

**INDEPENDENT TESTING LAB**

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

Company: FIFE LAKE AREA UTILITY AUTHORITY

Name:

ClientProj: QUARTERLY & BIWEEKLY

GTA ProjNo: 080520-1

Site Addr: 10701 VAN'S LANE

FIFE LAKE

Sampled By: RAY RAVARY/FLAUA

Date Rec: 8/5/2020

Time Rec: 12:05 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	MW-13	8/5/2020	8:43 AM	WATER
2	MW-14	8/5/2020	8:59 AM	WATER
3	MW-5	8/5/2020	9:09 AM	WATER
4	MW-7	8/5/2020	9:27 AM	WATER
5	MW-15	8/5/2020	9:40 AM	WATER
6	MW-12	8/5/2020	10:01 AM	WATER
7	EFFLUENT	8/5/2020	10:21 AM	WATER

ELECTRONIC SIGNATURE REPORT. This is a final report for the following pages of data for the samples specified above. All analysis was performed by the methods stated and all quality control measures required were completed. All quality control information is available upon request.

Kirk Chase

Kirk L. Chase/Chemist
Grand Traverse Analytical
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Traverse City, MI 49686
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COMPANY: FIFE LAKE AREA UTILITY AUTHORITY
PROJECT NO: QUARTERLY & BIWEEKLY
LOCATION: 10701 VAN'S LANE
FIFE LAKE
MI
SAMPLED BY: RAY RAVARY/FLAUA
SAMPLE ID: MW-13

GTA PROJECT NO: 080520-1
GTA SAMPLE NO: 1
DATE RECEIVED: 8/5/2020
TIME RECEIVED: 12:05 PM
DATE SAMPLED: 8/5/2020
TIME SAMPLED: 8:43 AM
SAMPLE MATRIX: WATER

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	290	10	mg/L (PPM)	TR	8/7/2020
ALKALINITY SM 4500CO2D (CARBONATE)	<10	10	mg/L (PPM)	TR	8/7/2020
AMMONIA-N EPA 350.1	0.034	0.015	mg/L (PPM)	KC	8/30/2020
CALCIUM DISS EPA 200.8	280	5.0	mg/L (PPM)	MR	8/13/2020
CHLORIDE EPA 300.0	15	10	mg/L (PPM)	LV	8/6/2020
CONDUCTIVITY SM2510-B	630	1.0	uS/cm@25C	LV	8/6/2020
IRON DISS EPA 200.8	<0.050	0.050	mg/L (PPM)	MR	8/13/2020
MAGNESIUM DISS EPA 200.8	21	0.50	mg/L (PPM)	MR	8/13/2020
MANGANESE DISS EPA 200.8	<0.0050	0.0050	mg/L (PPM)	MR	8/13/2020
NITRATE-N EPA 300.0	3.1	0.10	mg/L (PPM)	LV	8/6/2020
NITRITE-N EPA 300.0	<0.10	0.10	mg/L (PPM)	LV	8/6/2020
POTASSIUM DISS EPA 200.8	3.1	0.050	mg/L (PPM)	MR	8/13/2020
SODIUM DISS EPA 200.8	15	0.50	mg/L (PPM)	MR	8/13/2020
SULFATE EPA 300.0	5.6	1.0	mg/L (PPM)	LV	8/6/2020
TOTAL INORGANIC NITROGEN	3.1	0.22	mg/L (PPM)	LV/KC	8/30/2020
TOTAL PHOSPHORUS EPA 365.3	0.046	0.010	mg/L (PPM)	LV	8/11/2020

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PROJECT NO: QUARTERLY & BIWEEKLY
LOCATION: 10701 VAN'S LANE
FIFE LAKE
MI
SAMPLED BY: RAY RAVARY/FLAUA
SAMPLE ID: MW-14

GTA PROJECT NO: 080520-1
GTA SAMPLE NO: 2
DATE RECEIVED: 8/5/2020
TIME RECEIVED: 12:05 PM
DATE SAMPLED: 8/5/2020
TIME SAMPLED: 8:59 AM
SAMPLE MATRIX: WATER

