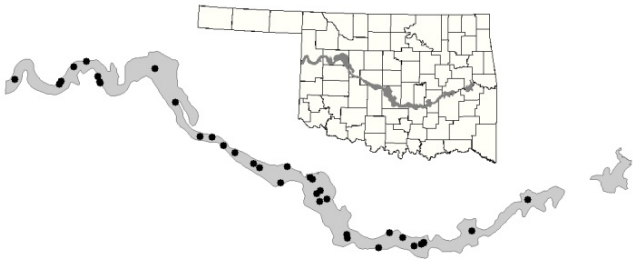
Canadian River Aquifer

Baseline Sample Period	Sampling Sites	Water Level Sites
August-September 2013	34	44



General		
	Location	Oklahoma state line to Lake Eufaula
	Area (km^2)	5544
	Storage (acre-feet)	5,010,000
	Primary Uses	Municipal & Domestic Supply; Irrigation; Mining; Industrial; Stock
	Category	Alluvial & Terrace

Parameters	General Field	Parameter	Mean	SEM	Minimum	25%	Median	75%	Maximum	Comments
		Well Depth (ft)	66	2.7	14	54	63	80	112	N=49
		Depth to Water (ft)	21.32	2.22	2.68	11	15.05	32.21	54.32	Below ground surface
		Temperature (°C)	19.99	0.229	17.95	18.79	20.16	21.03	22.43	
		Specific Conductance (µS/cm)	1370	167	102	724	908	2080	3710	
		Dissolved Oxygen (mg/L)	3.75	0.512	0.10	0.83	3.44	6.52	8.88	
		pH (units)	6.94	0.051	5.91	6.86	7.01	7.12	7.45	
		Alkalinity (mg/L)	266	21.7	26.4	187	275	329	537	
		Hardness (mg/L)	666	97.2	25.8	289	394	1110	2230	
		Calculated Bicarbonate (mg/L)	337	25.5	68.8	246	341	409	661	
		Total Dissolved Solids (mg/L)	1040	157	86.3	436	533	1750	3420	SMCL: 500; 23 sites over

Parameters	Nutrient Constituents	Parameter	Mean	SEM	Minimum	25%	Median	75%	Maximum	Comments
		Ammonia (mg/L)	All Values <0.1, except 8 (0.20,0.23,0.24,0.26,0.29,0.35,0.46,0.97)							
		Nitrate & Nitrite (mg/L)	3.34	0.739	<0.05	<0.05	1.19	5.27	16.1	MCL: 10; 5 over
		Total Dissolved Phosphorus (mg/L)	0.0603	0.016	<0.005	<0.005	0.035	0.074	0.516	

Parameters	Mineral Constituents	Parameter	Mean	SEM	Minimum	25%	Median	75%	Maximum	Comments
		Bromide (µg/L)	353	36.9	<100	217	320	449	966	
		dissolved Calcium (mg/L)	163	21.2	16.7	77.9	112	223	445	
		Chloride (mg/L)	59.2	13.2	<10	14.1	33.9	61.8	380	SMCL: 250; 1 over
		Fluoride (mg/L)	0.206	0.024	<0.2	<0.2	<0.2	0.305	0.56	MCL: 4; 0 over
		dissolved Magnesium (mg/L)	51.3	7.58	5.3	16.7	39.3	69.5	180	
		dissolved Potassium (mg/L)	1.95	0.22	<0.5	0.85	1.95	2.40	5.00	
		dissolved Silica (mg/L)	23.4	1.32	11	20.1	22.7	25.0	54.2	
		dissolved Sodium (mg/L)	77.8	15.2	10.5	22.2	45.9	94.0	430	
		Sulfate (mg/L)	463	104	<10	37.7	99.9	943	1860	SMCL: 250; 13 over

Parameters	Parameter	Mean	SEM	Minimum	25%	Median	75%	Maximum	Comments
Metal & Trace Element Constituents	dissolved Arsenic (µg/L)	All Values <10, except 2 (12.2,19.9)							MCL: 10; 2 over
	dissolved Barium (µg/L)	167	35.8	<10	20.3	81.4	230	987	MCL: 2000; 0 over
	dissolved Boron (µg/L)	400	105	<50	77.6	206	421	2970	HA: 6000; 0 over
	dissolved Chromium (µg/L)	All Values <5, except 3 (6.1,6.4,9.4)							MCL: 100; 0 over
	dissolved Copper (µg/L)	All Values <5, except 2 (6.7,13.1)							MCL: 1300; 0 over
	dissolved Iron (µg/L)	839	244	<50	<50	<50	828	4940	SMCL: 300; 12 over
	dissolved Manganese (µg/L)	210	50.7	<50	<50	<50	376	1090	SMCL: 50; 14 over. HA: 300; 9 over
	dissolved Mercury (µg/L)	All Values <0.05, except 1 (0.73)							MCL: 2; 0 over
	dissolved Molybdenum (µg/L)	All Values <10, except 3 (14.1,19,51.4)							HA: 40; 1 over
	dissolved Selenium (µg/L)	All Values <20, except 1 (31.8)							MCL: 50; 0 over
	dissolved Uranium (µg/L)	7.68	1.79	<1	<1	3.45	8.75	40.8	MCL: 30; 2 over
	dissolved Vanadium (µg/L)	28.6	4.22	<10	6.40	18.8	44.3	94.1	
	dissolved Zinc (µg/L)	37.2	13.8	<10	<10	10.5	25.5	424	SMCL: 5000; 0 over. HA: 2000; 0 over

Parameters	Parameters Below Detectable Limits			
	Aluminum Antimony Beryllium	Cadmium Cobalt	Lead Nickel	Silver Thallium

SEM = Standard Error of the Mean
MCL = EPA's Maximum Contaminant Level – enforced for public drinking water systems
SMCL = EPA's Secondary MCL – guidelines not enforced
HA = EPA's Health Advisory

Note: Groundwater samples collected for GMAP were filtered in the field, resulting in dissolved concentrations of constituents. The total concentration for any given constituent might be higher for an unfiltered sample from the same source.