

Natural Soda LLC 2019 Project Status Report & Annual Plan of Development January 2020

Please note CONFIDENTIAL data sections of this document

Prepared for: Colorado Division of Reclamation Mining and Safety 1313 Sherman Street, Room 215 Denver, CO 80203

> Submitted by: Natural Soda LLC 3200 Rio Blanco County Road 31 Rifle, CO 81650

Prepared by: Daub & Associates, Inc. 1985 1/2 South Broadway Grand Junction, CO 81507-9649

Vegetation Monitoring Report by: Rusty Roberts, Rangeland Ecologist/Biologist



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1.0 Introduction and Project Summary

This 2019 Project Status Report and Annual Plan of Development is submitted to fulfill the requirements of BLM sodium leases, COC-00118326, COC-00118327, COC-0119986, and COC-37474 as stated in Federal Regulations 43 CFR, Subpart 3591 and 3592 and the Project Record of Decision dated January 20, 1987. This report is also submitted to the Colorado Division of Reclamation Mining and Safety (DRMS) to meet the requirements for an Annual Report per State permit number M-1983-194, and in part to meet the requirements contained in the EPA UIC Class III Area Permits: CO30358-00000 and CO32169-00000.

This report summarizes the Natural Soda LLC (NS) 2019 process operations, production activities, reclamation status, geotechnical and environmental monitoring results, as well as, the status of surface facilities and wells. Proposed operations for 2020 will be described in this report, including drilling the 16H-1V and 16H-IR-E production wells and the 2020 Plugging and Abandonment Program.

2.0 Description of Project Area

2.1 Location and Regional Setting

The four NS sodium leases are located in the Piceance Creek Basin in Rio Blanco County in northwestern Colorado (Figures 1 and 2). The sodium leases are located primarily between the Yellow Creek and Piceance Creek drainages, approximately 41 miles from Meeker, Colorado and 53 miles from Rifle, Colorado. The climate is semi-arid with annual precipitation averaging 12-14 inches. Precipitation generally occurs as snow from November to March and as rain during the remainder of the year. The vegetation is predominantly pinyon pine, sagebrush, Utah juniper, western wheatgrass, and needle-and-thread grass. The total area contained within the four sodium leases is 8,379 acres more or less. The principle area of operation is located in and around Section 26, T1S, R98W, 6th Principal Meridian. Figure 1 shows the NS leases and regional setting. Figure 2 shows sodium leases within the Piceance Creek Basin. Figure 3 and Figure 4 show the NS well locations, and proposed well locations.





Figure 1: Natural Soda LLC Vicinity Map



Figure 2: Sodium Leases Map

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Figure 3: Plant and Well Location Map, Section 26 Detail.

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Figure 4: Plant and Well Location Map, Expanded View.



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2.2 Leasehold Status

The original four sodium leases were renewed by the BLM, in 2011 for a period of ten years. Annual rental and royalty payments have been submitted to the Mineral Management Service. The NS leases comprise approximately 8,379 acres.

3.0 Project Status

3.1 2019 Project Activities (Confidential) (See Figure 3 & Figure 4: Plant and Well Location Maps)

In 2019 NS produced 231,561 tons of sodium bicarbonate. This product was produced from the 10H, 12H, 13H, 14H, 15H, 16H, and 17H mining intervals. Routine boil outs were performed in 2019. Various short shut-downs were required for routine maintenance, equipment repair and/or replacement.

3.1.1 Items of Significance (Confidential)

- The 14H-1V (Slant Well), 15H-1V (Slant Well), and 15H-IR-E (Extended Lateral Well) production wells were variously drilled and/or completed in June and July.
- The DS-10 monitor well was drilled and completed during June and July and subsequently fitted with a sample pump.
- Sample pump equipment for the DS-2 and DS-3 monitor wells all had sampling equipment and pumps removed and were replaced in 2019.
- The 8H-I, 8H-R, and 13H-I production wells were successfully plugged and abandoned (P&A) in 2019.

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3.1.2 Mining interval Production (Confidential)

Table 1: Mining Interval Production in Tons (Confidential)

Tons	Mining Interval								
in 2019	#8H	#10H	#12H	#13H	#14H	#15H	#16H	#17H	DVPW1
2019	0	4,368	56,802	43,323	15,238	24,645	30,945	56,241	0
Total tons	93,878	356,348	206,642	153,589	232,559	155,149	110,380	72,762	1,264

3.1.3 2019 Monthly Production Tons Summary (Confidential)

Table 2: Monthly Production Summary in Tons (Confidential)

Month	Beginning Inventory	Production	Sales	Ending Inventory
January	3,354	22,212	20,417	5,149
February	5,149	16,914	15,826	6,237
March	6,237	16,584	17,487	5,334
April	5,334	19,610	18,886	6,058
Мау	6,058	19,564	18,935	6,687
June	6,687	19,906	19,001	7,592
July	7,592	17,518	20,696	4,415
August	4,415	21,364	18,961	6,817
September	6,817	17,538	19,112	5,243
October	5,243	19,435	20,090	4,588
November	4,588	20,258	18,573	6,273
December	6,273	20,658	18,932	7,998
TOTALS		231,561	226,917	



3.1.4 Regulatory Review (Confidential)

NS submitted routine Sundry Notices, monthly, quarterly, and annual reports to the appropriate agencies. The following summarizes other regulatory related activities:

Bureau of Land Management (BLM)

- NS submitted required Application for Permit to Drill (APD) and well completion documents for the DS-10 groundwater monitor well, 14H-1V production well, 15H-1V production well, and the 15H-IR-E production well.
- Sundry Notices for the P&A of the 8H-I, 8H-R, and 13H-I production wells were submitted.
- Undesirable Event reports (minor leaks of brine water to the ground surface) were submitted to the BLM in May and September 2019.
- In August 2019, NS, submitted the application for a 30 year renewal of ROW COC40613 (BLM Form 299). The right of way totals 12.05 acres.

United States Environmental Protection Agency (EPA)

- DS-10 GWM/SSMW well established a baseline gamma ray log and casing collar locator log for this dual purpose GWM/SSMW well.
- The EPA approved the addition and construction of the 14H-1V, 15H-1V, 16H-1V, and 17H-1V injection wells.
- The 13H-RI-E, 14H-RI, 15H-RI, and 16H-RI production wells were permitted for conversion to dual use injection/recovery. Required logging and MIT work was completed and submitted according to permit requirements.
- Routine Subsurface Subsidence Monitor Well (SSMW) Gamma-Ray logging was completed in the BG-5 in February.
- Routine Mechanical Integrity Testing (MIT) Part 2 temperature logging in the 13H-IR production well was completed in February.
- Routine MIT (Parts 1 and 2) was completed in the 10H-I production well in May.
- The EPA collected samples, inspected, and approved Natural Soda's facilities, records, processes, and controls in May.
- NS notified the EPA and provided completion documents for the plugging and abandonment of the 8H-I, 8H-R, and 13H-I production wells.
- Required logging and MIT work was completed and submitted for the newly constructed 15H-IR-E production well according to permit requirements.
- Mechanical Integrity Pressure Testing (MIT P1) was done in the newly constructed 14H-1V and 15H-1V slant production wells.
- NS submitted a UIC Add a Well (AAW) and request to inject (RTI) packet for the recently constructed 15H-IR-E production well.



- NS submitted an AAW packet for the 16H-IR-E production well to be drilled in 2020.
- NS updated the EPA's Financial Assurance documents in February, April, and December.

Colorado Division of Reclamation and Mine Safety (DRMS)

- NS submitted required annual payment fees and reports for DRMS Permits M-1983-194 and M-1999-051.
- The DRMS inspected the NS plant and well field in January, May, August, and October, no significant issues were noted.
- The DRMS approved Technical Revision (TR) 42 in May. TR 42 allowed for the construction of the 14H-1V and DS-10 wells and associated infrastructure.
- The DRMS approved TR 43 in June. TR 43 allowed for the construction of the 15H-1V, 16H-1V, 17H-1V, 15H-IR-E, 16H-IR-E, and 17H-IR-E wells and associated infrastructure.
- The DRMS approved TR 44 in October. TR 44 reduced the NS reclamation bond.

Colorado Division of Water Resources (DWR)

• The DWR issued a permit for the DS-10 groundwater monitor well in September 2019.

Colorado Department of Public Health & Environment (CDPHE)

- The annual CDPHE Sand and Gravel Mining and Processing Stormwater discharge Report Form was submitted in January.
- NS notified the CDPHE of the Start-up for the new "Main Boiler #2, mfr. Date: 2016" by submitting form APCD-103 in late October. CDPHE previously (March 2016) issued construction permit #15RB0259 for Main, Boiler #2.
- In May NS submitted a permit cancellation request for their back-up boiler #2 and renewed/updated six Air Pollution Emission Notices (APENs) to include: the main and #1 backup boilers, flash dryers and baghouses, air classifier, and mining and product conveyance.
- NS submitted required CDPHE form APCD-107 (Emissions Permit/APEN Cancellation) in December to cancel the old NS boiler #1 permit.
- In 2019 NS complied with all reporting requirements for storm water and environmental emissions.

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Rio Blanco County (RBC)

- In May the existing Special Use Permit (SUP) 12-04 was amended to include the 14H-1V, 15H-1V, 15H-IR-E, and DS-10 wells and pads.
- On and off lease temporary living quarters were inspected and approved in June for use in support of the 2019 drilling program.

3.2 Proposed 2020 Activities and Schedule (Confidential)

3.2.1 Processing (Confidential)

NS anticipates increased production in 2020. Brief shut-downs for periodic boil-outs and routine maintenance are planned in 2020.

3.2.2 Well field (Confidential)

- NS anticipates limited production from the DVPW in 2020.
- The 16H-1V and 16H-IR-E Injection/Recovery wells are planned to be drilled, completed, and begin production in 2020.
- In 2020 NS anticipates Plugging and Abandoning (P&A) the 10H-I, 10H-R, 10H-1V, and 14H-I production wells.
- In December 2018 89-1 (B-Groove Aquifer) wells was Inspected with a video log to determine the status of the sampling equipment in the well. Post video log, an operation commenced to remove all of the old PVC tubing, nylon sample lines, and wire from the well bore. The old sampling pump was not recovered from the sandpack at the bottom of the 89-1 well. Due to the proximity of the well to overhead power lines, this work will only proceed during the NS plant annual common electrical outage. NS plans clean out the 89-1 well in May of 2020 during the electrical outage and replace the sampling pump and associated equipment in the wellbore.
- The 89-2 (A-Groove Aquifer) well underwent operations in 2018 to remove all of the old PVC tubing, nylon sample lines, sampling pump, and wire from the well bore. Due to the proximity of the 89-2 well to overhead power lines, this work will only proceed during the NS plant annual common electrical outage. NS plans clean out the 89-2 well in conjunction with the operations on the 89-1 well in May of 2020 during the planned plant annual electrical outage and replace the sampling pump and associated equipment in the wellbore.



3.2.3 EPA Notification – 2020 Schedule of Planned Mechanical Integrity Test (MIT) (Confidential)

- Per EPA UIC Permit C030358-00000 Final Area Permit requirements the following MIT Part 1 and MIT Part 2 testing is planned for 2019.
 - 15H-IR-E Well initial, routine MIT Part 2 temperature logging will be conducted in the first or second quarter of 2020.
 - 16H-RI Well initial, routine MIT Part 2 temperature logging will be conducted in the first or second quarter of 2020.
 - 16H-IV Well initial, routine MIT Part 1 pressure testing, and Part 2 temperature logging will be conducted following well completion operations in 2020 per UIC permit requirements.
 - 16H-IR-E Well initial, routine MIT Part 1 pressure testing, and Part 2 temperature logging will be conducted following well completion operations in 2020 per UIC permit requirements.

3.2.4 EPA Notification – 2020 Schedule of Planned SSM Survey (Confidential)

 NS will collect biennial surface subsidence monument surveys in 2021, in accordance with UIC Permit C030358-00000 requirements.

3.2.5 EPA Notification – 2020 Schedule of Planned SSMW Logging (GR/CCL) (Confidential)

- Per EPA UIC Permit C030358-00000 requirements; the following routine subsurface subsidence monitor well (SSMW) logging (GR/CCL) is planned for 2020:
 - No routine SSMW logging is planned for 2020.

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4.0 2019 Project Activities

4.1 On-Site Facilities and Process Description

4.1.1 General Arrangement

Figure 5 provides an overview of the process flow.

4.1.2 Lab Operation / Sanitation / ISO

In 2019, activities continued in the laboratory to provide analysis for process control, quality assurance, and regulatory requirements.

- Plant operators performed process control analyses.
- Chloride levels were monitored by both operations and laboratory personnel on all USP grades to ensure USP standards were met.
- The USP test for insoluble materials was conducted on a per lot basis by laboratory personnel and a filter test for insoluble materials was conducted on the dry product once per shift by operations.
- Pests were controlled with the use of two UV bug lights and rodent traps around the interior and exterior walls of the plant.
- GMP/ISO/Sanitation training was provided for all employees as required.
- A food safety audit for FSSC 22000 was conducted for which Natural Soda maintained GFSI certification.
- CDPHE, NSF, OMRI, Kosher, Halal, non-GMO, and ISO 9001 certifications were maintained.

4.1.3 Process, Utilities, Facilities

- In 2019 NS installed and brought online a new boiler rated at 88.203 MM BTU per hour, fitted with a LoNOx burner. NS refers to this boiler as "Boiler, Main Number 2" and is permitted with CDPHE.
- In conjunction with the new boiler installation, NS added a new Barren Heat Exchanger. NS upgraded and expanded the condensate collection process and handling capacity.
- The 2 old NS boilers were retired, decommissioned and removed.
- The existing two boiler buildings were demolished and replaced with a new boiler building that encompass the upgraded boiler and all associated equipment.

Figure 5 illustrates the general process flow.

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Figure 5: General Flow Process



4.1.4 Wells Associated With the NS Project (Confidential)

The following well-field related activities occurred in 2019: Refer to *Figure 3 & Figure 4 Plant and Well Location Map.*

- The DS-10 Core Hole/GMW/SSMW well was drilled and completed in 2019 to serve as a multi-purpose well for NS. The DS-10 will monitor the DS Aquifer and provide water level and chemistry data for the DS aquifer. Per EPA requirements the DS-10 will also serve as a subsurface subsidence monitor well for the 15H and 16H mining intervals.
- The 14H-1V Slant/Production well was drilled and completed in June 2019, and began producing in August 2019. Routine Mechanical Integrity Tests (MIT) Parts 1 & 2 were completed pursuant to UIC stipulations. The 14H-1V began producing in August 2019.
- The 15H-1V Slant/Production well was spudded on June 28, 2019, and completed on July 6, 2019. Routine Mechanical Integrity Tests (MIT) Parts 1 & 2 were completed pursuant to UIC stipulations. The 15H-1V began producing in September 2019.
- The 15H-IR-E Production well was spudded on July 8, 2019, and initially completed on July 29, 2019. Prior to operation the 15H-IR-E required additional remediation work that was completed in December 2019. Routine Mechanical Integrity Tests (MIT) Part 1 was completed pursuant to UIC stipulations. The 15H-IR-E began producing in January 2020.
- The DS-3 well sampling equipment and pump were removed and replaced with a new nitrogen lift pump (NLP) system in May 2019.
- The DS-2 well sampling equipment and pump were removed and replaced with a new nitrogen lift pump (NLP) system in May 2019.

The current status of all wells associated with the NS Project is indicated in *Table 3: List and Status of Wells Associated with NS*.

4.1.5 Other Activities

Continuous water level monitoring of proximal DS aquifer monitor wells provided real time data for the management of active production mining interval operations. Throughout the year, injection and recovery rates were adjusted to maintain monitoring well water levels near target zones.



Table 3: List and Status of Wells Associated with N	1S

Well Name	Initial Well Type	Current Well Status	Section	Town- ship	Range	Latitude (NAD 27)	Longitude (NAD 27)	Initial TD, (MD, ft)	Current TD, (MD, ft)	Comments
3M-TDR	Subsidence Monitoring	Subsidence Monitoring	26	1S	98W	39.928794934	108.362551397	1820	1820	
4A-5M	Hydrology/Subsidence Monitoring	Plugged and Abandoned	26	1S	98W	39.929813477	108.365383461	1830	0	P&A June 2012 Currently Operates as TDR Well
10H-I	Horizontal Injection	Horizontal Injection (Inactive)	25	1S	98W	39.927895622	108.349074715	4033	4033	TVD TD=~1995'
10H-R	Horizontal Recovery	Horizontal Recovery (Inactive)	25	1S	98W	39.928427876	108.348902019	2840	2840	TVD TD=~2005'
10H-1V	Slant Recovery	Slant Recovery (Inactive)	26	1S	98W	39.928386480	108.357515700	2038	2038	TVD TD =~2000
12H-I	Horizontal-Injection	Horizontal- Production	25	1S	98W	39.929304000	108.348621000	4189.0	4189	TVD TD=~1985'
12H-R	Horizontal-Recovery	Horizontal- Recovery	25	1S	98W	39.929598000	108.348538000	2623.0	2623	TVD TD=~2007'
12H-IR	Horizontal-Production (Inj/Rec)	Horizontal- Production	26	1S	98W	39.929667896	108.363801054	3464.7	3464.7	TVD TD=-1972'
13H-R(I)	Horizontal-Production (Inj/Rec)	Horizontal- Production	25	1S	98W	39.929583170	108.348684400	2549	2549	TVD TD=~2013'
13H-IR	Horizontal-Production (Inj/Rec)	Horizontal- Production	26	1S	98W	39.930014690	108.363712457	3423.7	3423.7	TVD TD=-1964'
14H-I	Horizontal Injection	Horizontal- Injection (Inactive)	25	1S	98W	39.930529000	108.349996000	3822	3822	TVD TD=~1970'
14H-R(I)	Horizontal Production (Inj/Rec)	Horizontal- Production	25	1S	98W	39.930265288	108.349763798	2819	2819	TVD TD=~1983'
14H-1V	Slant Production (Inj/Rec)	Slant Production (Rec)	26	1S	98W	39.931733549	108.35641781	2095.5	2095.5	
15H-I	Horizontal Injection	Horizontal- Injection	27	1S	98W	39.927281590	108.370834800	5477	5477	TVD TD=~1877'
15H-R(I)	Horizontal Production (Inj/Rec)	Horizontal- Production	34	1S	98W	39.927050806	108.370714984	2698	2698	TVD TD=~1850'
15H-1V	Slant Production (Inj/Rec)	Slant Production (Rec)	26	1S	98W	39.92797980	108.36112812	2079.1	2079.1	
15H-IR-E	Horizontal Production (Inj/Rec)	Slant Production (Inj)	25	1S	98W	39.92778393	108.34898748	4032.4	4032.4	
15H-SSMW	Subsurface Subsidence Monitoring	Subsurface Subsidence Monitoring	26	1S	98W	39.927297800	108.367304200	1760.5	1760.5	
16H-I	Horizontal Injection	Horizontal- Injection	34	1S	98W	39.926332533	108.371061443	5425	5425	TVD TD=~1910'
16H-R(I)	Horizontal Production (Inj/Rec)	Horizontal- Production	34	1S	98W	39.926848404	108.371348247	2451	2451	TVD TD=~1856'
17H-I	Horizontal-Injection	Horizontal- Injection	34	1S	98W	39.925807900	108.370279100	5378.9	5378.9	TVD TD=-1911'
17H-R	Horizontal-Recovery	Horizontal- Recovery	34	1S	98W	39.926171184	108.370365216	2431.7	2431.7	TVD TD=-1872'
17H-SSMW	Subsurface Subsidence Monitoring	Subsurface Subsidence Monitoring	35	1S	98W	39.925620961	108.367424479	1731.0	1720.6	
89-1	Hydrology Monitoring	Hydrology Monitoring Well	26	1S	98W	39.934818008	108.359830288	1989	1570	
89-2	Hydrology Monitoring	Hydrology Monitoring Well	26	1S	98W	39.934771572	108.359655360	1409	1389	
89-3	Hydrology Monitoring	Hydrology Monitoring Well	26	1S	98W	39.934959857	108.359876003	400	390	Periodic sampling issues.
90-1	Water Supply	Hydrology Monitoring Well	26	1S	98W	39.930942569	108.362786046	1451	1451	Converted to A-Grv MW August 2015
WSW-2 (2010-26-198- 2C)	Core Hole	Water Supply	26	1S	98W	39.932913043	108.357000636	1964	1402	Cored July 2010
WSW-3	Water Supply	Water Supply	26	1S	98W	39.940837450	108.361799400	1440	1440	Drilled August 2014
WSW-4	Water Supply	Water Supply	26	1S	98W	39.940358200	108.348198508	1437	1437	Drilled August 2014
90-3	Hydrology Monitoring	Hydrology Monitoring Well	26	1S	98W	39.927659529	108.363196386	1577	1556	
90-4	Hydrology Monitoring	Hydrology Monitoring Well	26	1S	98W	39.927654857	108.363040763	1392	1371	
AG-1	Core Hole 2014-25-198-J	Hydrology Monitoring Well	25	1A	98W	39.929116963	108.348465043	2061	1487	Cemented up to groundwater monitoring well level
BG-1	Hydrology Monitoring	Hydrology Monitoring	35	1S	98W	39.92620970	108.36612260	1911	1552	
BG-4	Hydrology Monitoring	Hydrology Monitoring Well	26	1S	98W	39.929278506	108.356901248	1999.5	1603	
BG-5 (12H-C)	Core Hole	Hydrology & Subsidence Monitoring Well	26	1S	98W	39.929138572	108.351120681	3005	1645	Cemented up to groundwater monitoring well level.
BG-6 (2010- 26-198-6C)	Core Hole	Hydrology Subsidence Monitoring Well	26	1S	98W	39.931301816	108.354997679	1978	1577	Bladder pump installed December 2010.
BG-7	Core Hole 2014-25-198-K	Hydrology Monitoring Well	25	1S	98W	39.928987896	108.432905289	1967	1593.1	Cemented up to groundwater monitoring well level.
BG-9 (DS-5)	Core Hole	Hydrology Subsidence Monitoring Well	26	1S	98W	39.930335423	108.351403951	1973	1902	Previously known as DS-5, Sep 2018: CIBP; 1829', perfs: 1603-1623' for B-Grv Monitoring.
DS-2 (97 DS2)	Hydrology Monitoring	Hydrology Monitoring Well	35	1S	98W	39.926217942	108.366158755	1854	1829	
DS-3	Hydrology Monitoring	Hydrology Monitoring Well	26	1S	98W	39.929529067	108.360329121	2100	1874.5	Sample pump replaced with NLP in 2018





Table 3: List and Status of Wells Associated with NS (continued)

Well Name	Initial Well Type	Current Well Status	Section	Town- ship	Range	Latitude (NAD 27)	Longitude (NAD 27)	Initial TD, (MD, ft)	Current TD, (MD, ft)	Comments
DVPW-1	Vertical Production	Vertical Production	26	1S	98W	39.929100000	108.357500000	2904.6	2904.6	Limited Production.
DS-6	Core Hole	Hydrology Monitoring Well	35	1S	98W	39.926942000	108.362195000	2962.6	1870	Cemented up to groundwater monitoring well level.
DS-7	Core Hole	Hydrology Subsidence Monitoring Well	26	1S	98W	39.932036903	108.362826421	1980	1875	Cemented up to groundwater monitoring well level.
DS-8	Core Hole 2014-26-198-I	Hydrology Monitoring Well	26	1S	98W	39.932738295	108.355594975	2000	1881.7	Cemented up to groundwater monitoring well level.
DS-9	Core Hole 2014-25-198-M	Hydrology Monitoring Well	25	1S	98W	39.927447860	108.340064803	1916.5	1842	Cemented up to groundwater monitoring well level
DS-10	Hydrology Subsidence Monitoring Well	Hydrology Subsidence Monitoring Well	35	1S	98W	39.92659671	108.35590409	1995	1925	
EX-2	Core Hole	Hydrology Monitoring Well	26	1S	98W	39.934857517	108.359996032	1980	1897	
MMC-IRI-1	Core Hole	Hydrology Monitoring Well	26	1S	98W	39.927580161	108.363115621	2981	397	Cemented up to groundwater monitoring well level.
MMC-IRI-4	Core Hole	Hydrology Monitoring Well	23	1S	98W	39.942950000	108.355333333	3001	1411	Cemented up to groundwater monitoring well level.
MMC-IRI-5	Core Hole	Hydrology Monitoring Well	23	1S	98W	39.943578031	108.355623039	2983	378	
MMC-IRI-6	Core Hole	Hydrology Monitoring Well	23	1S	98W	39.943733333	108.355316667	1878	1394	
MMC-IRI-7	Core Hole	Hydrology Monitoring Well	23	1S	98W	39.943516667	108.356033333	1880	1395	
MMC-IRI-8	Core Hole	Hydrology Monitoring Well	23	1S	98W	39.943450000	108.355833333	1880	489	
MMC-IRI-9	Core Hole	Hydrology Monitoring Well	34	1S	98W	39.920759982	108.383119038	2864	1710	
MMC-IRI-11	Core Hole	Hydrology Monitoring Well	25	1S	98W	39.931608050	108.336010982	2963	1550	Cemented up to groundwater monitoring well level.
MWA-2	Hydrology Monitoring	Hydrology Monitoring Well	20	1S	98W	39.952825612	108.412403600	1200	1200	
MWB-2	Hydrology Monitoring	Hydrology Monitoring Well	20	1S	98W	39.953067253	108.412206500	1398	1398	
MWD-1	Hydrology Monitoring	Hydrology Monitoring Well	20	1S	98W	39.953094778	108.411828300	1731	1731	
MWD-2	Hydrology Monitoring	Hydrology Monitoring Well	20	1S	98W	39.952635000	108.412036900	1703	1703	
MWU-2	Hydrology Monitoring	Hydrology Monitoring Well	20	1S	98W	39.933370000	108.350210000	687	687	
O-GMW-A	Core Hole 2014-27-198-O	Hydrology Monitoring Well (Inactive)	27	1S	98W	39.934483259	108.383446479	1786	1294	Cemented up to groundwater monitoring well level
TH75-6A	Hydrology Monitoring	Hydrology Monitoring Well	14	1S	98W	39.964492958	108.353578053	1260	1260	
TH75-6B	Hydrology Monitoring	Hydrology Monitoring Well	14	1S	98W	39.964807700	108.353045189	1755	1755	
TH75-7A	Hydrology Monitoring	Hydrology Monitoring Well	20	1S	98W	39.952321958	108.409207410	1080	1080	
TH75-7B	Hydrology Monitoring	Hydrology Monitoring Well	20	1S	98W	39.953286260	108.409494700	1498	1498	
RS-96-20-1	Hydrology Monitoring	Inactive	20	1S	98W	39.95037676	108.41282630	2598	1717	OH Packer at 1295'





4.2 New Findings or Developments (Confidential)

- The 10H mining interval reached the end of its useable life and was retired in 2019, the 10H-I, 10H-R, and 10H-1V wells will be P&A'd in 2020.
- The WSW-2 water supply well is currently pumping at a minimal rate. The water chemistry of the WSW-2 is currently under review.
- The DS-10 Core Hole/GMW/SSMW well was drilled and completed in 2019 to serve as a multi-purpose well for NS. The DS-10 well was drilled and cored the Boies Bed to provide addition geological data for the southern portion of the NS lease. The DS-10 well was completed as a DS Aquifer monitor well that will provide water level and chemistry data for the DS Aquifer. NS installed a transducer into the DS-10 well to allow it to be used to monitor DS Aquifer WL in conjunction with production mining of the 15H and 16H well interval. Per EPA requirements the DS-10 will also serve as a subsurface subsidence monitor well for the 15H and 16H mining intervals.
- In 2019, the 14H-1V Slant/Production well was drilled and completed as the first of three production wells drilled in 2019. The 14H-1V production well was drilled into the end of the existing horizontal well bore of the 14H-I production well, providing a new recovery well on the western end of the 14H mining interval. The 14H mining interval began production operations in August of 2019, the 14H mining interval had not been actively mined since June of 2018.
- The 15H-1V Slant/Production well was drilled and completed as the second of three production wells drilled in 2019. The 15H-1V well was drilled into the approximate mid-point of the existing horizontal well bore of the 15H-I lateral well. The 15H-1V production well will provide a new recovery/injection well to support the 15H mining interval from either the 15H-R(I)/15H-I wells on the western end of the mining interval, or the newly drilled 15H-IR-E production well drilled on the eastern end of the 15H mining interval. The 15H-1V began production operations in September of 2019, recovering fluid injected into the 15-R(I) well (western side).
- The third of three production wells drilled in 2019 was the 15H-IR-E Production well. The 15H-IR-E well was horizontally drilled and completed into the end of the existing 15H-I production well. In conjunction with the 15H-1V Slant/Production well, the 15H-IR-E will serve to enhance NS production capabilities and demonstrate a new model for the future mining of sodium bicarbonate on the NS lease.



4.3 2018 Operation Results (Confidential)

Mining and production activities were continuous in 2019. The following table provides a summary of mining and process results:

<u>2019</u>	Recovery	Recovery	Assay	Assay	Tons	Monthly								
Month	Avg	Temp.	Bicarb	NaCl	Mining Interval	Total								
	GPM	remp.	g/I	g/l	#8H	#10H	#12H	#13H	#14H	#15H	#16H	#17H	DVPW1	Tons
Jan-19	1,916	196	211	23	0	0	5,078	3,248	0	4,656	3,285	5,945	0	22,212
Feb-19	1,640	194	212	19	0	87	4,350	2,330	0	2,863	2,588	4,696	0	16,914
Mar-19	1,497	194	208	17	0	1,047	4,330	2,504	0	426	3,248	5,028	0	16,584
Apr-19	2,016	193	198	17	0	932	4,515	4,053	0	1,233	3,983	4,895	0	19,610
May-19	1,833	195	202	18	P&A	1,023	5,081	3,946	0	554	3,420	5,540	0	19,564
Jun-19	1,846	197	206	18	P&A	619	4,979	3,953	0	1,151	4,143	5,060	0	19,906
Jul-19	1,709	196	207	18	P&A	366	4,628	3,541	0	29	4,380	4,574	0	17,518
Aug-19	1,987	194	206	20	P&A	292	5,121	4,777	1,850	0	4,599	4,725	0	21,364
Sep-19	1,737	185	205	20	P&A	0	4,469	3,172	2,653	2,078	1,299	3,867	0	17,538
Oct-19	1,720	186	204	19	P&A	0	4,266	4,385	3,506	3,408	0	3,870	0	19,435
Nov-19	1,827	184	201	18	P&A	0	5,047	3,282	3,848	4,133	0	3,946	0	20,258
Dec-19	1,862	185	203	18	P&A	0	4,938	4,131	3,381	4,112	0	4,059	0	20,658
AVERAGE	1,799	192	205	19	0	364	4,734	3,610	1,270	2,054	2,579	4,687	0	19,297
TOTAL					0	4,368	56,802	43,323	15,238	24,645	30,945	56,241	0	231,561
		Re	covery - Mor	thly average	house flow r	ate and preg	nant liquor te	emperature di	uring proces	s operations				<u> </u>
	Assay - g/L sodium bicarbonate (as total bicarbonate) and sodium chloride in the pregnant liquor													
Key to above headings: (Total bicarbonate = bicarbonate g/L + 1.58 x carbonate g/L)														
	e neadings.	То	ns - Total mo	onthly bicarbo	onate produc	tion from eac	ch mining into	erval.						
		Те	mp Tempe	rature in degr	rees F recove	red at the pr	egnant liquor	tank.						
		Av	g GPM - Mon	thly average	injection flov	v rate during	process ope	rations.						

Table 4: Mine and Process Data (Confidential)





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Figure 6 illustrates 2019 pregnant liquor analytical results. Figure 7 represents monthly production for 2019. NS processed and produced their sodium bicarbonate product during all twelve months of 2019. The balance between injection and recovery rates for mining intervals 10H, 12H, 13H, 14H, 15H, 16H, 17H, and the DVPW has been continuously monitored using fluid level indicators (pressure transmitters) installed in existing Dissolution Surface aquifer monitoring wells located near the active mining intervals.









4.4 Geotechnical Program

NS currently monitors two time-domain-reflectometry (TDR) subsurface-subsidence monitor wells, the 4A-5M and 3M-TDR. There has been no indication of surface or subsurface subsidence near the 4A-5M or 3M-TDR wells since installation. One of the TDR cables in the 4A-5M well is showing evidence of water infiltration. Two of the four TDR cables in 3M-TDR subsidence well were corrupted during installation, in 2003, and not operable. In addition to the monthly NS readings, the installation contractor also collects data quarterly.

4.4.1 Subsurface Subsidence Geophysical Logging

NS conducted the initial EPA mandated, subsurface subsidence logging, in the new DS-10 monitor well on July 1, 2019. This subsurface subsidence monitor well is associated with the 15H and 16H mining intervals.

4.4.2 Surface Subsidence Monitoring

A surface subsidence monument (SSM) survey of all SSMs above NS's area of operations was conducted in the second quarter of 2019. Results of the 2019 SSM survey are shown in Table 5 below.

4.5 Water Well Pumpage

In 2019, approximately 70.5 million gallons of water was pumped from water supply wells WSW-2, WSW-3, and WSW-4 with an average of 134.5 gpm. The total pumpage from WSW-2 was 226,000 gallons, WSW-3 was 40.5 million gallons, and the total pumpage from WSW-4 was 29.6 million gallons.

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SSM Monument	Initial Monument Elevation (ft. AMSL)	2019 Monument Elevation (ft. AMSL)	Elevation Change (ft.)
CP Soda BM	6,634.90	6,634.90	0.00
CP Center SSM	6,658.99	6,658.95	-0.04
CP North SSM	6,639.21	6,639.18	-0.02
CP East SSM	6,669.52	6,669.39	-0.13
CP South SSM	6,683.84	6,683.86	0.02
CP West SSM	6,669.77	6,669.59	-0.18
CP 6 SSM	6,682.88	6,683.06	0.18
CP 7 SSM	6,706.52	6,706.46	-0.06
CP 8 SSM	6,691.65	6,691.66	0.01
CP 10 SSM	6,687.41	6,687.39	-0.02
10H SSM	6,712.95	6,712.71	-0.25
11H SSM	6,705.81	6,705.48	-0.32
12H SSM	6,695.86	6,695.64	-0.22
13H SSM	6,684.47	6,684.22	-0.25
14H SSM	6,675.20	6,675.08	-0.12
15X SSM	6,694.41	6,694.37	-0.04
15H SSM	6,702.35	6,702.38	0.03
16H SSM	6,713.03	6,713.21	0.18
17H SSM	6,719.06	6,719.12	0.07
12HA SSM	6,661.41	6,661.39	-0.02
CP 11 SSM	6,653.71	6,653.69	-0.02
CP 12 SSM	6,702.11	6,702.11	0.00
CP 13 SSM	6,725.22	6,725.30	0.08

Table 5: Surface Subsidence Monument (SSM) Elevation Monitoring

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5.0 Environmental Monitoring and Protection

5.1 Hydrology Monitoring

5.1.1 Introduction

NS's hydrology monitoring program concentrates on groundwater, as there are no perennial streams or springs located on the NS's sodium leases. The USGS stream gauging station-monitoring program is conducted, with NS support, to provide regional surface stream flow data on Yellow and Piceance Creeks.

The hydrology-monitoring plan is designed to determine impacts of NS's solution mining operations on underground sources of drinking water, as designated by the US EPA.

Refer to Figure 3 and Figure 4 for the locations of existing monitor wells. Groundwater analytical results are presented in Appendix A.

5.1.2 Stream Gauging Stations

NS contracts with the USGS to monitor surface waters for water quality and quantity. Monitoring was performed upstream and downstream relative to the mining operations and with respect to Yellow Creek and Piceance Creek at four existing stations with extensive historical data. Historical stream gauging data is reported in this document and discharge data is complete through the 2018 water year (WY) (October 2017 – September 2018). Discharge data is mostly complete through the 2019 WY (October 2018 – September 2019).

The USGS surface water data are available to the public from the USGS web site at http://co.water.usgs.gov. Tables 6 and 7 summarize key 2019 WY data for surface water near the NS site.

Data reported in Table 6 and Table 7 is compiled from the USGS web site. At the time of publication of this Annual report, monitoring stations 6200 (Piceance Creek below Ryan Gulch) and 6242 (Corral Gulch near Rangely) 2019 year end water discharge reports were not available. The Specific Conductance and Temp data included in the tables were generated by using USGS lab test results for each stream reported on the USGS web site during the 2019 WY.

A review of USGS stream water quality data indicated no significant change in stream water quality during 2019. The NS 2019 precipitation data showed an increase at the NS location from 2017 (16.6"), 2018 (18.2"), through 2019 (20.8"). The WY data discharge (cfs) in this area does not indicate a similar increase in average stream discharge levels from 2017 to 2019. Possible reasons for the decrease in stream flow discharge levels 2017 through 2019 could be from irrigation diversions in the area. The USGS notes in the 2018 and 2019 year end water reports that the 6200 (Piceance Creek below Ryan Gulch) has diversions for irrigation upstream of monitor station. The 6222 (Piceance Creek at White River) has diversions for irrigation of ~5,500 acres upstream from the monitor station. The 6255 (Yellow Creek near White River) has

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diversions to irrigate ~300 acres upstream from the monitor station. The 6242 (Corral Gulch near Rangely) which historically has been a low flow stream is not reported as having any diversions upstream from the monitoring station.

The 2019 Specific Conductance data from USGS for all four stations was within the range values for the period of record. Two (6220 & 6255) of the four streams had increases in Max Specific Conductance from 2018 to 2019 WY. Two (6222 & 6242) of the four streams had decreases in Max Specific Conductance from 2018 to 2019 WY.

The 2019 water temperature values were within the range of historic data. Post review of the USGS data, no effect on stream water quality was noted due to the NS mining operations.

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	Discharge P of R*	Discharge 2019 WY**	Average Total Discharge P of R	Total Discharge 2019		Specific co	Tom	n (°a)			
Station						(µS/cm (Temp (°c.)				
Station					P of R	2019 WY	P of R	2019 WY	P of R	2019 WY	
	<u>cfs</u>	<u>cfs</u>	<u>ac ft/yr</u>	<u>ac ft/yr</u>	Max	Max	Min	Min	Max	Max	
<u>6200</u>	N/D (54 yrs)	N/D	N/D	N/D	2,800	1,740	600	1,310	26.3	18.1	
6222	31.80 (50 yrs)	11.60	22,806	8,398	7,240	3,300	516	1,780	30.0	18.9	
<u>6242</u>	N/D (44 yrs)	N/D	N/D	N/D	1,760	1,480	312	1,090	24.0	20.2	
6255	2.40 (41 yrs)	1.63	1,732	1,180	5,200	4,530	460	3,580	31.0	23.2	
6200 Piceanc	e Creek below Ry	6242 Corral Gulch near Rangely									
6222 Piceanc	e Creek at White	6255 Yellow Creek near White River									
* P of R = Period of Record for collection of data.						**WY = Water Year (October-September).					
cfs = cubic fe	et per second, ave	erage annual fl	OW.		N/D = No data available at time of publication						

 Table 6: Historical Comparison with 2019 Water Year Data

Table 7: Yellow and Piceance Creek Discharge Data up to 2019 Water Year

	Project Data Comparison													
Discharge for Water Years in cfs														
Station	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
6200	14.3	15.2	27.9	16.3	13.4	36.2	17.5	11.3	10.7	15.9	17.0	11.7	7.5	N/D
6222	16.6	17.8	36.2	20.8	17.6	41.7	19.2	11.8	13.0	19.7	21.2	15.5	8.9	11.6
6242	0.2	0.5	1.3	0.4	0.3	1.1	0.3	0.2	0.5	0.5	1.9	0.6	0.1	N/D
6255	1.1	1.2	1.1	1.0	0.9	1.3	1.2	1.1	1.2	1.3	1.3	1.7	0.8	1.6
	Maximum Specific Conductance (µS/cm @ 25° C)													
Station	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
6200	1,800	1,700	1,460	1,620	2,020	1,460	1,610	1,930	2,040	1,770	1,840	2,120	1,700	1,740
6222	3,910	3,500	1,950	3,130	4,800	2,290	5,350	5,100	3,190	2,790	2,020	3,550	5,350	3,300
<u>6242</u>	1,500	1,280	1,350	1,320	1,460	1,280	1,480	1,430	1,400	1,330	1,170	1,280	1,490	1,480
6255	4,320	4,230	3,830	4,050	4,260	4,130	4,170	4,720	4,530	4,070	4,520	3,600	3,980	4,530
* P of R = I	Period of R	ecord for co	ellection of a	data.	**W`	Y = Water	Year (October-September). cfs = cubic feet per second, average annual flow.							
6200 Piceance Creek below Ryan Gulch					6242 Corral Gulch near Rangely									
6222 Piceance Creek at White River							6255 Y	ellow Cree	k near Whit	te River				
N/D No da	V/D No data available at time of publication.													

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5.1.3 Monitoring Wells

Per regulatory requirements, dedicated groundwater monitoring wells have been constructed to monitor four water-bearing intervals identified as the Perched, A-Groove, B-Groove, and the Dissolution Surface Aquifers. These aquifers are monitored at several locations across the solution mining area: up and down-gradient, remote down-gradient, and toward the east near the southeast portion of Section 26. Refer to Figure 3 and Figure 4 for well locations.

Baseline and current groundwater monitoring data have been obtained from 1991 through present. Within NS's lease boundaries, there are four aquifers defined by US EPA as underground sources of drinking water (USDW): the Perched, A-Groove, B-Groove, and Dissolution Surface Aquifers. The Dissolution Surface Aquifer has been exempted as an underground source of drinking water in the NS lease and permit areas. The DS Aquifer monitored by NS contains TDS values in excess of 10,000 parts per million (PPM).

The Perched Aquifer is characteristically lower in total dissolved solids (TDS), conductivity, fluoride, SAR (sodium absorption ratio) and moderate to higher in sulfate and pH. The A-Groove and B-Groove Aquifers are similar in water quality with moderate TDS, conductivity, SAR, but higher fluoride. However, the B-Groove Aquifer generally has slightly higher levels of TDS, conductivity, SAR, and fluoride. The Dissolution Surface Aquifer is characterized by very high TDS and conductivity (30,000 to >100,000 ppm), higher SAR, magnesium, potassium, moderate pH, and a generally higher fluoride.

In 2019 the results of groundwater monitoring were analyzed for potential anomalies in order to prevent or mitigate potential negative impacts to the USDW's.

Appendix A contains detailed sampling results for all groundwater monitoring wells.

5.1.4 Storage and Evaporation Ponds

The NS storage and evaporation ponds have a secondary liner and are constructed to collect and direct any condensation or leakage to tubes for removal. Weekly collection and removal of leachate continued in 2019. Pond information is reported on a monthly basis.

5.1.5 Potentiometric Surface Maps (Confidential)

Using groundwater level elevations from NS groundwater monitoring wells and other NS wells, the potentiometric surface has been plotted for the A-Groove and B-Groove Aquifers. Maps representing the potentiometric surface for the A-Groove and B-Groove Aquifers have been included with this report in Appendix C (Confidential).

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6.0 Land Disturbance and Reclamation

6.1 Summary of 2019 Disturbance

NS created new disturbed acreage in 2019 by building two new pads and access to these locations for the DS-10 groundwater monitor well and the 14H-1V production well. The 15H-IR-E production well was built by extending the existing 10H pad resulting in some new disturbance and a small portion of the total area underwent interim reclamation. New disturbed acreage was used to build the 15H-1V production well pad on a location that had both previously disturbed and reclaimed land. Following drilling operations on the DS-10 GMW/SSMW well, the pad and road were regraded and pulled in and are now undergoing interim reclamation. The total disturbed acreage reported in 2018 was 98.55 acres. In 2019 the NS land disturbance is 103.49 acres as of December 2019. Table 8 lists the disturbed acreage as of December 2019.

Process Area:	Acres:
Plant Site Disturbed	26.84
Plant Site Undergoing Interim Reclamation	4.46
Plant Site Undergoing Final Reclamation	0.00
Plant Site Successfully Reclaimed	0.00
Well Field:	
Roads Disturbed	2.39
Well Pads Disturbed	27.08
Roads/Misc. Undergoing Interim Reclamation	1.26
Well Pads Undergoing Interim Reclamation	12.66
Road/Misc. Undergoing Final Reclamation	0.91
Well Pads Undergoing Final Reclamation	7.65
Road/Misc. Successfully Reclaimed	1.55
Well Pads Successfully Reclaimed	18.69
Total Disturbance:	<u>103.49</u>

Table 8: Disturbed Acreage





6.2 Regulatory Compliance

6.2.1 Regulatory Activity

In 2019, all required reports were submitted in a timely manner. Required forms were submitted to the appropriate agencies regarding all activities pertaining to the new wells drilled & associated plugging and abandonment operations.

6.3 Reclamation Activity

6.3.1 Regrading & Scarification

Regrading and scarification activities occurred in 2019 at the DS-10 GMW/SSMW pad location to support interim reclamation.

6.3.2 Seeding & Weed Control

The majority of seeding activity in 2019 focused on the areas disturbed following the 2019 well field drilling projects, specifically the DS-10 and 15H-IR-E well pads. These areas were reseeded with the BLM Approved final seed mix. The DS-10 was seeded following interim reclamation activities in November and the top soil pile for the 15H-IR-E was seeded in November.

Slash was placed on various well locations in 2019 for interim reclamation compliance. The pads slash was placed on include the A, C, G, DS-10 locations, and on the 15H-IR-E topsoil pile.

In 2019 NS applied weed control measures in and around the wellfield area as recommended by agency communication and the 2018 Vegetation Monitoring report. In 2019 Noxious weed control was conducted by Elder Weed Spraying. The focus of the weed control was Cheatgrass and Russian Thistle. Locations sprayed include the following; A, C, G, T, U, 5H-1V, 7H-IR, and the 90-2 well pads.

Annual vegetation monitoring continued in 2019 for the areas of study that are currently in final reclamation status. This report, *The 2019 Vegetation Monitoring Reclamation Status Report,* prepared by Mr. Rusty Roberts, can found in Appendix D.

6.3.3 Reclamation Fencing

Repair and maintenance was performed, as necessary, on existing fences in 2019 as needed. Fencing is utilized to keep livestock and wildlife out of the reclaimed areas.

All newly built, lined pits on the 14H-1V, 15H-1V, and 15H-IR-E locations were fenced for safety purposes.

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6.3.5 Precipitation

Perennial vegetation is an indicator of long-term precipitation, the "normal" precipitation for the NS site is 12-14 inches for the calendar year. The distribution of precipitation is important for proper reclamation. 2019 precipitation as measured at the NS plant was 20.75 inches. Table 9 provides a composite of precipitation from the NS mine site for the last 10 years.

Month/Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	AVG
Jan	0.40	0.18	0.18	0.25	0.98	0.47	1.62	1.89	1.26	0.67	0.79
Feb	0.20	0.15	1.15	0.30	0.35	0.39	1.34	1.52	1.35	1.47	0.82
Mar	1.45	1.25	0.30	0.50	0.28	0.82	1.76	1.01	1.55	0.85	0.98
Apr	0.25	1.25	0.40	1.35	0.63	1.71	5.18	1.11	1.74	2.99	1.66
Мау	0.05	0.95	0.14	1.05	1.66	4.36	2.06	2.17	1.52	2.93	1.69
Jun	0.95	0.00	0.06	0.35	0.01	0.51	0.53	0.47	0.99	3.86	0.77
Jul	0.45	0.23	0.43	1.40	1.34	1.78	1.07	3.36	1.27	1.87	1.32
Aug	0.40	0.00	0.86	0.26	3.17	1.44	2.78	0.85	3.24	0.83	1.38
Sep	0.70	0.13	0.36	2.89	2.14	0.32	2.19	1.55	0.10	1.75	1.21
Oct	1.08	0.87	0.58	1.35	1.09	1.38	1.89	1.62	4.10	1.19	1.52
Nov	0.35	0.05	0.28	1.30	0.80	0.70	1.56	0.64	0.60	1.62	0.79
Dec	1.67	0.32	0.83	0.17	1.00	0.10	1.04	0.44	0.45	0.71	0.67
Annual Totals	7.95	5.38	5.57	11.17	13.45	13.97	23.02	16.63	18.17	20.75	13.61

6.3.6 Vegetation Monitoring Results

See Appendix D for *2019 Vegetation Monitoring Reclamation Status Report* prepared by Rusty Roberts.

6.4 Deer Road Kill Study

Per the monitoring requirement from the BLM, NS compiled deer road kill data throughout 2019 for vehicles traveling to and from the mine site. Four deer of unknown sex were reported as struck and killed in 2019. Three deer of unknown sex were reported as struck but not killed, ran off into wilderness, in 2019. One cow was reported as struck and killed in 2019; the rancher claimed the carcass with no issues reported.

6.5 Raptor Survey

In 2019 NS conducted a raptor breeding activity survey and inventory in the pinionjuniper habitat that was proximal to the planned 2019/2020 well field development areas. The survey was performed on April 23, 2019 by Daub & Associates, Inc., and covered 144 acres of suitable raptor habitat. The intent of the raptor study was to identify raptor breeding areas and nests prior to well field development. The BLM White River Field Office assisted by identifying areas which provide the most suitable raptor nesting habitat within the 2019/2020 project areas. Surveyors walked predetermined transect paths checking all suitable trees for nests and higher accumulations of woody debris under trees. Call-playback techniques were used in conjunction with pedestrian surveys using the Kennedy Stahlecker-Rinker method. GPS track logs were collected from all transects surveyed. No new raptor nest, or known raptor nests were observed

DAUB & ASSOCIATES, INC. AT THE AND THE THE THE THE AND



within the area of study during the pedestrian transect surveys. One known raven nest first documented in 2014 was no longer present in 2019. Two red tailed hawks were seen outside the survey area near the plant. Hawks have been present in this location since 2017. A report was written and submitted to the BLM following completion of the survey. The area surveyed in 2019 included the areas of the planned 2020 well field development activities, therefore, per BLM guidelines, no raptor survey will be conducted in 2020.

6.6 Other Observations

Elk, deer, coyotes, rabbits, bobcat, and fox were noted in and around the well-field throughout the year.

6.7 Waste Disposal

Common domestic solid waste was collected in containers and periodically transported to the Rio Blanco County landfill. Sewage from the plant was directed to a septic system with a leach drain field. Process water, including cooling tower blowdowns, boiler ditch, plant wash down, blow down from the boilers, and precipitation runoff, was directed to the process pond. A pump in the process storage pond allows NS to recycle the water to the barren system. The wastewater evaporation pond contains water from the cooling tower overflow and laboratory drains. Table 10 indicates hazardous waste that was generated and collected at the NS facilities. Hazardous waste was collected, contained safely, stored separately from day to day waste, and then disposed of properly by Clean Harbors, Inc., a certified hazardous waste handling/disposal company.

DAUB & ASSOCIATES, INC. The The State of States



Table 10: Hazardous Waste Disposal

Date Shipped	# of Containers	Total Quantity	Contents / Waste	EPA Waste Code					
01/17/2019	4	899 Ibs	UN1219, WASTE ISOPROPANOL SOLUTION, 3, PG II, - TETRA-ALKYL AMMONIUM CHLORIDE	D001					
	1	506 lbs	NA3082, HAZARDOUS WASTE, LIQUID, N.O.S. (SILVER, CHROMIUM) , 9, PG III CHLORIDE TEST WASTE	D007, D011					
	1	8 lbs	UN1477, WASTE NITRATES, INORGANIC, N.O.S. (NITRATES, INORGANIC) , 5.1, PG II LABPACK REACTIVE OXIDIZERS FOR INCINERATION.	D001, D003					
	1	14 lbs	UN1830, WASTE SULFURIC ACID (SULPHURIC ACID) , 8, PG II – LABPACK MERCURY SALTS AND SOLUTIONS FOR RETORT.	D009					
	1	72 lbs	NONE, NON DOT REGULATED MATERIAL, N/A, NONE, (UNIVERSAL WASTE-LAMPS) STRAIGHT FLUORESCENT TUBES FOR RECLAIM.	NONE					
04/30/2018	1	62 lbs	UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S. (ACETONE, ISOPROPANOL) , 3, PG II ACETONE WITH TERPENE PHENOLIC AND BLACK INK.	D001, F003					
	1	5 lbs	UN2810, TOXIC LIQUIDS, ORGANIC, N.O.S (SULFITES, SODIUMBICARBONATE) , 6.1, PG III – LABPACK ORGANICS FOR INCINERATION.	NONE					
	1	11 lbs	UN3262, WASTE CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (SODIUMSULFIDE) , 8, PG II – LABPACK BASIC AND BASIC COMPATIBLES FOR INCINERATION.	D002					
	1	7 lbs	UN3260, WASTE CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (LITHIUMHYDROXIDE, SULFAMIC ACID) , 8, PG II – LABPACK ACIT AND ACID COMPATIBLES FOR INCINERATION.	D002					
	1	492 lbs	NONE, NON-REGULATED LIQUID (HYDROCARBONS) , N/A, NONE ULTRA FG.	NONE					
09/19/2019	1	600 lbs	NA3082, HAZARDOUS WASTE, LIQUID, N.O.S. (SILVER, CHROMIUM) , 9, PG III CHLORIDE TEST WASTE	D007, D011					
Reported from Natural Soda by Mr. Gerry Deschaine 01/03/2020									







Natural Soda LLC

Appendix A

Groundwater Analytical Results





Table 11. 03-3 Annual Fercheu Aquitei										
Parameters	No. of	High	Date	Low	Date	Average	Units			
Wet Chemistry	Samples									
Bicarbonate as CaCO3	171	404.00	8/28/13	66.00	9/14/92	204.01	mg/l			
Carbonate as CaCO3	171	138.00	12/5/12	3.00	6/26/90	29.66	mg/l			
Total Alkalinity as	171	524.00	8/28/13	66.00	9/14/92	225.60	mg/l			
Bromide	25	0.60	7/6/00	0.05	10/22/89	0.19	mg/l			
Cation-Anion Balance	169	15.70	6/14/17	-13.00	12/16/15	0.19	%			
Sum of Anions	148	12.60	8/28/13	5.10	6/14/17	7.55	meq/l			
Sum of Cations	149	11.80	8/28/13	5.78	9/14/92	7.53	meg/l			
Chemical Oxygen	19	300.00	9/23/10	10.00	10/22/89	51.82	mg/l			
Chloride	171	75.30	8/28/13	4.00	9/27/90	15.77	mg/l			
Conductivity, Lab	167	1,210.00	8/28/13	534.00	8/6/92	726.15	µmhos			
Fluoride	171	18.00	7/31/91	0.02	4/19/01	0.48	mg/l			
Hardness as CaCO3	170	113.00	4/11/06	27.00	3/30/90	79.91	mg/l			
Nitrate as N, dissolved	27	0.76	7/24/02	0.02	12/5/12	0.14	mg/l			
Nitrate/Nitrite as N,	27	0.85	7/24/02	0.03	7/18/95	0.15	mg/l			
Nitrite as N, dissolved	27	0.10	6/26/91	0.01	6/25/07	0.04	mg/l			
Nitrogen, Ammonia	24	13.10	9/23/10	0.11	7/12/96	1.52	mg/l			
Nitrogen, Organic	24	13.40	6/26/91	0.10	7/18/95	1.93	mg/l			
Nitrogen, Total Kjeldahl	24	25.40	9/23/10	0.20	7/21/94	3.20	mg/l			
pH, lab	170	11.50	12/19/91	6.60	9/14/92	8.57	units			
Phosphate, total	22	155.00	6/25/07	0.03	7/2/98	11.12	mg/l			
Phosphorus, total	24	2.33	9/23/10	0.01	6/26/91	0.23	mg/l			
SAR in Water	160	15.92	3/30/90	4.82	9/14/92	6.84	none			
Sulfate	171	296.00	3/30/90	1.00	12/12/08	126.31	mg/l			
Sulfide	21	4.50	9/23/10	0.03	7/2/98	0.49	mg/l			
Total Dissolved Solids	171	659.00	8/28/13	329.00	6/14/17	441.57	mg/l			
Conductivity, Field	188	16,000.00	7/1/90	500.00	2/24/93	778.70	μmhos			
pH, Field	189	10.23	7/19/09	6.90	12/12/18	8.67	units			
Temperature (°C), Field	99	21.10	7/19/09	6.40	12/1/90	12.05	(°C)			
Water Level, Field	85	341.00	9/1/11	315.50	3/12/19	323.78	Ft.			
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Parameters	No. of	High	Date	Low	Date	Average	Units			
Metals	Samples					_				
Aluminum, dissolved	25	0.04	10/22/89	0.0007	12/5/12	0.0117	mg/l			
Arsenic, dissolved	25	0.69	3/30/90	0.01	10/22/89	0.06	mg/l			
Barium, dissolved	25	0.01	6/26/91	0.01	6/26/91	0.01	mg/l			
Beryllium, dissolved	171	0.43	8/28/13	0.02	4/24/91	0.06	mg/l			
Boron, dissolved	25	0.003	9/13/95	U	12/5/12	U	mg/l			
Cadmium, dissolved	171	17.00	9/27/90	4.50	6/25/07	11.66	mg/l			
Calcium, dissolved	26	0.01	6/26/91	0.01	6/26/91	0.01	mg/l			
Chromium, dissolved	26	0.20	12/5/12	0.01	3/30/90	0.06	mg/l			
Copper, dissolved	25	4.17	9/27/90	0.01	7/7/99	0.44	mg/l			
Iron, dissolved	25	0.06	8/19/09	0.02	6/26/91	0.04	mg/l			
Lead, dissolved	25	0.05	3/30/90	0.02	6/26/91	0.03	mg/l			
Lithium, dissolved	171	18.40	7/24/02	3.00	3/30/90	12.32	mg/l			
Magnesium, dissolved	25	0.14	9/27/90	0.01	7/7/99	0.03	mg/l			
Manganese, dissolved	24	0.0005	10/22/89	0.0001	6/26/91	0.0003	mg/l			
Mercury, dissolved	25	0.15	6/26/90	0.01	7/12/96	0.07	mg/l			
Molybdenum, dissolved	25	0.02	10/22/89	0.02	10/22/89	0.02	mg/l			
Nieles dieselesel	474	10.00	1/01/01		4/00/05					

Table 11: 89-3 Annual Perched Aquifer

DAUB & ASSOCIATES, INC. DIS# 347 PM BOD STAD STAD

Nickel, dissolved

Silica, dissolved

Zinc, dissolved

Sodium, dissolved

Potassium, dissolved

Selenium, dissolved

Strontium, dissolved

Vanadium, dissolved

171

25

171

171

171

25 25

25

10.00

0.002

33.20

236.00

1.09

U

0.35

0.04

1.19

0.002

15.62

134.00

0.81

U

0.05

0.0117

mg/l

mg/l

mg/l

mg/l

mg/l

mg/l

mg/l

mg/l

1/31/91

3/30/90

7/27/01

8/28/13

4/11/06

3/30/90

10/22/89

12/5/2012

0.04

0.001

4.80

96.00

0.17

U

0.01

0.0007

4/28/95

9/27/90

1/21/92

9/14/92

3/30/90

9/23/2010

10/22/89

12/5/12


D ·			. .		P ·		
Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples						
Bicarbonate as CaCO3	115	548.00	1/8/15	0.00	8/1/90	166.14	mg/l
Carbonate as CaCO3	115	300.00	10/25/90	0.00	8/30/08	120.90	mg/l
Total Alkalinity as	115	900.00	8/1/90	156.00	10/13/92	303.29	mg/l
Bromide	26	1.60	7/21/93	0.06	6/16/11	0.29	mg/l
Cation-Anion Balance	112	63.90	8/14/17	-16.00	3/13/03	0.74	%
Sum of Anions	105	24.97	8/13/90	5.30	6/15/14	9.05	meq/l
Sum of Cations	105	50.00	8/14/17	5.70	6/14/11	9.55	meq/l
Chemical Oxygen	19	300.00	9/21/10	10.00	8/16/94	46.25	mg/l
Chloride	115	400.00	4/24/91	14.00	12/15/92	52.42	mg/l
Conductivity, Lab	112	2,630.00	1/20/92	467.00	3/23/05	880.77	µmhos
Fluoride	115	24.00	9/2/98	1.70	4/20/92	6.53	mg/l
Hardness as CaCO3	115	553.00	8/1/90	2.00	6/23/10	37.79	mg/l
Nitrate as N, dissolved	26	2.77	6/26/02	0.02	6/28/06	0.38	mg/l
Nitrate/Nitrite as N,	26	2.79	6/26/02	0.03	6/28/06	0.35	mg/l
Nitrite as N, dissolved	26	0.13	8/16/96	0.01	8/1/90	0.05	mg/l
Nitrogen, Ammonia	25	2.57	7/31/91	0.25	6/9/99	0.76	mg/l
Nitrogen, Organic	25	3.90	7/21/92	0.10	6/16/11	1.03	mg/l
Nitrogen, Total Kjeldahl	25	5.90	7/31/91	0.50	6/16/11	1.83	mg/l
pH, lab	112	11.30	7/31/91	6.60	8/30/08	9.56	units
Phosphate, total	24	155.00	6/28/06	0.10	8/13/90	18.35	mg/l
Phosphorus, total	25	1.41	9/21/10	0.03	7/31/91	0.26	mg/l
SAR in Water	107	76.00	8/14/17	5.76	8/1/90	21.71	none
Sulfate	115	243.00	12/15/92	40.40	9/16/19	77.95	mg/l
Sulfide	24	4.00	6/13/01	0.03	6/2/98	1.08	mg/l
Total Dissolved Solids	113	1,644.00	8/1/90	335.00	6/15/14	597.48	mg/l
	113	1,044.00	0/1/90	335.00	0/15/14	597.40	
		2 500 00		642.00	11/07/10	1 160 92	umboc
Conductivity, Field	172	3,500.00	8/1/90	643.00	11/27/12	1,169.82	<u>µmhos</u>
Conductivity, Field pH, Field	172 172	12.80	8/1/90 12/1/90	6.04	8/30/08	10.25	units
Conductivity, Field pH, Field Temperature (°C), Field	172 172 112	<u>12.80</u> 20.10	8/1/90 12/1/90 5/16/07	6.04 6.50	8/30/08 12/12/08	10.25 12.29	units (°C)
Conductivity, Field pH, Field	172 172	12.80	8/1/90 12/1/90	6.04	8/30/08	10.25	units
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field	172 172 112 87	12.80 20.10 387.19	8/1/90 12/1/90 5/16/07 8/14/17	6.04 6.50 308.80	8/30/08 12/12/08 6/20/17	10.25 12.29 380.54	units (°C) Ft.
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters	172 172 112 87 No. of	<u>12.80</u> 20.10	8/1/90 12/1/90 5/16/07	6.04 6.50	8/30/08 12/12/08	10.25 12.29	units (°C)
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals	172 172 112 87 No. of Samples	12.80 20.10 387.19 High	8/1/90 12/1/90 5/16/07 8/14/17 Date	6.04 6.50 308.80 Low	8/30/08 12/12/08 6/20/17 Date	10.25 12.29 380.54 Average	units (°C) Ft. Units
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved	172 172 112 87 No. of Samples 26	12.80 20.10 387.19 High 11.10	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96	6.04 6.50 308.80 Low	8/30/08 12/12/08 6/20/17 Date 7/29/09	10.25 12.29 380.54 Average 3.18	units (°C) Ft. Units mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved	172 172 112 87 No. of Samples 26 26	12.80 20.10 387.19 High 11.10 0.01	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91	6.04 6.50 308.80 Low 0.06 0.00	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12	10.25 12.29 380.54 Average 3.18 0.00	units (°C) Ft. Units mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	172 172 112 87 No. of Samples 26 26 26 26	12.80 20.10 387.19 High 11.10 0.01 0.29	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95	6.04 6.50 308.80 Low 0.06 0.00 0.01	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12	10.25 12.29 380.54 Average 3.18 0.00 0.08	units (°C) Ft. Units mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 26	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95	6.04 6.50 308.80 Low 0.06 0.00 0.01 0.00	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 8/14/95	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00	units (°C) Ft. Units mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 26 26 115	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 1/8/15	6.04 6.50 308.80 Low 0.06 0.00 0.01 0.00 0.00	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 8/14/95 10/25/90	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17	units (°C) Ft. Units mg/l mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 26 115 26	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39 0.03	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 1/8/15 7/21/93	6.04 6.50 308.80 Low 0.06 0.00 0.01 0.00 0.00 0.00 0.03	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 8/14/95 10/25/90 7/21/93	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17 0.03	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 26 115 26 115	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39 0.03 223.00	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 1/8/15 7/21/93 8/1/90	6.04 6.50 308.80 Low 0.06 0.00 0.01 0.00 0.00 0.00 0.03 0.90	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 8/14/95 10/25/90 7/21/93 6/23/10	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17 0.03 11.52	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 26 115 26 115 26	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39 0.03 223.00 0.02	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 1/8/15 7/21/93 8/1/90 8/1/90	6.04 6.50 308.80 Low 0.06 0.00 0.01 0.00 0.00 0.03 0.90 0.01	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 8/14/95 10/25/90 7/21/93 6/23/10 8/16/96	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17 0.03 11.52 0.01	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 26 115 26 115 26 115 26 26	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39 0.03 223.00 0.02 0.20	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 1/8/15 7/21/93 8/1/90 8/1/90 6/14/00	6.04 6.50 308.80 Low 0.06 0.00 0.01 0.00 0.03 0.90 0.01 0.01	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 8/14/95 10/25/90 7/21/93 6/23/10 8/16/96 8/1/90	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17 0.03 11.52 0.01 0.04	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 26 115 26 115 26 26 26 26 26	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39 0.03 223.00 0.02 0.20 14.10	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 1/8/15 7/21/93 8/1/90 8/1/90 6/14/00 7/21/93	6.04 6.50 308.80 Low 0.06 0.00 0.01 0.00 0.03 0.90 0.01 0.01 0.02	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 8/14/95 10/25/90 7/21/93 6/23/10 8/16/96 8/1/90 7/21/92	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17 0.03 11.52 0.01 0.04 3.20	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 115 26 115 26 26 26 26 26 26 26 26	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39 0.03 223.00 0.02 0.20 14.10 0.10	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 1/8/15 7/21/93 8/1/90 8/1/90 6/14/00 7/21/93 7/21/93	6.04 6.50 308.80 Low 0.06 0.00 0.01 0.00 0.03 0.90 0.01 0.01 0.01 0.02 0.05	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 8/14/95 10/25/90 7/21/93 6/23/10 8/16/96 8/1/90 7/21/92 6/16/97	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17 0.03 11.52 0.01 0.04 3.20 0.07	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 115 26 115 26 26 26 26 26 26 26 26 26 26 26	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39 0.03 223.00 0.02 0.20 14.10 0.10 0.19	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 1/8/15 7/21/93 8/1/90 8/1/90 6/14/00 7/21/93 7/21/93 8/13/90	6.04 6.50 308.80 Low 0.06 0.00 0.01 0.00 0.03 0.90 0.01 0.01 0.01 0.02 0.05 0.00	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 8/14/95 10/25/90 7/21/93 6/23/10 8/16/96 8/1/90 7/21/92 6/16/97 8/30/08	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17 0.03 11.52 0.01 0.04 3.20 0.07 0.05	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 115 26 26 26 26 26 26 26 26 26 26 26 26 26	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39 0.03 223.00 0.02 0.20 14.10 0.10 0.19 31.20	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 1/8/15 7/21/93 8/1/90 8/1/90 6/14/00 7/21/93 7/21/93 8/13/90 3/14/00	6.04 6.50 308.80 Low 0.06 0.00 0.01 0.00 0.03 0.90 0.01 0.01 0.01 0.02 0.05 0.00 0.30	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 8/14/95 10/25/90 7/21/93 6/23/10 8/16/96 8/1/90 7/21/92 6/16/97 8/30/08 9/26/01	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17 0.03 11.52 0.01 0.04 3.20 0.07 0.05 2.57	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 115 26 26 26 26 26 26 26 26 26 26 26 26 26	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39 0.03 223.00 0.02 0.20 14.10 0.10 0.19 31.20 0.37	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 1/8/15 7/21/93 8/1/90 8/1/90 6/14/00 7/21/93 7/21/93 8/13/90 3/14/00 8/14/95	6.04 6.50 308.80 0.06 0.00 0.01 0.00 0.03 0.90 0.01 0.01 0.02 0.05 0.00 0.30 0.01	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 8/14/95 10/25/90 7/21/93 6/23/10 8/16/96 8/1/90 7/21/92 6/16/97 8/30/08 9/26/01 8/30/08	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17 0.03 11.52 0.01 0.04 3.20 0.07 0.05 2.57 0.09	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 115 26 26 26 26 26 26 26 26 26 26 26 26 26	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39 0.03 223.00 0.02 0.20 14.10 0.10 0.19 31.20 0.37 0.0002	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 8/14/95 8/1/90 8/1/90 8/1/90 6/14/00 7/21/93 7/21/93 8/13/90 3/14/00 8/14/95 8/14/95	6.04 6.50 308.80 0.06 0.00 0.01 0.00 0.00 0.03 0.90 0.01 0.01 0.02 0.05 0.00 0.30 0.01 U	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 8/14/95 10/25/90 7/21/93 6/23/10 8/16/96 8/1/90 7/21/92 6/16/97 8/30/08 9/26/01 8/30/08 8/16/96	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17 0.03 11.52 0.01 0.04 3.20 0.07 0.05 2.57 0.09 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 115 26 26 26 26 26 26 26 26 26 26 26 26 26	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39 0.03 223.00 0.02 0.20 14.10 0.10 0.19 31.20 0.37 0.0002 0.10	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 1/8/15 7/21/93 8/1/90 8/1/90 6/14/00 7/21/93 7/21/93 8/13/90 3/14/00 8/14/95 8/14/95 8/1/90	6.04 6.50 308.80 0.06 0.00 0.01 0.00 0.00 0.03 0.90 0.01 0.02 0.05 0.00 0.30 0.01 U 0.01	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 8/14/95 10/25/90 7/21/93 6/23/10 8/16/96 8/1/90 7/21/92 6/16/97 8/30/08 9/26/01 8/30/08 8/16/96 6/16/97	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17 0.03 11.52 0.01 0.04 3.20 0.07 0.05 2.57 0.09 U 0.04	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Baryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 26 26 26 26 26 26 26 26	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39 0.03 223.00 0.02 0.20 14.10 0.10 0.19 31.20 0.37 0.0002 0.10 0.02	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 1/8/15 7/21/93 8/1/90 8/1/90 6/14/00 7/21/93 8/13/90 3/14/00 8/14/95 8/14/95 8/14/95 8/1/90 10/25/90	6.04 6.50 308.80 0.06 0.00 0.01 0.00 0.00 0.03 0.00 0.01 0.02 0.05 0.00 0.05 0.00 0.30 0.01 U 0.01 0.01	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 8/14/95 10/25/90 7/21/93 6/23/10 8/16/96 8/1/90 7/21/92 6/16/97 8/30/08 9/26/01 8/30/08 8/16/96 6/16/97 8/16/96	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17 0.03 11.52 0.01 0.04 3.20 0.07 0.05 2.57 0.09 U 0.04 0.04 0.01	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Baryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 26 26 26 26 26 26 26 26	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39 0.03 223.00 0.02 0.20 14.10 0.10 0.19 31.20 0.37 0.0002 0.37 0.0002 0.10 0.02 146.00	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 1/8/15 7/21/93 8/1/90 8/1/90 6/14/00 7/21/93 8/13/90 3/14/00 8/13/90 8/14/95 8/14/95 8/1/90 10/25/90 8/1/90	6.04 6.50 308.80 0.06 0.00 0.01 0.00 0.00 0.03 0.00 0.01 0.02 0.05 0.00 0.01 0.02 0.05 0.00 0.30 0.01 U 0.01 0.01 0.01 0.01 0.01 0.01 0	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 8/14/95 10/25/90 7/21/93 6/23/10 8/16/96 8/1/90 7/21/92 6/16/97 8/30/08 9/26/01 8/30/08 8/16/96 6/16/97 8/16/96 4/24/91	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17 0.03 11.52 0.01 0.04 3.20 0.07 0.05 2.57 0.09 U 0.04 0.04 0.01 7.76	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 26 26 26 26 26 26 26 26	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39 0.03 223.00 0.02 0.20 14.10 0.10 0.19 31.20 0.37 0.0002 0.37 0.0002 0.10 0.02 146.00 0.004	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 8/14/95 8/1/90 8/1/90 8/1/90 8/1/90 3/14/00 8/14/95 8/14/95 8/14/95 8/14/95 8/1/90 10/25/90 8/1/90	6.04 6.50 308.80 0.06 0.00 0.01 0.00 0.00 0.03 0.00 0.01 0.02 0.05 0.00 0.01 0.02 0.05 0.00 0.30 0.01 U 0.01 0.01 0.01 0.01 0.01 0.01 0	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 8/14/95 10/25/90 7/21/93 6/23/10 8/16/96 8/1/90 7/21/92 6/16/97 8/30/08 9/26/01 8/30/08 8/16/96 6/16/97 8/16/96 4/24/91 8/13/90	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17 0.03 11.52 0.01 0.04 3.20 0.07 0.05 2.57 0.09 U 0.04 0.04 0.01 7.76 0.003	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 26 26 26 26 26 26 26 26	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39 0.03 223.00 0.02 0.20 14.10 0.10 0.19 31.20 0.37 0.0002 0.37 0.0002 0.37 0.0002 0.10 0.02 146.00 0.004 99.30	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 8/14/95 8/1/90 8/1/90 8/1/90 6/14/00 7/21/93 7/21/93 8/13/90 3/14/00 8/14/95 8/14/95 8/1/90 10/25/90 8/1/90 7/31/91 8/14/95	6.04 6.50 308.80 0.06 0.00 0.01 0.00 0.00 0.03 0.00 0.01 0.02 0.05 0.00 0.01 0.02 0.05 0.00 0.30 0.01 U 0.01 0.01 0.01 0.01 0.01 0.01 0	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 11/27/12 8/14/95 10/25/90 7/21/93 6/23/10 8/16/96 8/1/90 7/21/92 6/16/97 8/30/08 9/26/01 8/30/08 8/16/96 6/16/97 8/16/96 4/24/91 8/13/90 8/1/90	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17 0.03 11.52 0.01 0.04 3.20 0.07 0.05 2.57 0.09 U 0.04 0.04 0.01 7.76 0.003 30.67	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Maganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 26 26 26 26 26 26 26 26	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39 0.03 223.00 0.02 0.20 14.10 0.10 0.19 31.20 0.37 0.0002 0.37 0.0002 0.37 0.0002 0.10 0.37 0.0002 0.10 0.02 146.00 0.004 99.30 1,110.00	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 8/14/95 8/1/90 8/1/90 6/14/00 7/21/93 7/21/93 8/13/90 3/14/00 8/14/95 8/14/95 8/14/95 8/1/90 7/31/91 8/14/95 8/14/95	6.04 6.50 308.80 0.06 0.00 0.01 0.00 0.00 0.03 0.00 0.01 0.02 0.05 0.00 0.01 0.02 0.05 0.00 0.30 0.01 U 0.01 0.01 0.01 0.01 0.01 0.01 0	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 11/27/12 8/14/95 10/25/90 7/21/93 6/23/10 8/16/96 8/1/90 7/21/92 6/16/97 8/30/08 9/26/01 8/30/08 8/16/96 6/16/97 8/16/96 4/24/91 8/13/90 8/1/90 6/14/11	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17 0.03 11.52 0.01 0.04 3.20 0.07 0.05 2.57 0.09 U 0.04 0.01 7.76 0.003 30.67 200.65	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 26 26 26 26 26 26 26 26	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39 0.03 223.00 0.02 0.20 14.10 0.10 0.19 31.20 0.37 0.0002 0.37 0.0002 0.37 0.0002 0.10 0.02 146.00 0.004 99.30	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 8/14/95 8/1/90 8/1/90 8/1/90 8/14/00 7/21/93 7/21/93 8/13/90 3/14/00 8/14/95 8/14/95 8/14/95 8/1/90 7/31/91 8/14/95 8/14/95	6.04 6.50 308.80 0.06 0.00 0.01 0.00 0.00 0.03 0.00 0.01 0.02 0.05 0.00 0.01 0.02 0.05 0.00 0.30 0.01 U 0.01 0.01 0.01 0.01 0.01 0.01 0	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 11/27/12 8/14/95 10/25/90 7/21/93 6/23/10 8/16/96 8/1/90 7/21/92 6/16/97 8/30/08 9/26/01 8/30/08 8/16/96 6/16/97 8/16/96 4/24/91 8/13/90 8/1/90 6/14/11 5/24/94	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17 0.03 11.52 0.01 0.04 3.20 0.07 0.05 2.57 0.09 U 0.04 0.04 0.01 7.76 0.003 30.67	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Conductivity, Field pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Maganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved	172 172 112 87 No. of Samples 26 26 26 26 26 26 26 26 26 26 26 26 26	12.80 20.10 387.19 High 11.10 0.01 0.29 0.00 0.39 0.03 223.00 0.02 0.20 14.10 0.10 0.19 31.20 0.37 0.0002 0.37 0.0002 0.37 0.0002 0.10 0.37 0.0002 0.10 0.02 146.00 0.004 99.30 1,110.00	8/1/90 12/1/90 5/16/07 8/14/17 Date 8/16/96 7/31/91 8/14/95 8/14/95 8/14/95 8/1/90 8/1/90 6/14/00 7/21/93 7/21/93 8/13/90 3/14/00 8/14/95 8/14/95 8/14/95 8/1/90 7/31/91 8/14/95 8/14/95	6.04 6.50 308.80 Low 0.06 0.00 0.01 0.00 0.01 0.00 0.01 0.00 0.01 0.00 0.03 0.90 0.01 0.02 0.030 0.01 U 0.01 0.01 0.01 0.02 7.10 126.00	8/30/08 12/12/08 6/20/17 Date 7/29/09 11/27/12 11/27/12 11/27/12 8/14/95 10/25/90 7/21/93 6/23/10 8/16/96 8/1/90 7/21/92 6/16/97 8/30/08 9/26/01 8/30/08 8/16/96 6/16/97 8/16/96 4/24/91 8/13/90 8/1/90 6/14/11	10.25 12.29 380.54 Average 3.18 0.00 0.08 0.00 0.17 0.03 11.52 0.01 0.04 3.20 0.07 0.05 2.57 0.09 U 0.04 0.01 7.76 0.003 30.67 200.65	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 12: IRI-1 Annual Perched Aquifer

DAUB & ASSOCIATES, INC. AN SHE AND STRATING



Table 13: IRI-5 Annual Perched Aquifer

Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples	ingn	Duic	Lon	Buic	Average	Onits
Bicarbonate as CaCO3	59	327.00	6/30/09	2.00	12/18/91	183.18	mg/l
Carbonate as CaCO3	59	284.00	12/18/91	0.00	6/14/08	76.98	mg/l
Total Alkalinity as	59	406.00	3/25/92	181.00	5/29/02	252.21	mg/l
Bromide	29	1.00	8/22/91	0.00	8/12/92	0.21	mg/l
Cation-Anion Balance	56	17.30	6/14/08	-10.20	5/26/04	0.89	%
Sum of Anions	51	15.77	6/16/92	8.43	12/19/95	9.92	meg/l
Sum of Cations	51	15.25	6/16/92	7.90	5/26/04	10.15	meg/l
Chemical Oxygen	26	181.00	11/2/15	0.00	5/29/02	53.69	mg/l
Chloride	59	420.00	6/16/92	9.00	12/19/95	21.24	mg/l
Conductivity, Lab	59	1.500.00	6/16/92	795.00	8/12/91	976.56	μmhos
Fluoride	59	0.90	9/16/91	0.00	6/30/95	0.29	mg/l
Hardness as CaCO3	59	182.00	6/14/08	1.00	12/20/93	33.49	mg/l
Nitrate as N, dissolved	30	12.50	5/29/02	0.00	8/12/92	1.03	mg/l
Nitrate/Nitrite as N,	30	12.50	5/29/02	0.00	8/12/92	0.91	mg/l
Nitrite as N, dissolved	30	0.06	9/14/92	0.00	8/12/92	0.02	mg/l
Nitrogen, Ammonia	30	0.87	6/23/94	0.08	5/21/07	0.29	mg/l
Nitrogen, Organic	30	80.00	5/15/98	0.00	8/12/92	5.09	mg/l
Nitrogen, Total Kjeldahl	30	80.00	5/15/98	0.00	6/25/19	4.89	mg/l
pH, lab	59	11.90	6/28/93	2.40	6/16/92	9.22	units
Phosphate, total	28	155.00	7/29/09	0.06	5/29/02	6.20	mg/l
Phosphorus, total	30	1.87	6/18/96	0.00	5/29/02	0.20	mg/l
SAR in Water	50	90.44	1/20/94	7.50	6/30/09	22.64	none
Sulfate	59	290.00	3/25/92	148.00	3/22/96	203.29	mg/l
Sulfide	29	1.20	8/24/17	0.05	6/14/08	0.32	mg/l
Total Dissolved Solids	58	1,090	6/16/92	504	4/21/94	631	mg/l
Conductivity, Field	72	9,880	5/21/07	715	12/19/95	1,178	μmhos
pH, Field	72	12.00	8/12/92	6.33	6/14/08	9.88	units
Temperature (°C), Field	32	17	6/14/08	9.70	11/1/02	12	(°C)
Water Level, Field	53				12/15/15	241.12	Ft.
		2/18/16	6/15/10	238/10			
vvalet Level, FIEIO	- 53	248.06	6/15/10	238.40	12/15/15	241.12	Γι.
*			т			-	
Parameters	No. of	High	6/15/10 Date	238.40	Date	Average	Units
Parameters Metals	No. of Samples	High	Date	Low	Date	Average	Units
Parameters Metals Aluminum, dissolved	No. of Samples 29	High 10.00	Date 8/22/92	Low	Date 5/29/03	Average 1.17	Units mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved	No. of Samples 29 29	High 10.00 0.01	Date 8/22/92 6/18/96	Low 0.04 0.0003	Date 5/29/03 5/26/04	Average 1.17 0.0019	Units mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	No. of Samples 29 29 29	High 10.00 0.01 0.27	Date 8/22/92 6/18/96 5/21/07	Low 0.04 0.0003 0.01	Date 5/29/03 5/26/04 5/26/04	Average 1.17 0.0019 0.04	Units mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	No. of Samples 29 29 29 29 29	High 10.00 0.01 0.27 0.01	Date 8/22/92 6/18/96 5/21/07 8/22/92	Low 0.04 0.0003 0.01 0.01	Date 5/29/03 5/26/04 5/26/04 8/22/92	Average 1.17 0.0019 0.04 0.01	Units mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	No. of Samples 29 29 29 29 29 29 29 59	High 10.00 0.01 0.27 0.01 0.11	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05	Low 0.04 0.0003 0.01 0.01 0.02	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97	Average 1.17 0.0019 0.04 0.01 0.07	Units mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	No. of Samples 29 29 29 29 29 29 59 29	High 10.00 0.01 0.27 0.01 0.11 0.01	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05 8/22/92	Low 0.04 0.0003 0.01 0.01 0.02 0.00	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97 3/22/16	Average 1.17 0.0019 0.04 0.01 0.07 0.00	Units mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	No. of Samples 29 29 29 29 29 59 29 59 29 59	High 10.00 0.01 0.27 0.01 0.11 0.01 63.60	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05 8/22/92 6/14/08	Low 0.04 0.0003 0.01 0.01 0.02 0.00 1.00	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97 3/22/16 6/16/92	Average 1.17 0.0019 0.04 0.01 0.07 0.00 7.05	Units mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	No. of Samples 29 29 29 29 59 29 59 29 59 29	High 10.00 0.01 0.27 0.01 0.11 0.01 63.60 0.02	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05 8/22/92 6/14/08 8/22/92	Low 0.04 0.0003 0.01 0.02 0.00 1.00 0.01	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97 3/22/16 6/16/92 6/23/94	Average 1.17 0.0019 0.04 0.01 0.07 0.00 7.05 0.02	Units mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	No. of Samples 29 29 29 29 59 29 59 29 59 29 29 29	High 10.00 0.01 0.27 0.01 0.11 0.01 63.60 0.02 0.04	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05 8/22/92 6/14/08 8/22/92 6/25/19	Low 0.04 0.0003 0.01 0.02 0.00 1.00 0.01 0.01	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97 3/22/16 6/16/92 6/23/94 6/23/94	Average 1.17 0.0019 0.04 0.01 0.07 0.00 7.05 0.02 0.02	Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	No. of Samples 29 29 29 29 59 29 59 29 29 29 29 29 29	High 10.00 0.01 0.27 0.01 0.11 0.01 63.60 0.02 0.04 7.30	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05 8/22/92 6/14/08 8/22/92 6/25/19 8/22/92	Low 0.04 0.0003 0.01 0.02 0.00 1.00 0.01 0.01 0.01	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97 3/22/16 6/16/92 6/23/94 6/23/94 5/26/04	Average 1.17 0.0019 0.04 0.01 0.07 0.00 7.05 0.02 0.02 0.02 0.65	Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	No. of Samples 29 29 29 29 59 29 59 29 29 29 29 29 29 29	High 10.00 0.01 0.27 0.01 0.11 0.01 63.60 0.02 0.04 7.30 0.12	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05 8/22/92 6/14/08 8/22/92 6/25/19 8/22/92 3/22/16	Low 0.04 0.0003 0.01 0.02 0.00 1.00 0.01 0.01 0.01 0.02	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97 3/22/16 6/16/92 6/23/94 6/23/94 5/26/04 8/12/91	Average 1.17 0.0019 0.04 0.01 0.07 0.00 7.05 0.02 0.02 0.02 0.65 0.05	Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	No. of Samples 29 29 29 29 59 29 59 29 29 29 29 29 29 29 29	High 10.00 0.01 0.27 0.01 0.11 0.01 63.60 0.02 0.04 7.30 0.12 0.06	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05 8/22/92 6/14/08 8/22/92 6/25/19 8/22/92 3/22/16 10/3/12	Low 0.04 0.0003 0.01 0.02 0.00 1.00 0.01 0.01 0.01 0.02 0.02 0.02	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97 3/22/16 6/16/92 6/23/94 6/23/94 5/26/04 8/12/91 5/26/04	Average 1.17 0.0019 0.04 0.01 0.07 0.00 7.05 0.02 0.02 0.02 0.65 0.05 0.03	Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	No. of Samples 29 29 29 29 59 29 29 29 29 29 29 29 29 29 29 29 29 29	High 10.00 0.01 0.27 0.01 0.11 0.01 63.60 0.02 0.04 7.30 0.12 0.06 9.10	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05 8/22/92 6/14/08 8/22/92 6/25/19 8/22/92 3/22/16 10/3/12 6/30/09	Low 0.04 0.0003 0.01 0.02 0.00 1.00 0.01 0.01 0.01 0.01 0.02 0.02 0.02 0.30	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97 3/22/16 6/16/92 6/23/94 6/23/94 5/26/04 8/12/91 5/26/04 6/30/95	Average 1.17 0.0019 0.04 0.01 0.07 0.00 7.05 0.02 0.02 0.02 0.65 0.05 0.03 4.52	Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	No. of Samples 29 29 29 29 59 29 29 29 29 29 29 29 29 29 29 29 29 29	High 10.00 0.01 0.27 0.01 0.11 0.01 63.60 0.02 0.04 7.30 0.12 0.06 9.10 0.07	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05 8/22/92 6/14/08 8/22/92 6/25/19 8/22/92 3/22/16 10/3/12 6/30/09 8/22/92	Low 0.04 0.0003 0.01 0.02 0.00 1.00 0.01 0.01 0.01 0.02 0.02 0.02 0.30 0.01	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97 3/22/16 6/16/92 6/23/94 6/23/94 6/23/94 5/26/04 8/12/91 5/26/04 6/30/95 8/22/97	Average 1.17 0.0019 0.04 0.01 0.07 0.00 7.05 0.02 0.02 0.65 0.05 0.03 4.52 0.02	Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	No. of Samples 29 29 29 29 59 29 29 29 29 29 29 29 29 29 29 29 29 29	High 10.00 0.01 0.27 0.01 0.11 0.01 63.60 0.02 0.04 7.30 0.12 0.06 9.10 0.07 0.0001	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05 8/22/92 6/14/08 8/22/92 6/25/19 8/22/92 3/22/16 10/3/12 6/30/09 8/22/92 8/22/92	Low 0.04 0.0003 0.01 0.02 0.00 1.00 0.01 0.01 0.02 0.02 0.02 0.02 0.30 0.01 U	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97 3/22/16 6/16/92 6/23/94 6/23/94 6/23/94 5/26/04 8/12/91 5/26/04 6/30/95 8/22/97 8/24/17	Average 1.17 0.0019 0.04 0.01 0.07 0.00 7.05 0.02 0.02 0.02 0.65 0.05 0.03 4.52 0.02 U	Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved	No. of Samples 29 29 29 59 29 29 29 29 29 29 29 29 29 29 29 29 29	High 10.00 0.01 0.27 0.01 0.11 0.01 63.60 0.02 0.04 7.30 0.12 0.06 9.10 0.07 0.0001 0.03	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05 8/22/92 6/14/08 8/22/92 6/25/19 8/22/92 3/22/16 10/3/12 6/30/09 8/22/92 8/22/92 6/14/08	Low 0.04 0.0003 0.01 0.01 0.02 0.00 1.00 0.01 0.01 0.02 0.02 0.02 0.02 0.30 0.01 U 0.01	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97 3/22/16 6/16/92 6/23/94 6/23/94 5/26/04 8/12/91 5/26/04 8/12/91 5/26/04 6/30/95 8/22/97 8/24/17 6/18/96	Average 1.17 0.0019 0.04 0.01 0.07 0.00 7.05 0.02 0.02 0.05 0.03 4.52 0.02 U 0.02	Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Nickel, dissolved	No. of Samples 29 29 29 29 29 29 29 29 29 29 29 29 29	High 10.00 0.01 0.27 0.01 0.11 0.01 63.60 0.02 0.04 7.30 0.12 0.06 9.10 0.07 0.0001 0.03 0.04	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05 8/22/92 6/14/08 8/22/92 6/25/19 8/22/92 3/22/16 10/3/12 6/30/09 8/22/92 8/22/92 8/22/92 6/14/08 7/29/09	Low 0.04 0.0003 0.01 0.02 0.00 1.00 0.01 0.01 0.02 0.02 0.02 0.30 0.01 U 0.01 0.01 0.01 0.01 0.02	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97 3/22/16 6/16/92 6/23/94 6/23/94 6/23/94 5/26/04 8/12/91 5/26/04 8/12/91 5/26/04 6/30/95 8/22/97 8/24/17 6/18/96 8/22/92	Average 1.17 0.0019 0.04 0.01 0.07 0.00 7.05 0.02 0.02 0.05 0.05 0.03 4.52 0.02 U 0.02 U 0.02 0.02 0.02 0.03	Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved	No. of Samples 29 29 29 29 29 29 29 29 29 29 29 29 29	High 10.00 0.01 0.27 0.01 0.11 0.01 63.60 0.02 0.04 7.30 0.12 0.06 9.10 0.07 0.0001 0.03 0.04 22.00	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05 8/22/92 6/14/08 8/22/92 6/25/19 8/22/92 3/22/16 10/3/12 6/30/09 8/22/92 8/22/92 8/22/92 6/14/08 7/29/09 12/18/91	Low 0.04 0.0003 0.01 0.02 0.00 1.00 0.01 0.01 0.02 0.02 0.02 0.30 0.01 U 0.01 0.01 0.01 0.02 0.02 0.30 0.01	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97 3/22/16 6/16/92 6/23/94 6/23/94 6/23/94 5/26/04 8/12/91 5/26/04 8/12/91 5/26/04 8/12/91 5/26/04 8/12/91 5/26/04 8/22/97 8/24/17 6/18/96 8/22/92 6/25/19	Average 1.17 0.0019 0.04 0.01 0.07 0.00 7.05 0.02 0.02 0.05 0.03 4.52 0.02 U 0.02 U 0.02 0.03 7.57	Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	No. of Samples 29 29 29 29 59 29 29 29 29 29 29 29 29 29 29 29 29 29	High 10.00 0.01 0.27 0.01 0.11 0.01 63.60 0.02 0.04 7.30 0.12 0.06 9.10 0.07 0.0001 0.03 0.04 22.00 0.00	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05 8/22/92 6/14/08 8/22/92 6/25/19 8/22/92 3/22/16 10/3/12 6/30/09 8/22/92 8/22/92 8/22/92 8/22/92 6/14/08 7/29/09 12/18/91 8/12/91	Low 0.04 0.0003 0.01 0.02 0.00 1.00 0.01 0.01 0.02 0.02 0.02 0.02 0.30 0.01 U 0.01 0.01 0.02 0.02 0.30 0.01 0.02 0.02 0.30 0.01 0.02 0.02 0.02 0.00 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.01 0.01 0.01 0.01 0.02 0.01 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.01 0.01 0.02 0.00 0.01 0.01 0.02 0.01 0.01 0.02 0.00 0.01 0.01 0.01 0.02 0.01 0.01 0.02 0.01 0.01 0.02 0.02 0.02 0.02 0.02 0.01 0.01 0.01 0.01 0.02 0.00 0.02 0.00 0.00 0.02 0.00 0.	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97 3/22/16 6/16/92 6/23/94 6/23/94 6/23/94 5/26/04 8/12/91 5/26/04 6/30/95 8/22/97 8/24/17 6/18/96 8/22/92 6/25/19 8/12/91	Average 1.17 0.0019 0.04 0.01 0.07 0.00 7.05 0.02 0.02 0.05 0.03 4.52 0.02 U 0.02 U 0.02 0.03 7.57 0.00	Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lead, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved	No. of Samples 29 29 29 29 59 29 29 29 29 29 29 29 29 29 29 29 29 29	High 10.00 0.01 0.27 0.01 0.11 0.01 63.60 0.02 0.04 7.30 0.12 0.06 9.10 0.07 0.0001 0.03 0.04 22.00 0.00 74.00	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05 8/22/92 6/14/08 8/22/92 6/25/19 8/22/92 3/22/16 10/3/12 6/30/09 8/22/92 8/22/92 8/22/92 6/14/08 7/29/09 12/18/91 8/12/91 8/22/92	Low 0.04 0.0003 0.01 0.02 0.00 1.00 0.01 0.01 0.01 0.02 0.02 0.02 0.30 0.01 U 0.01 0.02 0.02 0.30 0.01 0.02 0.02 0.30 0.01 0.02 0.02 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97 3/22/16 6/16/92 6/23/94 6/23/94 6/23/94 5/26/04 8/12/91 5/26/04 8/12/91 5/26/04 6/30/95 8/22/97 8/24/17 6/18/96 8/22/92 6/25/19 8/12/91 3/21/17	Average 1.17 0.0019 0.04 0.01 0.07 0.00 7.05 0.02 0.02 0.05 0.03 4.52 0.02 U 0.02 U 0.02 0.03 7.57 0.00 18.46	Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lead, dissolved Magnesium, dissolved Manganese, dissolved Selenium, dissolved Selenium, dissolved	No. of Samples 29 29 29 29 59 29 29 29 29 29 29 29 29 29 29 29 29 29	High 10.00 0.01 0.27 0.01 0.11 0.01 63.60 0.02 0.04 7.30 0.12 0.06 9.10 0.07 0.0001 0.03 0.04 22.00 0.00 74.00 336.00	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05 8/22/92 6/14/08 8/22/92 6/25/19 8/22/92 3/22/16 10/3/12 6/30/09 8/22/92 8/22/92 6/14/08 7/29/09 12/18/91 8/12/91 8/22/92 6/16/92	Low 0.04 0.0003 0.01 0.02 0.00 1.00 0.01 0.01 0.01 0.02 0.02 0.02 0.02 0.30 0.01 U 0.01 0.02 0.02 0.02 0.00 1.00 0.02 0.00 0.01 0.01 0.02 0.00 0.02 0.02 0.02 0.00 0.01 0.01 0.02 0.00 0.01 0.01 0.02 0.00 1.00 0.01 0.01 0.02 0.00 1.00 0.01 0.01 0.02 0.00 1.00 0.01 0.01 0.01 0.02 0.00 1.00 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.00 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.01 0.01 0.01 0.02 0.00 0.02 0.00 0.02 0.00 0.00 0.02 0.00 0.	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97 3/22/16 6/16/92 6/23/94 6/23/94 6/23/94 5/26/04 8/12/91 5/26/04 8/12/91 5/26/04 6/30/95 8/22/97 8/24/17 6/18/96 8/22/92 6/25/19 8/12/91 3/21/17 5/26/04	Average 1.17 0.0019 0.04 0.01 0.07 0.00 7.05 0.02 0.02 0.05 0.03 4.52 0.02 U 0.02 U 0.02 0.03 7.57 0.00 18.46 209.07	Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lead, dissolved Lead, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved Strontium, dissolved	No. of Samples 29 29 29 29 59 29 29 29 29 29 29 29 29 29 29 29 29 29	High 10.00 0.01 0.27 0.01 0.11 0.01 63.60 0.02 0.04 7.30 0.12 0.06 9.10 0.07 0.0001 0.03 0.04 22.00 0.00 74.00 336.00 1.30	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05 8/22/92 6/14/08 8/22/92 6/25/19 8/22/92 3/22/16 10/3/12 6/30/09 8/22/92 8/22/92 6/14/08 7/29/09 12/18/91 8/12/91 8/22/92 6/16/92 6/30/09	Low 0.04 0.0003 0.01 0.02 0.00 1.00 0.01 0.01 0.01 0.02 0.02 0.02 0.30 0.01 U 0.01 0.02 0.02 0.30 0.01 0.02 0.02 0.00 1.00 0.02 0.02 0.00 1.00 0.02 0.02 0.00 0.01 0.02 0.00 0.02 0.00 0.02 0.00 0.00 0.02 0.00 0.	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97 3/22/16 6/16/92 6/23/94 6/23/94 6/23/94 5/26/04 8/12/91 5/26/04 8/12/91 5/26/04 6/30/95 8/22/97 8/24/17 6/18/96 8/22/92 6/25/19 8/12/91 3/21/17 5/26/04 6/16/92	Average 1.17 0.0019 0.04 0.01 0.07 0.00 7.05 0.02 0.02 0.05 0.03 4.52 0.02 U 0.02 U 0.02 0.03 7.57 0.00 18.46 209.07 0.48	Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lead, dissolved Magnesium, dissolved Manganese, dissolved Selenium, dissolved Selenium, dissolved	No. of Samples 29 29 29 29 59 29 29 29 29 29 29 29 29 29 29 29 29 29	High 10.00 0.01 0.27 0.01 0.11 0.01 63.60 0.02 0.04 7.30 0.12 0.06 9.10 0.07 0.0001 0.03 0.04 22.00 0.00 74.00 336.00	Date 8/22/92 6/18/96 5/21/07 8/22/92 11/21/05 8/22/92 6/14/08 8/22/92 6/25/19 8/22/92 3/22/16 10/3/12 6/30/09 8/22/92 8/22/92 6/14/08 7/29/09 12/18/91 8/12/91 8/22/92 6/16/92	Low 0.04 0.0003 0.01 0.02 0.00 1.00 0.01 0.01 0.01 0.02 0.02 0.02 0.02 0.30 0.01 U 0.01 0.02 0.02 0.02 0.00 1.00 0.02 0.00 0.01 0.01 0.02 0.00 0.02 0.02 0.02 0.00 0.01 0.01 0.02 0.00 0.01 0.01 0.02 0.00 1.00 0.01 0.01 0.02 0.00 1.00 0.01 0.01 0.02 0.00 1.00 0.01 0.01 0.01 0.02 0.00 1.00 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.00 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.01 0.01 0.01 0.02 0.00 0.02 0.00 0.02 0.00 0.00 0.02 0.00 0.	Date 5/29/03 5/26/04 5/26/04 8/22/92 8/22/97 3/22/16 6/16/92 6/23/94 6/23/94 6/23/94 5/26/04 8/12/91 5/26/04 8/12/91 5/26/04 6/30/95 8/22/97 8/24/17 6/18/96 8/22/92 6/25/19 8/12/91 3/21/17 5/26/04	Average 1.17 0.0019 0.04 0.01 0.07 0.00 7.05 0.02 0.02 0.05 0.03 4.52 0.02 U 0.02 U 0.02 0.03 7.57 0.00 18.46 209.07	Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

