.20	8:32	
yes	MW-239	opposite brown house	AF Gravels	8/16/11	17.42	13.96	8:27	
yes	MW-49	opposite chain link gate	S&P Sands	8/14/11	18.57	15.65	8:23	replaced tag - seal fallen in
yes	MW-66		USAS	8/16/11	3.25	0.50	8:22	
yes	MW-89		USAS	8/16/11	3.70	0.79	8:21	
yes	MW-17D		USAS	8/16/11	4.52	1.56	8:19	
yes	MW-17S	by Talle Rd intersection	USAS	8/16/11	4.40	1.32	8:18	replaced tag
yes	MW-79		LSAS	8/16/11	15.66	12.91	8:15	
yes	MW-132		AF Gravels	8/16/11	18.88	15.52	8:17	
yes	MW-15D	RR S of site across from tree	USAS	8/16/11	4.97	1.94	8:41	**access note**
NO	MW-15S		USAS	8/16/11	4.81	1.79	8:45	**access note** water
NO	MW-77	across from Babe's house	LSAS	8/16/11	20.55	17.03	9:01	Full of water **access note** No tubing in well
NO	MW-20	long walk - opposite boat	USAS	8/16/11	5.46	2.99	8:56	**access note** water
NO	MW-18D	Ward near Tallevast Rd	USAS	8/16/11	3.05	1.12	9:18	water
NO	MW-18S		USAS	8/16/11	2.90	1.31	9:16	water
yes	MW-29		USAS	8/16/11	2.87	0.93	9:07	replace tag - not needed to replace
yes	MW-91		LSAS	8/16/11	12.76	9.70	9:08	
yes	MW-133		AF Gravels	8/16/11	17.16.75	13.13	9:09	
yes	MW-52		S&P Sands	8/16/11	16.40	13.43	9:12	
yes	MW-64	Ward E of drive	USAS	8/16/11	2.73	0.98	9:14	

initials DC/SL

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
NO	MW-28	Front yard Ward	USAS	8/16/11	3.02	0.45	9:23	water init
yes	MW-53		S&P Sands	8/16/11	17.00	14.15	9:21	
yes	MW-27		USAS	8/16/11	2.95	1.81	9:31	
yes	MW-54		S&P Sands	8/16/11	16.34	13.54	9:29	
yes	MW-104	Ward in back	USAS	8/16/11	2.54	1.66	9:37	
yes	MW-105		LSAS	8/16/11	11.12	9.20	9:39	
yes	MW-248		AF Gravels	8/16/11	15.59	11.97	9:35	
yes	MW-156	Schmid - be sure to keep all gates securely closed at all times.	USAS	8/16/11	1.42	0.68	10:27	
yes	MW-157		LSAS	8/16/11	11.23	8.77	10:25	
yes	MW-158		AF Gravels	8/16/11	13.96	10.05	10:31	
NO	MW-159		S&P Sands	8/16/11	15.32	12.03	10:23	water
yes	MW-160		Lower AF Sands	8/16/11	11.99	10.78	10:21	
yes	MW-161		Floridan	8/16/11	8.30	5.87	10:29	
NO	MW-83		AF Gravels	8/16/11	14.74	10.83	10:59	water
yes	MW-94		USAS	8/16/11	1.87	1.24	10:35	needs TAG - Well pad moved, fixable
yes	MW-95		USAS	8/16/11	1.65	0.93	10:54	
yes	MW-107		USAS	8/16/11	2.36	1.35	10:50	
yes	MW-114	Schmid - back	USAS	8/16/11	1.83	1.09	10:41	
	2400 TALLEVAST RD (PW-84)	Schmid - in the farmhouse						
yes	MW-183	Tallevast + 301	USAS	8/16/11	1.71	1.05	11:15	transducer
NO	MW-184		LSAS	8/16/11	11.01	8.62	11:17	water
yes	MW-185		AF Gravels	8/16/11	13.94	9.84	11:13	
yes	MW-186		S&P Sands	8/16/11	14.79	11.17	11:09	
yes	MW-187		Lower AF Sands	8/16/11	11.25	8.05	11:07	transducer broke off plug, fell in well

initials DC/SL

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
NO	MW-188	301 ROW S of Tallevast	USAS	8/16/11	3.07	1.63	12:36	water
NO	MW-189		LSAS	8/16/11	7.71	6.23	12:41	water
yes	MW-190		AF Gravels	8/16/11	12.70	8.92	12:33	
NO	MW-191		S&P Sands	8/16/11	13.81	9.98	12:43	water
yes	MW-192		Lower AF Sands	8/16/11	8.15	4.81	12:38	
yes	MW-223	15th St E & Univ across fr 7-11	Hard Streak	8/16/11	4.39	3.38	13:12	
yes	MW-224		Venice Clay	8/16/11	4.59	3.54	13:10	
yes	MW-225		Venice Clay	8/16/11	5.58	3.55	13:14	
yes	MW-226		AF Gravels	8/16/11	5.63	3.02	13:15	replaced tag
NO	MW-227		S&P Sands	8/16/11	4.06	4.87	13:20	water
yes	MW-241		Lower AF Sands	8/16/11	7.41	3.49	13:17	
yes	MW-208	e side 301 by Lux Art	USAS	8/16/11	2.48	1.48	12:56	
yes	MW-209		LSAS	8/16/11	6.90	4.40	12:54	
NO	MW-210		AF Gravels	8/16/11	7.65	4.09	13:01	water
NO	MW-211		S&P Sands	8/16/11	5.97	6.73	12:58	water
yes	MW-212		Lower AF Sands	8/16/11	6.06	2.68	12:51	

