

Chemistry

Date: February 2019

Version 1

	Lake Sites									
	McCaig Pier @ Blue Eye Creek Embayment	Wilson Pier @ Fishing Creek Embayment	Choccolocco Creek @ Co. Road 207 Embayment	Rainwater Wharf Main channel	Poor House Branch Marina Embayment	Kasper Pier Main channel	Bower Pier Backwater	Gen. Lee Marina Backwater	O'Hara Dock Backwater	Logan Martin dam Main channel
AWW Code	05012020	05012034	05012037	05012001	05012021	05012019	05012007	05012009	05012044	05012023
Sample Date		02/07/19		02/06/19	02/10/19		02/11/19	02/09/19	02/08/19	
Air Temperature °C		24		22	6		18	12	10	
Water Temperature °C		17		13	10		13.5	10.5	14	
pH		7.5		7.5	7.5		8.5	7.5	7	
Dissolved Oxygen		10.2		10.9	10		13.4	10.9	8.9	
% DO Saturation		105		105			127.6	96.8	86	
Alkalinity		90		40	70		45	40	45	
Hardness		70		50	110		40	30	40	
Turbidity		10					5		15	
Secchi Depth (meters)				0.7	1			0.7	0.5	

	Tributary Sites					
	Blue Eye Creek @ Plum Springs Bridge Crossing	Blue Eye Creek @ McClain Ave	Dye Creek @ Hardwick Road	Cropwell Branch in Lakeside Park	Fishing Creek @ Benjamin Moore	
AWW Code	05012048	05012050	05012043	05012045	05012049	
Sample Date	02/06/19	02/09/19	02/11/19			
Air Temperature °C	22	7	16			
Water Temperature °C	16.5	12	14			
pH	8	7.5	8			
Dissolved Oxygen	9.3	9	11.8			
% DO Saturation	97	80	113.68			
Alkalinity	100	90	125			
Hardness	110	100	160			
Turbidity	2		70			
Secchi Depth (meters)						

Phone # for lake level: 1-800-525-3711

AWW = Alabama Water Watch

Next Testing Dates: March 6th thru 11th 2019

AL WQ = Alabama water quality standards as set by ADEM and effective for Logan Martin and its tributaries

Water Temperature - AL WQ: should not exceed 90° (approximately 32.2°C)

pH - measures how acidic or basic the water is, **AL WQ:** 6-8.5

Dissolved Oxygen - how much oxygen is present in the water, **AL WQ:** not less than 5.0 mg/L at a depth of 5 feet (LMLPA measures DO at about 9")

% Dissolved Oxygen Saturation - the amount of dissolved oxygen present compared to maximum amount expected in undisturbed conditions. **No AL WQ** standards. 80-125 excellent for most stream animals

Alkalinity and Hardness - no AL WQ . Very dependent on geology, primarily the calcium carbonate and magnesium carbonate in limestone

Alkalinity - measures the buffering capacity based on carbonate and bicarbonate content, higher alkalinity water better able to fend off rapid changes in pH

Hardness - measures the calcium and magnesium content, alkalinity and hardness values at a particular site tend to be similar in our area, tributary values may differ from lake values

Turbidity and Secchi Depth - measure the clarity of the water, Secchi measurement is preferred if water is deep enough, **AL WQ:** no turbidity that is not of natural origin

Secchi Depth: 1 meter = 3.3 feet

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Testing Results						
Location						
Sample Date						
Rain Event Testing (Y/N)						
Sample Volume (mL)						
Avg # of E. coli colonies per plate						
Avg # of E. coli colonies per 100 mL						

# of E. coli colonies per 100 mL	
≤126	Relatively Safe For human contact
>126 ≤235	Increased risk for human contact
>235	Relatively unsafe for human contact

LMLPA uses Alabama Water Watch methods for its first alert bacteria testing at popular swimming areas. We use the same color coding as the Coosa Riverkeeper.

For weekly results at Lakeside Park swim beach May - Labor Day, use the Swim Guide app. It can be downloaded at the App Store and at Google Play.

Be aware that E. coli counts can be elevated after a rain event.

For more detailed information and swimmer safety tips, see the Coosa Riverkeeper blog at <https://www.coosariver.org/is-it-safe-to-swim/>

Per Alabama's water quality standards, E.coli bacteria should not exceed the geometric mean of 126 colonies/100mL nor 235 colonies/100mL

in any one sample for Logan Martin Lake, classified as Swimming and Other Whole Body Water-Contact Sports.

Most of the creeks that are tributaries to Logan Martin, such as Choccolocco, are classified as Fish and Wildlife. For F & W waterbodies from May - Oct., E. coli bacteria

should not exceed the geometric mean of 126 colonies/100mL nor 298 colonies/100mL in any one sample.

LMLPA uses the stricter Swimming classification standards for our colors on Choccolocco. We prefer to err on side of safety, as kaying and tubing are popular sports on the creek.