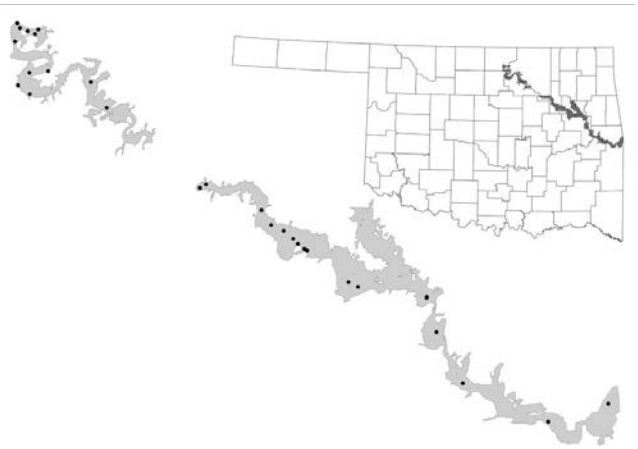
Arkansas River Aquifer

Baseline Sample Period	Sampling Sites	Water Level Sites
September-October 2014	29	22



General	
Location	Runs North Central to East Central Oklahoma
Area (km^2)	2,223
Capacity (acre-feet)	946,000
Primary Uses	Irrigation; Public Supply; Domestic; Industrial
Category	Alluvial & Terrace

Parameters — General Field

Parameter	Mean	SEM[i]	Minimum	25%	Median	75%	Maximum	Comments
Well Depth (ft)	45.41	3.07	26	35.25	40	49.5	116	n=34
Depth to Water (ft)	24.63	2.97	0	16.28	22.51	27.23	60.31	Below ground surface
Temperature (°C)	19.39	0.402	16.49	17.92	18.98	19.7	27.25	
Specific Conductance (µS/cm)	650.6	68.0	122.5	428	641	916.5	1688	
Dissolved Oxygen (mg/L)	3.89	0.491	0.24	1.28	3.89	5.81	8.7	
pH (units)	6.57	0.072	5.69	6.37	6.63	6.83	7.25	
Reduction Potential (mV)	304.1	22.27	48.6	263.5	370.3	378.4	560.6	
Alkalinity (mg/L)	233.8	25.52	39	124	224	333	489	
Hardness (mg/L)	263.7	26.75	27	179	255	404	484	
Calculated Bicarbonate (mg/L)	283.2	31.54	48	153	269	410	597	
Total Dissolved Solids (mg/L)	386.5	36.31	88.8	279	385	515	914	SMCL: 500; 9 over

Parameters — Nutrient Constituents

Parameter	Mean	SEM[i]	Minimum	25%	Median	75%	Maximum	Comments
Ammonia (mg/L)	All Values <0.1, except 5 (0.15, 0.17, 0.18, 0.21, 0.91)							
Nitrate & Nitrite (mg/L)	3.46	0.716	<0.05	0.22	2.42	5.5	17.4	MCL: 10; 1 over
Total Dissolved Phosphorus (mg/L)	0.148	0.041	0.025	0.063	0.1	0.125	1.17	

Parameters — Mineral Constituents

Parameter	Mean	SEM[i]	Minimum	25%	Median	75%	Maximum	Comments
Bromide (µg/L)	361.5	44.88	<100	212	291	481	1080	
dissolved Calcium (mg/L)	70.65	7.06	7.6	49.4	71	104	133	
Chloride (mg/L)	41.37	12.69	<10	<10	11.6	53.6	342	SMCL: 250; 1 over
Fluoride (mg/L)	0.204	0.017	<0.2	<0.2	0.24	0.26	0.4	MCL: 4; 0 over
dissolved Magnesium (mg/L)	15.95	1.74	1.9	11	14.6	20.6	36.8	
dissolved Potassium (mg/L)	1.96	0.248	0.5	1.1	1.6	2.3	5.7	
dissolved Silica (mg/L)	26.02	1.93	7.82	19.4	22.2	33.1	45.2	
dissolved Sodium (mg/L)	38.83	8.8	7.8	14.1	24.8	40.1	240	
Sulfate (mg/L)	37.01	5.75	<10	16.5	26.5	51.4	125	SMCL: 250; 0 over

Parameters	Parameter	Mean	SEM[i]	Minimum	25%	Median	75%	Maximum	Comments
Metal & Trace Element Constituents	dissolved Arsenic (µg/L)	0.983	0.164	<1	<1	<1	1.3	4.1	MCL: 10; 0 over
	dissolved Barium (µg/L)	257.1	36.04	58.6	124	209	345	885	MCL: 2000; 0 over
	dissolved Boron (µg/L)	51.74	8.44	<20	<20	45.7	70	232	HA: 6000; 0 over
	dissolved Chromium (µg/L)	All Values <5, except 1 (5.8)							MCL: 100; 0 over
	dissolved Copper (µg/L)	5.45	0.98	<5	<5	<5	7.5	26.7	MCL: 1300; 0 over
	dissolved Iron (µg/L)	901.6	443.9	<20	<20	20.4	283	12200	SMCL: 300; 7 over
	dissolved Manganese (µg/L)	514.9	156.3	<5	<5	242	674	3970	SMCL: 50; 15 over. HA: 300; 13 over.
	dissolved Molybdenum (µg/L)	All Values <5, except 1 (5.7)							HA: 40; 0 over
	dissolved Uranium (µg/L)	1.66	0.393	<1	<1	<1	2.1	9.2	MCL: 30; 0 over
	dissolved Vanadium (µg/L)	5.14	0.721	<5	<5	<5	7.9	15	
	dissolved Zinc (µg/L)	45.3	15.49	<5	<5	6.8	37.8	371	SMCL: 5000; 0 over. HA: 2000; 0 over.

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

[i] Standard Error of the Mean