Northwest Quadrant

Names: Nicki & Heather

Date: 8.15.11 & 8.16.11

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
Y	MW-122	ROW s side Talle Rd	USAS	8/16	5.71	3.44	10:58	
Y	MW-121		USAS		7.66	6.75	12:50	10:44 transducer (q) string
N	MW-171		LSAS	8/16	8.51	7.17	12:45	transducer
N	MW-172		AF Gravels	8/16	11.98	10.27	12:47	transducer
N	MW-173		S&P Sands	8/16	12.08	10.88	12:48	transducer, replace tag ←
Y	MW-174		Lower AF Sands	8/16	11.68	9.76	12:52	transducer
N	MW-69	strip plaza E side	USAS	8/16	4.07	2.57	1:42	**access note** <del>string was vented</del>
Y	MW-251	15th stay on	Floridan	8/16	10.92	8.51	1:02	**access note**
Y	MW-61	ROW	S&P Sands	8/16	15.59	14.72	1:03	**access note**
	7561/7571 15TH ST E (PW-7)							
	Staff Gauge-4 (Commerce Center South Pond)			8/16			10:11	0.78
			Unassigned			0.98		
Y	MW-175	Commerce Center	AF Gravels	8/16	8:25	14.65	20:36	
N	MW-115		USAS	8/16	8:55	4.70	6:81	replace tag, <del>string</del> vented 8:25
N	MW-125	Dolt issues	Venice Clay	8/16	8:57	7.75	7:74	replace tag, <del>string</del> vented 8:28
N	MW-176 *		S&P Sands	8/16	89:00	18.00	20:35	replace tag, <del>string</del> vented 8:37 Need lock
N	MW-177 *		Lower AF Sands	8/16	9:05	15.85	17:76	replace tag, <del>string</del> vented 8:36 Need lock
N	MW-229		USAS	8/16	9:30	4.35	6:47	replace tag, <del>string</del> vented 8:54
N	MW-230 *	behind commerce center	LSAS	8/16	9:35	7.09	6:98	replace tag, <del>string</del> vented 8:51
N	MW-231		AF Gravels	8/16	9:40	16.40	20:71	replace tag, <del>string</del> vented 8:48
Y	MW-196	commerce center	AF Gravels	8/16	8:20	12.70	18:95	
Y	MW-197		AF Gravels	8/16	10:00	17.54	19:85	

SG 4 & wells 175, 115, 125,  
176, 177, 229, 230, 231,  
196, 197 timed dtw  
is reversed

Time ↑ DTW ↑

Wells 108, 242, 243, 244 time + dtw is reversed

initials N Gerwing, H McKenzie

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
N	MW-116	mini stonehenge - commerce place	USAS	8/10	0.99	0.29	10:32	venting water
N	MW-178		LSAS	8/10	12.95	4.80	10:29	transducer
N	MW-179		AF Gravels	8/10	13.24	9.58	10:30	transducer
N	MW-180		S&P Sands	8/10	15.09	12.45	10:31	transducer
N	MW-181		Lower AF Sands	8/10	15.69	11.52	10:32	transducer
N	MW-245	Commerce Ct	Hard Streak	8/10	4.89	3.45	11:07	venting water
N	MW-246		LSAS	8/10	13.23	12.70	11:08	venting water
Y	MW-247		AF Gravels	8/10	12.30	9.37	10:06	wider riser - plug doesn't fit
	Staff Gauge-3 (Commerce Court Pond)		Unassigned	8/10	↔		10:54	1.24
Y	MW-151	15th St E + Talle	USAS	8/10	3.75	2.55	1:25	
Y	MW-152		LSAS	8/10	7.60	6.14	1:27	
N	MW-153		AF Gravels	8/10	9.71	8.21	1:31	venting water
Y	MW-154		S&P Sands	8/10	9.71	9.08	1:26	Need Tag
Y	MW-155		Lower AF Sands	8/10	10.05	9.43	1:19	
	1201 TALLEVAST RD (PW-65)							
Y	MW-108	near Sunbelt	USAS	8/10	10:15	0.95	2.85	
Y	MW-242	Hardin and	USAS	8/10	8:00	0.90	2.65	Go early before parking lot fills
Y	MW-243	Rome - Habitat for Humanity	LSAS	8/10	8:05	9.64	11:01	venting water
Y	MW-244		AF Gravels	8/10	8:08	10.41	12:81	venting water
Y	MW-14D	17th St Ct E Rain gutter	USAS	8/10	3.60	0.96	14:14	need new tool
N	MW-14S		USAS	8/10	3.63	0.95	14:15	venting water
Y	MW-86	Park by church. Walk onto	LSAS					
Y	MW-110	property - walk beyond (north of)	USAS			0.50		replace tag
Y	MW-21	a camper.	S&P Sands			15.11		replace tag