DAUB & ASSOCIATES, INC. 2019 Jan Contraction of the Contraction



Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples	riigii	Date	LOW	Date	Average	Units
Bicarbonate as CaCO3	179	903.00	12/12/08	41.00	1/30/97	516.92	mg/l
Carbonate as CaCO3	179	566.00	1/30/97	8.00	11/28/90	89.40	mg/l
Total Alkalinity as	179	926.00	12/12/08	160.00	10/25/90	604.56	mg/l
Bromide	27	3.00	6/26/90	0.05	7/1/97	0.44	mg/l
Cation-Anion Balance	170	63.40	4/14/05	-28.80	8/2/06	0.76	%
Sum of Anions	153	20.10	12/12/08	11.66	11/28/90	14.13	meq/l
Sum of Cations	153	67.50	4/14/05	7.80	8/2/06	14.49	meg/l
Chemical Oxygen	24	220.00	9/22/10	10.00	8/2/06	80.23	mg/l
Chloride	178	118.00	10/22/89	2.00	4/24/91	19.66	mg/l
Conductivity, Lab	176	1,760.00	12/12/08	1,000.00	5/20/93	1,258.74	μmhos
Fluoride	179	30.00	12/19/91	1.90	6/26/91	21.40	mg/l
Hardness as CaCO3	173	375.00	5/21/18	0.40	10/25/90	11.08	mg/l
Nitrate as N, dissolved	28	5.76	8/10/08	0.02	7/18/95	0.53	mg/l
Nitrate/Nitrite as N,	28	6.26	8/10/08	0.02	7/18/95	0.56	mg/l
Nitrite as N, dissolved	28	0.50	8/10/08	0.01	3/30/90	0.13	mg/l
Nitrogen, Ammonia	26	3.77	8/10/08	0.54	6/15/92	1.30	mg/l
Nitrogen, Organic	26	14.60	9/27/90	0.10	6/15/92	4.37	mg/l
Nitrogen, Total Kjeldahl	26	15.40	9/27/90	0.60	6/15/92	5.49	mg/l
pH, lab	175	9.70	12/20/94	8.00	7/18/95	8.91	units
Phosphate, total	22	155.00	6/25/07	0.06	7/2/98	10.79	mg/l
Phosphorus, total	27	0.46	6/26/90	0.01	8/17/93	0.08	mg/l
SAR in Water	136	345.00	4/14/05	0.21	5/21/18	58.38	none
Sulfate	179	445.00	6/26/90	2.49	5/21/18	40.76	mg/l
Sulfide	23	2.40	7/24/02	0.02	7/15/04	0.45	mg/l
Total Dissolved Solids	179	2,040.00	4/14/05	494.00	10/25/90	787.56	mg/l
Conductivity, Field	225	1,980.00	12/12/08	620.00	3/16/94	1,223.05	µmhos
pH, Field	225	10.00	8/22/91	6.80	3/10/15	9.09	units
Temperature (°C), Field	105	17.40	7/1/02	9.20	1/30/06	12.20	(°C)
Water Level, Field	91	545.20	6/25/14	463.95	4/1/03	494.79	Ft.
			-	-		-	
Parameters	No. of	High	Date	Low	Date	Average	Units
Metals	Samples	0.70	10/00/00	0.00	7/4/07	0.40	4
Aluminum, dissolved	26	0.70	10/22/89	0.03	7/1/97	0.12	mg/l
Arsenic, dissolved	26	0.04	6/26/91	0.00	6/15/92	0.01	mg/l
		0.00	7/4 5/0 4		0/0/00		
Barium, dissolved	26	0.23	7/15/04	0.01	8/2/06	0.04	mg/l
Beryllium, dissolved	26 26	0.01	6/26/90	0.01	6/26/90	0.01	mg/l
Beryllium, dissolved Boron, dissolved	26 26 172	0.01 1.48	6/26/90 4/14/05	0.01 0.19	6/26/90 8/2/06	0.01 0.37	mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved	26 26 172 26	0.01 1.48 0.01	6/26/90 4/14/05 6/26/90	0.01 0.19 0.01	6/26/90 8/2/06 6/26/90	0.01 0.37 0.01	mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	26 26 172 26 171	0.01 1.48 0.01 141.00	6/26/90 4/14/05 6/26/90 5/21/18	0.01 0.19 0.01 0.30	6/26/90 8/2/06 6/26/90 4/27/04	0.01 0.37 0.01 2.33	mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	26 26 172 26 171 26	0.01 1.48 0.01 141.00 0.07	6/26/90 4/14/05 6/26/90 5/21/18 7/30/03	0.01 0.19 0.01 0.30 0.01	6/26/90 8/2/06 6/26/90 4/27/04 6/26/90	0.01 0.37 0.01 2.33 0.04	mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	26 26 172 26 171 26 26 26	0.01 1.48 0.01 141.00 0.07 0.01	6/26/90 4/14/05 6/26/90 5/21/18 7/30/03 6/26/90	0.01 0.19 0.01 0.30 0.01 0.01	6/26/90 8/2/06 6/26/90 4/27/04 6/26/90 6/26/90	0.01 0.37 0.01 2.33 0.04 0.01	mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	26 26 172 26 171 26 26 26 26	0.01 1.48 0.01 141.00 0.07 0.01 0.80	6/26/90 4/14/05 6/26/90 5/21/18 7/30/03 6/26/90 10/22/89	0.01 0.19 0.01 0.30 0.01 0.01 0.01	6/26/90 8/2/06 6/26/90 4/27/04 6/26/90 6/26/90 7/18/95	0.01 0.37 0.01 2.33 0.04 0.01 0.13	mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	26 26 172 26 171 26 26 26 26 26	0.01 1.48 0.01 141.00 0.07 0.01 0.80 0.05	6/26/90 4/14/05 6/26/90 5/21/18 7/30/03 6/26/90 10/22/89 10/22/89	0.01 0.19 0.01 0.30 0.01 0.01 0.01 0.02	6/26/90 8/2/06 6/26/90 4/27/04 6/26/90 6/26/90 7/18/95 6/26/90	0.01 0.37 0.01 2.33 0.04 0.01 0.13 0.03	mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	26 26 172 26 171 26 26 26 26 26 26 26	0.01 1.48 0.01 141.00 0.07 0.01 0.80 0.05 0.13	6/26/90 4/14/05 6/26/90 5/21/18 7/30/03 6/26/90 10/22/89 10/22/89 7/15/04	0.01 0.19 0.01 0.30 0.01 0.01 0.01 0.02 0.02	6/26/90 8/2/06 6/26/90 4/27/04 6/26/90 6/26/90 7/18/95 6/26/90 6/26/90	0.01 0.37 0.01 2.33 0.04 0.01 0.13 0.03 0.05	mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	26 26 172 26 171 26 26 26 26 26 26 26 171	0.01 1.48 0.01 141.00 0.07 0.01 0.80 0.05 0.13 9.10	6/26/90 4/14/05 6/26/90 5/21/18 7/30/03 6/26/90 10/22/89 10/22/89 7/15/04 12/12/08	0.01 0.19 0.01 0.30 0.01 0.01 0.01 0.02 0.02 0.20	6/26/90 8/2/06 6/26/90 6/26/90 6/26/90 6/26/90 7/18/95 6/26/90 6/26/90 4/27/04	0.01 0.37 0.01 2.33 0.04 0.01 0.13 0.03 0.05 1.22	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	26 26 172 26 171 26 26 26 26 26 26 26 26 171 25	0.01 1.48 0.01 141.00 0.07 0.01 0.80 0.05 0.13 9.10 0.14	6/26/90 4/14/05 6/26/90 5/21/18 7/30/03 6/26/90 10/22/89 10/22/89 7/15/04 12/12/08 7/30/03	0.01 0.19 0.01 0.01 0.01 0.01 0.02 0.02 0.02 0.20 0.01	6/26/90 8/2/06 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 4/27/04 6/26/90	0.01 0.37 0.01 2.33 0.04 0.01 0.13 0.03 0.05 1.22 0.06	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved	26 26 172 26 171 26 26 26 26 26 26 26 171 25 26	0.01 1.48 0.01 141.00 0.07 0.01 0.80 0.05 0.13 9.10 0.14 0.00	6/26/90 4/14/05 6/26/90 5/21/18 7/30/03 6/26/90 10/22/89 10/22/89 7/15/04 12/12/08 7/30/03 6/15/92	0.01 0.19 0.01 0.30 0.01 0.01 0.02 0.02 0.20 0.20 0.01 0.00	6/26/90 8/2/06 6/26/90 4/27/04 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90	0.01 0.37 0.01 2.33 0.04 0.01 0.13 0.03 0.05 1.22 0.06 0.00	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved	26 26 172 26 171 26 26 26 26 26 26 171 25 26 26 26 26 26 26	0.01 1.48 0.01 141.00 0.07 0.01 0.80 0.05 0.13 9.10 0.14 0.00 0.13	6/26/90 4/14/05 6/26/90 5/21/18 7/30/03 6/26/90 10/22/89 7/15/04 12/12/08 7/30/03 6/15/92 10/22/89	0.01 0.19 0.01 0.30 0.01 0.01 0.02 0.02 0.20 0.20 0.01 0.00 0.01	6/26/90 8/2/06 6/26/90 4/27/04 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 7/12/96	0.01 0.37 0.01 2.33 0.04 0.01 0.13 0.03 0.05 1.22 0.06 0.00 0.05	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved	26 26 172 26 171 26 26 26 26 26 26 171 25 26 26 26 26 26 26 26 26	0.01 1.48 0.01 141.00 0.07 0.01 0.80 0.05 0.13 9.10 0.14 0.00 0.13 0.52	6/26/90 4/14/05 6/26/90 5/21/18 7/30/03 6/26/90 10/22/89 7/15/04 12/12/08 7/30/03 6/15/92 10/22/89 7/30/03	0.01 0.19 0.01 0.30 0.01 0.01 0.02 0.02 0.20 0.01 0.00 0.01 0.02	6/26/90 8/2/06 6/26/90 4/27/04 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 7/12/96 10/22/89	0.01 0.37 0.01 2.33 0.04 0.01 0.13 0.03 0.05 1.22 0.06 0.00 0.05 0.19	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Potassium, dissolved	26 26 172 26 171 26 26 26 26 26 26 171 25 26 26 26 26 26 26 26 26 26 26 26 26 26	0.01 1.48 0.01 141.00 0.07 0.01 0.80 0.05 0.13 9.10 0.14 0.00 0.13 0.52 12.50	6/26/90 4/14/05 6/26/90 5/21/18 7/30/03 6/26/90 10/22/89 7/15/04 12/12/08 7/30/03 6/15/92 10/22/89 7/30/03 5/21/18	0.01 0.19 0.01 0.30 0.01 0.01 0.02 0.02 0.20 0.01 0.00 0.01 0.02 0.01 0.00 0.01 0.02 0.01	6/26/90 8/2/06 6/26/90 4/27/04 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 7/12/96 10/22/89 8/2/06	0.01 0.37 0.01 2.33 0.04 0.01 0.13 0.03 0.05 1.22 0.06 0.00 0.05 0.19 1.39	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	26 26 172 26 171 26 26 26 26 26 26 26 26 26 26 26 26 26	0.01 1.48 0.01 141.00 0.07 0.01 0.80 0.05 0.13 9.10 0.14 0.00 0.13 0.52 12.50 0.01	6/26/90 4/14/05 6/26/90 5/21/18 7/30/03 6/26/90 10/22/89 7/15/04 12/12/08 7/30/03 6/15/92 10/22/89 7/30/03 5/21/18 9/27/90	0.01 0.19 0.01 0.30 0.01 0.01 0.02 0.02 0.20 0.01 0.00 0.01 0.02 0.00 0.01 0.02 0.60 0.001	6/26/90 8/2/06 6/26/90 4/27/04 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 7/12/96 10/22/89 8/2/06 6/26/90	0.01 0.37 0.01 2.33 0.04 0.01 0.13 0.03 0.05 1.22 0.06 0.00 0.05 0.19 1.39 0.004	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lead, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved	26 26 172 26 171 26 26 26 26 26 26 26 26 26 26 26 26 26	0.01 1.48 0.01 141.00 0.07 0.01 0.80 0.05 0.13 9.10 0.14 0.00 0.13 0.52 12.50 0.01 27.70	6/26/90 4/14/05 6/26/90 5/21/18 7/30/03 6/26/90 10/22/89 7/15/04 12/12/08 7/30/03 6/15/92 10/22/89 7/30/03 5/21/18 9/27/90 1/9/01	0.01 0.19 0.01 0.01 0.01 0.01 0.02 0.02 0.02 0.02 0.01 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.00 0.02 0.00 0.00 0.00 0.02 0.00 0.00 0.00 0.02 0.00 0.00 0.00 0.00 0.02 0.00	6/26/90 8/2/06 6/26/90 4/27/04 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 7/12/96 10/22/89 8/2/06 6/26/90 12/10/19	0.01 0.37 0.01 2.33 0.04 0.01 0.13 0.03 0.05 1.22 0.06 0.00 0.05 0.19 1.39 0.004 12.94	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved	26 26 172 26 171 26 26 26 26 26 26 26 26 26 26 26 26 26	0.01 1.48 0.01 141.00 0.07 0.01 0.80 0.05 0.13 9.10 0.14 0.00 0.13 0.52 12.50 0.01 27.70 1,530.00	6/26/90 4/14/05 6/26/90 5/21/18 7/30/03 6/26/90 10/22/89 7/15/04 12/12/08 7/30/03 6/15/92 10/22/89 7/30/03 5/21/18 9/27/90 1/9/01 4/14/05	0.01 0.19 0.01 0.01 0.01 0.01 0.02 0.02 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.02 0.02 0.02 0.02 0.01 0.02 0.02 0.01 0.02	6/26/90 8/2/06 6/26/90 4/27/04 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 7/12/96 10/22/89 8/2/06 6/26/90 12/10/19 5/21/18	0.01 0.37 0.01 2.33 0.04 0.01 0.13 0.03 0.05 1.22 0.06 0.00 0.05 0.19 1.39 0.004 12.94 323.04	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lead, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved	26 26 172 26 171 26 26 26 26 26 26 26 26 26 26 26 26 26	0.01 1.48 0.01 141.00 0.07 0.01 0.80 0.05 0.13 9.10 0.14 0.00 0.13 0.52 12.50 0.01 27.70	6/26/90 4/14/05 6/26/90 5/21/18 7/30/03 6/26/90 10/22/89 7/15/04 12/12/08 7/30/03 6/15/92 10/22/89 7/30/03 5/21/18 9/27/90 1/9/01	0.01 0.19 0.01 0.01 0.01 0.01 0.02 0.02 0.02 0.02 0.01 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.01 0.02 0.00 0.00 0.02 0.00 0.00 0.00 0.02 0.00 0.00 0.00 0.02 0.00 0.00 0.00 0.00 0.02 0.00	6/26/90 8/2/06 6/26/90 4/27/04 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 6/26/90 7/12/96 10/22/89 8/2/06 6/26/90 12/10/19	0.01 0.37 0.01 2.33 0.04 0.01 0.13 0.03 0.05 1.22 0.06 0.00 0.05 0.19 1.39 0.004 12.94	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 14: 89-2 Annual A-Groove Aquifer

DAUB & ASSOCIATES, INC.



Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples	ingn	Date	LOW	Date	Average	Units
Bicarbonate as CaCO3	99	12,800.00	9/9/19	170.00	6/12/90	2,697.76	mg/l
Carbonate as CaCO3	99	6,530.00	12/13/16	9.00	4/27/04	455.13	mg/l
Total Alkalinity as	99	14,200.00	9/9/19	477.00	4/16/02	3,172.31	mg/l
Bromide	23	0.10	1/31/91	0.08	7/31/09	0.10	mg/l
Cation-Anion Balance	96	30.70	12/13/16	-14.70	2/27/17	-0.46	%
Sum of Anions	96	466.00	9/9/19	11.49	2/24/92	100.31	meq/l
Sum of Cations	96	418.00	10/9/19	11.50	9/27/90	96.49	meg/l
Chemical Oxygen	19	191.00	6/29/16	10.00	10/22/02	61.30	mg/l
Chloride	98	6,350.00	9/9/19	10.00	1/31/91	1,216.46	mg/l
Conductivity, Lab	97	33,400.00	10/9/19	1,075.00	1/31/91	8,568.20	μmhos
Fluoride	99	46.70	9/9/19	1.40	4/27/04	16.90	mg/l
Hardness as CaCO3	99	98.00	11/6/14	4.00	9/9/15	42.38	mg/l
Nitrate as N, dissolved	23	3.99	1/31/91	0.02	9/27/90	0.70	mg/l
Nitrate/Nitrite as N,	23	4.00	1/31/91	0.02	9/27/90	0.60	mg/l
Nitrite as N, dissolved	23	0.02	9/27/90	0.02	1/31/91	0.00	mg/l
Nitrogen, Ammonia	23	5.10	8/21/15	0.01	9/27/90	1.03	
Nitrogen, Organic	22	2.50	6/29/16	0.08	1/31/91	0.53	mg/l mg/l
Nitrogen, Total Kjeldahl	22	7.10	6/29/16	0.10	9/27/90	1.43	mg/l
pH, lab	97	12.80	1/27/16	6.30	7/25/02	8.78	units
Phosphate, total	19	11.00	6/29/16	0.06	6/28/07	1.35	mg/l
Phosphorus, total	22	3.40	6/29/16	0.00	6/28/07	0.38	mg/l
SAR in Water	94	1,600.00	12/13/16	25.30	8/4/08	174.35	none
SAN III Water Sulfate	94	933.00	9/9/15	10.00	10/4/11	90.83	mg/l
Sulfide	23	12.00	10/19/00	0.07	10/22/02	4.14	mg/l
Total Dissolved Solids	99	24,400.00	9/9/19	700.00	7/21/94	5,341.20	mg/l
Conductivity, Field	315	33,100.00	4/8/19	1,122.70	5/4/10	3,672.64	
pH, Field	100	12.50	4/13/16	7.00	12/11/18	8.49	<u>µmhos</u> units
Temperature (°C), Field	72	24.40	7/28/11	7.50	3/4/13	18.26	(°C)
remperature (C), Field							
Water Lovel Field							
Water Level, Field	18	549.12	10/15/15	531.00	4/21/16	537.89	Ft.
•	18	549.12	10/15/15	531.00	4/21/16	537.89	Ft.
Parameters	18 No. of						
Parameters Metals	18 No. of Samples	549.12 High	10/15/15 Date	531.00 Low	4/21/16 Date	537.89 Average	Ft. Units
Parameters Metals Aluminum, dissolved	18 No. of Samples 23	549.12 High 0.05	10/15/15 Date 6/12/90	531.00 Low 0.04	4/21/16 Date 6/28/07	537.89 Average 0.05	Ft. Units mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved	18 No. of <u>Samples</u> 23 23	549.12 High 0.05 0.05	10/15/15 Date 6/12/90 8/21/15	531.00 Low 0.04 0.0008	4/21/16 Date 6/28/07 10/26/04	537.89 Average 0.05 0.01	Ft. Units mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	18 No. of 23 23 23 23	549.12 High 0.05 0.05 1.77	10/15/15 Date 6/12/90 8/21/15 11/6/14	531.00 Low 0.04 0.0008 0.02	4/21/16 Date 6/28/07 10/26/04 1/31/91	537.89 Average 0.05 0.01 0.47	Ft. Units mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	18 No. of 23 23 23 23 23 23	549.12 High 0.05 0.05 1.77 0.01	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90	531.00 Low 0.04 0.0008 0.02 0.01	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90	537.89 Average 0.05 0.01 0.47 0.01	Ft. Units mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	18 No. of 23 23 23 23 23 23 23 99	549.12 High 0.05 0.05 1.77 0.01 11.20	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19	531.00 Low 0.04 0.0008 0.02 0.01 0.25	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90	537.89 Average 0.05 0.01 0.47 0.01 2.23	Ft. Units mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	18 No. of 23 23 23 23 23 23 23 23 23 23	549.12 High 0.05 0.05 1.77 0.01 11.20 0.01	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19 6/12/90	531.00 Low 0.04 0.0008 0.02 0.01 0.25 0.01	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90 9/27/90	537.89 Average 0.05 0.01 0.47 0.01 2.23 0.01	Ft. Units mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	18 No. of Samples 23 23 23 23 23 99 23 99 23 97	549.12 High 0.05 0.05 1.77 0.01 11.20 0.01 12.00	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19 6/12/90 8/21/15	531.00 Low 0.04 0.008 0.02 0.01 0.25 0.01 0.00	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90 9/27/90 5/17/17	537.89 Average 0.05 0.01 0.47 0.01 2.23 0.01 4.89	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	18 No. of 23 23 23 23 23 99 23 99 23 97 23	549.12 High 0.05 0.05 1.77 0.01 11.20 0.01 12.00 0.02	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19 6/12/90 8/21/15 9/28/06	531.00 Low 0.04 0.008 0.02 0.01 0.25 0.01 0.00 0.01	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90 9/27/90 5/17/17 6/12/90	537.89 Average 0.05 0.01 0.47 0.01 2.23 0.01 4.89 0.01	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	18 No. of 23 23 23 23 23 99 23 99 23 97 23 23 23	549.12 High 0.05 0.05 1.77 0.01 11.20 0.01 12.00 0.02 0.01	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19 6/12/90 8/21/15 9/28/06 6/12/90	531.00 Low 0.04 0.0008 0.02 0.01 0.25 0.01 0.00 0.01 0.01	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90 5/17/17 6/12/90 6/12/90	537.89 Average 0.05 0.01 0.47 0.01 2.23 0.01 4.89 0.01 0.01	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	18 No. of Samples 23 23 23 23 23 99 23 97 23 23 23 23 23	549.12 High 0.05 0.05 1.77 0.01 11.20 0.01 12.00 0.02 0.01 3.00	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19 6/12/90 8/21/15 9/28/06 6/12/90 8/21/15	531.00 Low 0.04 0.0008 0.02 0.01 0.25 0.01 0.00 0.01 0.01 0.02	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90 9/27/90 5/17/17 6/12/90 6/12/90 9/27/90	537.89 Average 0.05 0.01 0.47 0.01 2.23 0.01 4.89 0.01 0.01 0.01 0.23	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	18 No. of Samples 23 23 23 23 99 23 97 23 23 23 23 23 23 23	549.12 High 0.05 0.05 1.77 0.01 11.20 0.01 12.00 0.02 0.01 3.00 0.02	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19 6/12/90 8/21/15 9/28/06 6/12/90 8/21/15 6/12/90	531.00 Low 0.04 0.0008 0.02 0.01 0.25 0.01 0.00 0.01 0.01 0.02 0.02 0.02	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90 9/27/90 5/17/17 6/12/90 6/12/90 9/27/90 6/12/90	537.89 Average 0.05 0.01 0.47 0.01 2.23 0.01 4.89 0.01 0.01 0.23 0.02	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	18 No. of Samples 23 23 23 23 99 23 97 23 23 23 23 23 23 23 23 23	549.12 High 0.05 0.05 1.77 0.01 11.20 0.01 12.00 0.02 0.01 3.00 0.02 0.49	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19 6/12/90 8/21/15 9/28/06 6/12/90 8/21/15 6/12/90 11/6/14	531.00 Low 0.04 0.0008 0.02 0.01 0.25 0.01 0.00 0.01 0.01 0.02 0.02 0.02 0.02 0.01	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90 9/27/90 5/17/17 6/12/90 6/12/90 9/27/90 6/12/90 6/12/90 6/12/90	537.89 Average 0.05 0.01 0.47 0.01 2.23 0.01 4.89 0.01 0.01 0.23 0.02 0.18	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	18 No. of Samples 23 23 23 23 99 23 97 23 23 23 23 23 23 23 23 23 23 23 99	549.12 High 0.05 0.05 1.77 0.01 11.20 0.01 12.00 0.02 0.01 3.00 0.02 0.49 19.00	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19 6/12/90 8/21/15 9/28/06 6/12/90 8/21/15 6/12/90 11/6/14 11/6/14	531.00 Low 0.04 0.0008 0.02 0.01 0.25 0.01 0.00 0.01 0.02 0.01 0.02 0.02 0.02 0.01 2.00	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90	537.89 Average 0.05 0.01 0.47 0.01 2.23 0.01 4.89 0.01 0.01 0.23 0.02 0.18 8.13	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	18 No. of Samples 23 23 23 23 99 23 97 23 23 23 23 23 23 23 23 23 23 23 23 23	549.12 High 0.05 0.05 1.77 0.01 11.20 0.01 12.00 0.02 0.01 3.00 0.02 0.01 3.00 0.02 0.49 19.00 0.08	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19 6/12/90 8/21/15 9/28/06 6/12/90 8/21/15 6/12/90 11/6/14 11/6/14 10/4/11	531.00 Low 0.04 0.0008 0.02 0.01 0.25 0.01 0.00 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.01 2.00 0.01	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90 9/27/90 5/17/17 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 9/22/10	537.89 Average 0.05 0.01 0.47 0.01 2.23 0.01 4.89 0.01 0.01 0.23 0.02 0.18 8.13 0.02	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	18 No. of Samples 23 23 23 23 99 23 97 23 23 23 23 23 23 23 23 23 23 23 23 23	549.12 High 0.05 0.05 1.77 0.01 11.20 0.01 12.00 0.02 0.01 3.00 0.02 0.01 3.00 0.02 0.49 19.00 0.08 0.004	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19 6/12/90 8/21/15 9/28/06 6/12/90 8/21/15 6/12/90 11/6/14 11/6/14 10/4/11 10/30/03	531.00 Low 0.04 0.0008 0.02 0.01 0.25 0.01 0.00 0.01 0.02 0.02 0.02 0.01 2.00 0.01 0.00	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90 9/27/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 9/22/10 6/12/90	537.89 Average 0.05 0.01 0.47 0.01 2.23 0.01 4.89 0.01 0.01 0.23 0.02 0.18 8.13 0.02 0.0002	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved	18 No. of Samples 23 23 23 23 99 23 97 23 23 23 23 23 23 23 23 23 23 23 23 23	549.12 High 0.05 0.05 1.77 0.01 11.20 0.01 12.00 0.02 0.01 3.00 0.02 0.01 3.00 0.02 0.49 19.00 0.08 0.0004 0.05	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19 6/12/90 8/21/15 9/28/06 6/12/90 8/21/15 6/12/90 11/6/14 11/6/14 10/4/11 10/30/03 6/12/90	531.00 Low 0.04 0.0008 0.02 0.01 0.25 0.01 0.00 0.01 0.02 0.02 0.02 0.01 2.00 0.01 0.00 0.01 0.02 0.01 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.02 0.01 0.00 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.02 0.01 0.02 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.02 0.02 0.01 0.02 0.0	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 9/22/10 6/12/90 9/22/10 6/12/90 9/22/10	537.89 Average 0.05 0.01 0.47 0.01 2.23 0.01 4.89 0.01 0.23 0.02 0.18 8.13 0.02 0.0002 0.04	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved	18 No. of Samples 23 23 23 23 99 23 97 23 23 23 23 23 23 23 23 23 23 23 23 23	549.12 High 0.05 0.05 1.77 0.01 11.20 0.01 12.00 0.02 0.01 3.00 0.02 0.01 3.00 0.02 0.49 19.00 0.08 0.0004 0.05 0.05 0.02	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19 6/12/90 8/21/15 9/28/06 6/12/90 8/21/15 6/12/90 11/6/14 11/6/14 10/4/11 10/30/03 6/12/90 6/12/90	531.00 Low 0.04 0.0008 0.02 0.01 0.25 0.01 0.00 0.01 0.02 0.02 0.01 2.00 0.01 2.00 0.01 0.02 0.01 2.00 0.01 0.02 0.02 0.02 0.02 0.02	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90 9/27/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 9/22/10 6/12/90 9/22/10 6/12/90 9/15/07 6/12/90	537.89 Average 0.05 0.01 0.47 0.01 2.23 0.01 4.89 0.01 0.23 0.02 0.18 8.13 0.02 0.002 0.04 0.02	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Potassium, dissolved	18 No. of Samples 23 23 23 23 99 23 97 23 23 23 23 23 23 23 23 23 23 23 23 23	549.12 High 0.05 0.05 1.77 0.01 11.20 0.01 12.00 0.02 0.01 3.00 0.02 0.49 19.00 0.08 0.0004 0.05 0.02 746.00	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19 6/12/90 8/21/15 9/28/06 6/12/90 8/21/15 6/12/90 11/6/14 11/6/14 10/4/11 10/30/03 6/12/90 6/12/90 12/13/16	531.00 Low 0.04 0.0008 0.02 0.01 0.25 0.01 0.00 0.01 0.02 0.02 0.01 2.00 0.01 2.00 0.01 0.02 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.01 0.02 0.01 0.02 0.02 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.02 0.02 0.01 0.02 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.0	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 9/22/10 6/12/90 9/22/10 6/12/90 9/15/07 6/12/90 7/18/00	537.89 Average 0.05 0.01 0.47 0.01 2.23 0.01 4.89 0.01 0.23 0.02 0.02 0.18 8.13 0.02 0.02 0.02 0.002 0.04 0.02 30.26	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	18 No. of Samples 23 23 23 23 99 23 97 23 23 23 23 23 23 23 23 23 23 23 23 23	549.12 High 0.05 0.05 1.77 0.01 11.20 0.01 12.00 0.02 0.01 3.00 0.02 0.49 19.00 0.08 0.0004 0.05 0.02 746.00 0.0014	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19 6/12/90 8/21/15 9/28/06 6/12/90 8/21/15 6/12/90 11/6/14 11/6/14 10/4/11 10/30/03 6/12/90 6/12/90 12/13/16 8/21/15	531.00 Low 0.04 0.0008 0.02 0.01 0.25 0.01 0.00 0.01 0.02 0.02 0.02 0.01 2.00 0.01 2.00 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.00 0.00 0.02 0.01 0.00 0.02 0.01 0.00 0.02 0.01 0.02 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.02 0.01 0.02 0.01 0.02 0.02 0.01 0.02 0.01 0.02 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.02 0.01 0.02 0.01 0.02 0.01 0.00 0.02 0.0	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90 9/27/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 9/22/10 6/12/90 9/22/10 6/12/90 9/15/07 6/12/90 7/18/00 6/12/90	537.89 Average 0.05 0.01 0.47 0.01 2.23 0.01 4.89 0.01 0.23 0.02 0.18 8.13 0.02 0.02 0.02 0.002 0.04 0.02 30.26 0.0011	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Silica, dissolved	18 No. of Samples 23 23 23 99 23 97 23 23 23 23 23 23 23 23 23 23 23 23 23	549.12 High 0.05 0.05 1.77 0.01 11.20 0.01 12.00 0.02 0.01 3.00 0.02 0.49 19.00 0.08 0.0004 0.05 0.02 746.00 0.0014 40.00	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19 6/12/90 8/21/15 9/28/06 6/12/90 8/21/15 6/12/90 11/6/14 11/6/14 10/4/11 10/30/03 6/12/90 6/12/90 12/13/16 8/21/15 9/9/15	531.00 Low 0.04 0.0008 0.02 0.01 0.25 0.01 0.00 0.01 0.02 0.02 0.01 2.00 0.01 2.00 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.00 0.0	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90 9/27/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 9/22/10 6/12/90 9/22/10 6/12/90 9/22/10 6/12/90 9/15/07 6/12/90 7/18/00 6/12/90 1/17/18	537.89 Average 0.05 0.01 0.47 0.01 2.23 0.01 4.89 0.01 0.23 0.02 0.18 8.13 0.02 0.02 0.04 0.02 30.26 0.0011 12.99	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved Selenium, dissolved Sodium, dissolved	18 No. of Samples 23 23 23 99 23 97 23 23 23 23 23 23 23 23 23 23 23 23 23	549.12 High 0.05 0.05 1.77 0.01 11.20 0.01 12.00 0.02 0.01 3.00 0.02 0.49 19.00 0.08 0.0004 0.05 0.02 746.00 0.0014 40.00 9,480.00	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19 6/12/90 8/21/15 9/28/06 6/12/90 8/21/15 6/12/90 11/6/14 11/6/14 10/4/11 10/30/03 6/12/90 6/12/90 12/13/16 8/21/15 9/9/15 10/9/19	531.00 Low 0.04 0.0008 0.02 0.01 0.25 0.01 0.00 0.01 0.02 0.02 0.01 2.00 0.01 2.00 0.01 0.02 0.02 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.01 0.00 0.02 0.01 0.02 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.00 0.01 0.00 0.02 0.01 0.00 0.02 0.01 0.00 0.02 0.0	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90 9/27/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 9/22/10 6/12/90 9/22/10 6/12/90 9/15/07 6/12/90 7/18/00 6/12/90 1/17/18 6/12/90	537.89 Average 0.05 0.01 0.47 0.01 2.23 0.01 4.89 0.01 0.23 0.02 0.18 8.13 0.02 0.02 0.04 0.02 30.26 0.0011 12.99 2,138.87	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved	18 No. of Samples 23 23 23 23 99 23 97 23 23 23 23 23 23 23 23 23 23 23 23 23	549.12 High 0.05 0.05 1.77 0.01 11.20 0.01 12.00 0.02 0.01 3.00 0.02 0.49 19.00 0.08 0.0004 0.05 0.02 746.00 0.0014 40.00 9,480.00 4.93	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19 6/12/90 8/21/15 9/28/06 6/12/90 8/21/15 6/12/90 11/6/14 10/4/11 10/30/03 6/12/90 6/12/90 12/13/16 8/21/15 9/9/15 10/9/19 11/6/14	531.00 Low 0.04 0.0008 0.02 0.01 0.25 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.03	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90 9/27/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 9/22/10 6/12/90 9/22/10 6/12/90 9/22/10 6/12/90 9/15/07 6/12/90 1/17/18 6/12/90 9/9/15	537.89 Average 0.05 0.01 0.47 0.01 2.23 0.01 4.89 0.01 0.23 0.02 0.18 8.13 0.02 0.02 0.04 0.02 30.26 0.0011 12.99 2,138.87 1.86	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved Selenium, dissolved Sodium, dissolved	18 No. of Samples 23 23 23 99 23 97 23 23 23 23 23 23 23 23 23 23 23 23 23	549.12 High 0.05 0.05 1.77 0.01 11.20 0.01 12.00 0.02 0.01 3.00 0.02 0.49 19.00 0.08 0.0004 0.05 0.02 746.00 0.0014 40.00 9,480.00	10/15/15 Date 6/12/90 8/21/15 11/6/14 6/12/90 10/9/19 6/12/90 8/21/15 9/28/06 6/12/90 8/21/15 6/12/90 11/6/14 11/6/14 10/4/11 10/30/03 6/12/90 6/12/90 12/13/16 8/21/15 9/9/15 10/9/19	531.00 Low 0.04 0.0008 0.02 0.01 0.25 0.01 0.00 0.01 0.02 0.02 0.01 2.00 0.01 2.00 0.01 0.02 0.02 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.01 0.00 0.02 0.01 0.02 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.00 0.01 0.00 0.02 0.01 0.00 0.02 0.01 0.00 0.02 0.0	4/21/16 Date 6/28/07 10/26/04 1/31/91 6/12/90 6/12/90 9/27/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 6/12/90 9/22/10 6/12/90 9/22/10 6/12/90 9/15/07 6/12/90 7/18/00 6/12/90 1/17/18 6/12/90	537.89 Average 0.05 0.01 0.47 0.01 2.23 0.01 4.89 0.01 0.23 0.02 0.18 8.13 0.02 0.02 0.04 0.02 30.26 0.0011 12.99 2,138.87	Ft. Units mg/l

Table 15: 90-1 Annual A-Groove Aquifer

DAUB & ASSOCIATES, INC. 2013 States Contraction



Baramotoro	No. of	Linh	Data	Low	Data	Avorage	Units
Parameters Wet Chemietry		High	Date	Low	Date	Average	Units
Wet Chemistry	Samples	1,680.00	9/24/03	45.00	6/26/02	785.16	
Bicarbonate as CaCO3 Carbonate as CaCO3	119 119	693.00	6/26/02	45.00	12/16/03	83.76	mg/l mg/l
Total Alkalinity as	119	1,740.00	9/24/03	142.00	9/28/06	859.08	mg/l
Bromide	29	16.00	6/16/97	0.29	<u>9/28/08</u> 8/1/90	5.56	
Cation-Anion Balance	116	11.90	6/23/10	-68.80	8/15/17	-2.06	mg/l %
Sum of Anions	116	153.40	5/24/94	-00.00 34.16	8/1/90	85.87	
Sum of Cations	116	143.00	2/27/97	10.00	8/15/17	83.06	meq/l
Chemical Oxygen	21	840.00	8/16/94	10.00	8/16/96	199.29	meg/l mg/l
Chloride	119	4,690.00	5/24/94	700.00	8/1/90	2,476.39	mg/l
Conductivity, Lab	116	14,100.00	2/21/94	309.00	5/27/15	8,566.03	μmhos
Fluoride	119	23.70	8/1/90	5.50	6/14/08	12.57	mg/l
Hardness as CaCO3	119	204.00	2/21/94	25.00	8/15/17	87.92	mg/l
Nitrate as N, dissolved	28	0.08	6/26/02	0.02	6/28/06	0.05	mg/l
Nitrate/Nitrite as N,	28	0.08	6/16/11	0.02	6/28/06	0.05	mg/l
Nitrite as N, dissolved	28	0.09	6/16/11	0.02	1/29/91	0.00	
	20	3.30	8/10/08	0.83	8/13/90	1.90	mg/l
Nitrogen, Ammonia Nitrogen, Organic	27	10.10	3/14/08	0.83	7/21/93	3.48	mg/l mg/l
Nitrogen, Total Kjeldahl	27	12.10	3/14/08	1.30	6/14/00	5.12	
pH, lab	116	9.00	10/9/19	7.70	9/14/04	8.54	mg/l units
Phosphate, total	25		6/28/06	0.06	<u> </u>	17.76	
	25	<u>155.00</u> 0.11		0.06	7/31/91	0.06	mg/l
Phosphorus, total SAR in Water	116	4,950.00	8/13/90 6/24/03	19.00	8/15/17	133.54	mg/l
	118	2,310.00				70.78	none ma/l
Sulfate Sulfide	22		6/15/14 6/26/02	4.00 0.02	<u>12/16/04</u> 8/10/08	1.18	mg/l
Total Dissolved Solids	119	5.80		2,110.00	8/15/17	5,019.29	mg/l
Conductivity, Field	177	8,270.00	2/27/97 11/17/93				mg/l
	172	13,600.00		2,900.00	<u>8/1/90</u> 10/9/19	8,637.72	<u>µmhos</u>
pH, Field Temperature (°C), Field	120	9.53 22.10	7/29/09 7/10/18	7.30 7.40	12/15/05	8.53 12.28	units (°C)
Water Level, Field	98	544.21	3/1/10	516.40	10/1/90	538.16	Ft.
	90	044.21	3/1/10	510.40	10/1/90	556.10	Гι.
Parameters	No. of	High	Date	Low	Date	Average	Units
				LOW	Duic	Average	Onits
Metals		riigii	Bato			J J	
Metals	Samples			0.03	9/21/10	•	ma/l
Aluminum, dissolved	Samples 28	0.80	6/16/05	0.03	9/21/10	0.28	mg/l
Aluminum, dissolved Arsenic, dissolved	Samples 28 28	0.80 0.05	6/16/05 1/29/91	0.00	6/28/06	0.28 0.01	mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved	Samples 28 28 28 28	0.80 0.05 1.56	6/16/05 1/29/91 3/14/08	0.00 0.09	6/28/06 8/1/90	0.28 0.01 0.87	mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	Samples 28 28 28 28 28	0.80 0.05 1.56 U	6/16/05 1/29/91 3/14/08 6/16/11	0.00 0.09 U	6/28/06 8/1/90 11/27/12	0.28 0.01 0.87 U	mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	Samples 28 28 28 28 28 28 119	0.80 0.05 1.56 U 1.29	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92	0.00 0.09 U 0.10	6/28/06 8/1/90 11/27/12 11/20/96	0.28 0.01 0.87 U 0.32	mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	Samples 28 28 28 28 28 119 28	0.80 0.05 1.56 U 1.29 0.03	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92 7/21/93	0.00 0.09 U 0.10 0.03	6/28/06 8/1/90 11/27/12 11/20/96 7/21/93	0.28 0.01 0.87 U 0.32 0.03	mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	Samples 28 28 28 28 119 28 119 28 119	0.80 0.05 1.56 U 1.29 0.03 45.00	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92 7/21/93 12/16/04	0.00 0.09 U 0.10 0.03 3.00	6/28/06 8/1/90 11/27/12 11/20/96 7/21/93 11/20/96	0.28 0.01 0.87 U 0.32 0.03 10.85	mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	Samples 28 28 28 28 119 28 119 28 119 28	0.80 0.05 1.56 U 1.29 0.03 45.00 U	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92 7/21/93 12/16/04 6/16/11	0.00 0.09 U 0.10 0.03 3.00 U	6/28/06 8/1/90 11/27/12 11/20/96 7/21/93 11/20/96 11/27/12	0.28 0.01 0.87 U 0.32 0.03 10.85 U	mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	Samples 28 28 28 28 119 28 119 28 219 28 28	0.80 0.05 1.56 U 1.29 0.03 45.00 U 0.08	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92 7/21/93 12/16/04 6/16/11 6/24/04	0.00 0.09 U 0.10 0.03 3.00 U 0.08	6/28/06 8/1/90 11/27/12 11/20/96 7/21/93 11/20/96 11/27/12 6/24/04	0.28 0.01 0.87 U 0.32 0.03 10.85 U 0.08	mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	Samples 28 28 28 28 119 28 119 28 28 28 28 28	0.80 0.05 1.56 U 1.29 0.03 45.00 U 0.08 1.67	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92 7/21/93 12/16/04 6/16/11 6/24/04 10/25/90	0.00 0.09 U 0.10 0.03 3.00 U 0.08 0.07	6/28/06 8/1/90 11/27/12 11/20/96 7/21/93 11/20/96 11/27/12 6/24/04 9/21/10	0.28 0.01 0.87 U 0.32 0.03 10.85 U 0.08 0.39	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	Samples 28 28 28 28 119 28 119 28 28 28 28 28 28 28 28 28 28 28 28 28 28 28 28	0.80 0.05 1.56 U 1.29 0.03 45.00 U 0.08 1.67 U	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92 7/21/93 12/16/04 6/16/11 6/24/04 10/25/90 6/16/11	0.00 0.09 U 0.10 0.03 3.00 U 0.08 0.07 U	6/28/06 8/1/90 11/27/12 11/20/96 7/21/93 11/20/96 11/27/12 6/24/04 9/21/10 11/27/12	0.28 0.01 0.87 U 0.32 0.03 10.85 U 0.08 0.39 U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	Samples 28 28 28 28 119 28 119 28 27	0.80 0.05 1.56 U 1.29 0.03 45.00 U 0.08 1.67 U 0.10	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92 7/21/93 12/16/04 6/16/11 6/24/04 10/25/90 6/16/11 6/16/97	0.00 0.09 U 0.10 0.03 3.00 U 0.08 0.07 U 0.02	6/28/06 8/1/90 11/27/12 11/20/96 7/21/93 11/20/96 11/27/12 6/24/04 9/21/10 11/27/12 8/13/90	0.28 0.01 0.87 U 0.32 0.03 10.85 U 0.08 0.39 U 0.04	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	Samples 28 28 28 28 119 28 119 28 29 119	0.80 0.05 1.56 U 1.29 0.03 45.00 U 0.08 1.67 U 0.10 37.00	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92 7/21/93 12/16/04 6/16/11 6/24/04 10/25/90 6/16/11 6/16/97 2/21/94	0.00 0.09 U 0.10 0.03 3.00 U 0.08 0.07 U 0.02 3.90	6/28/06 8/1/90 11/27/12 11/20/96 7/21/93 11/20/96 11/27/12 6/24/04 9/21/10 11/27/12 8/13/90 8/15/17	0.28 0.01 0.87 U 0.32 0.03 10.85 U 0.08 0.39 U 0.04 14.74	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	Samples 28 28 28 28 119 28 119 28 28 28 28 28 28 28 28 28 28 28 28 28 27 119 27	0.80 0.05 1.56 U 1.29 0.03 45.00 U 0.08 1.67 U 0.08 1.67 U 0.10 37.00 0.15	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92 7/21/93 12/16/04 6/16/11 6/24/04 10/25/90 6/16/11 6/16/97 2/21/94 10/25/90	0.00 0.09 U 0.10 0.03 3.00 U 0.08 0.07 U 0.02 3.90 0.01	6/28/06 8/1/90 11/27/12 11/20/96 7/21/93 11/20/96 11/27/12 6/24/04 9/21/10 11/27/12 8/13/90 8/15/17 9/21/10	0.28 0.01 0.87 U 0.32 0.03 10.85 U 0.08 0.39 U 0.04 14.74 0.05	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	Samples 28 28 28 28 119 28 119 28 28 28 28 28 28 28 28 28 28 28 28 28 28 28 27 119 27 28	0.80 0.05 1.56 U 1.29 0.03 45.00 U 0.08 1.67 U 0.08 1.67 U 0.10 37.00 0.15 0.00	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92 7/21/93 12/16/04 6/16/11 6/24/04 10/25/90 6/16/11 6/16/97 2/21/94 10/25/90 9/15/07	0.00 0.09 U 0.10 0.03 3.00 U 0.08 0.07 U 0.02 3.90 0.01 0.00	6/28/06 8/1/90 11/27/12 11/20/96 7/21/93 11/20/96 11/27/12 6/24/04 9/21/10 11/27/12 8/13/90 8/15/17 9/21/10 8/14/95	0.28 0.01 0.87 U 0.32 0.03 10.85 U 0.08 0.39 U 0.04 14.74 0.05 0.00	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved	Samples 28 28 28 28 119 28 119 28	0.80 0.05 1.56 U 1.29 0.03 45.00 U 0.08 1.67 U 0.10 37.00 0.15 0.00 0.37	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92 7/21/93 12/16/04 6/16/11 6/24/04 10/25/90 6/16/11 6/16/97 2/21/94 10/25/90 9/15/07 8/13/90	0.00 0.09 U 0.10 0.03 3.00 U 0.08 0.07 U 0.02 3.90 0.01 0.00 0.13	6/28/06 8/1/90 11/27/12 11/20/96 7/21/93 11/20/96 11/27/12 6/24/04 9/21/10 11/27/12 8/13/90 8/15/17 9/21/10 8/14/95 10/25/90	0.28 0.01 0.87 U 0.32 0.03 10.85 U 0.08 0.39 U 0.04 14.74 0.05 0.00 0.24	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved	Samples 28 28 28 28 119 28 119 28	0.80 0.05 1.56 U 1.29 0.03 45.00 U 0.08 1.67 U 0.10 37.00 0.15 0.00 0.37 U	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92 7/21/93 12/16/04 6/16/11 6/24/04 10/25/90 6/16/11 6/16/97 2/21/94 10/25/90 9/15/07 8/13/90 6/16/11	0.00 0.09 U 0.10 0.03 3.00 U 0.08 0.07 U 0.02 3.90 0.01 0.00 0.13 U	6/28/06 8/1/90 11/27/12 11/20/96 7/21/93 11/20/96 11/27/12 6/24/04 9/21/10 11/27/12 8/13/90 8/15/17 9/21/10 8/14/95 10/25/90 11/27/12	0.28 0.01 0.87 U 0.32 0.03 10.85 U 0.08 0.39 U 0.04 14.74 0.05 0.00 0.24 U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Nickel, dissolved Potassium, dissolved	Samples 28 28 28 28 119 28 119 28	0.80 0.05 1.56 U 1.29 0.03 45.00 U 0.08 1.67 U 0.10 37.00 0.15 0.00 0.37 U 10.00	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92 7/21/93 12/16/04 6/16/11 6/24/04 10/25/90 6/16/11 6/16/97 2/21/94 10/25/90 9/15/07 8/13/90 6/16/11 7/31/91	0.00 0.09 U 0.10 0.03 3.00 U 0.08 0.07 U 0.02 3.90 0.01 0.00 0.13 U 1.50	6/28/06 8/1/90 11/27/12 11/20/96 7/21/93 11/20/96 11/27/12 6/24/04 9/21/10 11/27/12 8/13/90 8/15/17 9/21/10 8/14/95 10/25/90 11/27/12 1/16/18	0.28 0.01 0.87 U 0.32 0.03 10.85 U 0.08 0.39 U 0.04 14.74 0.05 0.00 0.24 U 3.07	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Nickel, dissolved Selenium, dissolved	Samples 28 28 28 28 119 28 119 28	0.80 0.05 1.56 U 1.29 0.03 45.00 U 0.08 1.67 U 0.10 37.00 0.15 0.00 0.37 U 10.00 0.00	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92 7/21/93 12/16/04 6/16/11 6/24/04 10/25/90 6/16/11 6/16/97 2/21/94 10/25/90 9/15/07 8/13/90 6/16/11 7/31/91 1/29/91	0.00 0.09 U 0.10 0.03 3.00 U 0.08 0.07 U 0.02 3.90 0.01 0.00 0.13 U 1.50 0.00	6/28/06 8/1/90 11/27/12 11/20/96 7/21/93 11/20/96 11/27/12 6/24/04 9/21/10 11/27/12 8/13/90 8/15/17 9/21/10 8/14/95 10/25/90 11/27/12 1/16/18 8/13/90	0.28 0.01 0.87 U 0.32 0.03 10.85 U 0.08 0.39 U 0.04 14.74 0.05 0.00 0.24 U 3.07 0.00	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lead, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Nickel, dissolved Potassium, dissolved Selenium, dissolved	Samples 28 28 28 28 119 28 119 28 28 28 28 28 28 28 28 27 28 28 28 28 28 28 28 28 28 28 119 28 119	0.80 0.05 1.56 U 1.29 0.03 45.00 U 0.08 1.67 U 0.10 37.00 0.15 0.00 0.37 U 10.00 0.37 U 10.00 0.00 63.00	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92 7/21/93 12/16/04 6/16/11 6/24/04 10/25/90 6/16/11 6/16/97 2/21/94 10/25/90 9/15/07 8/13/90 6/16/11 7/31/91 1/29/91 12/16/04	0.00 0.09 U 0.10 0.03 3.00 U 0.08 0.07 U 0.02 3.90 0.01 0.00 0.13 U 1.50 0.00 2.10	6/28/06 8/1/90 11/27/12 11/20/96 7/21/93 11/20/96 11/27/12 6/24/04 9/21/10 11/27/12 8/13/90 8/15/17 9/21/10 8/14/95 10/25/90 11/27/12 1/16/18 8/13/90 4/20/92	0.28 0.01 0.87 U 0.32 0.03 10.85 U 0.08 0.39 U 0.04 14.74 0.05 0.00 0.24 U 3.07 0.00 12.37	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lead, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Selenium, dissolved Selenium, dissolved Solica, dissolved	Samples 28 28 28 28 119 28 119 28 28 28 28 28 28 28 28 27 28 28 28 28 28 28 28 28 28 28 28 28 28 119 28 119 28 119 28 119 28 119 28 119 28 119 28 119 28 119 119	0.80 0.05 1.56 U 1.29 0.03 45.00 U 0.08 1.67 U 0.10 37.00 0.15 0.00 0.37 U 10.00 0.37 U 10.00 0.37 U 10.00 0.37	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92 7/21/93 12/16/04 6/16/11 6/24/04 10/25/90 6/16/11 6/16/97 2/21/94 10/25/90 9/15/07 8/13/90 6/16/11 7/31/91 1/29/91 12/16/04 2/27/97	0.00 0.09 U 0.10 0.03 3.00 U 0.08 0.07 U 0.02 3.90 0.01 0.00 0.13 U 1.50 0.00 2.10 220.00	6/28/06 8/1/90 11/27/12 11/20/96 7/21/93 11/20/96 11/27/12 6/24/04 9/21/10 11/27/12 8/13/90 8/15/17 9/21/10 8/14/95 10/25/90 11/27/12 1/16/18 8/13/90 4/20/92 8/15/17	0.28 0.01 0.87 U 0.32 0.03 10.85 U 0.08 0.39 U 0.04 14.74 0.05 0.00 0.24 U 3.07 0.00 12.37 1,902.99	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lead, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Selenium, dissolved Selenium, dissolved Solica, dissolved Solica, dissolved	Samples 28 28 28 28 119 28 119 28 28 28 28 28 28 28 28 27 28 28 28 28 28 28 28 28 28 119 28 119 28 119 28 119 28 119 219	0.80 0.05 1.56 U 1.29 0.03 45.00 U 0.08 1.67 U 0.10 37.00 0.15 0.00 0.37 U 10.00 0.37 U 10.00 0.37 U 10.00 0.37 U 10.00 0.31 8.17	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92 7/21/93 12/16/04 6/16/11 6/24/04 10/25/90 6/16/11 6/16/97 2/21/94 10/25/90 9/15/07 8/13/90 6/16/11 7/31/91 1/29/91 12/16/04 2/27/97 2/21/94	0.00 0.09 U 0.10 0.03 3.00 U 0.08 0.07 U 0.02 3.90 0.01 0.00 0.13 U 1.50 0.00 2.10 220.00 0.30	6/28/06 8/1/90 11/27/12 11/20/96 7/21/93 11/20/96 11/27/12 6/24/04 9/21/10 11/27/12 8/13/90 8/15/17 9/21/10 8/14/95 10/25/90 11/27/12 1/16/18 8/13/90 4/20/92 8/15/17 8/15/17	0.28 0.01 0.87 U 0.32 0.03 10.85 U 0.08 0.39 U 0.04 14.74 0.05 0.00 0.24 U 3.07 0.00 12.37 1,902.99 3.19	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lead, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Selenium, dissolved Selenium, dissolved Solica, dissolved	Samples 28 28 28 28 119 28 119 28 28 28 28 28 28 28 28 27 28 28 28 28 28 28 28 28 28 28 28 28 28 119 28 119 28 119 28 119 28 119 28 119 28 119 28 119 28 119 119	0.80 0.05 1.56 U 1.29 0.03 45.00 U 0.08 1.67 U 0.10 37.00 0.15 0.00 0.37 U 10.00 0.37 U 10.00 0.37 U 10.00 0.37	6/16/05 1/29/91 3/14/08 6/16/11 7/21/92 7/21/93 12/16/04 6/16/11 6/24/04 10/25/90 6/16/11 6/16/97 2/21/94 10/25/90 9/15/07 8/13/90 6/16/11 7/31/91 1/29/91 12/16/04 2/27/97	0.00 0.09 U 0.10 0.03 3.00 U 0.08 0.07 U 0.02 3.90 0.01 0.00 0.13 U 1.50 0.00 2.10 220.00	6/28/06 8/1/90 11/27/12 11/20/96 7/21/93 11/20/96 11/27/12 6/24/04 9/21/10 11/27/12 8/13/90 8/15/17 9/21/10 8/14/95 10/25/90 11/27/12 1/16/18 8/13/90 4/20/92 8/15/17	0.28 0.01 0.87 U 0.32 0.03 10.85 U 0.08 0.39 U 0.04 14.74 0.05 0.00 0.24 U 3.07 0.00 12.37 1,902.99	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 16: 90-4 Annual A-Groove Aquifer

DAUB & ASSOCIATES, INC. 2013 States Contraction



Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples		Duto	2011	Duto	Allolugo	onito
Bicarbonate as CaCO3	9	1,360	4/22/19	198	2/10/15	532	mg/l
Carbonate as CaCO3	9	273	1/29/15	53	11/4/14	184	mg/l
Total Alkalinity as	9	1,540	6/11/19	377	2/10/15	715	mg/l
Bromide	9	2.38	4/22/19	0.17	1/29/15	1.27	mg/l
Cation-Anion Balance	9	0.00	12/15/15	-6.70	2/10/15	-3.00	%
Sum of Anions	9	45.00	6/11/19	15.00	12/15/15	22.67	meq/l
Sum of Cations	9	42.00	6/11/19	14.00	2/10/15	21.22	meg/l
Chemical Oxygen	9	37.00	12/15/15	10.00	6/11/19	18.71	mg/l
Chloride	9	435	6/11/19	92	11/4/14	194	mg/l
Conductivity, Lab	9	3,800	6/11/19	1,430	11/4/14	2,083	μmhos
Fluoride	9	16.40	6/11/19	5.47	6/19/18	8.05	mg/l
Hardness as CaCO3	9	80.00	6/11/19	13.00	6/19/18	33.92	mg/l
Nitrate as N, dissolved	9	0.02	1/29/15	0.02	1/29/15	0.02	mg/l
Nitrate/Nitrite as N,	9	0.02	1/29/15	0.00	11/4/14	0.02	mg/l
Nitrite as N, dissolved	9	0.00	1/29/15	0.00	11/4/14	0.02	mg/l
Nitrogen, Ammonia	9	1.51	9/28/17	0.47	4/5/16	0.82	mg/l
Nitrogen, Organic	9	0.50	1/29/15	0.10	4/5/16	0.29	mg/l
Nitrogen, Total Kjeldahl	9	1.90	9/28/17	0.60	4/5/16	1.03	mg/l
pH, lab	9	9.70	1/29/15	8.70	11/4/14	9.36	units
Phosphate, total	9	0.53	6/11/19	0.06	6/19/18	0.26	mg/l
Phosphorus, total	9	0.17	6/11/19	0.00	6/19/18	0.20	mg/l
SAR in Water	9	48	6/19/18	20.00	11/4/14	37	
SAN III Waler Sulfate	9	210	2/10/15	37.30	6/11/19	117	none mg/l
Sulfide	9	5.00	6/11/19	0.04	11/4/14	1.23	
Total Dissolved Solids	9	2,400	6/11/19	843	12/15/15	1,236	mg/l mg/l
Conductivity, Field	9 7	4,062	4/22/19	1,432	4/5/16	2,283	µmhos
pH, Field	7	9.64	6/19/18	<u> </u>	4/3/10	9.02	units
Temperature (°C), Field	7	22.22	6/19/18	16.10	11/20/18	18.70	(°C)
Water Level, Field	7	581.90	9/28/17	572.10	1/16/15	576.37	Ft.
	/	501.90	5/20/17	572.10	1/10/13	570.57	1.
Parameters	No of	High	Date	Low	Date	Average	llnite
Parameters Metals	No. of Samples	High	Date	Low	Date	Average	Units
Metals	Samples	_				-	
Metals Aluminum, dissolved	Samples 9	U	11/4/14	U	6/11/19	U	mg/l
Metals Aluminum, dissolved Arsenic, dissolved	Samples 9 9	U 0.00	<u>11/4/14</u> 11/4/14	U 0.00	6/11/19 2/10/15	U 0.00	mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	Samples 9 9 9	U 0.00 0.41	11/4/14 11/4/14 4/22/19	U 0.00 0.01	6/11/19 2/10/15 12/15/15	U 0.00 0.10	mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	Samples 9 9 9 9 9 9 9 9	U 0.00 0.41 U	11/4/14 11/4/14 4/22/19 11/4/14	U 0.00 0.01 U	6/11/19 2/10/15 12/15/15 6/11/19	U 0.00 0.10 U	mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	Samples 9 9 9 9 9 9 9 9 9 9 9	U 0.00 0.41 U 0.93	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19	U 0.00 0.01 U 0.21	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15	U 0.00 0.10 U 0.40	mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	Samples 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	U 0.00 0.41 U 0.93 U	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14	U 0.00 0.01 U 0.21 U	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19	U 0.00 0.10 U 0.40 U	mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	Samples 9 9 9 9 9 9 9 9 9 9 9 9 9 9	U 0.00 0.41 U 0.93 U 7.80	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14	U 0.00 0.01 U 0.21 U 1.30	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16	U 0.00 0.10 U 0.40 U 2.86	mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	Samples 9	U 0.00 0.41 U 0.93 U 7.80 U	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14	U 0.00 0.01 U 0.21 U 1.30 U	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19	U 0.00 0.10 U 0.40 U 2.86 U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	Samples 9	U 0.00 0.41 U 0.93 U 7.80 U U U	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14	U 0.00 0.01 U 0.21 U 1.30 U U	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 6/11/19	U 0.00 0.10 U 0.40 U 2.86 U U U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	Samples 9	U 0.00 0.41 U 0.93 U 7.80 U 7.80 U U U 0.86	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14 9/28/17	U 0.00 0.01 U 0.21 U 1.30 U U 0.03	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 6/11/19 11/4/14	U 0.00 0.10 U 0.40 U 2.86 U U U 0.25	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	Samples 9	U 0.00 0.41 U 0.93 U 7.80 U 7.80 U U U 0.86 U	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14 9/28/17 11/4/14	U 0.00 0.01 U 0.21 U 1.30 U U 0.03 U	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 6/11/19 11/4/14 6/11/19	U 0.00 0.10 U 0.40 U 2.86 U 2.86 U U 0.25 U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	Samples 9	U 0.00 0.41 U 0.93 U 7.80 U 7.80 U U 0.86 U 0.28	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14 9/28/17 11/4/14 6/11/19	U 0.00 0.01 U 0.21 U 1.30 U U 0.03 U 0.12	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 6/11/19 11/4/14 6/11/19 11/4/14	U 0.00 0.10 U 0.40 U 2.86 U U 0.25 U 0.17	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	Samples 9	U 0.00 0.41 U 0.93 U 7.80 U U U 0.86 U 0.28 17.10	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14 9/28/17 11/4/14 6/11/19 6/11/19	U 0.00 0.01 U 0.21 U 1.30 U U 0.03 U 0.03 U 0.12 2.40	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 6/11/19 11/4/14 6/11/19 11/4/14 6/19/18	U 0.00 0.10 U 0.40 U 2.86 U U 0.25 U 0.25 U 0.17 6.50	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Magnesied, dissolved	Samples 9	U 0.00 0.41 U 0.93 U 7.80 U U U 0.86 U 0.28 17.10 0.08	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14 9/28/17 11/4/14 6/11/19 6/11/19 11/4/14	U 0.00 0.01 U 0.21 U 1.30 U U 0.03 U 0.12 2.40 0.01	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/19/18 4/5/16	U 0.00 0.10 U 0.40 U 2.86 U U 0.25 U 0.25 U 0.17 6.50 0.03	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved	Samples 9	U 0.00 0.41 U 0.93 U 7.80 U U U 0.86 U 0.86 U 0.28 17.10 0.08 U	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14 9/28/17 11/4/14 6/11/19 6/11/19 11/4/14	U 0.00 0.01 U 0.21 U 1.30 U U 0.03 U 0.12 2.40 0.01 U	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/19/18 4/5/16 6/11/19	U 0.00 0.10 U 0.40 U 2.86 U U 0.25 U 0.25 U 0.17 6.50 0.03 U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved	Samples 9	U 0.00 0.41 U 0.93 U 7.80 U U 0.86 U 0.28 17.10 0.08 U 0.19	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14 9/28/17 11/4/14 6/11/19 6/11/19 11/4/14 11/4/14 6/19/18	U 0.00 0.01 U 0.21 U 1.30 U U 0.03 U 0.03 U 0.12 2.40 0.01 U 0.06	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/19/18 4/5/16 6/11/19 11/4/14	U 0.00 0.10 U 0.40 U 2.86 U U 0.25 U 0.25 U 0.17 6.50 0.03 U 0.13	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved	Samples 9	U 0.00 0.41 U 0.93 U 7.80 U U 0.86 U 0.28 17.10 0.28 17.10 0.08 U 0.19 U	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14 9/28/17 11/4/14 6/11/19 6/11/19 11/4/14 11/4/14 11/4/14	U 0.00 0.01 U 0.21 U 1.30 U U 0.03 U 0.03 U 0.12 2.40 0.01 U 0.06 U	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/19/18 4/5/16 6/11/19 11/4/14 6/11/19	U 0.00 0.10 U 0.40 U 2.86 U U 0.25 U 0.25 U 0.17 6.50 0.03 U 0.13 U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Potassium, dissolved	Samples 9	U 0.00 0.41 U 0.93 U 7.80 U U 0.86 U 0.28 17.10 0.28 17.10 0.08 U 0.19 U 0.19 U 11.30	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14 9/28/17 11/4/14 6/11/19 6/11/19 11/4/14 11/4/14 6/19/18 11/4/14	U 0.00 0.01 U 0.21 U 1.30 U U 0.03 U 0.03 U 0.12 2.40 0.01 U 0.06 U 1.50	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/19/18 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14	U 0.00 0.10 U 0.40 U 2.86 U U 0.25 U 0.17 6.50 0.03 U 0.13 U 7.12	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	Samples 9	U 0.00 0.41 U 0.93 U 7.80 U U 0.86 U 0.28 17.10 0.28 17.10 0.08 U 0.19 U 0.19 U 11.30 0.00	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14 9/28/17 11/4/14 6/11/19 6/11/19 6/11/19 11/4/14 6/19/18 11/4/14 6/19/18 6/11/19	U 0.00 0.01 U 0.21 U 1.30 U U 0.03 U 0.12 2.40 0.01 U 0.01 U 0.06 U 1.50 0.00	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/19/18 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19	U 0.00 0.10 U 0.40 U 2.86 U U 0.25 U 0.17 6.50 0.03 U 0.13 U 0.13 U 7.12 0.00	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Silica, dissolved	Samples 9 </td <td>U 0.00 0.41 U 0.93 U 7.80 U U 0.86 U 0.28 17.10 0.28 17.10 0.08 U 0.19 U 0.19 U 11.30 0.00 13.90</td> <td>11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14 9/28/17 11/4/14 6/11/19 6/11/19 11/4/14 6/19/18 11/4/14 6/19/18 6/11/19 11/4/14</td> <td>U 0.00 0.01 U 0.21 U 1.30 U U 0.03 U 0.03 U 0.03 U 0.12 2.40 0.01 U 0.06 U 1.50 0.00 0.20</td> <td>6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/19/18 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 2/10/15</td> <td>U 0.00 0.10 U 0.40 U 2.86 U U 0.25 U 0.25 U 0.17 6.50 0.03 U 0.13 U 7.12 0.00 5.46</td> <td>mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l</td>	U 0.00 0.41 U 0.93 U 7.80 U U 0.86 U 0.28 17.10 0.28 17.10 0.08 U 0.19 U 0.19 U 11.30 0.00 13.90	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14 9/28/17 11/4/14 6/11/19 6/11/19 11/4/14 6/19/18 11/4/14 6/19/18 6/11/19 11/4/14	U 0.00 0.01 U 0.21 U 1.30 U U 0.03 U 0.03 U 0.03 U 0.12 2.40 0.01 U 0.06 U 1.50 0.00 0.20	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/19/18 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 2/10/15	U 0.00 0.10 U 0.40 U 2.86 U U 0.25 U 0.25 U 0.17 6.50 0.03 U 0.13 U 7.12 0.00 5.46	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Sodium, dissolved	Samples 9 </td <td>U 0.00 0.41 U 0.93 U 7.80 U U 0.86 U 0.28 17.10 0.28 17.10 0.08 U 0.19 U 0.19 U 11.30 0.00 13.90 924</td> <td>11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14 9/28/17 11/4/14 6/11/19 6/11/19 11/4/14 6/19/18 11/4/14 6/19/18 6/11/19 11/4/14 6/11/19</td> <td>U 0.00 0.01 U 0.21 U 1.30 U U 0.03 U 0.03 U 0.12 2.40 0.01 U 0.06 U 1.50 0.00 0.20 303</td> <td>6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/19/18 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 2/10/15 2/10/15</td> <td>U 0.00 0.10 U 0.40 U 2.86 U U 0.25 U 0.25 U 0.17 6.50 0.03 U 0.13 U 0.13 U 7.12 0.00 5.46 459</td> <td>mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l</td>	U 0.00 0.41 U 0.93 U 7.80 U U 0.86 U 0.28 17.10 0.28 17.10 0.08 U 0.19 U 0.19 U 11.30 0.00 13.90 924	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14 9/28/17 11/4/14 6/11/19 6/11/19 11/4/14 6/19/18 11/4/14 6/19/18 6/11/19 11/4/14 6/11/19	U 0.00 0.01 U 0.21 U 1.30 U U 0.03 U 0.03 U 0.12 2.40 0.01 U 0.06 U 1.50 0.00 0.20 303	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/19/18 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 2/10/15 2/10/15	U 0.00 0.10 U 0.40 U 2.86 U U 0.25 U 0.25 U 0.17 6.50 0.03 U 0.13 U 0.13 U 7.12 0.00 5.46 459	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Sodium, dissolved Strontium, dissolved	Samples 9 </td <td>U 0.00 0.41 U 0.93 U 7.80 U 0.86 U 0.28 17.10 0.08 U 0.19 U 11.30 0.00 13.90 924 1.93</td> <td>11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14 9/28/17 11/4/14 6/11/19 6/11/19 11/4/14 6/19/18 11/4/14 6/19/18 6/11/19 11/4/14 6/11/19 6/11/19 6/11/19</td> <td>U 0.00 0.01 U 0.21 U 1.30 U 0.03 U 0.12 2.40 0.01 U 0.06 U 1.50 0.00 0.20 303 0.23</td> <td>6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 12/10/15 2/10/15 12/15/15</td> <td>U 0.00 0.10 U 0.40 U 2.86 U U 0.25 U 0.25 U 0.17 6.50 0.03 U 0.13 U 7.12 0.00 5.46 459 0.75</td> <td>mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l</td>	U 0.00 0.41 U 0.93 U 7.80 U 0.86 U 0.28 17.10 0.08 U 0.19 U 11.30 0.00 13.90 924 1.93	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14 9/28/17 11/4/14 6/11/19 6/11/19 11/4/14 6/19/18 11/4/14 6/19/18 6/11/19 11/4/14 6/11/19 6/11/19 6/11/19	U 0.00 0.01 U 0.21 U 1.30 U 0.03 U 0.12 2.40 0.01 U 0.06 U 1.50 0.00 0.20 303 0.23	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 12/10/15 2/10/15 12/15/15	U 0.00 0.10 U 0.40 U 2.86 U U 0.25 U 0.25 U 0.17 6.50 0.03 U 0.13 U 7.12 0.00 5.46 459 0.75	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Sodium, dissolved	Samples 9 </td <td>U 0.00 0.41 U 0.93 U 7.80 U U 0.86 U 0.28 17.10 0.28 17.10 0.08 U 0.19 U 0.19 U 11.30 0.00 13.90 924</td> <td>11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14 9/28/17 11/4/14 6/11/19 6/11/19 11/4/14 6/19/18 11/4/14 6/19/18 6/11/19 11/4/14 6/11/19</td> <td>U 0.00 0.01 U 0.21 U 1.30 U U 0.03 U 0.03 U 0.12 2.40 0.01 U 0.06 U 1.50 0.00 0.20 303</td> <td>6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/19/18 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 2/10/15 2/10/15</td> <td>U 0.00 0.10 U 0.40 U 2.86 U U 0.25 U 0.25 U 0.17 6.50 0.03 U 0.13 U 0.13 U 7.12 0.00 5.46 459</td> <td>mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l</td>	U 0.00 0.41 U 0.93 U 7.80 U U 0.86 U 0.28 17.10 0.28 17.10 0.08 U 0.19 U 0.19 U 11.30 0.00 13.90 924	11/4/14 11/4/14 4/22/19 11/4/14 6/11/19 11/4/14 11/4/14 11/4/14 11/4/14 9/28/17 11/4/14 6/11/19 6/11/19 11/4/14 6/19/18 11/4/14 6/19/18 6/11/19 11/4/14 6/11/19	U 0.00 0.01 U 0.21 U 1.30 U U 0.03 U 0.03 U 0.12 2.40 0.01 U 0.06 U 1.50 0.00 0.20 303	6/11/19 2/10/15 12/15/15 6/11/19 2/10/15 6/11/19 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/19/18 4/5/16 6/11/19 11/4/14 6/11/19 11/4/14 6/11/19 2/10/15 2/10/15	U 0.00 0.10 U 0.40 U 2.86 U U 0.25 U 0.25 U 0.17 6.50 0.03 U 0.13 U 0.13 U 7.12 0.00 5.46 459	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 17: AG-1 Annual A-Groove Aquifer

