GWDP
Q3 2018

PARAMETER	UNIT	Maximum Daily Limit for Downgradient Wells Only	QAL008A Aug 2018 08/01/18 (Downgradient)	Q	QAL008D Aug 2018 08/01/18 (Downgradient)	Q	QAL025D Aug 2018 08/01/18	Q	QAL026A Aug 2018 08/01/18	Q	QAL026D Aug 2018 08/01/18	Q	QAL029A Aug 2018 08/02/18	Q	QAL029D Aug 2018 08/02/18	Q	QAL050A Aug 2018 08/01/18 (Downgradient)	Q	QAL051A Aug 2018 08/02/18 (Downgradient)	Q	QAL051D Aug 2018 08/02/18 (Downgradient)	Q	QAL052A Aug 2018 08/01/18 (Downgradient)	Q	QAL053A Aug 2018 08/01/18	Q	QAL055A Aug 2018 08/01/18	Q	QAL056A Aug 2018 08/01/18	Q	QAL057A Aug 2018 08/02/18 (Downgradient)	Q	QAL057D Aug 2018 08/02/18 (Downgradient)	Q	QAL075A Aug 2018 08/02/18 (Downgradient)	Q	QAL075D Aug 2018 08/02/18 (Downgradient)	Q
Field																																						
D.O.	ppm	NA	10		6.7		4.9		9.7		11		10		7.0		10		10		4.9		3.7		2.7		9.9		9.9		11		6.6		10		0.8	
ORP	mV	NA	55		66		74		119		74		88		102		63		73		53		47		53		51		62		63		57		64		30	
pH	SU	6.5-9.7	9.2		8.7		7.5		6.6		7.8		7.4		7.0		8.8		7.9		8.0		7.8		8.5		8.3		8.8		9.1		8.6		8.8		8.3	
Specific Conductance	µS/cm @ 25°C	NA	65		102		82		101		56		616		743		148		77		93		99		122		592		73		121		201		83		127	
Temperature	°C	NA	16		11		7.4		NM		7.5		8.8		9.6		12		10.1		8.4		11		9		10		13		12		11		9.1		8.6	
Turbidity	NTU	NA	<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1	
Water Elevation	ft MSL	NA	1394.04		1355.39		1413.41		1417.11		1410.15		1413.86		1407.26		1365.52		1367.19		1367.34		1354.16		1386.92		1366.92		1395.28		1364.44		1364.53		1349.36		1350.83	
Metals																																						
Aluminum	ug/L	150	<50.0		<50.0		<50.0		<50.0		<50.0		<50.0		<50.0		<50.0		143		<50.0		<50.0		<50.0		<50.0		<50.0		<50.0		<50.0		<50.0		<50.0	
Antimony	ug/L	5.0	<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0	
Arsenic	ug/L	6.0	<1.0		3.1		2.8		<1.0		<1.0		<1.0		<1.0		<1.0		1.3		4.6		1.5		7.2		<1.0		<1.0		<1.0		3		<1.0		1.9	
Barium	ug/L	1000	<5.0		6.9		5.1		7.4		<5.0		121		30.6		7.4		5.6		12.9		5.2		7.7		33.4		<5.0		6		8.3		<5.0		5.3	
Beryllium	ug/L	3.0	<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0	
Boron	ug/L	285	<20.0		<20.0		<20.0		<20.0		<20.0		<20.0		<20.0		<20.0		<20.0		<20.0		<20.0		33		<20.0		<20.0		<20.0		<20.0		<20.0		<20.0	
Cadmium	ug/L	3.0	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20	
Chromium	ug/L	52	<1.0		1.8		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		5.9		<1.0		<1.0		1.6		<1.0		<1.0	
Cobalt	ug/L	23	<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		<15.0		68.6		<15.0		<15.0		<15.0		<15.0		<15.0	
Copper	ug/L	10	<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0	
Iron	ug/L	NA	<20.0		<20.0		<20.0		49.2		<20.0		<20.0		<20.0		<20.0		93.4		<20.0		<20.0		<20.0		39.3		<20.0		<20.0		24.2		25		<20.0	
Lead	ug/L	3.0	<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0	
Lithium	ug/L	88	<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0		<8.0	
Manganese	ug/L	50	<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0	
Mercury	ng/L	NA	<0.50		<0.50		0.81		0.54		<0.50		0.9		2.64		<0.50		1.35		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50	