\*  
\*  
\*

MW: 45  
MW: 135  
MW: 13D  
MW: 81

18.58  
4.92  
5.09  
22.29

14:08  
67 5.12  
14:09  
14:09  
\* woman refused entry 8-16  
14:10

initials *N. Gerwing, H. McKenzie*

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
<i>Y</i>	MW-67	corner yard - just NE of church	USAS	<i>8/14</i>	<i>5.12</i>	2.29	<i>14:05</i>	<i>need new lock</i>
<i>Y</i>	MW-81	church sidewalk	LSAS	<i>8/14</i>	<i>22.29</i>	18.29	<i>14:10</i>	
<i>Y</i>	MW-45		S&P Sands	<i>8/14</i>	<i>18.58</i>	16.65	<i>14:08</i>	<i>replace tag need new lock</i>
<i>Y</i>	MW-13D		USAS	<i>8/14</i>	<i>5.09</i>	2.51	<i>14:09</i>	<i>need new lock</i>
<i>Y</i>	MW-13S		USAS	<i>8/14</i>	<i>4.92</i>	22.80	<i>14:09</i>	
<i>Y</i>	MW-48	16th St Ct E empty lot across st from site	LSAS	<i>8/14</i>	<i>20.71</i>	16.80	<i>2:20</i>	<i>broken</i>
<i>Y</i>	MW-232	16th St Ct E by mouth of path	AF Gravels	<i>8/14</i>	<i>17.70</i>	14.51	<i>2:25</i>	<i>broken</i>
<i>N</i>	MW-47		USAS	<i>8/14</i>	<i>4.09</i>	2.10	<i>2:40</i>	<i>no water vented 2:15</i>
<i>Y</i>	MW-109	16th St. Ct E - end	USAS	<i>8/14</i>	<i>4.32</i>	1.64	<i>2:34</i>	
<i>N</i>	MW-68	16th St E - empty lot	LSAS	<i>8/14</i>	<i>15.72</i>	12.71	<i>2:13</i>	<i>**access note**</i>
<i>Y</i>	MW-31		Lower AF Sands	<i>8/14</i>	<i>10.45</i>	14.21	<i>2:04</i>	<i>**access note**</i>
<i>Y</i>	MW-59		S&P Sands	<i>8/14</i>	<i>15.41</i>	13.72	<i>2:05</i>	<i>**access note**</i>
<i>Y</i>	MW-60	end of 16th St E	S&P Sands	<i>8/14</i>	<i>15.92</i>	13.90	<i>2:10</i>	<i>**access note**</i>

## Northeast Quadrant

Names: R. Kontos, N. Woods

Date: 8-15-11/8-16-11  
vent DTW

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments	
NO	MW-228	N of Ring power	AF Gravels	8-16	15.22	10.86	0824		
NO	7500 26TH CT E (PW-57)	e of 301		8-16	NA			Spiroct	
Vented	MW-204	near Ring power	USAS	8-16	2.95	2.64	0830		
NO	MW-205		LSAS	8-16	9.94	7.55	0827		
Yes	MW-206		AF Gravels	8-16	10.56	6.87	0828		
Yes	MW-207		Lower AF Sands	8-16	9.85	6.68	0829		
Yes	MW-198		cluster e of 301 near Ringpower	USAS	8-16	2.47	1.70	0839	
Yes	MW-199	LSAS		8-16	10.45	6.49	0837		
Yes	MW-200	AF Gravels		8-16	11.58	6.39	0836		
Yes	MW-201	S&P Sands		8-16	10.76	7.21	0835		
Yes	MW-202	Lower AF Sands		8-16	8.43	5.57	0834	NO Tag / Transducer in well	
NO	MW-193	301 ROW E of Desenberg		AF Gravels	8-16	11.22	7.27	0857	* Needs Low Profile J Plug *
NO	MW-194			S&P Sands	8-16	11.45	8.35	0859	
NO	MW-195		Lower AF Sands	8-16	11.00	7.95	0855		
Yes	MW-255	Desenberg		8-16	19.35	10.05	0910		
Yes	MW-250		AF Gravels AC	8-16	16.30	NA	0915		
Yes	MW-213		USAS 10/811		1.54	1.52	0918		
Yes	MW-214		LSAS		11.79	9.36	0919		
Yes	MW-215		AF Gravels		14.66	10.77	0921		
Yes	MW-216		S&P Sands		15.41	13.55	0923		
Yes	MW-217		Lower AF Sands		13.15	9.92	0924		

