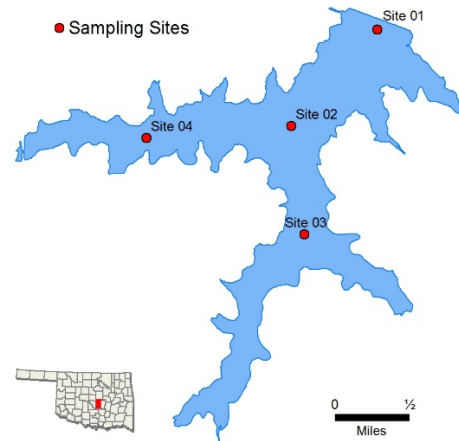


Shawnee Twin No. 1



Sample Period	Times Visited	Sampling Sites
November 2018 – September 2019	4	4

General	Location	Pottawatomie County
	Impoundment	1935
	Area	1,336 acres
	Capacity	22,600 acre-feet
	Purposes	Water Supply, Recreation

Parameters	In-Situ	Parameter (<i>Descriptions</i>)	Result	Notes/Comments
		Average Turbidity	12 NTU	100% of values < OWQS of 25 NTU
		Average Secchi Disk Depth	74.2 cm	
		Water Clarity Rating	Good	
		Chlorophyll-a	8.93 mg/m ³	
		Trophic State Index	52	Previous Value = 47
	Trophic Class	Eutrophic		
	Profile	Salinity	0.09 – 0.13 ppt	
		Specific Conductivity	195.2 – 277.1 μS/cm	
		pH	7.10 – 8.27 pH units	Neutral to slightly alkaline
		Oxidation-Reduction Potential	45.1 to 468.0 mV	
		Dissolved Oxygen	Up to 30% of water column < 2 mg/L in September	
	Nutrients	Surface Total Nitrogen	0.375 mg/L to 0.765 mg/L	
		Surface Total Phosphorus	0.012 mg/L to 0.026 mg/L	
		Nitrogen to Phosphorus Ratio	31:1	Phosphorus limited

Beneficial Uses	Click to learn more about Beneficial Uses	Turbidity	pH	Dissolved Oxygen	Metals	TSI	True Color	Sulfates	Chlorides	Total Dissolved Solids	Enterococci & E. coli	Chlor-a
	Fish & Wildlife Propagation	NS	S	NEI	S							
	Aesthetics					S	*					
	Agriculture							S	S	S		
	Primary Body Contact Recreation										S	
	Public & Private Water Supply											

S = Fully Supporting
NS = Not Supporting
NEI = Not Enough Information

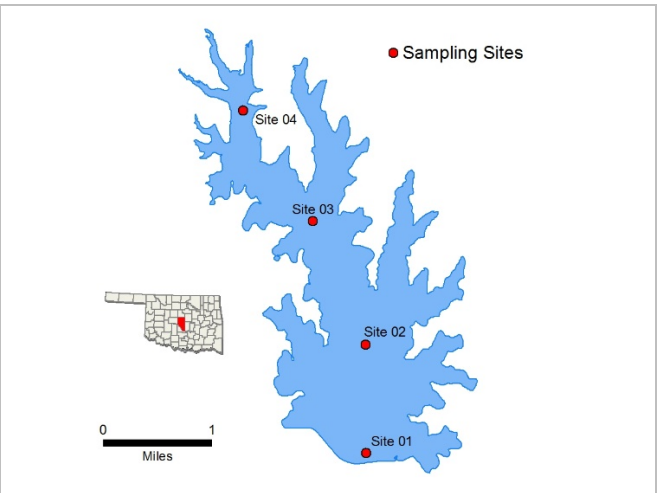
Notes *Standards revision, true color is for permitting purposes only

NTU = nephelometric turbidity units OWQS = Oklahoma Water Quality Standards mg/L = milligrams per liter ppt = parts per thousand
 μS/cm = microsiemens per centimeter mV = millivolts μS/cm = microsiemens/cm En = Enterococci
 E. coli = Escherichia coli Chlor-a = Chlorophyll-a

Stanley Draper

Sample Period	Times Visited	Sampling Sites
October 2015 – August 2016	4	5

General	Location	Cleveland County
	Impoundment	1962
	Area	2,900 acres
	Capacity	100,000 acre-feet
	Purposes	Water Supply, Recreation

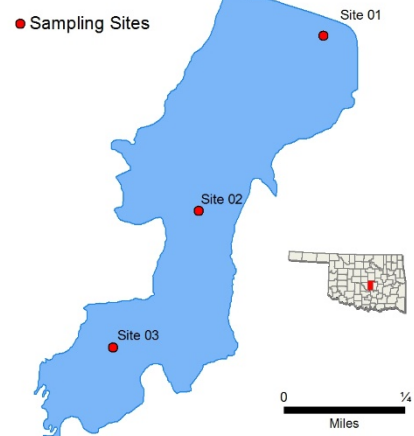


Parameters	Parameter (<i>Descriptions</i>)		Result	Notes/Comments
	In Situ	Average Turbidity	8 NTU	100% of values < OWQS of 25 NTU
		Average Secchi Disk Depth	104 cm	
		Water Clarity Rating	Excellent	
		Chlorophyll-a	2.7 mg/m ³	
		Trophic State Index	40	Previous value = 36
		Trophic Class	Oligotrophic	
	Profile	Salinity	0.05 – 0.06 ppt	
		Specific Conductivity	108.7 – 132.7 µS/cm	
		pH	6.81 – 8.34 pH units	
		Oxidation-Reduction Potential	176.1 – 463.7 mV	
		Dissolved Oxygen	Up to 62% of water column < 2 mg/L in August	
	Nutrients	Surface Total Nitrogen	0.26 mg/L to 0.55 mg/L	
		Surface Total Phosphorus	0.010 mg/L to 0.015 mg/L	
		Nitrogen to Phosphorus Ratio	31:1	Phosphorus limited