DAUB & ASSOCIATES, INC. AT THE CONTRACTOR



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Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples				- /- /		
Bicarbonate as CaCO3	58	1,250.00	3/22/93	34.00	9/8/93	266.31	mg/l
Carbonate as CaCO3	58	870.00	3/22/93	24.00	6/30/09	266.97	mg/l
Total Alkalinity as	58	2,120.00	3/22/93	176.00	6/14/08	492.38	mg/l
Bromide	29	2.70	11/29/11	0.07	5/26/00	0.62	mg/l
Cation-Anion Balance	56	13.30	11/6/14	-9.10	3/22/16	2.09	%
Sum of Anions	56	19.49	9/16/91	9.50	5/29/03	13.11	meq/l
Sum of Cations	56	18.34	9/16/91	9.50	5/26/04	13.76	meq/l
Chemical Oxygen	27	1,300.00	5/29/02	15.00	3/27/18	450.58	mg/l
Chloride	58	252.00	6/14/08	21.00	12/20/93	112.50	mg/l
Conductivity, Lab	57	3,320.00	9/15/92	1,010.00	5/29/03	1,519.30	µmhos
Fluoride	58	27.00	12/19/95	2.20	9/15/92	8.95	mg/l
Hardness as CaCO3	58	962.00	3/22/93	0.00	1/19/94	34.72	mg/l
Nitrate as N, dissolved	29	3.89	6/14/08	0.02	9/15/92	0.43	mg/l
Nitrate/Nitrite as N,	29	3.90	6/14/08	0.02	9/15/92	0.33	mg/l
Nitrite as N, dissolved	29	0.05	11/6/14	0.01	6/18/96	0.02	mg/l
Nitrogen, Ammonia	29	21.30	9/8/93	0.34	8/23/17	3.84	mg/l
Nitrogen, Organic	29	104.00	5/29/02	0.20	8/23/17	18.43	mg/l
Nitrogen, Total Kjeldahl	29	106.00	5/29/02	0.40	4/22/19	20.54	mg/l
pH, lab	57	11.90	6/16/92	8.60	6/30/09	10.23	units
Phosphate, total	29	155.00	7/29/09	0.03	5/26/99	7.01	mg/l
Phosphorus, total	29	2.95	9/27/90	0.01	5/26/99	0.25	mg/l
SAR in Water	49	190.00	11/14/97	3.83	3/25/92	63.42	none
Sulfate	58	360.00	9/16/91	0.80	2/26/97	31.18	mg/l
Sulfide	29	29.00	3/22/16	0.02	9/15/92	4.73	mg/l
Total Dissolved Solids	57	2,752.00	3/22/93	578.00	9/27/90	848.57	mg/l
Conductivity, Field	76	3,910.00	7/29/09	694.00	6/1/05	1,583.00	μmhos
pH, Field	75	12.90	9/13/95	7.78	9/16/19	10.69	units
Temperature (°C), Field	36	22.50	6/1/05	7.00	7/1/91	12.55	(°C)
Water Level, Field	59	485.59	5/17/18	409.63	11/1/90	431.15	Ft.
Parameters	No. of	High	Date	Low	Date	Average	Units
Metals	Samples	_					
Aluminum, dissolved	29	1.35	11/6/14	0.03	8/23/17	0.22	mg/l
Arsenic, dissolved	00			0.00	1/00/10		
Barium, dissolved	29	0.01	8/23/17	0.00	4/22/19	0.00	mg/l
Danum, dissolved		0.01 0.20		0.00		0.00	mg/l mg/l
	29		7/29/09		9/8/93		mg/l
Beryllium, dissolved	29 29	0.20 U	7/29/09 5/29/03	0.00 U		0.04	mg/l mg/l
Beryllium, dissolved Boron, dissolved	29	0.20	7/29/09 5/29/03 12/20/93	0.00	9/8/93 10/17/13	0.04 U	mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved	29 29 58 29	0.20 U 0.47 U	7/29/09 5/29/03 12/20/93 5/29/03	0.00 U 0.10	9/8/93 10/17/13 3/17/10	0.04 U 0.22	mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	29 29 58 29 58	0.20 U 0.47 U 27.50	7/29/09 5/29/03 12/20/93 5/29/03 6/30/09	0.00 U 0.10 U	9/8/93 10/17/13 3/17/10 10/17/13 11/14/97	0.04 U 0.22 U 4.27	mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	29 29 58 29	0.20 U 0.47 U 27.50 0.02	7/29/09 5/29/03 12/20/93 5/29/03 6/30/09 11/6/14	0.00 U 0.10 U 0.20 0.01	9/8/93 10/17/13 3/17/10 10/17/13 11/14/97 6/23/94	0.04 U 0.22 U 4.27 0.02	mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	29 29 58 29 58 58 29	0.20 U 0.47 U 27.50 0.02 0.04	7/29/09 5/29/03 12/20/93 5/29/03 6/30/09	0.00 U 0.10 U 0.20	9/8/93 10/17/13 3/17/10 10/17/13 11/14/97 6/23/94 7/30/91	0.04 U 0.22 U 4.27 0.02 0.03	mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	29 29 58 29 58 29 29 29 29	0.20 U 0.47 U 27.50 0.02 0.04 65.10	7/29/09 5/29/03 12/20/93 5/29/03 6/30/09 11/6/14 7/29/09 11/6/14	0.00 U 0.10 U 0.20 0.01 0.01	9/8/93 10/17/13 3/17/10 10/17/13 11/14/97 6/23/94 7/30/91 6/30/95	0.04 U 0.22 U 4.27 0.02	mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	29 29 58 29 58 29 29 29	0.20 U 0.47 U 27.50 0.02 0.04	7/29/09 5/29/03 12/20/93 5/29/03 6/30/09 11/6/14 7/29/09	0.00 U 0.10 U 0.20 0.01 0.01 0.01	9/8/93 10/17/13 3/17/10 10/17/13 11/14/97 6/23/94 7/30/91	0.04 U 0.22 U 4.27 0.02 0.03 3.22	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	29 29 58 29 58 29 29 29 29 29 29 29	0.20 U 0.47 U 27.50 0.02 0.04 65.10 0.63 0.17	7/29/09 5/29/03 12/20/93 5/29/03 6/30/09 11/6/14 7/29/09 11/6/14 9/15/10 9/27/90	0.00 U 0.10 0.20 0.01 0.01 0.01 0.02	9/8/93 10/17/13 3/17/10 10/17/13 11/14/97 6/23/94 7/30/91 6/30/95 6/23/94 8/23/17	0.04 U 0.22 U 4.27 0.02 0.03 3.22 0.14 0.07	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	29 29 58 29 58 29 29 29 29 29 29 29 29 29 58	0.20 U 0.47 U 27.50 0.02 0.04 65.10 0.63 0.17 5.00	7/29/09 5/29/03 12/20/93 5/29/03 6/30/09 11/6/14 7/29/09 11/6/14 9/15/10 9/27/90 9/27/90	0.00 U 0.10 0.20 0.01 0.01 0.01 0.02 0.02 0.02	9/8/93 10/17/13 3/17/10 10/17/13 11/14/97 6/23/94 7/30/91 6/30/95 6/23/94 8/23/17 5/24/05	0.04 U 0.22 U 4.27 0.02 0.03 3.22 0.14 0.07 1.38	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	29 29 58 29 58 29 29 29 29 29 29 29	0.20 U 0.47 U 27.50 0.02 0.04 65.10 0.63 0.17 5.00 0.59	7/29/09 5/29/03 5/29/03 6/30/09 11/6/14 7/29/09 11/6/14 9/15/10 9/27/90 9/27/90 11/6/14	0.00 U 0.10 0.20 0.01 0.01 0.01 0.02 0.02	9/8/93 10/17/13 3/17/10 10/17/13 11/14/97 6/23/94 7/30/91 6/30/95 6/23/94 8/23/17	0.04 U 0.22 U 4.27 0.02 0.03 3.22 0.14 0.07	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved	29 29 58 29 58 29 29 29 29 29 29 29 58 29	0.20 U 0.47 U 27.50 0.02 0.04 65.10 0.63 0.17 5.00	7/29/09 5/29/03 5/29/03 6/30/09 11/6/14 7/29/09 11/6/14 9/15/10 9/27/90 9/27/90 11/6/14 7/30/91	0.00 U 0.10 0.20 0.01 0.01 0.02 0.02 0.02 0.00 0.01	9/8/93 10/17/13 3/17/10 10/17/13 11/14/97 6/23/94 7/30/91 6/30/95 6/23/94 8/23/17 5/24/05 7/29/09	0.04 U 0.22 U 4.27 0.02 0.03 3.22 0.14 0.07 1.38 0.06 0.00	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	29 29 58 29 58 29 29 29 29 29 29 29 58 29 58 29 29	0.20 U 0.47 U 27.50 0.02 0.04 65.10 0.63 0.17 5.00 0.59 0.00 0.13	7/29/09 5/29/03 5/29/03 6/30/09 11/6/14 7/29/09 11/6/14 9/15/10 9/27/90 9/27/90 11/6/14	0.00 U 0.10 0.20 0.01 0.01 0.02 0.02 0.02 0.00 0.01 0.00	9/8/93 10/17/13 3/17/10 10/17/13 11/14/97 6/23/94 7/30/91 6/30/95 6/23/94 8/23/17 5/24/05 7/29/09 9/27/90	0.04 U 0.22 U 4.27 0.02 0.03 3.22 0.14 0.07 1.38 0.06	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved	29 29 58 29 58 29 29 29 29 29 29 58 29 58 29 29 29 29 29 29	0.20 U 0.47 U 27.50 0.02 0.04 65.10 0.63 0.17 5.00 0.59 0.00 0.13 0.03	7/29/09 5/29/03 5/29/03 6/30/09 11/6/14 7/29/09 11/6/14 9/15/10 9/27/90 9/27/90 9/27/90 11/6/14 7/30/91 5/24/05 9/15/92	0.00 U 0.10 U 0.20 0.01 0.01 0.02 0.02 0.02 0.00 0.01 0.01	9/8/93 10/17/13 3/17/10 10/17/13 11/14/97 6/23/94 7/30/91 6/30/95 6/23/94 8/23/17 5/24/05 7/29/09 9/27/90 5/9/01 3/22/16	0.04 U 0.22 U 4.27 0.02 0.03 3.22 0.14 0.07 1.38 0.06 0.00 0.05 0.01	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Potassium, dissolved	29 29 58 29 58 29 29 29 29 29 29 58 29 29 29 29 29 29 29 29 29 29 58	0.20 U 0.47 U 27.50 0.02 0.04 65.10 0.63 0.17 5.00 0.59 0.00 0.13 0.03 39.00	7/29/09 5/29/03 5/29/03 6/30/09 11/6/14 7/29/09 11/6/14 9/15/10 9/27/90 9/27/90 9/27/90 11/6/14 7/30/91 5/24/05 9/15/92 3/22/93	0.00 U 0.10 0.20 0.01 0.01 0.02 0.02 0.02 0.00 0.01 0.01	9/8/93 10/17/13 3/17/10 10/17/13 11/14/97 6/23/94 7/30/91 6/30/95 6/23/94 8/23/17 5/24/05 7/29/09 9/27/90 5/9/01 3/22/16 8/23/17	0.04 U 0.22 U 4.27 0.02 0.03 3.22 0.14 0.07 1.38 0.06 0.00 0.05 0.01 5.99	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Potassium, dissolved Selenium, dissolved	29 29 58 29 58 29 29 29 29 29 29 29 29 29 29 29 29 29	0.20 U 0.47 U 27.50 0.02 0.04 65.10 0.63 0.17 5.00 0.59 0.00 0.13 0.03 39.00 0.00	7/29/09 5/29/03 5/29/03 6/30/09 11/6/14 7/29/09 11/6/14 9/15/10 9/27/90 9/27/90 9/27/90 11/6/14 7/30/91 5/24/05 9/15/92 3/22/93 7/30/91	0.00 U 0.10 0.20 0.01 0.01 0.01 0.02 0.02 0.00 0.01 0.01	9/8/93 10/17/13 3/17/10 10/17/13 11/14/97 6/23/94 7/30/91 6/30/95 6/23/94 8/23/17 5/24/05 7/29/09 9/27/90 5/9/01 3/22/16 8/23/17 3/27/18	0.04 U 0.22 U 4.27 0.02 0.03 3.22 0.14 0.07 1.38 0.06 0.00 0.05 0.01 5.99 0.00	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lead, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Nickel, dissolved Potassium, dissolved Selenium, dissolved	29 29 58 29 58 29 29 29 29 29 29 29 29 29 29 29 29 29	0.20 U 0.47 U 27.50 0.02 0.04 65.10 0.63 0.17 5.00 0.59 0.00 0.13 0.03 39.00 0.00 44.60	7/29/09 5/29/03 12/20/93 5/29/03 6/30/09 11/6/14 7/29/09 11/6/14 9/15/10 9/27/90 9/27/90 9/27/90 9/27/90 11/6/14 7/30/91 5/24/05 9/15/92 3/22/93 7/30/91 6/16/92	0.00 U 0.10 0.20 0.01 0.01 0.01 0.02 0.02 0.00 0.01 0.01	9/8/93 10/17/13 3/17/10 10/17/13 11/14/97 6/23/94 7/30/91 6/30/95 6/23/94 8/23/17 5/24/05 7/29/09 9/27/90 5/9/01 3/22/16 8/23/17 3/27/18 10/3/12	0.04 U 0.22 U 4.27 0.02 0.03 3.22 0.14 0.07 1.38 0.06 0.00 0.05 0.01 5.99 0.00 16.20	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved	29 29 58 29 58 29 29 29 29 29 29 29 29 29 29 29 29 29	0.20 U 0.47 U 27.50 0.02 0.04 65.10 0.63 0.17 5.00 0.59 0.00 0.13 0.03 39.00 0.00 44.60 567.00	7/29/09 5/29/03 12/20/93 5/29/03 6/30/09 11/6/14 7/29/09 11/6/14 9/15/10 9/27/90 9/27/90 9/27/90 11/6/14 7/30/91 5/24/05 9/15/92 3/22/93 7/30/91 6/16/92 3/22/93	0.00 U 0.10 U 0.20 0.01 0.01 0.02 0.02 0.02 0.00 0.01 0.01	9/8/93 10/17/13 3/17/10 10/17/13 11/14/97 6/23/94 7/30/91 6/30/95 6/23/94 8/23/17 5/24/05 7/29/09 9/27/90 5/9/01 3/22/16 8/23/17 3/27/18 10/3/12 3/25/92	0.04 U 0.22 U 4.27 0.02 0.03 3.22 0.14 0.07 1.38 0.06 0.00 0.05 0.01 5.99 0.00 16.20 303.07	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved Strontium, dissolved	29 29 58 29 58 29 29 29 29 29 29 29 29 29 29 29 29 29	0.20 U 0.47 U 27.50 0.02 0.04 65.10 0.63 0.17 5.00 0.59 0.00 0.13 0.03 39.00 0.03 39.00 0.00 44.60 567.00 5.10	7/29/09 5/29/03 12/20/93 6/30/09 11/6/14 7/29/09 11/6/14 9/15/10 9/27/90 9/27/90 9/27/90 11/6/14 7/30/91 5/24/05 9/15/92 3/22/93 7/30/91 6/16/92 3/22/93 3/25/92	0.00 U 0.10 0.20 0.01 0.01 0.01 0.02 0.02 0.00 0.01 0.01	9/8/93 10/17/13 3/17/10 10/17/13 11/14/97 6/23/94 7/30/91 6/30/95 6/23/94 8/23/17 5/24/05 7/29/09 9/27/90 5/9/01 3/22/16 8/23/17 3/27/18 10/3/12 3/25/92 4/21/94	0.04 U 0.22 U 4.27 0.02 0.03 3.22 0.14 0.07 1.38 0.06 0.00 0.05 0.01 5.99 0.00 16.20 303.07 0.32	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved	29 29 58 29 58 29 29 29 29 29 29 29 29 29 29 29 29 29	0.20 U 0.47 U 27.50 0.02 0.04 65.10 0.63 0.17 5.00 0.59 0.00 0.13 0.03 39.00 0.00 44.60 567.00	7/29/09 5/29/03 12/20/93 5/29/03 6/30/09 11/6/14 7/29/09 11/6/14 9/15/10 9/27/90 9/27/90 9/27/90 11/6/14 7/30/91 5/24/05 9/15/92 3/22/93 7/30/91 6/16/92 3/22/93	0.00 U 0.10 U 0.20 0.01 0.01 0.02 0.02 0.02 0.00 0.01 0.01	9/8/93 10/17/13 3/17/10 10/17/13 11/14/97 6/23/94 7/30/91 6/30/95 6/23/94 8/23/17 5/24/05 7/29/09 9/27/90 5/9/01 3/22/16 8/23/17 3/27/18 10/3/12 3/25/92	0.04 U 0.22 U 4.27 0.02 0.03 3.22 0.14 0.07 1.38 0.06 0.00 0.05 0.01 5.99 0.00 16.20 303.07	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 18: IRI-4 Annual A-Groove Aquifer

DAUB & ASSOCIATES, INC. DI WAT ON STATISTICS



Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples		Duto	_0	2410	, tronago	•
Bicarbonate as CaCO3	1	528.00	10/5/14	528.00	10/5/14	528.00	mg/l
Carbonate as CaCO3	1	51.40	10/5/14	51.40	10/5/14	51.40	mg/l
Total Alkalinity as	1	579.00	10/5/14	579.00	10/5/14	579.00	mg/l
Bromide	1	<u> </u>	10/5/14	U	10/5/14	U	mg/l
Cation-Anion Balance	1	-3.70	10/5/14	-3.70	10/5/14	-3.70	%
Sum of Anions	1	14.00	10/5/14	14.00	10/5/14	14.00	meq/l
Sum of Cations	1	13.00	10/5/14	13.00	10/5/14	13.00	meg/l
Chemical Oxygen	1	<u> </u>	10/5/14	U	10/5/14	10.00	mg/l
Chloride	1	18.60	10/5/14	18.60	10/5/14	18.60	mg/l
Conductivity, Lab	1	1,270.00	10/5/14	1,270.00	10/5/14	1,270.00	μmhos
Fluoride	1	16.40	10/5/14	16.40	10/5/14	16.40	mg/l
Hardness as CaCO3	1	46.00	10/5/14	46.00	10/5/14	46.00	mg/l
Nitrate as N, dissolved	1	<u> </u>	10/5/14	<u> </u>	10/5/14	U	mg/l
Nitrate/Nitrite as N,	1	<u> </u>	10/5/14	Ŭ	10/5/14	Ŭ	mg/l
Nitrite as N, dissolved	1	<u> </u>	10/5/14	Ŭ	10/5/14	Ŭ	mg/l
Nitrogen, Ammonia	1	0.40	10/5/14	0.40	10/5/14	0.40	mg/l
Nitrogen, Organic	1	0.30	10/5/14	0.30	10/5/14	0.30	mg/l
Nitrogen, Total Kjeldahl	1	0.70	10/5/14	0.70	10/5/14	0.70	mg/l
pH, lab	1	8.60	10/5/14	8.60	10/5/14	8.60	units
Phosphate, total	1	0.06	10/5/14	0.06	10/5/14	0.06	mg/l
Phosphorus, total	1	0.02	10/5/14	0.00	10/5/14	0.02	mg/l
SAR in Water	1	17.00	10/5/14	17.00	10/5/14	17.00	none
Sulfate	1	60.00	10/5/14	60.00	10/5/14	60.00	mg/l
Sulfide	1	0.03	10/5/14	0.03	10/5/14	0.03	mg/l
Total Dissolved Solids	1	746.00	10/5/14	746.00	10/5/14	746.00	mg/l
Conductivity, Field	0	N/A	N/A	N/A	N/A	N/A	μmhos
pH, Field	0	N/A	N/A	N/A	N/A	N/A	units
Temperature (°C), Field	0	N/A	N/A	N/A	N/A	N/A	(°C)
Temperature (°C), Field Water Level, Field	0	N/A N/A	N/A	N/A	N/A	N/A N/A	(°C)
Temperature (°C), Field	0 0 No. of	N/A	N/A N/A	N/A N/A	N/A N/A	N/A	(°C) Ft.
Temperature (°C), Field Water Level, Field Parameters	0 0	N/A N/A	N/A N/A Date	N/A N/A	N/A N/A Date	N/A N/A	(°C) Ft. Units
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved	0 0 No. of	N/A N/A High	N/A N/A	N/A N/A	N/A N/A	N/A N/A Average	(°C) Ft. Units mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved	0 0 No. of Samples 1	N/A N/A High U 0.02	N/A N/A Date 10/5/14 10/5/14	N/A N/A Low	N/A N/A Date 10/5/14 10/5/14	N/A N/A Average	(°C) Ft. Units mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	0 0 No. of Samples 1	N/A N/A High	N/A N/A Date 10/5/14 10/5/14 10/5/14	N/A N/A Low U 0.02	N/A N/A Date 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02	(°C) Ft. Units mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved	0 0 No. of Samples 1	N/A N/A High U 0.02 0.13 U	N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Low U 0.02 U U U	N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13 U	(°C) Ft. Units mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	0 0 No. of Samples 1	N/A N/A High U 0.02 0.13	N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Low U 0.02 U	N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13	(°C) Ft. Units mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	0 0 No. of Samples 1 1 1 1 1 1	N/A N/A High U 0.02 0.13 U 0.25	N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Low U 0.02 U U 0.25	N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13 U 0.25	(°C) Ft. Units mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	0 0 No. of Samples 1 1 1 1 1 1 1	N/A N/A High U 0.02 0.13 U 0.25 U	N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A U U 0.02 U U 0.25 U U	N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13 U 0.25 U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	0 0 No. of Samples 1 1 1 1 1 1 1	N/A N/A High U 0.02 0.13 U 0.25 U 0.25 U 6.00	N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A U 0.02 U U 0.25 U U U	N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13 U 0.25 U 6.00	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	0 0 No. of Samples 1 1 1 1 1 1 1	N/A N/A High U 0.02 0.13 U 0.25 U 0.25 U 6.00 U	N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A U U 0.02 U U 0.25 U U U U U U	N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13 U 0.25 U 0.25 U 6.00 U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	0 0 No. of Samples 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N/A N/A High U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U	N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A U U 0.02 U U U 0.25 U U U U U U U U	N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	0 0 No. of Samples 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N/A N/A High U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U U U U	N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A U U 0.02 U U U U U U U U U U U U U U U U U U	N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U U U U U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	0 0 No. of Samples 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N/A N/A High U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U U U U U U U U	N/A N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A U U 0.02 U U U 0.25 U U U U U U U U U	N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13 U 0.25 U 6.00 U 0.25 U 0.02 U 0.25 U 0 U 0.25 U 0 U U 0 U 0 U U 0 U U U 0 U U 0 U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lithium, dissolved	0 0 No. of Samples 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N/A N/A High U 0.02 0.13 U 0.25 U 0.25 U 0.25 U 6.00 U U U U U U U U U 2,40	N/A N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A U 0.02 U U 0.25 U U U U U U U U U U U U U U U U U U U	N/A N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13 U 0.25 U 6.00 U U U U U U U U U 0.12 7.40	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	0 0 No. of Samples 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N/A N/A High U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U U U U U U U U	N/A N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A U U 0.02 U U U U U U U U U U U U U U U U U U U	N/A N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13 U 0.25 U 6.00 U 0.25 U 0.02 U 0.25 U 0 U 0.25 U 0 U U 0 U 0 U U 0 U U U 0 U U 0 U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lithium, dissolved	0 0 No. of Samples 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N/A N/A High U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U U U U U U U U U U 0.12 7.40 0.01	N/A N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A U 0.02 U U 0.25 U U U U U U U U U U U U U U U U U U U	N/A N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U U U U U U U 0.12 7.40 0.01	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved	0 0 No. of Samples 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N/A N/A High U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U U U U U U U U U U U U U U U U U	N/A N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A U 0.02 U U 0.25 U U U U U U U U U U U U U U U U U U U	N/A N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U U U U U U U U U U U U U U U U U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved	0 0 No. of Samples 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N/A N/A High U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U U U U U U U U U U U U U U U U U	N/A N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A U 0.02 U U 0.25 U U U U U U U U U U U U U U U U U U U	N/A N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13 U 0.25 U 0.25 U 0.25 U 0.25 U 0.25 U 0.25 U 0.25 U 0.25 U 0.25 U 0.01 U 0.12 7.40 0.01 U 0.01 U 0.12 7.40 U 0.01 U 0.02 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved	0 0 No. of Samples 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N/A N/A High U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U U U U U U U U U U U U U U U U U	N/A N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A U 0.02 U U 0.25 U U U U U U U U U U U U U U U U U U U	N/A N/A N/A Date Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U U U U U U U U 0.12 7.40 0.01 U U U U U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	0 0 No. of Samples 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N/A N/A High U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U U U U 0.12 7.40 0.01 U U U U U U U U U U U U U U U U U U U	N/A N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A U 0.02 U U 0.25 U U U U U U U U U U U U U U U U U U U	N/A N/A N/A Date Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13 U 0.25 U 6.00 U U 0.25 U 0.25 U 0.25 U 0.25 U 0.25 U 0.25 U 0.01 U U 0.12 7.40 0.01 U U U 0.12 7.40 0.01 U 0.12 7.40 0.01 U 0.12 0.13 U 0.13 U 0.25 U 0.13 U 0.25 U 0.13 U 0.25 U 0.13 U 0.25 U 0.13 U 0.25 U 0.13 U 0.25 U 0.13 U 0.25 U 0.13 U 0.25 U 0.13 U 0.25 U 0.13 U 0.25 U 0.13 U 0.13 U 0.25 U 0.13 U 0.25 U 0.13 U 0.25 U 0.13 U 0.25 U 0.12 U 0.12 U 0.13 U 0.25 U 0.12 U 0.12 U 0.12 U 0.13 U 0.25 U 0.12 U 0.12 U 0.12 U 0.12 U 0.12 U 0.12 U 0.13 U 0 U 0.13 U 0 U 0 0 U 0 0 0 0 0 0 0 0 0 0 0 0 0	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	0 0 No. of Samples 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N/A N/A High U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U U U U 0.12 7.40 0.01 U U U U U U U U U 1.30 U U 11.80	N/A N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A U 0.02 U U 0.25 U U U U U U U U U U U U U U U U U U U	N/A N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U U U U 0.12 7.40 0.01 U U U U U U U U 1.30 U U 11.80	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Boron, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Selenium, dissolved Sodium, dissolved	0 0 No. of Samples 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N/A N/A High U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U U U U 0.12 7.40 0.01 U U U U U U U U U U U 1.30 U U 11.80 267.00	N/A N/A N/A Date Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A U 0.02 U U 0.25 U U U U U U U U U U U U U U U U U U U	N/A N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13 U 0.25 U 6.00 U U 0.25 U 0.25 U 0.25 U 0.25 U 0.25 U 0.25 U 0.25 U 0.25 U 0.25 U 0.02 0.13 U 0.25 U 0.25 U 0.25 U 0.02 0.13 U 0.25 U 0.02 0.13 U 0.25 U 0.02 0.13 U 0.25 U 0.02 0.13 U 0.25 U 0.02 0.13 U 0.25 U 0.02 0.13 U 0.25 U 0.02 0.13 U 0.25 U 0.02 0.13 U 0.02 0.13 U 0.02 0.13 U 0.02 0.02 U 0.13 U 0.25 U 0.12 0.02 U 0.13 U 0.25 U 0.12 0.02 U 0.13 U 0.25 U 0.12 0.12 U 0.12 0.12 U 0.12 0.02 U 0.13 U 0.25 U 0.02 0.12 U 0.12 0.02 U 0.12 U 0.12 0.02 U 0.12 0.02 U 0.12 0.02 U 0.12 0.02 U 0.12 0.02 U 0.12 0.02 U 0.12 0.02 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	0 0 No. of Samples 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N/A N/A High U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U U U U 0.12 7.40 0.01 U U U U U U U U U 1.30 U U 11.80	N/A N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A U 0.02 U U 0.25 U U U U U U U U U U U U U U U U U U U	N/A N/A N/A Date 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14 10/5/14	N/A N/A Average U 0.02 0.13 U 0.25 U 0.25 U 6.00 U U U U U 0.12 7.40 0.01 U U U U U U U U 1.30 U U 11.80	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 19: O-GMW-A Annual A-Groove Aquifer

DAUB & ASSOCIATES, INC. 203# Stranger



Devenue		112 1	Dut		Det	A	11
Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples	0 700 00	7/0/10	400.00	0/10/14	1 001 70	//
Bicarbonate as CaCO3	47	3,720.00	7/3/19	483.00	6/16/14	1,381.79	mg/l
Carbonate as CaCO3	46	387.00	5/14/19	42.60	11/10/14	121.34	mg/l
Total Alkalinity as	47	4,000.00	7/3/19	534.00	6/16/14	1,501.30	mg/l
Bromide	5	0.46	7/11/13	0.03	10/4/11	0.18	mg/l
Cation-Anion Balance	45	3.40	6/16/14	-3.40	6/14/11	-2.92	%
Sum of Anions	46	135.00	7/3/19	13.70	10/4/11	42.79	meq/l
Sum of Cations	46	125.00	7/3/19	12.60	6/14/11	40.08	meq/l
Chemical Oxygen	8	30.00	1/24/18	10.00	1/20/11	17.38	mg/l
Chloride	46	1,910.00	7/3/19	11.00	6/14/11	421.10	mg/l
Conductivity, Lab	47	10,400	7/3/19	1,250	10/4/11	3,792	µmhos
Fluoride	46	28.10	11/14/18	13.80	9/17/12	19.77	mg/l
Hardness as CaCO3	46	72.00	1/24/18	14.00	11/30/11	31.13	mg/l
Nitrate as N, dissolved	2	0.10	11/10/14	0.06	3/30/11	0.08	mg/l
Nitrate/Nitrite as N,	2	0.10	11/10/14	0.06	3/30/11	0.08	mg/l
Nitrite as N, dissolved	12	UH	4/3/19	U	1/24/18	U	mg/l
Nitrogen, Ammonia	12	1.62	4/3/19	0.39	10/4/11	0.80	mg/l
Nitrogen, Organic	10	0.90	4/3/19	0.10	3/23/11	0.00	mg/l
Nitrogen, Total Kjeldahl	12	2.50	4/3/19	0.60	3/30/11	1.03	mg/l
pH, lab	47	8.90	3/16/14	8.50	5/14/18	8.69	units
Phosphate, total	12	1.83	4/3/19	0.09	3/23/11	0.38	mg/l
Phosphorus, total	12	0.59	4/3/19	0.03	3/23/11	0.38	mg/l
SAR in Water	46	160.00	7/3/19	31.30	6/14/11	63.56	
					7/17/18		none
Sulfate	45	156.00	9/11/19	5.41		38.24	mg/l
Sulfide	12	3.90	10/4/11	1.41	1/24/18	2.42	mg/l
Total Dissolved Solids	46	7,230.00	7/3/19	740.00	11/30/11	2,285.28	mg/l
Conductivity, Field	102	10,470	7/3/19	719	3/23/11	3,500	µmhos
pH, Field	74	8.90	3/16/16	7.30	5/28/15	8.22	units
						o / 33	
Temperature (°C), Field	74	25.00	7/13/16	16.35	5/17/16	21.77	(°C)
						21.77 N/A	(°C) Ft.
Temperature (°C), Field Water Level, Field	74 N/A	25.00 N/A	7/13/16 N/A	16.35 N/A	5/17/16 N/A	N/A	Ft.
Temperature (°C), Field Water Level, Field Parameters	74 N/A No. of	25.00	7/13/16	16.35	5/17/16		
Temperature (°C), Field Water Level, Field Parameters Metals	74 N/A No. of Samples	25.00 N/A High	7/13/16 N/A Date	16.35 N/A Low	5/17/16 N/A Date	N/A Average	Ft. Units
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved	74 N/A No. of Samples 12	25.00 N/A High 0.05	7/13/16 N/A Date 3/23/11	16.35 N/A Low	5/17/16 N/A Date 11/5/15	N/A Average 0.04	Ft. Units mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved	74 N/A No. of Samples 12 12	25.00 N/A High 0.05 0.0004	7/13/16 N/A Date 3/23/11 3/23/17	16.35 N/A Low 0.03 0.0002	5/17/16 N/A Date 11/5/15 11/5/15	N/A Average 0.04 0.0003	Ft. Units mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	74 N/A No. of Samples 12 12 12	25.00 N/A High 0.05 0.0004 1.53	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19	16.35 N/A Low 0.03 0.0002 0.03	5/17/16 N/A Date 11/5/15 11/5/15 1/24/18	N/A Average 0.04 0.0003 0.24	Ft. Units mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	74 N/A No. of Samples 12 12 12 12 12	25.00 N/A High 0.05 0.0004 1.53 0.002	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11	16.35 N/A Low 0.03 0.0002 0.03 U	5/17/16 N/A Date 11/5/15 11/5/15 1/24/18 3/23/11	N/A Average 0.04 0.0003 0.24 U	Ft. Units mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	74 N/A No. of Samples 12 12 12 12 12 12 46	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19	16.35 N/A Low 0.03 0.0002 0.03 U 0.36	5/17/16 N/A Date 11/5/15 11/5/15 1/24/18 3/23/11 10/4/11	N/A Average 0.04 0.0003 0.24 U 0.97	Ft. Units mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	74 N/A No. of Samples 12 12 12 12 12	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11	16.35 N/A Low 0.03 0.0002 0.03 U 0.36 U	5/17/16 N/A Date 11/5/15 11/5/15 1/24/18 3/23/11	N/A Average 0.04 0.0003 0.24 U	Ft. Units mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	74 N/A No. of Samples 12 12 12 12 12 12 46 12 46	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U 14.10	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19 1/24/18 1/24/18	16.35 N/A Low 0.03 0.0002 0.03 U 0.36 U 1.70	5/17/16 N/A Date 11/5/15 11/5/15 1/24/18 3/23/11 10/4/11 4/3/19 5/14/19	N/A Average 0.04 0.0003 0.24 U 0.97 U 3.23	Ft. Units mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	74 N/A No. of Samples 12 12 12 12 12 12 46 12 46 12	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19 1/24/18 1/24/18 4/6/16	16.35 N/A Low 0.03 0.0002 0.03 U 0.36 U	5/17/16 N/A Date 11/5/15 11/5/15 1/24/18 3/23/11 10/4/11 4/3/19 5/14/19 4/6/16	N/A Average 0.04 0.0003 0.24 U 0.97 U	Ft. Units mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	74 N/A No. of Samples 12 12 12 12 12 46 12 46 12 46 12 12	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U 14.10 0.02 U	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19 1/24/18 1/24/18 4/6/16 1/24/18	16.35 N/A Low 0.03 0.0002 0.03 U 0.36 U 0.36 U 1.70 0.02 U	5/17/16 N/A Date 11/5/15 1/24/18 3/23/11 10/4/11 4/3/19 5/14/19 4/6/16 4/3/19	N/A Average 0.04 0.0003 0.24 U 0.97 U 3.23 0.02 U	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	74 N/A No. of Samples 12 12 12 12 46 12 46 12 46 12 12 12	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U 14.10 0.02	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19 1/24/18 1/24/18 4/6/16	16.35 N/A Low 0.03 0.0002 0.03 U 0.36 U 1.70 0.02	5/17/16 N/A Date 11/5/15 1/24/18 3/23/11 10/4/11 4/3/19 5/14/19 4/6/16 4/3/19 3/23/11	N/A Average 0.04 0.0003 0.24 U 0.97 U 3.23 0.02	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	74 N/A No. of Samples 12 12 12 12 12 46 12 46 12 46 12 12	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U 14.10 0.02 U	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19 1/24/18 1/24/18 4/6/16 1/24/18	16.35 N/A Low 0.03 0.0002 0.03 U 0.36 U 0.36 U 1.70 0.02 U	5/17/16 N/A Date 11/5/15 1/24/18 3/23/11 10/4/11 4/3/19 5/14/19 4/6/16 4/3/19	N/A Average 0.04 0.0003 0.24 U 0.97 U 3.23 0.02 U	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	74 N/A No. of Samples 12 12 12 12 46 12 46 12 46 12 12 12	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U 14.10 0.02 U 14.30	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19 1/24/18 1/24/18 4/6/16 1/24/18 4/3/19	16.35 N/A Low 0.03 0.0002 0.03 U 0.36 U 1.70 0.02 U 0.05	5/17/16 N/A Date 11/5/15 1/24/18 3/23/11 10/4/11 4/3/19 5/14/19 4/6/16 4/3/19 3/23/11	N/A Average 0.04 0.0003 0.24 U 0.97 U 3.23 0.02 U 0.28	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	74 N/A No. of Samples 12 12 12 12 12 46 12 46 12 46 12 12 12 12 12 12 12	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U 14.10 0.02 U 14.10 0.02 U 1.30 U 0.22	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19 1/24/18 1/24/18 4/6/16 1/24/18 4/3/19 1/24/18 4/3/19	16.35 N/A Low 0.03 0.0002 0.03 U 0.36 U 0.36 U 1.70 0.02 U 0.02 U 0.05 U 0.06	5/17/16 N/A Date 11/5/15 11/5/15 1/24/18 3/23/11 10/4/11 4/3/19 5/14/19 4/6/16 4/3/19 3/23/11 4/3/19 1/20/11	N/A Average 0.04 0.0003 0.24 U 0.97 U 3.23 0.02 U 0.28 U 0.28 U 0.09	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	74 N/A No. of Samples 12 12 12 12 12 46 12 46 12 46 12 12 12 12 12 12 12 12 46	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U 14.10 0.02 U 14.10 0.02 U 1.30 U 0.22 13.00	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19 1/24/18 1/24/18 4/6/16 1/24/18 4/3/19 1/24/18 4/3/19 4/3/19 4/10/18	16.35 N/A Low 0.03 0.0002 0.03 U 0.36 U 0.36 U 1.70 0.02 U 0.05 U 0.05 U 0.06 2.00	5/17/16 N/A Date 11/5/15 11/5/15 1/24/18 3/23/11 10/4/11 4/3/19 5/14/19 4/6/16 4/3/19 3/23/11 4/3/19 1/20/11 1/20/11	N/A Average 0.04 0.0003 0.24 U 0.97 U 3.23 0.02 U 0.28 U 0.28 U 0.09 5.60	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	74 N/A No. of Samples 12 12 12 12 12 46 12 12 46 12 12 12 12 12 12 12 12 12 12 12 12 12	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U 14.10 0.02 U 14.10 0.02 U 1.30 U 0.22	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19 1/24/18 1/24/18 4/6/16 1/24/18 4/3/19 1/24/18 4/3/19 4/10/18 4/3/19	16.35 N/A Low 0.03 0.0002 0.03 U 0.36 U 0.36 U 1.70 0.02 U 0.02 U 0.05 U 0.06	5/17/16 N/A Date 11/5/15 11/5/15 1/24/18 3/23/11 10/4/11 4/3/19 5/14/19 4/6/16 4/3/19 3/23/11 4/3/19 1/20/11	N/A Average 0.04 0.0003 0.24 U 0.97 U 3.23 0.02 U 0.28 U 0.09	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	74 N/A No. of Samples 12 12 12 12 12 46 12 12 12 12 12 12 12 12 12 12 12 12 12	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U 14.10 0.02 U 14.10 0.02 U 1.30 U 0.22 13.00 0.05	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19 1/24/18 4/6/16 1/24/18 4/6/16 1/24/18 4/3/19 1/24/18 4/3/19 4/10/18 4/3/19 1/24/18	16.35 N/A Low 0.03 0.0002 0.03 U 0.36 U 0.36 U 1.70 0.02 U 0.05 U 0.05 U 0.06 2.00 0.01	5/17/16 N/A Date 11/5/15 11/5/15 1/24/18 3/23/11 10/4/11 4/3/19 5/14/19 4/6/16 4/3/19 3/23/11 4/3/19 1/20/11 1/20/11 3/23/11 4/3/19	N/A Average 0.04 0.0003 0.24 U 0.97 U 3.23 0.02 U 0.28 U 0.28 U 0.09 5.60 0.02	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved	74 N/A No. of Samples 12 12 12 12 12 46 12 12 12 12 12 12 12 12 12 12 12 12 12	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U 14.10 0.02 U 14.10 0.02 U 1.30 U 0.22 13.00 0.05 U U	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19 1/24/18 4/6/16 1/24/18 4/6/16 1/24/18 4/3/19 1/24/18 4/3/19 1/24/18 1/24/18	16.35 N/A Low 0.03 0.0002 0.03 U 0.36 U 1.70 0.02 U 0.05 U 0.05 U 0.06 2.00 0.01 U U U	5/17/16 N/A Date 11/5/15 11/5/15 1/24/18 3/23/11 10/4/11 4/3/19 5/14/19 4/6/16 4/3/19 3/23/11 4/3/19 1/20/11 1/20/11 3/23/11 4/3/19 4/3/19	N/A Average 0.04 0.0003 0.24 U 0.97 U 3.23 0.02 U 0.28 U 0.28 U 0.28 U 0.09 5.60 0.02 U U U U U U U 0.97	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved	74 N/A No. of Samples 12 12 12 12 12 46 12 12 12 12 12 12 12 12 12 12 12 12 12	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U 14.10 0.02 U 14.10 0.02 U 1.30 U 0.22 13.00 0.05 U U 0.02	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19 1/24/18 4/6/16 1/24/18 4/3/19 1/24/18 4/3/19 1/24/18 4/3/19 1/24/18 1/24/18 1/24/18 7/11/13	16.35 N/A Low 0.03 0.0002 0.03 U 0.36 U 0.36 U 1.70 0.02 U 0.05 U 0.05 U 0.06 2.00 0.01 U U 0.01	5/17/16 N/A Date 11/5/15 1/24/18 3/23/11 10/4/11 4/3/19 5/14/19 4/6/16 4/3/19 3/23/11 4/3/19 1/20/11 1/20/11 3/23/11 4/3/19 4/3/19 3/23/11	N/A Average 0.04 0.0003 0.24 U 0.97 U 3.23 0.02 U 0.28 U 0.09 5.60 0.02 U U 0.02 U 0.02	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Potassium, dissolved	74 N/A No. of Samples 12 12 12 12 12 46 12 12 12 12 12 12 12 12 12 12 12 12 12	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U 14.10 0.02 U 14.10 0.02 U 1.30 U 0.22 13.00 0.05 U U 0.02 3.10	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19 1/24/18 1/24/18 4/6/16 1/24/18 4/3/19 1/24/18 4/3/19 1/24/18 4/3/19 1/24/18 1/24/18 1/24/18 1/24/18	16.35 N/A Low 0.03 0.0002 0.03 U 0.36 U 0.36 U 1.70 0.02 U 0.05 U 0.05 U 0.06 2.00 0.01 U U 0.01 0.40	5/17/16 N/A Date 11/5/15 1/24/18 3/23/11 10/4/11 4/3/19 5/14/19 4/6/16 4/3/19 3/23/11 4/3/19 1/20/11 1/20/11 3/23/11 4/3/19 4/3/19 3/23/11 11/1/12	N/A Average 0.04 0.0003 0.24 U 0.97 U 3.23 0.02 U 0.28 U 0.09 5.60 0.02 U U 0.02 U U 0.02 1.21	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	74 N/A No. of Samples 12 12 12 12 12 46 12 12 12 12 12 12 12 12 12 12 12 12 12	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U 14.10 0.02 U 14.10 0.02 U 1.30 U 0.22 13.00 0.05 U U 0.02 3.10 U	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19 1/24/18 1/24/18 4/6/16 1/24/18 4/3/19 1/24/18 4/3/19 1/24/18 1/24/18 1/24/18 7/11/13 1/27/16 1/24/18	16.35 N/A 0.03 0.0002 0.03 0.03 U 0.03 U 0.36 U 1.70 0.02 U 0.05 U 0.05 U 0.06 2.00 0.01 U U 0.01 U 0.01 0.40 U	5/17/16 N/A Date 11/5/15 1/24/18 3/23/11 10/4/11 4/3/19 5/14/19 4/6/16 4/3/19 3/23/11 4/3/19 1/20/11 1/20/11 3/23/11 4/3/19 4/3/19 3/23/11 11/1/12 4/3/19	N/A Average 0.04 0.0003 0.24 U 0.97 U 3.23 0.02 U 0.28 U 0.09 5.60 0.02 U U 0.09 5.60 0.02 U U 0.02 1.21 U	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Silica, dissolved	74 N/A No. of Samples 12 12 12 12 12 46 12 12 12 12 12 12 12 12 12 12 12 12 12	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U 14.10 0.02 U 14.10 0.02 U 1.30 U 0.22 13.00 0.05 U U 0.02 3.10 U U 12.80	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19 1/24/18 1/24/18 4/6/16 1/24/18 4/3/19 1/24/18 4/3/19 1/24/18 4/3/19 1/24/18 1/24/18 1/24/18 1/24/18 1/27/16 1/24/18 11/5/15	16.35 N/A 0.03 0.0002 0.03 U 0.03 U 0.36 U 1.70 0.02 U 0.05 U 0.06 2.00 0.01 U U 0.01 0.01 0.40 U 9.00	5/17/16 N/A Date 11/5/15 1/24/18 3/23/11 10/4/11 4/3/19 5/14/19 4/6/16 4/3/19 3/23/11 4/3/19 1/20/11 1/20/11 1/20/11 3/23/11 4/3/19 3/23/11 11/1/12 4/3/19 1/24/18	N/A Average 0.04 0.0003 0.24 U 0.97 U 3.23 0.02 U 0.28 U 0.09 5.60 0.02 U U 0.09 5.60 0.02 U U 0.02 1.21 U 11.54	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Silica, dissolved	74 N/A No. of Samples 12 12 12 12 12 46 12 12 12 12 12 12 12 12 12 12 12 12 12	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U 14.10 0.02 U 14.10 0.02 U 1.30 U 0.22 13.00 0.05 U U 0.22 13.00 0.05 U U 0.02 3.10 U U 12.80 2,800.00	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19 1/24/18 1/24/18 4/6/16 1/24/18 4/3/19 1/24/18 4/3/19 1/24/18 4/3/19 1/24/18 1/24/18 1/24/18 1/24/18 1/24/18 1/24/18 1/27/16 1/24/18 1/27/16 1/24/18	16.35 N/A 0.03 0.0002 0.03 U 0.36 U 1.70 0.02 U 0.05 U 0.06 2.00 0.01 U 0.06 2.00 0.01 U U 0.01 0.01 0.40 U 9.00 279.00	5/17/16 N/A Date 11/5/15 1/24/18 3/23/11 10/4/11 4/3/19 5/14/19 4/6/16 4/3/19 3/23/11 4/3/19 1/20/11 1/20/11 3/23/11 4/3/19 3/23/11 1/20/11 1/20/11 3/23/11 1/20/11 3/23/11 4/3/19 3/23/11 11/1/12 4/3/19 1/24/18 6/14/11	N/A Average 0.04 0.0003 0.24 U 0.97 U 3.23 0.02 U 0.28 U 0.09 5.60 0.02 U U 0.09 5.60 0.02 U U 0.02 1.21 U 11.54 895.07	Ft. Units mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Selenium, dissolved Silica, dissolved Sodium, dissolved	74 N/A No. of Samples 12 12 12 12 46 12 12 12 12 12 12 12 12 12 12 12 12 12	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U 14.10 0.02 U 14.10 0.02 U 1.30 U 0.22 13.00 0.05 U U U 0.02 3.10 U U 12.80 2,800.00 2.67	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19 1/24/18 1/24/18 4/6/16 1/24/18 4/3/19 1/24/18 4/3/19 1/24/18 4/3/19 1/24/18 1/24/18 1/24/18 1/24/18 1/24/18 1/24/18 1/24/18 1/24/18 1/24/18	16.35 N/A 0.03 0.0002 0.03 U 0.36 U 1.70 0.02 U 0.05 U 0.05 U 0.06 2.00 0.01 U U 0.01 U U 0.01 0.40 U 0.40 U 9.00 279.00 0.44	5/17/16 N/A Date 11/5/15 1/24/18 3/23/11 10/4/11 4/3/19 3/23/11 4/6/16 4/3/19 3/23/11 4/3/19 1/20/11 1/20/11 1/20/11 3/23/11 4/3/19 3/23/11 11/1/12 4/3/19 3/23/11 11/1/12 4/3/19 3/23/11	N/A Average 0.04 0.0003 0.24 U 0.97 U 3.23 0.02 U 0.28 U 0.09 5.60 0.02 U 0.09 5.60 0.02 U U 0.02 1.21 U 11.54 895.07 1.22	Ft. Units mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Silica, dissolved	74 N/A No. of Samples 12 12 12 12 12 46 12 12 12 12 12 12 12 12 12 12 12 12 12	25.00 N/A High 0.05 0.0004 1.53 0.002 2.80 U 14.10 0.02 U 14.10 0.02 U 1.30 U 0.22 13.00 0.05 U U 0.22 13.00 0.05 U U 0.02 3.10 U U 12.80 2,800.00	7/13/16 N/A Date 3/23/11 3/23/17 4/3/19 1/20/11 7/3/19 1/24/18 1/24/18 4/6/16 1/24/18 4/3/19 1/24/18 4/3/19 1/24/18 4/3/19 1/24/18 1/24/18 1/24/18 1/24/18 1/24/18 1/24/18 1/27/16 1/24/18 1/27/16 1/24/18	16.35 N/A 0.03 0.0002 0.03 U 0.36 U 1.70 0.02 U 0.05 U 0.06 2.00 0.01 U 0.06 2.00 0.01 U U 0.01 0.01 0.40 U 9.00 279.00	5/17/16 N/A Date 11/5/15 1/24/18 3/23/11 10/4/11 4/3/19 5/14/19 4/6/16 4/3/19 3/23/11 4/3/19 1/20/11 1/20/11 3/23/11 4/3/19 3/23/11 1/20/11 1/20/11 3/23/11 1/20/11 3/23/11 4/3/19 3/23/11 11/1/12 4/3/19 1/24/18 6/14/11	N/A Average 0.04 0.0003 0.24 U 0.97 U 3.23 0.02 U 0.28 U 0.09 5.60 0.02 U U 0.09 5.60 0.02 U U 0.02 1.21 U 11.54 895.07	Ft. Units mg/l

Table 20: WSW-2 Annual A-Groove Aquifer

DAUB & ASSOCIATES, INC. 201 3 The Contraction of the Con



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Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples	500.00	0/00/11.4	450.0	7/17/10	407.4	//
Bicarbonate as CaCO3	25	529.00	8/22/14	459.0	7/17/18	487.4	mg/l
Carbonate as CaCO3	25	86.10	4/3/19	26.70	4/6/16	55.52	mg/l
Total Alkalinity as	25	578.00	11/5/15	520.0	10/18/16	543.0	mg/l
Bromide	4	1.54	3/23/17	0.10	8/22/14	0.98	mg/l
Cation-Anion Balance	25	13.30	1/24/18	-4.00	8/22/14	-1.38	%
Sum of Anions	25	14.00	4/3/19	12.00	10/18/16	13.00	meq/l
Sum of Cations	25	17.00	1/24/18	12.00	8/22/14	12.68	meq/l
Chemical Oxygen	2	196.00	4/6/16	22.00	8/22/14	109.0	mg/l
Chloride	25	20.90	4/6/16	11.60	8/27/15	13.96	mg/l
Conductivity, Lab	25	1,250	4/6/16	1,100	8/16/16	1,178	μmhos
Fluoride	25	19.80	8/22/14	16.50	4/6/16	18.41	mg/l
Hardness as CaCO3	25	238.00	1/24/18	12.00	6/27/17	22.14	mg/l
Nitrate as N, dissolved	1	0.09	8/22/14	0.09	8/22/14	0.09	mg/l
Nitrate/Nitrite as N,	1	0.25	8/22/14	0.25	8/22/14	0.25	mg/l
Nitrite as N, dissolved	1	0.16	8/22/14	0.25	8/22/14	0.25	mg/l
Nitrogen, Ammonia	6	0.52	11/5/15	0.43	4/6/16	0.47	mg/l
Nitrogen, Organic	3	0.40	8/22/14	0.30	4/3/19	0.37	mg/l
Nitrogen, Total Kjeldahl	6	0.80	8/22/14	0.30	1/24/18	0.60	mg/l
pH, lab	25	9.30	10/10/19	8.60	8/22/14	8.77	units
Phosphate, total	6	0.12	8/22/14	0.06	4/3/19	0.10	mg/l
Phosphorus, total	6	0.04	8/22/14	0.02	4/3/19	0.03	mg/l
SAR in Water	25	37.00	9/10/19	7.60	1/24/18	32.50	none
Sulfate	23	57.90	4/6/16	11.60	1/27/16	34.99	mg/l
Sulfide	6	2.70	4/3/19	0.16	8/22/14	1.58	mg/l
Total Dissolved Solids	25	774.00	1/24/18	661.0	8/27/15	695.1	mg/l
Conductivity, Field	52	1,498	10/10/19	632	2/21/19	1,184	μmhos
		1.430	10/10/19	032	2/21/19		
pH, Field	52	8.90	3/16/16	7.60	4/6/16	8.35	units
pH, Field Temperature (°C), Field	<u>52</u> 52	8.90 23.40	<u>3/16/16</u> 7/17/17	7.60 17.80	<u>4/6/16</u> 12/3/15	8.35 21.46	units (°C)
pH, Field	52	8.90	3/16/16	7.60	4/6/16	8.35	units
pH, Field Temperature (°C), Field Water Level, Field	52 52 N/A	8.90 23.40 N/A	3/16/16 7/17/17 N/A	7.60 17.80 N/A	4/6/16 12/3/15 N/A	8.35 21.46 N/A	units (°C) Ft.
pH, Field Temperature (°C), Field Water Level, Field Parameters	52 52 N/A No. of	8.90 23.40	<u>3/16/16</u> 7/17/17	7.60 17.80	<u>4/6/16</u> 12/3/15	8.35 21.46	units (°C)
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals	52 52 N/A No. of Samples	8.90 23.40 N/A High	3/16/16 7/17/17 N/A Date	7.60 17.80 N/A Low	4/6/16 12/3/15 N/A Date	8.35 21.46 N/A Average	units (°C) Ft. Units
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved	52 52 N/A No. of Samples 6	8.90 23.40 N/A High 0.04	3/16/16 7/17/17 N/A Date 1/24/18	7.60 17.80 N/A Low	4/6/16 12/3/15 N/A Date 8/22/14	8.35 21.46 N/A Average	units (°C) Ft. Units mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved	52 52 N/A No. of Samples 6 6	8.90 23.40 N/A High 0.04 0.05	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14	7.60 17.80 N/A Low 0.00 0.00	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17	8.35 21.46 N/A Average 0.02 0.02	units (°C) Ft. Units mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	52 52 N/A No. of Samples 6 6 6	8.90 23.40 N/A High 0.04 0.05 0.25	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19	7.60 17.80 N/A Low 0.00 0.00 0.03	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18	8.35 21.46 N/A Average 0.02 0.02 0.17	units (°C) Ft. Units mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	52 52 N/A No. of Samples 6 6 6 6 6	8.90 23.40 N/A High 0.04 0.05 0.25 U	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15	7.60 17.80 N/A Low 0.00 0.00 0.03 U	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19	8.35 21.46 N/A Average 0.02 0.02 0.17 U	units (°C) Ft. Units mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	52 52 N/A No. of Samples 6 6 6 6 6 6 6 6 25	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14	7.60 17.80 N/A Low 0.00 0.00 0.00 0.03 U 0.21	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16	8.35 21.46 N/A Average 0.02 0.02 0.17 U 0.24	units (°C) Ft. Units mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	52 52 N/A No. of Samples 6 6 6 6 6 6 6 25 6	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27 U	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14 11/5/15	7.60 17.80 N/A Low 0.00 0.00 0.03 U 0.21 U	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16 4/3/19	8.35 21.46 N/A Average 0.02 0.02 0.17 U 0.24 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	52 52 N/A No. of Samples 6 6 6 6 6 6 25 6 25	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27 U 81.30	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14 11/5/15 1/24/18	7.60 17.80 N/A Low 0.00 0.00 0.03 U 0.21 U 2.20	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16 4/3/19 3/23/17	8.35 21.46 N/A Average 0.02 0.02 0.17 U 0.24 U 0.24 U 5.58	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	52 52 N/A No. of Samples 6 6 6 6 6 6 25 6 25 6 25 6	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27 U 0.27 U 81.30 U	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14 11/5/15 1/24/18 11/5/15	7.60 17.80 N/A Low 0.00 0.00 0.03 U 0.21 U 2.20 U	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16 4/3/19 3/23/17 4/3/19	8.35 21.46 N/A Average 0.02 0.02 0.17 U 0.24 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	52 52 N/A No. of Samples 6 6 6 6 6 25 6 25 6 25 6 6 25 6 6	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27 U 0.27 U 81.30 U U	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14 11/5/15 1/24/18 11/5/15 11/2/15	7.60 17.80 N/A Low 0.00 0.00 0.03 U 0.21 U 0.21 U 2.20 U U U	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16 4/3/19 3/23/17 4/3/19 4/3/19	8.35 21.46 N/A Average 0.02 0.02 0.17 U 0.24 U 0.24 U 5.58 U U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	52 52 N/A No. of Samples 6 6 6 6 6 25 6 25 6 25 6 6 25 6 6 6 6 6	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27 U 0.27 U 81.30 U	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14 11/5/15 1/24/18 11/5/15 11/25/15 11/5/15	7.60 17.80 N/A Low 0.00 0.00 0.03 U 0.21 U 2.20 U	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16 4/3/19 3/23/17 4/3/19 3/23/17	8.35 21.46 N/A Average 0.02 0.02 0.17 U 0.24 U 0.24 U 5.58	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	52 52 N/A No. of Samples 6 6 6 6 6 25 6 25 6 25 6 6 25 6 6 6 6 6	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27 U 0.27 U 81.30 U U	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14 11/5/15 1/24/18 11/5/15 11/5/15 11/5/15 11/5/15	7.60 17.80 N/A Low 0.00 0.00 0.03 U 0.21 U 0.21 U 2.20 U U U	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19	8.35 21.46 N/A Average 0.02 0.02 0.17 U 0.24 U 0.24 U 5.58 U U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	52 52 N/A No. of Samples 6 6 6 6 6 25 6 25 6 25 6 6 25 6 6 6 6 6	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27 U 0.27 U 81.30 U U 0.13	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14 11/5/15 1/24/18 11/5/15 11/25/15 11/5/15	7.60 17.80 N/A Low 0.00 0.03 U 0.21 U 2.20 U U U 0.05	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16 4/3/19 3/23/17 4/3/19 3/23/17	8.35 21.46 N/A Average 0.02 0.02 0.17 U 0.24 U 0.24 U 5.58 U U U 0.08	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Baryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	52 52 N/A No. of Samples 6 6 6 6 6 25 6 25 6 6 25 6 6 6 6 6 6 6	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27 U 0.27 U 81.30 U U 0.13 U 0.13	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14 11/5/15 1/24/18 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15	7.60 17.80 N/A Low 0.00 0.03 U 0.21 U 0.21 U 2.20 U U U 0.05 U	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19 8/22/14	8.35 21.46 N/A Average 0.02 0.02 0.17 U 0.24 U 0.24 U 5.58 U U U 0.08 U U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved	52 52 N/A No. of Samples 6 6 6 6 6 25 6 6 25 6 6 6 6 6 6 6 6 6 6	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27 U 0.27 U 81.30 U U 0.13 U 0.13 8.50	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14 11/5/15 1/24/18 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15	7.60 17.80 N/A Low 0.00 0.03 U 0.21 U 2.20 U U 0.21 U 0.21 U 0.21 U 0.21 U 0.21 U 0.21 U 0.05 U U 0.05 U 0.06 1.40	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19 8/22/14 9/10/19	8.35 21.46 N/A Average 0.02 0.02 0.17 U 0.24 U 0.24 U 5.58 U U U 0.08 U 0.08 1.97	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	52 52 N/A No. of Samples 6 6 6 6 6 25 6 6 25 6 6 6 6 6 6 6 6 6 6	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27 U 0.27 U 81.30 U U 0.13 U 0.13	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14 11/5/15 1/24/18 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15	7.60 17.80 N/A Low 0.00 0.03 U 0.21 U 2.20 U 2.20 U U 0.05 U 0.06	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19 3/23/17	8.35 21.46 N/A Average 0.02 0.02 0.17 U 0.24 U 0.24 U 5.58 U U U 0.08 U 0.08	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	52 52 N/A No. of Samples 6 6 6 6 6 25 6 6 6 6 6 6 6 6 6 6 6 6 6	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27 U 0.27 U 81.30 U 0.13 U 0.13 0.13 8.50 0.03 U	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14 11/5/15 1/24/18 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/24/18 8/22/14 11/5/15	7.60 17.80 N/A Low 0.00 0.03 U 0.21 U 0.21 U 2.20 U U 0.05 U 0.05 U 0.06 1.40 0.01 U	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19 8/22/14 9/10/19 4/6/16 4/3/19	8.35 21.46 N/A Average 0.02 0.02 0.17 U 0.24 U 0.24 U U 5.58 U U U 0.08 U 0.08 1.97 0.02 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
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pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Cadmium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved	52 52 N/A No. of Samples 6 6 6 6 25 6 6 6 6 6 6 6 6 6 6 6 6 6 6	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27 U 0.27 U 81.30 U 0.13 U 0.13 8.50 0.03 U 0.16 0.01	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14 11/5/15 1/24/18 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/24/18 8/22/14 11/5/15 1/24/18 8/22/14	7.60 17.80 N/A Low 0.00 0.03 U 0.21 U 2.20 U U 0.21 U 0.21 U 0.21 U 0.21 U 0.21 U 0.21 U 0.21 U 0.05 U 0.05 U 0.06 1.40 0.01 U 0.01 U 0.07 0.00	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19 8/22/14 9/10/19 4/6/16 4/3/19 8/22/14	8.35 21.46 N/A Average 0.02 0.02 0.17 U 0.24 U 0.24 U U 0.24 U 0.24 U 0.08 1.97 0.02 U 0.08 1.97 0.02 U 0.12 0.01	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved	52 52 N/A No. of Samples 6 6 6 6 25 6 6 6 6 6 6 6 6 6 6 6 6 6 6	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27 U 0.27 U 81.30 U 0.13 U 0.13 8.50 0.03 U 0.13 8.50 0.03 U 0.16 0.01 29.20	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14 11/5/15 1/24/18 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/24/18 8/22/14 11/5/15 1/24/18 8/22/14	7.60 17.80 N/A Low 0.00 0.03 U 0.21 U 2.20 U U 0.21 U 0.21 U 0.21 U 0.21 U 0.20 U 0.05 U 0.06 1.40 0.01 U 0.01 U 0.07 0.00 0.20	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19 8/22/14 9/10/19 4/6/16 4/3/19 8/22/14 9/2/14 8/22/14	8.35 21.46 N/A Average 0.02 0.02 0.17 U 0.24 U 0.24 U U 0.24 U 0.24 U 0.24 U 0.24 U 0.24 U 0.24 U 0.08 1.97 0.02 U 0.02 U 0.02 0.02 0.02 0.03 0.02 0.02 0.02 0.02	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	52 52 N/A No. of Samples 6 6 6 6 25 6 6 6 6 6 6 6 6 6 6 6 6 6 6	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27 U 0.27 U 81.30 U 0.13 0.13 8.50 0.03 U 0.13 8.50 0.03 U 0.16 0.01 29.20 U	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14 11/5/15 1/24/18 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/24/18 8/22/14 11/5/15 1/24/18 8/22/14 11/5/15	7.60 17.80 N/A Low 0.00 0.03 U 0.21 U 2.20 U U 0.21 U 0.21 U 0.21 U 0.21 U 0.21 U 0.21 U 0.05 U 0.05 U 0.06 1.40 0.01 U 0.01 U 0.07 0.00 0.20 U U	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19 8/22/14 9/10/19 4/6/16 4/3/19 8/22/14 8/22/14 8/22/14	8.35 21.46 N/A Average 0.02 0.02 0.02 0.17 U 0.24 U 0.24 U U 0.24 U U 0.24 U U 0.24 U U 0.24 U U 0.08 1.97 0.02 U 0.02 U 0.02 U 0.02 U 0.03 1.97 0.02 U 0.02 U 0.02 0.02 0.02 0.17 U 0.24 U 0.02 0.02 0.02 0.17 U 0.24 U 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	52 52 N/A No. of Samples 6 6 6 6 25 6 6 6 6 6 6 6 6 6 6 6 6 6 6	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27 U 81.30 U 0.27 U 0.27 U 0.13 8.50 0.03 U 0.13 8.50 0.03 U 0.16 0.01 29.20 U 13.40	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/24/18 8/22/14 11/5/15 1/24/18 8/22/14 11/5/15 1/24/18 8/22/14 11/5/15 1/24/18	7.60 17.80 N/A Low 0.00 0.03 U 0.21 U 2.20 U U 0.21 U 0.21 U 0.21 U 0.21 U 0.21 U 0.20 U 0.05 U 0.06 1.40 0.01 U 0.01 U 0.07 0.00 0.20 U 0.20 U 0.02 U 0.02 U 0.03	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19 8/22/14 9/10/19 4/6/16 4/3/19 8/22/14 8/22/14 8/22/14 10/18/16	8.35 21.46 N/A Average 0.02 0.02 0.02 0.17 U 0.24 U 0.24 U U 0.24 U U 0.24 U 0.24 U 0.24 U 0.24 U 0.24 U 0.08 1.97 0.02 U 0.02 U 0.02 U 0.02 U 0.02 0.02 0	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Selenium, dissolved Sodium, dissolved	52 52 N/A No. of Samples 6 6 6 6 25 6 6 6 6 6 6 6 6 6 6 6 6 6 6	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27 U 0.27 U 81.30 U 0.13 U 0.13 8.50 0.03 U 0.13 8.50 0.03 U 0.16 0.01 29.20 U 13.40 297.00	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14 11/5/15 1/24/18 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 1/24/18 8/22/14 11/5/15 1/24/18 8/22/14 11/5/15 1/24/18 8/22/14 11/5/15 1/24/18	7.60 17.80 N/A Low 0.00 0.03 U 0.21 U 2.20 U U 0.21 U 0.21 U 0.21 U 0.21 U 0.21 U 0.21 U 0.21 U 0.21 U 0.20 U 0.05 U 0.06 1.40 0.01 U 0.07 0.00 0.20 U 0.02 U 0.05 U 0 U 0.05 U 0 U 0.05 U 0 U 0.05 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19 8/22/14 9/10/19 4/6/16 4/3/19 8/22/14 8/22/14 10/18/16 4/3/19 4/6/16 5/14/18	8.35 21.46 N/A Average 0.02 0.02 0.17 U 0.24 U 0.24 U U 0.24 U U 0.24 U 0.24 U 0.24 U 0.24 U 0.24 U 0.24 U 0.24 U 0.02 U 0.02 U 0.02 U 0.02 0.02 0.02 0	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Boron, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Copper, dissolved Lithium, dissolved Lead, dissolved Lithium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved	52 52 N/A No. of Samples 6 6 6 6 25 6 6 6 6 6 6 6 6 6 6 6 6 6 6	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27 U 0.27 U 81.30 U 0.13 U 0.13 8.50 0.03 U 0.13 8.50 0.03 U 0.16 0.01 29.20 U 13.40 297.00 0.57	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 1/24/18 8/22/14 11/5/15 1/24/18 8/22/14 11/5/15 1/24/18 4/6/16 11/5/15 8/5/19 1/14/19	7.60 17.80 N/A 0.00 0.00 0.03 U 0.21 U 2.20 U U 2.20 U U 0.05 U 0.06 1.40 0.01 U 0.05 U 0.06 1.40 0.01 U 0.07 0.00 0.20 U 11.30 258.0 0.45	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19 8/22/14 9/10/19 4/6/16 4/3/19 8/22/14 8/22/14 10/18/16 4/3/19 4/6/16 5/14/18	8.35 21.46 N/A Average 0.02 0.02 0.17 U 0.24 U 0.24 U 5.58 U U 0.24 U 0.24 U 0.24 U 0.24 U 0.24 U 0.24 U 0.24 U 0.08 U 0.08 1.97 0.02 U 0.02 U 0.02 0.12 0.02 0.02 0.12 0.02 0.02 0.17 0.02 0.17 0.02 0.17 0.02 0.17 0.02 0.17 0.02 0.17 0.02 0.17 0.02 0.17 0.02 0.17 0.02 0.02 0.17 0.02 0.17 0.02 0.17 0.02 0.02 0.17 0.02 0.02 0.17 0.02 0.02 0.17 0.02 0.02 0.17 0.02 0.02 0.17 0.02 0.02 0.02 0.17 0.02 0.02 0.02 0.02 0.02 0.02 0.17 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.0	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Selenium, dissolved Sodium, dissolved	52 52 N/A No. of Samples 6 6 6 6 25 6 6 6 6 6 6 6 6 6 6 6 6 6 6	8.90 23.40 N/A High 0.04 0.05 0.25 U 0.27 U 0.27 U 81.30 U 0.13 U 0.13 8.50 0.03 U 0.13 8.50 0.03 U 0.16 0.01 29.20 U 13.40 297.00	3/16/16 7/17/17 N/A Date 1/24/18 8/22/14 4/3/19 11/5/15 8/22/14 11/5/15 1/24/18 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 11/5/15 1/24/18 8/22/14 11/5/15 1/24/18 8/22/14 11/5/15 1/24/18 8/22/14 11/5/15 1/24/18	7.60 17.80 N/A Low 0.00 0.03 U 0.21 U 2.20 U U 0.21 U 0.21 U 0.21 U 0.21 U 0.21 U 0.21 U 0.21 U 0.21 U 0.20 U 0.05 U 0.06 1.40 0.01 U 0.07 0.00 0.20 U 0.02 U 0.05 U 0 U 0.05 U 0 U 0.05 U 0 U 0.05 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U	4/6/16 12/3/15 N/A Date 8/22/14 3/23/17 1/24/18 4/3/19 4/6/16 4/3/19 3/23/17 4/3/19 3/23/17 4/3/19 8/22/14 9/10/19 4/6/16 4/3/19 8/22/14 8/22/14 10/18/16 4/3/19 4/6/16 5/14/18	8.35 21.46 N/A Average 0.02 0.02 0.17 U 0.24 U 0.24 U U 0.24 U U 0.24 U 0.24 U 0.24 U 0.24 U 0.24 U 0.24 U 0.24 U 0.02 U 0.02 U 0.02 U 0.02 0.02 0.02 0	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 21: WSW-3 Annual A-Groove Aquifer

DAUB & ASSOCIATES, INC. TO THE AND THE AND THE AREA



		22. W3W-4 AI		•			
Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples						
Bicarbonate as CaCO3	26	523.00	9/10/19	439.0	8/27/15	476.0	mg/l
Carbonate as CaCO3	27	537.00	9/25/14	49.00	10/18/16	80.43	mg/l
Total Alkalinity as	27	925.00	9/25/14	511.0	6/9/15	553.3	mg/l
Bromide	3	0.73	4/3/19	0.09	8/25/14	0.39	mg/l
Cation-Anion Balance	26	3.70	1/24/18	-7.30	9/25/14	-2.32	%
Sum of Anions	27	22.00	9/25/14	13.00	6/9/15	13.70	meq/l
Sum of Cations	27	19.00	9/25/14	12.00	8/27/15	13.07	meq/l
Chemical Oxygen	4	53.00	8/25/14	13.00	4/6/16	31.25	mg/l
Chloride	27	50.60	11/14/18	14.90	10/10/19	19.44	mg/l
Conductivity, Lab	27	2,810	9/25/14	1,130	4/6/16	1,279	µmhos
Fluoride	27	19.70	11/14/18	5.11	9/25/14	16.70	mg/l
Hardness as CaCO3	27	67.00	1/24/18	11.00	3/5/19	14.75	mg/l
Nitrate as N, dissolved	2	0.03	8/25/14	0.00	9/25/14	0.02	mg/l
Nitrate/Nitrite as N,	2	0.08	8/25/14	0.00	9/25/14	0.04	mg/l
Nitrite as N, dissolved	2	0.05	8/25/14	0.01	9/25/14	0.03	mg/l
Nitrogen, Ammonia	7	2.28	9/25/14	0.46	3/23/17	0.75	mg/l
Nitrogen, Organic	4	0.40	4/3/19	0.00	9/25/14	0.25	mg/l
Nitrogen, Total Kjeldahl	7	1.00	9/25/14	0.30	3/23/17	0.67	mg/l
pH, lab	27	11.70	9/25/14	8.70	10/18/16	8.91	units
Phosphate, total	7	0.28	9/25/14	0.06	4/3/19	0.12	mg/l
Phosphorus, total	7	0.09	9/25/14	0.02	4/3/19	0.04	mg/l
SAR in Water	27	44.00	9/25/14	15.00	1/24/18	34.81	none
Sulfate	27	130.00	9/25/14	20.00	4/6/16	57.38	mg/l
Sulfide	7	4.10	4/3/19	0.10	9/25/14	2.41	mg/l
Total Dissolved Solids	27	1,210.00	9/25/14	700.0	8/27/15	740.5	mg/l
Conductivity, Field	53	1,558	10/10/19	1,073	4/6/16	1,241	µmhos
pH, Field	53	8.90	3/16/16	7.70	8/27/15	8.42	units
Temperature (°C), Field	53	29.00	6/20/16	13.80	4/19/17	21.24	(°C)
Water Level, Field	N/A	N/A	N/A	N/A	N/A	N/A	Ft.
······································	,			/			
Parameters	No. of	High	Date	Low	Date	Average	Units
Metals	Samples	0				Ŭ	
Aluminum, dissolved	7	0.42	9/25/14	0.42	9/25/14	0.42	mg/l
Arsenic, dissolved	7	0.01	9/25/14	0.00	4/6/16	0.00	mg/l
Barium, dissolved	7	0.23	4/6/16	0.02	9/25/14	0.09	mg/l
Beryllium, dissolved	7	U	1/24/18	U	4/3/19	U	mg/l
Boron, dissolved	27	0.44	9/25/14	0.18	8/27/15	0.22	mg/l
Cadmium, dissolved	7	Ŭ	1/24/18	U	4/3/19	U	mg/l
Calcium, dissolved	27	24.70	1/24/18	1.90	3/23/17	3.13	mg/l
Chromium, dissolved	7	U	1/24/18	U	4/3/19	U	mg/l
Copper, dissolved	7	Ŭ	1/24/18	Ŭ	4/3/19	Ŭ	mg/l
Iron, dissolved	7	1.63	4/3/19	0.02	3/23/17	0.37	mg/l
Lead, dissolved	7	U	1/24/18	U	4/3/19	<u> </u>	mg/l
Lithium, dissolved	7	0.13	11/5/15	0.07	4/6/16	0.11	mg/l
Magnesium, dissolved	27	2.00	8/27/15	0.30	9/25/14	1.69	mg/l
Manganese, dissolved	7	0.01	1/24/18	0.00	1/24/18	0.01	mg/l
Mercury, dissolved	7	<u> </u>	1/24/18	U	4/3/19	U	mg/l
Molybdenum, dissolved	7	0.04	1/24/18	0.02	9/25/14	0.03	mg/l
Nickel, dissolved	7	0.00	8/25/14	U U	1/24/18	U U	mg/l
Potassium, dissolved	27	18.30	9/25/14	0.20	5/14/18	1.30	mg/l
Solonium dissolved	7	0.0004	0/00/17	0.20	4/2/10	0.0004	1119/1

Table 22: WSW-4 Annual A-Groove Aquifer

DAUB & ASSOCIATES, INC. 2013#347 Proto Tomp Martin

7

27

27

27

7

7

0.0004

172.00

416.00

7.97

U

0.02

Selenium, dissolved

Silica, dissolved

Zinc, dissolved

Sodium, dissolved

Strontium, dissolved

Vanadium, dissolved

mg/l

mg/l

mg/l

mg/l

mg/l

mg/l

0.0004

17.59

287.41

0.70

U

0.02

3/23/17

9/25/14

9/25/14

1/24/18

1/24/18

9/25/14

0.0003

8.90

266.00

0.39

U

0.02

4/3/19

3/5/19

4/3/19

9/25/14

1/24/18

10/18/17



Deveneteve	No. of	Literate	Dete		Data	A	Linita
Parameters Wet Chemistry	No. of	High	Date	Low	Date	Average	Units
Bicarbonate as CaCO3	Samples 179	762.00	3/25/94	144.00	7/30/90	609.29	ma/l
Carbonate as CaCO3	179	406.00	5/21/97	25.00	7/1/97	101.25	mg/l mg/l
Total Alkalinity as	179	830.00	7/31/91	200.00	7/30/90	710.70	mg/l
Bromide	28	10.00	6/26/91	0.06	7/1/97	1.15	mg/l
Cation-Anion Balance	174	24.10	4/16/02	-9.10	6/14/17	0.06	%
Sum of Anions	173	18.00	6/14/17	4.29	7/30/90	15.69	meq/l
Sum of Cations	173	18.20	4/11/06	4.38	7/30/90	15.51	meg/l
Chemical Oxygen	30	420.00	6/25/07	30.00	3/30/90	81.41	mg/l
Chloride	178	70.50	6/14/17	6.00	9/27/90	15.47	mg/l
Conductivity, Lab	171	1,850.00	4/24/91	1,000.00	5/20/93	1,392.39	μmhos
Fluoride	173	38.20	2/24/92	0.20	9/29/94	23.80	mg/l
Hardness as CaCO3	177	65.00	9/27/90	0.00	7/30/90	11.14	mg/l
Nitrate as N, dissolved	30	16.50	6/25/07	0.02	6/26/91	1.01	mg/l
Nitrate/Nitrite as N,	30	17.00	6/25/07	0.02	6/26/91	1.07	mg/l
Nitrite as N, dissolved	31	0.55	6/25/07	0.01	3/30/90	0.13	mg/l
Nitrogen, Ammonia	30	9.23	12/26/18	0.06	7/30/90	1.85	mg/l
Nitrogen, Organic	29	29.10	6/26/91	0.10	6/15/92	5.08	mg/l
Nitrogen, Total Kjeldahl	30	30.10	6/26/91	0.80	6/15/92	6.81	mg/l
pH, lab	174	9.80	12/20/94	8.10	10/28/02	8.89	units
Phosphate, total	26	155.00	6/25/07	0.06	7/18/95	13.46	mg/l
Phosphorus, total	31	2.90	9/27/90	0.02	7/2/98	0.17	mg/l
SAR in Water	149	158.62	6/26/90	16.50	9/27/90	48.70	none
Sulfate	177	140.00	10/25/90	0.00	8/16/17	20.10	mg/l
Sulfide	26	2.10	7/30/90	0.02	7/27/01	0.45	mg/l
Total Dissolved Solids	179	1,100.00	10/21/89	446.00	7/30/90	865.41	mg/l
Conductivity, Field	196	1,683.00	6/5/12	925.00	8/2/06	1,342.65	µmhos
pH, Field	196	10.12	7/29/09	7.60	3/10/15	9.05	units
Temperature (°C), Field	102	19.00	7/31/91	7.60	4/1/06	12.46	(°C)
		-					
Temperature (°C), Field Water Level, Field	102 86	19.00 500.70	7/31/91 6/25/14	7.60 432.37	4/1/06 6/25/14	12.46 473.35	(°C) Ft.
Temperature (°C), Field Water Level, Field Parameters	102 86 No. of	19.00	7/31/91	7.60	4/1/06	12.46	(°C)
Temperature (°C), Field Water Level, Field Parameters Metals	102 86 No. of Samples	19.00 500.70 High	7/31/91 6/25/14 Date	7.60 432.37 Low	4/1/06 6/25/14 Date	12.46 473.35 Average	(°C) Ft. Units
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved	102 86 No. of Samples 30	19.00 500.70 High 1.54	7/31/91 6/25/14 Date 3/30/90	7.60 432.37 Low 0.04	4/1/06 6/25/14 Date 7/1/97	12.46 473.35 Average 0.24	(°C) Ft. Units mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved	102 86 No. of Samples 30 30	19.00 500.70 High 1.54 0.30	7/31/91 6/25/14 Date 3/30/90 10/21/89	7.60 432.37 Low 0.04 0.0005	4/1/06 6/25/14 Date 7/1/97 12/3/12	12.46 473.35 Average 0.24 0.02	(°C) Ft. Units mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	102 86 No. of Samples 30 30 30	19.00 500.70 High 1.54 0.30 0.43	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06	7.60 432.37 Low 0.04 0.0005 0.02	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18	12.46 473.35 Average 0.24 0.02 0.18	(°C) Ft. Units mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	102 86 No. of Samples 30 30 30 29	19.00 500.70 High 1.54 0.30 0.43 0.01	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91	7.60 432.37 Low 0.04 0.0005 0.02 0.01	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91	12.46 473.35 Average 0.24 0.02 0.18 0.01	(°C) Ft. Units mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	102 86 No. of Samples 30 30 30 29 174	19.00 500.70 High 1.54 0.30 0.43 0.01 3.30	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91 3/25/91	7.60 432.37 Low 0.04 0.0005 0.02 0.01 0.35	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91 1/27/04	12.46 473.35 Average 0.24 0.02 0.18 0.01 0.68	(°C) Ft. Units mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	102 86 No. of Samples 30 30 30 29 174 29	19.00 500.70 High 1.54 0.30 0.43 0.01 3.30 0.01	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91 3/25/91 10/21/89	7.60 432.37 Low 0.04 0.0005 0.02 0.01 0.35 0.01	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91 1/27/04 10/21/89	12.46 473.35 Average 0.24 0.02 0.18 0.01 0.68 0.01	(°C) Ft. Units mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	102 86 No. of Samples 30 30 30 29 174 29 171	19.00 500.70 High 1.54 0.30 0.43 0.01 3.30 0.01 13.00	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91 3/25/91 10/21/89 9/27/90	7.60 432.37 Low 0.04 0.0005 0.02 0.01 0.35 0.01 0.50	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91 1/27/04 10/21/89 3/16/10	12.46 473.35 Average 0.24 0.02 0.18 0.01 0.68 0.01 2.30	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	102 86 No. of Samples 30 30 30 29 174 29 171 29	19.00 500.70 High 1.54 0.30 0.43 0.01 3.30 0.01 13.00 0.01	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91 3/25/91 10/21/89 9/27/90 6/26/91	7.60 432.37 Low 0.04 0.0005 0.02 0.01 0.35 0.01 0.50 0.01	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91 1/27/04 10/21/89 3/16/10 6/26/91	12.46 473.35 Average 0.24 0.02 0.18 0.01 0.68 0.01 2.30 0.01	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	102 86 No. of Samples 30 30 29 174 29 171 29 30	19.00 500.70 High 1.54 0.30 0.43 0.01 3.30 0.01 13.00 0.01 0.02	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91 3/25/91 10/21/89 9/27/90 6/26/91 6/25/07	7.60 432.37 Low 0.04 0.0005 0.02 0.01 0.35 0.01 0.50 0.01 0.01	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91 1/27/04 10/21/89 3/16/10 6/26/91 3/30/90	12.46 473.35 Average 0.24 0.02 0.18 0.01 0.68 0.01 2.30 0.01 0.01	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	102 86 No. of Samples 30 30 29 174 29 171 29 30 30 30	19.00 500.70 High 1.54 0.30 0.43 0.01 3.30 0.01 13.00 0.01 13.00 0.01 0.02 0.93	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91 3/25/91 10/21/89 9/27/90 6/26/91 6/25/07 3/30/90	7.60 432.37 Low 0.04 0.0005 0.02 0.01 0.35 0.01 0.50 0.01 0.01 0.01	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91 1/27/04 10/21/89 3/16/10 6/26/91 3/30/90 7/7/99	12.46 473.35 Average 0.24 0.02 0.18 0.01 0.68 0.01 2.30 0.01 0.01 0.01 0.17	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	102 86 No. of Samples 30 30 29 174 29 171 29 30 30 30 29	19.00 500.70 High 1.54 0.30 0.43 0.01 3.30 0.01 13.00 0.01 13.00 0.01 0.02 0.93 0.10	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91 3/25/91 10/21/89 9/27/90 6/26/91 6/25/07 3/30/90 10/21/89	7.60 432.37 Low 0.04 0.0005 0.02 0.01 0.35 0.01 0.50 0.01 0.01 0.01 0.02	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91 1/27/04 10/21/89 3/16/10 6/26/91 3/30/90 7/7/99 6/26/91	12.46 473.35 Average 0.24 0.02 0.18 0.01 0.68 0.01 2.30 0.01 0.01 0.01 0.17 0.06	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	102 86 No. of Samples 30 30 29 174 29 171 29 30 30 30 29 29	19.00 500.70 High 1.54 0.30 0.43 0.01 3.30 0.01 13.00 0.01 13.00 0.01 0.02 0.93 0.10 0.20	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91 3/25/91 10/21/89 9/27/90 6/26/91 6/25/07 3/30/90 10/21/89 12/27/90	7.60 432.37 Low 0.04 0.0005 0.02 0.01 0.35 0.01 0.50 0.01 0.01 0.01 0.01 0.02 0.06	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91 1/27/04 10/21/89 3/16/10 6/26/91 3/30/90 7/7/99 6/26/91 3/30/90	12.46 473.35 Average 0.24 0.02 0.18 0.01 0.68 0.01 2.30 0.01 0.01 0.01 0.17 0.06 0.13	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved	102 86 No. of Samples 30 30 29 174 29 171 29 30 30 30 29 29 29 29 173	19.00 500.70 High 1.54 0.30 0.43 0.01 3.30 0.01 13.00 0.01 13.00 0.01 0.02 0.93 0.10 0.20 8.00	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91 3/25/91 10/21/89 9/27/90 6/26/91 6/25/07 3/30/90 10/21/89 12/27/90 9/27/90	7.60 432.37 Low 0.04 0.0005 0.02 0.01 0.35 0.01 0.50 0.01 0.01 0.01 0.01 0.02 0.06 0.30	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91 1/27/04 10/21/89 3/16/10 6/26/91 3/30/90 7/7/99 6/26/91 3/30/90 3/16/10	12.46 473.35 Average 0.24 0.02 0.18 0.01 0.68 0.01 2.30 0.01 0.01 0.01 0.17 0.06 0.13 1.37	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	102 86 No. of Samples 30 30 29 174 29 171 29 30 30 30 29 29	19.00 500.70 High 1.54 0.30 0.43 0.01 3.30 0.01 13.00 0.01 13.00 0.01 0.02 0.93 0.10 0.20	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91 3/25/91 10/21/89 9/27/90 6/26/91 6/25/07 3/30/90 10/21/89 12/27/90	7.60 432.37 Low 0.04 0.0005 0.02 0.01 0.35 0.01 0.50 0.01 0.01 0.01 0.01 0.02 0.06	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91 1/27/04 10/21/89 3/16/10 6/26/91 3/30/90 7/7/99 6/26/91 3/30/90	12.46 473.35 Average 0.24 0.02 0.18 0.01 0.68 0.01 2.30 0.01 0.01 0.01 0.17 0.06 0.13	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	102 86 No. of Samples 30 30 29 174 29 171 29 30 30 30 29 29 29 173 29	19.00 500.70 High 1.54 0.30 0.43 0.01 3.30 0.01 13.00 0.01 13.00 0.01 0.02 0.93 0.10 0.20 8.00 0.07	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91 3/25/91 10/21/89 9/27/90 6/26/91 6/25/07 3/30/90 10/21/89 12/27/90 9/27/90 6/25/07	7.60 432.37 Low 0.04 0.0005 0.02 0.01 0.35 0.01 0.50 0.01 0.01 0.01 0.02 0.06 0.30 0.01	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91 1/27/04 10/21/89 3/16/10 6/26/91 3/30/90 7/7/99 6/26/91 3/30/90 3/16/10 7/1/97	12.46 473.35 Average 0.24 0.02 0.18 0.01 0.68 0.01 2.30 0.01 0.01 0.01 0.01 0.17 0.06 0.13 1.37 0.03	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	102 86 No. of Samples 30 30 29 174 29 171 29 30 30 30 29 29 29 173 29 30	19.00 500.70 High 1.54 0.30 0.43 0.01 3.30 0.01 13.00 0.01 0.02 0.93 0.10 0.20 8.00 0.07 0.001	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91 3/25/91 10/21/89 9/27/90 6/26/91 6/25/07 3/30/90 10/21/89 12/27/90 9/27/90 6/25/07 6/15/92	7.60 432.37 Low 0.04 0.0005 0.02 0.01 0.35 0.01 0.50 0.01 0.01 0.01 0.02 0.06 0.30 0.01 0.01 0.01 0.02	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91 1/27/04 10/21/89 3/16/10 6/26/91 3/30/90 7/7/99 6/26/91 3/30/90 3/16/10 7/1/97 6/26/91	12.46 473.35 Average 0.24 0.02 0.18 0.01 0.68 0.01 2.30 0.01 0.01 0.01 0.01 0.17 0.06 0.13 1.37 0.03 0.0005	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved	102 86 No. of Samples 30 30 29 174 29 171 29 30 30 29 29 29 173 29 30 30 29 29 30 30 29 30 30 29 30 30 29 30 30 30 30 30 30 30 30 30 30 30 30 30	19.00 500.70 High 1.54 0.30 0.43 0.01 3.30 0.01 13.00 0.01 0.02 0.93 0.10 0.20 8.00 0.07 0.001 0.60	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91 3/25/91 10/21/89 9/27/90 6/26/91 6/25/07 3/30/90 10/21/89 12/27/90 9/27/90 6/25/07 6/15/92 10/21/89	7.60 432.37 Low 0.04 0.0005 0.02 0.01 0.35 0.01 0.50 0.01 0.01 0.02 0.06 0.30 0.01 0.001 0.001 0.001	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91 1/27/04 10/21/89 3/16/10 6/26/91 3/30/90 7/7/99 6/26/91 3/30/90 3/16/10 7/1/97 6/26/91 7/27/01 12/3/12 4/27/04	12.46 473.35 Average 0.24 0.02 0.18 0.01 0.68 0.01 2.30 0.01 0.01 0.01 0.01 0.17 0.06 0.13 1.37 0.03 0.0005 0.14	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved	102 86 No. of Samples 30 30 29 174 29 171 29 30 30 29 29 29 173 29 30 30 29 29 29 30 30 29 30 30 30 30 30 30 30 30 30 30 30 30 30	19.00 500.70 High 1.54 0.30 0.43 0.01 3.30 0.01 13.00 0.01 13.00 0.01 0.02 0.93 0.10 0.20 8.00 0.07 0.001 0.60 0.03	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91 3/25/91 10/21/89 9/27/90 6/26/91 6/25/07 3/30/90 10/21/89 12/27/90 9/27/90 6/25/07 6/15/92 10/21/89 10/21/89	7.60 432.37 Low 0.04 0.0005 0.02 0.01 0.35 0.01 0.50 0.01 0.01 0.02 0.06 0.30 0.01 0.001 0.001 0.01 0.01	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91 1/27/04 10/21/89 3/16/10 6/26/91 3/30/90 7/7/99 6/26/91 3/30/90 3/16/10 7/1/97 6/26/91 7/27/01 12/3/12	12.46 473.35 Average 0.24 0.02 0.18 0.01 0.68 0.01 2.30 0.01 0.01 0.01 0.17 0.06 0.13 1.37 0.03 0.0005 0.14 0.02	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved	102 86 No. of Samples 30 30 29 174 29 171 29 30 30 29 29 29 173 29 30 29 30 29 29 30 30 29 30 30 29 30 30 29 30 30 29 30 30 30 30 30 30 30 30 30 30 30 30 30	19.00 500.70 High 1.54 0.30 0.43 0.01 3.30 0.01 13.00 0.01 0.02 0.93 0.10 0.20 8.00 0.07 0.001 0.60 0.03 13.00 0.00 35.90	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91 3/25/91 10/21/89 9/27/90 6/26/91 6/25/07 3/30/90 10/21/89 12/27/90 9/27/90 6/25/07 6/15/92 10/21/89 10/21/89 10/21/89 10/21/89	7.60 432.37 Low 0.04 0.0005 0.02 0.01 0.35 0.01 0.50 0.01 0.01 0.02 0.06 0.30 0.01 0.001 0.001 0.001 0.01 0.01 0	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91 1/27/04 10/21/89 3/16/10 6/26/91 3/30/90 7/7/99 6/26/91 3/30/90 3/16/10 7/1/97 6/26/91 7/27/01 12/3/12 4/27/04 12/26/18 6/11/19	12.46 473.35 Average 0.24 0.02 0.18 0.01 0.68 0.01 2.30 0.01 0.01 0.01 0.01 0.17 0.06 0.13 1.37 0.03 0.0005 0.14 0.02 1.31 U 17.07	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	102 86 No. of Samples 30 30 29 174 29 171 29 30 30 29 29 29 173 29 30 29 29 30 30 29 30 30 29 30 30 29 30 30 29 173 30 30 29 173 29 30 173 29 30 174	19.00 500.70 High 1.54 0.30 0.43 0.01 3.30 0.01 13.00 0.01 0.02 0.93 0.10 0.20 8.00 0.07 0.001 0.60 0.03 13.00 0.00 35.90 408.00	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91 3/25/91 10/21/89 9/27/90 6/26/91 6/25/07 3/30/90 10/21/89 12/27/90 9/27/90 6/25/07 6/15/92 10/21/89 10/21/89 10/21/89 10/21/89 10/21/89 4/11/06	7.60 432.37 Low 0.04 0.0005 0.02 0.01 0.35 0.01 0.50 0.01 0.01 0.02 0.06 0.30 0.01 0.02 0.06 0.30 0.01 0.001 0.001 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.02 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.01 0.02 0.01 0.02 0.01 0.01 0.02 0.01 0.01 0.02 0.01 0.01 0.02 0.01 0.02 0.01 0.01 0.02 0.01 0.01 0.02 0.01 0.02 0.01 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.01 0.02 0.01 0.01 0.02 0.01 0.	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91 1/27/04 10/21/89 3/16/10 6/26/91 3/30/90 7/7/99 6/26/91 3/30/90 3/16/10 7/1/97 6/26/91 7/27/01 12/3/12 4/27/04 12/26/18 6/11/19 12/27/90	12.46 473.35 Average 0.24 0.02 0.18 0.01 0.68 0.01 2.30 0.01 0.01 0.01 0.01 0.17 0.06 0.13 1.37 0.03 0.0005 0.14 0.02 1.31 U 17.07 349.91	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Magnesium, dissolved Manganese, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved Strontium, dissolved	102 86 No. of Samples 30 30 29 174 29 171 29 30 30 29 29 173 29 30 29 29 173 29 30 30 29 30 30 29 30 173 30 173 30 174 174	19.00 500.70 High 1.54 0.30 0.43 0.01 3.30 0.01 13.00 0.01 0.02 0.93 0.10 0.20 8.00 0.07 0.001 0.60 0.03 13.00 0.00 35.90 408.00 0.83	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91 3/25/91 10/21/89 9/27/90 6/26/91 6/25/07 3/30/90 10/21/89 12/27/90 9/27/90 6/25/07 6/15/92 10/21/89 10/21/89 10/21/89 10/21/89 10/21/89 4/11/06 3/14/12	7.60 432.37 0.04 0.0005 0.02 0.01 0.35 0.01 0.50 0.01 0.01 0.01 0.02 0.06 0.30 0.01 0.001 0.001 0.001 0.01 0.01 0	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91 1/27/04 10/21/89 3/16/10 6/26/91 3/30/90 7/7/99 6/26/91 3/30/90 3/16/10 7/1/97 6/26/91 7/27/01 12/3/12 4/27/04 12/26/18 6/11/19 12/27/90 10/21/89	12.46 473.35 Average 0.24 0.02 0.18 0.01 0.68 0.01 2.30 0.01 0.01 0.17 0.06 0.13 1.37 0.03 0.0005 0.14 0.02 1.31 U 17.07 349.91 0.48	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved	102 86 No. of Samples 30 30 29 174 29 171 29 30 30 29 29 29 173 29 30 29 29 30 30 29 30 30 29 30 30 29 30 30 29 173 30 30 29 173 29 30 173 29 30 174	19.00 500.70 High 1.54 0.30 0.43 0.01 3.30 0.01 13.00 0.01 0.02 0.93 0.10 0.20 8.00 0.07 0.001 0.60 0.03 13.00 0.00 35.90 408.00	7/31/91 6/25/14 Date 3/30/90 10/21/89 8/2/06 6/26/91 3/25/91 10/21/89 9/27/90 6/26/91 6/25/07 3/30/90 10/21/89 12/27/90 9/27/90 6/25/07 6/15/92 10/21/89 10/21/89 10/21/89 10/21/89 10/21/89 4/11/06	7.60 432.37 0.04 0.0005 0.02 0.01 0.35 0.01 0.50 0.01 0.01 0.01 0.02 0.06 0.30 0.01 0.02 0.06 0.30 0.01 0.01 0.001 0.01 0.01 0.01 0.0	4/1/06 6/25/14 Date 7/1/97 12/3/12 12/26/18 6/26/91 1/27/04 10/21/89 3/16/10 6/26/91 3/30/90 7/7/99 6/26/91 3/30/90 3/16/10 7/1/97 6/26/91 7/27/01 12/3/12 4/27/04 12/26/18 6/11/19 12/27/90	12.46 473.35 Average 0.24 0.02 0.18 0.01 0.68 0.01 2.30 0.01 0.01 0.01 0.01 0.17 0.06 0.13 1.37 0.03 0.0005 0.14 0.02 1.31 U 17.07 349.91	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 23: 89-1 Annual B-Groove Aquifer