initials RK

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments	
Yes	MW-234	Desenberg	USAS	8-16	1.37	1.30	0931		
Yes	MW-235		LSAS	8-16	11.72	9.53	0933		
Yes	MW-236		AF Gravels	8-16	14.29	11.13	0935		
Yes	MW-237		S&P Sands	8-16	14.82	8.58	0929		
Yes	MW-238		Lower AF Sands	8-16	13.40	10.51	0936		
	Staff Gauge-6 (Desenberg pond)		Unassigned	AC	8-16		NA		Staff Gauge Missing
Yes	MW-249		AF Gravels	10/16/11	12.50	8.08	0951	Broken Tag - Partially Legible	
	MW-203	Boothe	Floridan			NA		cannot gauge	
	Staff Gauge-8 (Boothe Pond)		Unassigned			DRY	DRY	13:06	
no need to vent	Stilling Well-3 (Boothe Pond)		Unassigned			2.79	NA	1307	
- Yes	MW-146 <i>Net 89</i>	Staging area - front (TICC). Check in with office or with Just Steel	USAS		2.31	0.83	1040	replaced tag	
Yes	MW-147		LSAS		2.32	NA	1045		
- No	MW-148		AF Gravels		15.10	11.21	1047		
Yes	MW-149		S&P Sands		15.99	12.97	1050		
- Yes	MW-150		Lower AF Sands		13.65	10.51	1042		
Yes	MW-96		Clay/Sand Zone 3&4		15.11	11.40	10:15		
No	MW-141	Staging area in back	USAS		2.12	0.66	10:21		
Yes	MW-142		LSAS		2.38	0.64	10:19		
Yes	MW-143		AF Gravels		14.82	11.13	1024		
No	MW-144		S&P Sands		16.20	12.01	10:17		
Yes	MW-145		Lower AF Sands		13.70	10.42	1028		



initials RL

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
Yes	MW-136	staging area way back	AF Gravels	8-16	14.87	11.70	1005	
Yes	MW-137		USAS		2.00	0.13	1007	
Yes	MW-138		LSAS		12.00	9.44	1009	
Yes	MW-139		S&P Sands		15.82	12.13	1010	
No	MW-140		Lower AF Sands		14.73	11.41	1012	
Yes	MW-111	empty wooden sign	USAS		2.41	1.26	1058	
Yes	MW-113		LSAS		12.72	9.81	1056	
Yes	MW-26	N of 111	USAS		3.51	1.24	1059	
No	MW-51		Lower AF Sands		14.44	11.81	101	
	Staff Gauge-9 (1975/2003 Tallevast Rd Pond)	same parcel as MW-51	Unassigned		1.15 1.15	NA	1104	
no need to vent	Stilling Well-4 (1975/2003 Tallevast Rd Pond)		Unassigned		3.88 <del>1.15</del>	NA	1430	
NO	MW-16S <sup>New Tag</sup>	19th St E	USAS		2.53	0.98	1245	replaced tag
Yes	MW-16D		USAS		2.47	0.76	1243	
Yes	MW-131	19th St E	AF Gravels		16.42	12.73	1239	
Yes	MW-63		USAS		2.81	0.70	1238	
Yes	MW-46 <sup>New Tag</sup>		Lower AF Sands		14.94	12.18	1237	replaced tag
Yes	MW-92		LSAS		14.01	11.18	1236	
Yes	MW-62	19th St E	USAS		2.96	0.66	1234	
	MW-135 <sup>New Tag</sup>	19th St E by yellow trailer	AF Gravels			13.20		replace tag Covered by Trailer
Yes	MW-93		LSAS		14.66	11.75	1231	
Yes	MW-50		Lower AF Sands		15.11	12.36	1232	

initials RK

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
✓	MW-165	19th St E through trees	S&P Sands AC	8-16	16.05	15.19	12:23	
✓	MW-162		USAS 10/8/11		2.40	0.38	12:20	
✓	MW-166		Lower AF Sands		14.00	11.02	12:20	
✓	MW-163		LSAS		12.27	9.60	12:21	
✓ ✓ <sub>ATC</sub>	MW-97		Clay/Sand Zone 3&4		15.04	12.23	12:22	
✓	MW-164		AF Gravels		15.38	12.78	12:21	
✓	MW-65		behind a house that is on Talle Just E of the tracks. Access the well from 18th St E	USAS	↓	3.25	2.50	12:49

### Southwest Quadrant

Names: SCOTT, MCARDOW

Date: 8/15/11 VENT

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
✓	MW-58	just outside side fence. Between pond and Talle	S&P Sands <sup>MC</sup> <sub>10/8/11</sub>	8-16	18.52	16.63		
✓	MW-129		AF Gravels			18.63	15.89	
✓	MW-30	Talle Rd just W of site. S side of street. Leave car at 58 & walk	USAS		4.25	1.75		
✓	MW-70	Talle Rd by site - by side gate	USAS		6.95	5.20		
WATER IN VAULT	MW-71	Talle and 17th St Ct E	USAS		7.92	3.89		replaced tag
✓	MW-76	17th St Ct E. this is E of the southernmost site fence.	USAS		6.37	4.05		
WATER IN VAULT	MW-9D	17th St Ct E - east side of street by poles.	USAS		5.25	2.53		
✓	MW-9S		USAS			5.23	2.57	
✓	MW-22	at S end of 17th St Ct E	Lower AF Sands		16.89	15.29		
✓	MW-23		S&P Sands			17.38	14.72	
✓	MW-25	78th Dr E - neighborhood s of site	USAS		4.35	1.79		replaced tag
WATER IN VAULT	MW-85		LSAS			9.10	5.71	
WATER IN VAULT	MW-233	17th St E	AF Gravels		18.32	17.75		