Molybdenum	ug/L	22	<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0		<5.0	
Nickel	ug/L	57	<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		2.4		<2.0		<2.0		<2.0		<2.0		<2.0	
Selenium	ug/L	5.0	<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0	
Silver	ug/L	0.40	<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20		<0.20	
Strontium	ug/L	2300	9.5		35.8		29.3		30.4		11		184		43.8		32.3		17.9		75.9		46.2		73		125		10.3		18.4		76.4		15.8		51.9	
Thallium	ug/L	1.0	<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0	
Uranium	ug/L	NA	<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0		<1.0	
Vanadium	ug/L	3.1	2.3	J	2.1	J	4.0	J	<1.4		<1.4		<1.4		<1.4		<1.4		3.2	J	1.8	J	1.5	J	<1.4		<1.4		<1.4		<1.4		<1.4		2.2	J	<1.4	
Zinc	ug/L	1200	<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0	
Major Anions																																						
Alkalinity, Bicarbonate	mg/L	NA	32.5		48.4		44.8		52.7		32.3		38.7		99		49.8		34		50.5		54.7		57.7		69.6		33.8		40.7		61		38.7		59.5	
Chloride	mg/L	NA	<1.0		1.3		1.0		1.1		1.0		175		187		17.1		2.2		2.0		1.4		<1.0		121		1.0		10.5		22.2		1.1		<1.0	
Fluoride	mg/L	1.0	<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10		<0.10	
Nitrogen, Ammonia	mg/L	10	<0.020		<0.050		<0.020		<0.020		<0.020		<0.020		<0.020		<0.020		<0.020		<0.020		<0.020		<0.020		<0.020		<0.020		<0.020		<0.020		<0.020		<0.020	
Nitrogen, Nitrate	mg/L	10	0.89		0.12		0.11		0.72		0.11		4.1		1.1		0.59		2.8		0.61		0.26		<0.050		0.86		0.91		1.0		0.27		1.0		0.053	
Nitrogen, Nitrite	mg/L	NA	<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050	
Nitrogen, Total Inorganic	mg/L	10	0.89		0.12		0.11		0.72		0.11		4.1		1.1		0.59		2.8		0.61		0.26		<0.050		0.86		0.92		1.0		0.27		1.0		0.055	
Phosphorus, Total	mg/L	NA	0.038	e	0.023	e	0.018	e	0.015	e	0.022	e	0.011	e	0.02	e	0.017	e	0.031	e	0.017	e	0.012	e	0.028	e	0.011	e	0.043	e	0.021	e	0.022	e	0.024	e	0.016	e
Sulfate	mg/L	250	<1.0		4.2		5.1		2.1		1.9		5.8		11.1		3.2		1.3		3.5		4.9		6.3		7.3		<1.0		<1.0		4.2		<1.0		6.4	
Major Cations																																						
Calcium	mg/L	NA	6.9		13.9		12.2		21.3		9.9		47.9		17		18.1		12.5		14.1		15.6		15.9		56.2		9.0		16.1		26.6		11.6		17.7	
Magnesium	mg/L	NA	1.0		3.0		2.9		3.2		1.5		8.9		6.8		3.6		2.4		3.1		3.7		4.0		12.9		1.4		2.9		5.9		2.4		4.0	
Potassium	mg/L	NA	0.75		0.86		0.64		1.2		<0.50		2.9		2		0.92		0.68		1.2		1.0		1.2		1.9		0.82		0.83		1.4		0.6		1.1	
Sodium	mg/L	NA	4.1		1.2		2.9		1.2		0.69		62		155		2.5		1.3		2.5		1.5		1.9		29.7		3.5		2.5		1.7		1.2		1.5	
General																																						
Hardness	mg/L	NA	21		47		42		66		31		156		70		60		41		48		54		56		193		28		52		91		39		61	

Notes:
e: estimated value. The laboratory statement of data qualifications indicates that a quality control limit for this parameter was exceeded.
J: estimated value. Reported concentration was between method detection limit and reporting limit.
*The 3.1 ug/L MDL for vanadium does not apply to monitoring wells QAL008A and QAL051A.
Value is outside of maximum daily limit as stipulated in Permit GW1810162 for compliance monitoring locations.