DAUB & ASSOCIATES, INC. 2013# Jacob Contraction



Devenuetava	No. of	Llink	Dete	Low	Data	A.v.o.v.o.v.o	Linite
Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples	1 700 00	0/14/04	410.00	3/23/05	770.45	
Bicarbonate as CaCO3	118 118	1,790.00	9/14/04 3/23/05	419.00			mg/l
Carbonate as CaCO3 Total Alkalinity as	118	419.00 1,790.00	9/14/04	4.00 680.00	<u>6/16/97</u> 6/15/14	<u>88.41</u> 855.14	mg/l
Bromide	13	1.50	7/21/92		1/29/91	0.44	mg/l
Cation-Anion Balance	117	36.90	8/10/08	0.10 -33.50	9/14/04	-1.42	mg/l %
Sum of Anions	108	36.90			6/26/02	18.88	
Sum of Cations	108		9/14/04	15.00	11/23/10		meq/l
Chemical Oxygen	20	<u>39.50</u> 210.00	8/10/08 9/15/07	<u>11.10</u> 10.00	8/14/95	<u>18.24</u> 75.00	meg/l
Chloride	118	293.00	6/14/08	9.75	1/16/18	21.52	mg/l
Conductivity, Lab	115	2,200.00	5/16/07	1,280.00	7/21/92	1,590.12	mg/l µmhos
Fluoride	118	98.00	3/24/99	9.00	12/11/01	23.15	
Hardness as CaCO3	114	47.00	10/9/19	9.00	10/25/90	14.99	mg/l
Nitrate as N, dissolved	25	0.27	6/24/04	0.04	1/29/91	0.11	mg/l mg/l
Nitrate/Nitrite as N,	25	0.27	6/24/04	0.04	1/29/91	0.11	mg/l
	25	0.27	8/16/94	0.05	1/29/91	0.12	
Nitrite as N, dissolved	25	10.90		0.01	6/28/06		mg/l
Nitrogen, Ammonia	24		8/16/96	0.83		1.66 3.70	mg/l
Nitrogen, Organic	24	12.00 13.00	9/15/07 9/15/07		<u>1/29/91</u> 8/14/95	4.37	mg/l
Nitrogen, Total Kjeldahl	115		4/24/91	0.50 7.40	6/16/97	4.37 8.69	mg/l
<u>pH, lab</u>		9.00 155.00	6/28/06		8/10/08		units
Phosphate, total	20 23			0.09 0.02		8.70 0.29	mg/l
Phosphorus, total SAR in Water	109	3.63	8/1/90		<u>6/28/06</u> 4/24/91		mg/l
		198.04	10/25/90	0.08		48.53 49.26	none
Sulfate	74	333.00	1/20/92	0.60	<u>9/29/97</u> 6/28/06	49.20	mg/l
Sulfide	<u>18</u> 116	6.21	8/1/90	0.03			mg/l
Total Dissolved Solids		1,490.00	8/10/08	813.00	11/23/10	1,014.48	mg/l
Conductivity, Field	176 176	2,200.00	5/16/07 12/16/02	1,135.00	6/16/97	1,548.07	<u>µmhos</u>
<u>pH, Field</u> Temperature (°C), Field	117	<u>10.60</u> 19.70	5/1/02	7.00 8.00	<u>10/9/19</u> 12/1/04	<u>8.69</u> 12.34	units (°C)
Water Level, Field	98	547.40	6/14/11	507.30	1/15/16	530.43	Ft.
Waler Lever, Fleiu	90	547.40	0/14/11	507.50	1/13/10	530.45	Γί.
_				Law	. .	•	Units
Daramotore	No of	High	Data		L)ato	Avorado	
Parameters Metals	No. of	High	Date	Low	Date	Average	Units
Metals	Samples			_		•	
Metals Aluminum, dissolved	Samples 25	9.47	6/16/97	0.04	6/14/00	1.73	mg/l
Metals Aluminum, dissolved Arsenic, dissolved	Samples 25 25	9.47 0.02	6/16/97 8/1/90	0.04	6/14/00 11/27/12	1.73 0.0035	mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	Samples 25 25 25	9.47 0.02 0.96	6/16/97 8/1/90 6/16/97	0.04 0.0003 0.03	6/14/00 11/27/12 8/8/90	1.73 0.0035 0.36	mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	Samples 25 25 25 25 25	9.47 0.02 0.96 U	6/16/97 8/1/90 6/16/97 9/21/10	0.04 0.0003 0.03 U	6/14/00 11/27/12 8/8/90 11/27/12	1.73 0.0035 0.36 U	mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	Samples 25 25 25 25 25 119	9.47 0.02 0.96 U 0.93	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04	0.04 0.0003 0.03 U 0.31	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94	1.73 0.0035 0.36 U 0.73	mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	Samples 25 25 25 25 25 119 25	9.47 0.02 0.96 U 0.93 0.03	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04 7/21/93	0.04 0.0003 0.03 U 0.31 0.03	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94 7/21/93	1.73 0.0035 0.36 U 0.73 0.03	mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	Samples 25 25 25 25 119 25 119 25 119	9.47 0.02 0.96 U 0.93 0.03 15.00	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04 7/21/93 10/9/19	0.04 0.0003 0.03 U 0.31 0.03 0.80	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94 7/21/93 12/12/08	1.73 0.0035 0.36 U 0.73 0.03 2.50	mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	Samples 25 25 25 25 119 25 119 25 119 25	9.47 0.02 0.96 U 0.93 0.03 15.00 U	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04 7/21/93 10/9/19 9/21/10	0.04 0.0003 0.03 U 0.31 0.03 0.80 U	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94 7/21/93 12/12/08 11/27/12	1.73 0.0035 0.36 U 0.73 0.03 2.50 U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	Samples 25 25 25 25 119 25 119 25 25 25	9.47 0.02 0.96 U 0.93 0.03 15.00 U 0.40	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04 7/21/93 10/9/19 9/21/10 7/31/91	0.04 0.0003 0.03 U 0.31 0.03 0.80 U 0.01	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94 7/21/93 12/12/08 11/27/12 6/24/04	1.73 0.0035 0.36 U 0.73 0.03 2.50 U 0.21	mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	Samples 25 25 25 25 119 25 119 25 25 25 25	9.47 0.02 0.96 U 0.93 0.03 15.00 U 0.40 12.10	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04 7/21/93 10/9/19 9/21/10 7/31/91 6/16/97	0.04 0.0003 0.03 U 0.31 0.03 0.80 U 0.01 0.01	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94 7/21/93 12/12/08 11/27/12 6/24/04 6/16/05	1.73 0.0035 0.36 U 0.73 0.03 2.50 U 0.21 1.65	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	Samples 25 25 25 25 119 25 119 25 25 25 25 25	9.47 0.02 0.96 U 0.93 0.03 15.00 U 0.40 12.10 0.07	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04 7/21/93 10/9/19 9/21/10 7/31/91 6/16/97 6/16/97	0.04 0.0003 0.03 U 0.31 0.03 0.80 U 0.01 0.01 0.04	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94 7/21/93 12/12/08 11/27/12 6/24/04 6/16/05 7/21/92	1.73 0.0035 0.36 U 0.73 0.03 2.50 U 0.21 1.65 0.06	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	Samples 25 25 25 25 119 25 119 25 25 25 25 25 25 25 24	9.47 0.02 0.96 U 0.93 0.03 15.00 U 0.40 12.10 0.07 0.15	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04 7/21/93 10/9/19 9/21/10 7/31/91 6/16/97 6/16/97 6/9/99	0.04 0.0003 0.03 U 0.31 0.03 0.80 U 0.01 0.01 0.01 0.04 0.04	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94 7/21/93 12/12/08 11/27/12 6/24/04 6/16/05 7/21/92 7/21/93	1.73 0.0035 0.36 U 0.73 0.03 2.50 U 0.21 1.65 0.06 0.13	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	Samples 25 25 25 25 119 25 119 25 25 25 25 25 25 25 24 119	9.47 0.02 0.96 U 0.93 0.03 15.00 U 0.40 12.10 0.07 0.15 8.00	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04 7/21/93 10/9/19 9/21/10 7/31/91 6/16/97 6/16/97 6/9/99 10/30/91	0.04 0.0003 0.03 U 0.31 0.03 0.80 U 0.01 0.01 0.01 0.04 0.04 0.90	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94 7/21/93 12/12/08 11/27/12 6/24/04 6/16/05 7/21/92 7/21/93 12/12/08	1.73 0.0035 0.36 U 0.73 0.03 2.50 U 0.21 1.65 0.06 0.13 2.20	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	Samples 25 25 25 25 119 25 119 25 25 25 25 25 25 25 25 25 25 25 25 25 24 119 24	9.47 0.02 0.96 U 0.93 0.03 15.00 U 0.40 12.10 0.07 0.15 8.00 0.08	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04 7/21/93 10/9/19 9/21/10 7/31/91 6/16/97 6/16/97 6/9/99 10/30/91 6/16/97	0.04 0.0003 0.03 U 0.31 0.03 0.80 U 0.01 0.01 0.04 0.04 0.04 0.90 0.01	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94 7/21/93 12/12/08 11/27/12 6/24/04 6/16/05 7/21/92 7/21/93 12/12/08 6/28/06	1.73 0.0035 0.36 U 0.73 0.03 2.50 U 0.21 1.65 0.06 0.13 2.20 0.02	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved	Samples 25 25 25 25 119 25 119 25 25 25 25 25 25 25 25 25 25 25 24 119 24 25	9.47 0.02 0.96 U 0.93 0.03 15.00 U 0.40 12.10 0.07 0.15 8.00 0.08 0.02	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04 7/21/93 10/9/19 9/21/10 7/31/91 6/16/97 6/16/97 6/9/99 10/30/91 6/16/97 7/31/91	0.04 0.0003 0.03 U 0.31 0.03 0.80 U 0.01 0.01 0.04 0.04 0.04 0.90 0.01 0.001 0.0002	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94 7/21/93 12/12/08 11/27/12 6/24/04 6/16/05 7/21/92 7/21/93 12/12/08 6/28/06 8/14/95	1.73 0.0035 0.36 U 0.73 0.03 2.50 U 0.21 1.65 0.06 0.13 2.20 0.02 0.01	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved	Samples 25 25 25 25 119 25 25 25 25 25 25 25 25 25 25 25 25 25 25 24 119 24 25 25	9.47 0.02 0.96 U 0.93 0.03 15.00 U 0.40 12.10 0.07 0.15 8.00 0.08 0.02 0.14	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04 7/21/93 10/9/19 9/21/10 7/31/91 6/16/97 6/16/97 6/9/99 10/30/91 6/16/97 7/31/91 8/1/90	0.04 0.0003 0.03 U 0.31 0.03 0.80 U 0.01 0.04 0.04 0.04 0.90 0.01 0.04 0.90 0.01 0.0002 0.02	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94 7/21/93 12/12/08 11/27/12 6/24/04 6/16/05 7/21/92 7/21/93 12/12/08 6/28/06 8/14/95 8/16/96	1.73 0.0035 0.36 U 0.73 0.03 2.50 U 0.21 1.65 0.06 0.13 2.20 0.02 0.02 0.01 0.07	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved	Samples 25 25 25 25 119 25 119 25	9.47 0.02 0.96 U 0.93 0.03 15.00 U 0.40 12.10 0.07 0.15 8.00 0.08 0.02 0.14 0.02	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04 7/21/93 10/9/19 9/21/10 7/31/91 6/16/97 6/16/97 6/9/99 10/30/91 6/16/97 7/31/91 8/1/90 1/29/91	0.04 0.0003 0.03 U 0.31 0.03 0.80 U 0.01 0.01 0.04 0.04 0.90 0.01 0.04 0.90 0.01 0.0002 0.02 0.02 0.01	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94 7/21/93 12/12/08 11/27/12 6/24/04 6/16/05 7/21/92 7/21/93 12/12/08 6/28/06 8/14/95 8/16/96 9/21/10	1.73 0.0035 0.36 U 0.73 0.03 2.50 U 0.21 1.65 0.06 0.13 2.20 0.02 0.01 0.07 0.02	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Potassium, dissolved	Samples 25 25 25 25 119 25 119 25 25 25 25 25 25 24 119 24 25 25 25 25 25 25 25 25 25 25 25 25 25	9.47 0.02 0.96 U 0.93 0.03 15.00 U 0.40 12.10 0.07 0.15 8.00 0.08 0.02 0.14 0.02 12.00	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04 7/21/93 10/9/19 9/21/10 7/31/91 6/16/97 6/16/97 6/9/99 10/30/91 6/16/97 7/31/91 8/1/90 1/29/91 7/31/91	0.04 0.0003 0.03 U 0.31 0.03 0.80 U 0.01 0.01 0.04 0.90 0.01 0.04 0.90 0.01 0.002 0.02 0.02 0.01 1.00	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94 7/21/93 12/12/08 11/27/12 6/24/04 6/16/05 7/21/92 7/21/93 12/12/08 6/28/06 8/14/95 8/16/96 9/21/10 5/23/94	1.73 0.0035 0.36 U 0.73 0.03 2.50 U 0.21 1.65 0.06 0.13 2.20 0.02 0.01 0.07 0.02 1.70	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	Samples 25 25 25 119 25 119 25	9.47 0.02 0.96 U 0.93 0.03 15.00 U 0.40 12.10 0.07 0.15 8.00 0.08 0.02 0.14 0.02 12.00 0.001	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04 7/21/93 10/9/19 9/21/10 7/31/91 6/16/97 6/16/97 6/9/99 10/30/91 6/16/97 7/31/91 8/1/90 1/29/91 7/31/91 8/8/90	0.04 0.0003 0.03 U 0.31 0.03 0.80 U 0.01 0.04 0.04 0.90 0.01 0.04 0.90 0.01 0.0002 0.02 0.02 0.01 1.00 U	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94 7/21/93 12/12/08 11/27/12 6/24/04 6/16/05 7/21/92 7/21/93 12/12/08 6/28/06 8/14/95 8/16/96 9/21/10 5/23/94 11/27/12	1.73 0.0035 0.36 U 0.73 0.03 2.50 U 0.21 1.65 0.06 0.13 2.20 0.02 0.02 0.01 0.07 0.02 1.70 U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Silica, dissolved	Samples 25 25 25 119 25 119 25 119 25 119 25 119	9.47 0.02 0.96 U 0.93 0.03 15.00 U 0.40 12.10 0.07 0.15 8.00 0.08 0.02 0.14 0.02 12.00 0.001 122.00	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04 7/21/93 10/9/19 9/21/10 7/31/91 6/16/97 6/16/97 6/16/97 6/16/97 7/31/91 8/1/90 1/29/91 7/31/91 8/8/90 10/30/91	0.04 0.0003 0.03 U 0.31 0.03 0.80 U 0.01 0.01 0.04 0.90 0.01 0.04 0.90 0.01 0.002 0.02 0.02 0.02 0.01 1.00 U 0.30	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94 7/21/93 12/12/08 11/27/12 6/24/04 6/16/05 7/21/92 7/21/93 12/12/08 6/28/06 8/14/95 8/16/96 9/21/10 5/23/94 11/27/12 4/24/91	1.73 0.0035 0.36 U 0.73 0.03 2.50 U 0.21 1.65 0.06 0.13 2.20 0.02 0.01 0.07 0.02 1.70 U 19.87	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved	Samples 25 25 25 119 25 119 25 119 25 119 25 119 25 119 25 119 119 119	9.47 0.02 0.96 U 0.93 0.03 15.00 U 0.40 12.10 0.07 0.15 8.00 0.08 0.02 0.14 0.02 12.00 0.001 122.00 882.00	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04 7/21/93 10/9/19 9/21/10 7/31/91 6/16/97 6/16/97 6/9/99 10/30/91 6/16/97 7/31/91 8/1/90 1/29/91 7/31/91 8/8/90 10/30/91 8/10/08	0.04 0.0003 0.03 U 0.31 0.03 0.80 U 0.01 0.04 0.04 0.90 0.01 0.04 0.90 0.01 0.002 0.02 0.02 0.02 0.01 1.00 U 0.30 247.00	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94 7/21/93 12/12/08 11/27/12 6/24/04 6/16/05 7/21/92 7/21/93 12/12/08 6/28/06 8/14/95 8/16/96 9/21/10 5/23/94 11/27/12 4/24/91 11/23/10	1.73 0.0035 0.36 U 0.73 0.03 2.50 U 0.21 1.65 0.06 0.13 2.20 0.02 0.02 0.01 0.07 0.02 1.70 U 19.87 409.02	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved Silica, dissolved Strontium, dissolved	Samples 25 25 25 119 25 119 25 119 25 119 25 119 25 119 119 119	9.47 0.02 0.96 U 0.93 0.03 15.00 U 0.40 12.10 0.07 0.15 8.00 0.08 0.02 0.14 0.02 12.00 0.01 122.00 882.00 1.30	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04 7/21/93 10/9/19 9/21/10 7/31/91 6/16/97 6/16/97 6/16/97 6/16/97 7/31/91 8/1/90 1/29/91 7/31/91 8/1/90 10/30/91 8/10/08 4/20/92	0.04 0.0003 0.03 U 0.31 0.03 0.80 U 0.01 0.01 0.04 0.90 0.01 0.04 0.90 0.01 0.002 0.02 0.02 0.02 0.01 1.00 U 0.30 247.00 0.06	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94 7/21/93 12/12/08 11/27/12 6/24/04 6/16/05 7/21/92 7/21/93 12/12/08 6/28/06 8/14/95 8/16/96 9/21/10 5/23/94 11/27/12 4/24/91 11/23/10 6/14/00	1.73 0.0035 0.36 U 0.73 0.03 2.50 U 0.21 1.65 0.06 0.13 2.20 0.02 0.01 0.07 0.02 1.70 U 19.87 409.02 0.68	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved	Samples 25 25 25 119 25 119 25 119 25 119 25 119 25 119 25 119 119 119	9.47 0.02 0.96 U 0.93 0.03 15.00 U 0.40 12.10 0.07 0.15 8.00 0.08 0.02 0.14 0.02 12.00 0.001 122.00 882.00	6/16/97 8/1/90 6/16/97 9/21/10 3/18/04 7/21/93 10/9/19 9/21/10 7/31/91 6/16/97 6/16/97 6/9/99 10/30/91 6/16/97 7/31/91 8/1/90 1/29/91 7/31/91 8/8/90 10/30/91 8/10/08	0.04 0.0003 0.03 U 0.31 0.03 0.80 U 0.01 0.04 0.04 0.90 0.01 0.04 0.90 0.01 0.002 0.02 0.02 0.02 0.01 1.00 U 0.30 247.00	6/14/00 11/27/12 8/8/90 11/27/12 2/21/94 7/21/93 12/12/08 11/27/12 6/24/04 6/16/05 7/21/92 7/21/93 12/12/08 6/28/06 8/14/95 8/16/96 9/21/10 5/23/94 11/27/12 4/24/91 11/23/10	1.73 0.0035 0.36 U 0.73 0.03 2.50 U 0.21 1.65 0.06 0.13 2.20 0.02 0.02 0.01 0.07 0.02 1.70 U 19.87 409.02	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 24: 90-3 Annual B-Groove Aquifer

DAUB & ASSOCIATES, INC. 2013 Frank Contraction



Devenenteve		ا الا مرام	Data	Law	Data	A	L lusida
Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples	1 010 00	0/7/07	000.00	2/16/07	<u> </u>	
Bicarbonate as CaCO3	136	1,010.00	8/7/97 8/21/03	283.00	5/26/00	638.36	mg/l
Carbonate as CaCO3	<u>136</u> 136	581.00 1,160.00	8/21/03	8.00 364.00	2/16/07	133.02 767.32	mg/l
Total Alkalinity as Bromide	130		9/2/98			0.49	mg/l
Cation-Anion Balance	136	3.00 42.30	3/17/09	0.10 -36.30	<u>5/18/06</u> 8/7/97	-1.45	mg/l %
Sum of Anions	136	30.80	8/7/97	<u>-36.30</u> 9.10	2/16/07	17.34	
Sum of Cations	136	43.20	3/17/09	9.10 6.70	2/16/07	16.88	meq/l
Chemical Oxygen	136	43.20	8/25/05	10.00	9/14/00	148.00	meg/l
Chloride	136	249.00	8/7/97	10.00 U	9/25/02	24.88	mg/l mg/l
Conductivity, Lab	136	3,980.00	8/7/97	769.00	2/16/07	1,509.54	
Fluoride	136	56.00	3/25/98	12.80	6/14/08	24.12	µmhos
Hardness as CaCO3	135	48.00	4/19/01	12.80	2/16/07	11.10	mg/l
Nitrate as N, dissolved	18	0.53	9/25/02	0.03	8/30/08	0.20	mg/l mg/l
Nitrate/Nitrite as N,	18	0.53	9/25/02	0.03	5/18/06	0.20	mg/l
Nitrite as N, dissolved	18	0.02	5/18/06	0.02	5/18/06	0.02	
	16	5.00	9/29/97	0.02	9/29/06	1.87	mg/l
Nitrogen, Ammonia Nitrogen, Organic	16	28.00	9/29/97 9/25/02	0.72	9/29/06	8.02	mg/l
Nitrogen, Total Kjeldahl	16	28.00	9/25/02	1.40	<u>9/22/99</u> 9/15/97	<u>8.02</u> 9.79	mg/l
	135	9.60	7/29/09	7.00	12/12/08	<u>9.79</u> 8.94	mg/l units
<u>pH, lab</u>	135	155.00				24.26	
Phosphate, total	14		5/18/06	0.08 0.03	<u>9/15/97</u> 9/15/97	0.13	mg/l
Phosphorus, total	135	0.51	9/24/03 11/23/10	19.80	4/19/01		mg/l
SAR in Water		148.00 70.00	10/30/03		<u>4/19/01</u> 5/15/17	58.44 12.30	none
Sulfate	134			0.00	9/29/06		mg/l
Sulfide	14 136	1.50	9/24/03	0.03		0.33	mg/l
Total Dissolved Solids		1,510.00	3/17/09	453.00	2/16/07	936.71	mg/l
Conductivity, Field	149	3,980.00	8/7/97 7/29/09	1,310.00	2/8/00	1,528.27	<u>µmhos</u>
<u>pH, Field</u> Temperature (°C), Field	149 101	10.69	6/1/07	6.35	<u>8/30/08</u> 12/1/03	<u>8.92</u> 12.56	units (°C)
Water Level, Field	101	16.20 539.90	3/20/15	8.60 493.67	7/1/01	521.56	Ft.
Waler Lever, Fleiu	100	559.90	3/20/13	493.07	7/1/01	521.50	Γί.
Parameters	No. of	High	Date	Low	Date	Average	Units
					Duic		Onits
		nign	Buto				
Metals	Samples	-		0.03			ma/l
Metals Aluminum, dissolved	Samples 18	7.96	9/25/02	0.03	11/16/07	1.06	mg/l
Metals Aluminum, dissolved Arsenic, dissolved	Samples 18 18	7.96 0.002	9/25/02 9/29/97	0.0002	11/16/07 11/27/12	1.06 0.0009	mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	Samples 18 18 18	7.96 0.002 1.26	9/25/02 9/29/97 9/25/02	0.0002	11/16/07 11/27/12 9/29/06	1.06 0.0009 0.31	mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	Samples 18 18 18 18 18	7.96 0.002 1.26 U	9/25/02 9/29/97 9/25/02 9/21/10	0.0002 0.13 U	11/16/07 11/27/12 9/29/06 11/27/12	1.06 0.0009 0.31 U	mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	Samples 18 18 18 18 18 135	7.96 0.002 1.26 U 1.67	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09	0.0002 0.13 U 0.22	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01	1.06 0.0009 0.31 U 0.82	mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	Samples 18 18 18 18 135 135 18	7.96 0.002 1.26 U 1.67 U	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09 9/21/10	0.0002 0.13 U 0.22 U	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01 11/27/12	1.06 0.0009 0.31 U 0.82 U	mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	Samples 18 18 18 18 135 18 135 18	7.96 0.002 1.26 U 1.67 U 8.80	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09 9/21/10 12/12/08	0.0002 0.13 U 0.22 U 0.20	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01 11/27/12 11/23/10	1.06 0.0009 0.31 U 0.82 U 2.25	mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	Samples 18 18 18 18 135 18 135 18 135 18 135 18 134	7.96 0.002 1.26 U 1.67 U 8.80 0.02	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09 9/21/10 12/12/08 9/29/97	0.0002 0.13 U 0.22 U 0.20 0.02	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01 11/27/12 11/23/10 9/29/97	1.06 0.0009 0.31 U 0.82 U 2.25 0.02	mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	Samples 18 18 18 135 18 135 18 135 18 134 18 134 18	7.96 0.002 1.26 U 1.67 U 8.80 0.02 0.38	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09 9/21/10 12/12/08 9/29/97 9/25/02	0.0002 0.13 U 0.22 U 0.20 0.02 0.01	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01 11/27/12 11/23/10 9/29/97 9/24/03	1.06 0.0009 0.31 U 0.82 U 2.25 0.02 0.09	mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	Samples 18 18 18 18 135 18 134 18 134 18 134 18 18	7.96 0.002 1.26 U 1.67 U 8.80 0.02 0.38 29.40	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09 9/21/10 12/12/08 9/29/97 9/25/02 9/25/02	0.0002 0.13 U 0.22 U 0.20 0.02 0.02 0.01 0.03	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01 11/27/12 11/23/10 9/29/97 9/24/03 3/14/08	1.06 0.0009 0.31 U 0.82 U 2.25 0.02 0.09 2.66	mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	Samples 18 18 18 135 18 135 18 134 18 18 134 18 18 18 134 18 18 18 18 18 18	7.96 0.002 1.26 U 1.67 U 8.80 0.02 0.38 29.40 0.88	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09 9/21/10 12/12/08 9/29/97 9/25/02 9/25/02 9/25/02	0.0002 0.13 U 0.22 U 0.20 0.02 0.01 0.03 0.05	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01 11/27/12 11/23/10 9/29/97 9/24/03 3/14/08 9/21/10	1.06 0.0009 0.31 U 0.82 U 2.25 0.02 0.09 2.66 0.36	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	Samples 18 18 18 135 18 134 18 134 18 18 134 18 18 18 18 18 18 18 18 18 18 18 18 18 18	7.96 0.002 1.26 U 1.67 U 8.80 0.02 0.38 29.40 0.88 0.20	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09 9/21/10 12/12/08 9/29/97 9/25/02 9/25/02 9/25/02 9/25/02	0.0002 0.13 U 0.22 U 0.20 0.02 0.01 0.03 0.05 0.12	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01 11/27/12 11/23/10 9/29/97 9/24/03 3/14/08 9/21/10 8/30/08	1.06 0.0009 0.31 U 0.82 U 2.25 0.02 0.09 2.66 0.36 0.16	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	Samples 18 18 18 135 18 134 18 134 18 134 18 18 18 134 18 18 18 18 18 18 18 18 18 18 18 18 18 18 18 18 18 18 18	7.96 0.002 1.26 U 1.67 U 8.80 0.02 0.38 29.40 0.88 0.20 9.40	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09 9/21/10 12/12/08 9/29/97 9/25/02 9/25/02 9/25/02 9/25/02 9/2/98 4/19/01	0.0002 0.13 U 0.22 U 0.20 0.02 0.01 0.03 0.05 0.12 0.20	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01 11/27/12 11/23/10 9/29/97 9/24/03 3/14/08 9/21/10 8/30/08 9/29/06	1.06 0.0009 0.31 U 0.82 U 2.25 0.02 0.09 2.66 0.36 0.16 1.34	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	Samples 18 18 18 18 135 18 134 18 18 134 18 18 18 134 18 18 18 18 18 17	7.96 0.002 1.26 U 1.67 U 8.80 0.02 0.38 29.40 0.88 0.20 9.40 0.18	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09 9/21/10 12/12/08 9/29/97 9/25/02 9/25/02 9/25/02 9/2/98 4/19/01 9/25/02	0.0002 0.13 U 0.22 U 0.20 0.02 0.01 0.03 0.05 0.12 0.20 0.01	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01 11/27/12 11/23/10 9/29/97 9/24/03 3/14/08 9/21/10 8/30/08 9/29/06 9/14/00	1.06 0.0009 0.31 U 0.82 U 2.25 0.02 0.09 2.66 0.36 0.16	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved	Samples 18 18 18 135 135 18 134 18 18 18 18 18 18 18 18 18 18	7.96 0.002 1.26 U 1.67 U 8.80 0.02 0.38 29.40 0.88 0.20 9.40 0.18 0.0006	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09 9/21/10 12/12/08 9/29/97 9/25/02 9/25/02 9/25/02 9/25/02 9/2/98 4/19/01 9/25/02 9/2/98	0.0002 0.13 U 0.22 U 0.20 0.02 0.01 0.03 0.05 0.12 0.20 0.01 U	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01 11/27/12 11/23/10 9/29/97 9/24/03 3/14/08 9/21/10 8/30/08 9/29/06 9/14/00 11/27/12	1.06 0.0009 0.31 U 0.82 U 2.25 0.02 0.09 2.66 0.36 0.16 1.34 0.04 U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved	Samples 18 18 18 135 135 18 134 134 18 18 18 18 18 18 134 18 18 18 18 18 18 18 18 18 18	7.96 0.002 1.26 U 1.67 U 8.80 0.02 0.38 29.40 0.88 0.20 9.40 0.18 0.0006 0.06	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09 9/21/10 12/12/08 9/29/97 9/25/02 9/25/02 9/25/02 9/2/98 4/19/01 9/25/02 9/2/98 9/29/97	0.0002 0.13 U 0.22 U 0.20 0.02 0.01 0.03 0.05 0.12 0.20 0.01 U 0.01	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01 11/27/12 11/23/10 9/29/97 9/24/03 3/14/08 9/21/10 8/30/08 9/29/06 9/14/00 11/27/12 9/14/04	1.06 0.0009 0.31 U 0.82 U 2.25 0.02 0.09 2.66 0.36 0.16 1.34 0.04 U 0.03	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved	Samples 18 18 18 135 134 134 18 18 18 18 18 18 134 18 18 134 18 18 18 134 18 18 18 18 18 18 18 18 18 18	7.96 0.002 1.26 U 1.67 U 8.80 0.02 0.38 29.40 0.88 0.20 9.40 0.18 0.0006 0.06 0.05	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09 9/21/10 12/12/08 9/29/97 9/25/02 9/25/02 9/25/02 9/25/02 9/2/98 4/19/01 9/25/02 9/2/98 9/29/97 9/29/06	0.0002 0.13 U 0.22 U 0.20 0.02 0.01 0.03 0.05 0.12 0.20 0.01 U 0.01 0.02	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01 11/27/12 11/23/10 9/29/97 9/24/03 3/14/08 9/21/10 8/30/08 9/29/06 9/14/00 11/27/12 9/14/04 9/25/02	1.06 0.0009 0.31 U 0.82 U 2.25 0.02 0.09 2.66 0.36 0.16 1.34 0.04 U 0.03 0.03	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Potassium, dissolved	Samples 18 18 18 18 135 18 134 18 18 18 134 18 18 18 18 18 18 18 18 18 134 18 134 17 18 134 17 18 134 134	7.96 0.002 1.26 U 1.67 U 8.80 0.02 0.38 29.40 0.88 0.20 9.40 0.18 0.0006 0.06 0.05 12.00	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09 9/21/10 12/12/08 9/29/97 9/25/02 9/25/02 9/25/02 9/25/02 9/2/98 4/19/01 9/25/02 9/2/98 9/29/97 9/29/06 8/7/97	0.0002 0.13 U 0.22 U 0.20 0.02 0.02 0.01 0.20 0.12 0.20 0.01 U 0.01 0.02 1.20	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01 11/27/12 11/23/10 9/29/97 9/24/03 3/14/08 9/21/10 8/30/08 9/21/10 8/30/08 9/29/06 9/14/00 11/27/12 9/14/04 9/25/02 6/14/01	1.06 0.0009 0.31 U 0.82 U 2.25 0.02 0.09 2.66 0.36 0.16 1.34 0.04 U 0.03 0.03 3.09	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	Samples 18 18 18 135 18 134 18 134 18 18 18 18 18 18 18 18 18 134 18 134 18 134 17 18 134 17 18 134 134 134 134 134 134 134 134 136 18	7.96 0.002 1.26 U 1.67 U 8.80 0.02 0.38 29.40 0.88 0.20 9.40 0.18 0.20 9.40 0.18 0.0006 0.05 12.00 U	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09 9/21/10 12/12/08 9/29/97 9/25/02 9/25/02 9/25/02 9/25/02 9/2/98 4/19/01 9/25/02 9/2/98 9/29/97 9/29/97 9/29/06 8/7/97 9/21/10	0.0002 0.13 U 0.22 U 0.20 0.02 0.01 0.03 0.05 0.12 0.20 0.01 U 0.01 0.02 1.20 U	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01 11/27/12 11/23/10 9/29/97 9/24/03 3/14/08 9/21/10 8/30/08 9/29/06 9/14/00 11/27/12 9/14/04 9/25/02 6/14/01 11/27/12	1.06 0.0009 0.31 U 0.82 U 2.25 0.02 0.09 2.66 0.36 0.16 1.34 0.04 U 0.03 0.03 3.09 U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Silica, dissolved	Samples 18 18 18 135 18 134 18 134 18 18 18 18 18 18 134 18 134 18 134 18 134 134 134 134 134 134 134 134 134 134 134 134 134 134 136	7.96 0.002 1.26 U 1.67 U 8.80 0.02 0.38 29.40 0.88 0.20 9.40 0.18 0.0006 0.06 0.05 12.00 U 50.20	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09 9/21/10 12/12/08 9/29/97 9/25/02 9/25/02 9/25/02 9/25/02 9/2/98 4/19/01 9/25/02 9/2/98 9/29/97 9/29/97 9/29/06 8/7/97 9/21/10 9/25/02	0.0002 0.13 U 0.22 U 0.20 0.02 0.01 0.03 0.05 0.12 0.20 0.01 U 0.01 0.02 1.20 U 1.40	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01 11/27/12 11/23/10 9/29/97 9/24/03 3/14/08 9/21/10 8/30/08 9/29/06 9/14/00 11/27/12 9/14/04 9/25/02 6/14/01 11/27/12 10/26/04	1.06 0.0009 0.31 U 0.82 U 2.25 0.02 0.09 2.66 0.36 0.16 1.34 0.04 U 0.03 0.03 3.09 U 9.75	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved	Samples 18 18 18 135 18 134 18 134 18 18 18 18 18 18 134 18 134 18 134 18 134 134 134 134 134 134 134 136 136 136	7.96 0.002 1.26 U 1.67 U 8.80 0.02 0.38 29.40 0.88 0.20 9.40 0.18 0.20 9.40 0.18 0.0006 0.06 0.05 12.00 U 50.20 973.00	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09 9/21/10 12/12/08 9/29/97 9/25/02 9/25/02 9/25/02 9/2/98 4/19/01 9/25/02 9/2/98 9/29/97 9/29/97 9/29/96 8/7/97 9/21/10 9/25/02 3/17/09	0.0002 0.13 U 0.22 U 0.20 0.02 0.02 0.01 0.03 0.05 0.12 0.20 0.01 U 0.01 0.02 1.20 U 1.40 152.00	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01 11/27/12 11/23/10 9/29/97 9/24/03 3/14/08 9/21/10 8/30/08 9/29/06 9/14/00 11/27/12 9/14/04 9/25/02 6/14/01 11/27/12 10/26/04 2/16/07	1.06 0.0009 0.31 U 0.82 U 2.25 0.02 0.09 2.66 0.36 0.16 1.34 0.04 U 0.03 0.03 3.09 U 9.75 375.47	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved Silica, dissolved Strontium, dissolved	Samples 18 18 18 135 18 134 18 134 18 18 18 18 18 18 134 18 134 18 134 136 136 136 136 136 136 135	7.96 0.002 1.26 U 1.67 U 8.80 0.02 0.38 29.40 0.88 0.20 9.40 0.18 0.20 9.40 0.18 0.0006 0.05 12.00 U 50.20 973.00 1.58	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09 9/21/10 12/12/08 9/29/97 9/25/02 9/25/02 9/25/02 9/2/98 4/19/01 9/25/02 9/2/98 9/29/97 9/29/97 9/29/97 9/29/97 9/29/06 8/7/97 9/21/10 9/25/02 3/17/09 9/25/02	0.0002 0.13 U 0.22 U 0.20 0.02 0.02 0.01 0.03 0.05 0.12 0.20 0.01 U 0.01 0.02 1.20 U 1.40 152.00 0.14	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01 11/27/12 11/23/10 9/29/97 9/24/03 3/14/08 9/21/10 8/30/08 9/29/06 9/14/00 11/27/12 9/14/04 9/25/02 6/14/01 11/27/12 10/26/04 2/16/07 2/16/07	1.06 0.0009 0.31 U 0.82 U 2.25 0.02 0.09 2.66 0.36 0.16 1.34 0.04 U 0.03 0.03 3.09 U 9.75 375.47 0.52	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved	Samples 18 18 18 135 18 134 18 134 18 18 18 18 18 18 134 18 134 18 134 18 134 134 134 134 134 134 134 136 136 136	7.96 0.002 1.26 U 1.67 U 8.80 0.02 0.38 29.40 0.88 0.20 9.40 0.18 0.20 9.40 0.18 0.006 0.05 12.00 U 50.20 973.00	9/25/02 9/29/97 9/25/02 9/21/10 3/17/09 9/21/10 12/12/08 9/29/97 9/25/02 9/25/02 9/25/02 9/2/98 4/19/01 9/25/02 9/2/98 9/29/97 9/29/97 9/29/96 8/7/97 9/21/10 9/25/02 3/17/09	0.0002 0.13 U 0.22 U 0.20 0.02 0.02 0.01 0.03 0.05 0.12 0.20 0.01 U 0.01 0.02 1.20 U 1.40 152.00	11/16/07 11/27/12 9/29/06 11/27/12 4/19/01 11/27/12 11/23/10 9/29/97 9/24/03 3/14/08 9/21/10 8/30/08 9/29/06 9/14/00 11/27/12 9/14/04 9/25/02 6/14/01 11/27/12 10/26/04 2/16/07	1.06 0.0009 0.31 U 0.82 U 2.25 0.02 0.09 2.66 0.36 0.16 1.34 0.04 U 0.03 0.03 3.09 U 9.75 375.47	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 25: BG-1 Annual B-Groove Aquifer

DAUB & ASSOCIATES, INC. 2013 Frank Contraction



		; 20. DG-4 Am					
Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples						
Bicarbonate as CaCO3	201	899.00	10/28/02	524.0	9/14/04	687.9	mg/l
Carbonate as CaCO3	201	210.00	7/30/03	16.00	11/21/08	93.54	mg/l
Total Alkalinity as	201	984.00	5/7/18	612.0	4/17/02	778.2	mg/l
Bromide	28	0.10	8/12/04	0.10	8/12/04	0.10	mg/l
Cation-Anion Balance	201	13.40	8/2/06	-2.80	5/7/18	-2.27	%
Sum of Anions	201	22.00	5/7/18	12.60	8/2/06	17.39	meq/l
Sum of Cations	201	19.60	8/22/02	13.60	4/29/10	16.62	meq/l
Chemical Oxygen	28	400.00	8/22/02	10.00	8/2/06	80.08	mg/l
Chloride	201	57.90	8/30/06	2.00	8/2/06	21.47	mg/l
Conductivity, Lab	200	1,920	5/7/18	1,160	8/2/06	1,533	µmhos
Fluoride	201	26.90	12/16/03	2.09	6/6/17	22.23	mg/l
Hardness as CaCO3	200	47.00	9/30/08	5.00	11/27/02	15.04	mg/l
Nitrate as N, dissolved	27	2.06	9/28/06	0.03	11/6/14	1.05	mg/l
Nitrate/Nitrite as N,	27	2.08	9/28/06	0.02	5/18/06	0.59	mg/l
Nitrite as N, dissolved	27	0.21	8/2/06	0.01	5/18/06	0.07	mg/l
Nitrogen, Ammonia	28	1.61	9/30/08	0.59	12/20/07	0.89	mg/l
Nitrogen, Organic	26	27.00	8/22/02	0.50	8/2/06	4.88	mg/l
Nitrogen, Total Kjeldahl	28	28.00	8/22/02	1.00	4/13/16	5.26	mg/l
pH, lab	201	9.20	5/21/09	7.50	8/30/08	8.78	units
Phosphate, total	24	155.00	5/18/06	0.12	8/18/10	43.98	mg/l
Phosphorus, total	28	0.24	12/20/18	0.03	8/2/06	0.07	mg/l
SAR in Water	200	73.30	12/16/02	23.40	9/30/08	42.84	none
Sulfate	199	50.00	9/28/06	0.00	9/2/15	12.06	mg/l
Sulfide	20	0.80	8/22/02	0.03	9/28/06	0.28	mg/l
Total Dissolved Solids	201	1,070	5/7/18	789	8/2/06	921	mg/l
Conductivity, Field	218	2,874	2/10/16	1,101	10/5/06	1,528	μmhos
pH, Field	218	10.01	7/29/09	6.90	11/4/19	8.52	units
Temperature (°C), Field	214	22.70	8/2/16	5.80	1/26/10	12.09	(°C)
Water Level, Field	210	547.26	11/10/10	468.3	7/1/02	506.4	Ft.
						•	
Parameters	No. of	High	Date	Low	Date	Average	Units
Metals	Samples					_	
Aluminum, dissolved	30	0.67	8/21/03	0.03	5/18/06	0.14	mg/l
Arsenic, dissolved	30	0.0009	9/30/08	0.0003	12/20/18	0.0006	mg/l
Barium, dissolved	30	0.14	7/29/09	0.003	7/6/17	0.02	mg/l
Beryllium, dissolved	30	U	8/22/02	U	12/20/18	U	mg/l
Boron, dissolved	202	0.97	7/12/07	0.34	8/21/03	0.72	mg/l
Cadmium, dissolved	30	U	8/22/02	U	12/20/18	U	mg/l
Calcium, dissolved	203	11.70	9/30/08	1.10	12/16/02	2.89	mg/l
Chromium, dissolved	30	0.02	9/28/06	0.02	9/28/06	0.02	mg/l
Copper, dissolved	30	U	8/22/02	U	12/20/18	U	mg/l
Iron, dissolved	30	0.63	9/28/06	0.01	8/12/04	0.13	mg/l
Lead, dissolved	30	0.04	5/6/19	0.04	5/6/19	0.04	mg/l
Lithium, dissolved	30	0.16	12/20/18	0.08	8/21/03	0.14	mg/l
Magnesium, dissolved	202	4.40	9/30/08	0.60	11/27/02	1.90	mg/l
Manganese, dissolved	28	0.19	9/30/08	0.01	3/14/08	0.03	mg/l
Mercury, dissolved	30	0.0004	9/28/06	0.0004	9/28/06	0.0004	mg/l
Molybdenum, dissolved	30	0.12	8/22/02	0.01	8/18/10	0.04	mg/l
Nickel, dissolved	30	0.03	9/30/08	0.01	12/3/12	0.02	mg/l
Potassium, dissolved	203	6.20	7/24/02	0.60	11/21/08	1.62	mg/l
Solonium dissolved	20	0.0001	E/C/10	11	10/00/10	11	

Table 26: BG-4 Annual B-Groove Aquifer

DAUB & ASSOCIATES, INC. DI WE TO THE WORK OF THE MERINE

30

202

203

202

30

30

0.0001

29.30

434.00

0.82

U

0.13

Selenium, dissolved

Silica, dissolved

Zinc, dissolved

Sodium, dissolved

Strontium, dissolved

Vanadium, dissolved

mg/l

mg/l

mg/l

mg/l

mg/l

mg/l

U

14.57

368.77

0.48

U

0.03

5/6/19

4/17/02

8/22/02

2/7/17

8/22/02

8/30/08

U

5.50

302.00

0.06

U

0.01

12/20/18

8/21/03

9/11/13

4/27/04

12/20/18

8/22/02



Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples	ingn	Date	LOw	Date	Average	Onits
Bicarbonate as CaCO3	126	3,530.00	9/4/18	447.0	3/22/11	1,001.	mg/l
Carbonate as CaCO3	120	735.00	9/4/18	43.10	2/10/16	154.7	mg/l
Total Alkalinity as	126	4,260.00	9/4/18	670.0	5/14/14	1,156.	
							mg/l
Bromide	13	0.94	7/10/13	0.00	11/10/14	0.47	mg/l
Cation-Anion Balance	126	7.90	10/28/10	-1.10	10/9/13	-2.98	%
Sum of Anions	126	127.00	9/4/18	15.00	5/14/14	31.65	meq/l
Sum of Cations	126	120.00	9/4/18	14.90	5/6/13	29.77	meq/l
Chemical Oxygen	13	320.00	9/22/10	16.00	10/12/15	70.73	mg/l
Chloride	126	1,440.00	9/4/18	14.20	11/30/15	260.6	mg/l
Conductivity, Lab	126	10,300	9/4/18	1,420	1/11/16	2,833	µmhos
Fluoride	126	33.00	8/6/18	9.80	2/23/10	22.52	mg/l
Hardness as CaCO3	126	44.00	10/28/10	11.00	5/6/13	17.65	mg/l
Nitrate as N, dissolved	14	0.07	11/10/14	0.02	10/7/09	0.04	mg/l
Nitrate/Nitrite as N,	14	0.07	11/10/14	0.02	10/7/09	0.04	mg/l
Nitrite as N, dissolved	14	U	10/7/09	0.00	11/10/14	U	mg/l
Nitrogen, Ammonia	14	2.15	5/7/19	0.56	10/7/09	0.96	mg/l
Nitrogen, Organic	14	3.90	9/22/10	0.20	12/13/12	1.13	mg/l
Nitrogen, Total Kjeldahl	14	5.10	9/22/10	0.80	10/12/15	1.99	mg/l
pH, lab	126	9.60	3/22/11	6.10	4/2/19	8.89	units
Phosphate, total	14	155.00	10/7/09	0.06	10/12/15	19.73	mg/l
Phosphorus, total	14	0.65	5/7/19	0.02	10/12/15	0.12	mg/l
SAR in Water	126	240.00	6/4/18	39.20	11/10/10	68.40	none
Sulfate	126	110.00	11/10/10	0.00	11/22/11	29.94	mg/l
Sulfide	14	1.33	8/11/11	0.00	11/10/14	0.57	mg/l
Total Dissolved Solids	126	6,810	9/4/18	829	5/14/14	1,690	mg/l
Conductivity, Field	152	10,410	9/4/18	1,232	6/5/17	2,742	μmhos
pH, Field	150	9.66	2/4/11	6.70	11/4/19	8.61	units
pH, Field Temperature (°C), Field	1 <u>50</u> 152	9.66 21.00	2/4/11 8/18/10	6.70 7.10	11/4/19 2/5/14	8.61 12.44	units (°C)
pH, Field	150	9.66	2/4/11	6.70	11/4/19	8.61	units
pH, Field Temperature (°C), Field Water Level, Field	150 152 145	9.66 21.00 540.40	2/4/11 8/18/10 9/7/14	6.70 7.10 520.1	11/4/19 2/5/14 12/2/19	8.61 12.44 529.4	units (°C) Ft.
pH, Field Temperature (°C), Field Water Level, Field Parameters	150 152 145 No. of	9.66 21.00	2/4/11 8/18/10	6.70 7.10	11/4/19 2/5/14	8.61 12.44	units (°C)
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals	150 152 145 No. of Samples	9.66 21.00 540.40 High	2/4/11 8/18/10 9/7/14 Date	6.70 7.10 520.1 Low	11/4/19 2/5/14 12/2/19 Date	8.61 12.44 529.4 Average	units (°C) Ft. Units
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved	150 152 145 No. of Samples 13	9.66 21.00 540.40 High 0.10	2/4/11 8/18/10 9/7/14 Date 8/18/10	6.70 7.10 520.1 Low	11/4/19 2/5/14 12/2/19 Date 8/11/11	8.61 12.44 529.4 Average 0.06	units (°C) Ft. Units mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved	150 152 145 No. of Samples 13 13	9.66 21.00 540.40 High 0.10 0.01	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10	6.70 7.10 520.1 Low 0.04 0.00	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14	8.61 12.44 529.4 Average 0.06 0.00	units (°C) Ft. Units mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	150 152 145 No. of Samples 13 13 13	9.66 21.00 540.40 High 0.10 0.01 2.47	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19	6.70 7.10 520.1 Low 0.04 0.00 0.04	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09	8.61 12.44 529.4 Average 0.06 0.00 0.58	units (°C) Ft. Units mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	150 152 145 No. of Samples 13 13 13 13	9.66 21.00 540.40 High 0.10 0.01 2.47 U	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09	6.70 7.10 520.1 Low 0.04 0.00 0.04 U	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18	8.61 12.44 529.4 Average 0.06 0.00 0.58 U	units (°C) Ft. Units mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	150 152 145 No. of Samples 13 13 13 13 13 13 126	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18	6.70 7.10 520.1 Low 0.04 0.00 0.04 U 0.45	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95	units (°C) Ft. Units mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	150 152 145 No. of Samples 13 13 13 13 13 126 13	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24 U	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18 10/7/09	6.70 7.10 520.1 Low 0.04 0.04 0.04 U 0.45 U	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09 12/20/18	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	150 152 145 No. of Samples 13 13 13 13 13 126 13 126	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24 U 3.24 U 7.70	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18 10/7/09 10/28/10	6.70 7.10 520.1 Low 0.04 0.00 0.04 U 0.45 U 1.60	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09 12/20/18 6/4/18	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95 U 2.93	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	150 152 145 No. of Samples 13 13 13 13 13 126 13 126 13	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24 U 3.24 U 7.70 U	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18 10/7/09 10/28/10 10/7/09	6.70 7.10 520.1 Low 0.04 0.00 0.04 U 0.45 U 1.60 U	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09 12/20/18 6/4/18 12/20/18	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95 U 2.93 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	150 152 145 No. of Samples 13 13 13 13 126 13 126 13 126 13 13	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24 U 3.24 U 7.70 U 0.07	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18 10/7/09 10/28/10 10/7/09 7/5/17	6.70 7.10 520.1 Low 0.04 0.04 0.04 U 0.45 U 1.60 U 0.02	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09 12/20/18 6/4/18 12/20/18 10/7/09	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95 U 2.93 U 0.05	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	150 152 145 No. of Samples 13 13 13 13 13 126 13 126 13 126 13 13 13	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24 U 7.70 U 7.70 U 0.07 0.90	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18 10/7/09 10/28/10 10/28/10 10/7/09 7/5/17 10/7/09	6.70 7.10 520.1 Low 0.04 0.04 0.04 U 0.45 U 1.60 U 0.02 0.03	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09 12/20/18 6/4/18 12/20/18 10/7/09 12/4/12	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95 U 2.93 U 2.93 U 0.05 0.16	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	150 152 145 No. of Samples 13 13 13 13 126 13 126 13 126 13 13 13 13	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24 U 7.70 U 7.70 U 0.07 0.90 U	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18 10/7/09 10/28/10 10/7/09 7/5/17 10/7/09 10/7/09	6.70 7.10 520.1 Low 0.04 0.04 0.04 U 0.45 U 1.60 U 0.02 0.03 U	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09 12/20/18 6/4/18 12/20/18 10/7/09 12/4/12 12/20/18	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95 U 2.93 U 2.93 U 0.05 0.16 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved	150 152 145 No. of Samples 13 13 13 13 126 13 126 13 126 13 13 13 13 13 13 13	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24 U 7.70 U 7.70 U 0.07 0.90 U 0.33	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18 10/7/09 10/28/10 10/28/10 10/7/09 7/5/17 10/7/09 10/7/09 5/7/19	6.70 7.10 520.1 Low 0.04 0.04 0.04 U 0.45 U 1.60 U 0.02 0.03 U 0.17	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09 12/20/18 6/4/18 12/20/18 10/7/09 12/4/12 12/20/18 10/7/09	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95 U 2.93 U 2.93 U 0.05 0.16 U 0.20	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved	150 152 145 No. of Samples 13 13 13 13 126 13 126 13 13 13 13 13 13 13 13 13 13 13	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24 U 7.70 U 0.07 0.90 U 0.33 5.90	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18 10/7/09 10/28/10 10/7/09 7/5/17 10/7/09 10/7/09 5/7/19 10/28/10	6.70 7.10 520.1 Low 0.04 0.04 0.04 U 0.45 U 1.60 U 0.02 0.03 U 0.17 1.30	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09 12/20/18 6/4/18 12/20/18 10/7/09 12/4/12 12/20/18 10/7/09 3/9/14	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95 U 2.93 U 2.93 U 0.05 0.16 U 0.20 2.49	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	150 152 145 No. of Samples 13 13 13 13 126 13 126 13 13 13 13 13 13 13 13 13 13 13 13 13	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24 U 3.24 U 7.70 U 0.07 0.90 U 0.33 5.90 0.03	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18 10/7/09 10/28/10 10/7/09 7/5/17 10/7/09 10/7/09 5/7/19 10/28/10 10/7/09	6.70 7.10 520.1 Low 0.04 0.00 0.04 U 0.45 U 1.60 U 0.02 0.03 U 0.02 0.03 U 0.17 1.30 0.01	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09 12/20/18 6/4/18 12/20/18 10/7/09 12/4/12 12/20/18 10/7/09 3/9/14 7/10/13	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95 U 2.93 U 0.05 0.16 U 0.20 2.49 0.01	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	150 152 145 No. of Samples 13 13 13 13 126 13 126 13 13 13 13 13 13 13 13 13 13 13 13 13	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24 U 7.70 U 0.07 0.90 U 0.33 5.90 0.03 U	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18 10/7/09 10/28/10 10/7/09 7/5/17 10/7/09 10/7/09 5/7/19 10/28/10 10/7/09 10/28/10 10/7/09	6.70 7.10 520.1 Low 0.04 0.00 0.04 U 0.45 U 1.60 U 0.02 0.03 U 0.02 0.03 U 0.17 1.30 0.01 U	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09 12/20/18 6/4/18 12/20/18 10/7/09 12/4/12 12/20/18 10/7/09 3/9/14 7/10/13 12/20/18	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95 U 2.93 U 0.05 0.16 U 0.20 2.49 0.01 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved	150 152 145 No. of Samples 13 13 13 13 126 13 126 13 13 13 13 13 13 13 13 13 13 13 13 13	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24 U 7.70 U 0.07 0.90 U 0.33 5.90 0.03 U 1.31	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18 10/7/09 10/28/10 10/7/09 7/5/17 10/7/09 10/7/09 5/7/19 10/28/10 10/7/09 10/28/10 10/7/09 10/7/09 10/7/09 10/7/09 10/7/09 10/7/09 10/7/09 10/7/09 10/7/09	6.70 7.10 520.1 Low 0.04 0.00 0.04 U 0.45 U 1.60 U 0.02 0.03 U 0.02 0.03 U 0.17 1.30 0.01 U 0.01	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09 12/20/18 6/4/18 12/20/18 10/7/09 12/4/12 12/20/18 10/7/09 3/9/14 7/10/13 12/20/18 10/7/09	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95 U 2.93 U 0.05 0.16 U 0.20 2.49 0.01 U 0.30	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved	150 152 145 No. of Samples 13 13 13 13 126 13 126 13 13 13 13 13 13 13 13 13 13 13 13 13	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24 U 7.70 U 0.07 0.90 U 0.03 5.90 0.03 U 1.31 U	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18 10/7/09 10/28/10 10/7/09 7/5/17 10/7/09 10/7/09 5/7/19 10/28/10 10/7/09 10/7/09 10/7/09 10/7/09 10/7/09 10/7/09 10/7/09	6.70 7.10 520.1 Low 0.04 0.00 0.04 U 0.45 U 1.60 U 0.02 0.03 U 0.02 0.03 U 0.17 1.30 0.01 U 0.01 0.02	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09 12/20/18 6/4/18 12/20/18 10/7/09 12/4/12 12/20/18 10/7/09 3/9/14 7/10/13 12/20/18 10/7/09 7/10/13	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95 U 2.93 U 0.05 0.16 U 0.20 2.49 0.01 U 0.30 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved	150 152 145 No. of Samples 13 13 13 13 126 13 13 126 13 13 13 13 13 13 13 13 13 13 13 13 13	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24 U 7.70 U 0.07 0.90 U 0.03 5.90 0.03 U 0.03 U 1.31 U 34.80	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18 10/7/09 10/28/10 10/7/09 7/5/17 10/7/09 10/7/09 5/7/19 10/28/10 10/7/09 10/7/19 10/7/09 10/7/09 10/7/09 10/7/19 10/7/09 10/7/09 10/7/19 10/7/19 10/7/09 10/7/19 10/7/19 10/7/19 10/7/19 10/7/19 10/7/19 10/7/19 10/7/19 10/7/19 10/7/19 10/7/17 10/7/19	6.70 7.10 520.1 Low 0.04 0.00 0.04 U 0.45 U 1.60 U 0.02 0.03 U 0.17 1.30 0.01 U 0.01 U 0.01 0.02 0.03	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09 12/20/18 6/4/18 12/20/18 10/7/09 12/4/12 12/20/18 10/7/09 3/9/14 7/10/13 12/20/18 10/7/09 7/10/13 11/1/16	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95 U 2.93 U 2.93 U 0.05 0.16 U 0.20 2.49 0.01 U 0.20 2.49 0.01 U 0.30 U U 1.98	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	150 152 145 No. of Samples 13 13 13 13 126 13 13 126 13 13 13 13 13 13 13 13 13 13 13 13 13	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24 U 7.70 U 0.07 0.90 U 0.07 0.90 U 0.33 5.90 0.03 U 1.31 U 1.31 U 34.80 0.01	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18 10/7/09 10/28/10 10/7/09 7/5/17 10/7/09 10/7/09 5/7/19 10/28/10 10/7/09 10/7/09 10/7/09 10/7/09 10/7/09 10/7/19 8/2/10 11/10/10	6.70 7.10 520.1 Low 0.04 0.00 0.04 U 0.45 U 1.60 U 0.02 0.03 U 0.17 1.30 0.01 U 0.01 U 0.01 0.01 0.02 0.03	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09 12/20/18 6/4/18 12/20/18 10/7/09 12/4/12 12/20/18 10/7/09 3/9/14 7/10/13 12/20/18 10/7/09 3/9/14 7/10/13 12/20/18	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95 U 2.93 U 2.93 U 0.05 0.16 U 0.20 2.49 0.01 U 0.20 2.49 0.01 U 0.30 U U 1.98 0.00	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved	150 152 145 No. of Samples 13 13 13 13 126 13 13 126 13 13 13 13 13 13 13 13 13 13 13 13 13	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24 U 7.70 U 0.07 0.90 U 0.03 5.90 0.03 U 0.03 U 1.31 U 34.80	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18 10/7/09 10/28/10 10/7/09 7/5/17 10/7/09 10/7/09 5/7/19 10/28/10 10/7/09 10/7/19 10/7/09 10/7/09 10/7/09 10/7/19 10/7/09 10/7/09 10/7/19 10/7/19 10/7/09 10/7/19 10/7/19 10/7/19 10/7/19 10/7/19 10/7/19 10/7/19 10/7/19 10/7/19 10/7/19 10/7/17 10/7/19	6.70 7.10 520.1 Low 0.04 0.00 0.04 U 0.45 U 1.60 U 0.02 0.03 U 0.17 1.30 0.01 U 0.01 U 0.01 0.02 0.03	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09 12/20/18 6/4/18 12/20/18 10/7/09 12/4/12 12/20/18 10/7/09 3/9/14 7/10/13 12/20/18 10/7/09 7/10/13 11/1/16	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95 U 2.93 U 2.93 U 0.05 0.16 U 0.20 2.49 0.01 U 0.20 2.49 0.01 U 0.30 U U 1.98	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	150 152 145 No. of Samples 13 13 13 13 126 13 13 126 13 13 13 13 13 13 13 13 13 13 13 13 13	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24 U 7.70 U 0.07 0.90 U 0.07 0.90 U 0.33 5.90 0.03 U 1.31 U 1.31 U 34.80 0.01	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18 10/7/09 10/28/10 10/7/09 7/5/17 10/7/09 10/7/09 5/7/19 10/28/10 10/7/09 10/7/09 10/7/09 10/7/09 10/7/09 10/7/09 10/7/19 8/2/10 11/10/10	6.70 7.10 520.1 Low 0.04 0.00 0.04 U 0.45 U 1.60 U 0.02 0.03 U 0.17 1.30 0.01 U 0.01 U 0.01 0.01 0.02 0.03	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09 12/20/18 6/4/18 12/20/18 10/7/09 12/4/12 12/20/18 10/7/09 3/9/14 7/10/13 12/20/18 10/7/09 3/9/14 7/10/13 12/20/18 10/7/09 7/10/13 11/1/16 8/11/11 2/17/11 5/6/13	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95 U 2.93 U 2.93 U 0.05 0.16 U 0.20 2.49 0.01 U 0.20 2.49 0.01 U 0.30 U U 1.98 0.00	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Selenium, dissolved Selenium, dissolved	150 152 145 No. of Samples 13 13 13 13 126 13 13 126 13 13 13 13 13 13 13 13 13 13 13 13 13	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24 U 7.70 U 0.07 0.90 U 0.03 5.90 0.03 5.90 0.03 U 1.31 U 1.31 U 34.80 0.01 15.80 2710	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18 10/7/09 10/28/10 10/7/09 7/5/17 10/28/10 10/7/09 5/7/19 10/28/10 10/7/09 10/7/09 10/7/09 10/7/09 10/7/09 10/7/09 10/7/19 8/2/10 11/10/10 5/7/19 8/2/10 11/10/10 12/4/12 9/4/18	6.70 7.10 520.1 Low 0.04 0.00 0.04 U 0.45 U 1.60 U 0.02 0.03 U 0.17 1.30 0.01 U 0.17 1.30 0.01 U 0.01 0.01 0.02 0.03	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09 12/20/18 6/4/18 12/20/18 10/7/09 12/4/12 12/20/18 10/7/09 3/9/14 7/10/13 12/20/18 10/7/09 3/9/14 7/10/13 12/20/18 10/7/09 7/10/13 11/1/16 8/11/11 2/17/11 5/6/13	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95 U 2.93 U 0.05 0.16 U 0.20 2.49 0.01 U 0.20 2.49 0.01 U 0.30 U 1.98 0.00 12.42 666.1	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	150 152 145 No. of Samples 13 13 13 13 126 13 13 126 13 13 13 13 13 13 13 13 13 13 13 13 13	9.66 21.00 540.40 High 0.10 0.01 2.47 U 3.24 U 7.70 U 0.07 0.90 U 0.03 5.90 0.03 U 0.03 U 1.31 U 34.80 0.01 15.80	2/4/11 8/18/10 9/7/14 Date 8/18/10 11/10/10 5/7/19 10/7/09 9/4/18 10/7/09 10/28/10 10/7/09 7/5/17 10/28/10 10/7/09 5/7/19 10/28/10 10/7/09 10/7/09 10/7/09 10/7/09 10/7/09 10/7/09 10/7/19 8/2/10 11/10/10 12/4/12	6.70 7.10 520.1 Low 0.04 0.00 0.04 U 0.45 U 1.60 U 0.02 0.03 U 0.17 1.30 0.01 U 0.17 1.30 0.01 U 0.01 0.01 0.02 0.01 0.02 0.00 0.00 0.00	11/4/19 2/5/14 12/2/19 Date 8/11/11 11/10/14 10/7/09 12/20/18 11/19/09 12/20/18 10/7/09 12/4/12 12/20/18 10/7/09 3/9/14 7/10/13 12/20/18 10/7/09 3/9/14 7/10/13 12/20/18 10/7/09 7/10/13 11/1/16 8/11/11 2/17/11	8.61 12.44 529.4 Average 0.06 0.00 0.58 U 0.95 U 2.93 U 2.93 U 0.05 0.16 U 0.20 2.49 0.01 U 0.30 U U 0.30 U 1.98 0.00 12.42	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 27: BG-5 Annual B-Groove Aquifer

DAUB & ASSOCIATES, INC. AT WAT AND THE AND THE AND



		20. DG-0 All					
Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples						
Bicarbonate as CaCO3	112	869.00	12/18/13	541.0	12/8/10	668.8	mg/l
Carbonate as CaCO3	112	219.00	12/8/10	56.60	9/5/18	92.04	mg/l
Total Alkalinity as	112	1,040.00	12/18/13	633.0	6/11/14	760.8	mg/l
Bromide	12	U	1/13/11	U	5/6/19	U	mg/l
Cation-Anion Balance	112	5.90	4/9/14	-9.30	4/11/11	-2.50	%
Sum of Anions	112	23.00	12/18/13	14.30	6/11/14	16.88	meq/l
Sum of Cations	112	20.00	12/18/13	13.10	4/11/11	16.06	meg/l
Chemical Oxygen	11	800.00	1/13/11	21.00	12/31/18	232.7	mg/l
Chloride	94	70.00	12/8/10	10.00	1/20/11	16.32	mg/l
Conductivity, Lab	112	8,820	6/3/19	1,320	7/5/17	1,587	µmhos
Fluoride	112	27.80	6/3/19	14.60	9/17/12	23.33	mg/l
Hardness as CaCO3	112	16.00	9/5/17	10.00	9/11/13	12.62	mg/l
Nitrate as N, dissolved	1	0.03	12/27/12	0.03	12/27/12	0.03	mg/l
Nitrate/Nitrite as N,	1	0.03	12/27/12	0.03	12/27/12	0.03	mg/l
Nitrite as N, dissolved	12	U	1/13/11	UH	5/6/19	U	mg/l
Nitrogen, Ammonia	11	0.95	10/12/15	0.71	1/20/11	0.82	mg/l
Nitrogen, Organic	11	8.30	1/13/11	0.80	10/12/15	2.49	mg/l
Nitrogen, Total Kjeldahl	11	9.00	1/13/11	1.60	5/6/19	3.30	mg/l
pH, lab	112	9.40	12/8/10	8.60	9/5/18	8.85	units
Phosphate, total	11	77.50	8/11/11	0.09	1/13/11	7.17	mg/l
Phosphorus, total	11	0.09	7/10/13	0.03	1/13/11	0.04	mg/l
SAR in Water	112	56.60	12/18/13	37.80	4/11/11	44.38	none
Sulfate	6	20.00	1/13/11	0.00	9/2/15	10.05	mg/l
Sulfide	5	0.10	1/20/11	0.03	7/10/13	0.05	mg/l
Total Dissolved Solids	112	1,130	12/18/13	799	5/14/14	883	mg/l
Conductivity, Field	110	2,413	9/17/12	1,232	6/5/17	1,503	µmhos
pH, Field	109	9.58	3/5/12	6.60	11/4/19	8.36	units
Temperature (°C), Field	110	23.00	9/5/17	4.62	11/22/11	11.67	(°C)
Water Level, Field	109	517.10	8/7/17	493.9	10/12/15	507.7	Ft.
Doromotoro	No. of	High	Date	Low	Date	Average	Units
Parameters Metals		підп	Dale	LOW	Dale	Average	Units
Aluminum, dissolved	Samples 2	0.04	1/13/11	0.04	1/13/11	0.04	mg/l
Arsenic, dissolved	12	0.04	1/13/11	0.004	4/12/16	0.04	
· · ·	12		1/13/11		7/5/17	0.01	mg/l
Barium, dissolved	12	0.39 U		0.31		0.34	mg/l
Beryllium, dissolved	112	-	<u>11/10/14</u> 12/18/13	0.00 0.62	<u>11/10/14</u> 12/8/10	0.72	mg/l
Boron, dissolved	12	<u>0.91</u> U		<u>0.62</u> U		<u> </u>	mg/l
Cadmium, dissolved			11/10/14	-	5/6/19	,	mg/l
Calcium, dissolved	112	3.40	9/5/17	2.00	9/11/13	2.42	mg/l
Chromium, dissolved		0.01	12/31/18	0.01	<u>12/31/18</u>	U	mg/l
Copper, dissolved	1	0.04	5/6/19	0.04	5/6/19		mg/l
Iron, dissolved	10	0.19	12/31/18	0.02	12/4/12	0.07	mg/l
Lead, dissolved	1	0.05	12/4/12	0.05	12/4/12		mg/l
Lithium, dissolved	12	0.13	1/13/11	0.11	7/5/17	0.12	mg/l
Magnesium, dissolved	112	1.90	3/9/11	1.30	12/8/10	1.59	mg/l
Manganese, dissolved	1	0.01	1/13/11	0.01	1/13/11	0.01	mg/l
Mercury, dissolved	12	U	1/13/11	U	12/27/12	<u> </u>	mg/l
Molybdenum, dissolved	1	0.06	1/13/11	0.06	1/13/11	0.06	mg/l
Nickel, dissolved	12	U	1/13/11	U	12/27/12	<u> </u>	mg/l
Potassium, dissolved	112	2.10	12/8/10	0.60	11/2/16	0.98	mg/l

Table 28: BG-6 Annual B-Groove Aquifer

DAUB & ASSOCIATES, INC. DI WE TO THE WORK OF THE MERINE

12

112

112

112

12

3

Selenium, dissolved

Silica, dissolved Sodium, dissolved

Strontium, dissolved

Vanadium, dissolved

Zinc, dissolved

U

15.30

356.8

0.70

U

U

mg/l

mg/l

mg/l

mg/l

mg/l

mg/l

12/27/12

12/8/10

4/11/11

12/8/10

12/4/12

12/27/12

1/13/11

10/1/18

9/7/14

7/5/17

1/13/11

12/18/13

U

1.10

292.0

0.38

U

0.01

U

17.60

439.00

0.83

U

0.03



Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples	ingn	Date	LOw	Date	Average	Units
Bicarbonate as CaCO3	6	818	6/25/19	501	12/15/15	633	mg/l
Carbonate as CaCO3	6	307	12/15/15	102	6/25/19	227	mg/l
Total Alkalinity as	6	920	6/25/19	808	12/15/15	860	mg/l
Bromide	6	0.14	10/18/14	0.13	9/28/17	0.13	mg/l
Cation-Anion Balance	6	2.40	6/25/19	-2.10	4/5/16	-0.30	% %
Sum of Anions	6	24.00	10/18/14	20.00	6/25/19	22.83	
Sum of Cations	6	24.00	10/18/14	20.00	6/25/19	22.63	meq/l
Chemical Oxygen	6	30.00	6/25/19	14.00	4/5/16	22.67	meq/l mg/l
Chloride	6	201	12/15/15	24	6/25/19	155	mg/l
Conductivity, Lab	6	2,340	10/18/14	1,780	6/25/19	2,162	
	6	2,340	6/25/19		12/15/15	19.75	µmhos
Fluoride	6		10/18/14	18.20	4/5/16	19.75	mg/l
Hardness as CaCO3	6	13.00 0.02	10/18/14	11.00	10/18/14		mg/l
Nitrate as N, dissolved	6	0.02	10/18/14	0.02		0.02	mg/l
Nitrate/Nitrite as N,	6			0.02	10/18/14		mg/l
Nitrite as N, dissolved	6	0.01	12/15/15	<u>0.00</u> 0.81	10/18/14	0.01 1.05	mg/l
Nitrogen, Ammonia	6	1.22	10/18/14 6/20/18		6/20/18 10/18/14		mg/l
Nitrogen, Organic	6	2.00	9/28/17	0.20	10/18/14	0.63 1.67	mg/l mg/l
Nitrogen, Total Kjeldahl	6	9.60	12/15/15	<u>1.40</u> 8.80	6/25/19	9.30	units
<u>pH, lab</u>	6		12/15/15				
Phosphate, total	6	0.40	12/15/15	0.09 0.03	6/20/18 6/20/18	0.18	mg/l
Phosphorus, total	6	66	4/5/16	58.00	6/25/19	0.06 64	mg/l
SAR in Water	6		4/5/16		6/20/18		none
Sulfate	6	40		5.58		<u>16</u> 0.14	mg/l
Sulfide	6	0.15	6/25/19	0.12	12/15/15		mg/l
Total Dissolved Solids	6 7	1,350	10/18/14	1,090	6/25/19	1,233	mg/l
Conductivity, Field	-	2,575	12/15/15	1,594	10/25/18	2,112	µmhos
		0 10	C/00/10	0 0 1	10/05/10	0 0 /	mito
pH, Field	7	9.40	6/20/18	8.21	10/25/18	8.84	units
Temperature (°C), Field	7 7 7 7	22.50	10/18/14	11.49	10/25/18	15.31	(°C)
Temperature (°C), Field Water Level, Field	7 7	22.50 480.10	10/18/14 9/28/17	11.49 470.30	10/25/18 10/25/18	15.31 476.54	(°C) Ft.
Temperature (°C), Field Water Level, Field Parameters	7 7 No. of	22.50	10/18/14	11.49	10/25/18	15.31	(°C)
Temperature (°C), Field Water Level, Field Parameters Metals	7 7 No. of Samples	22.50 480.10 High	10/18/14 9/28/17 Date	11.49 470.30 Low	10/25/18 10/25/18 Date	15.31 476.54 Average	(°C) Ft. Units
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved	7 7 No. of Samples 6	22.50 480.10 High 0.08	10/18/14 9/28/17 Date 10/18/14	11.49 470.30 Low U	10/25/18 10/25/18 Date 4/5/16	15.31 476.54 Average 0.07	(°C) Ft. Units mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved	7 7 No. of Samples 6 6	22.50 480.10 High 0.08 0.03	10/18/14 9/28/17 Date 10/18/14 10/18/14	11.49 470.30 Low U U	10/25/18 10/25/18 Date 4/5/16 9/28/17	15.31 476.54 Average 0.07 0.01	(°C) Ft. Units mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	7 7 No. of Samples 6 6 6	22.50 480.10 High 0.08 0.03 0.40	10/18/14 9/28/17 Date 10/18/14 10/18/14 6/25/19	11.49 470.30 Low U U 0.02	10/25/18 10/25/18 Date 4/5/16 9/28/17 12/15/15	15.31 476.54 Average 0.07 0.01 0.10	(°C) Ft. Units mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	7 7 No. of Samples 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U	10/18/14 9/28/17 Date 10/18/14 10/18/14 6/25/19 10/18/14	11.49 470.30 Low U U 0.02 U	10/25/18 10/25/18 Date 4/5/16 9/28/17 12/15/15 6/25/19	15.31 476.54 Average 0.07 0.01 0.10 U	(°C) Ft. Units mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	7 7 No. of Samples 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78	10/18/14 9/28/17 Date 10/18/14 10/18/14 6/25/19 10/18/14 6/25/19	11.49 470.30 Low U U 0.02 U 0.56	10/25/18 10/25/18 Date 4/5/16 9/28/17 12/15/15 6/25/19 12/15/15	15.31 476.54 Average 0.07 0.01 0.10 U 0.65	(°C) Ft. Units mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	7 7 No. of Samples 6 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78 U	10/18/14 9/28/17 Date 10/18/14 6/25/19 10/18/14 6/25/19 10/18/14	11.49 470.30 Low U U 0.02 U 0.56 U	10/25/18 10/25/18 Date 4/5/16 9/28/17 12/15/15 6/25/19 12/15/15 6/25/19	15.31 476.54 Average 0.07 0.01 0.10 U 0.65 U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	7 7 No. of Samples 6 6 6 6 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78 U 3.60	10/18/14 9/28/17 Date 10/18/14 10/18/14 6/25/19 10/18/14 6/25/19 10/18/14 10/18/14	11.49 470.30 Low U U 0.02 U 0.56 U U	10/25/18 10/25/18 Date 4/5/16 9/28/17 12/15/15 6/25/19 12/15/15 6/25/19 6/20/18	15.31 476.54 Average 0.07 0.01 0.10 U 0.65 U 2.08	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	7 7 No. of Samples 6 6 6 6 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78 U 3.60 U	10/18/14 9/28/17 Date 10/18/14 10/18/14 6/25/19 10/18/14 6/25/19 10/18/14 10/18/14	11.49 470.30 Low U U 0.02 U 0.56 U U U U U	10/25/18 10/25/18 Date 4/5/16 9/28/17 12/15/15 6/25/19 12/15/15 6/25/19 6/20/18 6/25/19	15.31 476.54 Average 0.07 0.01 0.10 U 0.65 U 2.08 U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	7 7 No. of Samples 6 6 6 6 6 6 6 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78 U 0.78 U 3.60 U U U	10/18/14 9/28/17 Date 10/18/14 10/18/14 6/25/19 10/18/14 6/25/19 10/18/14 10/18/14 10/18/14	11.49 470.30 Low U U U 0.02 U 0.56 U U U U U U U	10/25/18 10/25/18 Date 4/5/16 9/28/17 12/15/15 6/25/19 12/15/15 6/25/19 6/20/18 6/25/19 6/25/19	15.31 476.54 Average 0.07 0.01 0.10 U 0.65 U 2.08 U U U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	7 7 No. of Samples 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78 U 0.78 U 3.60 U U U 0.36	10/18/14 9/28/17 Date 10/18/14 10/18/14 6/25/19 10/18/14 6/25/19 10/18/14 10/18/14 10/18/14 10/18/14 9/28/17	11.49 470.30 Low U U U 0.02 U 0.56 U U U U U U U U 0.06	10/25/18 10/25/18 Date 4/5/16 9/28/17 12/15/15 6/25/19 12/15/15 6/25/19 6/20/18 6/25/19 6/25/19 12/15/15	15.31 476.54 Average 0.07 0.01 0.10 U 0.65 U 2.08 U U U 0.18	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	7 7 No. of Samples 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78 U 0.78 U 3.60 U U 0.36 U	10/18/14 9/28/17 Date 10/18/14 10/18/14 6/25/19 10/18/14 6/25/19 10/18/14 10/18/14 10/18/14 10/18/14 9/28/17 10/18/14	11.49 470.30 Low U U U 0.02 U 0.56 U U U U U U U U U U U U U U U U U	10/25/18 10/25/18 Date 9/28/17 12/15/15 6/25/19 12/15/15 6/25/19 6/20/18 6/25/19 6/25/19 12/15/15 6/25/19	15.31 476.54 Average 0.07 0.01 0.10 U 0.65 U 2.08 U 2.08 U U 0.18 U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	7 7 No. of Samples 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78 U 0.78 U 3.60 U U 0.36 U U 0.36 U 0.17	10/18/14 9/28/17 Date 10/18/14 10/18/14 6/25/19 10/18/14 6/25/19 10/18/14 10/18/14 10/18/14 10/18/14 9/28/17 10/18/14 4/5/16	11.49 470.30 Low U U 0.02 U 0.56 U U U U U U U U U 0.06 U 0.10	10/25/18 10/25/18 Date 9/28/17 12/15/15 6/25/19 12/15/15 6/25/19 6/20/18 6/25/19 6/25/19 12/15/15 6/25/19 12/15/15 6/25/19	15.31 476.54 Average 0.07 0.01 0.10 U 0.65 U 2.08 U 2.08 U U 0.18 U 0.15	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	7 7 No. of Samples 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78 U 0.78 U 3.60 U U 0.36 U 0.36 U 0.17 1.90	10/18/14 9/28/17 Date 10/18/14 10/18/14 6/25/19 10/18/14 6/25/19 10/18/14 10/18/14 10/18/14 10/18/14 9/28/17 10/18/14 4/5/16 9/28/17	11.49 470.30 Low U U 0.02 U 0.56 U U U U U U U U 0.06 U 0.10 U	10/25/18 10/25/18 Date 9/28/17 12/15/15 6/25/19 12/15/15 6/25/19 6/20/18 6/25/19 6/25/19 12/15/15 6/25/19 12/15/15 6/25/19 12/15/15	15.31 476.54 Average 0.07 0.01 0.10 U 0.65 U 2.08 U U 2.08 U U 0.18 U 0.15 1.63	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	7 7 No. of Samples 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78 U 0.78 U 3.60 U U 0.36 U 0.36 U 0.17 1.90 U	10/18/14 9/28/17 Date 10/18/14 10/18/14 6/25/19 10/18/14 6/25/19 10/18/14 10/18/14 10/18/14 10/18/14 9/28/17 10/18/14 4/5/16 9/28/17 9/28/17	11.49 470.30 Low U U 0.02 U 0.56 U U U U U U U 0.06 U U 0.06 U U U U U U U U U U U U U U U U U U U	10/25/18 10/25/18 Date 9/28/17 12/15/15 6/25/19 12/15/15 6/25/19 6/20/18 6/25/19 6/25/19 12/15/15 6/25/19 12/15/15 6/25/19 12/15/15 10/18/14	15.31 476.54 Average 0.07 0.01 0.10 U 0.65 U 2.08 U 2.08 U U 0.18 U 0.15 1.63 U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	7 7 No. of Samples 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78 U 0.78 U 3.60 U U 0.36 U 0.36 U 0.17 1.90 U U	10/18/14 9/28/17 Date 10/18/14 10/18/14 6/25/19 10/18/14 6/25/19 10/18/14 10/18/14 10/18/14 10/18/14 9/28/17 10/18/14 4/5/16 9/28/17 9/28/17 10/18/14	11.49 470.30 Low U U 0.02 U 0.56 U U U U U U U 0.06 U U 0.10 U U U U U U U U U U U	10/25/18 10/25/18 Date 4/5/16 9/28/17 12/15/15 6/25/19 12/15/15 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 10/18/14 10/18/14 6/25/19	15.31 476.54 Average 0.07 0.01 0.10 U 0.65 U 2.08 U 2.08 U U 0.18 U 0.15 1.63 U U U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved	7 7 No. of Samples 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78 U 0.78 U 3.60 U U 0.36 U 0.36 U 0.17 1.90 U U 0.14	10/18/14 9/28/17 Date 10/18/14 10/18/14 6/25/19 10/18/14 6/25/19 10/18/14 10/18/14 10/18/14 10/18/14 9/28/17 10/18/14 9/28/17 9/28/17 10/18/14	11.49 470.30 Low U U 0.02 U 0.56 U U U U U U 0.06 U U 0.10 U U U U U U 0.05	10/25/18 10/25/18 Date 4/5/16 9/28/17 12/15/15 6/25/19 12/15/15 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 10/18/14 10/18/14 6/25/19 6/20/18	15.31 476.54 Average 0.07 0.01 0.10 U 0.65 U 2.08 U U 2.08 U U 0.18 U 0.15 1.63 U U U 0.09	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved	7 7 No. of Samples 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78 U 3.60 U U 0.36 U 0.36 U 0.17 1.90 U U 0.14 U	10/18/14 9/28/17 Date 10/18/14 10/18/14 6/25/19 10/18/14 10/18/14 10/18/14 10/18/14 10/18/14 9/28/17 10/18/14 4/5/16 9/28/17 9/28/17 10/18/14 10/18/14	11.49 470.30 Low U U 0.02 U 0.56 U U U U U U U 0.06 U U 0.06 U U U 0.10 U U U U U 0.05 U	10/25/18 10/25/18 Date 4/5/16 9/28/17 12/15/15 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 10/18/14 10/18/14 6/25/19 6/20/18 6/25/19	15.31 476.54 Average 0.07 0.01 0.10 U 0.65 U 2.08 U 2.08 U U 0.18 U 0.15 1.63 U U 0.15 1.63 U U 0.09 U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Potassium, dissolved	7 7 Samples 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78 U 3.60 U U 0.36 U U 0.36 U U 0.17 1.90 U U 0.14 U 14.50	10/18/14 9/28/17 Date 10/18/14 10/18/14 6/25/19 10/18/14 10/18/14 10/18/14 10/18/14 10/18/14 9/28/17 10/18/14 4/5/16 9/28/17 9/28/17 10/18/14 10/18/14 10/18/14	11.49 470.30 Low U U 0.02 U 0.56 U U U U U U 0.06 U U U U U U U U 0.05 U U 0.05 U 0.90	10/25/18 10/25/18 Date 4/5/16 9/28/17 12/15/15 6/25/19 12/15/15 6/25/19 6/20/18 6/25/19 6/25/19 6/25/19 10/18/14 10/18/14 10/18/14 6/25/19 6/20/18 6/25/19 6/25/19	15.31 476.54 Average 0.07 0.01 0.10 U 0.65 U 2.08 U U 2.08 U U 0.18 U 0.15 1.63 U U 0.15 1.63 U U 0.09 U 0.09 U 9.83	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	7 7 Samples 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78 U 0.78 U 0.78 U 0.78 U 0.78 U 0.360 U U 0.36 U 0.17 1.90 U U 0.14 U 14.50 U	10/18/14 9/28/17 Date 10/18/14 10/18/14 6/25/19 10/18/14 10/18/14 10/18/14 10/18/14 10/18/14 9/28/17 10/18/14 4/5/16 9/28/17 9/28/17 10/18/14 10/18/14 10/18/14 10/18/14	11.49 470.30 Low U U 0.02 U 0.56 U U U U U U 0.06 U U 0.06 U U U U U U 0.05 U U 0.05 U U U U U U U U U U U U U U U U U U U	10/25/18 10/25/18 Date 4/5/16 9/28/17 12/15/15 6/25/19 12/15/15 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 10/18/14 10/18/14 10/18/14 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19	15.31 476.54 Average 0.07 0.01 0.10 U 0.65 U 2.08 U U 0.18 U 0.15 1.63 U U 0.15 1.63 U U 0.09 U 0.09 U 9.83 U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Silica, dissolved	7 7 No. of Samples 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78 U 3.60 U U 0.36 U 0.17 1.90 U U 0.17 1.90 U U 0.14 U 14.50 U 18.90	10/18/14 9/28/17 Date 10/18/14 10/18/14 6/25/19 10/18/14 10/18/14 10/18/14 10/18/14 10/18/14 9/28/17 10/18/14 4/5/16 9/28/17 9/28/17 10/18/14 10/18/14 10/18/14 10/18/14	11.49 470.30 Low U U 0.02 U 0.56 U U U U U U 0.06 U U U U U U U U U 0.06 U U 0.06 U U 0.05 U U 0.05 U U 0.90 U 0.90	10/25/18 10/25/18 Date 4/5/16 9/28/17 12/15/15 6/25/19 12/15/15 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 10/18/14 10/18/14 10/18/14 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 12/15/15 12/15/15	15.31 476.54 Average 0.07 0.01 0.10 U 0.65 U 2.08 U U 0.18 U 0.15 1.63 U U 0.15 1.63 U U 0.09 U 0.09 U 9.83 U 0 6.07	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Silica, dissolved	7 7 Samples 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78 U 3.60 U U 0.78 U 0.78 U 0.78 U 0.78 U 0.78 U 0.78 U 0.78 U 0.36 U 0.17 1.90 U U 0.14 U 0.14 U 14.50 U 18.90 536	10/18/14 9/28/17 Date 10/18/14 6/25/19 10/18/14 6/25/19 10/18/14 10/18/14 10/18/14 10/18/14 9/28/17 10/18/14 4/5/16 9/28/17 9/28/17 10/18/14 10/18/14 10/18/14 10/18/14 10/18/14	11.49 470.30 U U U 0.02 U 0.56 U U U U U 0.06 U U U U U U U U 0.06 U U 0.06 U U 0.05 U U 0.05 U U 0.90 U 0.90 459	10/25/18 10/25/18 Date 4/5/16 9/28/17 12/15/15 6/25/19 12/15/15 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 10/18/14 10/18/14 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 5/25/19 12/15/15 12/15/15 6/25/19	15.31 476.54 Average 0.07 0.01 0.10 U 0.65 U 2.08 U U 2.08 U U 0.18 U 0.15 1.63 U U 0.15 1.63 U U 0.09 U 0.09 U 9.83 U 0.07 500	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved Strontium, dissolved	7 7 8amples 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78 U 3.60 U U 0.36 U U 0.36 U U 0.17 1.90 U U 0.14 U 14.50 U 18.90 536 0.66	10/18/14 9/28/17 Date 10/18/14 10/18/14 6/25/19 10/18/14 10/18/14 10/18/14 10/18/14 10/18/14 9/28/17 10/18/14 4/5/16 9/28/17 9/28/17 10/18/14 10/18/14 10/18/14 10/18/14 10/18/14 10/18/14 10/18/14 10/18/14	11.49 470.30 U U U 0.02 U 0.56 U U U U U 0.06 U U U U U U U 0.06 U U 0.06 U U 0.05 U U 0.05 U U 0.90 U U 0.90 U U 0.90 U U	10/25/18 10/25/18 Date 4/5/16 9/28/17 12/15/15 6/25/19 12/15/15 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 12/15/15 12/15/15 6/25/19	15.31 476.54 Average 0.07 0.01 0.10 U 0.65 U 2.08 U U 0.18 U 0.18 U 0.15 1.63 U U 0.09 U 0.09 U 0.09 U 0.09 U 0.09 U 0.09 U 0.030	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Silica, dissolved	7 7 Samples 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	22.50 480.10 High 0.08 0.03 0.40 U 0.78 U 3.60 U U 0.78 U 0.78 U 0.78 U 0.78 U 0.78 U 0.78 U 0.78 U 0.36 U 0.17 1.90 U U 0.14 U 0.14 U 14.50 U 18.90 536	10/18/14 9/28/17 Date 10/18/14 6/25/19 10/18/14 6/25/19 10/18/14 10/18/14 10/18/14 10/18/14 9/28/17 10/18/14 4/5/16 9/28/17 9/28/17 10/18/14 10/18/14 10/18/14 10/18/14 10/18/14	11.49 470.30 U U U 0.02 U 0.56 U U U U U 0.06 U U U U U U U U 0.06 U U 0.06 U U 0.05 U U 0.05 U U 0.90 U 0.90 459	10/25/18 10/25/18 Date 4/5/16 9/28/17 12/15/15 6/25/19 12/15/15 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 10/18/14 10/18/14 6/25/19 6/25/19 6/25/19 6/25/19 6/25/19 5/25/19 12/15/15 12/15/15 6/25/19	15.31 476.54 Average 0.07 0.01 0.10 U 0.65 U 2.08 U U 2.08 U U 0.18 U 0.15 1.63 U U 0.15 1.63 U U 0.09 U 0.09 U 9.83 U 0.07 500	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 29: BG-7 Annual B-Groove Aquifer

