



429 River Lane • PO Box 27 Amasa, MI 49903 • Ph (906) 822-7889 • Fax -7977

Client: Hagerman Lake Property

WWA Job #: 84582

Project: Monitoring

Date Received: 8/12/2019

Date Reported: 9/4/2019

Sample Number	Client Sample ID	Date Sampled	Sample Matrix
84582-001	Epi	08/10/19	Water
84582-002	Hypo	08/10/19	Water
84582-003	E.coli	08/12/19	Water



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Comments (if any):

Key to Laboratory Flags:

- *: RPD/RSD exceeds limits.
 - B: The analyte was found in the associated blank as well as in the sample.
 - J: The quantitation is an estimated value because the result is less than the sample quantitation limit but greater than the detection limit.
 - M: A matrix effect was present.
 - Q: Batch QC data associated with the analysis does not meet the stated objectives
 - H: Indicates analytical holding time exceedance.
 - P: A manual peak selection or manual integration was performed to correct an erroneous software selection.
 - N: For reporting results that are non-target analytes, when requested by client for Mass Spec reporting.
 - T: Tentatively Identified Compound.
- ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit
ppm = mg/L (liquid) or mg/kg (solid), ppb = ug/L (liquid) or ug/kg (solid)
For coliform, Negative = No coliform bacteria detected, Positive = Coliform bacteria detected

Sample Types:

S = Solids, DW = Drinking water, D = Dissolved, T = Total, TC = TCLP extract, SP = SPLP extract

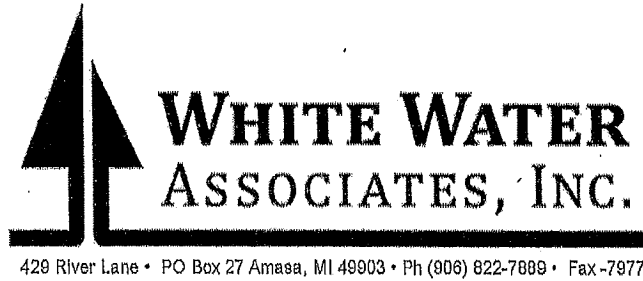
All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without the written approval of this laboratory. The Chain of Custody is attached.

This report satisfies the requirements of your project but has not been prepared to comply with NELAP reporting requirements.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and White Water Associates Standard Operating Procedures. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this Final Report is authorized by White Water Associates management, as is verified by the following signature.

Approved By: _____

WI DNR Lab Certification Number: 999971280
MI EGLE Certification Number: 9306
DoD-ELAP Accreditation Number: 65802
ISO/IEC 17025:2005 Accredited



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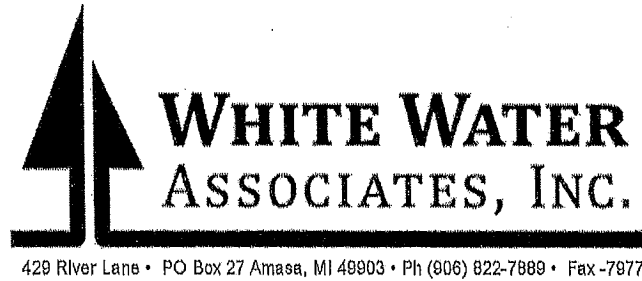
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Sample Results

Sample No. / ID / Description / Matrix	Result	Flags	Units	Date/Time	Method	MDL	QL	Analyst
84582-001 / Epi / Water								
General Chemistry Parameters								
Alkalinity (t) as CaCO ₃	56		mg/L	8/21/2019 15:46	310.2	8.0	30	NK
Ammonia-N	ND		mg/L	8/19/2019 12:28	4500-NH ₃ G	0.03	0.10	NK
Chlorophyll a	1.6		mg/m ³	8/22/2019 15:10	10200H	NA	NA	AH
Conductivity Lab	130		umho/cm	8/21/2019 8:50	2510B	1	1	GG
Hardness (t)	60		mg/L	8/15/2019 14:15	2340B	0.3	1.3	SB
Nitrate/Nitrite-N	ND		mg/L	8/26/2019 17:10	4500-NO ₃ - F	0.13	0.40	NK
Nitrate-N	ND		mg/L	8/26/2019 17:10	4500-NO ₃ - F	0.13	0.40	NK
Nitrite-N	ND	H	mg/L	8/12/2019 14:32	4500-NO ₃ - F	0.01	0.04	NK
pH Lab	8.3		pH Units	8/12/2019 11:45	4500H+ B	0.10	0.10	TM
Total Kjeldahl Nitrogen (t)	0.32	J	mg/L	8/15/2019 11:00	351.2	0.19	0.50	NK
Total Phosphorus LL (t)	ND		mg/L	8/20/2019 13:35	365.4	0.008	0.050	NK
Trace Metals - Total								
Calcium (t)	14		mg/L	8/15/2019 14:15	200.7	0.05	0.20	SB
Magnesium (t)	5.8		mg/L	8/15/2019 14:15	200.7	0.05	0.20	SB



