

**INDEPENDENT TESTING LAB**

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

Company: VILLAGE OF KALKASKA
Name:
ClientProj: ANNUAL
GTA ProjNo: 081122-8

Site Addr: 1005 ISLAND LAKE RD
KALKASKA
Sampled By: BRENDON WOLF/VOK
Date Rec: 8/11/2022
Time Rec: 10:00 AM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	MW-1	8/9/2022	9:53 AM	WATER
2	MW-2D	8/9/2022	12:31 PM	WATER
3	MW-2S	8/9/2022	10:22 AM	WATER
4	MW-3	8/9/2022	11:05 AM	WATER
5	MW-4	8/9/2022	9:25 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
830 Robinwood Court
Traverse City, MI 49686
Ph: 231-929-0905
Fx: 231-929-0894
SP: 231-590-0291
kirk@gtanalytical.com

**INDEPENDENT TESTING LAB**

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

COMPANY: VILLAGE OF KALKASKA

PROJECT NO: ANNUAL

LOCATION: 1005 ISLAND LAKE RD
KALKASKA
MI

SAMPLED BY: BRENDON WOLF/VOK

SAMPLE ID: MW-1

GTA PROJECT NO: 081122-8

GTA SAMPLE NO: 1

DATE RECEIVED: 8/11/2022
TIME RECEIVED: 10:00 AMDATE SAMPLED: 8/9/2022
TIME SAMPLED: 9:53 AM

SAMPLE MATRIX: WATER

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	160	10	mg/L (PPM)	TR	8/15/2022
ALKALINITY SM 4500CO2D (CARBONATE)	<10	10	mg/L (PPM)	TR	8/15/2022
AMMONIA-N EPA 350.1	<0.015	0.015	mg/L (PPM)	KC	8/30/2022
CALCIUM DISS EPA 200.8	39	5.0	mg/L (PPM)	MR	8/18/2022
CHLORIDE EPA 300.0	13	10	mg/L (PPM)	KC	8/11/2022
CONDUCTIVITY SM2510-B	330	1.0	uS/cm@25C	TR	8/15/2022
IRON DISS EPA 200.8	<1.0	1.0	mg/L (PPM)	MR	8/18/2022
MAGNESIUM DISS EPA 200.8	11	5.0	mg/L (PPM)	MR	8/18/2022
MANGANESE DISS EPA 200.8	0.12	0.010	mg/L (PPM)	MR	8/18/2022
NITRATE-N EPA 300.0	<0.20	0.20	mg/L (PPM)	KC	8/11/2022
NITRITE-N EPA 300.0	<0.20	0.20	mg/L (PPM)	KC	8/11/2022
POTASSIUM DISS EPA 200.8	11	5.0	mg/L (PPM)	MR	8/18/2022
SODIUM DISS EPA 200.8	5.4	5.0	mg/L (PPM)	MR	8/18/2022
SULFATE EPA 300.0	3.9	1.0	mg/L (PPM)	KC	8/11/2022
TOTAL PHOSPHORUS EPA 365.3	<0.010	0.010	mg/L (PPM)	KC	8/30/2022