DAUB & ASSOCIATES, INC. DIFF STOR STATIS



Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples	ingn	Date	LOw	Date	Average	Onits
Bicarbonate as CaCO3	16	900	5/7/19	529	8/5/19	607	mg/l
Carbonate as CaCO3	16	542	11/4/19	185	10/10/18	307	mg/l
Total Alkalinity as	16	1,290	5/7/19	793	8/5/19	<u> </u>	mg/l
Bromide	3	1,290	10/3/18	<u> </u>	5/7/19	<u> </u>	mg/l
Cation-Anion Balance	16	2.30	8/5/19	-24.50	5/7/19	-3.74	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Sum of Anions	16	33.00	5/7/19	20.00	10/10/18	24.06	meq/l
Sum of Cations	16	31.00	12/2/19	19.00	10/10/18	22.25	
Chemical Oxygen	3	23.00	5/7/19	23.00	5/7/19	23.00	meq/l mg/l
Chloride	16	254	11/4/19	101	10/10/18	161	mg/l
Conductivity, Lab	16	3,230	5/7/19	1,840	10/10/18	2,205	μmhos
Fluoride	16	24.90	2/11/19	18.90	10/7/19	22.83	mg/l
Hardness as CaCO3	16	17.00	10/7/19	5.10	9/9/19	9.12	mg/l
Nitrate as N, dissolved	3	UH	10/3/18	<u> </u>	5/7/19	<u>9.12</u> UH	mg/l
Nitrate/Nitrite as N,	3	UH	10/3/18	UH	5/7/19	UH	mg/l
Nitrite as N, dissolved	3	UH	10/3/18	UH	5/7/19	UH	mg/l
Nitrogen, Ammonia	3	1.44	10/3/18	1.37	10/10/18	1.40	mg/l
Nitrogen, Organic	3	0.40	5/7/19	0.30	10/3/18	0.35	mg/l
Nitrogen, Total Kjeldahl	3	1.80	5/7/19	1.70	10/3/18	1.75	mg/l
pH, lab	16	9.80	11/4/19	9.20	10/3/18	9.46	units
Phosphate, total	3	0.43	5/7/19	0.09	10/3/18	0.21	mg/l
	3	0.14	5/7/19	0.09	10/3/18	0.21	
Phosphorus, total SAR in Water	16	120	12/2/19	50.00	10/3/18	77	mg/l
SAR IN Water Sulfate	16	9	11/4/19	2.41	12/4/18	6	none
Sulfide	3	0.09	10/10/18	0.08	10/3/18	0.09	mg/l mg/l
Total Dissolved Solids	16	1,680	12/2/19	1,060	10/10/18	1,251	mg/l
Conductivity, Field	15	3,367	5/7/19	1,560	9/9/19	2,149	µmhos
pH, Field	15	9.50	4/2/19	7.60	11/4/19	8.87	units
pH, Field Temperature (°C), Field	15 15	9.50 14.30	4/2/19 7/1/19	7.60 8.07	11/4/19 2/11/19	8.87 11.81	units (°C)
pH, Field	15	9.50	4/2/19	7.60	11/4/19	8.87	units
pH, Field Temperature (°C), Field Water Level, Field	15 15 14	9.50 14.30 516.80	4/2/19 7/1/19 7/1/19	7.60 8.07 502.60	11/4/19 2/11/19 12/2/19	8.87 11.81 512.40	units (°C) Ft.
pH, Field Temperature (°C), Field Water Level, Field Parameters	15 15 14 No. of	9.50 14.30	4/2/19 7/1/19	7.60 8.07	11/4/19 2/11/19	8.87 11.81	units (°C)
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals	15 15 14 No. of Samples	9.50 14.30 516.80 High	4/2/19 7/1/19 7/1/19 Date	7.60 8.07 502.60	11/4/19 2/11/19 12/2/19 Date	8.87 11.81 512.40 Average	units (°C) Ft. Units
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved	15 15 14 No. of Samples 3	9.50 14.30 516.80 High	4/2/19 7/1/19 7/1/19 Date 10/3/18	7.60 8.07 502.60 Low	11/4/19 2/11/19 12/2/19 Date 5/7/19	8.87 11.81 512.40 Average U	units (°C) Ft. Units mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved	15 15 14 No. of Samples 3 3	9.50 14.30 516.80 High U U	4/2/19 7/1/19 7/1/19 Date 10/3/18 10/3/18	7.60 8.07 502.60 Low	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19	8.87 11.81 512.40 Average U U	units (°C) Ft. Units mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	15 15 14 No. of Samples 3 3 3	9.50 14.30 516.80 High U U 0.26	4/2/19 7/1/19 7/1/19 Date 10/3/18 10/3/18 10/3/18	7.60 8.07 502.60 Low U U 0.10	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19	8.87 11.81 512.40 Average U U 0.18	units (°C) Ft. Units mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	15 15 14 No. of Samples 3 3 3 3 3 3	9.50 14.30 516.80 High U U 0.26 U	4/2/19 7/1/19 7/1/19 Date 10/3/18 10/3/18 10/3/18 10/3/18	7.60 8.07 502.60 Low U U 0.10 U	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 5/7/19	8.87 11.81 512.40 Average U U 0.18 U	units (°C) Ft. Units mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	15 15 14 No. of Samples 3 3 3 3 3 3 16	9.50 14.30 516.80 High U U U 0.26 U 1.48	4/2/19 7/1/19 7/1/19 Date 10/3/18 10/3/18 10/3/18 10/3/18 12/2/19	7.60 8.07 502.60 Low U U 0.10 U 0.67	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 5/7/19 10/10/18	8.87 11.81 512.40 Average U U 0.18 U 0.89	units (°C) Ft. Units mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	15 15 14 No. of Samples 3 3 3 3 3 3 3 16 3	9.50 14.30 516.80 High U U 0.26 U 1.48 U	4/2/19 7/1/19 7/1/19 Date 10/3/18 10/3/18 10/3/18 10/3/18 12/2/19 10/3/18	7.60 8.07 502.60 Low U U 0.10 U 0.67 U	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 10/10/18 5/7/19	8.87 11.81 512.40 Average U U 0.18 U 0.89 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	15 15 14 No. of Samples 3 3 3 3 3 3 16 3 16	9.50 14.30 516.80 High U U U 0.26 U 1.48 U 5.50	4/2/19 7/1/19 7/1/19 Date 10/3/18 10/3/18 10/3/18 12/2/19 10/3/18 10/3/18	7.60 8.07 502.60 Low U U 0.10 U 0.67 U 1.10	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 5/7/19 10/10/18 5/7/19 7/1/19	8.87 11.81 512.40 Average U U 0.18 U 0.89 U 1.77	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	15 15 14 No. of Samples 3 3 3 3 3 3 3 16 3 16 3 16 3	9.50 14.30 516.80 U U U 0.26 U 1.48 U 5.50 U	4/2/19 7/1/19 7/1/19 Date 10/3/18 10/3/18 10/3/18 12/2/19 10/3/18 10/7/19 10/3/18	7.60 8.07 502.60 Low U U 0.10 U 0.67 U 1.10 U	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 10/10/18 5/7/19 7/1/19 5/7/19	8.87 11.81 512.40 Average U U 0.18 U 0.89 U 1.77 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	15 15 14 No. of Samples 3 3 3 3 3 3 3 3 16 3 16 3 16 3 3 3	9.50 14.30 516.80 U U U 0.26 U 1.48 U 5.50 U 0.01	4/2/19 7/1/19 7/1/19 Date 10/3/18 10/3/18 10/3/18 12/2/19 10/3/18 10/7/19 10/3/18 10/3/18	7.60 8.07 502.60 Low U U 0.10 U 0.67 U 1.10 U 0.01	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 10/10/18 5/7/19 7/1/19 7/1/19 5/7/19	8.87 11.81 512.40 Average U U 0.18 U 0.89 U 1.77 U 0.01	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	15 15 14 No. of Samples 3 3 3 3 3 3 3 3 16 3 16 3 16 3 3 3 3 3	9.50 14.30 516.80 U U U 0.26 U 1.48 U 5.50 U 0.01 2.40	4/2/19 7/1/19 7/1/19 Date 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/7/19 10/3/18 10/3/18 10/3/18	7.60 8.07 502.60 Low U U 0.10 U 0.67 U 1.10 U 0.01 0.01 0.10	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 10/10/18 5/7/19 7/1/19 5/7/19 10/3/18 5/7/19	8.87 11.81 512.40 Average U U 0.18 U 0.89 U 1.77 U 0.01 1.27	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	15 15 14 No. of Samples 3 3 3 3 3 3 3 3 16 3 16 3 16 3 3 3 3 3	9.50 14.30 516.80 U U U 0.26 U 1.48 U 5.50 U 5.50 U 0.01 2.40 U	4/2/19 7/1/19 7/1/19 Date 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/7/19 10/3/18 10/3/18 10/3/18 10/3/18	7.60 8.07 502.60 U U 0.10 U 0.67 U 1.10 U 0.01 0.01 0.10 U	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 10/10/18 5/7/19 7/1/19 5/7/19 10/3/18 5/7/19 5/7/19	8.87 11.81 512.40 Average U U 0.18 U 0.89 U 1.77 U 0.01 1.27 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	15 15 14 No. of Samples 3 3 3 3 3 3 16 3 16 3 16 3 3 3 3 3 3 3	9.50 14.30 516.80 U U U 0.26 U 1.48 U 5.50 U 5.50 U 0.01 2.40 U 0.14	4/2/19 7/1/19 7/1/19 Date 10/3/18 10/3/18 10/3/18 10/3/18 10/7/19 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18	7.60 8.07 502.60 Low U U 0.10 U 0.67 U 1.10 U 0.01 0.01 0.10 U 0.14	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 10/10/18 5/7/19 7/1/19 5/7/19 10/3/18 5/7/19 10/3/18 5/7/19	8.87 11.81 512.40 Average U U 0.18 U 0.89 U 1.77 U 0.01 1.27 U 0.14	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved	15 15 14 No. of Samples 3 3 3 3 3 16 3 16 3 3 3 3 3 3 3 3 3 16	9.50 14.30 516.80 U U U 0.26 U 1.48 U 5.50 U 0.01 2.40 U 0.14 2.20	4/2/19 7/1/19 7/1/19 Date 10/3/18 10/3/18 10/3/18 10/3/18 10/7/19 10/3/18 10/7/19 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18	7.60 8.07 502.60 Low U U U 0.10 U 0.67 U 1.10 U 0.01 0.10 U 0.14 0.50	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 10/10/18 5/7/19 7/1/19 5/7/19 10/3/18 5/7/19 10/3/18 5/7/19 10/3/18	8.87 11.81 512.40 Average U U 0.18 U 0.89 U 1.77 U 0.01 1.27 U 0.14 1.13	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	15 15 14 No. of Samples 3 3 3 3 3 16 3 3 16 3 3 3 3 3 3 3 3 3 3	9.50 14.30 516.80 U U U 0.26 U 0.26 U 1.48 U 5.50 U 0.01 2.40 U 0.14 2.20 0.03	4/2/19 7/1/19 7/1/19 Date 10/3/18 10/3/18 10/3/18 10/3/18 10/7/19 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18	7.60 8.07 502.60 Low U U 0.10 U 0.67 U 1.10 U 0.01 0.10 U 0.14 0.50 0.02	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 10/10/18 5/7/19 7/1/19 5/7/19 10/3/18 5/7/19 10/3/18 5/7/19 10/3/18 5/7/19 10/10/18	8.87 11.81 512.40 Average U U 0.18 U 0.89 U 1.77 U 0.01 1.27 U 0.14	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved	15 15 14 No. of Samples 3 3 3 3 3 16 3 3 3 3 3 3 3 3 3 3 3 3 3	9.50 14.30 516.80 U U U 0.26 U 1.48 U 5.50 U 0.01 2.40 U 0.01 2.40 U 0.14 2.20 0.03 U	4/2/19 7/1/19 7/1/19 Date 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/7/19 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18	7.60 8.07 502.60 U U U 0.10 U 0.67 U 1.10 U 0.01 0.10 U 0.14 0.50 0.02 U	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 10/10/18 5/7/19 7/1/19 5/7/19 10/3/18 5/7/19 10/3/18 5/7/19 10/10/18 9/9/19 10/10/18 5/7/19	8.87 11.81 512.40 Average U U 0.18 U 0.89 U 1.77 U 0.01 1.27 U 0.01 1.27 U 0.14 1.13 0.02 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved	15 15 14 No. of Samples 3 3 3 3 3 16 3 3 3 3 3 3 3 3 3 3 3 3 3	9.50 14.30 516.80 U U U 0.26 U 1.48 U 5.50 U 0.01 2.40 U 0.14 2.20 0.03 U 0.17	4/2/19 7/1/19 7/1/19 Date 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18	7.60 8.07 502.60 Low U U 0.10 U 0.67 U 1.10 U 0.01 0.10 U 0.01 0.14 0.50 0.02 U 0.13	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 10/10/18 5/7/19 7/1/19 5/7/19 10/3/18 5/7/19 10/3/18 5/7/19 10/10/18 9/9/19 10/10/18 5/7/19	8.87 11.81 512.40 Average U U 0.18 U 0.89 U 1.77 U 0.01 1.27 U 0.01 1.27 U 0.14 1.13 0.02 U 0.16	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved	15 15 14 No. of Samples 3 3 3 3 3 16 3 3 3 3 3 3 3 3 3 3 3 3 3	9.50 14.30 516.80 U U U 0.26 U 0.26 U 1.48 U 5.50 U 0.01 2.40 U 0.01 2.40 U 0.14 2.20 0.03 U 0.17 U	4/2/19 7/1/19 7/1/19 Date 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18	7.60 8.07 502.60 U U U 0.10 U 0.67 U 1.10 U 0.67 U 1.10 U 0.01 0.10 U 0.14 0.50 0.02 U 0.13 U	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 10/10/18 5/7/19 7/1/19 5/7/19 10/3/18 5/7/19 10/3/18 5/7/19 10/10/18 9/9/19 10/10/18 5/7/19 5/7/19	8.87 11.81 512.40 Average U U 0.18 U 0.89 U 1.77 U 0.01 1.27 U 0.01 1.27 U 0.14 1.13 0.02 U 0.16 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved	15 15 14 No. of Samples 3 3 3 3 16 3 3 3 3 3 3 3 3 3 3 3 3 3 3	9.50 14.30 516.80 U U U 0.26 U 0.26 U 1.48 U 5.50 U 0.01 2.40 U 0.01 2.40 U 0.14 2.20 0.03 U 0.17 U 0.17 U 5.20	4/2/19 7/1/19 7/1/19 Date 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18	7.60 8.07 502.60 Low U U 0.10 U 0.10 U 0.67 U 1.10 U 0.01 0.01 0.10 U 0.14 0.50 0.02 U 0.13 U 2.40	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 10/10/18 5/7/19 7/1/19 5/7/19 10/3/18 5/7/19 5/7/19 10/10/18 9/9/19 10/10/18 5/7/19 5/7/19	8.87 11.81 512.40 Average U U 0.18 U 0.89 U 1.77 U 0.01 1.27 U 0.01 1.27 U 0.14 1.13 0.02 U 0.16 U 3.03	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	15 15 14 No. of Samples 3 3 3 3 16 3 3 3 3 3 3 3 3 3 3 3 3 3 3	9.50 14.30 516.80 U U U 0.26 U 1.48 U 5.50 U 0.01 2.40 U 0.01 2.40 U 0.14 2.20 0.03 U 0.17 U 0.17 U 5.20 U	4/2/19 7/1/19 7/1/19 7/1/19 Date 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18 10/3/18	7.60 8.07 502.60 Low U U 0.10 U 0.10 U 0.67 U 1.10 U 0.01 0.01 0.14 0.50 0.02 U 0.13 U 2.40 U	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 10/10/18 5/7/19 7/1/19 5/7/19 10/3/18 5/7/19 5/7/19 10/10/18 9/9/19 10/10/18 5/7/19 5/7/19 5/7/19	8.87 11.81 512.40 Average U U 0.18 U 0.89 U 1.77 U 0.01 1.27 U 0.01 1.27 U 0.14 1.13 0.02 U 0.16 U 3.03 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved	15 15 14 No. of Samples 3 3 3 3 16 3 3 3 3 3 3 3 3 3 3 3 3 3 3	9.50 14.30 516.80 U U U 0.26 U 1.48 U 5.50 U 0.01 2.40 U 0.01 2.40 U 0.14 2.20 0.03 U 0.14 2.20 0.03 U 0.17 U 5.20 U 4.70	4/2/19 7/1/19 7/1/19 7/1/19 Date 10/3/18	7.60 8.07 502.60 Low U U 0.10 U 0.10 U 0.67 U 1.10 U 0.01 0.01 0.10 U 0.14 0.50 0.02 U 0.13 U 2.40 U 1.80	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 10/10/18 5/7/19 7/1/19 5/7/19 10/3/18 5/7/19 5/7/19 10/10/18 5/7/19 5/7/19 5/7/19 5/7/19 5/7/19 5/7/19	8.87 11.81 512.40 Average U U 0.18 U 0.89 U 1.77 U 0.01 1.27 U 0.01 1.27 U 0.14 1.13 0.02 U 0.16 U 3.03 U 2.87	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Solica, dissolved	15 15 14 No. of Samples 3 3 3 3 16 3 3 3 3 3 3 3 3 3 3 3 3 3 3	9.50 14.30 516.80 U U U 0.26 U 1.48 U 5.50 U 0.01 2.40 U 0.01 2.40 U 0.14 2.20 0.03 U 0.14 2.20 0.03 U 0.17 U 5.20 U 4.70 699	4/2/19 7/1/19 7/1/19 7/1/19 Date 10/3/18 10/2/19	7.60 8.07 502.60 Low U U 0.10 U 0.10 U 0.67 U 1.10 U 0.01 0.01 0.14 0.50 0.02 U 0.13 U 2.40 U 1.80 420	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 10/10/18 5/7/19 7/1/19 5/7/19 10/3/18 5/7/19 5/7/19 10/10/18 5/7/19 5/7/19 5/7/19 5/7/19 5/7/19 5/7/19 5/7/19 5/7/19	8.87 11.81 512.40 Average U U 0.18 U 0.89 U 1.77 U 0.01 1.27 U 0.01 1.27 U 0.14 1.13 0.02 U 0.16 U 3.03 U 2.87 499	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved Sodium, dissolved	15 15 14 No. of Samples 3 3 3 3 16 3 3 3 3 3 3 3 3 3 3 3 3 3 3	9.50 14.30 516.80 U U U 0.26 U 1.48 U 5.50 U 0.01 2.40 U 0.14 2.20 0.03 U 0.14 2.20 0.03 U 0.17 U 5.20 U 0.17 U 5.20 U 4.70 699 0.60	4/2/19 7/1/19 7/1/19 7/1/19 Date 10/3/18 12/2/19 10/3/18	7.60 8.07 502.60 Low U U 0.10 U 0.10 U 0.67 U 1.10 U 0.01 0.01 0.14 0.50 0.02 U 0.13 U 2.40 U 1.80 420 0.35	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 10/10/18 5/7/19 7/1/19 5/7/19 10/3/18 5/7/19 5/7/19 10/10/18 5/7/19 5/7/19 5/7/19 5/7/19 5/7/19 5/7/19 5/7/19 5/7/19 5/7/19	8.87 11.81 512.40 Average U U 0.18 U 0.89 U 1.77 U 0.01 1.27 U 0.01 1.27 U 0.14 1.13 0.02 U 0.16 U 3.03 U 2.87 499 0.44	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Solica, dissolved	15 15 14 No. of Samples 3 3 3 3 16 3 3 3 3 3 3 3 3 3 3 3 3 3 3	9.50 14.30 516.80 U U U 0.26 U 1.48 U 5.50 U 0.01 2.40 U 0.01 2.40 U 0.14 2.20 0.03 U 0.14 2.20 0.03 U 0.17 U 5.20 U 4.70 699	4/2/19 7/1/19 7/1/19 7/1/19 Date 10/3/18 10/2/19	7.60 8.07 502.60 Low U U 0.10 U 0.10 U 0.67 U 1.10 U 0.01 0.01 0.14 0.50 0.02 U 0.13 U 2.40 U 1.80 420	11/4/19 2/11/19 12/2/19 Date 5/7/19 5/7/19 5/7/19 10/10/18 5/7/19 7/1/19 5/7/19 10/3/18 5/7/19 5/7/19 10/10/18 5/7/19 5/7/19 5/7/19 5/7/19 5/7/19 5/7/19 5/7/19 5/7/19	8.87 11.81 512.40 Average U U 0.18 U 0.89 U 1.77 U 0.01 1.27 U 0.01 1.27 U 0.14 1.13 0.02 U 0.16 U 3.03 U 2.87 499	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 30: BG-9 (DS-5) Annual B-Groove Aquifer

DAUB & ASSOCIATES, INC. 2013# Jac mark to Dank The All



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Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples						
Bicarbonate as CaCO3	62	806.00	12/16/92	356.00	2/26/91	634.92	mg/l
Carbonate as CaCO3	62	754.00	9/27/90	10.00	6/16/92	102.70	mg/l
Total Alkalinity as	62	1,064.00	9/27/90	375.00	9/7/90	714.21	mg/l
Bromide	32	2.60	9/7/90	0.06	5/26/00	0.82	mg/l
Cation-Anion Balance	60	11.10	5/29/02	-9.40	7/29/09	0.53	%
Sum of Anions	54	24.21	9/27/90	12.00	5/26/04	16.36	meq/l
Sum of Cations	54	23.84	9/27/90	13.00	5/26/04	16.47	meg/l
Chemical Oxygen	24	550.00	7/29/09	11.00	8/24/17	156.21	mg/l
Chloride	61	524.00	9/7/90	11.00	6/30/95	41.49	mg/l
Conductivity, Lab	60	1,660.00	9/8/93	1,050.00	3/22/93	1,436.58	μmhos
Fluoride	62	32.00	9/28/94	2.80	5/28/91	21.61	mg/l
Hardness as CaCO3	60	59.00	9/27/90	3.00	6/30/09	10.83	mg/l
Nitrate as N, dissolved	31	1.99	6/14/08	0.02	6/30/95	0.23	mg/l
Nitrate/Nitrite as N,	31	2.13	6/14/08	0.02	9/28/94	0.24	mg/l
Nitrite as N, dissolved	31	0.14	6/14/08	0.01	10/3/12	0.08	mg/l
Nitrogen, Ammonia	31	5.70	5/9/01	0.58	5/21/07	1.15	mg/l
Nitrogen, Organic	31	34.70	7/29/09	0.92	5/9/01	9.08	mg/l
	31	35.50	7/29/09	1.80	3/27/18	<u>9.08</u> 10.21	
Nitrogen, Total Kjeldahl							mg/l
pH, lab	60	11.60	12/20/93	8.40	12/30/96	8.87	units
Phosphate, total	31	0.90	9/7/90	0.03	5/26/00	0.15	mg/l
Phosphorus, total	31	0.30	9/7/90	0.01	6/18/96	0.05	mg/l
SAR in Water	50	92.00	11/27/02	29.17	9/27/90	53.06	none
Sulfate	62	140.00	6/14/08	2.00	5/28/91	17.55	mg/l
Sulfide	31	0.80	9/7/90	0.01	5/26/04	0.13	mg/l
Total Dissolved Solids	61	1,428.00	9/27/90	690.00	5/29/03	916.16	mg/l
Conductivity, Field	86	3,803.00	9/1/09	982.00	11/21/05	1,540.99	µmhos
pH, Field	85	12.00	9/27/90	7.60	9/16/19	9.29	units
Temperature (°C), Field	43	16.20	6/14/08	8.00	12/1/90	12.25	(°C)
	43 59	<u>16.20</u> 435.60	6/14/08 8/24/17	8.00 398.45	<u>12/1/90</u> 11/1/90	12.25 411.22	(°C) Ft.
Temperature (°C), Field		435.60					
Temperature (°C), Field							
Temperature (°C), Field Water Level, Field	59	435.60 High	8/24/17 Date	398.45	11/1/90 Date	411.22	Ft.
Temperature (°C), Field Water Level, Field Parameters	59 No. of	435.60	8/24/17	398.45	11/1/90	411.22	Ft.
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved	59 No. of Samples 30	435.60 High 3.79	8/24/17 Date 9/27/90	398.45 Low	11/1/90 Date 5/26/04	411.22 Average 0.65	Ft. Units mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved	59 No. of Samples 30 30	435.60 High 3.79 0.03	8/24/17 Date 9/27/90 9/27/90	398.45 Low U U	11/1/90 Date 5/26/04 5/26/04	411.22 Average 0.65 0.01	Ft. Units mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	59 No. of Samples 30 30 30	435.60 High 3.79 0.03 0.43	8/24/17 Date 9/27/90 9/27/90 3/27/18	398.45 Low U U U	11/1/90 Date 5/26/04 5/26/04 9/7/90	411.22 Average 0.65 0.01 0.22	Ft. Units mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	59 No. of Samples 30 30 30 30 30	435.60 High 3.79 0.03 0.43 U	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90	398.45 Low U U U U U	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17	411.22 Average 0.65 0.01 0.22 U	Ft. Units mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	59 No. of Samples 30 30 30 30 30 62	435.60 High 3.79 0.03 0.43 U 0.72	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91	398.45 Low U U U U U 0.19	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93	411.22 Average 0.65 0.01 0.22 U 0.57	Ft. Units mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	59 No. of Samples 30 30 30 30 62 30	435.60 High 3.79 0.03 0.43 U 0.72 U	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91 9/7/90	398.45 Low U U U U 0.19 U	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93 8/24/17	411.22 Average 0.65 0.01 0.22 U 0.57 U	Ft. Units mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	59 No. of Samples 30 30 30 30 62 30 62	435.60 High 3.79 0.03 0.43 U 0.72 U 12.00	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91 9/7/90 9/27/90	398.45 Low U U U U 0.19 U 0.00	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93 8/24/17 2/26/91	411.22 Average 0.65 0.01 0.22 U 0.57 U 2.27	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	59 No. of Samples 30 30 30 62 30 62 30 62 30 62 30	435.60 High 3.79 0.03 0.43 U 0.72 U 12.00 0.01	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91 9/7/90 9/27/90 9/27/90	398.45 Low U U U U 0.19 U 0.00 U	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93 8/24/17 2/26/91 9/7/90	411.22 Average 0.65 0.01 0.22 U 0.57 U 2.27 0.01	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	59 No. of Samples 30 30 30 62 30 62 30 62 30 62 30 62 30 30	435.60 High 3.79 0.03 0.43 U 0.72 U 12.00 0.01 U	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91 9/7/90 9/27/90 9/27/90 9/27/90 10/22/13	398.45 Low U U U U U 0.19 U 0.00 U U U U U U U U U U U U U	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93 8/24/17 2/26/91 9/7/90 10/22/13	411.22 Average 0.65 0.01 0.22 U 0.57 U 2.27 0.01 U	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	59 No. of Samples 30 30 30 62 30 62 30 62 30 62 30 62 30 30 30 30	435.60 High 3.79 0.03 0.43 U 0.72 U 12.00 0.01 U 0.24	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91 9/7/90 9/27/90 9/27/90 9/27/90 10/22/13 11/6/14	398.45 Low U U U U U U 0.19 U 0.00 U U U U U U U U U U U U U	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93 8/24/17 2/26/91 9/7/90 10/22/13 5/26/99	411.22 Average 0.65 0.01 0.22 U 0.57 U 2.27 0.01 U 0.05	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	59 No. of Samples 30 30 30 62 30 62 30 62 30 62 30 62 30 62 30 30 30 30	435.60 High 3.79 0.03 0.43 U 0.72 U 12.00 0.01 U 0.24 0.32	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91 9/7/90 9/27/90 9/27/90 9/27/90 10/22/13 11/6/14 3/22/16	398.45 Low U U U U U U 0.19 U 0.00 U U U U U U U U U U U U U	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93 8/24/17 2/26/91 9/7/90 10/22/13 5/26/99 6/23/94	411.22 Average 0.65 0.01 0.22 U 0.57 U 2.27 0.01 U 0.05 0.15	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	59 No. of Samples 30 30 30 62 30 62 30 62 30 62 30 62 30 30 30 30 30 30 30	435.60 High 3.79 0.03 0.43 U 0.72 U 12.00 0.01 U 0.24 0.32 0.13	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91 9/7/90 9/27/90 9/27/90 9/27/90 10/22/13 11/6/14 3/22/16 9/7/90	398.45 Low U U U U U 0.19 U 0.00 U U U U U 0.00 0.	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93 8/24/17 2/26/91 9/7/90 10/22/13 5/26/99 6/23/94 9/15/92	411.22 Average 0.65 0.01 0.22 U 0.57 U 2.27 0.01 U 0.05 0.15 0.08	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	59 No. of Samples 30 30 30 62 30 62 30 62 30 30 30 30 30 30 30 30 30 30	435.60 High 3.79 0.03 0.43 U 0.72 U 12.00 0.01 U 0.24 0.32 0.13 7.00	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91 9/7/90 9/27/90 9/27/90 10/22/13 11/6/14 3/22/16 9/7/90 9/27/90	398.45 Low U U U U U 0.19 U 0.00 U U U U U U 0.06 U	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93 8/24/17 2/26/91 9/7/90 10/22/13 5/26/99 6/23/94 9/15/92 2/26/91	411.22 Average 0.65 0.01 0.22 U 0.57 U 2.27 0.01 U 0.05 0.15 0.08 1.20	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	59 No. of Samples 30 30 30 62 30 62 30 62 30 30 30 30 30 30 30 30 30 30 30 30 30	435.60 High 3.79 0.03 0.43 U 0.72 U 12.00 0.01 U 0.24 0.32 0.13 7.00 0.02	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91 9/7/90 9/27/90 9/27/90 10/22/13 11/6/14 3/22/16 9/7/90 9/27/90 3/27/18	398.45 Low U U U U U 0.19 U 0.00 U U U U U U U U U U U U U	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93 8/24/17 2/26/91 9/7/90 10/22/13 5/26/99 6/23/94 9/15/92 2/26/91 7/31/91	411.22 Average 0.65 0.01 0.22 U 0.57 U 2.27 0.01 U 0.05 0.15 0.08 1.20 0.01	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	59 No. of Samples 30 30 30 62 30 62 30 62 30 30 30 30 30 30 30 30 30 30 30 30 30	435.60 High 3.79 0.03 0.43 U 0.72 U 12.00 0.01 U 0.24 0.32 0.13 7.00 0.02 U	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91 9/7/90 9/27/90 9/27/90 9/27/90 10/22/13 11/6/14 3/22/16 9/7/90 9/27/90 3/27/18 9/7/90	398.45 Low U U U U U U U U U U U U U	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93 8/24/17 2/26/91 9/7/90 10/22/13 5/26/99 6/23/94 9/15/92 2/26/91 7/31/91 8/24/17	411.22 Average 0.65 0.01 0.22 U 0.57 U 2.27 0.01 U 0.05 0.15 0.08 1.20 0.01 U	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved	59 No. of Samples 30 30 30 62 30 62 30 62 30 30 30 30 30 30 30 30 30 30 30 30 30	435.60 High 3.79 0.03 0.43 U 0.72 U 12.00 0.01 U 0.24 0.32 0.13 7.00 0.02 U U U U	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91 9/7/90 9/27/90 9/27/90 10/22/13 11/6/14 3/22/16 9/7/90 9/27/90 3/27/18 9/7/90 3/22/16	398.45 Low U U U U U 0.19 U 0.00 U U U U U U U U U U U U U	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93 8/24/17 2/26/91 9/7/90 10/22/13 5/26/99 6/23/94 9/15/92 2/26/91 7/31/91 8/24/17 3/22/16	411.22 Average 0.65 0.01 0.22 U 0.57 U 2.27 0.01 U 0.05 0.15 0.08 1.20 0.01 U U U U	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved	59 No. of Samples 30 30 30 62 30 62 30 62 30 30 30 30 30 30 30 30 30 30 30 30 30	435.60 High 3.79 0.03 0.43 U 0.72 U 12.00 0.01 U 0.24 0.32 0.13 7.00 0.02 U U 0.02	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91 9/7/90 9/27/90 9/27/90 9/27/90 10/22/13 11/6/14 3/22/16 9/7/90 3/27/18 9/7/90 3/27/18 9/7/90 3/22/16 6/23/94	398.45 Low U U U U U 0.19 U 0.00 U U U U U U U U U U U U U	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93 8/24/17 2/26/91 9/7/90 10/22/13 5/26/99 6/23/94 9/15/92 2/26/91 7/31/91 8/24/17 3/22/16 6/23/94	411.22 Average 0.65 0.01 0.22 U 0.57 U 2.27 0.01 U 0.05 0.15 0.08 1.20 0.01 U U 0.02	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved	59 No. of Samples 30 30 30 62 30 62 30 62 30 30 30 30 30 30 30 30 30 30 30 30 30	435.60 High 3.79 0.03 0.43 U 0.72 U 12.00 0.01 U 0.24 0.32 0.13 7.00 0.02 U U 0.02 13.00	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91 9/7/90 9/27/90 9/27/90 9/27/90 9/27/90 9/27/90 3/22/16 9/7/90 3/22/16 6/23/94 9/7/90	398.45 Low U U U U U 0.19 U 0.00 U U U U U U U U U U U U U	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93 8/24/17 2/26/91 9/7/90 10/22/13 5/26/99 6/23/94 9/15/92 2/26/91 7/31/91 8/24/17 3/22/16 6/23/94 11/16/04	411.22 Average 0.65 0.01 0.22 U 0.57 U 2.27 0.01 U 0.05 0.15 0.08 1.20 0.01 U U 0.02 1.78	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	59 No. of Samples 30 30 30 62 30 62 30 62 30 30 30 30 30 30 30 30 30 30 30 30 30	435.60 High 3.79 0.03 0.43 U 0.72 U 12.00 0.01 U 0.24 0.32 0.13 7.00 0.02 U U 0.02 U 0.02 13.00 0.00	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91 9/7/90 9/27/90 9/27/90 10/22/13 11/6/14 3/22/16 9/7/90 3/27/18 9/7/90 3/22/16 6/23/94 9/7/90 9/27/90	398.45 Low U U U U U 0.19 U 0.00 U U U U U U U U U U U U U	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93 8/24/17 2/26/91 9/7/90 10/22/13 5/26/99 6/23/94 9/15/92 2/26/91 7/31/91 8/24/17 3/22/16 6/23/94 11/16/04 7/31/91	411.22 Average 0.65 0.01 0.22 U 0.57 U 2.27 0.01 U 0.05 0.15 0.08 1.20 0.01 U U 0.01 U 0.02 1.78 0.00	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	59 No. of Samples 30 30 30 62 30 62 30 62 30 30 30 30 30 30 30 30 30 30 30 30 30	435.60 High 3.79 0.03 0.43 U 0.72 U 12.00 0.01 U 0.24 0.32 0.13 7.00 0.02 U U 0.02 13.00 0.00 63.00	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91 9/7/90 9/27/90 9/27/90 10/22/13 11/6/14 3/22/16 9/7/90 9/27/90 3/27/18 9/7/90 3/22/16 6/23/94 9/7/90 9/27/90 9/27/90 9/27/90	398.45 Low U U U U U 0.19 U 0.00 U U U U U U U U U U U U U	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93 8/24/17 2/26/91 9/7/90 10/22/13 5/26/99 6/23/94 9/15/92 2/26/91 7/31/91 8/24/17 3/22/16 6/23/94 11/16/04 7/31/91 12/20/93	411.22 Average 0.65 0.01 0.22 U 0.57 U 2.27 0.01 U 0.05 0.15 0.08 1.20 0.01 U U 0.02 1.78	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	59 No. of Samples 30 30 30 62 30 62 30 62 30 30 30 30 30 30 30 30 30 30 30 30 30	435.60 High 3.79 0.03 0.43 U 0.72 U 12.00 0.01 U 0.24 0.32 0.13 7.00 0.02 U U 0.02 U 0.02 13.00 0.00	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91 9/7/90 9/27/90 9/27/90 10/22/13 11/6/14 3/22/16 9/7/90 3/27/18 9/7/90 3/22/16 6/23/94 9/7/90 9/27/90	398.45 Low U U U U U 0.19 U 0.00 U U U U U U U U U U U U U	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93 8/24/17 2/26/91 9/7/90 10/22/13 5/26/99 6/23/94 9/15/92 2/26/91 7/31/91 8/24/17 3/22/16 6/23/94 11/16/04 7/31/91	411.22 Average 0.65 0.01 0.22 U 0.57 U 2.27 0.01 U 0.05 0.15 0.08 1.20 0.01 U U 0.01 U 0.02 1.78 0.00	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	59 No. of Samples 30 30 30 62 30 62 30 62 30 30 30 30 30 30 30 30 30 30 30 30 30	435.60 High 3.79 0.03 0.43 U 0.72 U 12.00 0.01 U 0.24 0.32 0.13 7.00 0.02 U U 0.02 13.00 0.00 63.00	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91 9/7/90 9/27/90 9/27/90 10/22/13 11/6/14 3/22/16 9/7/90 9/27/90 3/27/18 9/7/90 3/22/16 6/23/94 9/7/90 9/27/90 9/27/90 9/27/90	398.45 Low U U U U U 0.19 U 0.00 U U U U U U U U U U U U U	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93 8/24/17 2/26/91 9/7/90 10/22/13 5/26/99 6/23/94 9/15/92 2/26/91 7/31/91 8/24/17 3/22/16 6/23/94 11/16/04 7/31/91 12/20/93	411.22 Average 0.65 0.01 0.22 U 0.57 U 2.27 0.01 U 0.05 0.15 0.08 1.20 0.01 U U 0.01 U 0.02 1.78 0.00 17.46	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Copper, dissolved Copper, dissolved Lithium, dissolved Lead, dissolved Lithium, dissolved Maganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	59 No. of Samples 30 30 30 62 30 62 30 62 30 30 30 30 30 30 30 30 30 30 30 30 30	435.60 High 3.79 0.03 0.43 U 0.72 U 12.00 0.01 U 0.24 0.32 0.13 7.00 0.02 U U 0.02 13.00 0.00 63.00 508.00	8/24/17 Date 9/27/90 9/27/90 3/27/18 9/7/90 1/31/91 9/7/90 9/27/90 9/27/90 10/22/13 11/6/14 3/22/16 9/7/90 9/27/90 3/27/18 9/7/90 3/22/16 6/23/94 9/7/90 9/27/90 9/27/90 9/27/90 9/27/90	398.45 Low U U U U 0.19 U 0.00 U U U U U U U U U U U U U	11/1/90 Date 5/26/04 5/26/04 9/7/90 8/24/17 12/20/93 8/24/17 2/26/91 9/7/90 10/22/13 5/26/99 6/23/94 9/15/92 2/26/91 7/31/91 8/24/17 3/22/16 6/23/94 11/16/04 7/31/91 12/20/93 12/20/93	411.22 Average 0.65 0.01 0.22 U 0.57 U 2.27 0.01 U 0.05 0.15 0.08 1.20 0.01 U U 0.02 1.78 0.00 17.46 368.6	Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 31: IRI-6 Annual B-Groove Aquifer

DAUB & ASSOCIATES, INC. DIFF ST CONCERNMENT



Deveneteve	No. of	Llinda	Data	Law	Data	A	l lucito
Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples		0/04/00	0.070.00	11/10/00	40.004.07	//
Bicarbonate as CaCO3	153	66,300.00	8/21/03	3,970.00	11/18/06	42,334.67	mg/l
Carbonate as CaCO3	153	33,400.00	8/5/99	130.00	11/18/06	3,885.32	mg/l
Total Alkalinity as	153	68,800.00	8/21/03	4,100.00	11/18/06	45,915.79	mg/l
Bromide	19	3.00	5/18/06	2.70	11/5/19	2.85	mg/l
Cation-Anion Balance	153	80.00	11/18/06	-67.20	9/15/07	-2.03	%
Sum of Anions	153	1,420.00	8/21/03	105.00	11/18/06	962.53	meq/l
Sum of Cations	153	1,320.00	1/15/19	193.00	9/15/07	928.70	meg/l
Chemical Oxygen	18	1,100.00	7/29/09	100.00	9/14/00	295.33	mg/l
Chloride	153	15,000.00	12/9/19	105.00	4/11/06	1,493.69	mg/l
Conductivity, Lab	153	73,300.00	9/10/19	5,220.00	2/8/00	50,190.99	µmhos
Fluoride	153	123.00	3/25/98	8.60	4/11/06	51.08	mg/l
Hardness as CaCO3	153	150.00	11/16/07	1.00	3/25/98	36.99	mg/l
Nitrate as N, dissolved	19	0.96	9/25/02	0.00	9/24/03	0.10	mg/l
Nitrate/Nitrite as N,	19	1.65	9/25/02	0.00	9/24/03	0.16	mg/l
Nitrite as N, dissolved	19	0.87	9/25/02	0.00	9/24/03	0.11	mg/l
Nitrogen, Ammonia	18	16.30	9/26/01	3.75	9/14/00	11.98	mg/l
Nitrogen, Organic	18	16.40	7/29/09	1.90	9/24/03	6.80	mg/l
Nitrogen, Total Kjeldahl	18	27.00	11/5/19	1.70	9/14/00	15.29	mg/l
pH, lab	153	9.10	10/14/08	8.20	6/9/99	8.49	units
Phosphate, total	18	77.50	5/18/06	1.55	10/14/08	34.87	mg/l
Phosphorus, total	18	18.80	9/15/07	3.00	10/14/08	10.89	mg/l
SAR in Water	134	7,600.00	3/25/98	801.00	11/16/07	2,273.04	none
Sulfate	153	1,040.00	12/16/02	10.00	9/27/05	128.81	mg/l
Sulfide	18	18.60	11/5/19	0.05	8/25/05	2.87	mg/l
Total Dissolved Solids	153	69,100.00	2/12/19	20,800.00	12/8/00	50,972.37	mg/l
Conductivity, Field	156	82,870.00	12/9/19	26,900.00	12/1/08	53,153.65	µmhos
		10.00			0/4/45	0.50	
pH, Field	156	10.29	6/1/09	7.00	3/4/15	8.50	units
pH, Field Temperature (°C), Field	<u>156</u> 110	23.77	6/1/09 6/15/11	7.00 6.30	3/4/13	13.02	(°C)
pH, Field	156		6/1/09	7.00			
pH, Field Temperature (°C), Field Water Level, Field	156 110 167	23.77 569.00	6/1/09 6/15/11 11/26/18	7.00 6.30 511.30	3/4/13 4/2/19	13.02 551.97	(°C) Ft.
pH, Field Temperature (°C), Field Water Level, Field Parameters	156 110 167 No. of	23.77	6/1/09 6/15/11	7.00 6.30	3/4/13	13.02	(°C)
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals	156 110 167 No. of Samples	23.77 569.00 High	6/1/09 6/15/11 11/26/18 Date	7.00 6.30 511.30 Low	3/4/13 4/2/19 Date	13.02 551.97 Average	(°C) Ft. Units
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved	156 110 167 No. of Samples 19	23.77 569.00 High 1.60	6/1/09 6/15/11 11/26/18 Date 9/23/10	7.00 6.30 511.30 Low U	3/4/13 4/2/19 Date 3/14/08	13.02 551.97 Average 1.09	(°C) Ft. Units mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved	156 110 167 No. of Samples 19 19	23.77 569.00 High 1.60 U	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97	7.00 6.30 511.30 Low U U	3/4/13 4/2/19 Date 3/14/08 11/5/19	13.02 551.97 Average 1.09 U	(°C) Ft. Units mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	156 110 167 No. of Samples 19 19 19	23.77 569.00 High 1.60 U 3.85	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08	7.00 6.30 511.30 Low U U 0.06	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08	13.02 551.97 Average 1.09 U 1.72	(°C) Ft. Units mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	156 110 167 No. of Samples 19 19 19 19	23.77 569.00 High 1.60 U 3.85 U	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97	7.00 6.30 511.30 Low U U 0.06 U	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19	13.02 551.97 Average 1.09 U 1.72 U	(°C) Ft. Units mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	156 110 167 No. of Samples 19 19 19 19 19 19	23.77 569.00 High 1.60 U 3.85 U 43.40	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 1/28/03	7.00 6.30 511.30 Low U U 0.06 U 0.06 U 6.60	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07	13.02 551.97 Average 1.09 U 1.72 U 30.99	(°C) Ft. Units mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	156 110 167 No. of Samples 19 19 19 19 19 152 19	23.77 569.00 High 1.60 U 3.85 U 43.40 U	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 1/28/03 9/30/97	7.00 6.30 511.30 Low U U 0.06 U 0.06 U 6.60 U	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07 11/5/19	13.02 551.97 Average 1.09 U 1.72 U 30.99 U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	156 110 167 No. of Samples 19 19 19 19 19 19 152 19 152	23.77 569.00 High 1.60 U 3.85 U 43.40 U 43.40 U 60.00	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 1/28/03 9/30/97 11/16/07	7.00 6.30 511.30 U U U 0.06 U 0.06 U 6.60 U U U	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07 11/5/19 8/12/04	13.02 551.97 Average 1.09 U 1.72 U 30.99 U 13.40	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	156 110 167 No. of Samples 19 19 19 19 19 152 19 152 19 152 19	23.77 569.00 High 1.60 U 3.85 U 43.40 U 43.40 U 60.00 0.40	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 1/28/03 9/30/97 11/28/03 9/30/97 11/16/07 9/23/10	7.00 6.30 511.30 U U U 0.06 U 0.06 U 6.60 U U U U U	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07 11/5/19 8/12/04 9/23/10	13.02 551.97 Average 1.09 U 1.72 U 30.99 U 13.40 0.40	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	156 110 167 No. of Samples 19 19 19 19 152 19 152 19 152 19 152 19	23.77 569.00 High 1.60 U 3.85 U 43.40 U 43.40 U 60.00 0.40 0.60	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 1/28/03 9/30/97 11/16/07 9/23/10 9/14/04	7.00 6.30 511.30 Low U U 0.06 U 0.06 U 6.60 U U U U U U U U U U U U U	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07 11/5/19 8/12/04 9/23/10 9/2/98	13.02 551.97 Average 1.09 U 1.72 U 30.99 U 13.40 0.40 0.45	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	156 110 167 No. of Samples 19 19 19 19 152 19 152 19 152 19 152 19 152 19	23.77 569.00 High 1.60 U 3.85 U 43.40 U 60.00 0.40 0.60 1.20	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 1/28/03 9/30/97 11/28/03 9/30/97 11/16/07 9/23/10 9/14/04 9/2/98	7.00 6.30 511.30 Low U U U 0.06 U 0.06 U 0.06 U U U U U U 0.24	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07 11/5/19 8/12/04 9/23/10 9/2/98 10/14/08	13.02 551.97 Average 1.09 U 1.72 U 30.99 U 13.40 0.40 0.45 0.64	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	156 110 167 No. of Samples 19 19 19 19 152 19 152 19 152 19 152 19 152 19 152 19	23.77 569.00 High 1.60 U 3.85 U 43.40 U 60.00 0.40 0.60 1.20 0.28	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 1/28/03 9/30/97 11/16/07 9/23/10 9/14/04 9/2/98 3/14/08	7.00 6.30 511.30 Low U U U 0.06 U 0.06 U 0.06 U U U U U U U U U U U U U	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07 11/5/19 8/12/04 9/23/10 9/2/98 10/14/08 3/14/08	13.02 551.97 Average 1.09 U 1.72 U 30.99 U 13.40 0.45 0.64 0.28	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	156 110 167 No. of Samples 19 19 19 19 152 19 152 19 152 19 152 19 152 19 152 19 19 19	23.77 569.00 High 1.60 U 3.85 U 43.40 U 60.00 0.40 0.60 1.20 0.28 12.70	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 1/28/03 9/30/97 11/16/07 9/23/10 9/14/04 9/2/98 3/14/08	7.00 6.30 511.30 Low U U U 0.06 U 0.06 U U U U U U U U 0.24 U 1.00	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07 11/5/19 8/12/04 9/23/10 9/2/98 10/14/08 3/14/08 9/15/07	13.02 551.97 Average 1.09 U 1.72 U 30.99 U 13.40 0.45 0.64 0.28 4.59	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	156 110 167 No. of Samples 19 19 19 19 152 19 152 19 152 19 152 19 19 19 19 19 19 19	23.77 569.00 High 1.60 U 3.85 U 43.40 U 60.00 0.40 0.60 1.20 0.28 12.70 10.00	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 1/28/03 9/30/97 11/16/07 9/23/10 9/14/04 9/2/98 3/14/08 3/14/08 9/8/15	7.00 6.30 511.30 Low U U U 0.06 U 0.06 U U U U U U U 0.24 U 1.00 U	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07 11/5/19 8/12/04 9/23/10 9/2/98 10/14/08 3/14/08 9/15/07 3/14/08	13.02 551.97 Average 1.09 U 1.72 U 30.99 U 13.40 0.45 0.64 0.28 4.59 5.56	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	156 110 167 No. of Samples 19 19 19 19 152 19 152 19 152 19 19 19 19 19 19 19 19 19 19 19	23.77 569.00 High 1.60 U 3.85 U 43.40 U 60.00 0.40 0.60 1.20 0.28 12.70 10.00 0.01	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 1/28/03 9/30/97 11/16/07 9/23/10 9/14/04 9/2/98 3/14/08 3/14/08 9/8/15 10/14/08	7.00 6.30 511.30 Low U U 0.06 U 0.06 U 0.06 U 0.06 U 0.024 U 0.24 U 1.00 U U U	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07 11/5/19 8/12/04 9/23/10 9/2/98 10/14/08 3/14/08 9/15/07 3/14/08 10/14/08	13.02 551.97 Average 1.09 U 1.72 U 30.99 U 13.40 0.45 0.64 0.28 4.59 5.56 0.01	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	156 110 167 No. of Samples 19 19 19 19 152 19 152 19 19 19 19 19 19 19 19 19 19 19 19 19	23.77 569.00 High 1.60 U 3.85 U 43.40 U 60.00 0.40 0.60 1.20 0.28 12.70 10.00 0.01 U	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 11/28/03 9/30/97 11/16/07 9/23/10 9/14/04 9/2/98 3/14/08 3/14/08 9/8/15 10/14/08 9/30/97	7.00 6.30 511.30 Low U U 0.06 U 0.06 U 0.06 U 0.06 U 0.024 U 0.24 U 1.00 U U U U U U 0.24 U 1.00 U U U U U 0.00 U U 0.024 U U 0.00 U 0.00 U 0.024 U 0.00 U U U U U U U U U U U U U	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07 11/5/19 8/12/04 9/23/10 9/2/98 10/14/08 3/14/08 9/15/07 3/14/08 10/14/08 10/14/08	13.02 551.97 Average 1.09 U 1.72 U 30.99 U 13.40 0.45 0.64 0.28 4.59 5.56 0.01 U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved	156 110 167 No. of Samples 19 19 19 19 152 19 152 19 19 19 19 19 19 19 19 19 19 19 19 19	23.77 569.00 High 1.60 U 3.85 U 43.40 U 60.00 0.40 0.60 1.20 0.28 12.70 10.00 0.01 U 0.50	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 11/28/03 9/30/97 11/16/07 9/23/10 9/14/04 9/2/98 3/14/08 3/14/08 3/14/08 9/8/15 10/14/08 9/30/97 9/23/10	7.00 6.30 511.30 Low U U 0.06 U 0.06 U 0.06 U 0.06 U 0.024 U 0.24 U 1.00 U U U U U U U U U U U U U	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07 11/5/19 8/12/04 9/23/10 9/2/98 10/14/08 3/14/08 9/15/07 3/14/08 10/14/08 11/5/19 3/14/08	13.02 551.97 Average 1.09 U 1.72 U 30.99 U 13.40 0.45 0.64 0.28 4.59 5.56 0.01 U 0.40	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved	156 110 167 No. of Samples 19 19 19 19 152 19 19 152 19 19 19 19 19 19 19 19 19 19 19 19 19	23.77 569.00 High 1.60 U 3.85 U 43.40 U 60.00 0.40 0.60 1.20 0.28 12.70 10.00 0.01 U 0.50 0.23	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 1/28/03 9/30/97 11/16/07 9/23/10 9/14/04 9/2/98 3/14/08 3/14/08 9/8/15 10/14/08 9/30/97 9/23/10 3/14/08	7.00 6.30 511.30 Low U U 0.06 U U 0.06	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07 11/5/19 8/12/04 9/23/10 9/2/98 10/14/08 3/14/08 10/14/08 10/14/08 11/5/19 3/14/08	13.02 551.97 Average 1.09 U 1.72 U 30.99 U 13.40 0.45 0.64 0.28 4.59 5.56 0.01 U 0.40	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved	156 110 167 No. of Samples 19 19 19 19 152 19 19 19 19 19 19 19 19 19 19 19 19 19	23.77 569.00 High 1.60 U 3.85 U 43.40 U 43.40 U 60.00 0.40 0.60 1.20 0.28 12.70 10.00 0.28 12.70 10.00 0.01 U 0.50 0.23 340.00	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 11/28/03 9/30/97 11/16/07 9/23/10 9/14/04 9/2/98 3/14/08 3/14/08 9/8/15 10/14/08 9/30/97 9/23/10 3/14/08 10/10/18	7.00 6.30 511.30 Low U U 0.06 U 0.024 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.24 U 0.06 U 0.06 U 0.24 U 0.06 U 0.06 U 0.24 U 0.06 U 0.06 U 0.06 U 0.24 U 0.06 U 0.06 U 0.06 U 0.24 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 0	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07 11/5/19 8/12/04 9/23/10 9/2/98 10/14/08 3/14/08 10/14/08 11/5/19 3/14/08 10/14/08	13.02 551.97 Average 1.09 U 1.72 U 30.99 U 13.40 0.45 0.64 0.28 4.59 5.56 0.01 U 0.40 0.23 41.99	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	156 110 167 No. of Samples 19 19 19 19 152 19 19 19 19 19 19 19 19 19 19 19 19 19	23.77 569.00 High 1.60 U 3.85 U 43.40 U 60.00 0.40 0.60 1.20 0.28 12.70 10.00 0.01 U 0.50 0.23 340.00 0.00	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 11/28/03 9/30/97 11/16/07 9/23/10 9/14/04 9/2/98 3/14/08 3/14/08 9/8/15 10/14/08 9/30/97 9/23/10 3/14/08 10/10/18 9/30/97	7.00 6.30 511.30 Low U U 0.06 U 0.024 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.24 U 0.06 U 0.06 U 0.06 U 0.24 U 0.06 U	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07 11/5/19 8/12/04 9/23/10 9/23/10 9/2/98 10/14/08 3/14/08 10/14/08 11/5/19 3/14/08 10/14/08 3/14/08 10/14/08 9/30/97	13.02 551.97 Average 1.09 U 1.72 U 30.99 U 13.40 0.45 0.64 0.28 4.59 5.56 0.01 U 0.40 0.23 41.99 0.00	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	156 110 167 No. of Samples 19 19 19 19 152 19 19 19 19 19 19 19 19 19 19 19 19 19	23.77 569.00 High 1.60 U 3.85 U 43.40 U 60.00 0.40 0.60 1.20 0.28 12.70 10.00 0.01 U 0.50 0.23 340.00 0.00 50.00	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 1/28/03 9/30/97 11/16/07 9/23/10 9/14/04 9/2/98 3/14/08 3/14/08 9/8/15 10/14/08 9/30/97 9/23/10 3/14/08 10/10/18 9/30/97 6/2/98	7.00 6.30 511.30 Low U U 0.06 U 0.024 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.06 U 0.24 U 0.06 U 0.06 U 0.24 U 0.06 U 0.06 U 0.06 U 0.24 U 0.06 U 0.06 U 0.06 U 0.24 U 0.06 0.06 U 0.06	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07 11/5/19 8/12/04 9/23/10 9/23/10 9/2/98 10/14/08 3/14/08 10/14/08 11/5/19 3/14/08 10/14/08 10/14/08 10/14/08 3/14/08	13.02 551.97 Average 1.09 U 1.72 U 30.99 U 13.40 0.45 0.64 0.28 4.59 5.56 0.01 U 0.40 0.23 41.99 0.00 26.82	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved	156 110 167 No. of Samples 19 19 19 19 152 19 19 19 19 19 19 19 19 19 19 19 19 19	23.77 569.00 High 1.60 U 3.85 U 43.40 U 60.00 0.40 0.60 1.20 0.28 12.70 10.00 0.01 U 0.28 12.70 10.00 0.01 U 0.50 0.23 340.00 0.00 50.00 29,800.00	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 1/28/03 9/30/97 11/16/07 9/23/10 9/14/04 9/2/98 3/14/08 3/14/08 9/8/15 10/14/08 9/8/15 10/14/08 9/30/97 9/23/10 3/14/08 10/10/18 9/30/97 6/2/98 4/19/01	7.00 6.30 511.30 Low U U 0.06 U 0.024 U 0.00	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07 11/5/19 8/12/04 9/23/10 9/23/10 9/2/98 10/14/08 3/14/08 10/14/08 11/5/19 3/14/08 10/14/08 11/5/19 3/14/08 10/14/08 10/14/08 9/30/97 4/11/06 9/15/07	13.02 551.97 Average 1.09 U 1.72 U 30.99 U 13.40 0.44 0.28 4.59 5.56 0.01 U 0.40 0.23 41.99 0.00 26.82 21,126.78	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved	156 110 167 No. of Samples 19 19 19 19 152 19 19 19 19 19 19 19 19 19 19 19 19 19	23.77 569.00 High 1.60 U 3.85 U 43.40 U 60.00 0.40 0.60 1.20 0.28 12.70 10.00 0.01 U 0.23 340.00 0.00 50.00 29,800.00 0.60	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 1/28/03 9/30/97 11/16/07 9/23/10 9/14/04 9/2/98 3/14/08 3/14/08 9/8/15 10/14/08 9/8/15 10/14/08 9/30/97 9/23/10 3/14/08 10/10/18 9/30/97 6/2/98 4/19/01 8/4/97	7.00 6.30 511.30 Low U U 0.06 U 0.06 U 0.06 U 0.06 U 0.00 U 0.00 U 0.24 U 0.24 U 0.24 U 0.24 U 0.00 U 0.24 U 0.00 U 0.24 U 0.00 U 0.24 U 0.00 U 0.24 U 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.00000 0.00000 0.00000 0.000000 0.00000000	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07 11/5/19 8/12/04 9/23/10 9/23/10 9/23/10 9/23/10 9/2/98 10/14/08 3/14/08 10/14/08 10/14/08 10/14/08 3/14/08 10/14/08 9/30/97 4/11/06 9/15/07 10/14/08	13.02 551.97 Average 1.09 U 1.72 U 30.99 U 13.40 0.440 0.28 4.59 5.56 0.01 U 0.40 0.23 41.99 0.00 26.82 21,126.78 0.26	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved	156 110 167 No. of Samples 19 19 19 19 152 19 19 19 19 19 19 19 19 19 19 19 19 19	23.77 569.00 High 1.60 U 3.85 U 43.40 U 60.00 0.40 0.60 1.20 0.28 12.70 10.00 0.01 U 0.28 12.70 10.00 0.01 U 0.50 0.23 340.00 0.00 50.00 29,800.00	6/1/09 6/15/11 11/26/18 Date 9/23/10 9/30/97 3/14/08 9/30/97 1/28/03 9/30/97 11/16/07 9/23/10 9/14/04 9/2/98 3/14/08 3/14/08 9/8/15 10/14/08 9/8/15 10/14/08 9/30/97 9/23/10 3/14/08 10/10/18 9/30/97 6/2/98 4/19/01	7.00 6.30 511.30 Low U U 0.06 U 0.024 U 0.00	3/4/13 4/2/19 Date 3/14/08 11/5/19 10/14/08 11/5/19 9/15/07 11/5/19 8/12/04 9/23/10 9/23/10 9/2/98 10/14/08 3/14/08 10/14/08 11/5/19 3/14/08 10/14/08 11/5/19 3/14/08 10/14/08 10/14/08 9/30/97 4/11/06 9/15/07	13.02 551.97 Average 1.09 U 1.72 U 30.99 U 13.40 0.44 0.28 4.59 5.56 0.01 U 0.40 0.23 41.99 0.00 26.82 21,126.78	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 32: DS-2 Monthly Dissolution Surface Aquifer

DAUB & ASSOCIATES, INC. DI STATION CONTRACTOR



Wet Chemistry Samples	Devenenteve	No. of	Lliada	Data	Laur	Data	A	
Bicarbonate as CaCQ3 193 43.000 5/2406 17.400 11/27/02 28.816 mo/t Total Alkalinity as 193 60.100 3/14/08 21.900 6/11/14 30.222 mg/t Bromide 29 5.00 5/206 0.70 8/2766 2.18 mg/t Cation-Anion Balance 193 1.35.00 10/28/02 -3.80 4/10/13 4/79 % Sum of Cations 193 1.7200 14/08 20.00 4/10/13 47.9 % Chemical Oxygen 29 1.000.00 7/0002 140.00 8/21/03 47.15 mg/t Conductivity, Lab 193 81.800 2/1318 27.200 9/28/06 40.07 µmhos Nitrates A, dissolved 29 0.10 8/1204 0.02 9/28/06 0.05 mg/t Nitrates N, dissolved 29 0.14 11/10/14 0.02 9/28/06 0.05 mg/t Nitrates N, dissolved 29 0.05 11/10/14	Parameters	No. of	High	Date	Low	Date	Average	Units
Carbonate as CaCQ3 193 23.900 5/3/08 4/19 6/26/02 3/84/08 1/1/14 30.222 mg/ Cation-Anion Balance 193 13.50 10/28/02 3.80 4/10/13 4/79 % Sum of Anions 193 1,420.00 4/2/16 511.00 4/2/203 4/10/13 7/68.36 meg/ Cation-Anions 193 1,730.00 3/14/08 20,70 4/10/13 7/68.56 meg/ Conductivity, Lab 193 11,200 12/19/18 39.00 5/24/05 5/35.7 mg/ Hardness as CaCQ3 193 49.00 3/21/04 0.02 9/28/06 0.05 mg/ Hardness as CaCQ3 193 49.00 3/21/04 0.02 9/28/06 0.05 mg/ Nitrate as N, dissolved 29 0.10 8/12/91 6.11 7/11/17 12.38 mg/ Nitrate as N, dissolved 29 0.05 11/10/14 0.02 9/28/06 0.05 mg/ Nitr			40,000	E/04/05	17 100	11/07/00	00.010	
Total Alkalinity as Bromide 193 60.100 3/14/08 21,900 6/11/14 30,222 mg/l Cation-Anion Balance 193 1.350 10/28/02 -3.80 4/10/13 4/79 % Sum of Anions 193 1.720.00 3/14/08 20.70 4/10/13 759.36 meg/l Chemical Oxygen 29 1.000.00 7/30/08 140.00 8/21/03 4/17.15 mg/l Conductivity, Lab 193 81.800 2/13/19 27.200 9/28/06 64.077 µmhos Nitrate as N, dissolved 29 0.10 8/12/04 0.02 9/28/06 0.05 mg/l Nitrate sN, dissolved 29 0.14 11/10/14 0.02 9/28/06 0.05 mg/l Nitrogen, Armonoia 29 3/4.20 12/19/18 6.11 7/10/17 1.23 mg/l Nitrogen, Craanic 29 3/4.20 12/19/18 6.11 7/10/17 1.23 mg/l Nitrate/Nitrie as N 29 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>								
Bromide 29 5.00 5/3/08 0.70 8/2/06 2.18 mg/l Cation-Anons 193 1.420.00 4/9/18 511.00 4/29/03 4/29/03 4/29/03 4/29/03 4/29/03 4/29/03 4/29/03 4/29/03 4/29/03 4/27.15 mg/l Chemical Oxrden 29 1.100.00 7/30/09 1/40.00 5/24/05 4/42.51 mg/l Conductivity, Lab 193 61.200 2/21/11 39.00 5/24/05 5/9.57 mg/l Hardness as CaCO3 193 49.00 3/21/11 10.01 1/28/03 15.44 mg/l Hardness as CaCO3 193 49.00 3/21/11 10.01 1/28/03 15.44 mg/l mg/l mg/l 10.02 9/28/06 0.05 mg/l mg/l 11/10/14 0.02 9/28/06 0.05 mg/l 11/10/14 0.02 9/28/06 0.05 mg/l 11/10/14 0.02 9/28/06 0.05 mg/l 11/10/14 0.02 <td< td=""><td>Carbonate as CaCO3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	Carbonate as CaCO3							
Cation-Anion Balance 193 13.50 10/28/02 -3.80 4/1/013 -4/7.9 % Sum of Cations 193 1.420.00 4/9/18 511.00 4/29/103 743.58 mea/l Chemical Oxygen 29 1.100.00 7/30/09 140.00 8/21/03 4/17.15 mg/l Choride 193 17.200 12/19/18 39.00 5/24/05 5.412.51 mg/l Conductivity, Lab 193 329.00 3/8/11 1.00 1/28/06 6.05 mg/l Hardness as CaCO3 193 49.00 3/8/11 1.00 1/28/06 0.05 mg/l Nitrates N, dissolved 29 0.14 11/10/14 0.02 9/28/06 0.05 mg/l Nitrates N, dissolved 29 0.05 11/10/14 0.01 7/11/13 0.03 mg/l Nitrates N, dissolved 29 0.05 11/10/14 0.01 7/11/13 0.03 mg/l Nitrates N, dissolved 29 0.05 <								
Sum of Anions 193 1.420.00 4/9/18 511.00 4/29/03 759.36 meg/l Chinoide 193 1.730.00 7/30/09 140.00 8/21/03 417.15 mg/l Chinoide 193 1.7200 12/19/18 39.00 5/24/05 5.412.51 mg/l Conductivity, Lab 193 329.00 11/1/17 2.280 5/24/05 5.412.51 mg/l Hardness as CaCO3 193 49.00 3/8/11 1.00 1/24/05 5.412.44 mg/l Nitrate/Nitrite as N, dissolved 29 0.10 8/12/04 0.02 9/28/06 0.05 mg/l Nitrogen, Carganic 29 0.05 11/10/14 0.01 7/11/17 12.38 mg/l Nitrogen, Carganic 29 28.00 8/22/02 0.80 9/30/08 7.93 mg/l Nitrogen, Carganic 29 29 0.50 7/30/09 3.10 8/16/11 3.25 9/23/10 19.11 mg/l Phosphatr								
Sum of Cations 193 1.730.00 3/14/08 20.70 4/10/13 700/18 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>								
Chemical Cxygen 29 1.100.00 7/30/09 140.00 8/21/03 417.15 mg/l Conductivity, Lab 193 81.800 2/13/19 27.200 9/28/06 46.077 µmhos Fluoride 193 329.00 11/7/18 2.80 5/24/05 5.412.51 mg/l Hardness as CaCO3 193 49.00 3/8/11 1.00 1/28/08 15.44 mg/l Nitrate as N, dissolved 29 0.10 8/12/04 0.02 9/28/06 0.05 mg/l Nitrogen, Ammonia 29 0.05 11/10/14 0.01 7/11/17 12.38 mg/l Nitrogen, Ammonia 29 28.20 8/22/02 0.80 9/32/08 7.93 mg/l Nitrogen, Ammonia 29 25.00 12/19/18 6.11 7/10/17 12.38 mg/l Phosphate, total 29 155.00 7/30/09 3.10 8/16/11 3.04 3.92 0 13/20/81 8.50 5/28/03 4.94								
Chloride 193 17.200 12/19/18 39.00 5/24/05 5/412.51 mg/l Conductivity, Lab 193 329.00 11/7/18 2.800 5/24/05 5/9.57 mg/l Hardness as CaCO3 193 49.00 3/8/11 1.00 1/28/06 6.05 mg/l Nitrate SN, dissolved 29 0.16 8/12/04 0.02 9/28/06 0.05 mg/l Nitrates N, dissolved 29 0.05 11/10/14 0.01 7/11/13 0.03 mg/l Nitrogen, Oranic 29 28.60 8/22/02 0.80 9/30/08 7.93 mg/l Phosphate, total 29 50.00 12/19/18 3.50 9/23/10 19.11 mg/l Phosphate, total 29 150.00 7/30/08 3.20 6/26/07 13.94 mg/l Sulfate 193 1.860 9/23/10 0.00 9/2/15 206 mg/l Sulfate 193 88.500 3/14/08 18.500 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
Conductivity, Lab 193 81.800 2/13/19 27.200 9/28/06 46,077 µmhos Hardness as CaCO3 193 329.00 11/7/18 2.80 5/24/05 59.57 mg/ Nitrate as N, dissolved 29 0.10 8/12/04 0.02 9/28/06 0.05 mg/ Nitrate as N, dissolved 29 0.14 11/10/14 0.02 9/28/06 0.05 mg/ Nitrogen, Ammonia 29 34.20 12/19/18 6.11 7/10/17 12.38 mg/ Nitrogen, Organic 29 28.00 8/22/02 0.80 9/30/08 7.93 mg/ Phosphate, total 29 155.00 7/30/09 3.10 8/16/11 30.53 mg/ Phosphorus, total 29 118.30 9/23/10 0.00 12/21/12 2.06 mg/ Sulfate 193 8.8500 3/14/08 18.500 5/29/03 40.416 mg/ Conductivity, Field 214 9.91 6/30/09								
Fluoride 193 329.00 11/7/18 2.80 5/24/05 59.57 mg/l Nitrate as N, dissolved 29 0.10 8/12/04 0.02 9/28/06 0.05 mg/l Nitrate Nitrite as N, dissolved 29 0.14 11/10/14 0.02 9/28/06 0.05 mg/l Nitrogen, Ammonia 29 0.05 11/10/14 0.01 7/11/13 0.03 mg/l Nitrogen, Ammonia 29 34.20 12/19/18 6.11 7/11/17 12.38 mg/l Nitrogen, Craanic 29 28.00 8/2/20 0.80 9/30/08 7.93 mg/l Phosphate, total 29 155.00 7/30/09 3.10 8/16/11 30.53 mg/l Phosphate, total 29 18.30 9/20/08 3.20 6/26/07 13.94 mg/l Sulfate 193 1,860 9/23/10 0.00 9/2/15 206 mg/l Sulfate 193 88.500 3/14/08 18.500<								
Hardness as CaC03 193 49.00 3/8/11 1.00 1/128/03 15.44 mg/l Nitrate as N, dissolved 29 0.14 11/10/14 0.02 9/28/06 0.05 mg/l Nitrate N, dissolved 29 0.14 11/10/14 0.02 9/28/06 0.05 mg/l Nitrogen, Ammonia 29 34.20 12/19/18 6.50 9/23/10 19.31 mg/l Nitrogen, Organic 29 28.00 8/22/02 0.80 9/23/10 19.11 mg/l 11/10/14 0.01 7/11/13 0.03 mg/l Nitrogen, Organic 29 34.20 12/18 5.50 9/23/10 10.01 12/21/14 24.66 nos Phosphate, total 29 11.30 11/5/19 0.04 8/25/05 1.96 mg/l SAR in Water 149 8.450 5/18/06 0.00 12/21/14 2.466 nose Sulfide 29 11.30 11/5/19 0.04 8/25/05 1.98								
Nitrate as N, dissolved 29 0.10 8/12/04 0.02 9/28/06 0.05 mg/l Nitrite as N, dissolved 29 0.05 11/10/14 0.02 9/28/06 0.05 mg/l Nitrogen, Armmonia 29 34.20 12/19/18 6.11 7/11/17 12.38 mg/l Nitrogen, Organic 29 28.00 8/22/02 0.80 9/30/08 7.33 mg/l Nitrogen, Organic 29 28.00 8/22/02 0.80 9/30/08 7.33 mg/l Phosphate, total 29 155.00 7/30/09 3.10 8/16/11 30.53 mg/l Phosphate, total 29 113.00 9/30/08 3.20 6/26/07 13.94 mg/l Sulfate 193 88.500 3/14/08 18.500 5/29/03 40.416 mg/l Conductivity, Field 214 86.810 2/13/19 30.600 4/29/03 49.940 µmhos Conductivity, Field 214 543.10 9/1								
Nitrate/Nitrite as N, 29 0.14 11/10/14 0.02 9/28/06 0.05 mg/l Nitrogen, Ammonia 29 0.42 12/19/18 6.11 7/11/13 0.03 mg/l Nitrogen, Ammonia 29 28.00 8/22/02 0.80 9/30/08 7.93 mg/l Nitrogen, Organic 29 50.00 12/19/18 5.50 9/23/10 19.11 mg/l Phosphate, total 29 155.00 7/30/09 3.10 8/16/11 30.53 mg/l Phosphate, total 29 183.00 9/30/08 3.22 6/26/07 13.94 mg/l SAR in Water 149 8.450 5/18/06 0.00 9/21/12 2.466 none Sulfide 29 11.30 11/5/19 0.04 8/25/05 1.96 mg/l Conductivity, Field 214 86.500 3/14/08 18.500 3/29/03 40.416 mg/l Conductivity, Field 213 2.4.40 7/5/16 <						1/28/03		
Nitrie as N, dissolved 29 0.05 11/10/14 0.01 7/11/13 0.03 mg/l Nitrogen, Ammonia 29 34.20 12/19/18 6.11 7/11/13 0.03 mg/l Nitrogen, Organic 29 28.00 8/22/02 0.86 9/30/08 7.83 mg/l Nitrogen, Organic 29 28.00 12/19/18 3.50 9/23/10 19.11 mg/l Phosphate, total 29 183.00 9/30/08 3.20 6/26/07 13.94 mg/l SAR in Water 149 8.450 5/18/06 0.00 12/9/14 2.466 none Sulfate 193 18.60 9/23/10 0.00 9/2/15 206 mg/l Conductivity, Field 214 9.91 6/30/99 7.00 3/9/16 8/42/01 19/7/14 484.10 2/4/16 521.75 Field Total Dissolved Solids 193 88.500 3/14/08 18.500 5/29/03 49.940 µmlos <								
Nitrogen, Ammonia 29 34.20 12/19/18 6.11 7/10/17 12.38 mg/l Nitrogen, Total Kjeldahi 29 50.00 12/19/18 3.50 9/23/10 19.11 mg/l phosphate, total 29 155.00 7/30/09 3.10 8/16/11 30.53 mg/l Phosphate, total 29 155.00 7/30/09 3.10 8/16/11 30.53 mg/l Phosphate, total 29 155.00 7/30/09 3.10 8/16/11 30.53 mg/l SAR in Water 149 8.450 5/18/06 0.00 12/9/14 2.466 none Sulfide 29 11.30 11/5/19 0.00 9/2/15 206 mg/l Conductivity, Field 214 86,810 2/13/19 30.600 4/29/03 49.40 µm/los Temperature (°C), Field 214 543.10 9/7/14 484.10 2/4/16 521.75 Ft. Parameters No. of High Date								
Nitrogen, Organic 29 28.00 8/22/02 0.80 9/30/08 7.93 mg/l Nitrogen, Total Kjeldahi 29 50.00 12/19/18 3.50 9/23/10 19.11 mg/l Phosphate, total 29 155.00 7/30/09 3.10 8/16/11 30.53 mg/l Phosphate, total 29 183.00 9/30/08 3.20 6/26/07 13.94 mg/l SAR in Water 149 8.450 5/18/06 0.00 12/9/14 2.466 none Sulfate 193 1.860 9/23/10 0.00 9/27/15 206 mg/l Conductivity, Field 214 8.610 2/13/19 30.600 4/29/03 49.940 µmhos pH, Field 214 9.91 6/30/09 7.00 3/9/16 8.42 units Temperature (°C), Field 213 24.40 7/5/16 5.30 2/9/12 12.90 (°C) Water Level, Field 30 3.28 8/25/05 <td< td=""><td></td><td></td><td></td><td></td><td></td><td>7/11/13</td><td></td><td>mg/l</td></td<>						7/11/13		mg/l
Nitrogen, Total Kieldahl 29 50.00 12/19/18 3.50 9/23/10 19.11 mr/l Phosphate, total 193 9.20 4/10/08 7.90 10/28/02 8.59 units Phosphate, total 29 155.00 7/30/09 3.10 8/16/11 30.53 mg/l Phosphate, total 29 183.00 9/30/08 3.20 6/26/07 13.94 mg/l Sulfate 193 1.860 9/23/10 0.00 9/21/15 206 mg/l Sulfate 193 1.860 9/23/10 0.00 9/21/15 206 mg/l Conductivity, Field 214 86.500 3/14/08 18.500 5/29/03 40.416 mg/l Conductivity, Field 214 86.810 2/13/19 30.600 4/29/03 49.940 µmhos D DH, Field 214 543.10 9/7/14 484.10 2/4/16 521.75 Ft. Parameters No. of Samples Sample	Nitrogen, Ammonia		34.20	12/19/18	6.11		12.38	mg/l
pH, lab 193 9.20 4/10/08 7.90 10/28/02 8.59 units Phospharus, total 29 155.00 7/30/09 3.10 8/16/11 30.53 mg/l SAR in Water 149 8.450 5/18/06 0.00 12/9/14 2.466 none Sulfate 193 1.860 9/23/10 0.00 9/2/15 206 mg/l Conductivity, Field 214 86.810 2/13/19 30.600 4/29/03 49.940 µmhos pH, Field 214 9.91 6/30/09 7.00 3/9/16 8.42 units Temperature (°C), Field 213 24.40 7/5/16 5.30 2/9/12 12.90 (°C) Water Level, Field 214 543.10 9/7/14 484.10 2/4/16 521.75 Ft. Parameters No. of High Date Low Date Average Units Aluminum, dissolved 30 79.90 8/12/04 U <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>mg/l</td></t<>								mg/l
Phosphate, total 29 155.00 7/30/09 3.10 8/16/11 30.53 mg/l Phosphorus, total 29 183.00 9/30/08 3.20 6/26/07 13.94 mg/l SAR in Water 149 8.450 5/18/06 0.00 12/9/14 2.466 none Sulfate 193 1.860 9/23/10 0.00 9/2/15 206 mg/l Total Dissolved Solids 193 88.500 3/14/08 18.500 5/29/03 40.416 mg/l Conductivity, Field 214 86.810 2/13/19 30.600 4/29/03 49.940 µmhos p.H. Field 214 9.91 6/30/09 7.00 3/9/16 8.42 units Temperature (°C), Field 213 24.40 7/5/16 5.30 2/9/12 12.90 (°C) Water Level, Field 214 543.10 9/7/14 484.10 2/4/16 521.75 Ft. Parameters No. of High Date <t< td=""><td>Nitrogen, Total Kjeldahl</td><td>29</td><td>50.00</td><td>12/19/18</td><td>3.50</td><td>9/23/10</td><td>19.11</td><td>mg/l</td></t<>	Nitrogen, Total Kjeldahl	29	50.00	12/19/18	3.50	9/23/10	19.11	mg/l
Phosphorus, total 29 183.00 9/30/08 3.20 6/26/07 13.94 mg/l SAR in Water 149 8.450 5/18/06 0.00 12/9/14 2.466 none Sulfide 29 11.30 11/5/19 0.04 8/25/05 1.96 mg/l Total Dissolved Solids 193 88,500 3/14/08 18,500 5/29/03 40,416 mg/l Conductivity, Field 214 9.91 6/30/09 7.00 3/9/16 8.42 units Temperature (°C), Field 213 24.40 7/16/16 5.30 2/9/12 12.90 (°C) Watar Samples Samples Mata 5.30 2/9/12 12.90 (°C) Aluminum, dissolved 30 79.90 8/12/04 U 3/14/08 17.00 mg/l Aluminum, dissolved 30 U 12/4/12 U mg/l mg/l Aluminum, dissolved 30 U 12/4/19/18 U 11/5/19	pH, lab	193	9.20	4/10/08	7.90	10/28/02	8.59	units
SAR in Water 149 8,450 5/18/06 0.00 12/9/14 2,466 none Sulfate 193 1,860 9/23/10 0.00 9/215 206 mg/l Total Dissolved Solids 193 88,500 3/14/08 18,500 5/29/03 40,416 mg/l Conductivity, Field 214 86,810 2/13/19 30,600 4/29/03 49,940 µmhos pH, Field 214 9,91 6/30/09 7.00 3/9/16 8.42 units Temperature (°C), Field 213 24.40 7/5/16 5.30 2/9/12 12.90 (°C) Water Level, Field 214 543.10 9/7/14 484.10 2/4/16 521.75 Ft. Parameters No. of Samples Date Low Date Average Units Aluminun, dissolved 30 U 12/4/12 U 11/5/19 U mg/l Barium, dissolved 30 U 12/19/18 U	Phosphate, total	29	155.00	7/30/09	3.10	8/16/11	30.53	mg/l
SAR in Water 149 8.450 5/18/06 0.00 12/9/14 2.466 none Sulfate 193 1.860 9/23/10 0.00 9/21/15 206 mg/l Total Dissolved Solids 193 88.500 3/14/08 18.500 5/29/03 40,416 mg/l Conductivity, Field 214 86.810 2/13/19 30.600 4/29/03 49,940 µmhos pH, Field 214 9.91 6/30/09 7.00 3/9/16 8.42 units Temperature (°C), Field 213 24.40 7/5/16 5.30 2/9/12 12.90 (°C) Water Level, Field 214 543.10 9/7/14 484.10 2/4/16 521.75 Ft. Parameters No. of High Date Low Date Average Units Aluminun, dissolved 30 U 12/4/12 U 11/5/19 U mg/l Barium, dissolved 30 U 12/4/12 U	Phosphorus, total	29	183.00	9/30/08	3.20	6/26/07	13.94	mg/l
Sulfate 193 1,860 9/23/10 0.00 9/2/15 206 mg/l Total Dissolved Solids 193 88,500 3/14/08 18,500 3/04/08 18,500 40,416 mg/l Conductivity, Field 214 86,810 2/13/19 30,600 4/29/03 49,940 µmhos pH, Field 214 9,91 6/30/09 7.00 3/9/16 8.42 units Temperature (°C), Field 213 24,40 7/5/16 5.30 2/9/12 12.90 (°C) Water Level, Field 214 543.10 9/7/14 484.10 2/4/16 521.75 Ft. Parameters No. of High Date Low Date Average Units Aluminum, dissolved 30 U 12/4/12 U 3/14/08 17.00 mg/l Barium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Baron, dissolved 30 U 12/19/18	SAR in Water	149	8,450	5/18/06	0.00		2,466	
Sulfide 29 11.30 11/5/19 0.04 8/25/05 1.96 mg/l Total Dissolved Solids 193 88,500 3/14/08 18,500 5/29/03 40,416 mg/l Conductivity, Field 214 86,810 2/13/19 30,600 4/29/03 49,940 µmhos DH, Field 214 9.91 6/30/09 7.00 3/9/16 8.42 units Temperature (°C), Field 213 24.40 7/5/16 5.30 2/9/12 12.90 (°C) Water Level, Field 214 543.10 9/7/14 484.10 2/4/16 521.75 Ft. Parameters No. of High Date Low Date Average Units Aluminum, dissolved 30 U 12/4/12 U 11/5/19 U mg/l Barium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Barium, dissolved 30 U 12/19/18 U <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>206</td><td></td></td<>							206	
Total Dissolved Solids 193 88,500 3/14/08 18,500 5/29/03 40,416 mg/l Conductivity, Field 214 86,810 2/13/19 30,600 4/29/03 49,940 µmhos pH, Field 214 9,91 6/30/09 7.00 3/9/16 8.42 units Temperature (°C), Field 213 24.40 7/5/16 5.30 2/9/12 12.90 (°C) Water Level, Field 214 543.10 9/7/14 484.10 2/4/16 521.75 Ft. Parameters No. of High Date Low Date Average Units Aluminum, dissolved 30 79.90 8/12/04 U 3/14/08 17.00 mg/l Barium, dissolved 30 U 12/4/12 U mg/l Barium, dissolved 30 U 12/4/12 U mg/l Beryllium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Cadmium, di						8/25/05		
Conductivity, Field 214 86,810 2/13/19 30,600 4/29/03 49,940 µmhos Temperature (°C), Field 213 24.40 7/5/16 5.30 2/9/12 12.90 (°C) Water Level, Field 214 543.10 9/7/14 484.10 2/4/16 521.75 Ft. Parameters No. of High Date Low Date Average Units Aluminum, dissolved 30 79.90 8/12/04 U 3/14/08 17.00 mg/l Arsenic, dissolved 30 U 12/4/12 U 12/4/12 U mg/l Barium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Boron, dissolved 194 74.70 2/13/19 3.69 5/29/03 17.31 mg/l Cadmium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Cadmium, dissolved 30 1.20 8/16/11 U <								
pH, Field 214 9.91 6/30/09 7.00 3/9/16 8.42 units Temperature (°C), Field 213 24.40 7/5/16 5.30 2/9/12 12.90 (°C) Water Level, Field 214 543.10 9/7/14 484.10 2/4/16 521.75 Ft. Parameters No. of Samples High Samples Date Low Date Average Units Aluminum, dissolved 30 79.90 8/12/04 U 3/14/08 17.00 mg/l Arsenic, dissolved 30 U 12/4/12 U 12/4/12 U mg/l Barium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Boron, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Calcium, dissolved 30 0.01 5/18/06 U 5/18/06 0.01 mg/l Calcium, dissolved 30 1.40 8/22/02 U </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
Temperature (°C), Field 213 24.40 7/5/16 5.30 2/9/12 12.90 (°C) Water Level, Field 214 543.10 9/7/14 484.10 2/4/16 521.75 Ft. Parameters No. of Metals High Date Low Date Average Units Aluminum, dissolved 30 79.90 8/12/04 U 3/14/08 17.00 mg/1 Arsenic, dissolved 30 U 12/4/12 U 12/4/12 U mg/1 Barium, dissolved 30 U 12/19/18 U 11/5/19 U mg/1 Boron, dissolved 194 74.70 2/13/19 3.69 5/29/03 17.31 mg/1 Cadmium, dissolved 30 U 12/19/18 U 11/5/19 U mg/1 Cadeium, dissolved 30 0.01 5/18/06 U 5/18/06 0.01 mg/1 Low 8/22/02 U 3/14/08 0.81 mg/1								
Water Level, Field 214 543.10 9/7/14 484.10 2/4/16 521.75 Ft. Parameters No. of Metals Samples Date Low Date Average Units Aluminum, dissolved 30 79.90 8/12/04 U 3/14/08 17.00 mg/l Arsenic, dissolved 30 U 12/4/12 U 12/4/12 U mg/l Barium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Boron, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Cadmium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Calcium, dissolved 30 0.01 5/18/06 0.01 mg/l Chromium, dissolved 30 1.20 8/16/11 U 8/12/04 0.85 mg/l Lithium, dissolved 30 3.70 9/15/07 U 5/18/06 1.49 mg/l <								
Parameters No. of Samples High Samples Date Low Date Average Units Aluminum, dissolved 30 79.90 8/12/04 U 3/14/08 17.00 mg/l Arsenic, dissolved 30 U 12/4/12 U 12/4/12 U mg/l Barium, dissolved 30 3.32 8/25/05 0.19 8/19/07 1.83 mg/l Berylium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Cadmium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Calcium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Calcium, dissolved 30 0.01 5/18/06 U 5/29/03 4.13 mg/l Chromium, dissolved 30 1.20 8/16/11 U 8/12/04 0.85 mg/l Iron, dissolved 30 1.40 8/22/02 U 3/14/08								
Metals Samples - - - Aluminum, dissolved 30 79.90 8/12/04 U 3/14/08 17.00 mg/l Arsenic, dissolved 30 U 12/4/12 U 12/4/12 U mg/l Barium, dissolved 30 3.32 8/25/05 0.19 8/19/07 1.83 mg/l Beryllium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Cadmium, dissolved 194 74.70 2/13/19 3.69 5/29/03 17.31 mg/l Cadmium, dissolved 194 14.00 7/10/17 U 5/29/03 4.13 mg/l Calcium, dissolved 30 0.01 5/18/06 U 5/18/06 0.01 mg/l Copper, dissolved 30 1.20 8/16/11 U 8/12/04 0.85 mg/l Iron, dissolved 30 1.40 8/22/02 U 3/14/08 0.81 mg/l Lead, di		1		•, • , • •				
Aluminum, dissolved 30 79.90 8/12/04 U 3/14/08 17.00 mg/l Arsenic, dissolved 30 U 12/4/12 U 12/4/12 U mg/l Barium, dissolved 30 3.32 8/25/05 0.19 8/19/07 1.83 mg/l Beryllium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Boron, dissolved 194 74.70 2/13/19 3.69 5/29/03 17.31 mg/l Cadmium, dissolved 194 14.00 7/10/17 U 5/29/03 4.13 mg/l Chromium, dissolved 30 0.01 5/18/06 U 5/18/06 0.01 mg/l Copper, dissolved 30 1.20 8/16/11 U 8/12/04 0.85 mg/l Iron, dissolved 30 1.40 8/22/02 U 3/14/08 0.81 mg/l Lead, dissolved 30 1.40 8/22/02 U 3/14/08	Parameters	No. of	High	Date	Low	Date	Average	Units
Arsenic, dissolved 30 U 12/4/12 U 12/4/12 U mg/l Barium, dissolved 30 3.32 8/25/05 0.19 8/19/07 1.83 mg/l Beryllium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Boron, dissolved 194 74.70 2/13/19 3.69 5/29/03 17.31 mg/l Cadmium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Cadcium, dissolved 30 U 12/19/18 U 5/29/03 4.13 mg/l Chromium, dissolved 30 0.01 5/18/06 U 5/18/06 0.01 mg/l Copper, dissolved 30 1.20 8/16/11 U 8/12/04 0.85 mg/l Lead, dissolved 30 1.40 8/22/02 U 3/14/08 0.81 mg/l Magnesium, dissolved 30 U 12/19/18 U 11/5/19 <td< th=""><th>Metals</th><th>Samples</th><th>_</th><th></th><th></th><th></th><th></th><th></th></td<>	Metals	Samples	_					
Arsenic, dissolved 30 U 12/4/12 U 12/4/12 U mg/l Barium, dissolved 30 3.32 8/25/05 0.19 8/19/07 1.83 mg/l Beryllium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Boron, dissolved 194 74.70 2/13/19 3.69 5/29/03 17.31 mg/l Cadmium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Cadcium, dissolved 30 U 12/19/18 U 5/29/03 4.13 mg/l Chromium, dissolved 30 0.01 5/18/06 U 5/18/06 0.01 mg/l Copper, dissolved 30 1.20 8/16/11 U 8/12/04 0.85 mg/l Lead, dissolved 30 1.40 8/22/02 U 3/14/08 0.81 mg/l Magnesium, dissolved 30 U 12/19/18 U 11/5/19 <td< td=""><td>Aluminum, dissolved</td><td></td><td>79.90</td><td>8/12/04</td><td>U</td><td>3/14/08</td><td>17.00</td><td>mg/l</td></td<>	Aluminum, dissolved		79.90	8/12/04	U	3/14/08	17.00	mg/l
Barium, dissolved 30 3.32 8/25/05 0.19 8/19/07 1.83 mg/l Beryllium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Boron, dissolved 194 74.70 2/13/19 3.69 5/29/03 17.31 mg/l Cadmium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Cadmium, dissolved 194 14.00 7/10/17 U 5/29/03 4.13 mg/l Chromium, dissolved 30 0.01 5/18/06 U 5/18/06 0.01 mg/l Copper, dissolved 30 1.20 8/16/11 U 8/12/04 0.85 mg/l Lead, dissolved 30 1.40 8/22/02 U 3/14/08 0.81 mg/l Lithium, dissolved 30 1.40 8/22/02 U 3/14/08 0.81 mg/l Magnesium, dissolved 30 U 12/19/18 U 11/5/19				12/4/12	U		U	
Beryllium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Boron, dissolved 194 74.70 2/13/19 3.69 5/29/03 17.31 mg/l Cadmium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Calcium, dissolved 194 14.00 7/10/17 U 5/29/03 4.13 mg/l Chromium, dissolved 30 0.01 5/18/06 U 5/18/06 0.01 mg/l Copper, dissolved 30 1.20 8/16/11 U 8/12/04 0.85 mg/l Iron, dissolved 30 3.70 9/15/07 U 5/18/06 1.49 mg/l Lead, dissolved 30 1.40 8/22/02 U 3/14/08 0.81 mg/l Magnesium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Magnesium, dissolved 30 U 12/19/18 U 11/5/19 <		50	U				1 0 0	
Boron, dissolved 194 74.70 2/13/19 3.69 5/29/03 17.31 mg/l Cadmium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Calcium, dissolved 194 14.00 7/10/17 U 5/29/03 4.13 mg/l Chromium, dissolved 30 0.01 5/18/06 U 5/18/06 0.01 mg/l Copper, dissolved 30 1.20 8/16/11 U 8/12/04 0.85 mg/l Iron, dissolved 30 3.70 9/15/07 U 5/18/06 1.49 mg/l Lead, dissolved 30 1.40 8/22/02 U 3/14/08 0.81 mg/l Magnesium, dissolved 30 8.48 3/14/08 U 9/2/15 3.99 mg/l Manganese, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Molybdenum, dissolved 30 0.70 8/19/07 U 8/18/10			•		0.19	8/19/07	1.83	ma/l
Cadmium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Calcium, dissolved 194 14.00 7/10/17 U 5/29/03 4.13 mg/l Chromium, dissolved 30 0.01 5/18/06 U 5/18/06 0.01 mg/l Copper, dissolved 30 1.20 8/16/11 U 8/12/04 0.85 mg/l Iron, dissolved 30 3.70 9/15/07 U 5/18/06 1.49 mg/l Lead, dissolved 30 1.40 8/22/02 U 3/14/08 0.81 mg/l Lithium, dissolved 30 8.48 3/14/08 2.70 12/19/18 3.39 mg/l Magnesium, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Manganese, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Molybdenum, dissolved 30 0.20 9/23/10 U 5/18/06	Barium, dissolved	30	3.32	8/25/05				
Calcium, dissolved 194 14.00 7/10/17 U 5/29/03 4.13 mg/l Chromium, dissolved 30 0.01 5/18/06 U 5/18/06 0.01 mg/l Copper, dissolved 30 1.20 8/16/11 U 8/12/04 0.85 mg/l Iron, dissolved 30 3.70 9/15/07 U 5/18/06 1.49 mg/l Lead, dissolved 30 1.40 8/22/02 U 3/14/08 0.81 mg/l Lithium, dissolved 30 8.48 3/14/08 2.70 12/19/18 3.39 mg/l Magnesium, dissolved 194 10.00 1/8/08 U 9/2/15 3.99 mg/l Manganese, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Mercury, dissolved 30 0.70 8/19/07 U 8/18/10 0.45 mg/l Nickel, dissolved 30 0.20 9/23/10 U 5/18/06	Barium, dissolved Beryllium, dissolved	30 30	3.32 U	8/25/05 12/19/18	U	11/5/19	U	mg/l
Chromium, dissolved300.015/18/06U5/18/060.01mg/lCopper, dissolved301.208/16/11U8/12/040.85mg/lIron, dissolved303.709/15/07U5/18/061.49mg/lLead, dissolved301.408/22/02U3/14/080.81mg/lLithium, dissolved308.483/14/082.7012/19/183.39mg/lMagnesium, dissolved19410.001/8/08U9/2/153.99mg/lManganese, dissolved30U12/19/18U11/5/19Umg/lMercury, dissolved300.708/19/07U8/18/100.45mg/lMolybdenum, dissolved300.209/23/10U5/18/060.13mg/lNickel, dissolved300.209/23/10U5/18/060.13mg/lSelenium, dissolved194150.002/13/190.0011/21/0833.73mg/lSodium, dissolved19479.004/11/068.905/29/0325.45mg/lSodium, dissolved19439,2003/14/084504/10/1316,16mg/lStrontium, dissolved1940.702/21/05U5/29/030.22mg/lVanadium, dissolved1940.702/21/05U5/29/030.22mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved	30 30 194	3.32 U 74.70	8/25/05 12/19/18 2/13/19	U 3.69	11/5/19 5/29/03	U 17.31	mg/l mg/l
Copper, dissolved 30 1.20 8/16/11 U 8/12/04 0.85 mg/l Iron, dissolved 30 3.70 9/15/07 U 5/18/06 1.49 mg/l Lead, dissolved 30 1.40 8/22/02 U 3/14/08 0.81 mg/l Lithium, dissolved 30 8.48 3/14/08 2.70 12/19/18 3.39 mg/l Magnesium, dissolved 194 10.00 1/8/08 U 9/2/15 3.99 mg/l Manganese, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Mercury, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Molybdenum, dissolved 30 0.70 8/19/07 U 8/18/10 0.45 mg/l Nickel, dissolved 30 0.20 9/23/10 U 5/18/06 0.13 mg/l Selenium, dissolved 194 150.00 2/13/19 0.00 11/21/08 <td>Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved</td> <td>30 30 194 30</td> <td>3.32 U 74.70 U</td> <td>8/25/05 12/19/18 2/13/19 12/19/18</td> <td>U 3.69 U</td> <td>11/5/19 5/29/03 11/5/19</td> <td>U 17.31 U</td> <td>mg/l mg/l mg/l</td>	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	30 30 194 30	3.32 U 74.70 U	8/25/05 12/19/18 2/13/19 12/19/18	U 3.69 U	11/5/19 5/29/03 11/5/19	U 17.31 U	mg/l mg/l mg/l
Iron, dissolved 30 3.70 9/15/07 U 5/18/06 1.49 mg/l Lead, dissolved 30 1.40 8/22/02 U 3/14/08 0.81 mg/l Lithium, dissolved 30 8.48 3/14/08 2.70 12/19/18 3.39 mg/l Magnesium, dissolved 194 10.00 1/8/08 U 9/2/15 3.99 mg/l Manganese, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Mercury, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Molybdenum, dissolved 30 0.70 8/19/07 U 8/18/10 0.45 mg/l Nickel, dissolved 30 0.20 9/23/10 U 5/18/06 0.13 mg/l Potassium, dissolved 194 150.00 2/13/19 0.00 11/21/08 33.73 mg/l Selenium, dissolved 194 79.00 4/11/06 8.90 5	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	30 30 194 30 194	3.32 U 74.70 U 14.00	8/25/05 12/19/18 2/13/19 12/19/18 7/10/17	U 3.69 U U	11/5/19 5/29/03 11/5/19 5/29/03	U 17.31 U 4.13	mg/l mg/l mg/l mg/l
Lead, dissolved301.408/22/02U3/14/080.81mg/lLithium, dissolved308.483/14/082.7012/19/183.39mg/lMagnesium, dissolved19410.001/8/08U9/2/153.99mg/lManganese, dissolved30U12/19/18U11/5/19Umg/lMercury, dissolved30U12/19/18U11/5/19Umg/lMolybdenum, dissolved300.708/19/07U8/18/100.45mg/lNickel, dissolved300.209/23/10U5/18/060.13mg/lPotassium, dissolved194150.002/13/190.0011/21/0833.73mg/lSelenium, dissolved300.018/22/02U7/12/070.01mg/lSilica, dissolved19479.004/11/068.905/29/0325.45mg/lSodium, dissolved19439,2003/14/084504/10/1316,16mg/lStrontium, dissolved1940.702/21/05U5/29/030.22mg/lVanadium, dissolved1940.702/21/05U5/29/030.22mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	30 30 194 30 194 30	3.32 U 74.70 U 14.00 0.01	8/25/05 12/19/18 2/13/19 12/19/18 7/10/17 5/18/06	U 3.69 U U U	11/5/19 5/29/03 11/5/19 5/29/03 5/18/06	U 17.31 U 4.13 0.01	mg/l mg/l mg/l mg/l
Lithium, dissolved308.483/14/082.7012/19/183.39mg/lMagnesium, dissolved19410.001/8/08U9/2/153.99mg/lManganese, dissolved30U12/19/18U11/5/19Umg/lMercury, dissolved30U12/19/18U11/5/19Umg/lMolybdenum, dissolved300.708/19/07U8/18/100.45mg/lNickel, dissolved300.209/23/10U5/18/060.13mg/lPotassium, dissolved194150.002/13/190.0011/21/0833.73mg/lSelenium, dissolved300.018/22/02U7/12/070.01mg/lSilica, dissolved19479.004/11/068.905/29/0325.45mg/lSodium, dissolved19439,2003/14/084504/10/1316,16mg/lStrontium, dissolved1940.702/21/05U5/29/030.22mg/lVanadium, dissolved1940.702/21/05U5/29/030.22mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	30 30 194 30 194 30 30 30	3.32 U 74.70 U 14.00 0.01 1.20	8/25/05 12/19/18 2/13/19 12/19/18 7/10/17 5/18/06 8/16/11	U 3.69 U U U U	11/5/19 5/29/03 11/5/19 5/29/03 5/18/06 8/12/04	U 17.31 U 4.13 0.01 0.85	mg/l mg/l mg/l mg/l mg/l
Magnesium, dissolved19410.001/8/08U9/2/153.99mg/lManganese, dissolved30U12/19/18U11/5/19Umg/lMercury, dissolved30U12/19/18U11/5/19Umg/lMolybdenum, dissolved300.708/19/07U8/18/100.45mg/lNickel, dissolved300.209/23/10U5/18/060.13mg/lPotassium, dissolved194150.002/13/190.0011/21/0833.73mg/lSelenium, dissolved300.018/22/02U7/12/070.01mg/lSilica, dissolved19479.004/11/068.905/29/0325.45mg/lSodium, dissolved19439,2003/14/084504/10/1316,16mg/lStrontium, dissolved1940.702/21/05U5/29/030.22mg/lVanadium, dissolved300.206/26/07U5/18/060.08mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	30 30 194 30 194 30 30 30 30	3.32 U 74.70 U 14.00 0.01 1.20 3.70	8/25/05 12/19/18 2/13/19 12/19/18 7/10/17 5/18/06 8/16/11 9/15/07	U 3.69 U U U U U U	11/5/19 5/29/03 11/5/19 5/29/03 5/18/06 8/12/04 5/18/06	U 17.31 U 4.13 0.01 0.85 1.49	mg/l mg/l mg/l mg/l mg/l mg/l
Manganese, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Mercury, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Molybdenum, dissolved 30 0.70 8/19/07 U 8/18/10 0.45 mg/l Nickel, dissolved 30 0.20 9/23/10 U 5/18/06 0.13 mg/l Potassium, dissolved 194 150.00 2/13/19 0.00 11/21/08 33.73 mg/l Selenium, dissolved 30 0.01 8/22/02 U 7/12/07 0.01 mg/l Silica, dissolved 194 79.00 4/11/06 8.90 5/29/03 25.45 mg/l Sodium, dissolved 194 39,200 3/14/08 450 4/10/13 16,16 mg/l Strontium, dissolved 194 0.70 2/21/05 U 5/29/03 0.22 mg/l Vanadium, dissolved 30 0.20 6/26/07 U	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	30 30 194 30 194 30 30 30 30 30 30	3.32 U 74.70 U 14.00 0.01 1.20 3.70 1.40	8/25/05 12/19/18 2/13/19 12/19/18 7/10/17 5/18/06 8/16/11 9/15/07 8/22/02	U 3.69 U U U U U U U	11/5/19 5/29/03 11/5/19 5/29/03 5/18/06 8/12/04 5/18/06 3/14/08	U 17.31 U 4.13 0.01 0.85 1.49 0.81	mg/l mg/l mg/l mg/l mg/l mg/l
Mercury, dissolved 30 U 12/19/18 U 11/5/19 U mg/l Molybdenum, dissolved 30 0.70 8/19/07 U 8/18/10 0.45 mg/l Nickel, dissolved 30 0.20 9/23/10 U 5/18/06 0.13 mg/l Potassium, dissolved 194 150.00 2/13/19 0.00 11/21/08 33.73 mg/l Selenium, dissolved 30 0.01 8/22/02 U 7/12/07 0.01 mg/l Silica, dissolved 194 79.00 4/11/06 8.90 5/29/03 25.45 mg/l Sodium, dissolved 194 39,200 3/14/08 450 4/10/13 16,16 mg/l Strontium, dissolved 194 0.70 2/21/05 U 5/29/03 0.22 mg/l Vanadium, dissolved 30 0.20 6/26/07 U 5/18/06 0.08 mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	30 30 194 30 194 30 30 30 30 30 30 30 30	3.32 U 74.70 U 14.00 0.01 1.20 3.70 1.40 8.48	8/25/05 12/19/18 2/13/19 12/19/18 7/10/17 5/18/06 8/16/11 9/15/07 8/22/02 3/14/08	U 3.69 U U U U U 2.70	11/5/19 5/29/03 11/5/19 5/29/03 5/18/06 8/12/04 5/18/06 3/14/08 12/19/18	U 17.31 U 4.13 0.01 0.85 1.49 0.81 3.39	mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Molybdenum, dissolved 30 0.70 8/19/07 U 8/18/10 0.45 mg/l Nickel, dissolved 30 0.20 9/23/10 U 5/18/06 0.13 mg/l Potassium, dissolved 194 150.00 2/13/19 0.00 11/21/08 33.73 mg/l Selenium, dissolved 30 0.01 8/22/02 U 7/12/07 0.01 mg/l Silica, dissolved 194 79.00 4/11/06 8.90 5/29/03 25.45 mg/l Sodium, dissolved 194 39,200 3/14/08 450 4/10/13 16,16 mg/l Strontium, dissolved 194 0.70 2/21/05 U 5/29/03 0.22 mg/l Vanadium, dissolved 30 0.20 6/26/07 U 5/18/06 0.08 mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	30 30 194 30 194 30 30 30 30 30 30 30 30 194	3.32 U 74.70 U 14.00 0.01 1.20 3.70 1.40 8.48 10.00	8/25/05 12/19/18 2/13/19 12/19/18 7/10/17 5/18/06 8/16/11 9/15/07 8/22/02 3/14/08 1/8/08	U 3.69 U U U U U 2.70 U	11/5/19 5/29/03 11/5/19 5/29/03 5/18/06 8/12/04 5/18/06 3/14/08 12/19/18 9/2/15	U 17.31 U 4.13 0.01 0.85 1.49 0.81 3.39 3.99	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Nickel, dissolved 30 0.20 9/23/10 U 5/18/06 0.13 mg/l Potassium, dissolved 194 150.00 2/13/19 0.00 11/21/08 33.73 mg/l Selenium, dissolved 30 0.01 8/22/02 U 7/12/07 0.01 mg/l Silica, dissolved 194 79.00 4/11/06 8.90 5/29/03 25.45 mg/l Sodium, dissolved 194 39,200 3/14/08 450 4/10/13 16,16 mg/l Strontium, dissolved 194 0.70 2/21/05 U 5/29/03 0.22 mg/l Vanadium, dissolved 30 0.20 6/26/07 U 5/18/06 0.08 mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	30 30 194 30 194 30 30 30 30 30 30 30 30 30 30 30 30 30	3.32 U 74.70 U 14.00 0.01 1.20 3.70 1.40 8.48 10.00 U	8/25/05 12/19/18 2/13/19 12/19/18 7/10/17 5/18/06 8/16/11 9/15/07 8/22/02 3/14/08 1/8/08 12/19/18	U 3.69 U U U U U 2.70 U U	11/5/19 5/29/03 11/5/19 5/29/03 5/18/06 8/12/04 5/18/06 3/14/08 12/19/18 9/2/15 11/5/19	U 17.31 U 4.13 0.01 0.85 1.49 0.81 3.39 3.99 U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Potassium, dissolved 194 150.00 2/13/19 0.00 11/21/08 33.73 mg/l Selenium, dissolved 30 0.01 8/22/02 U 7/12/07 0.01 mg/l Silica, dissolved 194 79.00 4/11/06 8.90 5/29/03 25.45 mg/l Sodium, dissolved 194 39,200 3/14/08 450 4/10/13 16,16 mg/l Strontium, dissolved 194 0.70 2/21/05 U 5/29/03 0.22 mg/l Vanadium, dissolved 30 0.20 6/26/07 U 5/18/06 0.08 mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	30 30 194 30 194 30 30 30 30 30 30 30 30 30 30 30 30 30	3.32 U 74.70 U 14.00 0.01 1.20 3.70 1.40 8.48 10.00 U U	8/25/05 12/19/18 2/13/19 12/19/18 7/10/17 5/18/06 8/16/11 9/15/07 8/22/02 3/14/08 1/8/08 12/19/18 12/19/18	U 3.69 U U U U U 2.70 U U U U	11/5/19 5/29/03 11/5/19 5/29/03 5/18/06 8/12/04 5/18/06 3/14/08 12/19/18 9/2/15 11/5/19 11/5/19	U 17.31 U 4.13 0.01 0.85 1.49 0.81 3.39 3.99 U U U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Selenium, dissolved 30 0.01 8/22/02 U 7/12/07 0.01 mg/l Silica, dissolved 194 79.00 4/11/06 8.90 5/29/03 25.45 mg/l Sodium, dissolved 194 39,200 3/14/08 450 4/10/13 16,16 mg/l Strontium, dissolved 194 0.70 2/21/05 U 5/29/03 0.22 mg/l Vanadium, dissolved 30 0.20 6/26/07 U 5/18/06 0.08 mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved	30 30 194 30 194 30 30 30 30 30 30 194 30 30 30 30 30 30 30	3.32 U 74.70 U 14.00 0.01 1.20 3.70 1.40 8.48 10.00 U U 0.70	8/25/05 12/19/18 2/13/19 12/19/18 7/10/17 5/18/06 8/16/11 9/15/07 8/22/02 3/14/08 1/8/08 12/19/18 12/19/18 8/19/07	U 3.69 U U U U U 2.70 U U U U U U	11/5/19 5/29/03 11/5/19 5/29/03 5/18/06 8/12/04 5/18/06 3/14/08 12/19/18 9/2/15 11/5/19 11/5/19 8/18/10	U 17.31 U 4.13 0.01 0.85 1.49 0.81 3.39 3.99 U U U 0.45	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Silica, dissolved 194 79.00 4/11/06 8.90 5/29/03 25.45 mg/l Sodium, dissolved 194 39,200 3/14/08 450 4/10/13 16,16 mg/l Strontium, dissolved 194 0.70 2/21/05 U 5/29/03 0.22 mg/l Vanadium, dissolved 30 0.20 6/26/07 U 5/18/06 0.08 mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved	30 30 194 30 194 30 30 30 30 30 30 194 30 30 30 30 30 30 30 30 30	3.32 U 74.70 U 14.00 0.01 1.20 3.70 1.40 8.48 10.00 U U 0.70 0.20	8/25/05 12/19/18 2/13/19 12/19/18 7/10/17 5/18/06 8/16/11 9/15/07 8/22/02 3/14/08 1/8/08 12/19/18 12/19/18 12/19/18 8/19/07 9/23/10	U 3.69 U U U U U 2.70 U U U U U U U U	11/5/19 5/29/03 11/5/19 5/29/03 5/18/06 8/12/04 5/18/06 3/14/08 12/19/18 9/2/15 11/5/19 11/5/19 8/18/10 5/18/06	U 17.31 U 4.13 0.01 0.85 1.49 0.81 3.39 3.99 U U U 0.45 0.13	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Sodium, dissolved 194 39,200 3/14/08 450 4/10/13 16,16 mg/l Strontium, dissolved 194 0.70 2/21/05 U 5/29/03 0.22 mg/l Vanadium, dissolved 30 0.20 6/26/07 U 5/18/06 0.08 mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved	30 30 194 30 194 30 30 30 30 30 30 194 30 30 30 30 30 30 30 30 30 30	3.32 U 74.70 U 14.00 0.01 1.20 3.70 1.40 8.48 10.00 U U 0.70 0.20 150.00	8/25/05 12/19/18 2/13/19 12/19/18 7/10/17 5/18/06 8/16/11 9/15/07 8/22/02 3/14/08 1/8/08 12/19/18 12/19/18 12/19/18 8/19/07 9/23/10 2/13/19	U 3.69 U U U U U U U U U U U U U U U 0.00	11/5/19 5/29/03 5/29/03 5/18/06 8/12/04 5/18/06 3/14/08 12/19/18 9/2/15 11/5/19 11/5/19 8/18/10 5/18/06 11/21/08	U 17.31 U 4.13 0.01 0.85 1.49 0.81 3.39 3.99 U U U 0.45 0.13 33.73	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Strontium, dissolved 194 0.70 2/21/05 U 5/29/03 0.22 mg/l Vanadium, dissolved 30 0.20 6/26/07 U 5/18/06 0.08 mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Marcury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	30 30 194 30 194 30 30 30 30 30 30 30 30 30 30 30 30 30	3.32 U 74.70 U 14.00 0.01 1.20 3.70 1.40 8.48 10.00 U U U 0.70 0.20 150.00 0.01	8/25/05 12/19/18 2/13/19 12/19/18 7/10/17 5/18/06 8/16/11 9/15/07 8/22/02 3/14/08 1/8/08 12/19/18 12/19/18 12/19/18 8/19/07 9/23/10 2/13/19 8/22/02	U 3.69 U U U U U U U U U U U U U U U U U U U	11/5/19 5/29/03 5/29/03 5/18/06 8/12/04 5/18/06 3/14/08 12/19/18 9/2/15 11/5/19 11/5/19 8/18/10 5/18/06 11/21/08 7/12/07	U 17.31 U 4.13 0.01 0.85 1.49 0.81 3.39 3.99 U U U 0.45 0.13 33.73 0.01	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Vanadium, dissolved 30 0.20 6/26/07 U 5/18/06 0.08 mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Marcury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	30 30 194 30 194 30 30 30 30 30 30 30 30 30 30 30 30 30	3.32 U 74.70 U 14.00 0.01 1.20 3.70 1.40 8.48 10.00 U U 0.70 0.20 150.00 0.01 79.00	8/25/05 12/19/18 2/13/19 12/19/18 7/10/17 5/18/06 8/16/11 9/15/07 8/22/02 3/14/08 1/8/08 12/19/18 12/19/18 12/19/18 8/19/07 9/23/10 2/13/19 8/22/02 4/11/06	U 3.69 U U U U U U U U U U U U U U U U U U U	11/5/19 5/29/03 5/29/03 5/18/06 8/12/04 5/18/06 3/14/08 12/19/18 9/2/15 11/5/19 11/5/19 8/18/10 5/18/06 11/21/08 7/12/07 5/29/03	U 17.31 U 4.13 0.01 0.85 1.49 0.81 3.39 3.99 U U U 0.45 0.13 33.73 0.01 25.45	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Marganese, dissolved Marganese, dissolved Marganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved	30 30 194 30 30 30 30 30 30 30 30 30 30 30 30 30	3.32 U 74.70 U 14.00 0.01 1.20 3.70 1.40 8.48 10.00 U U 0.70 0.20 150.00 0.01 79.00 39,200	8/25/05 12/19/18 2/13/19 12/19/18 7/10/17 5/18/06 8/16/11 9/15/07 8/22/02 3/14/08 12/19/18 12/19/18 12/19/18 8/19/07 9/23/10 2/13/19 8/22/02 4/11/06 3/14/08	U 3.69 U U U U U 2.70 U U U U U U U U U U U 0.00 U 8.90 450	11/5/19 5/29/03 11/5/19 5/29/03 5/18/06 8/12/04 5/18/06 3/14/08 12/19/18 9/2/15 11/5/19 11/5/19 8/18/10 5/18/06 11/21/08 7/12/07 5/29/03 4/10/13	U 17.31 U 4.13 0.01 0.85 1.49 0.81 3.39 3.99 U U 0.45 0.13 33.73 0.01 25.45 16,16	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Zinc, dissolved 30 1.80 7/10/17 U 3/14/08 0.68 mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Marcury, dissolved Marganese, dissolved Marganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved	30 30 194 30 194 30 30 30 30 30 30 30 30 30 30 30 30 30	3.32 U 74.70 U 14.00 0.01 1.20 3.70 1.40 8.48 10.00 U U 0.70 0.20 150.00 0.01 79.00 39,200 0.70	8/25/05 12/19/18 2/13/19 12/19/18 7/10/17 5/18/06 8/16/11 9/15/07 8/22/02 3/14/08 12/19/18 12/19/18 12/19/18 12/19/18 8/19/07 9/23/10 2/13/19 8/22/02 4/11/06 3/14/08 2/21/05	U 3.69 U U U U U 2.70 U U U U U U U U U U U U 0.00 U 8.90 450 U	11/5/19 5/29/03 11/5/19 5/29/03 5/18/06 8/12/04 5/18/06 3/14/08 12/19/18 9/2/15 11/5/19 11/5/19 8/18/10 5/18/06 11/21/08 7/12/07 5/29/03 4/10/13 5/29/03	U 17.31 U 4.13 0.01 0.85 1.49 0.81 3.39 3.99 U U 0.45 0.13 33.73 0.01 25.45 16,16 0.22	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 33: DS-3 Monthly Dissolution Surface Aquifer