initials \_\_\_\_\_

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
✓	MW-78	community center	LSAS AC	8-16	12.25	9.73		Do not go to this well between hours of 7:30-5:30 Do not go to this well between *leave comm. Ctr. by noon 7:30-5:30
✓	MW-44	community center	S&P Sands 10/8/11		18.91	16.47		
WATER IN VAULT	MW-100	opposite antique shop	USAS		4.06	1.87		
✓	MW-99		Clay/Sand Zone 1		10.61	10.62		
✓	MW-219	Asolo conservatory	USAS		2.49	0.60		TRANSDUCER 936
✓	MW-220		LSAS		3.32	1.43		TRANSDUCER 935 TAG BROKEN
WATER	MW-221		AF Gravels		8.82	7.62		TRANSDUCER 934
✓	MW-222		S&P Sands		8.98	7.19		TRANSDUCER 933
WATER	MW-170	Convention Center	Lower AF Sands		17.14	14.44		TRANSDUCER 900
WATER	MW-169		AF Gravels		20.44	17.57		TRANSDUCER 905
WATER	MW-168		LSAS		5.51	3.41		TRANSDUCER 901
WATER	MW-167		USAS		3.47	1.85		TRANSDUCER 903
✓	MW-124		Clay/Sand Zone 2		14.43	12.46		TRANSDUCER 908
✓	MW-182		S&P Sands		16.86	14.30		TRANSDUCER 906
-	8005 15TH ST E (PW-102)	Convention center			-	NA		
WATER	MW-240	Convention Center in back	S&P Sands		19.79	16.34		
-	Staff Gauge-1	Convention Center	Unassigned		-	NA		MISSING
✓	MW-126	Convention Center - north	USAS		6.50	4.33		REPLACE CAP/LOCK
✓	MW-112		Clay/Sand Zone 1		13.64	19.18		
WATER	MW-106		LSAS		6.49	3.92		

initials

Scotty McAdow

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
✓	TW-84-A	waste pro	USAS Ae	8-16	7.00	4.83		check in at office replaced tag PVC STICK UP - NO TAG
✓	TW-84-B		USAS 101811		6.78	4.56		replaced tag PVC STICK UP - NO TAG
WATER	MW-101	behind waste pro	LSAS		8.71	6.41		check in at office BOLT HOLDER TOLLS BRUZZER
WATER	MW-24		USAS		5.41	2.99		
WATER	MW-55		AF Gravels		18.25	15.09		REPLACED LOCK
✓	MW-56	antique shop	S&P Sands		15.12	12.99		ask permission to access wells at antique shop INSTALL LOCK
✓	MW-74		USAS		2.60	0.00		DO NOT DRIVE ON GRASS
✓	MW-82		LSAS		3.19	NA		
✓	MW-88		Clay/Sand Zone 1			12.63	NA	
✓	MW-98	golf course by 15th St E gate	LSAS		3.32	1.56		TRANS DUCER 1005
✓	MW-73		USAS		2.83	1.14		PAD BRUZZER
✓	MW-102	N of 98. near main gate to golf course.	AF Gravels		12.13	10.77		TRANS DUCER 1025
✓	MW-103		USAS		4.74	2.59		
—	Staff Gauge-5 (Golf Course pond)	golf course pond	Unassigned		—	1.00		REMODEL
no need to vent	Stilling Well-5 (Golf Course pond)	golf course pond			—	NA		REMODEL
✓	MW-34	driving range	S&P Sands		17.52	13.74		replaced tag
✓	MW-35		USAS		3.81	NA		
✓	MW-87		LSAS		8.71	4.92		
—	7851 15TH ST E (PW-47)	golf course driving range			—	NA		
✓	MW-75	golf course	USAS		6.05	3.28		

initials JP

A  
B  
C  
D

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
no	MW-117	airport	LSAS AC	8-16	7.23	5.45		accessible by appt. only replaced tag
no	MW-118		USAS 101811		4.81	2.16		replaced tag
no	MW-119		LSAS		6.57	6.19		replaced tag
no	MW-120		USAS		1.51	0.58		replaced tag
-	Staff Gauge-7 (Tallevast Rd Ditch)	tallevast road ditch	Unassigned		2.30	2.58		
no need to vent	Stilling Well-2 (Tallevast Rd Ditch)	tallevast road ditch	Unassigned		2.1	NA		

Onsite - sublist A

Names: Mirko Simic Amy Coats

Date: 8-15 vent

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
Yes	MW-6	grass in front of building	USAS	8/16/11	6.05	4.05	0832	
Yes	MW-5	building	USAS		6.31	4.31	0835	
<del>Yes</del>	MW-72 No	in front of front door	USAS		5.05	2.76	0903	replace tag 72 not vented 8-15
Yes	MW-80 Yes		LSAS		18.96	15.62	0842	
	Staff Gauge-2 (on-Site Pond)	pond	Unassigned		0.5	2.89	0847	
no need to vent	Stilling Well-1 (on-Site Pond)		Unassigned		2.65	NA	1340	
Yes	MW-84		front by where mailbox was		LSAS	18.10	14.95	0850
Yes	MW-57	SW corner front lot	S&P Sands		17.68	15.82	0857	well pressurized
No	MW-130		AF Gravels		17.16	14.47	0904	
Yes	MW-7D	grass by fence to golf course	USAS		5:17	3.01	0910	
Yes	MW-7S		USAS	5.24	3.18	0909		
Yes	MW-123	behind treatment	Floridan	14.03	11.97	1003	Always open. In Situ	
Yes	MW-8D	behind treatment center by back fence	USAS	5.37	2.44	1009		
Yes	MW-8S		USAS	<del>5.37</del> 5.41	2.50	1006	No tag	