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	220	10	mg/L (PPM)	TR	8/7/2020
ALKALINITY SM 4500CO2D (CARBONATE)	<10	10	mg/L (PPM)	TR	8/7/2020
AMMONIA-N EPA 350.1	<0.015	0.015	mg/L (PPM)	KC	8/30/2020
CALCIUM DISS EPA 200.8	210	5.0	mg/L (PPM)	MR	8/13/2020
CHLORIDE EPA 300.0	48	10	mg/L (PPM)	LV	8/6/2020
CONDUCTIVITY SM2510-B	640	1.0	uS/cm@25C	LV	8/6/2020
IRON DISS EPA 200.8	<0.050	0.050	mg/L (PPM)	MR	8/13/2020
MAGNESIUM DISS EPA 200.8	16	0.50	mg/L (PPM)	MR	8/13/2020
MANGANESE DISS EPA 200.8	<0.0050	0.0050	mg/L (PPM)	MR	8/13/2020
NITRATE-N EPA 300.0	5.0	0.10	mg/L (PPM)	LV	8/6/2020
NITRITE-N EPA 300.0	<0.10	0.10	mg/L (PPM)	LV	8/6/2020
POTASSIUM DISS EPA 200.8	4.2	0.050	mg/L (PPM)	MR	8/13/2020
SODIUM DISS EPA 200.8	20	0.50	mg/L (PPM)	MR	8/13/2020
SULFATE EPA 300.0	6.6	1.0	mg/L (PPM)	LV	8/6/2020
TOTAL INORGANIC NITROGEN	5.0	0.22	mg/L (PPM)	LV/KC	8/30/2020
TOTAL PHOSPHORUS EPA 365.3	0.051	0.010	mg/L (PPM)	LV	8/11/2020

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PROJECT NO: QUARTERLY & BIWEEKLY
LOCATION: 10701 VAN'S LANE
FIFE LAKE
MI
SAMPLED BY: RAY RAVARY/FLAUA
SAMPLE ID: MW-5

GTA PROJECT NO: 080520-1
GTA SAMPLE NO: 3
DATE RECEIVED: 8/5/2020
TIME RECEIVED: 12:05 PM
DATE SAMPLED: 8/5/2020
TIME SAMPLED: 9:09 AM
SAMPLE MATRIX: WATER

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	190	10	mg/L (PPM)	TR	8/7/2020
ALKALINITY SM 4500CO2D (CARBONATE)	<10	10	mg/L (PPM)	TR	8/7/2020
AMMONIA-N EPA 350.1	0.018	0.015	mg/L (PPM)	KC	8/30/2020
CALCIUM DISS EPA 200.8	130	5.0	mg/L (PPM)	MR	8/13/2020
CHLORIDE EPA 300.0	85	10	mg/L (PPM)	LV	8/6/2020
CONDUCTIVITY SM2510-B	680	1.0	uS/cm@25C	LV	8/6/2020
IRON DISS EPA 200.8	<0.050	0.050	mg/L (PPM)	MR	8/13/2020
MAGNESIUM DISS EPA 200.8	13	0.50	mg/L (PPM)	MR	8/13/2020
MANGANESE DISS EPA 200.8	<0.0050	0.0050	mg/L (PPM)	MR	8/13/2020
NITRATE-N EPA 300.0	1.1	0.10	mg/L (PPM)	LV	8/6/2020
NITRITE-N EPA 300.0	<0.10	0.10	mg/L (PPM)	LV	8/6/2020
POTASSIUM DISS EPA 200.8	5.8	0.050	mg/L (PPM)	MR	8/13/2020
SODIUM DISS EPA 200.8	75	0.50	mg/L (PPM)	MR	8/13/2020
SULFATE EPA 300.0	8.9	1.0	mg/L (PPM)	LV	8/6/2020
TOTAL INORGANIC NITROGEN	1.1	0.22	mg/L (PPM)	LV/KC	8/30/2020
TOTAL PHOSPHORUS EPA 365.3	0.025	0.010	mg/L (PPM)	LV	8/11/2020

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PROJECT NO: QUARTERLY & BIWEEKLY
LOCATION: 10701 VAN'S LANE
FIFE LAKE
MI
SAMPLED BY: RAY RAVARY/FLAUA
SAMPLE ID: MW-7

GTA PROJECT NO: 080520-1
GTA SAMPLE NO: 4
DATE RECEIVED: 8/5/2020
TIME RECEIVED: 12:05 PM
DATE SAMPLED: 8/5/2020
TIME SAMPLED: 9:27 AM
SAMPLE MATRIX: WATER

