



# Your Stream Health

Stream samples are collected from five public access areas weekly by the Christian County Health Department EPHS staff, between Memorial Day and Labor Day. This is a community service to our residents and visitors of Christian County. Sites selected are based on their accessibility where people might come in contact with the water.

Bacterial monitoring is a method to determine the potential health risk of water exposure. Bacteria are microscopic, single-celled organisms that can be found in virtually any environment. Bacterial indicators of pollution are the species found in the intestines of warmblooded animals, including humans, where many pathogens originate. Indicator bacteria in a waterway come from many sources, including animal droppings, faulty or leaking septic or sewage systems, stormwater runoff, and disturbed sediments. The most common recreational water illnesses caused by swallowing water contaminated by *E. coli*, are Shigella, Giardia and Cryptosporidium.

The US Environmental Protection Agency's (USEPA) established recreational water quality criteria for bacterial levels, which states that no single water sample should have an *E. coli* count that exceeds 235 CFUs (colony forming units) per 100 ml of water. If two consecutive samples show *E. coli* levels above 235 CFUs an advisory is posted and will not be removed until two consecutive samples have results <200 CFU.

Stream	Date	Weather Condition	Nitrate (mg/L)	pH	Air Temp (°C)	Water Temp (°C)	Dissolved Oxygen (mg/L)	D.O % Saturation	Conductivity	Turbidity (NTUs)	Chloride (mg/L)	E. coli CFU MPN
Target			< 2 mg/l	6.5 - 9.0		0 -34° C	5-15 mg/l	> 80% - Healthy	No standards			< 235 CFU
<b>Linden</b>												
	1/23/2017	Clear	1.00	7.9	14.0	11.0	10.2	91.0	342	< 10	< 27	5.3
	2/2/2017	Cloudy	1.00	8.2	7.0	6.5	11.2	88.0	334	< 10	< 27	2.0
	3/1/2017	Clear	0.50	8.1	12.0	11.0	8.4	73.0	258	< 10	< 27	11.1
	4/5/2017	Cloudy	1.00	7.9	10.5	12.5	8.8	74.0	277	25	< 27	>200.5 ⚠
	5/9/2017	Clear	0.50	7.5	No data	20.0	7.0	77.0	286	5	29.0	109.1
	5/30/2017	Clear	0.50	7.9	22.0	18.0	7.8	74.0	261	< 10	< 27	165.2
	6/12/2017	Clear	1.00	7.7	40.0	26.4	3.0	37.0	308	No data	No data	9.9
	6/19/2017	Partially Cloudy	0.50	8.1	25.0	21.0	8.0	90.0	319	< 10	27.0	15.0
	6/27/2017	Clear	0.50	7.6	26.0	24.5	5.0	60.0	318.0	10	No data	36.4
	7/5/2017	Cloudy	0.25	8.1	22.0	22.5	7.9	92.0	315.0	< 10	< 27	23.8
	7/10/2017	Partially Cloudy	0.25	8.0	32.5	27.5	7.8	101.0	336.0	< 10	< 27	27.1
	7/17/2017	Clear	< 0.25	8.0	24.0	24.0	7.1	83.0	339.0	< 10	< 27	6.4
	7/24/17	Clear	0.50	7.7	42.0	31.4	8.0	108.0	330.0	< 10	No data	16.4
	7/31/2017	No data	0.25	8.0	25.0	24.3	5.0	60.0	290.0	10.0	< 29	16.4
	8/7/2017	Cloudy	< 0.25	8.1	19.5	21.0	10.1	112.0	330.0	< 10	< 28	28.8
<b>Delaware Town</b>												
	1/23/2017	Clear	No data	7.6	10.0	16.0	11.0	112.0	450.0	10	27.0	20.7
	2/9/2017	Partially Cloudy	4.00	8.0	8.0	14.0	17.0	165.0	8.7	10	27.0	8.7
	3/2/2017	Clear	> 10	8.0	15.0	10.5	8.6	71.0	574.0	< 10	46.0	40.6
	5/10/2017	Cloudy	4.00	7.7	22.0	20.0	8.0	88.0	380.0	< 10	< 27	79.8
	5/31/2017	Cloudy	4.00	7.9	23.0	18.0	7.9	74.0	394.0	< 10	< 27	88.5
	6/6/2017	Clear	4.00	7.9	24.0	19.5	7.9	86.0	479.0	< 10	< 27	165.2