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

s.u. = STANDARD pH UNITS REPORTED AT 25 C

DISS = DISSOLVED

**INDEPENDENT TESTING LAB**

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

COMPANY: VILLAGE OF KALKASKA

PROJECT NO: ANNUAL

LOCATION: 1005 ISLAND LAKE RD
KALKASKA
MI

SAMPLED BY: BRENDON WOLF/VOK

SAMPLE ID: MW-2D

GTA PROJECT NO: 081122-8

GTA SAMPLE NO: 2

DATE RECEIVED: 8/11/2022
TIME RECEIVED: 10:00 AMDATE SAMPLED: 8/9/2022
TIME SAMPLED: 12:31 PM

SAMPLE MATRIX: WATER

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	240	10	mg/L (PPM)	TR	8/15/2022
ALKALINITY SM 4500CO2D (CARBONATE)	<10	10	mg/L (PPM)	TR	8/15/2022
AMMONIA-N EPA 350.1	<0.015	0.015	mg/L (PPM)	KC	8/30/2022
CALCIUM DISS EPA 200.8	76	5.0	mg/L (PPM)	MR	8/18/2022
CHLORIDE EPA 300.0	250	10	mg/L (PPM)	KC	8/11/2022
CONDUCTIVITY SM2510-B	1,200	1.0	uS/cm@25C	TR	8/15/2022
IRON DISS EPA 200.8	<1.0	1.0	mg/L (PPM)	MR	8/18/2022
MAGNESIUM DISS EPA 200.8	17	5.0	mg/L (PPM)	MR	8/18/2022
MANGANESE DISS EPA 200.8	0.048	0.010	mg/L (PPM)	MR	8/18/2022
NITRATE-N EPA 300.0	<0.20	0.20	mg/L (PPM)	KC	8/11/2022
NITRITE-N EPA 300.0	<0.20	0.20	mg/L (PPM)	KC	8/11/2022
POTASSIUM DISS EPA 200.8	17	5.0	mg/L (PPM)	MR	8/18/2022
SODIUM DISS EPA 200.8	190	5.0	mg/L (PPM)	MR	8/18/2022
SULFATE EPA 300.0	20	1.0	mg/L (PPM)	KC	8/11/2022
TOTAL PHOSPHORUS EPA 365.3	<0.010	0.010	mg/L (PPM)	KC	8/30/2022

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

s.u. = STANDARD pH UNITS REPORTED AT 25 C

DISS = DISSOLVED

**INDEPENDENT TESTING LAB**

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

COMPANY: VILLAGE OF KALKASKA

PROJECT NO: ANNUAL

LOCATION: 1005 ISLAND LAKE RD
KALKASKA
MI

SAMPLED BY: BRENDON WOLF/VOK

SAMPLE ID: MW-2S

GTA PROJECT NO: 081122-8

GTA SAMPLE NO: 3

DATE RECEIVED: 8/11/2022
TIME RECEIVED: 10:00 AMDATE SAMPLED: 8/9/2022
TIME SAMPLED: 10:22 AM

SAMPLE MATRIX: WATER

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	240	10	mg/L (PPM)	TR	8/15/2022
ALKALINITY SM 4500CO2D (CARBONATE)	<10	10	mg/L (PPM)	TR	8/15/2022
AMMONIA-N EPA 350.1	<0.015	0.015	mg/L (PPM)	KC	8/30/2022
CALCIUM DISS EPA 200.8	98	5.0	mg/L (PPM)	MR	8/18/2022
CHLORIDE EPA 300.0	280	10	mg/L (PPM)	KC	8/11/2022
CONDUCTIVITY SM2510-B	1,300	1.0	uS/cm@25C	TR	8/15/2022
IRON DISS EPA 200.8	<1.0	1.0	mg/L (PPM)	MR	8/18/2022
MAGNESIUM DISS EPA 200.8	21	5.0	mg/L (PPM)	MR	8/18/2022
MANGANESE DISS EPA 200.8	0.020	0.010	mg/L (PPM)	MR	8/18/2022
NITRATE-N EPA 300.0	0.44	0.20	mg/L (PPM)	KC	8/11/2022
NITRITE-N EPA 300.0	<0.20	0.20	mg/L (PPM)	KC	8/11/2022
POTASSIUM DISS EPA 200.8	24	5.0	mg/L (PPM)	MR	8/18/2022
SODIUM DISS EPA 200.8	270	5.0	mg/L (PPM)	MR	8/18/2022
SULFATE EPA 300.0	21	1.0	mg/L (PPM)	KC	8/11/2022
TOTAL PHOSPHORUS EPA 365.3	0.11	0.010	mg/L (PPM)	KC	8/30/2022

