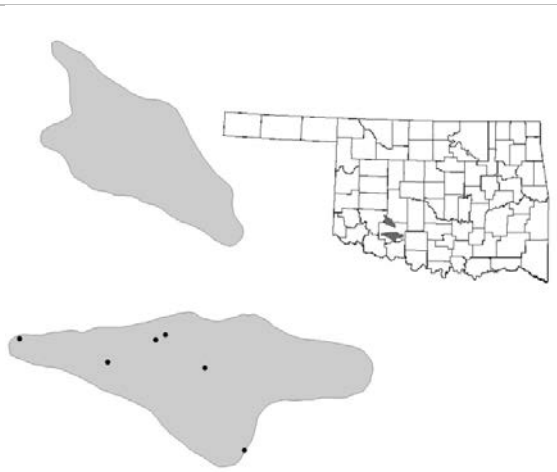
Arbuckle-Timbered Hills Aquifer

Baseline Sample Period	Sampling Sites	Water Level Sites
July 2015	6	3



General	
Location	Southwest Oklahoma
Area (km^2)	973
Capacity (acre-feet)	962,000
Primary Uses	Public Supply; Domestic; Industrial
Category	Bedrock – inter-bedded limestone, dolomite, sandstone

Parameters – General Field

Parameter	Mean	SEM[i]	Minimum	25%	Median	75%	Maximum	Comments
Well Depth (ft)	1212	218.3	618	908	1200	1305	2243	n=7
Depth to Water (ft)	109.90	40.20	64.50	--	75.25	--	190.10	Below ground surface
Temperature (°C)	21.53	1.05	19.41	--	20.80	--	26.23	
Specific Conductance (µS/cm)	1280	407	547	--	1010	--	3250	
Dissolved Oxygen (mg/L)	1.42	0.564	-0.01	--	1.37	--	3.69	
pH (units)	8.55	0.135	8.03	--	8.56	--	8.92	SMCL: 6.5-8.5; 4 over
Reduction Potential (mV)	78.8	44.7	-64.2	--	66.7	--	237	
Alkalinity (mg/L)	283	27.8	199	--	276	--	383	
Hardness (mg/L)	23.5	4.09	12.0	--	21.5	--	41.0	
Calculated Bicarbonate (mg/L)	345	33.9	243	--	336	--	467	
Total Dissolved Solids (mg/L)	708	218	326	--	562	--	1760	SMCL: 500; 4 over

Parameters – Nutrient Constituents

Parameter	Mean	SEM[i]	Minimum	25%	Median	75%	Maximum	Comments
Ammonia (mg/L)	0.147	0.023	<0.1	--	0.17	--	0.20	
Nitrate & Nitrite (mg/L)	All Values <0.05, except 1 (0.06)							MCL: 10; 0 over
Total Dissolved Phosphorus (mg/L)	All values <0.005, except 1 (0.013)							

Parameters – Mineral Constituents

Parameter	Mean	SEM[i]	Minimum	25%	Median	75%	Maximum	Comments
Bromide (µg/L)	788	367	255	--	460	--	2590	
dissolved Calcium (mg/L)	3.63	1.03	1.4	--	2.7	--	7.0	
Chloride (mg/L)	169	97.9	28.4	--	69.7	--	648	SMCL: 250; 1 over
Fluoride (mg/L)	8.56	1.95	3.41	--	7.90	--	15.9	MCL: 4; 5 over
dissolved Magnesium (mg/L)	1.52	0.662	<0.5	--	0.9	--	4.4	
dissolved Potassium (mg/L)	1.50	0.461	0.7	--	1.1	--	3.7	
dissolved Silica (mg/L)	10.6	0.287	9.96	--	10.4	--	11.7	
dissolved Sodium (mg/L)	274	89.0	121	--	212	--	705	
Sulfate (mg/L)	70.1	35.9	<10	--	46.6	--	243	SMCL: 250; 0 over

Parameters	Metal & Trace Element Constituents	Parameter	Mean	SEM[i]	Minimum	25%	Median	75%	Maximum	Comments
		dissolved Arsenic (µg/L)	24.2	11.5	<1	--	14.6	--	79.5	MCL: 10; 5 over
		dissolved Barium (µg/L)	14.3	3.64	3	--	15.1	--	26.2	MCL: 2000; 0 over
		dissolved Boron (µg/L)	1830	502	571	--	1590	--	3490	HA: 6000; 0 over
		dissolved Chromium (µg/L)	All Values <1, except 1 (1)							MCL: 100; 0 over
		dissolved Copper (µg/L)	All Values <1, except 1 (1)							MCL: 1300; 0 over
		dissolved Iron (µg/L)	46.4	29.9	<20	--	<20	--	193	SMCL: 300; 5 over
		dissolved Manganese (µg/L)	All Values <5, except 1 (6.7)							SMCL:50; 0 over. HA:300; 0 over.
		dissolved Molybdenum (µg/L)	17.6	6.22	<5	--	13.1	--	44.2	HA: 40; 1 over
		dissolved Selenium (µg/L)	3.48	1.49	1.4	--	2	--	10.8	MCL: 50; 0 over
		dissolved Zinc (µg/L)	All values <5, except 1 (13.1)							SMCL: 5000; 0 over HA: 2000; 0 over

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

[i] Standard Error of the Mean