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	100	10	mg/L (PPM)	TR	8/7/2020
ALKALINITY SM 4500CO2D (CARBONATE)	<10	10	mg/L (PPM)	TR	8/7/2020
AMMONIA-N EPA 350.1	<0.015	0.015	mg/L (PPM)	KC	8/30/2020
CALCIUM DISS EPA 200.8	17	0.50	mg/L (PPM)	MR	8/13/2020
CHLORIDE EPA 300.0	38	10	mg/L (PPM)	LV	8/6/2020
CONDUCTIVITY SM2510-B	360	1.0	uS/cm@25C	LV	8/6/2020
IRON DISS EPA 200.8	<0.050	0.050	mg/L (PPM)	MR	8/13/2020
MAGNESIUM DISS EPA 200.8	14	0.50	mg/L (PPM)	MR	8/13/2020
MANGANESE DISS EPA 200.8	<0.0050	0.0050	mg/L (PPM)	MR	8/13/2020
NITRATE-N EPA 300.0	0.32	0.10	mg/L (PPM)	LV	8/6/2020
NITRITE-N EPA 300.0	<0.10	0.10	mg/L (PPM)	LV	8/6/2020
POTASSIUM DISS EPA 200.8	5.8	0.050	mg/L (PPM)	MR	8/13/2020
SODIUM DISS EPA 200.8	52	0.50	mg/L (PPM)	MR	8/13/2020
SULFATE EPA 300.0	3.9	1.0	mg/L (PPM)	LV	8/6/2020
TOTAL INORGANIC NITROGEN	0.32	0.22	mg/L (PPM)	LV/KC	8/30/2020
TOTAL PHOSPHORUS EPA 365.3	<0.010	0.010	mg/L (PPM)	LV	8/11/2020

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PROJECT NO: QUARTERLY & BIWEEKLY
LOCATION: 10701 VAN'S LANE
FIFE LAKE
MI
SAMPLED BY: RAY RAVARY/FLAUA
SAMPLE ID: MW-15

GTA PROJECT NO: 080520-1
GTA SAMPLE NO: 5
DATE RECEIVED: 8/5/2020
TIME RECEIVED: 12:05 PM
DATE SAMPLED: 8/5/2020
TIME SAMPLED: 9:40 AM
SAMPLE MATRIX: WATER

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	210	10	mg/L (PPM)	TR	8/7/2020
ALKALINITY SM 4500CO2D (CARBONATE)	<10	10	mg/L (PPM)	TR	8/7/2020
AMMONIA-N EPA 350.1	<0.015	0.015	mg/L (PPM)	KC	8/30/2020
CALCIUM DISS EPA 200.8	210	5.0	mg/L (PPM)	MR	8/13/2020
CHLORIDE EPA 300.0	32	10	mg/L (PPM)	LV	8/6/2020
CONDUCTIVITY SM2510-B	540	1.0	uS/cm@25C	LV	8/6/2020
IRON DISS EPA 200.8	<0.050	0.050	mg/L (PPM)	MR	8/13/2020
MAGNESIUM DISS EPA 200.8	19	0.50	mg/L (PPM)	MR	8/13/2020
MANGANESE DISS EPA 200.8	<0.0050	0.0050	mg/L (PPM)	MR	8/13/2020
NITRATE-N EPA 300.0	2.4	0.10	mg/L (PPM)	LV	8/6/2020
NITRITE-N EPA 300.0	<0.10	0.10	mg/L (PPM)	LV	8/6/2020
POTASSIUM DISS EPA 200.8	4.0	0.050	mg/L (PPM)	MR	8/13/2020
SODIUM DISS EPA 200.8	24	0.50	mg/L (PPM)	MR	8/13/2020
SULFATE EPA 300.0	11	1.0	mg/L (PPM)	LV	8/6/2020
TOTAL INORGANIC NITROGEN	2.4	0.22	mg/L (PPM)	LV/KC	8/30/2020
TOTAL PHOSPHORUS EPA 365.3	0.027	0.010	mg/L (PPM)	LV	8/11/2020

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COMPANY: FIFE LAKE AREA UTILITY AUTHORITY
PROJECT NO: QUARTERLY & BIWEEKLY
LOCATION: 10701 VAN'S LANE
FIFE LAKE
MI
SAMPLED BY: RAY RAVARY/FLAUA
SAMPLE ID: MW-12

GTA PROJECT NO: 080520-1
GTA SAMPLE NO: 6
DATE RECEIVED: 8/5/2020
TIME RECEIVED: 12:05 PM
DATE SAMPLED: 8/5/2020
TIME SAMPLED: 10:01 AM
SAMPLE MATRIX: WATER