DAUB & ASSOCIATES, INC. DI FATOR CONTRACTOR



Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples	ingn	Date	LOW	Date	Average	Onits
Bicarbonate as CaCO3	52	8,220	9/27/16	5,770	12/7/17	6,839	mg/l
Carbonate as CaCO3	52	5,060	3/7/18	2,730	9/27/16	3,933	mg/l
Total Alkalinity as	52	11,800	10/4/17	9,650	8/9/16	10,770	mg/l
Bromide	8	0.00	4/5/16	<u> </u>	12/9/14	U	mg/l
Cation-Anion Balance	52	1.80	2/13/19	-12.70	10/4/17	-3.93	%
	52 52						
Sum of Anions		271.00	12/9/14	221.00	7/9/18	240.37	meq/l
Sum of Cations	52	240.00	12/9/14	195.00	4/4/18	222.24	meg/l
Chemical Oxygen	8	167.00	12/9/14	44.00	4/5/16	79.14	mg/l
Chloride	52	1,330	12/9/14	593	3/11/19	752	mg/l
Conductivity, Lab	52	19,800	12/9/14	15,400	9/22/16	17,010	µmhos
Fluoride	52	47.80	12/19/18	26.80	9/8/15	35.09	mg/l
Hardness as CaCO3	52	30.00	9/22/16	U	1/3/17	7.79	mg/l
Nitrate as N, dissolved	8	UH	4/5/16	U	9/27/16	U	mg/l
Nitrate/Nitrite as N,	8	0.02	12/9/14	0.02	12/9/14	0.02	mg/l
Nitrite as N, dissolved	8	0.03	12/9/14	0.03	12/9/14	0.03	mg/l
Nitrogen, Ammonia	8	4.18	12/19/18	3.30	12/9/14	3.73	mg/l
Nitrogen, Organic	8	5.60	5/7/19	0.80	7/11/17	2.86	mg/l
Nitrogen, Total Kjeldahl	8	9.30	5/7/19	4.70	7/11/17	6.58	mg/l
pH, lab	52	9.50	3/1/17	9.10	3/25/15	9.28	units
Phosphate, total	8	7.00	9/27/16	0.71	12/9/14	4.64	mg/l
Phosphorus, total	8	2.20	9/27/16	0.23	12/9/14	1.49	mg/l
SAR in Water	34	1,500	9/6/17	410.00	9/22/16	1,011	none
Sulfate	52	370	12/9/14	39.40	7/9/19	97	mg/l
Sulfide	8	3.00	7/11/17	0.30	4/5/16	1.50	mg/l
Total Dissolved Solids	52	14,100	12/9/14	11,700	1/8/19	12,531	mg/l
Conductivity, Field	48	19,680	5/7/19	15,380	4/5/16	17,047	μmhos
pH, Field	48	9.70	8/9/16	7.30	12/10/18	8.94	units
Temperature (°C), Field	48	16.70	9/6/17	9.92	2/13/19	12.34	(°C)
Temperature (°C), Field	48	16.70 537.80	9/6/17	9.92	2/13/19	12.34	(°C)
Temperature (°C), Field Water Level, Field Parameters	48 48 No. of	16.70	9/6/17 3/5/15	9.92 498.92	2/13/19 10/4/16	12.34 520.20	(°C) Ft.
Temperature (°C), Field Water Level, Field Parameters Metals	48 48	16.70 537.80	9/6/17 3/5/15 Date	9.92 498.92	2/13/19 10/4/16 Date	12.34 520.20	(°C) Ft. Units
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved	48 48 No. of Samples 8	16.70 537.80 High U	9/6/17 3/5/15 Date 12/9/14	9.92 498.92 Low	2/13/19 10/4/16 Date 4/5/16	12.34 520.20 Average	(°C) Ft. Units mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved	48 48 No. of Samples 8 8	16.70 537.80 High U 0.01	9/6/17 3/5/15 Date 12/9/14 12/9/14	9.92 498.92 Low U U	2/13/19 10/4/16 Date 4/5/16 12/9/14	12.34 520.20 Average U 0.01	(°C) Ft. Units mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	48 48 No. of Samples 8 8 8	16.70 537.80 High U	9/6/17 3/5/15 Date 12/9/14 12/9/14 10/4/16	9.92 498.92 Low	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16	12.34 520.20 Average	(°C) Ft. Units mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	48 48 No. of Samples 8 8 8 8 8 8	16.70 537.80 High U 0.01 0.46 U	9/6/17 3/5/15 Date 12/9/14 12/9/14 10/4/16 10/4/16	9.92 498.92 Low U U 0.05 U	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/16	12.34 520.20 Average U 0.01 0.29 U	(°C) Ft. Units mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	48 48 No. of Samples 8 8 8 8 8 8 8 51	16.70 537.80 High U 0.01 0.46 U 8.10	9/6/17 3/5/15 Date 12/9/14 12/9/14 10/4/16 10/4/16 5/7/19	9.92 498.92 Low U U 0.05 U 6.20	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/16 10/4/17	12.34 520.20 Average U 0.01 0.29 U 7.41	(°C) Ft. Units mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	48 48 No. of Samples 8 8 8 8 8 8 51 8 51 8	16.70 537.80 High U 0.01 0.46 U 8.10 U	9/6/17 3/5/15 Date 12/9/14 12/9/14 10/4/16 10/4/16 5/7/19 12/9/14	9.92 498.92 Low U U 0.05 U 6.20 U	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/16 10/4/17 4/5/16	12.34 520.20 Average U 0.01 0.29 U 7.41 U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	48 48 No. of Samples 8 8 8 8 8 8 51 51 8 51	16.70 537.80 High U 0.01 0.46 U 8.10 U 8.10 U 7.00	9/6/17 3/5/15 Date 12/9/14 12/9/14 10/4/16 10/4/16 5/7/19 12/9/14 9/22/16	9.92 498.92 Low U U 0.05 U 6.20 U U	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/16 10/4/17 4/5/16 3/25/15	12.34 520.20 Average U 0.01 0.29 U 7.41 U 1.96	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	48 48 No. of Samples 8 8 8 8 8 8 51 8 51 8 51 8 51 8	16.70 537.80 High U 0.01 0.46 U 8.10 U 8.10 U 7.00 U	9/6/17 3/5/15 Date 12/9/14 10/4/16 10/4/16 5/7/19 12/9/14 9/22/16 12/9/14	9.92 498.92 Low U U 0.05 U 6.20 U U U U U	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/17 4/5/16 3/25/15 4/5/16	12.34 520.20 Average U 0.01 0.29 U 7.41 U 1.96 U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	48 48 No. of Samples 8 8 8 8 8 51 8 51 8 51 8 51 8 8 51 8 8	16.70 537.80 High U 0.01 0.46 U 8.10 U 8.10 U 7.00 U U	9/6/17 3/5/15 Date 12/9/14 12/9/14 10/4/16 10/4/16 5/7/19 12/9/14 9/22/16 12/9/14 12/9/14	9.92 498.92 Low U U 0.05 U 6.20 U U U U U U	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/17 4/5/16 3/25/15 4/5/16 4/5/16	12.34 520.20 Average U 0.01 0.29 U 7.41 U 1.96 U U U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	48 48 No. of Samples 8 8 8 8 8 51 8 51 8 51 8 51 8 8 51 8 8 8 8	16.70 537.80 High U 0.01 0.46 U 8.10 U 8.10 U 7.00 U U U 0.60	9/6/17 3/5/15 Date 12/9/14 12/9/14 10/4/16 10/4/16 5/7/19 12/9/14 9/22/16 12/9/14 12/9/14 12/9/14	9.92 498.92 Low U U U 0.05 U 6.20 U U U U U U U U 0.20	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/17 4/5/16 3/25/15 4/5/16 4/5/16 9/22/16	12.34 520.20 Average U 0.01 0.29 U 7.41 U 1.96 U U U 0.38	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	48 48 8 8 8 8 8 8 8 51 8 51 8 51 8 51 8	16.70 537.80 High U 0.01 0.46 U 8.10 U 8.10 U 7.00 U U U 0.60 U	9/6/17 3/5/15 Date 12/9/14 12/9/14 10/4/16 10/4/16 5/7/19 12/9/14 9/22/16 12/9/14 12/9/14 12/9/14 12/9/14	9.92 498.92 U U U 0.05 U 6.20 U U U U U U U U U U U U U U U U U U U	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/17 4/5/16 3/25/15 4/5/16 4/5/16 9/22/16 4/5/16	12.34 520.20 Average U 0.01 0.29 U 7.41 U 1.96 U U U 0.38 U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	48 48 8 8 8 8 8 8 8 51 8 51 8 51 8 51 8	16.70 537.80 High U 0.01 0.46 U 8.10 U 8.10 U 7.00 U U 0.60 U 2.22	9/6/17 3/5/15 Date 12/9/14 12/9/14 10/4/16 10/4/16 5/7/19 12/9/14 9/22/16 12/9/14 12/9/14 12/9/14 12/9/14 12/9/14	9.92 498.92 U U U 0.05 U 6.20 U U U U U U U U U U U 1.94	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/17 4/5/16 3/25/15 4/5/16 4/5/16 9/22/16 4/5/16 9/27/16	12.34 520.20 Average U 0.01 0.29 U 7.41 U 1.96 U U U 0.38 U 2.08	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lithium, dissolved	48 48 8 8 8 8 8 8 8 51 51 8 51 8 8 8 8 8 8 8	16.70 537.80 High U 0.01 0.46 U 8.10 U 8.10 U 7.00 U U 0.60 U U 2.22 4.00	9/6/17 3/5/15 Date 12/9/14 12/9/14 10/4/16 10/4/16 5/7/19 12/9/14 9/22/16 12/9/14 12/9/14 12/9/14 12/9/14 5/7/19 12/19/18 3/25/15	9.92 498.92 Low U U 0.05 U 6.20 U U U U U U U U U U 1.94 U	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/17 4/5/16 3/25/15 4/5/16 4/5/16 9/22/16 4/5/16 9/27/16 9/8/15	12.34 520.20 Average U 0.01 0.29 U 7.41 U 1.96 U U 0.38 U 2.08 2.71	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	48 48 8 8 8 8 8 8 8 51 51 8 8 51 8 8 8 8 8 8	16.70 537.80 High U 0.01 0.46 U 8.10 U 8.10 U 7.00 U U 0.60 U U 2.22 4.00 U	9/6/17 3/5/15 Date 12/9/14 12/9/14 10/4/16 10/4/16 5/7/19 12/9/14 9/22/16 12/9/14 12/9/14 12/9/14 12/9/14 5/7/19 12/19/18 3/25/15 12/9/14	9.92 498.92 Low U U 0.05 U 6.20 U U U U U U U U U U 1.94 U U U U U	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/17 4/5/16 3/25/15 4/5/16 9/22/16 4/5/16 9/27/16 9/8/15 4/5/16	12.34 520.20 Average U 0.01 0.29 U 7.41 U 1.96 U U U 0.38 U 2.08 2.71 U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	48 48 8 8 8 8 8 8 8 51 8 51 8 8 8 8 8 8 8 8	16.70 537.80 High U 0.01 0.46 U 8.10 U 8.10 U 7.00 U U 0.60 U U 2.22 4.00 U U U	9/6/17 3/5/15 Date 12/9/14 12/9/14 10/4/16 10/4/16 5/7/19 12/9/14 9/22/16 12/9/14 12/9/14 12/9/14 5/7/19 12/19/18 3/25/15 12/9/14 12/9/14	9.92 498.92 U U U 0.05 U 6.20 U U U U U U U U U 0.20 U 1.94 U U U U U U U U	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/17 4/5/16 3/25/15 4/5/16 9/22/16 4/5/16 9/27/16 9/8/15 4/5/16	12.34 520.20 Average U 0.01 0.29 U 7.41 U 1.96 U U U 0.38 U U 2.08 2.71 U U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved	48 48 8 8 8 8 8 8 51 8 51 8 8 8 8 8 8 8 8 8	16.70 537.80 High U 0.01 0.46 U 8.10 U 8.10 U 7.00 U 7.00 U U 0.60 U 2.22 4.00 U U U U U U U U	9/6/17 3/5/15 Date 12/9/14 12/9/14 10/4/16 5/7/19 12/9/14 9/22/16 12/9/14 12/9/14 12/9/14 5/7/19 12/19/18 3/25/15 12/9/14 12/9/14	9.92 498.92 U U U 0.05 U 6.20 U U U U U U U U U U 1.94 U U U U U U U U U U U U U	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/17 4/5/16 3/25/15 4/5/16 9/22/16 4/5/16 9/27/16 9/8/15 4/5/16 4/5/16 4/5/16	12.34 520.20 Average U 0.01 0.29 U 7.41 U 1.96 U U 0.38 U 2.08 2.71 U U U U U U U U U U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved	48 48 8 8 8 8 8 8 51 51 8 8 51 8 8 8 8 8 8 8	16.70 537.80 High U 0.01 0.46 U 8.10 U 8.10 U 7.00 U 7.00 U U 0.60 U 2.22 4.00 U U U U U U U U U	9/6/17 3/5/15 Date 12/9/14 12/9/14 10/4/16 5/7/19 12/9/14 9/22/16 12/9/14 12/9/14 12/9/14 5/7/19 12/19/18 3/25/15 12/9/14 12/9/14 12/9/14	9.92 498.92 U U U 0.05 U 6.20 U U U U U U U U U 1.94 U U U U U U U U U U U U U U U	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/17 4/5/16 3/25/15 4/5/16 9/22/16 4/5/16 9/27/16 9/8/15 4/5/16 4/5/16 4/5/16 4/5/16	12.34 520.20 Average U 0.01 0.29 U 7.41 U 1.96 U U 0.38 U 2.08 2.71 U U U U U U U U U U U U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved	48 48 8 8 8 8 8 51 8 51 8 8 8 8 8 8 8 8 8 8	16.70 537.80 High U 0.01 0.46 U 8.10 U 8.10 U 7.00 U U 0.60 U U 2.22 4.00 U U U U U U U U U U U U U U U U U U	9/6/17 3/5/15 Date 12/9/14 12/9/14 10/4/16 5/7/19 12/9/14 9/22/16 12/9/14 12/9/14 12/9/14 12/9/14 12/9/14 12/9/14 12/9/14 12/9/14	9.92 498.92 U U U 0.05 U 6.20 U U U U U U U U U U U U U U U U U U U	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/17 4/5/16 3/25/15 4/5/16 9/22/16 4/5/16 9/27/16 9/8/15 4/5/16 4/5/16 4/5/16 4/5/16 1/8/19	12.34 520.20 Average U 0.01 0.29 U 7.41 U 1.96 U U U 0.38 U 2.08 2.71 U U U U U U U U U T7.96	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Copper, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	48 48 8 8 8 8 8 8 51 8 51 8 8 8 8 8 8 8 8 8	16.70 537.80 High U 0.01 0.46 U 8.10 U 8.10 U 7.00 U 0.60 U 2.22 4.00 U 2.22 4.00 U U U U U U U U U U U U U U U U U U	9/6/17 3/5/15 Date 12/9/14 12/9/14 10/4/16 10/4/16 5/7/19 12/9/14 9/22/16 12/9/14 12/9/14 12/9/14 5/7/19 12/19/18 3/25/15 12/9/14 12/9/14 12/9/14 12/9/14 12/9/14	9.92 498.92 U U U 0.05 U 0.05 U U U U U U U U U U U U U U U U U U U	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/17 4/5/16 3/25/15 4/5/16 9/22/16 4/5/16 9/27/16 9/8/15 4/5/16 4/5/16 4/5/16 4/5/16 1/8/19 9/22/16	12.34 520.20 Average U 0.01 0.29 U 7.41 U 1.96 U U 0.38 U 2.08 2.71 U U U U U U U U U U U U U U U U U U U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Copper, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	48 48 8 8 8 8 8 8 51 8 51 8 8 8 8 8 8 8 8 8	16.70 537.80 U 0.01 0.46 U 8.10 U 8.10 U 7.00 U U 0.60 U U 2.22 4.00 U 2.22 4.00 U U U U U U U U U U U U U U U U U U	9/6/17 3/5/15 Date 12/9/14 10/4/16 10/4/16 5/7/19 12/9/14 9/22/16 12/9/14 12/9/14 12/9/14 12/9/14 12/9/14 12/9/14 12/9/14 12/9/14 12/9/14 12/9/14 12/9/14	9.92 498.92 U U U 0.05 U 6.20 U U U U U U U U U U U U U U U U U U U	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/17 4/5/16 3/25/15 4/5/16 4/5/16 9/22/16 4/5/16 4/5/16 4/5/16 4/5/16 4/5/16 1/8/19 9/22/16 1/27/16	12.34 520.20 Average U 0.01 0.29 U 7.41 U 1.96 U U 0.38 U 2.08 2.71 U U U U U U U U U U 2.08 2.71 U U 2.08 2.71 U U 2.08 2.71 U U 2.08 2.71 U U 0.38 0 0 0 0.38 0 0 0.38 0 0 0 0.38 0 0 0 0 0.38 0 0 0 0.38 0 0 0 0 0.38 0 0 0 0.38 0 0 0 0.38 0 0 0 0.38 0 0 0 0.38 0 0 0 0.38 0 0 0 0 0 0 0 0 0.38 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Copper, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Selenium, dissolved Selenium, dissolved	48 48 8 8 8 8 8 8 51 8 51 8 8 8 8 8 8 8 8 8	16.70 537.80 U 0.01 0.46 U 8.10 U 8.10 U 7.00 U U 0.60 U U 2.22 4.00 U U U U U U U U U U U U U U U U U U	9/6/17 3/5/15 Date 12/9/14 10/4/16 10/4/16 5/7/19 12/9/14 9/22/16 12/9/14 12/9/19	9.92 498.92 U U U 0.05 U 0.05 U U U U U U U U U U U U U U U U U U U	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/17 4/5/16 3/25/15 4/5/16 4/5/16 9/22/16 9/27/16 9/8/15 4/5/16 4/5/16 4/5/16 4/5/16 1/8/19 9/22/16 1/27/16 4/4/18	12.34 520.20 Average U 0.01 0.29 U 7.41 U 1.96 U U 0.38 U U 0.38 2.71 U U U U U U U U U U U U U U U U U U U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Boron, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Copper, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Selenium, dissolved Sodium, dissolved Strontium, dissolved	48 48 8 8 8 8 8 8 51 8 51 8 8 8 8 8 8 8 8 8	16.70 537.80 High U 0.01 0.46 U 8.10 U 7.00 U 0.60 U 2.22 4.00 U U U 0.60 U 113.00 U 34.00 5,420 0.27	9/6/17 3/5/15 Date 12/9/14 12/9/14 10/4/16 10/4/16 5/7/19 12/9/14 9/22/16 12/9/14 12/9/18 3/7/19 8/7/18	9.92 498.92 U U U 0.05 U 6.20 U U U U U U 1.94 U U U U U U U U U U 0.20 U 0.20 U 1.94 U U 0.20 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/17 4/5/16 3/25/15 4/5/16 4/5/16 9/22/16 4/5/16 4/5/16 4/5/16 4/5/16 4/5/16 1/8/19 9/22/16 1/27/16 4/4/18 12/29/15	12.34 520.20 Average U 0.01 0.29 U 7.41 U 1.96 U U 0.38 U 2.08 2.71 U U U U U U U U U U 2.08 2.71 U U 2.08 2.71 U U 2.08 2.71 U U 2.08 2.71 U U 0.38 0 0 0 0.38 0 0 0.38 0 0 0 0.38 0 0 0 0 0.38 0 0 0 0.38 0 0 0 0 0.38 0 0 0 0.38 0 0 0 0.38 0 0 0 0.38 0 0 0 0.38 0 0 0 0.38 0 0 0 0 0 0 0 0 0.38 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Copper, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Selenium, dissolved Selenium, dissolved	48 48 8 8 8 8 8 8 51 8 51 8 8 8 8 8 8 8 8 8	16.70 537.80 U 0.01 0.46 U 8.10 U 8.10 U 7.00 U U 0.60 U U 2.22 4.00 U U U U U U U U U U U U U U U U U U	9/6/17 3/5/15 Date 12/9/14 10/4/16 10/4/16 5/7/19 12/9/14 9/22/16 12/9/14 12/9/19	9.92 498.92 U U U 0.05 U 6.20 U U U U U U U U U U U U U U U U U U U	2/13/19 10/4/16 Date 4/5/16 12/9/14 4/5/16 10/4/17 4/5/16 3/25/15 4/5/16 4/5/16 9/22/16 9/27/16 9/8/15 4/5/16 4/5/16 4/5/16 4/5/16 1/8/19 9/22/16 1/27/16 4/4/18	12.34 520.20 Average U 0.01 0.29 U 7.41 U 1.96 U U 0.38 U U 0.38 2.71 U U U U U U U U U U U U U U U U U U U	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 34: DS-6 Annual Dissolution Surface Aquifer

DAUB & ASSOCIATES, INC. DIS# STORE TO DATA



Parameters	No. of	High	Date	Low	Date	Average	Units
Parameters Wet Chemistry	Samples	ingn	Date	LOW	Date	Average	Onits
Bicarbonate as CaCO3	59	33,500	4/8/19	17,400	12/30/14	26,853	mg/l
Carbonate as CaCO3	59	16,600	8/2/16	608	8/8/17	6,225	mg/l
Total Alkalinity as	59	41,300	7/7/16	23,300	10/10/17	33,075	
							mg/l
Bromide	7	0.00	12/30/14	<u> </u>	12/17/14	U	mg/l
Cation-Anion Balance	59	6.50	6/17/15	-15.10	12/16/15	-3.89	%
Sum of Anions	59	3,360.00	12/17/14	728.00	10/10/17	1,522.27	meq/l
Sum of Cations	59	3,230.00	12/17/14	665.00	9/11/17	1,425.02	meq/l
Chemical Oxygen	7	3,630.00	11/5/15	344.00	5/7/19	1,693.14	mg/l
Chloride	59	96,000	12/30/14	9,250	10/10/17	30,586	mg/l
Conductivity, Lab	59	207,000	12/17/14	50,800	5/10/17	88,539	µmhos
Fluoride	59	106.00	12/10/19	40.40	10/11/16	67.67	mg/l
Hardness as CaCO3	59	82.40	12/16/15	0.00	12/30/14	45.03	mg/l
Nitrate as N, dissolved	7	UH	12/17/14	UH	12/30/14	UH	mg/l
Nitrate/Nitrite as N,	7	UH	12/17/14	UH	12/30/14	UH	mg/l
Nitrite as N, dissolved	7	ŬH	12/17/14	UH	12/30/14	ŪΗ	mg/l
Nitrogen, Ammonia	7	40.40	12/17/14	6.66	7/11/17	18.45	mg/l
Nitrogen, Organic	7	7.00	5/7/19	4.00	12/30/14	5.70	mg/l
Nitrogen, Total Kjeldahl	7	33.00	12/30/14	1.10	11/5/15	13.69	mg/l
pH, lab	59	9.10	5/6/15	8.40	11/6/18	8.67	units
	7	71.00	11/5/15	20.00	7/11/17	45.00	
Phosphate, total	7						mg/l
Phosphorus, total		23.00	11/5/15	6.50	7/11/17	14.54	mg/l
SAR in Water	20	7,600	6/8/16	1,500.00	2/12/19	3,092	none
Sulfate	59	480	12/30/14	110.00	7/11/17	350	mg/l
Sulfide	7	4.80	5/7/19	1.30	12/17/14	2.77	mg/l
Total Dissolved Solids	59	189,676	12/17/14	39,000	10/10/17	83,210	mg/l
Conductivity, Field	57	186,700	12/17/14	47,760	10/10/17	90,869	µmhos
pH, Field	57	9.20	3/10/16	7.10	12/17/14	8.34	units
Temperature (°C), Field	57	17.40	7/11/18	8.40	2/12/19	12.95	(°C)
Water Level, Field	58	643.10	12/12/14	478.76	11/9/16	498.15	Ft.
Parameters	No. of	High	Date	Low	Date	Average	Units
Matala	Samples						
Metals	Samples				_ /_ /		
Aluminum, dissolved	7	U	12/17/14	U	5/7/19	U	mg/l
Aluminum, dissolved	_	UU	12/17/14 12/17/14	U U	<u>5/7/19</u> 5/7/19	UU	
Aluminum, dissolved Arsenic, dissolved	7	U	12/17/14	U	5/7/19	U	mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved	7 7 7		<u>12/17/14</u> 7/11/17	U 0.40	5/7/19 11/5/15	U 1.03	mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	7 7 7 7 7	U 1.90 U	12/17/14 7/11/17 12/17/14	U 0.40 U	5/7/19 11/5/15 5/7/19	U 1.03 U	mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	7 7 7 7 7 59	U 1.90 U 66.00	12/17/14 7/11/17 12/17/14 9/9/15	U 0.40 U 7.10	5/7/19 11/5/15 5/7/19 1/9/18	U 1.03 U 27.94	mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	7 7 7 7 59 7 7	U 1.90 U 66.00 U	12/17/14 7/11/17 12/17/14 9/9/15 12/17/14	U 0.40 U 7.10 U	5/7/19 11/5/15 5/7/19 1/9/18 5/7/19	U 1.03 U 27.94 U	mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	7 7 7 59 7 59 7 59	U 1.90 U 66.00 U 30.00	12/17/14 7/11/17 12/17/14 9/9/15 12/17/14 5/6/15	U 0.40 U 7.10 U U	5/7/19 11/5/15 5/7/19 1/9/18 5/7/19 12/30/14	U 1.03 U 27.94 U 12.38	mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	7 7 7 59 7 59 7 59 7	U 1.90 U 66.00 U 30.00 U	12/17/14 7/11/17 12/17/14 9/9/15 12/17/14 5/6/15 12/17/14	U 0.40 U 7.10 U U U	5/7/19 11/5/15 5/7/19 1/9/18 5/7/19 12/30/14 5/7/19	U 1.03 U 27.94 U 12.38 U	mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	7 7 7 59 7 59 7 59 7 59 7 7 7	U 1.90 U 66.00 U 30.00 U U	12/17/14 7/11/17 12/17/14 9/9/15 12/17/14 5/6/15 12/17/14 12/17/14	U 0.40 U 7.10 U U U U U	5/7/19 11/5/15 5/7/19 1/9/18 5/7/19 12/30/14 5/7/19 5/7/19	U 1.03 U 27.94 U 12.38 U U U	mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	7 7 7 59 7 59 7 59 7 7 7 7 7	U 1.90 U 66.00 U 30.00 U U 5.00	12/17/14 7/11/17 12/17/14 9/9/15 12/17/14 5/6/15 12/17/14 12/17/14 12/30/14	U 0.40 U 7.10 U U U U 3.00	5/7/19 11/5/15 5/7/19 1/9/18 5/7/19 12/30/14 5/7/19 5/7/19 12/17/14	U 1.03 U 27.94 U 12.38 U U U 4.00	mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	7 7 7 59 7 59 7 59 7 7 7 7 7 7	U 1.90 U 66.00 U 30.00 U U 5.00 U	12/17/14 7/11/17 12/17/14 9/9/15 12/17/14 5/6/15 12/17/14 12/17/14 12/30/14 12/17/14	U 0.40 U 7.10 U U U U 3.00 U	5/7/19 11/5/15 5/7/19 1/9/18 5/7/19 12/30/14 5/7/19 5/7/19 12/17/14 5/7/19	U 1.03 U 27.94 U 12.38 U U U 4.00 U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	7 7 7 59 7 59 7 59 7 7 7 7 7 7 7 7	U 1.90 U 66.00 U 30.00 U U 5.00 U 2.70	12/17/14 7/11/17 12/17/14 9/9/15 12/17/14 5/6/15 12/17/14 12/17/14 12/30/14 12/17/14 7/11/17	U 0.40 U 7.10 U U U U 3.00 U 1.00	5/7/19 11/5/15 5/7/19 1/9/18 5/7/19 12/30/14 5/7/19 5/7/19 12/17/14 5/7/19 12/30/14	U 1.03 U 27.94 U 12.38 U U U 4.00 U U 1.87	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	7 7 7 59 7 59 7 59 7 7 7 7 7 7 7 7 59	U 1.90 U 66.00 U 30.00 U U 5.00 U 2.70 20.00	12/17/14 7/11/17 12/17/14 9/9/15 12/17/14 5/6/15 12/17/14 12/17/14 12/30/14 12/17/14 7/11/17 6/17/15	U 0.40 U 7.10 U U U 3.00 U 1.00 U	5/7/19 11/5/15 5/7/19 1/9/18 5/7/19 12/30/14 5/7/19 12/17/14 5/7/19 12/17/14 5/7/19 12/30/14 2/12/19	U 1.03 U 27.94 U 12.38 U U 4.00 U 1.87 18.00	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	7 7 7 59 7 59 7 59 7 7 7 7 7 7 7 7 7 59 7	U 1.90 U 66.00 U 30.00 U U 5.00 U 2.70 20.00 U	12/17/14 7/11/17 12/17/14 9/9/15 12/17/14 5/6/15 12/17/14 12/17/14 12/30/14 12/17/14 7/11/17 6/17/15 12/17/14	U 0.40 U 7.10 U U U U 3.00 U 1.00 U U	5/7/19 11/5/15 5/7/19 1/9/18 5/7/19 12/30/14 5/7/19 12/17/14 5/7/19 12/30/14 2/12/19 5/7/19	U 1.03 U 27.94 U 12.38 U U 4.00 U 1.87 18.00 U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	7 7 7 59 7 59 7 7 7 7 7 7 7 7 7 7 59 7 7 7 7	U 1.90 U 66.00 U 30.00 U U 5.00 U 2.70 20.00 U U U U	12/17/14 7/11/17 12/17/14 9/9/15 12/17/14 5/6/15 12/17/14 12/17/14 12/30/14 12/17/14 7/11/17 6/17/15	U 0.40 U 7.10 U U U U 3.00 U 1.00 U U U U U	5/7/19 11/5/15 5/7/19 1/9/18 5/7/19 12/30/14 5/7/19 12/17/14 5/7/19 12/30/14 2/12/19 5/7/19 5/7/19	U 1.03 U 27.94 U 12.38 U U 4.00 U 1.87 18.00 U U U U U U U U U U U U U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	7 7 7 59 7 59 7 59 7 7 7 7 7 7 7 7 7 59 7	U 1.90 U 66.00 U 30.00 U U 5.00 U 2.70 20.00 U	12/17/14 7/11/17 12/17/14 9/9/15 12/17/14 5/6/15 12/17/14 12/17/14 12/30/14 12/17/14 7/11/17 6/17/15 12/17/14 12/17/14 12/17/14	U 0.40 U 7.10 U U U U 3.00 U 1.00 U U	5/7/19 11/5/15 5/7/19 1/9/18 5/7/19 12/30/14 5/7/19 12/17/14 5/7/19 12/30/14 2/12/19 5/7/19	U 1.03 U 27.94 U 12.38 U U 4.00 U 1.87 18.00 U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	7 7 7 59 7 59 7 7 7 7 7 7 7 7 7 7 59 7 7 7 7	U 1.90 U 66.00 U 30.00 U U 5.00 U 2.70 20.00 U U U U	12/17/14 7/11/17 12/17/14 9/9/15 12/17/14 5/6/15 12/17/14 12/17/14 12/30/14 12/17/14 7/11/17 6/17/15 12/17/14 12/17/14	U 0.40 U 7.10 U U U U 3.00 U 1.00 U U U U U	5/7/19 11/5/15 5/7/19 1/9/18 5/7/19 12/30/14 5/7/19 12/17/14 5/7/19 12/30/14 2/12/19 5/7/19 5/7/19	U 1.03 U 27.94 U 12.38 U U 4.00 U 1.87 18.00 U U U U U U U U U U U U U	mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Nickel, dissolved	7 7 7 59 7 59 7 7 7 7 7 7 7 7 59 7 7 7 7	U 1.90 U 66.00 U 30.00 U U 5.00 U 2.70 20.00 U U 2.00	12/17/14 7/11/17 12/17/14 9/9/15 12/17/14 5/6/15 12/17/14 12/17/14 12/17/14 12/17/14 7/11/17 6/17/15 12/17/14 12/17/14 4/5/16 12/17/14	U 0.40 U 7.10 U U U 3.00 U U 1.00 U U U U U 2.00 U	5/7/19 11/5/15 5/7/19 1/9/18 5/7/19 12/30/14 5/7/19 12/17/14 5/7/19 12/30/14 2/12/19 5/7/19 5/7/19 5/7/19 5/7/19	U 1.03 U 27.94 U 12.38 U 12.38 U U 4.00 U 1.87 18.00 U U 2.00 U	mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Potassium, dissolved	7 7 7 59 7 59 7 7 7 7 7 7 7 7 7 7 59 7 7 7 7	U 1.90 U 66.00 U 30.00 U U 5.00 U 2.70 20.00 U U 2.00 U U 2.00 U	12/17/14 7/11/17 12/17/14 9/9/15 12/17/14 5/6/15 12/17/14 12/17/14 12/30/14 12/17/14 7/11/17 6/17/15 12/17/14 12/17/14 12/17/14 4/5/16 12/17/14 9/9/15	U 0.40 U 7.10 U U U 3.00 U 1.00 U U U U 2.00	5/7/19 11/5/15 5/7/19 1/9/18 5/7/19 12/30/14 5/7/19 12/17/14 5/7/19 12/30/14 2/12/19 5/7/19 5/7/19 5/7/19 5/7/19 4/5/16 5/7/19 12/4/18	U 1.03 U 27.94 U 12.38 U 12.38 U U 4.00 U 1.87 18.00 U U 2.00	mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	7 7 7 59 7 59 7 7 7 7 7 7 7 59 7 7 7 7 7	U 1.90 U 66.00 U 30.00 U 5.00 U 2.70 20.00 U 2.00 U 2.00 U 140.00 U	12/17/14 7/11/17 12/17/14 9/9/15 12/17/14 5/6/15 12/17/14 12/17/14 12/30/14 12/17/14 7/11/17 6/17/15 12/17/14 12/17/14 12/17/14 12/17/14 9/9/15 12/17/14	U 0.40 U 7.10 U U U 3.00 U 1.00 U U U U 2.00 U 20.00 U	5/7/19 11/5/15 5/7/19 1/9/18 5/7/19 12/30/14 5/7/19 12/17/14 5/7/19 12/30/14 2/12/19 5/7/19 5/7/19 5/7/19 4/5/16 5/7/19 12/4/18 5/7/19	U 1.03 U 27.94 U 12.38 U U 4.00 U 1.87 18.00 U 1.87 18.00 U 2.00 U 54.25 U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved	7 7 7 59 7 59 7 7 7 7 7 7 7 59 7 7 7 7 7	U 1.90 U 66.00 U 30.00 U U 5.00 U 2.70 20.00 U 2.00 U 2.00 U 140.00 U 30.00	12/17/14 7/11/17 12/17/14 9/9/15 12/17/14 12/17/14 12/17/14 12/30/14 12/17/14 12/17/14 7/11/17 6/17/15 12/17/14 12/17/14 4/5/16 12/17/14 9/9/15 12/17/14 6/17/15	U 0.40 U 7.10 U U U 3.00 U 1.00 U U 2.00 U 2.00 U 20.00 U 16.00	5/7/19 11/5/15 5/7/19 1/9/18 5/7/19 12/30/14 5/7/19 12/17/14 5/7/19 12/30/14 2/12/19 5/7/19 5/7/19 5/7/19 5/7/19 4/5/16 5/7/19 12/4/18 5/7/19 9/11/17	U 1.03 U 27.94 U 12.38 U U 4.00 U 1.87 18.00 U U 2.00 U 54.25 U 21.86	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved Solica, dissolved	7 7 7 59 7 59 7 7 7 7 7 7 7 7 7 7 7 7 7	U 1.90 U 66.00 U 30.00 U 5.00 U 2.70 20.00 U 2.00 U 140.00 U 30.00 73,200	12/17/14 7/11/17 12/17/14 9/9/15 12/17/14 12/17/14 12/17/14 12/30/14 12/17/14 12/17/14 7/11/17 6/17/15 12/17/14 4/5/16 12/17/14 9/9/15 12/17/14 6/17/15 12/17/14	U 0.40 U 7.10 U U U U 3.00 U U 1.00 U U 2.00 U 20.00 U 16.00 15,100	5/7/19 11/5/15 5/7/19 1/9/18 5/7/19 12/30/14 5/7/19 12/17/14 5/7/19 12/30/14 2/12/19 5/7/19 5/7/19 5/7/19 4/5/16 5/7/19 12/4/18 5/7/19 9/11/17	U 1.03 U 27.94 U 12.38 U U 4.00 U 1.87 18.00 U U 2.00 U 54.25 U 21.86 32,344	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved	7 7 7 59 7 59 7 7 7 7 7 7 7 59 7 7 7 7 7	U 1.90 U 66.00 U 30.00 U U 5.00 U 2.70 20.00 U 2.00 U 2.00 U 140.00 U 30.00	12/17/14 7/11/17 12/17/14 9/9/15 12/17/14 12/17/14 12/17/14 12/30/14 12/17/14 12/17/14 7/11/17 6/17/15 12/17/14 12/17/14 4/5/16 12/17/14 9/9/15 12/17/14 6/17/15	U 0.40 U 7.10 U U U 3.00 U 1.00 U U 2.00 U 2.00 U 20.00 U 16.00	5/7/19 11/5/15 5/7/19 1/9/18 5/7/19 12/30/14 5/7/19 12/17/14 5/7/19 12/30/14 2/12/19 5/7/19 5/7/19 5/7/19 5/7/19 4/5/16 5/7/19 12/4/18 5/7/19 9/11/17	U 1.03 U 27.94 U 12.38 U U 4.00 U 1.87 18.00 U U 2.00 U 54.25 U 21.86	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 35: DS-7 Annual Dissolution Surface Aquifer

DAUB & ASSOCIATES, INC. DIS# STORE TO DATA



			.	•	. .		
Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples		4/45/0045	10 700	0/05/00/0	10 700	
Bicarbonate as CaCO3	/	23,300	1/15/2015	16,700	6/25/2019	19,700	mg/l
Carbonate as CaCO3	7	9,590	6/25/2019	4,200	1/15/2015	6,851	mg/l
Total Alkalinity as	7	27,500	1/15/2015	25,300	9/28/2017	26,557	mg/l
Bromide	7	U	1/8/2015	U	6/25/2019	U	mg/l
Cation-Anion Balance	7	-1.40	6/25/2019	-9.50	1/8/2015	-4.23	%
Sum of Anions	7	582.00	1/15/2015	542.00	9/28/2017	565.57	meq/l
Sum of Cations	7	552.00	6/25/2019	477.00	1/8/2015	520.00	meq/l
Chemical Oxygen	7	731.00	1/15/2015	95.00	9/28/2017	223.14	mg/l
Chloride	7	1,080	6/25/2019	900	1/15/2015	982	mg/l
Conductivity, Lab	7	37,100	6/19/2018	33,200	12/15/2015	35,000	µmhos
Fluoride	7	70.70	6/25/2019	61.80	6/19/2018	65.70	mg/l
Hardness as CaCO3	7	U	1/8/2015	U	9/28/2017	U	mg/l
Nitrate as N, dissolved	7	0.03	1/15/2015	0.00	1/8/2015	0.02	mg/l
Nitrate/Nitrite as N,	7	0.03	1/15/2015	0.00	1/8/2015	0.02	mg/l
Nitrite as N, dissolved	7	0.01	6/25/2019	0.00	1/8/2015	0.00	mg/l
Nitrogen, Ammonia	7	10.50	1/15/2015	6.23	6/19/2018	8.11	mg/l
Nitrogen, Organic	7	6.60	4/5/2016	1.30	6/19/2018	4.63	mg/l
Nitrogen, Total Kjeldahl	7	14.80	1/15/2015	7.50	6/19/2018	12.71	mg/l
pH, lab	7	9.20	4/5/2016	8.70	1/8/2015	9.01	units
Phosphate, total	7	25.00	6/25/2019	15.00	12/15/2015	19.14	mg/l
Phosphorus, total	7	8.20	6/25/2019	4.90	12/15/2015	6.17	mg/l
SAR in Water	0	N/A	N/A	N/A	N/A	N/A	none
Sulfate	7	368	6/25/2019	100.00	1/8/2015	185	mg/l
Sulfide	7	2.00	6/25/2019	0.60	4/5/2016	1.13	mg/l
Total Dissolved Solids	7	30,100	6/25/2019	28,400	9/28/2017	29,186	mg/l
Conductivity, Field	7	39,750	12/15/201	31,210	4/5/2016	34,704	μmhos
							unnos
pH, Field	7	9.23	6/19/2018	8.20	10/6/2014	8.86	units
pH, Field Temperature (°C), Field	7 7	9.23 14.58	6/19/2018 6/19/2018	8.20 11.20	10/6/2014 10/6/2014	8.86 13.29	units (°C)
pH, Field	7	9.23	6/19/2018	8.20	10/6/2014	8.86	units
pH, Field Temperature (°C), Field Water Level, Field	7 7 7	9.23 14.58 497.50	6/19/2018 6/19/2018 6/19/2018	8.20 11.20 81.00	10/6/2014 10/6/2014 1/8/2015	8.86 13.29 436.61	units (°C) Ft.
pH, Field Temperature (°C), Field Water Level, Field Parameters	7 7 7 No. of	9.23 14.58	6/19/2018 6/19/2018	8.20 11.20	10/6/2014 10/6/2014	8.86 13.29	units (°C)
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals	7 7 7 No. of Samples	9.23 14.58 497.50 High	6/19/2018 6/19/2018 6/19/2018 Date	8.20 11.20 81.00	10/6/2014 10/6/2014 1/8/2015 Date	8.86 13.29 436.61 Average	units (°C) Ft. Units
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved	7 7 7 No. of Samples 7	9.23 14.58 497.50 High	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015	8.20 11.20 81.00 Low	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019	8.86 13.29 436.61 Average U	units (°C) Ft. Units mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved	7 7 7 No. of Samples 7 7	9.23 14.58 497.50 High U 0.07	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015	8.20 11.20 81.00 Low	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016	8.86 13.29 436.61 Average U 0.03	units (°C) Ft. Units mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	7 7 7 No. of Samples 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015	8.20 11.20 81.00 Low U U 0.40	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019	8.86 13.29 436.61 Average U 0.03 0.65	units (°C) Ft. Units mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	7 7 7 No. of Samples 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015	8.20 11.20 81.00 Low U U 0.40 U	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 6/25/2019	8.86 13.29 436.61 Average U 0.03 0.65 U	units (°C) Ft. Units mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	7 7 7 No. of Samples 7 7 7 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 6/25/2019	8.20 11.20 81.00 Low U U 0.40 U 12.70	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 6/25/2019 4/5/2016	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26	units (°C) Ft. Units mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	7 7 7 No. of Samples 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00 U	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 6/25/2019 1/8/2015	8.20 11.20 81.00 Low U U 0.40 U 12.70 U	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 4/5/2016 6/25/2019	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	7 7 7 No. of Samples 7 7 7 7 7 7 7 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00 U U	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 6/25/2019 1/8/2015 1/8/2015	8.20 11.20 81.00 U U 0.40 U 12.70 U U	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 4/5/2016 6/25/2019 6/25/2019 6/25/2019	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26 U U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved	7 7 7 No. of Samples 7 7 7 7 7 7 7 7 7 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00 U U U U U U	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 6/25/2019 1/8/2015 1/8/2015 1/8/2015	8.20 11.20 81.00 U U U U U 12.70 U U U U U U	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 4/5/2016 6/25/2019 6/25/2019 6/25/2019 6/25/2019	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26 U 13.26 U U U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	7 7 7 No. of Samples 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00 U U U U U U U	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015	8.20 11.20 81.00 U U U U U 12.70 U U U U U U U U	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26 U 13.26 U U U U U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	7 7 7 No. of Samples 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00 U U U U U U 2.70	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/15/2015	8.20 11.20 81.00 U U U U U U U U U U U U U U U U U 0.40	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 9/28/2017	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26 U U U U U U U U 1.44	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	7 7 7 No. of Samples 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00 U U U U U U U U U U U U U U U U U U	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/15/2015 1/8/2015	8.20 11.20 81.00 U U U U U U U U U U U U U U U U U U	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 9/28/2017 6/25/2019	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26 U U U U U U U U 1.44 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	7 7 7 No. of Samples 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00 U U U U U U 2.70 U 4.70	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/15/2015 1/8/2015 1/8/2015 1/8/2015	8.20 11.20 81.00 U U U 0.40 U 12.70 U U U U U U U 0.40 U U 4.20	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 9/28/2017 6/25/2019 1/8/2015	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26 U U U U U U U U 1.44 U 4.44	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	7 7 7 No. of Samples 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00 U U U U U U U U U U U U U U U U U U	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015	8.20 11.20 81.00 U U U 0.40 U 12.70 U U U U U U U U U U U U U U U U U U U	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 9/28/2017 6/25/2019 1/8/2015 6/25/2019	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26 U U U U U U U U U U U 4.44 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved	7 7 7 8 8 9 7 7 7 7 7 7 7 7 7 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00 U U U U U U U U U 2.70 U 4.70 U U U	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015	8.20 11.20 81.00 U U U 0.40 U 12.70 U U U U U U U U U U U U U U U U U U U	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 9/28/2017 6/25/2019 1/8/2015 6/25/2019	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26 U U U U U U U U U 1.44 U 4.44 U U U U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	7 7 7 8 8 9 7 7 7 7 7 7 7 7 7 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00 U U U U U U U U 2.70 U 4.70 U U U U U U U U U U U U U U U U U U U	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015	8.20 11.20 81.00 U U U 0.40 U 12.70 U U U U U U U U U U U U U U U U U U U	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 1/8/2015 6/25/2019 6/25/2019 6/25/2019 6/25/2019	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26 U U U U U U U U U 1.44 U 4.44 U U U U U U U U U U U U U U U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved	7 7 7 8 No. of Samples 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00 U U U U U 2.70 U U 4.70 U U U U U U U U U 0.50	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015	8.20 11.20 81.00 U U 0.40 U 12.70 U U U U U U U U U U U U U U U U U U U	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 9/28/2017 6/25/2019 1/8/2015 6/25/2019 6/25/2019 6/25/2019 6/25/2019	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26 U U U U U U 1.44 U U 4.44 U U U U U U U 0.50	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved	7 7 7 8 8 9 7 7 7 7 7 7 7 7 7 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00 U U U U U U 2.70 U U 4.70 U U U U U U U U U U U U U U U U U U U	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/15/2015	8.20 11.20 81.00 U U U 0.40 U 12.70 U U U U U U U U U U U U U U U U U U U	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 1/8/2015 6/25/2019 6/25/2019 6/25/2019 1/8/2015 6/25/2019 1/15/2015	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26 U U 13.26 U U U U U 1.44 U U U 4.44 U U U U U 0.50 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved	7 7 7 8 No. of Samples 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00 U U U U U U 2.70 U U U U U U U U U U 0.50 U 68.00	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/15/2015 1/15/2015 1/15/2015	8.20 11.20 81.00 Low U U 0.40 U 12.70 U U U U U 0.40 U U U U U U 0.40 U U U U 0.40 U U U 0.40 U U 0.40 U U 0.40 U 0.50 U 0.43.00 U 0.43.00 U 0.43.00 U 0.43.00 U 0.43.00 U 0.43.00 U 0.43.00 U 0.43.00 U 0.40 U 0.40 U 0.50 U 0.43.00 U 0.50 U 0.50 U	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 1/8/2015 6/25/2019 6/25/2019 1/8/2015 1/15/2015 1/8/2015	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26 U 13.26 U U U U U U U U U U U U U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lead, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	7 7 7 8 No. of Samples 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00 U U U U U U U U U U U U U U U U U U	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015	8.20 11.20 81.00 Low U U 0.40 U 12.70 U U U U U U U U U U U U U	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 1/8/2015 6/25/2019 6/25/2019 1/15/2015 1/15/2015 1/8/2015 6/25/2019	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26 U 13.26 U U U U U U U U U U U U U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lead, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved	7 7 7 8 No. of Samples 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00 U U U U U U U U U U U U U U U U 0.50 U U 0.50 U 0 58.00	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015	8.20 11.20 81.00 Low U U 0.40 U 12.70 U U U U U U U U U U U U U	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 1/8/2015 6/25/2019 6/25/2019 1/15/2015 1/15/2015 1/8/2015 6/25/2019 1/8/2015	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26 U 13.26 U U U U U U U U U U U U U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lead, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved	7 7 7 8 No. of Samples 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00 U U U U U U U U U U U U U U U U 0.50 U U 0.50 U U 0.50 U 0 U 0.50 U 0 U 0.50 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015	8.20 11.20 81.00 Low U U 0.40 U 12.70 U U U U U U U U U U U U U	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 1/8/2015 1/15/2015 1/8/2015 6/25/2019 1/8/2015 1/8/2015	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26 U 13.26 U U U U U U U U U U U U U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lead, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved Sodium, dissolved	7 7 7 7 8 No. of Samples 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00 U U U U U U U U U U U U U U U U 0.50 U U 0.50 U 0.50 U 0.50 U 0.50 U 0.50 U 0.50 U 0.50 0.10	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/15/2015 1/15/2015 1/15/2015 1/8/2015 1/8/2015 1/15/2015 1/15/2015 1/8/2015 1/15/2015	8.20 11.20 81.00 Low U U 0.40 U 12.70 U U U U U 0.40 U U U 0.40 U U U 0.40 U U 0.40 U U 0.40 U 12.70 U 13.00 U 10.800 U 10.800 U	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 1/8/2015 6/25/2019 6/25/2019 6/25/2019 6/25/2019 1/15/2015 1/15/2015 1/8/2015 1/8/2015 1/8/2015	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26 U 13.26 U U U U U U U U U U U U U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lead, dissolved Lead, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved	7 7 7 8 No. of Samples 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	9.23 14.58 497.50 High U 0.07 1.00 U 14.00 U U U U U U U U U U U U U U U U 0.50 U U 0.50 U U 0.50 U 0 U 0.50 U 0 U 0.50 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U 0 U	6/19/2018 6/19/2018 6/19/2018 Date 1/8/2015 1/15/2015 1/15/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/8/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015 1/15/2015	8.20 11.20 81.00 Low U U 0.40 U 12.70 U U U U U U U U U U U U U	10/6/2014 10/6/2014 1/8/2015 Date 6/25/2019 4/5/2016 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 6/25/2019 1/8/2015 1/15/2015 1/8/2015 6/25/2019 1/8/2015 1/8/2015	8.86 13.29 436.61 Average U 0.03 0.65 U 13.26 U 13.26 U U U U U U U U U U U U U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 36: DS-8 Annual Dissolution Surface Aquifer

DAUB & ASSOCIATES, INC. DIS# STORE TO DATA



Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples	nign	Dale	LOW	Dale	Average	Units
Bicarbonate as CaCO3	8	15,800	4/22/2019	11,900	6/20/2018	12,900	mg/l
Carbonate as CaCO3	8	4,570	4/22/2019	1,880	9/28/2017	2,800	mg/l
Total Alkalinity as	8	20,300	4/22/2019	14,300	9/28/2017	15,700	mg/l
Bromide	8	20,000	11/4/2014	U	4/22/2019	<u> </u>	mg/l
Cation-Anion Balance	8	-1.90	9/28/2017	-3.50	2/4/2015	-4.65	%
Sum of Anions	8	450.00	4/22/2019	341.00	6/20/2018	384.13	meq/l
Sum of Cations	8	424.00	4/22/2019	327.00	6/20/2018	349.38	meg/l
Chemical Oxygen	8	132.00	9/28/2017	97.00	4/5/2016	116.13	mg/l
Chloride	8	2,470	2/4/2015	1,390	4/22/2019	1,971	mg/l
Conductivity, Lab	8	27,000	4/22/2019	24,300	12/15/2015	25,913	µmhos
Fluoride	8	62.50	4/22/2019	41.40	6/20/2018	46.93	mg/l
Hardness as CaCO3	8	36.00	1/28/2015		12/15/2019	23.50	mg/l
Nitrate as N, dissolved	8	0.03	1/28/2015	0.03	1/28/2015	0.03	mg/l
Nitrate/Nitrite as N,	8	0.04	1/28/2015	0.04	1/28/2015	0.04	mg/l
Nitrite as N, dissolved	8	0.01	1/28/2015	0.01	1/28/2015	0.01	mg/l
Nitrogen, Ammonia	8	7.40	1/28/2015	3.43	6/20/2018	5.24	mg/l
Nitrogen, Organic	8	4.60	4/22/2019	1.80	1/28/2015	3.70	mg/l
Nitrogen, Total Kjeldahl	8	9.70	11/4/2014	7.00	2/4/2015	8.50	mg/l
pH, lab	8	9.00	4/22/2019	8.80	11/4/2014	8.86	units
Phosphate, total	8	9.90	4/22/2019	3.70	2/4/2015	6.24	mg/l
Phosphorus, total	8	3.19	4/22/2019	1.20	2/4/2015	2.01	mg/l
SAR in Water	3	660	2/4/2015	550.00	1/28/2015	617	none
Sulfate	8	2,870	2/4/2015	10.80	4/22/2019	588	mg/l
Sulfide	8	Ű	11/4/2014	U	4/22/2019	U	mg/l
Total Dissolved Solids	8	23,500	4/22/2019	18,100	6/20/2018	20,125	mg/l
	7		4/22/2019	23,740	4/5/2016	26,514	μmhos
Conductivity, Field		29.430	4/22/2019	23.740	+/J/2010	20.014	
Conductivity, Field pH, Field	7	<u>29,450</u> 8.93					
pH, Field		8.93	6/20/2018	7.20	1/29/2015 4/22/2019	8.29	units (°C)
	7				1/29/2015		units
pH, Field Temperature (°C), Field	7 7 8	8.93 14.35	6/20/2018 6/20/2018	7.20 11.90	1/29/2015 4/22/2019 10/18/2018	8.29 13.00	units (°C) Ft.
pH, Field Temperature (°C), Field Water Level, Field Parameters	7 7 8 No. of	8.93 14.35	6/20/2018 6/20/2018	7.20 11.90	1/29/2015 4/22/2019	8.29 13.00	units (°C)
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals	7 7 8	8.93 14.35 470.10	6/20/2018 6/20/2018 10/29/2014 Date	7.20 11.90 453.17	1/29/2015 4/22/2019 10/18/2018 Date	8.29 13.00 457.36	units (°C) Ft. Units
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved	7 7 8 No. of Samples 8	8.93 14.35 470.10 High	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014	7.20 11.90 453.17 Low U	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019	8.29 13.00 457.36 Average U	units (°C) Ft. Units mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved	7 7 8 No. of Samples 8 8	8.93 14.35 470.10 High U 0.01	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014	7.20 11.90 453.17 Low U	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015	8.29 13.00 457.36 Average U 0.01	units (°C) Ft. Units mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	7 7 8 No. of Samples 8 8 8	8.93 14.35 470.10 High	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014	7.20 11.90 453.17 Low U	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 2/4/2015	8.29 13.00 457.36 Average U	units (°C) Ft. Units mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	7 7 8 No. of Samples 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 11/4/2014	7.20 11.90 453.17 Low U U 0.12 U	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 2/4/2015 4/22/2019	8.29 13.00 457.36 Average U 0.01 0.58 U	units (°C) Ft. Units mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	7 7 8 No. of Samples 8 8 8 8 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 11/4/2014 4/22/2019	7.20 11.90 453.17 Low U U 0.12 U 8.70	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 2/4/2015 4/22/2019 9/28/2017	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64	units (°C) Ft. Units mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	7 7 8 No. of Samples 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90 U	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 11/4/2014	7.20 11.90 453.17 Low U U 0.12 U 8.70 U	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 2/4/2015 4/22/2019	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64 U	units (°C) Ft. Units mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	7 7 8 No. of Samples 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90 U 6.00	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 4/22/2019 11/4/2014 11/4/2014	7.20 11.90 453.17 Low U U 0.12 U 8.70 U U	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 4/22/2019 9/28/2017 4/22/2019 2/4/2015	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64 U 3.67	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	7 7 8 No. of Samples 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90 U 12.90 U 6.00 U	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 4/22/2019 11/4/2014 11/4/2014 11/4/2014	7.20 11.90 453.17 Low U U 0.12 U 8.70 U U U U U	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 4/22/2019 9/28/2017 4/22/2019 2/4/2015 4/22/2019	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64 U 3.67 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	7 7 8 No. of Samples 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90 U 12.90 U 6.00 U U U	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 4/22/2019 11/4/2014 11/4/2014 11/4/2014 11/4/2014	7.20 11.90 453.17 Low U U 0.12 U 0.12 U 8.70 U U U U U U	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 2/4/2015 4/22/2019 9/28/2017 4/22/2019 2/4/2015 4/22/2019 4/22/2019	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64 U 3.67 U U U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	7 7 8 No. of Samples 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90 U 12.90 U 6.00 U U 1.20	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 4/22/2019 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014	7.20 11.90 453.17 Low U U 0.12 U 0.12 U 0.12 U U U U U U 0.20	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 2/4/2015 4/22/2019 9/28/2017 4/22/2019 2/4/2015 4/22/2019 4/22/2019 12/15/2015	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64 U 3.67 U U U 0.58	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	7 7 8 No. of Samples 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90 U 6.00 U 6.00 U U 1.20 U	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014	7.20 11.90 453.17 Low U U 0.12 U 0.12 U U U U U U U U U U U U U U U U U U U	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 2/4/2015 4/22/2019 9/28/2017 4/22/2019 2/4/2015 4/22/2019 12/15/2015 4/22/2019	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64 U 3.67 U U 0.58 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	7 7 8 No. of Samples 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90 U 12.90 U 6.00 U 0 U 1.20 U 1.20 U 3.80	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014	7.20 11.90 453.17 Low U U 0.12 U U U U U U U U U U U 2.68	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 2/4/2015 4/22/2019 9/28/2017 4/22/2019 4/22/2019 12/15/2015 4/22/2019 9/28/2017	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64 U 3.67 U U 0.58 U 3.67 U U 0.58 U 0.01 0.58 U 0.01 0.58 0 0 0 0 0 0 0 0 0 0 0 0 0	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	7 7 8 No. of Samples 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90 U 12.90 U 6.00 U U 1.20 U 1.20 U 3.80 7.00	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014	7.20 11.90 453.17 Low U U 0.12 U U U U U U U U U U U 2.68 U	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 2/4/2015 4/22/2019 9/28/2017 4/22/2019 4/22/2019 4/22/2019 12/15/2015 4/22/2019 9/28/2017 11/4/2014	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64 U 3.67 U U 0.58 U 3.67 U U 0.58 U 3.67 U 0.3 5.33	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	7 7 8 8 No. of Samples 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90 U 12.90 U 6.00 U U 1.20 U 1.20 U 3.80 7.00 U	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/2/2019 1/28/2015 11/4/2014	7.20 11.90 453.17 Low U U 0.12 U U U U U U U U U U U U U U U U 2.68 U U	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 2/4/2015 4/22/2019 9/28/2017 4/22/2019 4/22/2019 12/15/2015 4/22/2019 9/28/2017 11/4/2014 4/22/2019	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64 U 3.67 U U 0.58 U 3.67 U U 0.58 U 3.67 U U 0.58 U 0 0 0 0 0 0 0 0 0 0 0 0 0	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved	7 7 8 8 No. of Samples 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90 U 12.90 U 6.00 U U 1.20 U 1.20 U 3.80 7.00 U U	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/2/2019 1/28/2015 11/4/2014 11/4/2014	7.20 11.90 453.17 Low U U 0.12 U 0.12 U 0.12 U U U U U U U U 2.68 U U U U U U U U U U U U U U U U U U U	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 2/4/2015 4/22/2019 9/28/2017 4/22/2019 4/22/2019 12/15/2015 4/22/2019 9/28/2017 11/4/2014 4/22/2019 4/22/2019	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64 U 3.67 U U 0.58 U 3.03 5.33 U U U U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Molybdenum, dissolved	7 7 8 8 No. of Samples 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90 U 12.90 U 6.00 U U 1.20 U 1.20 U 3.80 7.00 U	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/2/2019 1/28/2015 11/4/2014 2/4/2015	7.20 11.90 453.17 Low U U 0.12 U 0.12 U 0.12 U U 0.12 U 0.12 U 0.20 U U U 0.20 U U U U U U 0.20 U U U 0.20	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 2/4/2015 4/22/2019 9/28/2017 4/22/2019 4/22/2019 12/15/2015 4/22/2019 9/28/2017 11/4/2014 4/22/2019 4/22/2019 12/15/2015	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64 U 3.67 U U 0.58 U 3.67 U U 0.58 U U 0.58 U U 0.58 U U 0.58 U U 0.58 U 0 0 0.58 U 0 0 0 0 0 0 0 0 0 0 0 0 0	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved	7 7 8 8 No. of Samples 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90 U 12.90 U 6.00 U U 1.20 U 1.20 U 3.80 7.00 U U 0.30 U	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014	7.20 11.90 453.17 Low U U 0.12 U 0.12 U 0.12 U U U U U 0.20 U U 2.68 U U U U 0.20 U U U 0.20 U U U U 0.20 U U U U U U U U U U U U U U U U U U U	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 4/22/2019 9/28/2017 4/22/2019 2/4/2015 4/22/2019 4/22/2019 9/28/2017 11/4/2014 4/22/2019 4/22/2019 12/15/2015 4/22/2019	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64 U 3.67 U U 0.58 U 3.67 U U 0.58 U 3.67 U U 0.58 U U 0.58 U 0 0 0 0 0 0 0 0 0 0 0 0 0	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Potassium, dissolved	7 7 8 8 No. of Samples 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90 U 1.20 U 0.00 U 1.20 U 3.80 7.00 U U 0.30 U U 0.30 U 30.00	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2015 11/4/2014 11/4/2014 2/4/2015 11/4/2014	7.20 11.90 453.17 Low U U 0.12 U 0.12 U 8.70 U U U U U 0.20 U U 2.68 U U U U 0.20 U U 2.60 U U U 2.60 U U U 2.60 U U U U 0.20 U U U 0.20 U U 0.20 U U 0.20 U U 0.20 U U 0.20 U U 0.20 U U U U 0.20 U 0.20 U U U U U U U U U U U U U U U U U U U	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 2/4/2015 4/22/2019 9/28/2017 4/22/2019 2/4/2015 4/22/2019 12/15/2015 4/22/2019 9/28/2017 11/4/2014 4/22/2019 12/15/2015 4/22/2019 6/20/2018	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64 U 3.67 U U 0.58 U 0 3.03 5.33 U U 0.25 U 23.50	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	7 7 8 8 No. of Samples 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90 U 12.90 U 6.00 U U 1.20 U 1.20 U 3.80 7.00 U U 0.30 U U 0.30 U U 0.30 U U 0.30 U	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2015 11/4/2014 2/4/2015 11/4/2014 4/22/2019 11/4/2014	7.20 11.90 453.17 Low U U 0.12 U 0.12 U 0.12 U U 0.20 U U 2.68 U U U U 0.20 U U 0.20 U U 21.00 U U	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 2/4/2015 4/22/2019 9/28/2017 4/22/2019 2/4/2015 4/22/2019 12/15/2015 4/22/2019 9/28/2017 11/4/2014 4/22/2019 4/22/2019 12/15/2015 4/22/2019 6/20/2018 4/22/2019	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64 U 3.67 U U 0.58 U 3.03 5.33 U U 0.25 U 23.50 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	7 7 8 No. of Samples 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90 U 12.90 U 0.00 U 1.20 U 1.20 U 0.380 7.00 U U 0.30 U U 0.30 U U 29.00	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2015 11/4/2015 11/4/2014 4/22/2019 11/4/2014 4/22/2019	7.20 11.90 453.17 Low U U 0.12 U 0.12 U 0.12 U 0.20 U U 0.20 U U 0.20 U U 0.20 U U 0.20 U U 21.00 U 16.00	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 2/4/2015 4/22/2019 9/28/2017 4/22/2019 2/4/2015 4/22/2019 12/15/2015 4/22/2019 9/28/2017 11/4/2014 4/22/2019 4/22/2019 12/15/2015 4/22/2019 6/20/2018 4/22/2019 2/4/2015	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64 U 3.67 U U 0.58 U 3.67 U U 0.58 U U 0.58 U 0 0.58 U 0 0 0 0 0 0 0 0 0 0 0 0 0	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Selenium, dissolved Selenium, dissolved Solium, dissolved	7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90 U 12.90 U 0.00 U 1.20 U 1.20 U 3.80 7.00 U U 0.30 U U 0.30 U U 0.30 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.00 U 0.00 U 0.01 U 0.01 U 0.01 U 0.01 U 0.00 U 0 0 0.00 U 0.00 U 0.00 U 0 0 0 0	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2015 11/4/2015 11/4/2015 11/4/2014 4/22/2019 11/4/2014 4/22/2019	7.20 11.90 453.17 Low U U 0.12 U 0.12 U 0.12 U U 0.12 U 0.20 U U U 0.20 U U U 0.20 U U 0.20 U U 0.20 U U 0.20 U U 0.20 U U 0.20 U U 0.20 U U 0.20 U 0.20 U 0.20 U 0.20 U 0 U 0.20 U 0.20 U 0 U 0.20 U 0 U 0.20 U 0 U 0 U 0 U 0 U 0 U 0 U U 0 U 0 U 0	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 2/4/2015 4/22/2019 9/28/2017 4/22/2019 2/4/2015 4/22/2019 12/15/2015 4/22/2019 9/28/2017 11/4/2014 4/22/2019 12/15/2015 4/22/2019 6/20/2018 4/22/2019 2/4/2015 6/20/2018	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64 U 9.64 U 0.58 U 0.53 U 0.25 0.25 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Calcium, dissolved Chromium, dissolved Lithium, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Selenium, dissolved Selenium, dissolved Solica, dissolved Solica, dissolved	7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90 U 1.20 U 0.00 U 1.20 U 0.380 7.00 U U 0.30 U U 0.30 U 29.00 9,610 0.30	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2015 11/4/2015 11/4/2014 4/22/2019 11/4/2014 4/22/2019 11/4/2014	7.20 11.90 453.17 Low U U 0.12 U 0.12 U 0.12 U 0.20 U U 0.20 U 0.21.00 U 0.20 U 0.21.00 U 0.20 U 0.21.00 U 0.21.00 U 0.21.00 U 0.21.00 U 0.21.00 U 0.21.00 U 0.21.00 U 0.21.00 U 0.20 U 0.21.00 U 0.20 U 0.21.00 U 0.21.00 U 0.20 U 0.21.00 U 0.21.00 U 0.21.00 U 0.20 U 0.21.00 U	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 2/4/2015 4/22/2019 9/28/2017 4/22/2019 2/4/2015 4/22/2019 2/4/2015 4/22/2019 9/28/2017 11/4/2014 4/22/2019 4/22/2019 4/22/2019 6/20/2018 4/22/2019 2/4/2015 6/20/2018 9/28/2017	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64 U 9.64 U 3.67 U 0.58 U 0.25 U 0.25 U 23.50 U 20.63 7,913 0.17	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
pH, Field Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Beryllium, dissolved Cadmium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Lead, dissolved Lithium, dissolved Lithium, dissolved Magnesium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Manganese, dissolved Molybdenum, dissolved Selenium, dissolved Selenium, dissolved Solium, dissolved	7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8.93 14.35 470.10 High U 0.01 1.87 U 12.90 U 12.90 U 0.00 U 1.20 U 1.20 U 3.80 7.00 U U 0.30 U U 0.30 U U 0.30 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.01 U 0.00 U 0.00 U 0.01 U 0.01 U 0.01 U 0.01 U 0.00 U 0 0 0.00 U 0.00 U 0.00 U 0 0 0 0	6/20/2018 6/20/2018 10/29/2014 Date 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2014 11/4/2015 11/4/2015 11/4/2015 11/4/2014 4/22/2019 11/4/2014 4/22/2019	7.20 11.90 453.17 Low U U 0.12 U 0.12 U 0.12 U U 0.12 U 0.20 U U U 0.20 U U U 0.20 U U 0.20 U U 0.20 U U 0.20 U U 0.20 U U 0.20 U U 0.20 U U 0.20 U 0.20 U 0.20 U 0.20 U 0 U 0.20 U 0.20 U 0 U 0.20 U 0 U 0.20 U 0 U 0 U 0 U 0 U 0 U 0 U U 0 U 0 U 0	1/29/2015 4/22/2019 10/18/2018 Date 4/22/2019 2/4/2015 2/4/2015 4/22/2019 9/28/2017 4/22/2019 2/4/2015 4/22/2019 12/15/2015 4/22/2019 9/28/2017 11/4/2014 4/22/2019 12/15/2015 4/22/2019 6/20/2018 4/22/2019 2/4/2015 6/20/2018	8.29 13.00 457.36 Average U 0.01 0.58 U 9.64 U 9.64 U 0.58 U 0.53 U 0.25 0.25 U	units (°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 37: DS-9 Annual Dissolution Surface Aquifer