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

s.u. = STANDARD pH UNITS REPORTED AT 25 C

DISS = DISSOLVED

**INDEPENDENT TESTING LAB**

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

COMPANY: VILLAGE OF KALKASKA

PROJECT NO: ANNUAL

LOCATION: 1005 ISLAND LAKE RD
KALKASKA
MI

SAMPLED BY: BRENDON WOLF/VOK

SAMPLE ID: MW-3

GTA PROJECT NO: 081122-8

GTA SAMPLE NO: 4

DATE RECEIVED: 8/11/2022
TIME RECEIVED: 10:00 AMDATE SAMPLED: 8/9/2022
TIME SAMPLED: 11:05 AM

SAMPLE MATRIX: WATER

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	160	10	mg/L (PPM)	TR	8/15/2022
ALKALINITY SM 4500CO2D (CARBONATE)	<10	10	mg/L (PPM)	TR	8/15/2022
AMMONIA-N EPA 350.1	<0.015	0.015	mg/L (PPM)	KC	8/30/2022
CALCIUM DISS EPA 200.8	51	5.0	mg/L (PPM)	MR	8/18/2022
CHLORIDE EPA 300.0	17	10	mg/L (PPM)	KC	8/11/2022
CONDUCTIVITY SM2510-B	320	1.0	uS/cm@25C	TR	8/15/2022
IRON DISS EPA 200.8	<1.0	1.0	mg/L (PPM)	MR	8/18/2022
MAGNESIUM DISS EPA 200.8	14	5.0	mg/L (PPM)	MR	8/18/2022
MANGANESE DISS EPA 200.8	0.15	0.010	mg/L (PPM)	MR	8/18/2022
NITRATE-N EPA 300.0	<0.20	0.20	mg/L (PPM)	KC	8/11/2022
NITRITE-N EPA 300.0	<0.20	0.20	mg/L (PPM)	KC	8/11/2022
POTASSIUM DISS EPA 200.8	<5.0	5.0	mg/L (PPM)	MR	8/18/2022
SODIUM DISS EPA 200.8	8.0	5.0	mg/L (PPM)	MR	8/18/2022
SULFATE EPA 300.0	2.8	1.0	mg/L (PPM)	KC	8/11/2022
TOTAL PHOSPHORUS EPA 365.3	<0.010	0.010	mg/L (PPM)	KC	8/30/2022

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

s.u. = STANDARD pH UNITS REPORTED AT 25 C

DISS = DISSOLVED

**INDEPENDENT TESTING LAB**

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

COMPANY: VILLAGE OF KALKASKA

PROJECT NO: ANNUAL

LOCATION: 1005 ISLAND LAKE RD
KALKASKA
MI

SAMPLED BY: BRENDON WOLF/VOK

SAMPLE ID: MW-4

GTA PROJECT NO: 081122-8

GTA SAMPLE NO: 5

DATE RECEIVED: 8/11/2022
TIME RECEIVED: 10:00 AMDATE SAMPLED: 8/9/2022
TIME SAMPLED: 9:25 AM

SAMPLE MATRIX: WATER

SAMPLE RESULTS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>
ALKALINITY SM 4500CO2D (BICARBONATE)	180	10	mg/L (PPM)	TR	8/15/2022
ALKALINITY SM 4500CO2D (CARBONATE)	<10	10	mg/L (PPM)	TR	8/15/2022
AMMONIA-N EPA 350.1	<0.015	0.015	mg/L (PPM)	KC	8/30/2022
CALCIUM DISS EPA 200.8	63	5.0	mg/L (PPM)	MR	8/18/2022
CHLORIDE EPA 300.0	<10	10	mg/L (PPM)	KC	8/11/2022
CONDUCTIVITY SM2510-B	360	1.0	uS/cm@25C	TR	8/15/2022
IRON DISS EPA 200.8	<1.0	1.0	mg/L (PPM)	MR	8/18/2022
MAGNESIUM DISS EPA 200.8	12	5.0	mg/L (PPM)	MR	8/18/2022
MANGANESE DISS EPA 200.8	0.040	0.010	mg/L (PPM)	MR	8/18/2022
NITRATE-N EPA 300.0	0.83	0.20	mg/L (PPM)	KC	8/11/2022
NITRITE-N EPA 300.0	<0.20	0.20	mg/L (PPM)	KC	8/11/2022
POTASSIUM DISS EPA 200.8	<5.0	5.0	mg/L (PPM)	MR	8/18/2022
SODIUM DISS EPA 200.8	<5.0	5.0	mg/L (PPM)	MR	8/18/2022
SULFATE EPA 300.0	6.8	1.0	mg/L (PPM)	KC	8/11/2022
TOTAL PHOSPHORUS EPA 365.3	0.10	0.010	mg/L (PPM)	KC	8/30/2022

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

s.u. = STANDARD pH UNITS REPORTED AT 25 C

DISS = DISSOLVED

830 Robinwood Court
Traverse City, MI 49686
Phone (231) 929-0905 Fax (231) 929-0894

Chain of Custody Record

[illegible]