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	170	10	mg/L (PPM)	TR	8/7/2020
ALKALINITY SM 4500CO2D (CARBONATE)	<10	10	mg/L (PPM)	TR	8/7/2020
AMMONIA-N EPA 350.1	0.032	0.015	mg/L (PPM)	KC	8/30/2020
CALCIUM DISS EPA 200.8	200	5.0	mg/L (PPM)	MR	8/13/2020
CHLORIDE EPA 300.0	33	10	mg/L (PPM)	LV	8/6/2020
CONDUCTIVITY SM2510-B	520	1.0	uS/cm@25C	LV	8/6/2020
IRON DISS EPA 200.8	<0.050	0.050	mg/L (PPM)	MR	8/13/2020
MAGNESIUM DISS EPA 200.8	17	0.50	mg/L (PPM)	MR	8/13/2020
MANGANESE DISS EPA 200.8	<0.0050	0.0050	mg/L (PPM)	MR	8/13/2020
NITRATE-N EPA 300.0	6.6	0.10	mg/L (PPM)	LV	8/6/2020
NITRITE-N EPA 300.0	<0.10	0.10	mg/L (PPM)	LV	8/6/2020
POTASSIUM DISS EPA 200.8	1.4	0.050	mg/L (PPM)	MR	8/13/2020
SODIUM DISS EPA 200.8	27	0.50	mg/L (PPM)	MR	8/13/2020
SULFATE EPA 300.0	14	1.0	mg/L (PPM)	LV	8/6/2020
TOTAL INORGANIC NITROGEN	6.6	0.22	mg/L (PPM)	LV/KC	8/30/2020
TOTAL PHOSPHORUS EPA 365.3	0.041	0.010	mg/L (PPM)	LV	8/11/2020

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COMPANY: FIFE LAKE AREA UTILITY AUTHORITY
PROJECT NO: QUARTERLY & BIWEEKLY
LOCATION: 10701 VAN'S LANE
FIFE LAKE
MI
SAMPLED BY: RAY RAVARY/FLAUA
SAMPLE ID: EFFLUENT

GTA PROJECT NO: 080520-1
GTA SAMPLE NO: 7
DATE RECEIVED: 8/5/2020
TIME RECEIVED: 12:05 PM
DATE SAMPLED: 8/5/2020
TIME SAMPLED: 10:21 AM
SAMPLE MATRIX: WATER

SAMPLE ANALYSIS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Complete</u>
AMMONIA-N EPA 350.1	3.2	0.015	mg/L (PPM)	KC	8/30/2020
CHLORIDE EPA 300.0	180	10	mg/L (PPM)	LV	8/6/2020
NITRATE-N EPA 300.0	<0.10	0.10	mg/L (PPM)	LV	8/6/2020
NITRITE-N EPA 300.0	<0.10	0.10	mg/L (PPM)	LV	8/6/2020
SODIUM EPA 200.8	210	5.0	mg/L (PPM)	MR	8/13/2020
TOTAL INORGANIC NITROGEN	3.2	0.22	mg/L (PPM)	LV/KC	8/30/2020
TOTAL PHOSPHORUS EPA 365.3	3.1	0.010	mg/L (PPM)	LV	8/11/2020

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CHAIN OF CUSTODY

PROJECT NUMBER <i>Annual Quarterly + Biweekly</i>	SITE NAME/ADDRESS <i>FLAUA 10701 VANS LANE FIVE LAKE MI.</i>	COMPANY/NAME <i>FLAUA</i>
SAMPLED BY <i>Ray RAVARY</i>	COMPANY <i>FLAUA</i>	GTA PROJECT # <i>080520-1</i> <i>Quarterly + Biweekly</i>

SAMPLE INFORMATION

#	SAMPLE ID	DATE SAMPLED	TIME	MATRIX	ANALYSIS
2	1 1 MW 13	8/5/20	843	w/w	Annual Quarterly
2	2 2 MW 14		854		
2	3 3 MW 5		909		
2	4 4 MW 7		927		
2	5 5 MW 15		940		
2	6 6 MW 12		1001		
2	7 7 Effluent		1021		Bi Weekly

BILL TO: FLAUA
C/O H+R Block Kingsley

REPORT TO:
FLAUA @ att.net
RAVARY @ provide.net

RELEASED BY	DATE/TIME	RECEIVED BY	DATE/TIME
Ray RAVARY	8/5/20 12:05	K. Ch	8/5/20 12:05

REQUESTED TAT ☐ STANDARD ☐ 1 BUSINESS DAY ☐ 2 BUSINESS DAYS ☐ 3 BUSINESS DAYS