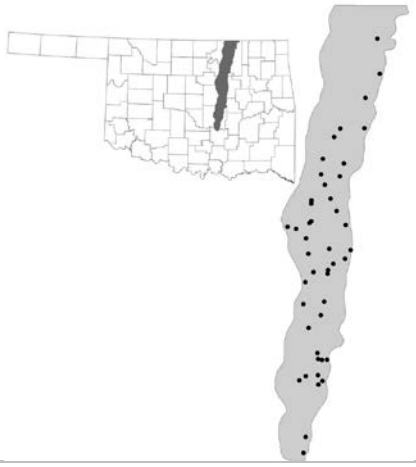
Ada-Vamoosa Aquifer

Baseline Sample Period	Sampling Sites	Water Level Sites
September 2014	44	44



General		
	Location	North Central to Central Oklahoma
	Area (km^2)	6,713
	Capacity (acre-feet)	14,900,000
	Primary Uses	Public Supply; Domestic; Industrial
	Category	Bedrock – Inter-bedded shale/sandstone

Parameters	General Field	Parameter	Mean	SEM[i]	Minimum	25%	Median	75%	Maximum	Comments
		Well Depth (ft)	216.3	18.3	72	141.3	180	253.8	850	n=50
		Depth to Water (ft)	79.29	8.01	11.65	43.33	71.99	104.7	321.2	Below ground surface
		Temperature (°C)	19.76	0.188	17.47	18.59	19.67	20.71	23	
		Specific Conductance (µS/cm)	684.9	49.54	170.3	466.4	626.9	839	1678	
		Dissolved Oxygen (mg/L)	2.78	0.408	0.18	0.42	1.64	5.45	8.56	
		pH (units)	7.02	0.075	5.98	6.79	7.05	7.22	8.41	
		Reduction Potential (mV)	315.4	18.37	-28	252.1	343.1	391.3	493.3	n=43
		Alkalinity (mg/L)	234.2	12.78	55	179	249.5	293.3	391	
		Hardness (mg/L)	220.6	17.58	11.8	122.5	224	280.3	499	
		Calculated Bicarbonate (mg/L)	288	15.7	67.8	220.5	307.5	361.3	482	
		Total Dissolved Solids (mg/L)	393.2	32.35	97.5	254.5	344	460	1120	SMCL: 500; 10 over

Parameters	Nutrient Constituents	Parameter	Mean	SEM[i]	Minimum	25%	Median	75%	Maximum	Comments
		Ammonia (mg/L)	0.124	0.02	<0.1	<0.1	<0.1	0.143	0.54	
		Nitrate & Nitrite (mg/L)	1.48	0.467	<0.05	<0.05	0.515	1.69	18.9	MCL: 10; 1 over
		Total Dissolved Phosphorus (mg/L)	0.029	0.009	<0.005	<0.005	<0.005	0.023	0.351	

Parameters	Mineral Constituents	Parameter	Mean	SEM[i]	Minimum	25%	Median	75%	Maximum	Comments
		Bromide (µg/L)	335.6	24.13	102	230.3	310	407.3	695	
		dissolved Calcium (mg/L)	49.36	3.81	3	29.8	48.3	62.3	105	
		Chloride (mg/L)	31.58	4.49	<10	11.65	17.65	41.15	117	SMCL: 250; 0 over
		Fluoride (mg/L)	0.28	0.062	<0.2	<0.2	<0.2	0.27	2.29	MCL: 4; 0 over
		dissolved Magnesium (mg/L)	21.84	1.93	1	11.7	23.55	29.4	62.1	
		dissolved Potassium (mg/L)	1.96	0.13	0.7	1.3	1.9	2.63	4.3	
		dissolved Silica (mg/L)	14.38	0.623	7.8	11.45	14.35	16.83	29.4	
		dissolved Sodium (mg/L)	67.92	12.42	5.9	14.68	36.6	80.9	351	
		Sulfate (mg/L)	75.4	19.58	<10	13.3	24.2	76.6	721	SMCL: 250; 3 over

Parameters	Metal & Trace Element Constituents	Parameter	Mean	SEM[i]	Minimum	25%	Median	75%	Maximum	Comments
		dissolved Arsenic (µg/L)	1.28	0.157	<1	<1	1.1	1.53	4.1	MCL: 10; 0 over
		dissolved Barium (µg/L)	91.22	12.52	8.6	36.45	64.5	111.3	348	MCL: 2000; 0 over
		dissolved Boron (µg/L)	507.2	145.4	<20	44.98	99.1	502.3	4810	HA: 6000; 0 over
		dissolved Copper (µg/L)	All Values <5, except 9 (5.1, 5.6, 5.6, 5.8, 6.3, 6.4, 9.5, 16.4, 755)							MCL: 1300; 0 over
		dissolved Iron (µg/L)	107.9	42.07	<20	<20	21.35	44.65	1570	SMCL: 300; 5 over
		dissolved Lead (µg/L)	All Values <0.5, except 6 (0.8, 0.8, 0.9, 0.9, 1.3, 1.3)							MCL: 15; 0 over
		dissolved Manganese (µg/L)	34.25	11.25	<5	<5	7.35	19.05	366	SMCL:50; 6 over. HA:300; 1 over.
		dissolved Molybdenum (µg/L)	All Values <5, except 1 (7)							HA: 40; 0 over
		dissolved Uranium (µg/L)	1.09	0.229	<1	<1	<1	1.2	8.1	MCL: 30; 0 over
		dissolved Vanadium (µg/L)	8.74	0.784	<5	<5	8.15	13.48	22.3	
		dissolved Zinc (µg/L)	18.84	5.08	<5	<5	6.1	14.25	164	SMCL: 5000; 0 over. HA: 2000; 0 over.

Parameters	Parameters Below Detectable Limits				
		Aluminum Antimony Beryllium	Cadmium Chromium	Cobalt Mercury	Nickel Selenium Silver

[i] Standard Error of the Mean