Beneficial Uses	Click to learn more about Beneficial Uses	Turbidity	pH	Dissolved Oxygen	Metals	TSI	True Color	Sulfates	Chlorides	Total Dissolved Solids	Enterococci & E. coli	Chlor-a
	Fish & Wildlife Propagation	NS	S	S	S							
	Aesthetics					S	*					
	Agriculture							S	S	S		
	Primary Body Contact Recreation										S	
	Public & Private Water Supply											
<i>S = Fully Supporting</i> <i>NS = Not Supporting</i> <i>NEI = Not Enough Information</i>		Notes *Standards revision, true color is for permitting purposes only										

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 E. coli = Escherichia coli Chlor-a = Chlorophyll-a

Tecumseh



Sample Period	Times Visited	Sampling Sites
October 2007 – July 2008	4	5

General	Location	Pottawatomie County
	Impoundment	1934
	Area	127 acres
	Capacity	1,118 acre feet
	Purposes	Waters Supply, and Recreation

Parameters	In Situ	Parameter (<i>Descriptions</i>)	Result	Notes/Comments
		Average Turbidity	132 NTU	All values > 25 NTU
		Average Secchi Disk Depth	11 cm	All values > OWQS of 70
		Water Clarity Rating	poor	
		Chlorophyll-a	6.52 mg/m ³	
		Trophic State Index	49	Previous value = 57
	Trophic Class	mesotrophic		
	Profile	Salinity	0.00 – 0.10 ppt	
		Specific Conductivity	105.6 – 141 µS/cm	
		pH	7.08 – 7.60 pH units	Neutral
		Oxidation-Reduction Potential	337 to 537 mV	
		Dissolved Oxygen		D.O. always > 5.0 mg/L
	Nutrients	Surface Total Nitrogen	1.01 mg/L to 1.55 mg/L	
		Surface Total Phosphorus	0.066 mg/L to 0.131 mg/L	
		Nitrogen to Phosphorus Ratio	12:1	Phosphorus limited

Beneficial Uses	Click to learn more about Beneficial Uses	Turbidity	pH	Dissolved Oxygen	Metals	TSI	True Color	Sulfates	Chlorides	Total Dissolved Solids	Enteroc. & E. coli	Chlor-a
	Fish & Wildlife Propagation	NS	S	S	S							
	Aesthetics					S	*					
	Agriculture							S	S	S		
	Primary Body Contact Recreation										S	
	Public & Private Water Supply											

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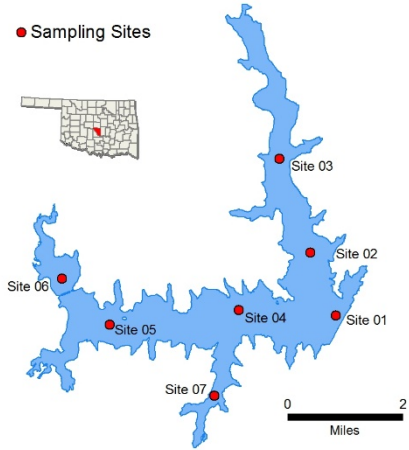
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 E. coli = Escherichia coli Chlor-a = Chlorophyll-a

Thunderbird

Sample Period	Times Visited	Sampling Sites
October 2014 – July 2015	4	7

General	Location	Cleveland County
	Impoundment	1965
	Area	6,070 acres
	Capacity	119,600 acre-feet
	Purposes	Flood Control, Water Supply, Recreation, Fish & Wildlife



Parameters	In Situ	Parameter (<i>Descriptions</i>)	Result	Notes/Comments
		Average Turbidity	14 NTU	4% of values > OWQS of 25 NTU
		Average Secchi Disk Depth	59 cm	
		Water Clarity Rating	Average	
		Chlorophyll-a	21 mg/m ³	
		Trophic State Index	61	Previous value = 56
	Trophic Class	Hypereutrophic		
	Profile	Salinity	0.13 – 0.26 ppt	
		Specific Conductivity	281.5 – 530 µS/cm	
		pH	7.14 – 8.68 pH units	Neutral to slightly alkaline
		Oxidation-Reduction Potential	90.2 to 454 mV	
		Dissolved Oxygen	Up to 67% of water column < 2 mg/L in July	Occurred at sites 1, the dam
	Nutrients	Surface Total Nitrogen	0.80 mg/L to 1.27 mg/L	
		Surface Total Phosphorus	0.018 mg/L to 0.064 mg/L	
		Nitrogen to Phosphorus Ratio	23:1	Phosphorus limited

Beneficial Uses	Click to learn more about Beneficial Uses	Turbidity	pH	Dissolved Oxygen	Metals	TSI	True Color	Sulfates	Chlorides	Total Dissolved Solids	Enterococci & E. coli	Chlor-a
	Fish & Wildlife Propagation	NS	S	NS	S							
	Aesthetics					NEI*	S					
	Agriculture							S	S	S		
	Primary Body Contact Recreation										S	
	Public & Private Water Supply											NS

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Notes
 * The lake is listed in the Oklahoma Water Quality Standards (WQS) as a Nutrient Limited watershed (NLW). This listing means that the lake is considered threatened from nutrients until a more intensive study can confirm the Aesthetics beneficial use non-support status.

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