Onsite - sublist B

Names: M Simic A Coats

Date: 8-15-11

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
N	MW-254	by huge well pad	USAS	8-16-11	7.60	5.68	1029	replace tag OK
N	MW-32	OS	USAS		6.86	6.05	1031	
Yes	MW-33	OS	LSAS		28.89	19.48	1025	
N	MW-3	dumpsters	USAS		5.80	3.22	1039	
N	MW-134	e of dumpsters	AF Gravels		19.92	16.58	1041	
Yes	MW-40		USAS		6.82	4.74	1048	plug popped
N	MW-41		LSAS		23.01	19.53	1051	
N	MW-12	by e gate	USAS		6.40	4.31	1053	
Yes	PZ-LSAS-1		LSAS		8.04 8.04	5.73	1056	
Yes	RW-2		USAS		6.50	4.45	1100	replaced tag
Yes	DW-1		AF Gravels		20.65	17.28	1102	
N	PZ-LSAS-2		LSAS	8-16-11	9.51	6.63	1113	



Onsite - sublist C

Names: M. Simic, A. Coats vent

Date: 8-15 vent

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
Yes	MW-38		USAS	8-16-11	7.58	5.48		
Yes	MW-39		LSAS	↓	18.41	19.40	11:16	
Yes	PZ-LSAS-5		LSAS		10.75	8.73	11:22	
Yes	PZ-LSAS-4		LSAS		11.85	9.49	11:24	
N	MW-43		LSAS		23.50	19.98	11:33	
N	MW-42		USAS		7.53	5.58	12:53	replaced tag
Yes	IWI-2		Clay/Sand Zone 3&4	↓	19.62	16.70	12:57	
Yes	IWI-1		AF Gravels		20.35	17.30	12:59	
N	PZ-LSAS-7		LSAS		11.90	9.80	13:08	replace tag
Yes	EW-UAFG-1		AF Gravels	8-16-11	20.19	17.25	13:06	

Onsite - sublist D

Names: Mirko Simic / Amy Coats

Date: 8-15-2011

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
Yes	MW-37	by slab	LSAS	8-16-11	24.02	20.55	13:12	
Yes	MW-127	by slab	AF Gravels	↓	23.20	17.40	13:13	
Yes	MW-36	by slab	USAS		10.62	8.19	13:14	Open vent (transducer)
N	MW-10	by slab	USAS		7.40	5.67	13:16	
Yes	RW-1		USAS		7.33	5.60	13:24	
Yes	MW-128	by slab	S&P Sands		19.40	17.05	13:33	
Yes	PZ-LSAS-6	was on slab	LSAS		11.41	10.92	13:54	
Yes	PZ-LSAS-3		LSAS		10.80	9.09	13:55	
Yes	MW-11	alley	USAS		10.53	5.06	13:57	replace tag
N	MW-4	in front of side gate	USAS		6.80	4.60	13:50	
Yes	MW-253		AF Gravels		19.80	16.78	14:01	replaced tag P
Yes	MW-19	grass between bldg and Talle	Lower AF Sands	19.42	17.35	14:03	always open	
Yes	MW-252		S&P Sands	8-16-11 19.26	17.02	14:05	replaced tag	

Tallevast  
Water Levels  
Extraction Wells

Date: 8.16.11

Name: Mirko Smic, Charles Woods

Well ID	time	manual dtw from TOC	time	screen reading dtw
EW-101	0 1350	16.38	1350	18.26
EW-102	0949	30.45	0949	32.07
EW-103	1336	14.71	1336	16.52
EW-104	1334	26.06	<del>1334</del> 28.05	28.05
EW-105	1346	19.83	1346	21.50
EW-106	1344	27.30	1344	29.02
EW-107	1044	11.43	1044	13.42
EW-108	1351	30.83	1351	32.74
EW-109	0956	17.70	0956	19.72
EW-110	0959	18.48	0959	20.17