DAUB & ASSOCIATES, INC. DIFFERENCE STATIS



Net Chemistry Samules Samules Low Date Partery Ortage Ortage Bicarbonate as CaCO3 6 22.000 12/9/19 19.100 11/5/19 20.667 mg/ Carbonate as CaCO3 6 5.390 9/10/19 1.970 8/14/19 2.167 mg/ Carbonate as CaCO3 6 5.390 9/10/19 12/2019 8/14/19 2.0 8/14/19 2.0 8/14/19 2.0 8/14/19 2.0 8/14/19 2.0 8/14/19 2.0 8/14/19 4.00 11/5/19 98.3 mg/ mg/ Cardiordia Gavaen 2 400.00 8/14/19 400.00 8/14/19 400.00 8/14/19 40.00 8/14/19 40.00 8/20/19 1.0 mg/ mg/ Conductivity, Lab 6 74.500 9/10/19 8/2.019 10.50 8/14/19 1.0 mg/ mg/ Conductivity, Lab 6 74.500 9/10/19 8/2.019 1.50 8/2.019 1.5	Parameters	No. of	High	Date	Low	Date	Average	Units
Bicarbonate as CaCO3 6 22,000 12/9/19 19,100 11/5/19 22,067 mg/ Total Akalinity as 6 25,400 9/10/19 22,100 8/14/19 3,505 mg/ Cationate as CaCO3 6 1,90 12/9/19 -6,70 10/7/19 2,83 % Sum of Cations 6 1,900 12/9/19 -6,70 10/7/19 2,83 % Chemical Oxygen 2 400,00 8/14/19 400,00 med/ 11/5/19 983,50 med/ Chemical Oxygen 2 400,00 8/14/19 400,00 11/5/19 18,217 mg/ Conductivity, Lab 6 74,500 9/10/19 64,100 12/9/19 83,00 10/7/19 18,00 mg/ Hardness as CaCO3 6 18,00 10/7/19 18,00 10/7/19 18,00 mg/ Nitrates N. dissolved 2 U 8/14/19 UH 8/20/19 U mg/ Nitrogen, Ammonia 2 </th <th></th> <th></th> <th>riigii</th> <th>Dale</th> <th>LOW</th> <th>Dale</th> <th>Average</th> <th>Units</th>			riigii	Dale	LOW	Dale	Average	Units
Carbonate as CaCO3 6 5.390 9/10/19 1.970 8/14/19 23,055 mg/ Cation-Anion Balance 2 U 8/14/19 U 8/20/19 U mg/ Cation-Anion Balance 6 1.90 12/2/19 6.70 10/7/19 -2.63 % Sum of Anions 6 1.060.00 9/10/19 918.00 11/5/19 993.50 meg/ Chemical Oxygen 2 400.00 8/14/19 400.00 8/14/19 404.67 meg/ Conductivity, Lab 6 74.500 9/10/19 15.500 11/5/19 983.83 mg/ Hardness as CaCO3 6 18.00 10/7/19 18.00 10/7/19 18.217 mg/ Nitrate/Nitrite as N, dissolved 2 U 8/14/19 UH 8/22/19 U mg/ Nitrogen, Ammonia 11.80 8/20/19 10.50 8/14/19 11.15 mg/ Nitrogen, Ammonia 2 13.80 8/20/19 5.00 <t< td=""><td></td><td></td><td>00.000</td><td>10/0/10</td><td>10,100</td><td>11/5/10</td><td>00.007</td><td>100 or /l</td></t<>			00.000	10/0/10	10,100	11/5/10	00.007	100 or /l
Total Akalinity as 6 25,400 9/10/19 22,100 8/14/19 U 8/20/19 U mg/ Cation-Anion Balance 6 1.90 12/9/19 -6.70 10/7/19 -2.83 % Sum of Cations 6 1.050.00 12/9/19 983.00 11/5/19 993.50 mea/l Chemical Oxygen 2 400.00 8/14/19 400.00 8/14/19 944.67 mea/l Conductivity, Lab 6 74,500 9/10/19 64,100 12/9/19 83.20 mg// 18.20 mg// 18.20 mg// 18.20 mg// 18.20 mg// 18.20 mg// 18.20 mg// 19.29/19 10.29/19 10.29/19 10.29/19 10.29/19 10.29/19 10.29/19 10.20 mg// 11.50 mg// 11.50 mg// 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.50								
Bromide 2 U 8/14/19 U 8/20/19 U mg/ Cation-Anion Balance 6 1.90 12/9/19 918.00 11/5/19 928.50 med/ Sum of Anions 6 1.060.00 9/10/19 834.00 11/5/19 944.67 med/ Chemical Oxygen 2 400.00 8/14/19 400.00 8/14/19 400.00 8/14/19 400.00 8/14/19 400.00 8/14/19 400.00 8/14/19 400.00 8/14/19 400.00 8/14/19 400.22 mg/ mg/ Conductivity, Lab 6 74.500 9/10/19 45.00 9/10/19 42.28 mg/ Hardness as CaCO3 6 18.00 10/719 18.00 mg/ 10 mg/ Nitracen, Ammonia 2 11.80 8/14/19 UH 8/20/19 U mg/ Nitrogen, Ammonia 2 13.00 8/20/19 15.00 8/14/19 11.15 mg/ Nitrogen, Ammonia								
Cation-Anion Balance 6 1.90 12/9/19 -6.70 11/5/19 93.50 med/ med/ med/ Sum of Cations 6 1.050.00 9/10/19 918.00 11/5/19 948.50 med/ Chemical Oxygen 2 400.00 8/14/19 400.00 8/14/19 400.00 mg/ Conductivity, Lab 6 74.500 9/10/19 15,500 11/5/19 18,217 mg/ Mirate as, N. dissolved 2 U 8/14/19 UH 8/20/19 U mg/ Nitrate as, N. dissolved 2 U 8/14/19 UH 8/20/19 U mg/ Nitrogen, Ammonia 2 11.80 8/20/19 10.50 8/14/19 U mg/ Nitrogen, Oraalic 2 6.00 8/20/19 5.00 8/14/19 18.50 mg/ Nitrogen, Oraalic 2 6.00 8/20/19 15.00 8/14/19 18.50 mg/ Phosphate, total 2 2.30.0 8/20/19		6			22,100		24,167	
Sum of Anions 6 1.060.00 9/10/19 918.00 11/5/19 994.67 meg/l Chemical Oxygen 2 400.00 8/14/19 400.00 8/14/19 400.00 8/14/19 400.00 8/14/19 400.00 8/14/19 400.00 8/14/19 400.00 8/14/19 400.00 8/14/19 400.00 8/14/19 400.00 8/14/19 400.00 8/14/19 400.00 8/14/19 400.00 8/14/19 40.00 8/14/19 42.01 8/14/19 42.00 9/10/19 42.28 mg/l 10.80 107/19 18.00 10/0/19 42.28 mg/l 10.80 10/0/19 U mg/l 11.80 8/20/19 U 8/20/19 U mg/l 10.80 10/19 10.50 8/14/19 11.5 mg/l 11.5 mg/l 11.5 10.50 8/14/19 1.6 8.80 11.5 10.60 8/14/19 1.6 8.80 11.5 10.7 11.5 11.5 11.5 11.5 11.5 11.5<			•		U		<u> </u>	mg/I
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Aluminum, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Arsenic, dissolved 2 0.01 8/14/19 0.01 8/14/19 0.01 mg/l Barium, dissolved 2 1.90 8/20/19 1.80 8/14/19 1.85 mg/l Beryllium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Boron, dissolved 6 22.70 12/9/19 17.40 8/14/19 U mg/l Cadmium, dissolved 6 7.00 10/7/19 7.00 10/7/19 7.00 mg/l Calcium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Chromium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Lead, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Magnesium, dissolved 2 U 8/14/19 U 8/20/19 U <td< th=""><th>Parameters</th><th>No. of</th><th>High</th><th>Date</th><th>Low</th><th>Date</th><th>Average</th><th>Units</th></td<>	Parameters	No. of	High	Date	Low	Date	Average	Units
Arsenic, dissolved 2 0.01 8/14/19 0.01 8/14/19 0.01 mg/l Barium, dissolved 2 1.90 8/20/19 1.80 8/14/19 1.85 mg/l Beryllium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Boron, dissolved 6 22.70 12/9/19 17.40 8/14/19 U mg/l Cadmium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Cadmium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Calcium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Chromium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Lead, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Magnesium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l	Metals	Samples	_					
Arsenic, dissolved 2 0.01 8/14/19 0.01 8/14/19 0.01 mg/l Barium, dissolved 2 1.90 8/20/19 1.80 8/14/19 1.85 mg/l Beryllium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Boron, dissolved 6 22.70 12/9/19 17.40 8/14/19 U mg/l Cadmium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Cadmium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Calcium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Chromium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Lead, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Magnesium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l	Aluminum, dissolved		U	8/14/19	U	8/20/19	U	mg/l
Barium, dissolved 2 1.90 8/20/19 1.80 8/14/19 1.85 mg/l Beryllium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Boron, dissolved 6 22.70 12/9/19 17.40 8/14/19 19.13 mg/l Cadmium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Cadmium, dissolved 6 7.00 10/7/19 7.00 10/7/19 7.00 mg/l Chromium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Copper, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Lead, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Lithium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Magnesium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
Beryllium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Boron, dissolved 6 22.70 12/9/19 17.40 8/14/19 19.13 mg/l Cadmium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Calcium, dissolved 6 7.00 10/7/19 7.00 10/7/19 7.00 mg/l Chromium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Copper, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Iron, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Lead, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Magnesium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Malgnesium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l		2	0.01		0.01	8/14/19	0.01	ma/l
Boron, dissolved 6 22.70 12/9/19 17.40 8/14/19 19.13 mg/l Cadmium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Calcium, dissolved 6 7.00 10/7/19 7.00 10/7/19 7.00 mg/l Chromium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Copper, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Iron, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Lead, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Magnesium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Magnesium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Molybdenum, dissolved 2 U 8/14/19 U 8/20/19 U mg/l		2		8/14/19				
Cadmium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Calcium, dissolved 6 7.00 10/7/19 7.00 10/7/19 7.00 mg/l Chromium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Copper, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Lopper, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Lead, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Lithium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Magnesium, dissolved 6 U 8/14/19 U 8/20/19 U mg/l Manganese, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Molybdenum, dissolved 2 U 8/14/19 U 8/20/19 U mg/l	Barium, dissolved	2	1.90	8/14/19 8/20/19	1.80	8/14/19	1.85	mg/l
Calcium, dissolved 6 7.00 10/7/19 7.00 10/7/19 7.00 mg/l Chromium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Copper, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Iron, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Lead, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Lithium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Magnesium, dissolved 6 U 8/14/19 U 8/20/19 U mg/l Manganese, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Molybdenum, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Nickel, dissolved 2 U 8/14/19 U 8/20/19 U mg/l <	Barium, dissolved Beryllium, dissolved	2 2	1.90 U	8/14/19 8/20/19 8/14/19	1.80 U	8/14/19 8/20/19	1.85 U	mg/l mg/l
Chromium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Copper, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Iron, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Lead, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Lithium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Magnesium, dissolved 2 3.50 8/14/19 U 8/20/19 U mg/l Manganese, dissolved 6 U 8/14/19 U 8/20/19 U mg/l Mercury, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Molybdenum, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Nickel, dissolved 2 U 8/14/19 U 8/20/19 U mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved	2 2 6	1.90 U 22.70	8/14/19 8/20/19 8/14/19 12/9/19	1.80 U 17.40	8/14/19 8/20/19 8/14/19	1.85 U 19.13	mg/l mg/l mg/l
Copper, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Iron, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Lead, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Lithium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Magnesium, dissolved 2 3.50 8/14/19 U 8/20/19 U mg/l Magnesium, dissolved 6 U 8/14/19 U 8/20/19 U mg/l Manganese, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Mercury, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Molybdenum, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Nickel, dissolved 2 U 8/14/19 U 8/20/19 U mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	2 2 6 2	1.90 U 22.70 U	8/14/19 8/20/19 8/14/19 12/9/19 8/14/19	1.80 U 17.40 U	8/14/19 8/20/19 8/14/19 8/20/19	1.85 U 19.13 U	mg/l mg/l mg/l
Iron, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Lead, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Lithium, dissolved 2 3.50 8/14/19 3.50 8/14/19 3.50 mg/l Magnesium, dissolved 6 U 8/14/19 U 8/20/19 U mg/l Magnesium, dissolved 6 U 8/14/19 U 8/20/19 U mg/l Manganese, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Mercury, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Molybdenum, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Nickel, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Selenium, dissolved 6 30.00 8/20/19 598.00 11/5/19 720.50 mg/l <td>Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved</td> <td>2 2 6 2 6</td> <td>1.90 U 22.70 U 7.00</td> <td>8/14/19 8/20/19 8/14/19 12/9/19 8/14/19 10/7/19</td> <td>1.80 U 17.40 U 7.00</td> <td>8/14/19 8/20/19 8/14/19 8/20/19 10/7/19</td> <td>1.85 U 19.13 U 7.00</td> <td>mg/l mg/l mg/l mg/l</td>	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	2 2 6 2 6	1.90 U 22.70 U 7.00	8/14/19 8/20/19 8/14/19 12/9/19 8/14/19 10/7/19	1.80 U 17.40 U 7.00	8/14/19 8/20/19 8/14/19 8/20/19 10/7/19	1.85 U 19.13 U 7.00	mg/l mg/l mg/l mg/l
Lead, dissolved2U8/14/19U8/20/19Umg/lLithium, dissolved23.508/14/193.508/14/193.50mg/lMagnesium, dissolved6U8/14/19U8/20/19Umg/lManganese, dissolved2U8/14/19U8/20/19Umg/lMercury, dissolved2U8/14/19U8/20/19Umg/lMolybdenum, dissolved2U8/14/19U8/20/19Umg/lNickel, dissolved2U8/14/19U8/20/19Umg/lPotassium, dissolved6800.008/20/19598.0011/5/19720.50mg/lSelenium, dissolved631.0012/9/1920.008/20/19Umg/lSodium, dissolved623,50012/9/1918,60011/5/1921,050mg/lStrontium, dissolved60.4012/9/190.308/14/190.35mg/lVanadium, dissolved2U8/14/19U8/20/19Umg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	2 2 6 2 6 2	1.90 U 22.70 U 7.00 U	8/14/19 8/20/19 8/14/19 12/9/19 8/14/19 10/7/19 8/14/19	1.80 U 17.40 U 7.00 U	8/14/19 8/20/19 8/14/19 8/20/19 10/7/19 8/20/19	1.85 U 19.13 U 7.00 U	mg/l mg/l mg/l mg/l mg/l
Lithium, dissolved23.508/14/193.508/14/193.50mg/lMagnesium, dissolved6U8/14/19U8/20/19Umg/lManganese, dissolved2U8/14/19U8/20/19Umg/lMercury, dissolved2U8/14/19U8/20/19Umg/lMolybdenum, dissolved2U8/14/19U8/20/19Umg/lNickel, dissolved2U8/14/19U8/20/19Umg/lPotassium, dissolved6800.008/20/19598.0011/5/19720.50mg/lSelenium, dissolved2U8/14/19U8/20/19Umg/lSilica, dissolved631.0012/9/1920.008/20/1924.83mg/lSodium, dissolved623,50012/9/1918,60011/5/1921,050mg/lStrontium, dissolved60.4012/9/190.308/14/190.35mg/lVanadium, dissolved2U8/14/19U8/20/19Umg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	2 2 6 2 6 2 2 2	1.90 U 22.70 U 7.00 U U	8/14/19 8/20/19 8/14/19 12/9/19 8/14/19 10/7/19 8/14/19 8/14/19	1.80 U 17.40 U 7.00 U U U	8/14/19 8/20/19 8/14/19 8/20/19 10/7/19 8/20/19 8/20/19	1.85 U 19.13 U 7.00 U U U	mg/l mg/l mg/l mg/l mg/l mg/l
Magnesium, dissolved 6 U 8/14/19 U 8/20/19 U mg/l Manganese, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Mercury, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Molybdenum, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Nickel, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Potassium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Selenium, dissolved 6 800.00 8/20/19 598.00 11/5/19 720.50 mg/l Silica, dissolved 6 31.00 12/9/19 20.00 8/20/19 U mg/l Sodium, dissolved 6 23,500 12/9/19 20.00 8/20/19 21,050 mg/l Strontium, dissolved 6 0.40 12/9/19 0.30 8/14/19 0	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	2 2 6 2 6 2 2 2 2	1.90 U 22.70 U 7.00 U U U U	8/14/19 8/20/19 8/14/19 12/9/19 8/14/19 10/7/19 8/14/19 8/14/19 8/14/19	1.80 U 17.40 U 7.00 U U U U	8/14/19 8/20/19 8/14/19 8/20/19 10/7/19 8/20/19 8/20/19 8/20/19	1.85 U 19.13 U 7.00 U U U U	mg/l mg/l mg/l mg/l mg/l mg/l
Manganese, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Mercury, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Molybdenum, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Nickel, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Potassium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Selenium, dissolved 6 800.00 8/20/19 598.00 11/5/19 720.50 mg/l Selenium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Silica, dissolved 6 31.00 12/9/19 20.00 8/20/19 24.83 mg/l Sodium, dissolved 6 23,500 12/9/19 18,600 11/5/19 21,050 mg/l Strontium, dissolved 6 0.40 12/9/19 0.30 8/14/19 <	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	2 2 6 2 6 2 2 2 2 2 2	1.90 U 22.70 U 7.00 U U U U U	8/14/19 8/20/19 8/14/19 12/9/19 8/14/19 10/7/19 8/14/19 8/14/19 8/14/19 8/14/19	1.80 U 17.40 U 7.00 U U U U U U	8/14/19 8/20/19 8/20/19 10/7/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19	1.85 U 19.13 U 7.00 U U U U U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Mercury, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Molybdenum, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Nickel, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Nickel, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Potassium, dissolved 6 800.00 8/20/19 598.00 11/5/19 720.50 mg/l Selenium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Silica, dissolved 6 31.00 12/9/19 20.00 8/20/19 24.83 mg/l Sodium, dissolved 6 23,500 12/9/19 18,600 11/5/19 21,050 mg/l Strontium, dissolved 6 0.40 12/9/19 0.30 8/14/19 0.35 mg/l Vanadium, dissolved 2 U 8/14/19 U 8/20/19 <	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	2 2 6 2 6 2 2 2 2 2 2 2 2	1.90 U 22.70 U 7.00 U U U U 3.50	8/14/19 8/20/19 8/14/19 12/9/19 8/14/19 10/7/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19	1.80 U 17.40 U 7.00 U U U U 3.50	8/14/19 8/20/19 8/20/19 10/7/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19	1.85 U 19.13 U 7.00 U U U U 3.50	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Molybdenum, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Nickel, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Potassium, dissolved 6 800.00 8/20/19 598.00 11/5/19 720.50 mg/l Selenium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Silica, dissolved 6 31.00 12/9/19 20.00 8/20/19 24.83 mg/l Sodium, dissolved 6 23,500 12/9/19 18,600 11/5/19 21,050 mg/l Strontium, dissolved 6 0.40 12/9/19 0.30 8/14/19 0.35 mg/l Vanadium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	2 2 6 2 2 2 2 2 2 2 2 2 6	1.90 U 22.70 U 7.00 U U U U 3.50 U	8/14/19 8/20/19 8/14/19 12/9/19 8/14/19 10/7/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19	1.80 U 17.40 U 7.00 U U U U 3.50 U	8/14/19 8/20/19 8/20/19 10/7/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/14/19 8/20/19	1.85 U 19.13 U 7.00 U U U U 3.50 U	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Nickel, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Potassium, dissolved 6 800.00 8/20/19 598.00 11/5/19 720.50 mg/l Selenium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Silica, dissolved 6 31.00 12/9/19 20.00 8/20/19 24.83 mg/l Sodium, dissolved 6 23,500 12/9/19 18,600 11/5/19 21,050 mg/l Strontium, dissolved 6 0.40 12/9/19 0.30 8/14/19 0.35 mg/l Vanadium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved	2 2 6 2 2 2 2 2 2 2 2 2 2 6 2	1.90 U 22.70 U 7.00 U U U U 3.50 U U U	8/14/19 8/20/19 8/14/19 12/9/19 8/14/19 10/7/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19	1.80 U 17.40 U 7.00 U U U U 3.50 U U	8/14/19 8/20/19 8/20/19 10/7/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19	1.85 U 19.13 U 7.00 U U U U 3.50 U U U	mg/l
Nickel, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Potassium, dissolved 6 800.00 8/20/19 598.00 11/5/19 720.50 mg/l Selenium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Silica, dissolved 6 31.00 12/9/19 20.00 8/20/19 24.83 mg/l Sodium, dissolved 6 23,500 12/9/19 18,600 11/5/19 21,050 mg/l Strontium, dissolved 6 0.40 12/9/19 0.30 8/14/19 0.35 mg/l Vanadium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	2 2 6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1.90 U 22.70 U 7.00 U U U U 3.50 U U U U U U U U	8/14/19 8/20/19 8/14/19 12/9/19 8/14/19 10/7/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19	1.80 U 17.40 U 7.00 U U U U 3.50 U U U U U	8/14/19 8/20/19 8/20/19 10/7/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19	1.85 U 19.13 U 7.00 U U U U 3.50 U U U U U U	mg/l
Potassium, dissolved 6 800.00 8/20/19 598.00 11/5/19 720.50 mg/l Selenium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Silica, dissolved 6 31.00 12/9/19 20.00 8/20/19 24.83 mg/l Sodium, dissolved 6 23,500 12/9/19 18,600 11/5/19 21,050 mg/l Strontium, dissolved 6 0.40 12/9/19 0.30 8/14/19 0.35 mg/l Vanadium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved	2 2 6 2 2 2 2 2 2 2 6 2 2 2 2 2 2 2 2 2	1.90 U 22.70 U 7.00 U U U U 3.50 U U U U U U U U U U	8/14/19 8/20/19 8/14/19 12/9/19 8/14/19 10/7/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19	1.80 U 17.40 U 7.00 U U U U 3.50 U U U U U	8/14/19 8/20/19 8/20/19 10/7/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19	1.85 U 19.13 U 7.00 U U U U 3.50 U U U U U U	mg/l
Selenium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l Silica, dissolved 6 31.00 12/9/19 20.00 8/20/19 24.83 mg/l Sodium, dissolved 6 23,500 12/9/19 18,600 11/5/19 21,050 mg/l Strontium, dissolved 6 0.40 12/9/19 0.30 8/14/19 0.35 mg/l Vanadium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved	2 2 6 2 2 2 2 2 2 2 6 2 2 2 2 2 2 2 2 2	1.90 U 22.70 U 7.00 U U U U 3.50 U U U U U U U U U	8/14/19 8/20/19 8/14/19 12/9/19 8/14/19 10/7/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19	1.80 U 17.40 U 7.00 U U U U 3.50 U U U U U U U U	8/14/19 8/20/19 8/20/19 10/7/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19	1.85 U 19.13 U 7.00 U U U U U 3.50 U U U U U U U U	mg/l
Silica, dissolved 6 31.00 12/9/19 20.00 8/20/19 24.83 mg/l Sodium, dissolved 6 23,500 12/9/19 18,600 11/5/19 21,050 mg/l Strontium, dissolved 6 0.40 12/9/19 0.30 8/14/19 0.35 mg/l Vanadium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved	2 2 6 2 2 2 2 2 2 2 6 2 2 2 2 2 2 2 2 2	1.90 U 22.70 U 7.00 U U U U 3.50 U U U U U U U U U U U U U	8/14/19 8/20/19 8/14/19 12/9/19 8/14/19 10/7/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19	1.80 U 17.40 U 7.00 U U U U U U U U U U U U U U U U U	8/14/19 8/20/19 8/20/19 10/7/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19	1.85 U 19.13 U 7.00 U U U U U U U U U U U U U U U U U	mg/l
Sodium, dissolved 6 23,500 12/9/19 18,600 11/5/19 21,050 mg/l Strontium, dissolved 6 0.40 12/9/19 0.30 8/14/19 0.35 mg/l Vanadium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Potassium, dissolved	2 2 6 2 2 2 2 2 2 2 6 2 2 2 2 2 2 2 2 2	1.90 U 22.70 U 7.00 U U U U 3.50 U U U U U U U U U U U U U U U 0 0 0 0	8/14/19 8/20/19 8/14/19 12/9/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19	1.80 U 17.40 U 7.00 U U U U U U U U U U U U U U U 598.00	8/14/19 8/20/19 8/20/19 10/7/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 11/5/19	1.85 U 19.13 U 7.00 U U U U U U U U U U U U U U U T20.50	mg/l
Strontium, dissolved 6 0.40 12/9/19 0.30 8/14/19 0.35 mg/l Vanadium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved	2 2 6 2 2 2 2 2 2 6 2 2 2 2 2 2 6 2 2 2 6 2 2 2 6 2 2 2 2 2 6 2 2 2 2 2 2 2 2 2 2 2 2 2	1.90 U 22.70 U 7.00 U U U U U U U U U U U U U U U U U 800.00 U	8/14/19 8/20/19 8/14/19 12/9/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/20/19 8/14/19	1.80 U 17.40 U 7.00 U U U U U U U U U U U U U U U 598.00 U	8/14/19 8/20/19 8/20/19 10/7/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19	1.85 U 19.13 U 7.00 U U U U U U U U U U U U U U U U T20.50 U	mg/l
Vanadium, dissolved 2 U 8/14/19 U 8/20/19 U mg/l	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved	2 2 6 2 2 2 2 2 2 2 6 2 2 2 2 2 2 2 6 2 2 2 6 2 2 2 6 2 2 2 6 2 2 2 6 2 2 2 6 2 2 2 2 6 2 2 2 2 2 2 2 2 6 6 2 2 2 2 6 6 2 2 2 6 6 2 2 2 6 6 2 2 6 6 2 2 6 6 2 2 2 6 6 2 2 6 6 2 2 6 6 6 2 2 2 6 6 6 2 2 2 6 6 6 2 2 2 6 6 6 6 7 2 7 6 6 6 7 2 7 6 6 6 6	1.90 U 22.70 U 7.00 U U U U U U U U U 800.00 U 31.00	8/14/19 8/20/19 8/14/19 12/9/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 12/9/19	1.80 U 17.40 U 7.00 U U U U U U U 598.00 U 20.00	8/14/19 8/20/19 8/20/19 10/7/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19	1.85 U 19.13 U 7.00 U U U U U U U U U U U U U U 24.83	mg/l
	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved	2 2 6 2 2 2 2 2 2 2 6 2 2 2 2 2 2 2 6 2 2 2 6 2 2 6 2 2 6 6 2 2 6 6 6 2 6 6 2 6 6 6 2 6 6 2 2 6 6 6 2 6 6 6 2 6	1.90 U 22.70 U 7.00 U U U U U U U U 800.00 U 31.00 23,500	8/14/19 8/20/19 8/14/19 12/9/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 12/9/19	1.80 U 17.40 U 7.00 U U U U U U U 598.00 U 20.00 18,600	8/14/19 8/20/19 8/20/19 10/7/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 11/5/19	1.85 U 19.13 U 7.00 U U U U U U U U U U U U 720.50 U 24.83 21,050	mg/l mg/l
	Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lead, dissolved Magnesium, dissolved Manganese, dissolved Manganese, dissolved Mercury, dissolved Molybdenum, dissolved Nickel, dissolved Selenium, dissolved Selenium, dissolved Sodium, dissolved Strontium, dissolved	2 2 6 2 2 2 2 2 2 2 6 2 2 2 6 2 2 6 2 2 6 6 2 2 2 6 6 2 2 2 2 6 6 6 6 6 7 2 2 2 2 6 6 6 6 7 2 2 2 2 6 6 7 2 2 2 2 6 6 7 7 7 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7	1.90 U 22.70 U 7.00 U U U 3.50 U U U U U 800.00 U 31.00 23,500 0.40	8/14/19 8/20/19 8/14/19 12/9/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 8/14/19 12/9/19 12/9/19	1.80 U 17.40 U 7.00 U U U U U U U 598.00 U U 20.00 18,600 0.30	8/14/19 8/20/19 8/20/19 10/7/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 8/20/19 11/5/19 8/20/19 8/20/19 8/20/19 8/20/19	1.85 U 19.13 U 7.00 U U U U U U U U U U U U 24.83 21,050 0.35	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l

Table 38: DS-10 Annual Dissolution Surface Aquifer

DAUB & ASSOCIATES, INC. DI 38 34 7 PM BOD STRAND



Parameters	No. of	High	Date	Low	Date	Average	Units
Wet Chemistry	Samples	ingi	Date	LOW	Date	Average	Onits
Bicarbonate as CaCO3	61	30,400	6/25/19	294	9/16/91	8,170	mg/l
Carbonate as CaCO3	61	4,730	11/2/15	10.00	6/30/95	1,080	mg/l
Total Alkalinity as	61	32,000	6/25/19	294	9/16/91	9,144	
							mg/l
Bromide	30	33.00	8/30/90	0.10	5/21/07	7.54	mg/l
Cation-Anion Balance	61	6.10	3/28/18	-26.90	6/25/19	-1.96	%
Sum of Anions	58	663.00	6/25/19	30.69	3/25/92	217.11	meq/l
Sum of Cations	58	403.00	9/15/10	31.56	5/28/91	199.59	meq/l
Chemical Oxygen	27	960.00	6/14/08	37.00	9/27/17	158.48	mg/l
Chloride	60	735.00	6/25/19	21.00	8/30/90	337.65	mg/l
Conductivity, Lab	59	37,300	6/25/19	2,500	6/16/92	13,090	µmhos
Fluoride	61	46.20	3/22/17	1.30	5/28/91	26.53	mg/l
Hardness as CaCO3	61	135.00	6/14/08	6.00	8/30/90	25.47	mg/l
Nitrate as N, dissolved	30	3.22	10/22/13	0.02	5/24/05	0.51	mg/l
Nitrate/Nitrite as N,	30	4.14	10/22/13	0.02	9/27/17	0.61	mg/l
Nitrite as N, dissolved	30	0.92	10/22/13	0.00	5/21/07	0.15	mg/l
Nitrogen, Ammonia	30	7.90	11/6/14	1.17	9/15/92	4.04	mg/l
Nitrogen, Organic	30	46.00	6/14/08	0.50	8/22/90	7.59	mg/l
Nitrogen, Total Kjeldahl	30	51.00	6/14/08	1.90	8/22/90	11.11	mg/l
pH, lab	61	9.20	6/16/92	8.30	6/30/95	8.65	units
Phosphate, total	28	155.00	5/21/07	0.17	9/15/92	16.03	mg/l
Phosphorus, total	31	4.70	9/15/10	0.05	9/15/92	1.71	mg/l
	57	1,020.00	5/21/07	88.89	3/25/92	398.48	
SAR in Water		2,031.00	9/16/91				none
Sulfate	60			2.50	6/18/96	169.18	mg/l
Sulfide	30	3.31	8/30/90	0.00	7/31/91	0.57	mg/l
Total Dissolved Solids	60	29,000	6/25/19	1,708	9/15/92	10,389	mg/l
Conductivity, Field	78	29,680	3/22/17	1,800	6/1/91	12,870	µmhos
	//		(1/1/0)	/ 86		8.92	units
pH, Field	77	12.20	9/1/90	7.86	11/7/15		
Temperature (°C), Field	42	19.40	8/1/90	7.50	12/1/90	12.45	(°C)
Temperature (°C), Field Water Level, Field	42 55	19.40 422.84	8/1/90 8/1/18	7.50 405.03	12/1/90 4/1/01	12.45 410.23	(°C) Ft.
Temperature (°C), Field Water Level, Field Parameters	42 55 No. of	19.40	8/1/90	7.50	12/1/90	12.45	(°C)
Temperature (°C), Field Water Level, Field Parameters Metals	42 55 No. of Samples	19.40 422.84 High	8/1/90 8/1/18 Date	7.50 405.03 Low	12/1/90 4/1/01 Date	12.45 410.23 Average	(°C) Ft. Units
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved	42 55 No. of Samples 30	19.40 422.84 High 1.40	8/1/90 8/1/18 Date 9/15/10	7.50 405.03 Low	12/1/90 4/1/01 Date 6/23/94	12.45 410.23 Average 0.61	(°C) Ft. Units mg/l
Temperature (°C), Field Water Level, Field Parameters Metals	42 55 No. of Samples 30 30	19.40 422.84 High 1.40 0.0050	8/1/90 8/1/18 Date 9/15/10 8/22/90	7.50 405.03 Low U U	12/1/90 4/1/01 Date 6/23/94 9/15/92	12.45 410.23 Average 0.61 0.0027	(°C) Ft. Units
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved	42 55 No. of Samples 30	19.40 422.84 High 1.40	8/1/90 8/1/18 Date 9/15/10	7.50 405.03 Low	12/1/90 4/1/01 Date 6/23/94	12.45 410.23 Average 0.61	(°C) Ft. Units mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved	42 55 No. of Samples 30 30	19.40 422.84 High 1.40 0.0050	8/1/90 8/1/18 Date 9/15/10 8/22/90	7.50 405.03 Low U U	12/1/90 4/1/01 Date 6/23/94 9/15/92	12.45 410.23 Average 0.61 0.0027	(°C) Ft. Units mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved	42 55 No. of Samples 30 30 30 30 30	19.40 422.84 High 1.40 0.0050 6.65 U	8/1/90 8/1/18 Date 9/15/10 8/22/90 9/15/10 8/22/90	7.50 405.03 Low U U 0.08 U	12/1/90 4/1/01 Date 6/23/94 9/15/92 9/15/92 3/28/18	12.45 410.23 Average 0.61 0.0027 3.96 U!	(°C) Ft. Units mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved	42 55 No. of Samples 30 30 30 30 30 61	19.40 422.84 High 1.40 0.0050 6.65	8/1/90 8/1/18 Date 9/15/10 8/22/90 9/15/10 8/22/90 6/25/19	7.50 405.03 Low U U 0.08 U 0.03	12/1/90 4/1/01 Date 6/23/94 9/15/92 9/15/92 3/28/18 2/26/91	12.45 410.23 Average 0.61 0.0027 3.96 U! 2.99	(°C) Ft. Units mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved	42 55 No. of Samples 30 30 30 61 30 61 30	19.40 422.84 High 1.40 0.0050 6.65 U 8.60 U 8.60	8/1/90 8/1/18 Date 9/15/10 8/22/90 9/15/10 8/22/90 6/25/19 8/22/90	7.50 405.03 Low U U 0.08 U 0.03 U U	12/1/90 4/1/01 Date 6/23/94 9/15/92 9/15/92 3/28/18 2/26/91 3/28/18	12.45 410.23 Average 0.61 0.0027 3.96 U! 2.99 U	(°C) Ft. Units mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved	42 55 No. of Samples 30 30 30 30 61 30 61	19.40 422.84 High 1.40 0.0050 6.65 U 8.60 U 8.60 U 44.00	8/1/90 8/1/18 Date 9/15/10 8/22/90 9/15/10 8/22/90 6/25/19 8/22/90 6/14/08	7.50 405.03 Low U U 0.08 U 0.03 U 1.00	12/1/90 4/1/01 Date 6/23/94 9/15/92 9/15/92 3/28/18 2/26/91 3/28/18 5/28/91	12.45 410.23 Average 0.61 0.0027 3.96 U! 2.99 U 3.47	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved	42 55 No. of Samples 30 30 30 61 30 61 30 61 30	19.40 422.84 High 1.40 0.0050 6.65 U 8.60 U 8.60 U 44.00 0.20	8/1/90 8/1/18 Date 9/15/10 8/22/90 9/15/10 8/22/90 6/25/19 8/22/90 6/14/08 11/2/15	7.50 405.03 Low U U 0.08 U 0.03 U 1.00 U	12/1/90 4/1/01 Date 6/23/94 9/15/92 9/15/92 3/28/18 2/26/91 3/28/18 5/28/91 6/23/94	12.45 410.23 Average 0.61 0.0027 3.96 U! 2.99 U 3.47 0.11	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved	42 55 No. of Samples 30 30 30 61 30 61 30 61 30 61 30 30	19.40 422.84 High 1.40 0.0050 6.65 U 8.60 U 8.60 U 44.00 0.20 0.10	8/1/90 8/1/18 Date 9/15/10 8/22/90 9/15/10 8/22/90 6/25/19 8/22/90 6/14/08 11/2/15 7/29/09	7.50 405.03 Low U U 0.08 U 0.03 U 1.00 U U U	12/1/90 4/1/01 Date 6/23/94 9/15/92 9/15/92 3/28/18 2/26/91 3/28/18 5/28/91 6/23/94 7/29/09	12.45 410.23 Average 0.61 0.0027 3.96 U! 2.99 U 3.47 0.11 0.10	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved	42 55 No. of Samples 30 30 30 61 30 61 30 61 30 61 30 30 30 30	19.40 422.84 High 1.40 0.0050 6.65 U 8.60 U 8.60 U 44.00 0.20 0.10 1.82	8/1/90 8/1/18 Date 9/15/10 8/22/90 9/15/10 8/22/90 6/25/19 8/22/90 6/14/08 11/2/15 7/29/09 7/31/91	7.50 405.03 Low U U U 0.08 U 0.03 U 1.00 U U U U 0.04	12/1/90 4/1/01 Date 6/23/94 9/15/92 9/15/92 3/28/18 2/26/91 3/28/18 5/28/91 6/23/94 7/29/09 6/23/94	12.45 410.23 Average 0.61 0.0027 3.96 U! 2.99 U 3.47 0.11 0.10 0.30	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved	42 55 No. of Samples 30 30 30 61 30 61 30 61 30 61 30 30 30 30 30 30	19.40 422.84 High 1.40 0.0050 6.65 U 8.60 U 8.60 U 44.00 0.20 0.10 1.82 0.04	8/1/90 8/1/18 Date 9/15/10 8/22/90 9/15/10 8/22/90 6/25/19 8/22/90 6/14/08 11/2/15 7/29/09 7/31/91 7/31/91	7.50 405.03 Low U U U 0.08 U 0.03 U 1.00 U 1.00 U U 0.04 U	12/1/90 4/1/01 Date 6/23/94 9/15/92 9/15/92 3/28/18 2/26/91 3/28/18 5/28/91 6/23/94 6/23/94 6/23/94	12.45 410.23 Average 0.61 0.0027 3.96 U! 2.99 U 3.47 0.11 0.10 0.30 0.03	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
Temperature (°C), Field Water Level, Field Parameters Metals Aluminum, dissolved Arsenic, dissolved Barium, dissolved Beryllium, dissolved Boron, dissolved Cadmium, dissolved Calcium, dissolved Chromium, dissolved Copper, dissolved Iron, dissolved Lead, dissolved Lithium, dissolved	42 55 No. of Samples 30 30 30 61 30 61 30 61 30 61 30 61 30 30 30 30 30 30 30	19.40 422.84 High 1.40 0.0050 6.65 U 8.60 U 8.60 U 44.00 0.20 0.10 1.82 0.04 3.30	8/1/90 8/1/18 Date 9/15/10 8/22/90 9/15/10 8/22/90 6/25/19 8/22/90 6/14/08 11/2/15 7/29/09 7/31/91 7/31/91 6/25/19	7.50 405.03 Low U U 0.08 U 0.03 U 1.00 U 1.00 U U 0.04 U 0.32	12/1/90 4/1/01 Date 6/23/94 9/15/92 9/15/92 3/28/18 2/26/91 3/28/18 5/28/91 6/23/94 6/23/94 6/23/94 9/15/92	12.45 410.23 Average 0.61 0.0027 3.96 U! 2.99 U 3.47 0.11 0.10 0.30 0.03 2.08	(°C) Ft. Units mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
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Table 39: IRI-7 Annual Dissolution Surface Aquifer

DAUB & ASSOCIATES, INC. 21. Frank Contraction



For Remote Wells (all levels taken from top of casing)								
Well / Ground Level (ft)		Depth to Water Level ft.						
	2014	2015	2016	2017	2018	2019		
IRI-8 / 6573.6	314.60	317.70	318.08	317.80	320.79	321.40		
IRI-9 / 6666.3	470.10	469.95	469.68	469.50	470.61	471.40		
IRI-10 / 6440.7	134.40	134.58	135.54	P&A	P&A	P&A		
IRI-11 / 6613.6	465.00	527.44	466.95	466.90	467.60	468.00		
*MWU-2 / 6441.0	191.75	194.36	195.00	195.40	195.38	197.50		
*MWA-2 / 6441.0	196.20	199.05	199.80	199.60	199.60	199.40		
*MWB-2 / 6441.0	251.80	253.28	253.05	254.80	256.13	255.40		
*MWD-1 / 6467.0	327.55	328.59	328.83	329.30	329.60	329.50		
*MWD-2 / 6641.0	251.65	252.58	247.82	253.50	254.54	254.30		
TH75-6A	287.25	293.18	298.16	298.10	297.21	296.40		
TH75-6B	287.19	291.46	294.82	295.50	295.28	294.30		
TH75-11A	413.30	415.76	414.94	413.70	413.80	413.80		
TH75-11B	496.95	500.17	497.28	494.80	495.00	494.80		
EX-2 (WL collected quarterly)	486.23	481.56	471.75	472.80	476.15	479.70		

Table 40: Summary of 2019 Annual Remote Water Levels



Appendix B

Subsidence Monitoring

DAUB & ASSOCIATES, INC. 21 34 TA CONTRACTOR OF THE STATE

January 2020

QUARTERLY 3M-TDR READING FOR DECEMBER 30, 2019

Prepared for

NATURAL SODA, INC.

January 2020

Prepared by



AGAPITO ASSOCIATES, INC. 715 Horizon Drive, Suite 340 Grand Junction, CO 81506

1726 Cole Blvd., Bldg. 22, Suite 130 Golden, CO 80401

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DISCLAIMER: This report contains professional opinions based on the survey logged with the TDR 100 instrument. AAI makes no warranties, either expressed or implied, as to the accuracy or completeness of the information herein. Opinions are based on subjective interpretations of the survey data; other equally valid interpretations may exist. Identification and control of hazardous conditions are the responsibilities of the Owner.

Page

1.0 INTRODUCTION

Natural Soda, Inc. (Natural Soda) commissioned Agapito Associates, Inc. (AAI) to take quarterly logs of its time domain reflectometry (TDR) surveys for monitoring subsidence from monitoring well (SMW) 3M TDR. This report presents the TDR surveys logged on December 30, 2019, for Cables #2 (Kyle) and #3 (Matt) from SMW 3M TDR. The completion diagram of SMW 3M TDR is shown in Figure 1 for reference.

2.0 TDR READINGS

The surveys were taken with AAI's Campbell Scientific, Inc. TDR 100 instrument. A propagation velocity factor (v_p) of 0.87 was used in the data processing and 2,048 data points were recorded along each cable. A waveform average of 64 points was used to eliminate background noise. Cables #1 (Blank) and #4 (Kyle2) were corrupted during installation and are not used for monitoring. No readings were taken in these cables.

3.0 WAVEFORM ANALYSIS AND RESULTS

TDR waveform histories for Cables #2 and #3 are shown in Figures 2 and 3, starting with the original waveforms from December 10, 2003. Expanded waveforms are shown in Figures 4 and 5 for Cables #2 and #3, respectively. The close-up figures highlight the zone of interest between 800 and 1,960 ft deep, including the B Groove aquifer located between 1,566 and 1,589 ft.

The December 30, 2019, survey indicates that no significant ground movement has occurred around SWM 3M TDR since the cables were originally installed. This is evidenced by the constant waveform history in Cable #3 (Figure 3).

Cable #2, parallel to Cable #3, shows evidence of water infiltration into the cable starting soon after installation. This is evident in the February 17, 2004, waveform, which shows the first signs of a distorted signal beyond a depth of approximately 1,745 ft. Water causes distortion by changing the dielectric constant of the insulation material in the cable and, thus, the propagation velocity of the reflected signal. Subsequent surveys in Cable #2 show a gradual rise in the distortion elevation, symptomatic of water propagating up the cable under hydraulic pressure from a leak originating at or near the end of the cable. Similar to the most recent results, the December 30, 2019, survey indicates that water has infiltrated the cable up to a depth of about 1,438 ft.

If the cable is not mechanically deformed by ground movement, the signal distortion caused by water infiltration superimposes on the original waveform. This appears to be the process occurring in Cable #2. Cable deformation, including shearing or breakage, normally produces a sharp "spike" in the waveform, which is expected to be recognizable even through the distortion caused by water infiltration. Cable #2 shows no obvious signs of localized damage, suggesting that significant ground movement is not occurring. This is consistent with the results of Cable #3. Water infiltration is likely to continue in Cable #2 and may eventually render the cable inoperative.



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Comparison of Waveforms (December 10, 2003; February 17, 2004; March 28, June 17, September 9, and December 30, 2019) for 3M-TDR Cable #2 (Kyle) Figure 2.

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Comparison of Waveforms (December 10, 2003; February 17, 2004; March 28, June 17, September 9, and December 30, 2019) for 3M-TDR Cable #3 (Matt) Figure 3.
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Agapito Associates, Inc. Consulting Engineers and Geologists



TDR BOREHOLE No. 4A 5M (Cable A)



Agapito Associates, Inc. Consulting Engineers and Geologists



TDR BOREHOLE No. 4A 5M (Cable B)





2019 Project Status Report& Annual Plan of Development

Appendix C

Potentiometric Surface Maps (Confidential)

DAUB & ASSOCIATES, INC.

January 2020



Legend

	Horizontal Production Well
	Vertical Production Well
ø	Slant Production Well
	Hydrology Monitoring Well
	Abandoned Well
	Core Hole
+	Drillhole
Ø	Water Supply Well
	Subsurface Subsidence Monitor Well (SSMW)
	Surface Subsidence Monument (SSM)
	Horizontal Well - Proposed
ø	Slant Well - Proposed
AG-1	A-Groove Aquifer Water Level

CONFIDENTIAL



scale in feet

Natural Soda LLC

Average 2019 Potentiometric Surface A-Groove Aquifer

Rio Blanco County, Colorado

Daub & Associates, Inc.

Date: January 17, 2020



Legend

-	Horizontal Production Well
	Vertical Production Well
	Slant Production Well
	Hydrology Monitoring Well
	Abandoned Well
	Core Hole
	Drillhole
5	Water Supply Well
	Subsurface Subsidence Monitor Well (SSMW)
	Surface Subsidence Monument (SSM)
	Horizontal Well - Proposed
	Slant Well - Proposed
6-7	B-Groove Aquifer Water Level

CONFIDENTIAL

Contour Interval: 5 feet



scale in feet

Natural Soda LLC

Average 2019 Potentiometric Surface B-Groove Aquifer

Rio Blanco County, Colorado

Daub & Associates, Inc.

Date: January 17, 2020



Appendix D

2019 Vegetation Monitoring Reclamation Status Report

Prepared

By

Rusty Roberts

DAUB & ASSOCIATES, INC.

January 2020

Reclamation Status Report 2019 Vegetation Monitoring Results for Reclaimed Sites

Evaluating Status of Current Plant Communities on Three Reclaimed P&A Production Well Pads and on Six Reclaimed Exploration Corehole Pad Sites in meeting Criteria for Successful Reclamation

> Prepared for: Natural Soda Rifle, Colorado

> Prepared by: Rusty Roberts Meeker, Colorado

December 2019

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Introduction

The Bureau of Land Management (BLM) and the State of Colorado require reclaimed lands to be revegetated in a manner that establishes a diverse, effective, and long-lasting vegetation cover that is equal or nearly so to the natural vegetation of the surrounding areas. Natural Soda's approved mine plan requires periodic monitoring to evaluate the success of revegetation efforts.

Vegetation cover, species composition, species density and ground cover data were collected from undisturbed reference area sites on Natural Soda's lease area near their current mining operations. The data collected from undisturbed areas is used in comparison to the vegetation cover, species composition, species density and ground cover data collected from reclaimed well pad sites to determine if the site have met the criteria for successful reclamation.

Data was collected from three production well pad sites that have been plugged and abandoned and in final reclamation status, from six exploration corehole sites in final reclamation status and from four native rangeland reference area sites on Natural Soda's lease area and near the sites evaluated. Table 1 lists the nine sites in final reclamation status for which data was collected in 2019.

Criteria for Successful Reclamation of Disturbed Areas

BLM approved Natural Soda's plant expansion in August 2015. The approval for the expansion modified the criterion for successful reclamation of disturbances from what had been utilized in prior years. The new criteria for successful reclamation must reflect a plant community of at least five desirable plant species where no one species may exceed 70 percent relative cover and desired foliar cover, bare ground, and shrub and/or forb density must have 80 percent similarity in relation to the identified desired plant community.

The desired plant community referenced in the criteria refers to an ecological site present at or near the area of disturbance. Two ecological sites occur on the parts of the lease area being actively mined, a pinyon and juniper woodland site and a rolling loam rangeland site. Several of the sites were along the fringe of the pinyon and juniper community and have soils of both a woodland site and a rangeland site. The vegetative values in the criteria are based on the capability of a site in an early seral plant community, which is basically an herbaceous species dominated site with varying amounts of shrub species. The rolling loam rangeland site reflects more of the capability of a site in an early seral plant community, thus, data collected from the four rolling loam native rangeland reference areas were used to evaluate the success of the plant community on each reclaimed pad in achieving the reclamation criteria.

The scientific and common names of the plant species encountered within the sampling from reference sites and from each well pad site are presented in tables in the appendix.

Vegetation Sampling Methods Utilized to Measure Criteria for Successful Reclamation

Data was collected based upon recommendations in White River Field Office's Surface Reclamation Plan which require that vegetation cover, composition, and diversity data be gathered using quantitative methods to measure the six Core Terrestrial Indicators and Methods in BLM Technical Note 440. BLM approved sampling methods are found in Monitoring Manual for Grassland, Shrubland, and Savanna Ecosystems, Volume I and II: Quick Start.

The six core terrestrial indicators include:

- (1) <u>Bare Ground</u>: The amount of bare ground is accepted as one of the most sensitive indicators of resource condition in rangelands. A large percentage of bare ground can be an indicator of high erosion potential, low forage production, poor wildlife habitat, and increased risk of invasion by nonnative plant species.
- (2) <u>Vegetation Composition</u>: Vegetation composition data, including the cover of groups of species are indicators generated from the same data, and when used together, are sensitive to most changes and are useful when determining the status of key species in a plant community.
- (3) <u>Nonnative Invasive Plant Species</u>: The presence and cover of nonnative species is acquired as a component of vegetation composition. Nonnative invasive species have the ability to significantly alter sustainability and site resilience.
- (4) <u>Plant Species of Management Concern</u>: The presence and cover of plant species of management concern is also acquired as a component of vegetation composition. Plant species of management concern can be sensitive to site disturbance, provide important ecosystem functions, or contribute to biological diversity.
- (5) <u>Vegetation Height</u>: The vertical structure of vegetation which can be used to characterize wildlife habitat and estimate wind erosion potential.
- (6) <u>Proportion of Soil Surface in Large Intercanopy Gaps</u>: Canopy gap intercept measures the proportion of a line covered by large gaps between plant canopies and is an important indicator of the potential for erosion.

Line-point intercept with plot-level species inventory was the vegetation monitoring technique used to measure the core indicators of bare ground, vegetation composition, non-native invasive plant species and plant species of management concern.

Line-point intercept is a rapid, accurate method for quantifying soil cover, including vegetation, litter, rocks and biological crusts. The theory behind this method is that if an infinite number of points are placed in a two-dimensional area, the cover of a plant species can be determined by counting the number of points that hit that species. These measurements are related to wind and water erosion, water infiltration, and the ability of the site to resist and recover from disturbance.

Gap intercept measurements were made along the line-point intercept transect line to provide information about the proportion of the line covered by large gaps between plants. Large gaps between plant canopies are important indicators of increased susceptibility to water erosion and runoff, wind erosion, weed invasion, and wildlife habitat. A plot-level plant species inventory provides a rapid estimate of species richness. A 50 square meter area search area at each site was utilized to record all plant species occurring within the plot. A thorough search of the plot can detect less-frequently occurring species that may not have been recorded in line-point intercept cover measurements.

Shrub and forb density also a criterion for successful reclamation are not measured by the sampling methods used for the other criteria. Forb and shrub density measurements were taken from one-meter square density quadrants along the same line-point intercept transect line used for the other sampling techniques.

Summary of Results for Reclaimed Well Pads in Achieving Reclamation Goals

Vegetation cover, plant species composition, ground cover and shrub and forb density data were collected from three production well pad sites that have been plugged and abandoned and in final reclamation status, from six exploration corehole sites in final reclamation status and from four native rangeland reference area sites on Natural Soda's lease area and near the sites evaluated. Data was collected from August 15 thru August 26, 2019. Table 1 lists the sites in final reclamation status for which data was collected in 2019. The location of sites monitored are illustrated on the attached location map.

	Table 1 Summ	own of Dogulta for D	alaimad Wall D	ada in Ashioving	Successful Dec	lomation Critari						
	Table 1 - Summary of Results for Reclaimed Well Pads in Achieving Successful Reclamation Criteria Criteria for Successful Reclamation of Disturbed Areas											
	species where r	t least five desirable plant ies where no one species may eed 70 percent relative cover the succession rectanation of Distance and rectanation										
Well	the number of desired plant species present	the relative cover of the desired species with the greatest cover	% similarity of desired foliar cover	% similarity of bare ground	% similarity of shrub density	% similarity of forb density	Criteria					
Pad #	2019 D	ata Collected for P&	&A Production V	Vell Pads in Fin	al Reclamation	Status	Met					
5H-1V	25 species	25 %	122 %	152 %	35 %	86 %	Yes					
93-2M	17 species	25 %	121 %	165 %	38 %	17 %	No					
93-4H	22 species	17 %	97 %	142 %	21 %	97 %	Yes					
Site	2019 D	ata Collected for Ex	ploration Corel	ole Pads in Fina	al Reclamation S	Status						
Pad E	21 species	22 %	101 %	112 %	43 %	156 %	Yes					
Pad H	26 species	20 %	112 %	147 %	41 %	82 %	Yes					
Pad N	25 species	15 %	106 %	145 %	60 %	195 %	Yes					
Pad P	26 species	19 %	108 %	129 %	84 %	70 %	Yes					
Pad Q	26 species	17 %	83 %	109 %	40 %	37 %	No					
Pad R	22 species	17 %	92 %	148 %	61 %	136 %	Yes					
	20)19 Baseline Data Co	ollected from Na	ntive Rangeland	Reference Area	s						
	23 species	31.5 %	62.5 %	26.5 %	1.75	6.13						
Note: va	lues in red are belo	ow the criteria require	ed for successful	reclamation								

Table 1 is a summary of the progress of each site monitored in achieving successful reclamation. The site-specific monitoring results for each site are discussed in detail later.

All the sites have productive plant communities with good distribution of perennial species across the site which has adequately stabilized each site. The vegetation that has established on the nine reclaimed sites are mostly the perennial species planted during reclamation. Many of the perennial species especially the grasses, are well established providing a resilient plant community that is difficult for desirable forbs and shrubs to compete and increase in cover and density. The favorable climatic conditions that occurred in 2019 has diminished some of the drought related impacts from recent years and has allowed several of the site evaluated to achieve successful reclamation status.

Vegetation Sampling Methods and Procedures for Reclaimed Pads and Reference Areas

The line-point intercept with plot-level species inventory was the vegetation sampling protocol used on both the reclaimed pads and associated reference areas. The procedure involves random placement of a transect line (measuring tape) as the base for data collection. Values for foliar cover, basal cover, species composition and bare ground were measured at specific points along the line. Gaps in vegetation canopy were measured along the same tape line. Density quadrants were placed adjacent the line at specific points.

Either a 25- or 50-meter tape was used for the baseline transect for each of the four rolling loam reference areas. A 25-meter tape was used for the baseline for transects placed on the reclaimed pads sites. At least three transects were placed on each reclaimed pad site.

The following techniques were used to collect the sample data:

- The beginning and ending points of each transect were recorded using a GPS receiver. Azimuths from the 0-meter to the 25-meter or 50-meter point were recorded.
- Photographs were taken at each transect that show vegetation features at the time of sampling.
- Point count data were collected at 1-meter intervals along a 50-meter tape or at 0.5-meter intervals along a 25-meter tape using a thin, straight metal rod (pin flag) for a total of fifty samples taken along each transect.
 - The first plant species in the canopy hit by the drop of a pin flag at each sample point was recorded by species in the "Top Layer". The total of top layer hits was used to determine total foliar cover for the study site and the total foliar cover for each species hit in the top layer.
 - Subsequent plant species and vegetative litter hits were recorded in the "Lower Canopy Layers". Vegetative litter was recorded as either unattached herbaceous or woody litter.
 - Species composition based upon total of all plant species encountered in the top layer and the lower layers at reach sample point and recorded by species and summarized by plant group.
 - Soil surface hits were recorded as plant species basal intercepts, lichen crust, moss, embedded litter, duff or bare soil. Bare ground percent was determined by a bare soil hit with no canopy intercepts in the top and lower canopy layers.
- Canopy gaps were recorded directly below the transect tape line. Only perennial plant species were used in the vegetative canopy. Annual species if present were not included

as part of the canopy. Gaps larger than 20 centimeters were recorded for the length of each transect. Gaps were totaled into gap sizes (21 to 50; 51 to 100; 101 to 200; >200). Though the gap data is not used in evaluating reclamation criteria, it was collected as a visualization of perennial species cover.

- Forb and shrub density data were taken from one-meter square density quadrants alongside the same line-point intercept transect line used for the other sampling techniques. Quadrants were placed at every 5th sample point along the transect tape for a total of 10 one-meter density quads for each transect. Only desirable forb and shrub densities are required in the criteria for successful reclamation. The total number of desirable forb and shrub species rooted in each quad were counted and recorded by species and summarized by plant group. Densities for grasses or trees were not collected.
- A plot-level plant species inventory was conducted within approximately 50 square meter search area at each site. In addition to those plant species recorded during sampling, other species not encountered during sampling but were observed in the sample area were recorded for species richness.

Vegetation Sampling Results for Nearby Native Rangeland Reference Areas

Vegetation cover, species composition, species density and ground cover data were collected from four rolling loam rangeland sites on August 19 thru August 26, 2019. Transects were established in the four rolling loam sites which represent the site characteristic's common in the project area. The pre-disturbance vegetation of the reclaimed well pads examined had pinyon and juniper tree cover over all or portion of the site. Several of the sites were along the fringe of the pinyon and juniper community and had soils of both a woodland site and a rangeland site. The vegetative values in the criteria are based on the capability of a site in an early seral plant community, which is basically an herbaceous species dominated site with varying amounts of shrub species. The rolling loam rangeland site reflects more of the capability of a site in an early seral plant community, thus, data collected from the four rolling loam rangeland reference areas were used to evaluate the success of the plant community on each reclaimed pad in achieving the reclamation criteria.

Values for foliar cover, basal cover, species composition and bare ground were collected from two 50 meter transects and two 25 meter transects for a total of 200 sample points. Values for forb and shrub densities were collected from 40 one-meter square quadrants. Table 2 summarizes the data collected in 2019 from the four reference areas. A comparison to the data collected in 2018 is included in the table.

Foliar cover of native species measured on the reference sites in 2019 increased 16 percent in comparison to comparable data collected in 2018. Foliar cover of perennial grasses increased 21 percent, foliar cover perennial of forbs more than doubled and shrub cover declined 11 percent. The foliar cover of invasive nonnative grasses remained unchanged. A 67 percent decline in foliar cover of nonnative forbs occurred in 2019. A 9 percent decline in herbaceous litter cover occurred in 2019.

Table 2 - Rolling Loam Native Rangeland Reference Area Vegetation Cover, Species Composition, Species Density & Ground Cover												
	Line-Point Canopy Intercept Data ¹											
		N	umbe		1	oliar		asal		cies	Density Data ² Forb/Shrub	
			Speci	ies	Co	ver	Co	ver	Comp	osition	Density (#/m ²)	
Plant Gr	oup	20)18	2019	2018	2019	2018	2019	2018	2019	2018	2019
Perennial Grass	ses		5	5	35.0	42.5	4.5	6.5	61.65	61.08	n/a	n/a
Invasive Non-N	Vative											
Grasses			1	1	1.0	1.0	0.0	0.0	1.50	1.34	n/a	n/a
Perennial Forb	8		16	12	3.5	8.0	1.0	2.0	8.27	19.46	6.23	6.13
Invasive and N	on-Native	;										
Forbs			3	2	1.5	0.5	0.0	0.0	3.76	1.34	n/a	n/a
Shrubs			5	5	13.5	12.0	1.5	1.0	21.80	16.78	3.20	1.70
Trees			1	1	2.0	0.0	0.0	0.0	3.01	0.0	0.05	0.050
Vegetation To	tals		31	26	56.5	64.0	7.0	9.5	100.0	100.0	12.93	7.88
		l	Line-l	Point In	tercept	Soil Sur	face Co	ver Data	3			
						rbaceou		Voody				
Percent	Bare G	round	Bio	tic Cru	st	Litter	Litter		I	Duff	R	ock
Cover by											201	
Туре	2018	2019	201	8 201	19 20 1	8 201	9 2018	8 2019	2018	8 2019	8	2019
	33.5	26.5	0.	0 0	0.5 37	.0 40.	5 0.0) 1.	5 0.0	0.0	0.0	0.0
	¹ Sum of data from 4 randomly placed transects with 50 sample points collected from each transect. Foliar cover											
based upon 1 st plant species encountered in the canopy at each sample point. Species composition based upon												
total of all plant species encountered at each sample point.												
² Sum of density data collected from ten 1-meter square quadrants along each transect. Only desirable forb and												
shrub densities were recorded based upon reclamation criteria. ³ Percentages are not cumulative with vegetation totals, rather a measure by layer of ground cover from the top												
layer thru the lo above the soil s	ower laye											

The increases in foliar cover and herbaceous litter cover that occurred in 2019 resulted in a 21 percent decrease in bare ground from that measured in 2018. The canopy gaps between perennial species is also an indicator of ground cover. The total canopy gaps between perennial species declined 3.4 percent from the values measured in 2018. The gaps in the canopies between perennial species became smaller in 2019. A 49 percent decline in the larger canopy gaps, those greater than 50 centimeters, occurred in 2019. The decline in larger canopy gaps between perennial species that occurred in 2019 is an indicator of improved ground cover.

The specific vegetation sampling data collected from the four rolling loam rangeland sites are presented in Appendix A. Data in the appendix include (1) vegetation cover, ground cover, species composition, and forb and shrub densities; (2) listing of plant species encountered; (3) GPS coordinate data for the transect start and end points; (4) inter-canopy gaps and (5) photographs of each transect.

Monitoring Results and Evaluation of Criteria for Sites in Final Reclamation Status

Vegetation cover, species composition, species density and ground cover data were collected from the disturbed areas of nine sites all in final reclamation status. The disturbed sites included 3 plugged and abandoned production well pad sites (5H-1V, 93-2M, and 93-4H) and 6 exploration corehole pad sites (pads E, H, N, P, Q and R). Well pad locations are noted on the attached location map.

Vegetation sampling data collected for the nine reclaimed sites are presented in the Appendix B through Appendix J.

- Appendix B reclaimed production well pad 5H-1V.
- Appendix C reclaimed production well pad 93-2M.
- Appendix D reclaimed production well pad 93-4H.
- Appendix E reclaimed exploration corehole pad E.
- Appendix F reclaimed exploration corehole pad H.
- Appendix G reclaimed exploration corehole pad N.
- Appendix H reclaimed exploration corehole pad P.
- Appendix I reclaimed exploration corehole pad Q.
- Appendix J reclaimed exploration corehole pad R.

Vegetation sampling data in the appendixes include (1) vegetation cover, ground cover, species composition, and forb and shrub densities; (2) listing of plant species encountered; (3) GPS coordinate data for the transect start and end points; (4) inter-canopy gaps; (5) photographs of each transect and access route photo-points and (6) plot diagram of transect layouts and photopoint locations.

Well Pad 5H-1V

This well pad was within the 8th growing season since being reclaimed when data was collected on August 21, 2019. Three 25 meter transects were placed in a spoke pattern on the pad with 50 sample points on each transect for a total of 150 points for cover data. Ten one-meter square density quadrants were placed along each transect for a total of 30 quadrants. Data collected from this site include vegetative foliar and basal cover, species composition, forb and shrub densities and ground cover all summarized by plant group. In addition, ground cover data was collected for dead vegetative litter, bare ground and surface rock. Table 3 compares the data collected in 2018 and in 2019 for this site.

The 2019 data in the Table 3 is summarized from data presented in Appendix Table B1. Each plant species encountered at this site is listed in Table B1. As shown in Table B1 there is a good establishment of the perennial grasses with uniform distribution across much of the site.

The foliar cover of desirable species increased 35 percent from 2018 values. Perennial grass cover increased 28 percent and cover of desirable forbs increased 71 percent. Shrub cover more than doubled but only contributed 4.5 percent of the total cover of desirable species.

Table 3 - Reclaimed Pad 5H-1V Vegetation Cover, Species Composition, Species Density & Ground Cover													
	Vegeta	tion (Cover, S	-		•	· •		ensity & cept Dat		l Cover	Density	Data ²
		·	Num	ber of	1	6 Fol	-	•	asal		cies	Forb/S	
				cies		Cove			ver	-	osition	Density	
Plant G	Froup		2018	2019	201	18	2019	2018	2019	2018	2019	2018	2019
Perennial Grass	ses		8	10	52	2.0	66.8	7.5	13.9	85.6	80.0	n/a	n/a
Invasive Non-N	Vative												
Grasses			1	1	2	2.5	0.0	0.0	0.0	5.6	0.8	n/a	n./a
Perennial Forbs	8		10	10	3	3.5	6.0	0.5	0.7	6.4	13.8	2.93	5.28
Invasive and N	on-Native	e											
Forbs			3	2	C).5	0.0	0.0	0.0	0.8	0.7	n/a	n/a
Shrubs			5	5	1	.0	3.4	0.0	0.7	1.6	4.7	0.93	0.60
Vegetation To	tals		27	28	59	9.5	76.2	8.0	15.3	100.0	100.0	3.86	6.30
			Line-l	Point Ir	terce	ept So	oil Surt	face Co	ver Data	3			
Percent	Bare G	round	Bio	tic Cru			aceous tter					Rock	
Cover by	2019	201	8 201	19	2018	2019	2018	8 201	9 201	8 2019	2018	2019	
Туре	25.0	12.7	7 0.	0 0	0.0	41.0	56.0) 4.	.5 2	.7 0	.0 0.0) 12.0	2.0
¹ Sum of data from 3 randomly placed 25 meter transects with 50 sample points collected from each transect. Foliar cover based upon 1 st plant species encountered in the canopy at each sample point. Species composition based upon total of all plant species encountered at each sample point.													

² Sum of density data collected from ten 1-meter square quadrants along each transect. Only desirable forb and shrub densities were recorded based upon reclamation criteria.

³ Percentages are not cumulative with vegetation totals, rather a measure by layer of ground cover from the top layer thru the lower layers to the soil surface. Values for bare ground have no vegetative, litter or rock cover above the soil surface.

The increases in foliar cover and herbaceous litter cover that occurred in 2019 resulted in a 49 percent decrease in bare ground from that measured in 2018. The total canopy gaps between perennial species declined 55 percent from the values measured in 2018. The gaps in the canopies between perennial species became smaller in 2019. An 82 percent decline in the larger canopy gaps, those greater than 50 centimeters, occurred in 2019. The decline in larger canopy gaps between perennial species that occurred in 2019 is an indicator of improved ground cover.

In 2019, the densities of desirable forbs increased 80 percent and shrub densities declined 35 percent. Only the forb density measured in 2019 meet the criteria value for successful reclamation.

Table 4 is a comparison of the data collected for reclaimed well pad 5H-1V with that of the rolling loam rangeland reference areas. Only the data required to access the success of achieving successful reclamation is used in Table 4.

Table 4 – Comparison of Reclamation Criteria Elements with Native Rangeland Reference Areas													
Site	# desired plant species	% desired foliar cover	%bare ground	shrub density (#/m ²)	forb density (#/m ²)								
Reclaimed Pad 5H-1V	25 species	76.2	12.7	0.60	5.28								
Reference Area ¹	23 species	62.5	26.5	1.75	6.13								
¹ The average of four na reclamation criteria.	tive rangelands ref	erence areas wer	e used as the ba	se for evaluating su	uccess of the								

Evaluation of successful reclamation of the disturbance on Well Pad 5H-1V:

- There are 25 desirable plant species established on the site (10 perennial grasses, 10 desirable forbs, and 5 shrubs) meeting the requirement of at least five plant species.
- Slender wheatgrass (*Elymus trachycaulus*) was the desired species with the greatest relative cover at 25.3 percent meeting the requirement that no one species can exceed 70 percent relative cover.
- The foliar cover of desirable species on the site was 22 percent greater than that on the native rangeland reference area meeting the requirement of 80 percent similarity.
- The amount of unprotected bare ground on the site was 52 percent less than on the native rangeland reference area which equates to 152 percent similarity, exceeding the required 80 percent similarity.
- The density of forbs and shrubs on the site in comparison with the native rangeland reference area was 86 percent and 35 percent, respectively. Desirable forb densities have met the requirement of 80 percent similarity.

The plant community established on this site has a good representation of the perennial species used in the seed mix. The perennial grasses are well established providing a resilient plant community that has been difficult for desirable forbs and shrubs to compete and increase in cover and density. The favorable climatic conditions which occurred in 2019 has improved the densities of perennial forbs enough to meet the required criteria. This site has a very productive plant community with good distribution of perennial species across the site which has adequately stabilized the site. The plant community does meet the criteria for species diversity, desired foliar cover, desirable forb density and bare ground for successful reclamation of the disturbance at this site.

Well Pad 93-2M

This site was within the 9th growing season since being reclaimed when data was collected on August 19, 2019. Three 25 meter transects were placed in a spoke pattern on the pad with 50 sample points on each transect for a total of 150 points for cover data. Ten one-meter square density quadrants were placed along each transect for a total of 30 quadrants. Data collected from this site include vegetative foliar and basal cover, species composition, forb and shrub densities and ground cover all summarized by plant group. In addition, ground cover data was collected for dead vegetative litter, bare ground and surface rock. Table 5 compares the data collected in 2018 and in 2019 for this site.

The 2019 data in the Table 5 is summarized from data presented in Appendix Table C1. Each plant species encountered at this site is listed in Table C1. As shown in Table C1 there is a good representation of the seeded species established on the site.

Table 5 - Reclaimed Pad 93-2M Vegetation Cover, Species Composition, Species Density & Ground Cover																
Line-Point Canopy Intercept Data ¹												Density Data ²				
			Numl Spe	per of cies		% Fo Cov		% Basal Cover			Species Composition			Forb/Shrub Density (#/m ²)		
Plant (Froup		2018	2019	20	018	2019	2018	2019	20	18	2019	20	18	2019	
Perennial Grass	ses		6	7	4	4.7	54.1	5.3	8.1	6	6.4	55.7		n/a	n/a	
Invasive Non-N	Native															
Grasses			1	1	1	0.7	5.3	0.0	0.0	1	8.1	10.1		n/a	n/a	
Desirable Forb	s		8	5		0.0	16.0	0.0	0.0		0.0	22.1		1.03	0.93	
Invasive and N	on-Native	9														
Forbs			4	3		4.0	3.4	0.0	0.0		6.0	7.0		n/a	n/a	
Shrubs			5	5		7.3	5.3	0.0	0.7		9.5	5.1		1.60	0.67	
Vegetation To	tals		24	21	6	66.7	84.1	5.3	8.8	10	0.0	100.0		2.63	1.60	
			Line-	Point I	nter	cept S	Soil Sur	face Co	ver Dat	a ³						
Percent	Bare G	round					baceous .itter			er				Rock		
Cover by	2018	2019	201	8 20	19	2018	8 2019	201	8 201	19	201	8 20	19 2	018	2019	
Туре	9.3	0.	0 (0.0	64.7	7 67.3	3 2.	.7	1.3	().0 ().0	0.0	0.0		
¹ Sum of data f	rom 3 ran	domly	placed	25 me	ter tı	ransec	ts with :	50 samp	le points	s coll	lecte	d from e	each tr	ansec	t	
Foliar cover based upon 1 st plant species encountered in the canopy at each sample point. Species composition based upon total of all plant species encountered at each sample point.																
	 ² Sum of density data collected from ten 1-meter square quadrants along each transect. Only desirable forb and shrub densities were recorded based upon reclamation criteria. 															

³ Percentages are not cumulative with vegetation totals, rather a measure by layer of ground cover from the top layer thru the lower layers to the soil surface. Values for bare ground have no vegetative, litter or rock cover above the soil surface.

There were several positive improvements on this site in 2019. The foliar cover of desirable species increased 45 percent from 2018 values. Perennial grass cover increased 47 percent. The cover of desirable forbs was non-existent in 2018 and increased to 16 percent of the desired foliar cover in 2019. Shrub cover declined 38 percent contributing only 9 percent of the total cover of desirable species. The cover of invasive and non-native species declined 41 percent from values measured in 2018. The amount of bare ground decreased 54 percent and the vegetative litter on the site increased 4 percent.

Table 6 is a comparison of the data collected for reclaimed well pads 93-2M with that from the rolling loam rangeland reference area. Only the data required to access the success of achieving successful reclamation is used.

Table 6 – Comparison of Reclamation Criteria Elements with Native Rangeland Reference Areas													
Site	# desired plant species	% desired foliar cover	% bare ground	shrub density (#/m ²)	forb density (#/m ²)								
Reclaimed Pad 93-2M	17 species	75.4	9.3	0.67	1.60								
Reference Area ¹	23 species	62.5	26.5	1.75	6.13								
¹ The average of four native rangelands reference areas were used as the base for evaluating success of the reclamation criteria.													

Evaluation of successful reclamation of the disturbance on Well Pads sites 93-2M:

- There are 17 desirable plant species established on the site (7 perennial grasses, 5 desirable forbs, and 5 shrubs) meeting the requirement of at least five plant species.
- Slender Wheatgrass (*Elymus trachycaulus*) was the desired species with the greatest relative cover at 24.7 percent meeting the requirement that no one species can exceed 70 percent relative cover.
- The foliar cover of desirable species on the site was 21 percent greater than that on the native rangeland reference areas meeting the requirement of 80 percent similarity.
- The amount of unprotected bare ground on the site was 65 percent less than on the native rangeland reference areas which equates to 165 percent similarity, meeting the required 80 percent similarity.
- The density of forbs and shrubs on the site in comparison with the native rangeland reference areas was 17 percent and 38 percent, respectively. The criteria only require either forb density or shrub density meet the requirement of 80 percent similarity which neither have met the required criteria.

The plant community established on this site has a good representation of the perennial species used in the seed mix. The perennial grasses are well established providing a resilient plant community that is difficult for desirable forbs and shrubs to compete and increase in cover and density. The densities of perennial forbs and shrubs continue to show improvement but remain well below the values necessary for attainment of the required criteria. It is going to take several more years with favorable climatic conditions for forb and shrub densities to reach the current criteria standards. The plant community only meets the species diversity, desired foliar cover and bare ground criteria established for successful reclamation of the disturbance at this site.

Well Pad 93-4H

This site was within the 12th growing season since being reclaimed when data was collected on August 20, 2019. Three 25 meter transects were placed in a spoke pattern on the pad with 50 sample points on each transect for a total of 150 points for cover data. Ten one-meter square density quadrants were placed along each transect for a total of 30 quadrants. Data collected from this site include vegetative foliar and basal cover, species composition, forb and shrub densities and ground cover all summarized by plant group. In addition, ground cover data was collected for dead vegetative litter, bare ground and surface rock. Table 7 compares the data collected in 2018 and in 2019 for this site.

The 2019 data in the Table 7 is summarized from data presented in Appendix Table D1. Each plant species encountered at this site is listed in Table D1. As shown in Table D1 there is a good representation of the seeded species established on the site.

	Table 7 - Reclaimed Pad 93-4H Vegetation Cover, Species Composition, Species Density & Ground Cover													
	Veget	ation (Cover,	^			<u> </u>		•		nd C	over	Density	Data ²
						Sp	Species Composition		Forb/Shrub Density (#/m ²					
Plant G	Froup		2018	2019	2018	201)	2018	2019	2018	20)19	2018	2019
Perennial Grass	ses		7	9	14.0	38.	6	1.4	8.1	29.7	4	4.5	n/a	n/a
Invasive Non-N	Vative													
Grasses			1	1	13.3	10.	7	0.0	0.0	25.3	1	8.2	n/a	n/a
Desirable Forb	8		7	7	7.3	18.	8	2.0	2.0	13.2	2	7.1	3.60	5.93
Invasive and N	nvasive and Non-Native													
Forbs			7	4	8.1	2.	6	0.0	0.0	18.6		6.6	n/a	n/a
Shrubs			4	6	7.3	3.	4	0.0	0.0	13.2		3.6	0.50	0.37
Vegetation To	tals		22	27	50.0	74.	1	3.4	10.1	100.0	10	0.0	4.10	6.30
			Line-	Point I	ntercep	t Soil (Surf	face Co	over Dat	a ³				
Percent	Bare G	round	Bio	tic Crus		erbace Litter		Woo	ody Litte	er	Duff		R	ock
Cover by	2018	2019	2018	8 201	9 20	18 20)19	2018	3 201	.9 20	18	2019	2018	2019
Туре	26.7	15.3	0.	0 0	.0 46	46.0 47.3 8.		7 7	'.3 (0.0	0.0	4.0	1.3	
¹ Sum of data from 3 randomly placed 25 meter transects with 50 sample points collected from each transect. Foliar cover based upon 1 st plant species encountered in the canopy at each sample point. Species composition														

based upon total of all plant species encountered at each sample point.

² Sum of density data collected from ten 1-meter square quadrants along each transect. Only desirable forb and shrub densities were recorded based upon reclamation criteria.

³ Percentages are not cumulative with vegetation totals, rather a measure by layer of ground cover from the top layer thru the lower layers to the soil surface. Values for bare ground have no vegetative, litter or rock cover above the soil surface.

The foliar cover of desirable species more than doubled (113%) from 2018 values and was 97 percent of that on the native rangeland reference areas, above the required 80 percent. Significant increases in perennial grass cover (175%) and in desirable forbs cover (158%) occurred in 2019. Shrub cover declined 53 percent. The amount of bare ground decreased 43 percent and the vegetative litter on the site increased 3 percent. The densities of desirable forbs increased 65 percent. Shrub densities declined 26 percent. Desirable forb densities are enough to meet the criteria value for successful reclamation.

The densities of invasive and non-native species declined 38 percent, most of which was a 68 percent decline in non-native forb species.

Table 8 is a comparison of the data collected for reclaimed well pads 93-4H with that from the rolling loam rangeland reference area. Only the data required to access the success of achieving successful reclamation is used in Table 8.

Table 8 – Comparison of Reclamation Criteria Elements with Native Rangeland Reference Areas										
Site	# desired plant species	% desired foliar cover	% bare ground	shrub density (#/m ²)	forb density (#/m ²)					
Reclaimed Pad 93-4H	22 species	60.8	15.3	0.37	5.93					
Reference Area ¹	23 species	62.5	26.5	1.75	6.13					
¹ The average of four native rangelands reference areas were used as the base for evaluating success of the reclamation criteria.										

Evaluation of successful reclamation of the disturbance on Well Pad site 93-4H

- There are 22 desirable plant species established on the site (9 perennial grasses, 7 desirable forbs, and 6 shrubs) meeting the requirement of at least five plant species.
- Alfalfa (*Medicago sativa*) was the desired species with the greatest relative cover at 16.7 percent meeting the requirement that no one species can exceed 70 percent relative cover.
- The foliar cover of desirable species on the site was 97 percent of that on the native rangeland reference areas meeting the requirement of 80 percent similarity.
- The amount of unprotected bare ground on the site was 42 percent less than on the native rangeland reference areas which equates to 142 percent similarity, meeting the required 80 percent similarity.
- The density of forbs and shrubs on the site in comparison with the native rangeland reference areas was 97 percent and 21 percent, respectively. The criteria only require either forb density or shrub density meet the requirement of 80 percent similarity. The density of desirable forbs exceeds the required criteria.

The plant community established on this site has a good representation of the perennial species used in the seed mix. The favorable climatic conditions which occurred in 2019 has improved the densities of perennial forbs enough to meet the required criteria. This site has a very productive plant community with good distribution of perennial species across the site which has adequately stabilized the site. The plant community does meet the criteria of species diversity, desired foliar cover, desirable forb density and bare ground for successful reclamation of the disturbance at this site.

Exploration Corehole Pad E

This site was one of several 2014 exploration corehole sites reclaimed in the fall of 2014. The final reclamation of this site includes approximately 0.73 acres at the pad site and approximately 960 feet of access road.

Vegetation sampling data was collected on August 15, 2019. Three 25 meter transects were randomly placed on the pad with 50 sample points on each transect for a total of 150 points for cover data. Ten one-meter square density quadrants were placed along each transect for a total of 30 quadrants. Data collected from this site include vegetative foliar and basal cover, species composition, forb and shrub densities and ground cover all summarized by plant group. In addition, ground cover data was collected for dead vegetative litter, bare ground and surface rock.

The 2019 data in the Table 9 is summarized from data presented in Appendix Table E1. Each plant species encountered at this site is listed in Table E1. As shown in Table E1 there is a good representation of the seeded species established on the site.

A visual inspection of the reclaimed access route to the pad site was also conducted with photographs taken at points which represent the plant community established on the route. The

same seed mix used on the pad was also used on the access route. All the plant species encountered on the pad site were also present on the access route.

Table 9 - Reclaimed Exploration Corehole Pad EVegetation Cover, Species Composition, Species Density & Ground Cover										
		Lin	e-Point Can	opy Inte	ercep	t Data ¹		Density Data ²		
		Number						De	esirable	
		of	% Foliar	% Bas		Species			nrub Density	
	Group	Species	Cover	Cove	r	Compositi	on	((#/m ²)	
Perennial Grasses 9 45.0 3.3 58.4 n/a								n/a		
Invasive Non-N	lative Grasses	1	3.0		0.0		4.9		n/a	
Desirable Forbs 8 11.7 2.0 20.8 15.71										
Invasive and Non-Native Forbs 4 7.0 0.0 10.0 n/a										
Shrubs 4 6.0 0.0 5.9 0.97										
Vegetation Tot	tals	26	72.7		5.3	10	0.0		16.68	
	L	ine-Point Inte	ercept Soil S	urface (Cove	r Data ³				
Percent			Herba	ceous						
Cover by	Bare Ground	Biotic Crus	st Litt	er	Wo	ody Litter]	Duff	Rock	
Туре	23.3	0	0.0	54.0		1.3		0.0	1.3	
	com 3 randomly pl									
Foliar cover based upon 1 st plant species encountered in the canopy at each sample point. Species composition										
based upon total of all plant species encountered at each sample point.										
² Sum of density data collected from ten 1-meter square quadrants along each transect. Only desirable forb and										
shrub densities were recorded based upon reclamation criteria.										
-	re not cumulative	-							-	
	ower layers to the s	soil surface. V	alues for bar	e ground	l hav	e no vegetati	ve, l	itter or ro	ck cover	
above the soil s	urface.									

The foliar cover of desirable species on the site was slightly greater than that measured on the reference areas. The cover of perennial grasses was 6 percent greater; the cover of desirable forbs was 46 percent greater and shrub cover was 50 percent less than that on the reference areas. The species composition of desirable species was 4 percent greater than that on the reference areas. The composition of perennial grasses was 4 percent lower, desirable forbs was 7 percent greater and shrubs was 65 percent lower.