Stream	Date	Weather Condition	Nitrate (mg/L)	pH	Air Temp (°C)	Water Temp (°C)	Dissolved Oxygen (mg/L)	D.O % Saturation	Conductivity	Turbidity (NTUs)	Chloride (mg/L)	E. coli CFU MPN
<b>Target</b>			< 2 mg/l	6.5 - 9.0		0 -34° C	5-15 mg/l	> 80% - Healthy	No standards			< 235 CFU
	6/13/2017	Cloudy	1.00	7.8	25.0	24.0	5.0	60.0	380.0	No data	No data	27.1
	6/19/2017	Cloudy	0.25	7.8	26.0	25.0	5.0	61.0	397.0	10.0	No data	38.4
	6/27/2017	Partially Cloudy	4.00	7.8	22.0	20.0	7.1	77.0	210.0	18.0	27.0	> 200.5 ⚠
	6/29/2017											174.5
	7/5/2017	Cloudy	6.00	8.1	21.0	21.0	7.2	79.0	524.0	< 10	33.0	65.9
	7/10/2017	Clear	3.00	7.4	25.0	24.0	5.0	60.0	555.0	10	No data	> 200.5 ⚠
	7/12/2017											59.1
	7/17/2017	Clear	2.00	7.4	28.0	26.0	6.0	74.0	434.0	< 10	No data	34.4
	7/24/2017	Clear	2.00	8.1	25.0	24.0	6.8	83.0	634.0	< 10	59.0	53.1
	7/31/2017	Partially Cloudy	2.00	8.1	23.5	22.0	6.4	69.0	551.0	< 10	46.0	40.6
	8/7/2017	Cloudy	2.00	7.8	30.0	25.0	9.0	109.0	348.0	15.0	< 29	> 200.5 ⚠
8/10/2017											24.1	
<b>Shelvin Rock</b>												
	1/23/2017	Clear	Unknown	7.6	11.0	16.0	10.0	102	470.0	10.0	27.0	25.4
	2/9/2017	Partially Cloudy	6.00	8.2	8.0	13.0	7.0	67	537.0	10.0	27.0	2.0
	3/2/2017	Clear	> 10	8.1	13.5	10.0	9.0	78	548.0	< 10	52.0	27.1
	5/10/2017	Cloudy	4.00	7.7	24.0	21.0	8.1	90	370.0	< 10	< 27	72.8
	5/31/2017	Cloudy	4.00	8.0	22.0	18.0	8.0	74	407.0	< 10	< 27	78.2
	6/6/2017	Clear	4.00	8.0	22.0	20.0	7.9	88	412.0	< 10	< 27	> 200.5 ⚠
	6/9/2017											19.2
	6/14/2017	Partially Cloudy	4.00	8.2	29.5	25.0	8.9	109	496.0	< 10	39.0	3.1
	6/19/2017	Cloudy	0.25	7.9	25	22	6	69	478	< 10	No data	25.4
	6/27/2017	Partially Cloudy	4.00	8.1	21.0	20.0	7.0	77	486.0	12	27	101.3
	7/5/2017	Cloudy	6.00	8.1	22.5	22.0	7.2	80.0	520.0	<10	52.0	47.8
	7/10/2017	Clear	1.00	7.3	26.0	24.3	6.0	71.0	565.0	10.0	No data	13.7
	7/17/2017	Clear	0.25	7.6	28.0	25.0	5.0	61.0	527.0	< 10	No data	22.2
	7/24/2017	Clear	2.00	8.1	25.0	25.0	5.2	61.0	628.0	< 10	59.0	6.4
	7/31/2017	Partially Cloudy	2.00	8.1	22.0	23.5	6.2	70.0	509.0	< 10	40.0	30.6
8/7/2017	Cloudy	1.00	7.7	30.0	25.6	8.0	97.0	366.0	15.0	< 29	> 200.5 ⚠	
8/10/2017											26.6	
<b>Jim Turner - Finley River Park</b>												
	1/23/2017	Partially Cloudy	1.00	8.1	17.0	10.0	11.0	98.0	337.0	< 10	< 27	3.1
	2/2/2017	Cloudy	0.50	8.2	6.50	8.0	11.1	73.0	336.0	< 10	< 27	2.0
	3/1/2017	Clear	0.25	8.0	18.00	16.0	9.4	91.0	337.0	< 10	< 27	53.1
	4/5/2017	Cloudy	1.00	8.00	16.00	14.0	8.2	78.0	294.0	< 10	< 27	73.8
	5/16/2017	Clear	2.00	7.9	27.0	20.0	8.3	88.0	261.0	< 10	< 27	65.9
	5/30/2017	Clear	0.50	7.7	22.0	20.0	7.7	88.0	290.0	< 10	< 27	144.5
	6/13/2017	Cloudy	0.25	7.6	30.0	28.0	9.0	115.0	314.0	No data	No data	12.4