### Northwest Quadrant

Names: Brian Mc Arrow Nate Woods  
 Date: 8-17

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
*	MW-122	ROW s side Talle Rd	USAS	8/17	7.66	3.44	1031	
*	MW-121		USAS			6.75		
	MW-171		LSAS			7.17		
	MW-172		AF Gravels			10.27		
	MW-173		S&P Sands			10.88		
	MW-174		Lower AF Sands			9.76		
	MW-69	strip plaza E side	USAS			2.57		**access note**
	MW-251	15th stay on	Floridan			8.51		**access note**
	MW-61	ROW	S&P Sands			14.72		**access note**
	7561/7571 15TH ST E (PW-7)							
	Staff Gauge-4 (Commerce Center South Pond)		Unassigned			0.98		
*	MW-175	Commerce Center	AF Gravels	8.17	18.50	14.65	1056	
	MW-115		USAS			4.70		
	MW-125		Venice Clay			7.75		
	MW-176		S&P Sands			18.00		
	MW-177		Lower AF Sands			15.85		
	MW-229	behind commerce center	USAS			4.35		
*	MW-230		LSAS	8.17	6.95	7.09	1046	
*	MW-231		AF Gravels	8.17	20.14	16.40	1047	
*	MW-196	commerce center	AF Gravels	8.17	16.50	12.70	1052	
	MW-197		AF Gravels			17.54		

initials McAdow, NAW

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
*	MW-116	mini stonehenge - commerce place	USAS			0.29		
	MW-178		LSAS	8/17	12.78	4.80	1102	
	MW-179		AF Gravels			9.58		
	MW-180		S&P Sands			12.45		
*	MW-181		Lower AF Sands	8/17	13.63	11.52	1103	
	MW-245	Commerce Ct	Hard Streak			3.45		
*	MW-246		LSAS	8/17	13.06	12.70	1109	
	MW-247		AF Gravels			9.37		
	Staff Gauge-3 (Commerce Court Pond)		Unassigned			1.32		
	MW-151	15th St E + Talle	USAS			2.55		
	MW-152		LSAS			6.14		
	MW-153		AF Gravels			8.21		
	MW-154		S&P Sands			9.08		
	MW-155		Lower AF Sands			9.43		
	1201 TALLEVAST RD (PW-65)							
	MW-108	near Sunbelt	USAS			0.95		
	MW-242	Hardin and	USAS			0.90		Go early before parking lot fills
	MW-243	Rome - Habitat	LSAS			9.64		
	MW-244	for Humanity	AF Gravels			10.41		
	MW-14D	17th St Ct E Rain	USAS			0.96		
	MW-14S	gutter	USAS			0.95		
*	MW-86	Park by church. Walk onto property - walk beyond (north of) a camper.	LSAS			12.67		No access
*	MW-110		USAS			0.50		↓
*	MW-21		S&P Sands			15.11		

initials McAdow, NAW

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
	MW-67	corner yard - just NE of church	USAS			2.29		
	MW-81	church sidewalk	LSAS			18.29		
	MW-45		S&P Sands			16.65		
	MW-13D		USAS			2.51		
	MW-13S		USAS			22.80		
	MW-48	16th St Ct E empty lot across st from site	LSAS			16.80		
	MW-232	16th St Ct E by mouth of path	AF Gravels			14.51		
	MW-47		USAS			2.10		
	MW-109	16th St. Ct E - end	USAS			1.64		
	MW-68	16th St E - empty lot	LSAS			12.71		**access note**
	MW-31		Lower AF Sands			14.21		**access note**
*	MW-59		S&P Sands		8/17	15.38	13.72	1115
	MW-60	end of 16th St E	S&P Sands			13.90		**access note**

Amy's set

Northeast Quadrant

Names: Brian McAdow Nate Woods

Date: 8/17

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
	MW-228	N of Ring power	AF Gravels			10.86		
	7500 26TH CT E (PW-57)	e of 301						
	MW-204	near Ring power	USAS			2.64		
	MW-205		LSAS			7.55		
	MW-206		AF Gravels			6.87		
	MW-207		Lower AF Sands			6.68		
	MW-198	cluster e of 301 near Ringpower	USAS			1.70		
	MW-199		LSAS			6.49		
	MW-200		AF Gravels			6.39		
	MW-201		S&P Sands			7.21		
	MW-202		Lower AF Sands			5.57		
	MW-193	301 ROW E of Desenberg	AF Gravels			7.27		
	MW-194		S&P Sands			8.35		
	MW-195		Lower AF Sands			7.95		
	MW-255	Desenberg				10.05		
*	MW-250		AF Gravels	8/17	15.60	NA	1020	
	MW-213		USAS			1.52		
	MW-214		LSAS			9.36		
	MW-215		AF Gravels			10.77		
	MW-216		S&P Sands			13.55		
	MW-217		Lower AF Sands			9.92		

initials McAdow, NAW

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
	MW-165	19th St E through trees	S&P Sands			15.19		
	MW-162		USAS			0.38		
	MW-166		Lower AF Sands			11.02		
	MW-163		LSAS			9.60		
	MW-97		Clay/Sand Zone 3&4			12.23		
	MW-164		AF Gravels			12.78		
*	MW-65	behind a house that is on Talle Just E of the tracks. Access the well from 18th St E	USAS	8/17	3.25		1010	