The density of desirable forbs on the site was 156 percent greater than that on reference areas. Two seeded forbs, Lewis flax (*Linum lewisii*) and alfalfa (*Medicago sativa*) in equal densities, accounted for 94 percent of the desirable forb density (Appendix Table E1).

The amount of bare ground on the reference areas was 12 percent greater than that measured on this site. The amount of herbaceous litter was 33 percent greater than that on the reference areas. The canopy gaps between perennial species measured on the site were 3 percent greater than that measured on the reference areas.

Both the pad site and the access route to the pad have productive established plant communities which have good representation of the perennial species used in the seed mix with good distribution of those species across both. The cover and composition of the of the species on the route appeared comparable to that on the pad site. The plant communities have adequately stabilized both.

Table 10 is a comparison of the data collected for exploration corehole pad E with that from the rolling loam rangeland reference area. Only the data required to access the success of achieving successful reclamation is used in Table 10.

Table 10 – Comparison of Reclamation Criteria Elements with Native Rangeland Reference Areas											
Site	# desired plant species										
Corehole Pad E	21 species	62.7	23.3	0.97	15.71						
Reference Area ¹ 23 species 62.5 26.5 1.75 6.13											
¹ The average of four native rangelands reference areas were used as the base for evaluating success of the											

reclamation criteria.

Evaluation of successful reclamation of the disturbance on Exploration Corehole Pad E

- There are 21 desirable plant species established on the site (9 perennial grasses, 8 desirable forbs, and 4 shrubs) meeting the requirement of at least five plant species.
- Western Wheatgrass (*Pascopyrum smithii*) was the desired species with the greatest relative cover at 22.0 percent meeting the requirement that no one species can exceed 70 percent relative cover.
- The foliar cover of desirable species on the site was slightly above that on the native rangeland reference areas meeting the requirement of 80 percent similarity.
- The amount of unprotected bare ground on the site was 12 percent less than on the native rangeland reference areas which equates to 112 percent similarity, meeting the required 80 percent similarity.
- The density of forbs and shrubs on the site in comparison with the native rangeland reference areas was 156 percent and 43 percent, respectively. The criteria only require either forb density or shrub density meet the requirement of 80 percent similarity. The density of desirable forbs exceeds the required criteria.

The plant community does meet the criteria of species diversity, desired foliar cover, desirable forb density and bare ground for successful reclamation of the disturbance at the site.

Exploration Corehole Pad H

This site was one of several 2014 exploration corehole sites reclaimed in the fall of 2014. The final reclamation of this site includes approximately 0.66 acres at the pad site and approximately 585 feet of access road.

Vegetation sampling data was collected on August 20, 2019. Three 25 meter transects were randomly placed on the pad with 50 sample points on each transect for a total of 150 points for cover data. Ten one-meter square density quadrants were placed along each transect for a total of 30 quadrants. Data collected from this site include vegetative foliar and basal cover, species composition, forb and shrub densities and ground cover all summarized by plant group. In addition, ground cover data was collected for dead vegetative litter, bare ground and surface rock.

The 2019 data in the Table 11 is summarized from data presented in Appendix Table F1. Each plant species encountered at this site is listed in Table F1. As shown in Table F1 there is a good representation of the seeded species established on the site.

A visual inspection of the reclaimed access route to the pad site was also conducted with photographs taken at points which represent the plant community established on the route. The same seed mix used on the pad was also used on the access route. All the plant species encountered on the pad site were also present on the access route.

Table 11 - Reclaimed Exploration Corehole Pad H Vegetation Cover, Species Composition, Species Density & Ground Cover										
			e-Point Can						sity Data ²	
		Number						De	esirable	
		of	% Foliar	% Ba	sal	Species		Forb/Sł	nrub Density	
Plant	Plant GroupSpeciesCoverCoverComposition(#/m²)									
Perennial Grasses 10 50.7 9.4 68.9 n/a										
Invasive Non-N	lative Grasses	1	0.0		0.0		0.0		n/a	
Desirable Forbs	Desirable Forbs 12 10.7 1.3 19.7 5.0									
Invasive and No	asive and Non-Native Forbs 1 0.0 0.0 0.0 n/a									
Shrubs		4 8.6 0.0 11.4 0.7						0.7		
Vegetation Tot	tals	28	70.0	1	10.7	10	0.0		5.7	
	Li	ine-Point Int	ercept Soil S	urface	Cove	r Data ³				
Percent			Herbao	ceous						
Cover by	Bare Ground	Biotic Crus	st Litt	er	Wo	ody Litter]	Duff	Rock	
Туре	14.0	0	0.0	40.7		18.0		0.0	7.3	
¹ Sum of data from 3 randomly placed 25 meter transects with 50 sample points collected from each transect. Foliar cover based upon 1 st plant species encountered in the canopy at each sample point. Species composition										
based upon total of all plant species encountered at each sample point.										
² Sum of density data collected from ten 1-meter square quadrants along each transect. Only desirable forb and shrub densities were recorded based upon reclamation criteria.										
³ Percentages are not cumulative with vegetation totals, rather a measure by layer of ground cover from the top layer thru the lower layers to the soil surface. Values for bare ground have no vegetative, litter or rock cover										

The foliar cover of desirable species on the site was 12 percent greater than that measured on the reference areas. The cover of perennial grasses was 19 percent greater; the cover of desirable forbs was 34 percent greater and shrub cover was 28 percent less than that on the reference areas. The species composition of desirable species was 3 percent greater than that on the reference areas. The composition of perennial grasses was 13 percent greater, desirable forbs was 1 percent greater and shrubs was 32 percent less than that on the reference areas. The composition of perennial grasses was 13 percent greater, desirable forbs was 1 percent greater and shrubs was 32 percent lower.

above the soil surface.

The amount of bare ground on the reference areas was 47 percent greater than that measured on this site. The amount of herbaceous litter was slightly greater than that on the reference areas. The canopy gaps between perennial species measured on the reference areas were 20 percent greater than that measured on this site.

Both the pad site and the access route to the pad have productive established plant communities which have good representation of the perennial species used in the seed mix with good distribution of those species across both. The cover and composition of the of the species on the

route appeared comparable to that on the pad site. The plant communities have adequately stabilized both.

Table 12 is a comparison of the data collected for exploration corehole pad H with that from the rolling loam rangeland reference area. Only the data required to access the success of achieving successful reclamation is used in Table 12.

Table 12 – Comparison of Reclamation Criteria Elements with Native Rangeland Reference Areas										
Site	# desired plant species	% desired foliar cover	% bare ground	shrub density (#/m ²)	forb density (#/m ²)					
Corehole Pad H	26 species	70.0	14.0	0.69	5.00					
Reference Area ¹	23 species	62.5	26.5	1.75	6.13					
¹ The average of four native rangelands reference areas were used as the base for evaluating success of the reclamation criteria.										

Evaluation of successful reclamation of the disturbance on Exploration Corehole Pad H

- There are 26 desirable plant species established on the site (10 perennial grasses, 12 desirable forbs, and 4 shrubs) meeting the requirement of at least five plant species.
- Green Needlegrass (*Nassella viridula*) was the desired species with the greatest relative cover at 20.0 percent meeting the requirement that no one species can exceed 70 percent relative cover.
- The foliar cover of desirable species on the site was 12 greater that on the native rangeland reference areas which equates to 112 percent similarity, meeting the requirement of 80 percent similarity.
- The amount of unprotected bare ground on the site was 47 percent less than on the native rangeland reference areas which equates to 147 percent similarity, meeting the required 80 percent similarity.
- The density of forbs and shrubs on the site in comparison with the native rangeland reference areas was 82 percent and 41 percent, respectively. The criteria only require either forb density or shrub density meet the requirement of 80 percent similarity. The density of desirable forbs exceeds the required criteria.

The plant community does meet the criteria of species diversity, desired foliar cover, desirable forb density and bare ground for successful reclamation of the disturbance at the site.

Exploration Corehole Pad N

This site was one of several 2014 exploration corehole sites reclaimed in the fall of 2014. The final reclamation of this site includes approximately 0.73 acres at the pad site and approximately 960 feet of access road.

Vegetation sampling data was collected on August 19, 2019. Three 25 meter transects were randomly placed on the pad with 50 sample points on each transect for a total of 150 points for cover data. Ten one-meter square density quadrants were placed along each transect for a total of

30 quadrants. Data collected from this site include vegetative foliar and basal cover, species composition, forb and shrub densities and ground cover all summarized by plant group. In addition, ground cover data was collected for dead vegetative litter, bare ground and surface rock.

The 2019 data in the Table 13 is summarized from data presented in Appendix Table G1. Each plant species encountered at this site is listed in Table G1. As shown in Table G1 there is a good representation of the seeded species established on the site.

A visual inspection of the reclaimed access route to the pad site was also conducted with photographs taken at points which represent the plant community established on the route. The same seed mix used on the pad was also used on the access route. All the plant species encountered on the pad site were also present on the access route.

Table 13 - Reclaimed Exploration Corehole Pad N Vegetation Cover, Species Composition, Species Density & Ground Cover												
			e-Point Can				sity Data ²					
		Number				D	esirable					
		of	% Foliar	% Basal	Species	Forb/S	hrub Density					
Plant	Group	Species	Cover	Cover	Compositi	on	$(\#/m^2)$					
Perennial Grass	ses	12	46.7	6.7	5	7.0	n/a					
Invasive Non-N	Vative Grasses	1	1.3	0.0		2.9	n/a					
Desirable Forbs	Desirable Forbs 7 15.3 2.7 29.9 11.93											
Invasive and N	Invasive and Non-Native Forbs 2 2.0 0.0 4.4 n/a											
Shrubs	6 4.1 0.7 5.8 0.70											
Vegetation To	tals	28	69.4	10.1	10	0.0	12.63					
	Li	ine-Point Inte	ercept Soil S	urface Cov	er Data ³							
Percent			Herbao	ceous								
Cover by	Bare Ground	Biotic Crus	st Litt	er W	oody Litter	Duff	Rock					
Туре	14.4	0	.0	42.7	15.3	0.0	7.3					
	rom 3 randomly pl											
Foliar cover based upon 1 st plant species encountered in the canopy at each sample point. Species composition												
based upon total of all plant species encountered at each sample point.												
² Sum of density data collected from ten 1-meter square quadrants along each transect. Only desirable forb and												
	-		shrub densities were recorded based upon reclamation criteria. ³ Percentages are not cumulative with vegetation totals, rather a measure by layer of ground cover from the top									
		•										
³ Percentages an		with vegetatio	n totals, rath	er a measur			-					

above the soil surface.

The foliar cover of desirable species on the site was 6 percent greater than that measured on the reference areas. The cover of perennial grasses was 10 percent less; the cover of desirable forbs was 91 percent greater and shrub cover was 66 percent less than that on the reference areas. The species composition of desirable species was 5 percent less than that on the reference areas. The composition of perennial grasses was 7 percent less, desirable forbs was 54 percent greater and shrubs was 65 percent lower.

The amount of bare ground on the reference areas was 45 percent greater than that measured on this site. The amount of herbaceous litter was 5 percent greater than that on the reference areas. The canopy gaps between perennial species measured on the reference areas were 19 percent greater than that measured on this site.

Both the pad site and the access route to the pad have productive established plant communities which have good representation of the perennial species used in the seed mix with good distribution of those species across both. The cover and composition of the of the species on the route appeared comparable to that on the pad site. The plant communities have adequately stabilized both.

Table 14 is a comparison of the data collected for exploration corehole pad N with that from the rolling loam rangeland reference area. Only the data required to access the success of achieving successful reclamation is used in Table 14.

Table 14 – Comparison of Reclamation Criteria Elements with Native Rangeland Reference Areas										
Site	# desired plant species	% desired foliar cover	% bare ground	shrub density (#/m ²)	forb density (#/m ²)					
Corehole Pad N	25 species	66.1	14.4	0.7	11.93					
Reference Area ¹	23 species	62.5	26.5	1.75	6.13					
¹ The average of four r reclamation criteria.	native rangelands refe	erence areas wer	e used as the ba	use for evaluating si	iccess of the					

Evaluation of successful reclamation of the disturbance on Exploration Corehole Pad N

- There are 25 desirable plant species established on the site (12 perennial grasses, 7 desirable forbs, and 6 shrubs) meeting the requirement of at least five plant species.
- Indian ricegrass (*Achnatherum hymenoides*) was the desired species with the greatest relative cover at 14.7 percent meeting the requirement that no one species can exceed 70 percent relative cover.
- The foliar cover of desirable species on the site was 6 greater than that on the native rangeland reference areas which equates to 106 percent similarity, meeting the requirement of 80 percent similarity.
- The amount of unprotected bare ground on the site was 45 percent less than on the native rangeland reference areas which equates to 145 percent similarity, meeting the required 80 percent similarity.
- The density of forbs on the site was 95 percent greater than that on native rangeland reference areas which equates to 195 percent similarity, meeting the requirement of 80 percent similarity. The shrub density was only 60 percent of that on native rangeland reference areas not meeting the required 80 percent. The criteria only require either forb density or shrub density meet the requirement of 80 percent similarity with the native rangeland reference areas in which the density of desirable forbs exceeds the required criteria.

The plant community does meet the criteria of species diversity, desired foliar cover, desirable forb density and bare ground for successful reclamation of the disturbance at the site.

Exploration Corehole Pad P

This site was one of several 2014 exploration corehole sites reclaimed in the fall of 2014. The final reclamation of this site includes approximately 0.59 acres at the pad site and approximately 450 feet of access road to the pad site and about 3050 feet of access route from Pad P to Pad Q.

Vegetation sampling data was collected on August 22, 2019. Three 25 meter transects were randomly placed on the pad with 50 sample points on each transect for a total of 150 points for cover data. Ten one-meter square density quadrants were placed along each transect for a total of 30 quadrants. Data collected from this site include vegetative foliar and basal cover, species composition, forb and shrub densities and ground cover all summarized by plant group. In addition, ground cover data was collected for dead vegetative litter, bare ground and surface rock.

The 2019 data in the Table 15 is summarized from data presented in Appendix Table H1. Each plant species encountered at this site is listed in Table H1. As shown in Table H1 there is a good representation of the seeded species established on the site.

A visual inspection of the reclaimed access route to the pad site was also conducted with photographs taken at points which represent the plant community established on the route. The same seed mix used on the pad was also used on the access route. All the plant species encountered on the pad site were also present on the access route.

Table 15 - Reclaimed Exploration Corehole Pad PVegetation Cover, Species Composition, Species Density & Ground Cover									
			e-Point Can						sity Data ²
Plant	Group	Number of Species	% Foliar Cover	% Ba Cov		Species Compositi		Forb/Sl	esirable nrub Density (#/m ²)
Perennial Grasses 11 60.1 9.4 83.5 n/a									
Invasive Non-N	Vative Grasses	1	0.0		0.0		0.0		n/a
Desirable Forbs 8 2.7 0.0 6.6 4.30									
									n/a
Shrubs 7 4.7 0.0 9.1 1.47									
Vegetation To	tals	28	68.2		9.4	10	0.0		5.77
	L	ine-Point Inte	ercept Soil S	urface	Cove	er Data ³			
Percent Cover by	Bare Ground	Biotic Crus	Herbao st Litt		Wo	ody Litter		Duff	Rock
Туре	18.7	0	0.0	50.0		2.7		0.0	4.0
Type18.70.050.02.70.04.01 Sum of data from 3 randomly placed 25 meter transects with 50 sample points collected from each transect.Foliar cover based upon 1st plant species encountered in the canopy at each sample point. Species compositionbased upon total of all plant species encountered at each sample point.2 Sum of density data collected from ten 1-meter square quadrants along each transect. Only desirable forb andshrub densities were recorded based upon reclamation criteria.3 Percentages are not cumulative with vegetation totals, rather a measure by layer of ground cover from the toplayer thru the lower layers to the soil surface. Values for bare ground have no vegetative, litter or rock coverabove the soil surface.									

The foliar cover of desirable species on the site was 8 percent greater than that measured on the reference areas. The cover of perennial grasses was 41 percent greater; the cover of desirable forbs was 66 percent less and shrub cover was 61 percent less than that on the reference areas. The species

composition of desirable species was 2 percent greater than that on the reference areas. The composition of perennial grasses was 37 percent greater, desirable forbs was 66 percent lower and shrubs was 46 percent lower.

The amount of bare ground on the reference areas was 29 percent greater than that measured on this site. The amount of herbaceous litter was 23 percent greater than that on the reference areas. The canopy gaps between perennial species measured on this site were 18 greater than that measured on the reference areas.

Both the pad site and the access route to the pad as well as the access route from pad P to pad Q have productive established plant communities which have good representation of the perennial species used in the seed mix with good distribution of those species across both. The cover and composition of the of the species on the route appeared comparable to that on the pad site. The plant communities have adequately stabilized both.

Table 16 is a comparison of the data collected for exploration corehole pad P with that from the rolling loam rangeland reference area. Only the data required to access the success of achieving successful reclamation is used in Table 16.

Table 16 – Comparison of Reclamation Criteria Elements with Native Rangeland Reference Areas										
Site	# desired plant species	% desired foliar cover	% bare ground	shrub density (#/m ²)	forb density (#/m ²)					
Corehole Pad P	26 species	67.5	18.7	1.47	4.30					
Reference Area ¹	23 species	62.5	26.5	1.75	6.13					
¹ The average of four na reclamation criteria.	tive rangelands refe	erence areas wer	e used as the ba	se for evaluating si	iccess of the					

Evaluation of successful reclamation of the disturbance on Exploration Corehole Pad P

- There are 26 desirable plant species established on the site (11 perennial grasses, 8 desirable forbs, and 6 shrubs) meeting the requirement of at least five plant species.
- Slender wheatgrass (*Elymus trachycaulus*) was the desired species with the greatest relative cover at 18.7 percent meeting the requirement that no one species can exceed 70 percent relative cover.
- The foliar cover of desirable species on the site was 8 greater than that on the native rangeland reference areas which equates to 108 percent similarity, meeting the requirement of 80 percent similarity.
- The amount of unprotected bare ground on the site was 29 percent less than on the native rangeland reference areas which equates to 129 percent similarity, meeting the required 80 percent similarity.
- The density of forbs on the site was 30 percent of that on native rangeland reference areas not meeting the requirement of 80 percent similarity. The shrub density was 84 percent of that on native rangeland reference areas meeting the required 80 percent similarity. The criteria only require either forb density or shrub density meet the requirement of 80

percent similarity with the native rangeland reference areas in which the density of shrubs meet the required criteria.

The plant community does meet the criteria of species diversity, desired foliar cover, shrub density and bare ground for successful reclamation of the disturbance at the site.

Exploration Corehole Pad Q

This site was one of several 2014 exploration corehole sites reclaimed in the fall of 2014. The final reclamation of this site includes approximately 0.68 acres at the pad site.

Vegetation sampling data was collected on August 26, 2019. Three 25 meter transects were randomly placed on the pad with 50 sample points on each transect for a total of 150 points for cover data. Ten one-meter square density quadrants were placed along each transect for a total of 30 quadrants. Data collected from this site include vegetative foliar and basal cover, species composition, forb and shrub densities and ground cover all summarized by plant group. In addition, ground cover data was collected for dead vegetative litter, bare ground and surface rock.

The 2019 data in the Table 17 is summarized from data presented in Appendix Table I1. Each plant species encountered at this site is listed in Table I1. As shown in Table I1 there is a good representation of the seeded species established on the site.

	Table 17 - Reclaimed Exploration Corehole Pad QVegetation Cover, Species Composition, Species Density & Ground Cover										
	vegetation Cov	· · ·	e-Point Can	-		•	na c	Density Data ²			
Plant	Group	Number of Species	% Foliar Cover	% Ba		Species Compositi		Forb/Sl	esirable nrub Density #/m ²)		
Perennial Grass	ses	11	39.4		4.9	4	8.0		n/a		
Invasive Non-N	lative Grasses	1	13.9		0.0	2	0.0	0 n/a			
Desirable Forbs	5	10	7.5		0.0	1	1.2	2 2.28			
Invasive and N	on-Native Forbs	5	6.1		0.0	1	4.4	4 n/a			
Shrubs		5	4.7		0.0		6.4		0.70		
Vegetation Tot	tals	32	71.6		4.9	10	0.0		2.98		
	Li	ne-Point Int	ercept Soil S	Surface	Cove	er Data ³					
Percent			Herba	ceous							
Cover by	Bare Ground	Biotic Crus	Crust Litter Woody Litter]	Duff	Rock				
Туре	24.0	1.0 0.0 30.0 0.0 0.0				1.3					
	¹ Sum of data from 3 randomly placed 25 meter transects with 50 sample points collected from each transect. Foliar cover based upon 1 st plant species encountered in the capopy at each sample point. Species composition										

Foliar cover based upon 1st plant species encountered in the canopy at each sample point. Species composition based upon total of all plant species encountered at each sample point.

² Sum of density data collected from ten 1-meter square quadrants along each transect. Only desirable forb and shrub densities were recorded based upon reclamation criteria.

³ Percentages are not cumulative with vegetation totals, rather a measure by layer of ground cover from the top layer thru the lower layers to the soil surface. Values for bare ground have no vegetative, litter or rock cover above the soil surface.

The foliar cover of desirable species on the site was 17 percent less than that measured on the reference areas. The cover of perennial grasses was 7 percent lower; the cover of desirable forbs was 6 percent lower and shrub cover was 61 percent less than that on the reference areas. The species composition of desirable species was 33 percent less than that on the reference areas. The composition of perennial grasses was 21 percent lower, desirable forbs was 42 percent lower and shrubs was 62 percent lower.

The amount of bare ground on this site was 9 percent greater than that measured on the reference areas. The amount of herbaceous litter was 26 percent less than that on the reference areas. The canopy gaps between perennial species measured on this site were 92 greater than that measured on the reference areas.

The pad site has a plant community which has good representation of the perennial species used in the seed mix with fair distribution of those species across the site. However, the invasive nonnative species make up 34 percent of the total species composition on the site. It appeared invasive species were not invading the site but rather declining in cover. The distribution of desirable species across the site has stabilized the site.

Table 18 is a comparison of the data collected for exploration corehole pad Q with that from the rolling loam rangeland reference area. Only the data required to access the success of achieving successful reclamation is used in Table 18.

Table 18 – Comparison of Reclamation Criteria Elements with Native Rangeland Reference Areas											
Site	# desired plant species										
Corehole Pad Q	26 species	51.6	24.0	0.7	2.28						
Reference Area ¹ 23 species 62.5 26.5 1.75 6.13											
¹ The average of four native rangelands reference areas were used as the base for evaluating success of the											

reclamation criteria.

Evaluation of successful reclamation of the disturbance on Exploration Corehole Pad Q

- There are 26 desirable plant species established on the site (11 perennial grasses, 10 desirable forbs, and 5 shrubs) meeting the requirement of at least five plant species.
- Needle & thread needlegrass (*Hesperostipa comata*) was the desired species with the greatest relative cover at 16.7 percent meeting the requirement that no one species can exceed 70 percent relative cover.
- The foliar cover of desirable species on the site was 83 percent of than that on the native rangeland reference areas meeting the requirement of 80 percent similarity.
- The amount of unprotected bare ground on the site was 9 percent less than on the native rangeland reference areas which equates to 109 percent similarity, not meeting the required 80 percent similarity.
- The density of forbs on the site was 37 percent of that on native rangeland reference areas not meeting the requirement of 80 percent similarity. The shrub density was 40 percent of that on native rangeland reference areas not meeting the required 80 percent similarity. The criteria only require either forb density or shrub density meet the requirement of 80

percent similarity with the native rangeland reference areas in which neither meet the required criteria.

The plant community meets only the species diversity and desired foliar cover criteria. It does not meet the shrub or desirable forb densities nor bare ground criteria. The site does not meet successful reclamation standards required for the site.

Exploration Corehole Pad R

This site was one of several 2014 exploration corehole sites reclaimed in the fall of 2014. The final reclamation of this site includes approximately 0.51 acres at the pad site and approximately 1550 feet of access road leading to and from the pad site.

Vegetation sampling data was collected on August 26, 2019. Three 25 meter transects were randomly placed on the pad with 50 sample points on each transect for a total of 150 points for cover data. Ten one-meter square density quadrants were placed along each transect for a total of 30 quadrants. Data collected from this site include vegetative foliar and basal cover, species composition, forb and shrub densities and ground cover all summarized by plant group. In addition, ground cover data was collected for dead vegetative litter, bare ground and surface rock.

The 2019 data in the Table 19 is summarized from data presented in Appendix Table J1. Each plant species encountered at this site is listed in Table J1. As shown in Table J1 there is a good representation of the seeded species established on the site.

A visual inspection of the reclaimed access route to the pad site was also conducted with photographs taken at points which represent the plant community established on the route. The same seed mix used on the pad was also used on the access route. All the plant species encountered on the pad site were also present on the access route.

Table 19 - Reclaimed Exploration Corehole Pad R											
Vegetation Cover, Species Composition, Species Density & Ground Cover											
		Lin	e-Point Can	Der	Density Data ²						
		Number					I	Desirable			
		of	% Foliar	% Ba	sal	Species	Forb/S	Forb/Shrub Density			
Plant	Group	Species	Cover	Cove	er	Compositi	on	(#/m ²)			
Perennial Grasses		9	38.7		4.1	4	9.3	n/a			
Invasive Non-N	Vative Grasses	1	12.4		0.0	2	2.7 n/a				
Desirable Forbs	Desirable Forbs		7.6		1.4	1	8.32				
Invasive and N	Invasive and Non-Native Forbs		1.4		0.0		2.4	4 n/a			
Shrubs		6	11.1		0.7	1	3.1	1.07			
Vegetation Totals		26	71.2		6.2	10	0.0	9.39			
Line-Point Intercept Soil Surface Cover Data ³											
Percent			Herba	ceous							
Cover by	Bare Ground	Biotic Crus	st Litt	er	Wo	ody Litter	Duff	Rock			
Туре	13.8	0	0.0	30.0		0.0	0.0	1.3			
¹ Sum of data from 3 randomly placed 25 meter transects with 50 sample points collected from each transect.											
Foliar cover based upon 1st plant species encountered in the canopy at each sample point. Species composition											
based upon total of all plant species encountered at each sample point.											

² Sum of density data collected from ten 1-meter square quadrants along each transect. Only desirable forb and shrub densities were recorded based upon reclamation criteria.

³ Percentages are not cumulative with vegetation totals, rather a measure by layer of ground cover from the top layer thru the lower layers to the soil surface. Values for bare ground have no vegetative, litter or rock cover above the soil surface.

The foliar cover of desirable species on the site was 8 percent less than that measured on the reference areas. The cover of perennial grasses was 9 percent lower; the cover of desirable forbs was 5 percent lower and shrub cover was 8 percent less than that on the reference areas. The species composition of desirable species was 23 percent less than that on the reference areas. The composition of perennial grasses was 19 percent lower, desirable forbs was 36 percent lower and shrubs was 22 percent lower.

The amount of bare ground measured on the reference areas was 48 percent greater than that on this site. The amount of herbaceous litter was 9 percent greater than that on the reference areas. The canopy gaps between perennial species measured on this site were 47 greater than that measured on the reference areas.

Both the pad site and the access route to the pad have productive established plant communities which have good representation of the perennial species used in the seed mix with good distribution of those species across both. However, invasive non-native species, primarily cheatgrass (*Bromus tectorum*), make up 23 percent of the total species composition on the pad site. It appeared cheatgrass was not invading the site but rather declining in cover. Very little cheatgrass was observed on the access routes.

The distribution of desirable species across the pad site and access route has stabilized both sites. The cover and composition of the of the desirable species on the route appeared comparable to that on the pad site. The plant communities have adequately stabilized both.

Table 20 is a comparison of the data collected for exploration corehole pad R with that from the rolling loam rangeland reference area. Only the data required to access the success of achieving successful reclamation is used in Table 20.

Table 20 – Comparison of Reclamation Criteria Elements with Native Rangeland Reference Areas										
Site	# desired plant species	% desired foliar cover	% bare ground	shrub density (#/m ²)	forb density (#/m ²)					
Corehole Pad R	22 species	57.4	13.8	1.07	8.32					
Reference Area ¹	23 species	62.5	26.5	1.75	6.13					
¹ The average of four native rangelands reference areas were used as the base for evaluating success of the										

¹ The average of four native rangelands reference areas were used as the base for evaluating success of the reclamation criteria.

Evaluation of successful reclamation of the disturbance on Exploration Corehole Pad R

- There are 22 desirable plant species established on the site (9 perennial grasses, 7 desirable forbs, and 6 shrubs) meeting the requirement of at least five plant species.
- Indian ricegrass (*Achnatherum hymenoides*) was the desired species with the greatest relative cover at 16.6 percent meeting the requirement that no one species can exceed 70 percent relative cover.
- The foliar cover of desirable species on the site was 92 percent of than that on the native rangeland reference areas meeting the requirement of 80 percent similarity.
- The amount of unprotected bare ground on the site was 48 percent less than on the native rangeland reference areas which equates to 148 percent similarity, meeting the required 80 percent similarity.
- The density of desirable forbs on the site was 36 percent greater than that on native rangeland reference areas which equates to 136 percent similarity, meeting the required 80 percent similarity. The shrub density was 61 percent of that on native rangeland reference areas not meeting the required 80 percent similarity. The criteria only require either forb density or shrub density meet the requirement of 80 percent similarity with the native rangeland reference areas in which the density of desirable forbs exceed the required criteria.

The plant community does meet the criteria of species diversity, desired foliar cover, desirable forb density and bare ground for successful reclamation of the disturbance at the site.



Appendix A – Vegetation Sampling Data Native Rangeland Reference Areas

		on Cover, Species Composit olling Loam Native Rangela			Ground Cover	
	Plant Species Observed wit		ntercept Data 1	Density Data ²		
Species			% Foliar	% Basal	Species	
Symbol	Scientific Name	Common Name	Cover	Cover	Composition	
ACHY	Achnatherum hymenoides	Indian ricegrass	1.0	0.5	1.34	
HECO26	Hesperostipa comata	needle & thread needlegrass	31.5	4.0	44.97	
KOMA	Koeleria macrantha	prairie junegrass	6.0	1.0	8.72	
PASM	Pascopyrum smithii	western wheatgrass	3.5	1.0	4.70	Desirable
POSE	Poa secunda	Sandberg bluegrass	0.5	0.0	1.34	Forb/Shrub
TODE	1 ou secundu	Perennial Grass Totals	42.5	6.5		Density (#/m ²)
ASCO12	Astragalus convallarius	lesser-rushy mlkvetch	0.5	0.0	4.03	0.400
CAFI	Carex filifolia	threadleaf sedge	0.0	0.0	0.67	0.025
CRFL6	Cryptantha flavoculata	roughseed cryptanth	0.0	0.0	0.67	0.100
EREA	Erigeron eatonii	Eaton's fleabane	2.0	1.0	2.68	0.100
HEBO	Hedysarum boreale	Utah sweetvetch	1.5	0.0	2.68	0.325
LUAR3	Lupinus argenteus	silvery lupine	0.0	0.0	0.00	0.32
LEER	Lupinus argenieus Leucelene ericoides		0.0	0.0	0.00	0.02.
LEEK		heath aster	0.0	0.0	0.00	0.42
MACDO	Machaeranthera		0.5	0.0	0.77	0.22
MAGR2	grindelioides	rayless tansyaster	0.5	0.0	0.67	0.22
OPPO DAMULT	Opuntia polyacantha	plains pricklypear cactus	0.5	0.0	0.67	0.00
PAMU11	Pakera multilobata	lobeleaf groundsel	0.0	0.0	0.67	0.07
PHHO SPCO	Phlox hoodii	Hood's phlox scarlet globemallow	1.0	0.5	3.36	1.05
SPCO	Sphaeralcea coccinea		1.5	0.0	3.36	2.575
		Perennial Forb Totals	8.0	2.0	19.46	6.125
	Artemisia tridentata var.	Waraning big angeheerb	10.0	0.5	12.40	0.95
ARTRW	wyomingensis	Wyoming big sagebrush	10.0	0.5	13.42	0.850
CHDE2	Chrysothamnus depressus	longflower rabbitbrush	2.0	0.5	3.36	0.75
CHVI8	Chrysothamnus viscidiflorus	yellow rabbitbrush	0.0	0.0	0.00	0.02
GUSA2	Gutierrezia sarothrae	broom Snakeweed	0.0	0.0	0.00	0.05
JUOS	Juniperus osteosperma	Utah juniper	0.0	0.0	0.00	0.050
SAVE4	Sarcobatus vermiculatus	greasewood	0.0	0.0	0.00	0.02
		Shrub Totals	12.0	1.0	16.78	1.75
ALDE	Alyssum desertorum	desert madwort	0.5	0.0	0.67	
BRTE	Bromus tectorum	cheatgrass	1.0	0.0	1.34	
LECA5	Lepidium campestre	field pepperweed	0.0	0.0	0.67	
	Totals for Invasi	ve and Non-Native Species	1.5	0.0	2.68	
		Vegetation Totals	64.0	9.5	100.00	7.87
	ta from 4 randomly placed transe			Percent G	Fround Cover by	Cover Type ⁴
	ct. Foliar cover based upon 1st pla				Bare Grour	nd 26.
	nt. Species composition based up		Biotic Cru	st 0.		
each sample						
	ensity data collected from 10 one				Herbaceous Litte Woody Litte	
	ble forb and shrub densities were			· · · · · · · · · · · · · · · · · · ·		
	ies not encountered in sampling			Du		
	es are not cumulative with vegeta		Roo	ck 0.0		
	er from the top layer thru the low e no vegetative, litter or rock cov		les for bare			

	Table A2 - Canopy Gap Intercept Data Rolling Loam Native Rangeland Reference Area													
Canopy Gaps > 20	Total of Gaps > 20 cm		Gaps 21-50 cm		Gaps 51-100 cm		Gaps 101-200 cm		Gaps >200 cm					
centimeters	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019				
Transect 1	854	987	467	641	387	346	0	0	0	0				
Transect 2	1735	1227	735	1008	1000	219	0	0	0	0				
Transect 3	1513	684	443	629	850	55	220	0	0	0				
Transect 4	1367	1066	586	453	493	309	288	304	0	0				
Total Gaps (cm)	5469	3964	2231	2731	2730	929	508	304	0	0				
% Line in Gaps	% Line in Gaps 27.35 26.43 11.16 18.21 13.65 6.19 2.54 2.03 0.00 0.00													
Line length for each tro	insect was	50 meters	s for site to	otal length	of 200 me	eters in 20	18							

	Table A3 - Transect Coordinate Locations Native Rangeland Reference Areas (Datum: UTM Zone 12, WGS 84)												
	Azimuth from Transect Starting Point Transect Ending Point												
Site	starting point (true N)	Northing (mN)	Northing (mN) Easting (mE) Northing (mN) East										
Transect 1	005°	4424575.074	725222.01	4424620.039	725228.378	50 meters							
Transect 2	018°	4422649.855	724786.5965	4422698.949	724797.3818	50 meters							
Transect 3	051°	4424490.83	725574.2099	4424505.933	725588.9861	25 meters							
Transect 4	045°	4425652.377	722789.301	4425674.196	722802.1731	25 meters							

Transect Photos Native Rangeland Reference Areas



Figure A1 Rolling Loam Rangeland Reference Area Transect #1



Figure A2 Rolling Loam Rangeland Reference Area Transect #2



Figure A3 Rolling Loam Rangeland Reference Area Transect #3



Figure A4 Rolling Loam Rangeland Reference Area Transect #4

	Plant Species Observed wit	hin Study Area	Line-Poin	t Canopy I	ntercept Data ¹	Density Data ²
Species			% Foliar	% Basal	Species	
Symbol	Scientific Name	Common Name	Cover	Cover	Composition	
ACHY ³	Achnatherum hymenoides	Indian ricegrass	0.0	0.0	0.0	
ELLAL	Elymus lanceolatus	thickspike wheatgrass	4.0	1.3	4.6	
ELTR7	Elymus trachycaulus	slender wheatgrass	25.3	6.7	30.8	
HECO26	Hesperostipa comata	needle & thread needlegrass	0.7	0.0	0.7	
LECI4	Leymus cinereus	basin wildrye	0.7	0.0	0.8	
NAVI4	Nassella viridula	green needlegrass	4.0	1.3	5.4	
PASM	Pascopyrum smithii	western wheatgrass	0.7	0.0	0.8	
PSJU3	Psathyrostachys juncea	Russian wildrye	16.0	3.3	19.2	
1.5000	Pseudoroegneria spicata	beardless bluebunch	1010	0.0		
PSSPI	ssp. inermis	wheatgrass	2.7	0.0	3.1	Desirable
THIN6	Thinopyrum intermedium	pubescent wheatgrass	12.7	1.3	14.6	Forb/Shrub
		tals for Perennial Grasses	66.8	13.9	80.0	Density (#/m ²)
ASCH	Astragalus chamaeleuce	cicada milkvetch	0.0	0.0	0.0	0.07
ASCI4	Astragalus cicer	cicer milkvetch	0.0	0.0	0.0	0.87
CROC	Crepis occidentalis	largeflower hawksbeard	0.0	0.0	0.0	0.03
EREA	Erigeron eatonii	Eaton fleabane	0.0	0.0	0.0	0.10
LILE3	Linum lewisii	Lewis flax	2.7	0.0	4.6	0.87
MACA2	Machaeranthera canescens	hoary tansyaster	0.0	0.0	0.7	0.33
	Machaeranthera					
MAGR2	grindelioides	rayless tansyaster	0.0	0.0	0.8	0.10
MESA	Medicago sativa	alfalfa	3.3	0.7	7.7	2.27
PEPA8	Penstemon palmeri	Palmer's penstemon	0.0	0.0	0.0	0.27
SPCO	Sphaeralcea coccinea	scarlet globemallow	0.0	0.0	0.0	0.37
		or Desirable Forb Species	6.0	0.7	13.8	5.28
ARTRW	Artemisia tridentata var. wyomingensis	Wyoming big sagebrush	0.0	0.0	0.0	0.03
ATCA2	Atriplex canescens	four-wing saltbush	0.7	0.0	0.8	0.00
CHVI8	Chrysothamnus viscidiflorus	yellow rabbitbrush	0.0	0.0	0.0	0.13
GUSA2	Gutierrezia sarothrae	broom Snakeweed	2.0	0.7	3.1	0.37
KRLA2	Krascheninnikovia lanata	winterfat	0.7	0.0	0.8	0.07
		Totals for Shrubs	3.4	0.7	4.7	0.60
ALDE	Alyssum desertorum	desert madwort	0.0	0.0	0.7	
BRTE	Bromus tectorum	cheatgrass	0.0	0.0	0.8	
MEOF	Melilotus officinalis	yellow sweetclover	0.0	0.0	0.0	
	Totals for Invasiv	e and Non-Native Species	0.0	0.0	1.5	
		Vegetation Totals	76.2	15.3	100.0	5.88
collected fr	ta from 3 randomly placed 25 m om each transect. Foliar cover ba	used upon 1 st plant species encou	untered in	Percent (Ground Cover by	Cover Type ⁴
	at each sample point. Species con	mposition based upon total of al	l plant		Bare Grou	nd 12.7
enecies enc	ountered at each sample point.				Biotic Cru	

Appendix B – Vegetation Sampling Data Reclaimed Well Pad 5H-1V

² Sum of density data collected from 10 one-square meter quadrants along each transect. Only desirable forb and shrub densities were recorded based upon reclamation criteria.
³ Plant species not encountered in sampling data but were present within the study area.

⁴ Percentages are not cumulative with vegetation totals, rather a measure by layer of ground cover from the top layer thru the lower layers to the soil surface. Values for bare ground have no vegetative, litter or rock cover above the soil surface.

Bare Ground	12.7
Biotic Crust	0.0
Herbaceous Litter	56.0
Woody Litter	2.7
Duff	0.0
Rock	2.0

	Table B2 - Canopy Gap Intercept Data Reclaimed Pad 5H-1V														
Canopy Gaps > 20	Total o > 20	of Gaps) cm	Gaps 21-50 cm		Gaps : ci		Gaps 1 cı		Gaps >200 cm						
centimeters	2018 ¹	2019 ²	2018 ¹	2019 ²	2018 ¹	2019 ²	2018 ¹	2019 ²	2018 ¹	2019 ²					
Transect 1	696	294	410	215	286	79	0	0	0	0					
Transect 2	636	459	342	381	294	78	0	0	0	0					
Transect 3	608	389	339	389	269	0	0	0	0	0					
Transect 4	577		251		326		0		0						
Total Gaps (cm)	2517	1142	1342	985	1175	157	0	0	0	0					
% Line in Gaps															
¹ In 2018 four transec										ers					

²In 2019 three transects were sampled. Each transect was 25 meters long for site total length of 75 meters

	Table B3 - Transect Coordinate LocationsReclaimed Pad 5H-1V (Datum: UTM Zone 12, WGS 84)												
Azimuth from Transect Starting Point Transect Ending Point													
Site	starting point (true N)	Northing (mN)	Easting (mE)	Northing (mN)	Easting (mE)	Length							
Transect 1	133°	4423196.945	725478.897	4423180.277	725497.6099	25 meters							
Transect 2	230°	4423195.042	725467.1489	4423181.893	725447.0939	25 meters							
Transect 3	316°	4423202.974	725472.3888	4423216.758	725453.8468	25 meters							

Transect Photos and Transect Layout Plot



Figure B1 Transect 1 Reclaimed Pad 5H-1V



Figure B2 Transect 2 Reclaimed Pad 5H-1V



Figure B3 Transect 3 Reclaimed Pad 5H-1V



Figure B4 Transect Layout

Appendix C – Vegetation Sampling Data Reclaimed Well Pad 93-2M

	Table C1 - Vegetation	Cover, Species Composit Reclaimed Pad		Density & (Ground Cover		
-	Plant Species Observed withi		-	t Canopy II	ntercept Data ¹	Density Data ²	
Species			% Foliar	% Basal	Species		
Symbol	Scientific Name	Common Name	Cover	Cover	Composition		
ELLAL	Elymus lanceolatus	thickspike wheatgrass	8.0	2.0	8.9		
ELTR7	Elymus trachycaulus	slender wheatgrass	24.7	4.7	25.9		
LECI4	Leymus cinereus	basin wildrye	3.3	0.0	3.2		
NAVI4	Nassella viridula	green needlegrass	0.7	0.0	0.6		
PASM	Pascopyrum smithii	western wheatgrass	2.0	0.0	1.9		
PSJU3	Psathyrostachys juncea	Russian wildrye	8.7	0.7	8.2	Desirable Forb/Shrub	
THIN6	Thinopyrum intermediumpubescent wheatgrass6.70.77.0						
		Perennial Grass Totals	54.1	8.1	55.7	Density (#/m ²)	
CROC	Crepis occidentalis	largeflower hawksbeard	0.0	0.0	0.0	0.03	
DEPI	Descurainia pinnata	western tansymustard	14.7	0.0	19.0	0.00	
LILE3	Linum lewisii	Lewis flax	0.0	0.0	0.0	0.07	
MESA	Medicago sativa	alfalfa	1.3	0.0	2.5	0.40	
SPCO	Sphaeralcea coccinea	scarlet globemallow	0.0	0.0	0.6	0.43	
		Perennial Forb Totals	16.0	0.0	22.1	0.93	
	Artemisia tridentata var.	Wyoming big					
ARTRW	wyomingensis	sagebrush	2.0	0.0	1.9	0.17	
ATCA2	Atriplex canescens	four-wing saltbush	0.7	0.0	0.6	0.00	
CHVI8	Chrysothamnus viscidiflorus	yellow rabbitbrush	1.3	0.0	1.3	0.17	
ERNA10	Ericameria nauseosa	rubber rabbitbrush	0.0	0.0	0.0	0.03	
GUSA2	Gutierrezia sarothrae	broom Snakeweed	1.3	0.7	1.3	0.30	
		Shrub Totals	5.3	0.7	5.1	0.67	
ALDE	Alyssum desertorum	desert madwort	0.7	0.0	1.3		
BRTE	Bromus tectorum	cheatgrass	5.3	0.0	10.1		
LECA5	Lepidium campestre	field pepperweed	2.0	0.0	3.2		
LEPE2	Lepidium perfoliatum	clasping pepperweed	0.7	0.0	2.5		
	Totals for Invasive	and Non-Native Species	8.7	0.0	17.1		
		Vegetation Totals	84.1	8.8	100.0	1.60	
	ta from 3 randomly placed 25 meter					а т 4	
	ransect. Foliar cover based upon 1st			Percent (Fround Cover by	Cover Type 4	
	ple point. Species composition base	es		Bare Grou	nd 9.3		
	l at each sample point. nsity data collected from 10 one-sq		Biotic Cr				
	ble forb and shrub densities were re		Herbaceous Lit				
³ Plant spec	ies not encountered in sampling dat	a but were present within the	study area.		ter 1.3		
⁴ Percentage	es are not cumulative with vegetation	on totals, rather a measure by 1	ayer of		v	uff 0.0	
	er from the top layer thru the lower		les for bare			ock 0.0	
ground have	e no vegetative, litter or rock cover	above the soil surface.					

	Table C2 - Canopy Gap Intercept Data Reclaimed Pad 93-2M													
Canopy Gaps > 20	Total of Gaps		Gaps 21-50		Gaps 51-100		Gaps 101-200		Gaps >200					
centimeters	> 20	-	CI		CI		CI		CI					
centimeters	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019				
Transect 1	1011	354	179	130	731	224	101	0	0	0				
Transect 2	1120	860	101	60	507	503	512	297	0	0				
Transect 3	779	944	238	54	541	302	0	588	0	0				
Total Gaps (cm)	2910	2158	518	244	1779	1029	613	885	0	0				
% Line in Gaps 38.80 28.77 6.91 3.25 23.72 13.72 8.17 11.80 0.00 0.00														
Line length for each	transect v	vas 25 m	eters for .	site total	length of	75 meter	s							

	Table C3 - Transect Coordinate Locations Reclaimed Pad 93-2M (Datum: UTM Zone 12, WGS 84)												
Azimuth from Transect Starting Point Transect Ending Point													
Site	starting point (true N)	Northing (mN)	Easting (mE)	Northing (mN)	Easting (mE)	Length							
Transect 1	337°	4423692.586	725373.4847	4423718.07	725367.3425	25 meters							
Transect 2	263°	4423688.504	725378.2242	4423683.439	725353.4837	25 meters							
Transect 3	137º	4423688.915	725377.1001	4423665.028	725380.8857	25 meters							

Transect Photos and Transect Layout Plot



Figure C1 Transect 1 Reclaimed Pad 93-2M



Figure C2 Transect 2 Reclaimed Pad 93-2M



Figure C3 Transect 3 Reclaimed Pad 93-2M

Figure C4 Pad 93-2M Transect Layout

Appendix D – Vegetation Sampling Data Reclaimed Well Pad 93-4H

	Table D1 - Vegetation	Cover, Species Composit Reclaimed Pad 9		Density & (Ground Cover		
	Plant Species Observed with	in Study Area	Line-Poin	t Canopy I	ntercept Data ¹	Density Data ²	
Species			% Foliar	% Basal	Species	v	
Symbol	Scientific Name	Common Name	Cover	Cover	Composition		
ACHY	Achnatherum hymenoides	Indian ricegrass	6.7	2.0	8.0		
AGCR	Agropyron cristatum	crested wheatgrass	3.3	0.7	3.6		
ELLAL	Elymus lanceolatus	thickspike wheatgrass	1.3	0.7	1.6		
ELTR7	Elymus trachycaulus	slender wheatgrass	10.0	2.7	10.9		
LECI4	Leymus cinereus	basin wildrye	1.3	0.0	1.5		
PSJU3	Psathyrostachys juncea	Russian wildrye	3.3	0.0	3.6		
PSSPI	Pseudoroegneria spicata ssp. inermis	beardless bluebunch wheatgrass	0.7	0.0	0.7		
	Pseudoroegneria spicata ssp.	bearded bluebunch					
PSSPS	spicata	wheatgrass	0.7	0.0	0.7	Desirable	
THIN6	Thinopyrum intermedium	pubescent wheatgrass	11.3	2.0	13.9	Forb/Shrub	
		Perennial Grass Totals	38.6	8.1	44.5	Density (#/m ²)	
ASCI4	Astragalus cicer	cicer milkvetch	0.0	0.0	0.0	0.10	
CRFL6	Cryptantha flavoculata	roughseed cryptanth	0.0	0.0	0.0	0.00	
DEPI	Descurainia pinnata	western tansymustard	0.7	0.0	0.7	0.00	
GRSQ	Grindelia squarrosa	curlycup gumweed	0.7	0.0	0.7	0.23	
MACA2	Machaeranthera canescens	hoary tansyaster	0.7	0.0	1.5	0.23	
MESA	Medicago sativa	alfalfa	16.7	2.0	24.2	5.27	
SPCO	Sphaeralcea coccinea	scarlet globemallow	0.0	0.0	0.0	0.10	
		Perennial Forb Totals	18.8	2.0	27.1	5.93	
	Artemisia tridentata var.						
ARTRW	wyomingensis	Wyoming big sagebrush	0.7	0.0	0.7	0.00	
ATCA2	Atriplex canescens	four-wing saltbush	0.7	0.0	0.7	0.10	
CHVI8	Chrysothamnus viscidiflorus	yellow rabbitbrush	2.0	0.0	2.2	0.17	
ERNA10	Ericameria nauseosa	rubber rabbitbrush	0.0	0.0	0.0	0.00	
GUSA2	Gutierrezia sarothrae	broom Snakeweed	0.0	0.0	0.0	0.07	
JUOS	Juniperus osteosperma	Utah juniper	0.0	0.0	0.0	0.03	
		Shrub Totals	3.4	0.0	3.6	0.37	
BRTE	Bromus tectorum	cheatgrass	10.7	0.0	18.2		
ALDE	Alyssum desertorum	desert madwort	1.3	0.0	4.4		
LEPE2	Lepidium perfoliatum	clasping pepperweed	0.0	0.0	0.7		
MEOF	Melilotus officinalis	yellow sweetclover	0.0	0.0	0.0		
SATR12	Salsola tragus	Russian thistle	1.3	0.0	1.5		
	Totals for Invasive	e and Non-Native Species	13.3	0.0	24.8		
		Vegetation Totals	74.1	10.1	100.0	6.30	
	ata from 3 randomly placed 25 meters ransect. Foliar cover based upon 15	er transects with 50 sample point	nts collected		Ground Cover by	Cover Type ⁴	
	ple point. Species composition bas				Darra Ca	nd 15.2	
	d at each sample point.	•			Bare Grou		
	ensity data collected from 10 one-se				Biotic Cru		
	ble forb and shrub densities were r			Herbaceous Litter			
	cies not encountered in sampling da				Woody Lit	ter 7.3	
	es are not cumulative with vegetati				D	uff 0.0	
ground cover from the top layer thru the lower layers to the soil surface. Values for bare ground have no vegetative, litter or rock cover above the soil surface.							

ground have no vegetative, litter or rock cover above the soil surface.

	Table D2 - Canopy Gap Intercept Data Reclaimed Pad 93-4H														
Canopy Gaps > 20	Total of Gaps > 20 cm		Gaps 21-50 cm		Gaps 51-100 cm		Gaps 1 ci		Gaps >200 cm						
centimeters	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019					
Transect 1	1664	883	318	125	683	423	441	119	222	216					
Transect 2	1596	923	263	389	472	427	322	107	539	0					
Transect 3	1468	1286	334	145	235	306	353	835	546	0					
Total Gaps (cm)	4728	3092	915	659	1390	1156	1116	1061	1307	216					
% Line in Gaps	% Line in Gaps 63.04 41.23 12.20 8.79 18.53 15.41 14.88 14.15 17.43 2.88														
Line length for each	transect v	vas 25 m	eters for .	site total	length of	75 meter	s								

	Table D3 - Transect Coordinate LocationsReclaimed Pad 93-4H (Datum: UTM Zone 12, WGS 84)									
	Azimuth from	Transect Sta	rting Point	Transect Er	ding Point					
Site	starting point (true N)	Northing (mN)								
Transect 1	335°	4423398.615	725186.1273	4423424.276	725182.2043	25 meters				
Transect 2	135°	4423392.593	725189.1279	4423377.347	725207.1133	25 meters				
Transect 3	218°	4423394.462	725184.7103	4423378.398	725167.4788	25 meters				

Transect Photos and Transect Layout Plot



Figure D1 Transect 1 Reclaimed Pad 93-4H

Figure D2 Transect 2 Reclaimed Pad 93-4H



Figure D3 Transect 3 Reclaimed Pad 93-4H

Figure D4 Transect Layout

Appendix E – Vegetation Sampling Data Reclaimed Corehole Pad E

	Table E1 - Vegetation	Cover, Species Compositi			Ground Cover	
	Plant Species Observed with	Reclaimed Exploration C			ntercept Data ¹	Density Data ²
	Trait Species Observed with		percent	percent		Density Data
Species			Foliar	Basal	Species	
Symbol	Scientific Name	Common Name	Cover	Cover	Composition	
ELLAL	Elymus lanceolatus	thickspike wheatgrass	0.0	0.0	1.0	
ELTR7	Elymus trachycaulus	slender wheatgrass	3.0	0.0	3.0	
		needle & thread				
HECO26	Hesperostipa comata	needlegrass	16.7	3.3	24.7	
LECI4	Leymus cinereus	basin wildrye	0.0	0.0	0.0	
NAVI4	Nassella viridula	green needlegrass	2.0	0.0	2.0	
PASM	Pascopyrum smithii	western wheatgrass	22.0	0.0	25.7	
PSJU3	Psathyrostachys juncea	Russian wildrye	0.0	0.0	0.0	
	Pseudoroegneria spicata ssp.	beardless bluebunch				
PSSPI	inermis	wheatgrass	1.3	0.0	2.0	
	Pseudoroegneria spicata ssp.	bearded bluebunch				Desirable
PSSPS ³	Spicata	wheatgrass	0.0	0.0	0.0	Forb/Shrub
		Perennial Grass Totals	45.0	3.3	58.4	Density (#/m ²)
ACLA	Achillea lanulosa	western yarrow	0.0	0.0	0.0	0.07
ASCI4	Astragalus cicer	cicer milkvetch	0.0	0.0	0.0	0.40
CHAL	Chenopodium album	lambsquarter	0.0	0.0	0.0	0.47
CLSE ³	Cleome serrulata	Rocky Mtn. beeplant	0.0	0.0	0.0	0.00
LILE3	Linum lewisii	Lewis flax	3.0	0.7	4.0	7.37
MAGR2 ³	Machaeranthera grindelioides	rayless tansyaster	0.0	0.0	0.0	0.00
MESA	Medicago sativa	alfalfa	8.7	1.3	16.8	7.37
PEPA8	Penstemon palmeri	Palmer's penstemon	0.0	0.0	0.0	0.03
		Perennial Forb Totals	11.7	2.0	20.8	15.71
ARTRW	Artemisia tridentata var. wyomingensis	Wyoming big sagebrush	0.0	0.0	0.0	0.07
ATCA2	Atriplex canescens	four-wing saltbush	6.0	0.0	5.9	0.67
CHVI8	Chrysothamnus viscidiflorus	yellow rabbitbrush	0.0	0.0	0.0	0.03
KRLA2	Krascheninnikovia lanata	winterfat	0.0	0.0	0.0	0.20
		Shrub Totals	6.0	0.0	5.9	0.97
ALDE	Alyssum desertorum	desert madwort	2.0	0.0	4.0	
BRTE	Bromus tectorum	cheatgrass (annual grass)	3.0	0.0	4.9	
LASQ	Lappula squarrosa	European stickseed	2.0	0.0	2.0	
LECA5	Lepidium campestre	field pepperweed	2.0	0.0	3.0	
SATR12	Salsola tragus	Russian thistle	1.0	0.0	1.0	
	Totals for Invasive	and Non-Native Species	10.0	0.0	14.9	
		Vegetation Totals	72.7	5.3	100.0	16.68
¹ Sum of da	ta from 3 randomly placed 25 mete		nts collected	_		~ - 1
	ransect. Foliar cover based upon 1 st ple point. Species composition base			Percent (Ground Cover by	
at each sample point. Species composition based upon total of all plant species encountered at each sample point.					Bare Ground	
² Sum of density data collected from 10 one-square meter quadrants along each transect.					Biotic Crus	t 0.0
Only desirable forb and shrub densities were recorded based upon reclamation criteria.				H	erbaceous Litte	r 54.0
³ Plant species not encountered in sampling data but were present within the study area.					Woody Litte	
	es are not cumulative with vegetation				Duf	
ground cove	er from the top layer thru the lower	layers to the soil surface. Value	les for bare		Rock	
ground have	e no vegetative, litter or rock cover	above the soil surface.			KUCI	

Table E2 - Canopy Gap Intercept DataReclaimed Exploration Corehole Pad E							
Canopy Gaps > 20 centimetersTotal of Gaps > 20 cmGaps 21-50 cmGaps 51-100 cmGaps 101-200 cmGaps >20 cm							
Transect 1	636	522	114	0	0		
Transect 2	443	392	51	0	0		
Transect 3	963	264	590	109	0		
Total Gaps (cm)	2042	1178	755	109	0		
% Line in Gaps 27.23 15.71 10.07 1.45 0.00							
Line length for each	transect was 25 m	eters for site total	length of 75 meter	rs			

Table E3 - Transect Coordinates and Access Route Photo-point Locations Reclaimed Exploration Corehole Pad E (Datum: UTM Zone 12, WGS 84)									
	Azimuth from	Transect Sta	rting Point	Transect En	ding Point				
Site	starting point (true N)	Northing (mN)	Easting (mE)	Northing (mN)	Easting (mE)	Length			
Transect 1	332°	4424566.154	725032.9249	4424588.202	725019.5308	25 meters			
Transect 2	203°	4424564.03	725032.4745	4424541.717	725018.0813	25 meters			
Transect 3	126°	4424564.386	725036.9967	4424550.578	725054.7658	25 meters			
Access Route/Photo-point Location									
Pad E / Photo	p-point # 1	4424531.064	725105.0315						

Transect Photos, Access Route Photos and Transect Layout Plot



Transect 1 Reclaimed Exploration Corehole Pad E Figure E1

Transect 2 Reclaimed Exploration Corehole Pad E



Figure E3 Transect 3 Reclaimed Exploration Corehole Pad E Figure E4 Reclaimed Access Road to Corehole Pad E



Figure E5 Transect Layout & Access Route Photopoint Location

Appendix F – Vegetation Sampling Data Reclaimed Corehole Pad H

	Table F1 - Vegetation	Cover, Species Compositi Reclaimed Exploration Co			Ground Cover	
	Plant Species Observed with	in Study Area	Line-Poin	t Canopy II	ntercept Data ¹	Density Data ²
Species Symbol	Scientific Name	Common Name	percent Foliar Cover	percent Basal Cover	Species Composition	
ACHY	Achnatherum hymenoides	Indian ricegrass	5.3	1.3	6.6	
	Elymus elymoides ssp.					
ELELE	elymoides	bottlebrush squirreltail	0.7	0.0	0.8	
ELLAL	Elymus lanceolatus	thickspike wheatgrass	5.3	1.3	8.3	
ELTR7	Elymus trachycaulus	slender wheatgrass	8.0	2.0	9.8	
LECI4	Leymus cinereus	basin wildrye	4.7	0.0	5.7	
NAVI4	Nassella viridula	green needlegrass	20.0	2.7	29.5	
PASM	Pascopyrum smithii	western wheatgrass	1.3	0.0	1.6	
PSJU3	Psathyrostachys juncea	Russian wildrye	2.0	0.7	2.5	
PSSPI	Pseudoroegneria spicata ssp. inermis	beardless bluebunch wheatgrass	2.7	0.7	3.3	
PSSPS	Pseudoroegneria spicata ssp. Spicata	bearded bluebunch wheatgrass	0.7	0.7	0.8	
PSSPS ³	Pseudoroegneria spicata ssp. Spicata	bearded bluebunch wheatgrass	0.0	0.0	0.0	Desirable Forb/Shrub
		Perennial Grass Totals	50.7	9.4	68.9	Density (#/m ²)
ACLA	Achillea lanulosa	western yarrow	0.0	0.0	0.0	0.07
ASCH	Astragalus chamaeleuce	cicada milkvetch	0.0	0.0	0.0	0.03
ASCI4	Astragalus cicer	cicer milkvetch	0.0	0.0	1.7	0.60
CHAL	Chenopodium album	lambsquarter	0.7	0.0	0.8	0.00
CIUNT	Cirsium undulatum var. tracyi	wavyleaf thistle	0.0	0.0	0.0	0.03
CRFL6	Cryptantha flavoculata	roughseed cryptanth	0.0	0.0	0.0	0.07
LILE3	Linum lewisii	Lewis flax	0.7	0.0	0.8	0.30
MACA2 ³	Machaeranthera canescens	hoary tansyaster	0.0	0.0	0.0	0.00
MAGR2	Machaeranthera grindelioides	rayless tansyaster	0.0	0.0	0.0	0.20
MESA	Medicago sativa	alfalfa	7.3	1.3	13.1	3.17
PEPA8	Penstemon palmeri	Palmer's penstemon	2.0	0.0	3.3	0.50
SPCO	Sphaeralcea coccinea	scarlet globemallow	0.0	0.0	0.0	0.03
	1	Perennial Forb Totals	10.7	1.3	19.7	5.00
ATCA2	Atriplex canescens	four-wing saltbush	7.3	0.0	9.8	0.53
CHVI8	Chrysothamnus viscidiflorus	yellow rabbitbrush	0.0	0.0	0.0	0.03
KRLA2	Krascheninnikovia lanata	winterfat	0.0	0.0	0.0	0.10
PUTR2	Purshia tridentata	antelope bittrebrush	1.3	0.0	1.6	0.03
DD/TD2		Shrub Totals	8.6	0.0	11.4	0.69
BRTE ³	Bromus tectorum	cheatgrass	0.0	0.0	0.0	
LECA5 ³	Lepidium campestre	field pepperweed	0.0	0.0	0.0	
	Totals for Invasive	and Non-Native Species	0.0	0.0	0.0	
1		Vegetation Totals	70.0	10.7	100.0	5.69
from each th	ta from 3 randomly placed 25 meter ransect. Foliar cover based upon 1 st	plant species encountered in the	he canopy	Percent (Ground Cover by	v Cover Type ⁴
	ple point. Species composition bas	ed upon total of all plant specie	es		Bare Ground	1 14.0
encountered at each sample point.					Biotic Crus	
² Sum of density data collected from 10 one-square meter quadrants along each transect.				Ц	lerbaceous Litte	
Only desirable forb and shrub densities were recorded based upon reclamation criteria. ³ Plant species not encountered in sampling data but were present within the study area.					Woody Litte	
	es are not cumulative with vegetation				*	~
	er from the top layer thru the lower				Duf	
	e no vegetative, litter or rock cover		Juit		Rocl	x 7.3

Table F2 - Canopy Gap Intercept DataReclaimed Exploration Corehole Pad H							
Canopy Gaps > 20 centimetersTotal of Gaps > 20 cmGaps 21-50 cmGaps 51-100 cmGaps 101-200 cmGaps >							
Transect 1	414	275	139	0	0		
Transect 2	725	249	290	186	0		
Transect 3	444	316	128	0	0		
Total Gaps (cm)	1583	840	557	186	0		
% Line in Gaps 21.11 11.20 7.43 2.48 0.00							
Line length for each	transect was 25 m	eters for site total	length of 75 meter	s			

	Table F3 - Transect Coordinates and Access Route Photo-point Locations Reclaimed Exploration Corehole Pad H (Datum: UTM Zone 12, WGS 84)									
	Azimuth from	Transect Sta	rting Point	Transect En	ding Point					
Site	starting point (true N)	Northing (mN)	Easting (mE)	Northing (mN)	Easting (mE)	Length				
Transect 1	270°	4423840.995	725052.8859	4423845.004	725026.8516	25 meters				
Transect 2	196°	4423838.323	725052.7082	4423820.014	725038.4519	25 meters				
Transect 3	089°	4423838.008	725053.3163	4423839.726	725081.4054	25 meters				
Access Rout	e/Photo-point Lo	cation								
Pad H / Photo-point # 1 4423835.311 725097.4446										
Pad H / Photo-point # 2 4423860.973 725161.2628										

Transect Photos, Access Route Photos and Transect Layout Plot



Figure F1 Transect 1 Reclaimed Exploration Corehole Pad H

Figure F2 Transect 2 Reclaimed Exploration Corehole Pad H



Figure F3 Transect 3 Reclaimed Exploration Corehole Pad H

Figure F4 Photo Point 1 Reclaimed Access Road Corehole Pad H



Figure F5 Photo Point 2 Reclaimed Access Road to Corehole Pad H Figure F6 Transect Layout & Access Route Photopoint Locations

Appendix G – Vegetation Sampling Data Reclaimed Corehole Pad N

	Table G1 - Vegetation	Cover, Species Compositi Reclaimed Exploration Co			Ground Cover	
	Plant Species Observed with				ntercept Data ¹	Density Data ²
Species Symbol	Scientific Name	Common Name	percent Foliar Cover	percent Basal Cover	Species Composition	
ACHY	Achnatherum hymenoides	Indian ricegrass	14.7	1.3	19.0	
ELELE ³	Elymus elymoides ssp. elymoides	bottlebrush squirreltail	0.0	0.0	0.0	
ELLAL	Elymoues Elymus lanceolatus	thickspike wheatgrass	3.4	0.0	3.6	
ELTR7	<i>Elymus trachycaulus</i>	slender wheatgrass	4.7	0.0	5.1	
HECO26	Hesperostipa comata	needle & thread needlegrass	1.3	0.0	1.5	
KOMA	Koeleria macrantha	prairie junegrass	0.7	0.0	0.7	
LECI4	Leymus cinereus	basin wildrye	1.3	0.7	1.5	
NAVI4	Nassella viridula	green needlegrass	13.3	2.7	16.8	
PASM	Pascopyrum smithii	western wheatgrass	2.7	0.0	2.9	
PSJU3 ³	Psathyrostachys juncea	Russian wildrye	0.0	0.0	0.0	
PSSPI	Pseudoroegneria spicata ssp. inermis	beardless bluebunch wheatgrass	3.3	1.3	4.4	
PSSPS	Pseudoroegneria spicata ssp. Spicata	bearded bluebunch wheatgrass	1.3	0.0	1.5	Desirable Forb/Shrub
		Perennial Grass Totals	46.7	6.7	57.0	Density (#/m ²)
ACLA	Achillea lanulosa	western yarrow	0.0	0.0	0.0	0.10
ASCI4	Astragalus cicer	cicer milkvetch	0.0	0.0	0.0	1.07
CRFL6	Cryptantha flavoculata	roughseed cryptanth	0.7	0.0	0.7	0.07
LILE3	Linum lewisii	Lewis flax	1.3	0.0	2.2	0.10
MAGR2	Machaeranthera grindelioides	rayless tansyaster	0.7	0.0	0.7	0.23
MESA	Medicago sativa	alfalfa	12.6	2.7	26.3	10.23
PEPA8	Penstemon palmeri	Palmer's penstemon	0.0	0.0	0.0	0.13
		Perennial Forb Totals	15.3	2.7	29.9	11.93
ARTRW	Artemisia tridentata var. wyomingensis	Wyoming big sagebrush	0.0	0.0	0.0	0.10
ATCA2	Atriplex canescens	four-wing saltbush	2.7	0.0	3.6	0.37
CHDE2	Chrysothamnus depressus	longflower rabbitbrush	0.7	0.7	0.7	0.00
CHVI8	Chrysothamnus viscidiflorus	yellow rabbitbrush	0.7	0.0	1.5	0.10
GUSA2	Gutierrezia sarothrae	broom Snakeweed	0.0	0.0	0.0	0.03
KRLA2	Krascheninnikovia lanata	winterfat	0.0	0.0	0.0	0.10
		Shrub Totals	4.1	0.7	5.8	0.70
ALDE	Alyssum desertorum	desert madwort	1.3	0.0	1.5	
BRTE	Bromus tectorum	cheatgrass	1.3	0.0	2.9	
LECA5	Lepidium campestre	field pepperweed	0.7	0.0	2.9	
	Totals for Invasive	e and Non-Native Species	3.3	0.0	7.3	
		Vegetation Totals	69.4	10.1	100.0	12.63
from each t	ata from 3 randomly placed 25 meter ransect. Foliar cover based upon 1 ^s	t plant species encountered in t	he canopy	Percent (Fround Cover by	y Cover Type ⁴
	ple point. Species composition bas	ed upon total of all plant specie	S		Bare Ground	1 14.4
encountered at each sample point. ² Sum of density data collected from 10 one-square meter quadrants along each transect.					Biotic Crus	
Only desirable forb and shrub densities were recorded based upon reclamation criteria.			Н	erbaceous Litte		
	³ Plant species not encountered in sampling data but were present within the study area.				Woody Litte	
	es are not cumulative with vegetati				Duf	
ground cov	er from the top layer thru the lower	layers to the soil surface. Value			Rocl	
ground hav	e no vegetative, litter or rock cover	above the soil surface.			Roci	-

Table G2 - Canopy Gap Intercept Data Reclaimed Exploration Corehole Pad N							
Canopy Gaps > 20 centimeters	Total of Gaps > 20 cm	Gaps 21-50 cm	Gaps 51-100 cm	Gaps 101-200 cm	Gaps >200 cm		
Transect 1	529	345	184	0	0		
Transect 2	610	372	136	102	0		
Transect 3	459	331	128	0	0		
Total Gaps (cm)	1598	1048	448	102	0		
% Line in Gaps 21.31 13.97 5.97 1.36 0.00							
Line length for each	transect was 25 me	eters for site total	length of 75 meter	~S			

	Table G3 - Transect Coordinates and Access Route Photo-point Locations Reclaimed Exploration Corehole Pad N (Datum: UTM Zone 12, WGS 84)									
	Azimuth from	Transect Sta	rting Point	Transect Er	ding Point					
Site	starting point (true N)	Northing (mN)	Easting (mE)	Northing (mN)	Easting (mE)	Length				
Transect 1	281°	4423820.652	724385.5732	4423826.303	724362.399	25 meters				
Transect 2	165°	4423816.252	724387.0712	4423795.377	724395.0415	25 meters				
Transect 3	346°	4423823.801	724386.849	4423846.801	724379.3294	25 meters				
Access Rout	e/Photo-point Lo	cation								
Pad N / Photo	o-point # 1	4423814.762	724411.9191							
Pad N / Photo	Pad N / Photo-point # 2 4423787.732 724501.4109									
Pad N / Photo	o-point # 3	4423583.726	724767.625							

Transect Photos, Access Route Photos and Transect Layout Plot



Figure G1 **Transect 1 Reclaimed Corehole Pad N**

Figure G2 Transect 2 Reclaimed Corehole Pad N





Figure G3 Transect 3 Reclaimed Corehole Pad N

Figure G4 Photo Point 1 - Access Road to Corehole Pad N



Figure G5 Photo Point 2 - Access Road to Corehole Pad N



Figure G6 Photo Point 3 - Access Road to Corehole Pad N



Figure G7 Transect Layout and Access Route photopoint locations

Appendix H – Vegetation Sampling Data Reclaimed Corehole Pad P

	Table H1 - Vegetation	Cover, Species Compositi Reclaimed Exploration C			Ground Cover	
	Plant Species Observed with				ntercept Data ¹	Density Data ²
Species Symbol	Scientific Name	Common Name	percent Foliar Cover	percent Basal Cover	Species Composition	
ACHY	Achnatherum hymenoides	Indian ricegrass	8.7	1.3	12.4	
ELELE	Elymus elymoides ssp. elymoides	bottlebrush squirreltail	0.7	0.0	0.8	
ELLAL	Elymus lanceolatus	thickspike wheatgrass	4.0	0.7	5.0	
ELTR7	Elymus trachycaulus	slender wheatgrass	18.7	4.0	28.9	
HECO26	Hesperostipa comata	needle & thread needlegrass	4.0	0.0	5.8	
LECI4	Leymus cinereus	basin wildrye	4.0	0.7	5.0	
NAVI4	Nassella viridula	green needlegrass	8.0	1.3	9.9	
PASM	Pascopyrum smithii	western wheatgrass	0.7	0.0	0.8	
PSJU3	Psathyrostachys juncea	Russian wildrye	1.3	0.0	1.7	
PSSPI	Pseudoroegneria spicata ssp. inermis	beardless bluebunch wheatgrass	3.3	0.7	4.1	
PSSPS	Pseudoroegneria spicata ssp. Spicata	bearded bluebunch wheatgrass	6.7	0.7	9.1	Desirable Forb/Shrub
		Perennial Grass Totals	60.1	9.4	83.5	Density (#/m ²)
ASCH	Astragalus chamaeleuce	cicada milkvetch	0.0	0.0	0.0	0.03
ASCI4	Astragalus cicer	cicer milkvetch	0.0	0.0	0.0	0.17
CRFL6	Cryptantha flavoculata	roughseed cryptanth	0.0	0.0	0.0	0.07
EREA	Erigeron eatonii	Eaton's fleabane	0.7	0.0	0.8	0.03
LILE3 ³	Linum lewisii	Lewis flax	0.0	0.0	0.0	0.00
MAGR2	Machaeranthera grindelioides	rayless tansyaster	0.7	0.0	0.8	0.13
MESA	Medicago sativa	alfalfa	1.3	0.0	5.0	3.87
PEPA8 ³	Penstemon palmeri	Palmer's penstemon	0.0	0.0	0.0	0.00
		Perennial Forb Totals	2.7	0.0	6.6	4.30
ARTRW	Artemisia tridentata var. wyomingensis	Wyoming big sagebrush	0.0	0.0	0.0	0.10
ATCA2	Atriplex canescens	four-wing saltbush	4.0	0.0	7.5	0.87
ATCO	Atriplex confertifolia	shadscale saltbush	0.0	0.0	0.8	0.13
CHVI8 ³	Chrysothamnus viscidiflorus	yellow rabbitbrush	0.0	0.0	0.0	0.00
GUSA2	Gutierrezia sarothrae	broom Snakeweed	0.7	0.0	0.8	0.17
KRLA2	Krascheninnikovia lanata	winterfat	0.0	0.0	0.0	0.20
SAVE4 ³	Sarcobatus vermiculatus	greasewood	0.0	0.0	0.0	0.00
		Shrub Totals	4.7	0.0	9.1	1.47
ALDE	Alyssum desertorum	desert madwort	0.7	0.0	0.8	
BRTE ³	Bromus tectorum	cheatgrass	0.0	0.0	0.0	
	Totals for Invasive	and Non-Native Species	0.7	0.0	0.8	
		Vegetation Totals	68.2	9.4	100.0	5.77
from each t	ta from 3 randomly placed 25 meter ransect. Foliar cover based upon 1 ^s	t plant species encountered in the	he canopy	Percent (Ground Cover by	y Cover Type ⁴
	ple point. Species composition bas d at each sample point.	ed upon total of all plant specie	es		Bare Ground	
² Sum of density data collected from 10 one-square meter quadrants along each transect.					Biotic Crus	
Only desirable forb and shrub densities were recorded based upon reclamation criteria.				H	erbaceous Litte	r 50.0
³ Plant spec	³ Plant species not encountered in sampling data but were present within the study area.				Woody Litte	r 2.7
	es are not cumulative with vegetation				Duf	
	er from the top layer thru the lower		es for bare		Rocl	
ground hav	e no vegetative, litter or rock cover	above the soil surface.				

Table H2 - Canopy Gap Intercept Data Reclaimed Exploration Corehole Pad P							
Canopy Gaps > 20 centimetersTotal of Gaps > 20 cmGaps 21-50 cmGaps 51-100 cmGaps 101-200 cmGaps 101-200 cm							
Transect 1	665	431	234	0	0		
Transect 2	720	416	304	0	0		
Transect 3	950	535	51	364	0		
Total Gaps (cm)	2335	1382	589	364	0		
% Line in Gaps 31.13 18.43 7.85 4.85 0.00							
Line length for each	transect was 25 me	eters for site total	length of 75 meter	rs			

Table H3 - Transect Coordinates and Access Route Photo-point Locations Reclaimed Exploration Corehole Pad P (Datum: UTM Zone 12, WGS 84)									
	Azimuth from	Transect Starting Point		Transect Er					
Site	starting point (true N)	Northing (mN)	Easting (mE)	Northing (mN)	Easting (mE)	Length			
Reclaimed V	Vell Pad 93-4H								
Transect 1	283°	4424752.11	723078.3449	4424756.347	723056.0714	25 meters			
Transect 2	359°	4424757.943	723080.2266	4424780.292	723077.0066	25 meters			
Transect 3	077°	4424754.559	723082.2926	4424766.628	723103.661	25 meters			
Access Rout	e/Photo-point Lo	cation							
Pad P / Photo-point # 1		4424711.226	723017.7114						
Pad P to Q / Photo-point # 1		4424779.076	723115.1836						
Pad P to Q / Photo-point # 2		4424933.260	723365.430						
Pad P to Q / Photo-point # 3		4425261.908	723443.9527						

Transect Photos, Access Route Photos and Transect Layout Plot



Figure H1 Transect 1 Reclaimed Corehole Pad P

Figure H2 Transect 2 Reclaimed Corehole Pad P



Figure H3 Transect 3 Reclaimed Corehole Pad P

Figure H4 Photo Point 1 - Access Road to Corehole Pad P



Figure H5 Photo Point 1 - Access Route Pad P to Pad Q

Figure H6 Photo Point 2 - Access Route Pad P to Pad Q



Figure H7 Photo Point 3 - Access Route Pad P to Pad Q



Figure H8 Coreholes P & Q - Transect Layout, Access Routes and Access Route Photopoints

Appendix I – Vegetation Sampling Data Reclaimed Corehole Pad Q

	Table I 1 - Vegetation	a Cover, Species Compositi Reclaimed Exploration C			Ground Cover	
	Plant Species Observed with	z it Canopy II	Density Data ²			
Species			percent Foliar	percent Basal	Species	Density Dutu
Symbol	Scientific Name	Common Name	Cover	Cover	Composition	
ACHY	Achnatherum hymenoides	Indian ricegrass	3.3	0.0	4.0	
menn	Elymus elymoides ssp.	Indian neegrass	5.5	0.0	-1.0	
ELELE	elymoides	bottlebrush squirreltail	0.7	0.7	0.8	
ELLAL	Elymus lanceolatus	thickspike wheatgrass	2.0	0.7	2.4	
ELTR7	Elymus trachycaulus	slender wheatgrass	5.3	0.7	6.4	
		needle & thread				
HECO26	Hesperostipa comata	needlegrass	16.7	2.1	20.0	
LECI4	Leymus cinereus	basin wildrye	0.7	0.0	0.8	
NAVI4	Nassella viridula	green needlegrass	6.0	0.0	7.2	
PASM	Pascopyrum smithii	western wheatgrass	2.7	0.7	3.2	
PSJU3 ³	Psathyrostachys juncea	Russian wildrye	0.0	0.0	0.0	
	Pseudoroegneria spicata ssp.	beardless bluebunch				
PSSPI	inermis	wheatgrass	1.3	0.0	2.4	
	Pseudoroegneria spicata ssp.	bearded bluebunch				Desirable
PSSPS	spicata	wheatgrass	0.7	0.0	0.8	Forb/Shrub
1000		Perennial Grass Totals	39.4	4.9	48.0	Density (#/m ²)
ARFR4	Artemisia frigida	fringed sage	0.7	0.0	0.8	0.20
ASCH	Astragalus chamaeleuce	cicada milkvetch	0.0	0.0	0.0	0.07
ASCI4 CHAL	Astragalus cicer	cicer milkvetch	0.7	0.0	0.8	0.00
LILE3	Chenopodium album Linum lewisii	lambsquarter	4.0	0.0	5.6	0.00
LILE3 LUAR3		Lewis flax	0.7	0.0	0.8	0.27
MACA2	Lupinus argenteus Machaeranthera canescens	silvery lupine hoary tansyaster	0.7	0.0	0.8	0.00
MACA2 MESA	Medicago sativa	alfalfa	0.7	0.0	0.8	0.20
PEPA8	Penstemon palmeri	Palmer's penstemon	0.0	0.0	0.0	0.97
SPCO	Sphaeralcea coccinea	scarlet globemallow	0.0	0.0	0.8	0.50
5100	Sprace accounted	Perennial Forb Totals	7.5	0.0	11.2	2.28
	Artemisia tridentata var.			0.0		
ARTRW	wyomingensis	Wyoming big sagebrush	0.0	0.0	0.0	0.07
ATCA2	Atriplex canescens	four-wing saltbush	0.0	0.0	0.0	0.03
CHVI8	Chrysothamnus viscidiflorus	yellow rabbitbrush	3.3	0.0	4.8	0.53
GUSA2	Gutierrezia sarothrae	broom Snakeweed	0.7	0.0	0.8	0.00
KRLA2	Krascheninnikovia lanata	winterfat	0.7	0.0	0.8	0.07
		Shrub Totals	4.7	0.0	6.4	0.70
ALDE	Alyssum desertorum	desert madwort	0.7	0.0	4.0	
BRTE	Bromus tectorum	cheatgrass	13.9	0.0	20.0	
DESO2	Descurainia sophia	yellow mustard	0.7	0.0	0.8	
LASQ	Lappula squarrosa	European stickseed	0.7	0.0	0.8	
LECA5	Lepidium campestre	field pepperweed	0.0	0.0	1.6	
SATR12	Salsola tragus	Russian thistle	4.0	0.0	7.2	
	Totals for Invasiv	e and Non-Native Species	20.0	0.0	34.4	
		Vegetation Totals	71.6	4.9	100.0	2.98
from each t	ata from 3 randomly placed 25 met ransect. Foliar cover based upon 1	st plant species encountered in t	he canopy	Percent (V Cover Type ⁴	
	at each sample point. Species composition based upon total of all plant species				Bare Ground	1 24.0
encountered at each sample point. ² Sum of density data collected from 10 one-square meter quadrants along each transect.					Biotic Crus	
Only desirable forb and shrub densities were recorded based upon reclamation criteria.					lerbaceous Litter	
³ Plant species not encountered in sampling data but were present within the study area.					Woody Litter	
⁴ Percentages are not cumulative with vegetation totals, rather a measure by layer of					Duf	
	er from the top layer thru the lower				Rock	
ground have no vegetative litter or rock cover above the soil surface					KUCF	1.5

ground have no vegetative, litter or rock cover above the soil surface.

Table I 2 - Canopy Gap Intercept DataReclaimed Exploration Corehole Pad Q								
Canopy Gaps > 20 centimeters	Total of Gaps > 20 cm	Gaps 21-50 cm	Gaps 51-100 cm	Gaps 101-200 cm	Gaps >200 cm			
Transect 1	1546	318	448	0	780			
Transect 2	1192	490	213	489	0			
Transect 3	1060	191	584	0	285			
Total Gaps (cm)	3798	999	1245	489	1065			
% Line in Gaps 50.64 13.32 16.60 6.52 14.20								
Line length for each transect was 25 meters for site total length of 75 meters								

Table I 3 - Transect Coordinate LocationsReclaimed Exploration Corehole Pad Q (Datum: UTM Zone 12, WGS 84)								
	Azimuth from Transect Starting Point Transect Ending Point							
Site	starting point (true N)	Northing (mN)	Northing (mN) Easting (mE)		Easting (mE)	Length		
Reclaimed V	Reclaimed Well Pad 93-4H							
Transect 1	150°	4425025.34	723522.6398	4425001.715	723535.3908	25 meters		
Transect 2	204°	4425023.685	723523.0304	4425000.595	723508.5714	25 meters		
Transect 3	258°	4425026.607	723520.3792	4425025.211	723495.5348	25 meters		

Transect Photos and Transect Layout Plot



Figure I 1 Transect 1 Reclaimed Corehole Pad Q

Figure I 2 Transect 2 Reclaimed Corehole Pad Q



Figure I 3 Transect 3 Reclaimed Corehole Pad Q

Appendix J – Vegetation Sampling Data Reclaimed Corehole Pad R

	Table J1 - Vegetation Cover, Species Composition, Species Density & Ground Cover Reclaimed Exploration Corehole Pad R							
	Plant Species Observed with	in Study Area	Line-Poin	Density Data ²				
			percent	percent	•	J.		
Species			Foliar	Basal	Species			
Symbol	Scientific Name	Common Name	Cover	Cover	Composition			
ACHY	Achnatherum hymenoides	Indian ricegrass	16.6	3.4	23.4			
ELLAL	Elymus lanceolatus	thickspike wheatgrass	0.7	0.0	0.8			
ELTR7	Elymus trachycaulus	slender wheatgrass	1.4	0.0	1.6			
		needle & thread		010	110			
HECO26	Hesperostipa comata	needlegrass	6.9	0.0	7.8			
LECI4	Leymus cinereus	basin wildrye	4.1	0.0	4.7			
NAVI4	Nassella viridula	green needlegrass	0.7	0.0	0.8			
PSJU3	Psathyrostachys juncea	Russian wildrye	1.4	0.0	1.6			
	Pseudoroegneria spicata ssp.	beardless bluebunch						
PSSPI	inermis	wheatgrass	5.5	0.7	7.0	Desirable		
THIN6	Thinopyrum intermedium	pubescent wheatgrass	1.4	0.0	1.6	Forb/Shrub		
	· · · · · · · · · · · · · · · · · · ·	Perennial Grass Totals	38.7	4.1	49.3	Density (#/m ²)		
ASCI4	Astragalus cicer	cicer milkvetch	0.0	0.0	0.0	0.03		
ASCO12	Astragalus convallarius	lesser-rushy mlkvetch	0.7	0.0	0.8	0.03		
CAFI	Carex filifolia	threadleaf sedge	0.7	0.7	0.8	0.03		
LILE3	Linum lewisii	Lewis flax	0.0	0.0	0.0	0.17		
MESA	Medicago sativa	alfalfa	6.2	0.7	10.9	8.00		
	Penstemon fremontii var.							
PEFRF5	fremontii	Fremont beardtongue	0.0	0.0	0.0	0.03		
PEPA8	Penstemon palmeri	Palmer's penstemon	0.0	0.0	0.0	0.03		
		Perennial Forb Totals	7.6	1.4	12.5	8.32		
ARTRW	Artemisia tridentata var.	Wyoming big sagebrush	2.1	0.0	2.1	0.27		
	wyomingensis							
ATCA2	Atriplex canescens	four-wing saltbush	7.6	0.7	9.4	0.67		
CHVI8	Chrysothamnus viscidiflorus	yellow rabbitbrush	1.4	0.0	1.6	0.07		
KRLA2 ³	Krascheninnikovia lanata	winterfat	0.0	0.0	0.0	0.00		
PUTR2	Purshia tridentata	antelope bittrebrush	0.0	0.0	0.0	0.03		
SAVE4	Sarcobatus vermiculatus	greasewood	0.0	0.0	0.0	0.03		
		Shrub Totals	11.1	0.7	13.1	1.07		
ALDE ³	Alyssum desertorum	desert madwort	0.0	0.0	0.0			
BASC	Bassia scoparia	burningbush (kochia)	1.4	0.0	1.6			
BRTE	Bromus tectorum	cheatgrass	12.4	0.0	22.7			
LECA5	Lepidium campestre	field pepperweed	0.0	0.0	0.8			
	Totals for Invasiv	e and Non-Native Species	13.8	0.0	25.1			
		Vegetation Totals	71.2	6.2	100.0	9.39		
¹ Sum of da	ta from 3 randomly placed 25 met							
	ansect. Foliar cover based upon 18		Percent C	Fround Cover by	V Cover Type ⁴			
at each sample point. Species composition based upon total of all plant species					Pono Crosse	12.0		
encountered at each sample point.					Bare Ground			
² Sum of density data collected from 10 one-square meter quadrants along each transect.					Biotic Crus			
Only desirable forb and shrub densities were recorded based upon reclamation criteria.					erbaceous Litter			
³ Plant species not encountered in sampling data but were present within the study area.					Woody Litter	r <u>10.3</u>		
⁴ Percentages are not cumulative with vegetation totals, rather a measure by layer of ground cover from the top layer thru the lower layers to the soil surface. Values for bare					Duf	f 0.0		
0		-	les for bare		Rock	K 0.7		
ground have	e no vegetative, litter or rock cover							

Table J2 - Canopy Gap Intercept DataReclaimed Exploration Corehole Pad R								
Canopy Gaps > 20 centimeters	Total of Gaps > 20 cm	Gaps 21-50 cm	Gaps 51-100 cm	Gaps 101-200 cm	Gaps >200 cm			
Transect 1	808	352	456	0	0			
Transect 2	862	416	329	117	0			
Transect 3	1241	431	638	172	0			
Total Gaps (cm)	2911	1199	1423	289	0			
% Line in Gaps 38.81 15.99 18.97 3.85 0.00								
Line length for each transect was 25 meters for site total length of 75 meters								

Table J3 - Transect Coordinates and Access Route Photo-point Locations Reclaimed Exploration Corehole Pad R (Datum: UTM Zone 12, WGS 84)								
	Azimuth from	Transect Starting Point		Transect En				
Site	starting point (true N)	Northing (mN)	Northing (mN) Easting (mE) Northing (mN) Easting (mE		Easting (mE)	Length		
Reclaimed Well Pad 93-4H								
Transect 1	318°	4425572.836	722979.492	4425595.748	722965.1398	25 meters		
Transect 2	348°	4425574.962	722980.0283	4425600.314	722984.5023	25 meters		
Transect 3	105°	4425573.597	722982.7191	4425571.285	723006.2164	25 meters		
Access Route/Photo-point Location								
Pad R / Photo-point # 1		4425609.529	722809.6227					

Transect Photos, Access Route Photos and Transect Layout Plot



Figure J1 Transect 1 Reclaimed Corehole Pad R

Figure J2 Transect 2 Reclaimed Corehole Pad R



Figure J3 Transect 3 Reclaimed Corehole Pad R

Figure J4 Photo Point 1 - Access Road to Corehole Pad R



Figure J5 Corehole Pad R Transect Layout & Access Route