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Sample Results

Sample No. / ID / Description / Matrix	Result	Flags	Units	Date/Time	Method	MDL	MQL	Analyst
84582-002 / Hypo / Water								
General Chemistry Parameters								
Alkalinity (t) as CaCO ₃	57		mg/L	8/21/2019 15:46	310.2	8.0	30	NK
Ammonia-N	ND		mg/L	8/19/2019 12:29	4500-NH ₃ G	0.03	0.10	NK
Conductivity Lab	140		umho/cm	8/21/2019 8:50	2510B	1	1	GG
Hardness (t)	64		mg/L	8/15/2019 14:15	2340B	0.3	1.3	SB
Nitrate/Nitrite-N	ND		mg/L	8/26/2019 17:14	4500-NO ₃ - F	0.13	0.40	NK
Nitrate-N	ND		mg/L	8/26/2019 17:14	4500-NO ₃ - F	0.13	0.40	NK
Nitrite-N	ND	H	mg/L	8/12/2019 14:34	4500-NO ₃ - F	0.01	0.04	NK
pH Lab	6.7		pH Units	8/12/2019 11:45	4500H+ B	0.10	0.10	TM
Total Kjeldahl Nitrogen (t)	0.43	J	mg/L	8/15/2019 11:00	351.2	0.19	0.50	NK
Total Phosphorus LL (t)	0.036	J	mg/L	8/20/2019 13:18	365.4	0.008	0.050	NK

84582-003 / E.coli / Water**General Chemistry Parameters**

E. coli	12		MPN/100mL	8/12/2019 14:00	9223B	1	1	TM
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Login Checklist

Project No.: 84582 Date logged in.: 8/12/2019 Login person's initials: AH
Client: Hagerman Lake Property Number of coolers: 1
Project name: Monitoring Courier/shipper: WWA

- 1. Custody seals/original packing tape were intact (if applicable).
- 2. Samples are in good condition, i.e. not broken or leaking.
- 3. Samples were received within holding times.
- 4. Samples were received on ice (in direct contact with the samples).
- 5. Temperature of the samples was between 0-6°C. Temp.:

NOTES on #4:

NOTE: Samples not between 0-6°C that are received at the laboratory on the day of sample collections do not require client notification.

- 6. Samples matched the Chain of Custody (COC).
- 7. Proper containers were used.
- 8. Samples were collected in White Water lab containers.
- 9. There is adequate sample volume for requested analyses and QC.
- 10. For water VOC samples, headspace is less than the size of a pea.
- 11. Samples are preserved to the proper pH. Sample bottles and preservation are noted in LIMS Sample Container Section.
- 12. The COC is signed. (either Sampler or Relinquished by)
- 13. Sub-sampling (SS) is required. Bottles created are noted in sample containers section of log-in form.
- 14. For Dissolved Analysis (when applicable), samples were filtered in the lab.
- 15. For soil VOCs, methanol preserved samples were received.
- 16. For Soil VOCs, samples were preserved with methanol in the lab.
- 17. Client contact is necessary. Provide documentation below.

COMMENTS/CORRECTIVE ACTION

CLIENT RESPONSE

Note: If hold time, volume, and received on ice or temperature criteria are not met when required by the method, results may not be able to be used for regulatory purposes. Check with your reporting agency for more information.