Southwest Quadrant

Names: Brian Mc Adow, Nate Woods

Date: 8.17

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
	MW-58	just outside side fence. Between pond and Talle	S&P Sands			16.63		
	MW-129		AF Gravels				15.89	
	MW-30	Talle Rd just W of site. S side of street. Leave car at 58 & walk	USAS			1.75		
	MW-70	Talle Rd by site - by side gate	USAS			5.20		
*	MW-71	Talle and 17th st Ct E	USAS	8/17/11	7.33	3.89	0920	
	MW-76	17th St Ct E. this is E of the southernmost site fence.	USAS			4.05		
	MW-9D	17th St Ct E - east side of street by poles.	USAS			2.53		
	MW-9S		USAS				2.57	
	MW-22	at S end of 17th St Ct E	Lower AF Sands			15.29		
	MW-23		S&P Sands				14.72	
	MW-25	78th Dr E - neighborhood s of site	USAS			1.79		
	MW-85		LSAS				5.71	
*	MW-233 *	17th St E	AF Gravels	8/17	18.14	17.75	0930	

McAdow, NAW

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
	TW-84-A	waste pro	USAS			4.83		check in at office
	TW-84-B		USAS			4.56		
	MW-101	behind waste pro	LSAS			6.41		check in at office
	MW-24		USAS			2.99		
	MW-55		AF Gravels			15.09		
	MW-56	antique shop	S&P Sands			12.99		ask permission to access wells at antique shop
	MW-74		USAS			0.00		
*	MW-82 *		LSAS	8.17	3.26	NA	948	
	MW-88		Clay/Sand Zone 1			NA		
	MW-98	golf course by 15th St E gate	LSAS			1.56		
	MW-73		USAS			1.14		
	MW-102	N of 98. near main gate to golf course.	AF Gravels			10.77		
	MW-103		USAS			2.59		
	Staff Gauge-5 (Golf Course pond)	golf course pond	Unassigned			1.00		
no need to vent	Stilling Well-5 (Golf Course pond)	golf course pond				NA		
	MW-34	driving range	S&P Sands			13.74		
	MW-35		USAS			NA		
	MW-87		LSAS			4.92		
	7851 15TH ST E (PW-47)	golf course driving range				NA		
	MW-75	golf course	USAS			3.28		

Onsite - sublist A

Names: Brian Mc Adow Nate Woods

Date: 8.17

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
	MW-6	grass in front of building	USAS			4.05		
	MW-5		USAS			4.31		
	MW-72	in front of front door	USAS			2.76		
	MW-80		LSAS			15.62		
	Staff Gauge-2 (on-Site Pond)	pond	Unassigned			2.89		
no need to vent	Stilling Well-1 (on-Site Pond)		Unassigned			NA		
	MW-84		front by where mailbox was	LSAS			14.95	
	MW-57	SW corner front lot	S&P Sands			15.82		
	MW-130		AF Gravels			14.47		
	MW-7D	grass by fence to golf course	USAS			3.01		
	MW-7S		USAS			3.18		
*	MW-123 *	behind treatment	Floridan	8/17	14.13	11.97	1128	
	MW-8D	behind treatment center by back	USAS			2.44		
	MW-8S	fence	USAS			2.50		

Onsite - sublist B

Names: Brian McAdew Nate Woods

Date: 8.17

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
	MW-254	by huge well pad	USAS			5.68		
	MW-32	OS	USAS			6.05		
*	MW-33*	OS	LSAS	8.17	21.93	19.48	1131	
	MW-3	dumpsters	USAS			3.22		
	MW-134	e of dumpsters	AF Gravels			16.58		
	MW-40		USAS			4.74		
	MW-41		LSAS			19.53		
	MW-12	by e gate	USAS			4.31		
	PZ-LSAS-1		LSAS			5.73		
	RW-2		USAS			4.45		
	DW-1		AF Gravels			17.28		
	PZ-LSAS-2		LSAS			6.63		

Onsite - sublist C

Names: Brian Mc Adow Nate Woods

Date: 8.17

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
	MW-38		USAS			5.48		
*	MW-39 *		LSAS	8.17	19.74	19.40	1139	
	PZ-LSAS-5		LSAS			8.73		
	PZ-LSAS-4		LSAS			9.49		
	MW-43		LSAS			19.98		
	MW-42		USAS			5.58		
	IWI-2		Clay/Sand Zone 3&4			16.70		
	IWI-1		AF Gravels			17.30		
	PZ-LSAS-7		LSAS			9.80		
	EW-UAFG-1		AF Gravels			17.25		

Onsite - sublist D

Names: Brian McAdow Nate Woods

Date: 8-17

Vented on Mon 8-15?	Well ID	Location Description	Zone	Date	Depth to Water (ft toc)	Previous Depth to Water (ft toc)	Time	Comments
	MW-37	by slab	LSAS			20.55		
*	MW-127	by slab	AF Gravels	8/17	20.04	17.40	1141	
	MW-36	by slab	USAS			8.19		
	MW-10	by slab	USAS			5.67		
	RW-1		USAS			5.60		
	MW-128	by slab	S&P Sands			17.05		
	PZ-LSAS-6	was on slab	LSAS			10.92		
	PZ-LSAS-3		LSAS			9.09		
	MW-11	alley	USAS			5.06		
	MW-4	in front of side gate	USAS			4.60		
	MW-253		AF Gravels			16.78		
	MW-19	grass between bldg and Talle	Lower AF Sands			17.35		
	MW-252		S&P Sands			17.02		