

November 12, 2014

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, DC 20426

**RE: Winter Hydroelectric Project  
FERC Project Number P-2064  
Flambeau Hydro LLC  
Final Report 2014 Water Quality Monitoring Data**

Dear Ms. Bose:

On behalf of Flambeau Hydro LLC, "Flambeau" (Licensee), Renewable World Energies, LLC (RWE) is submitting a copy of the Final Report 2014 Water Quality Monitoring Data for the Winter Hydroelectric Project. The Federal Energy Regulatory Commission "FERC" issued a License to Flambeau on August 12, 2005. A revised Water Quality Certification was issued August 19, 2008. This report is submitted as a requirement of that License pursuant to License Article 401 Condition N, Appendix A. 2013 was the eighth year monitoring was conducted since the license was issued, but is the 3<sup>rd</sup> year of submittal by RWE on the behalf of the Licensee.

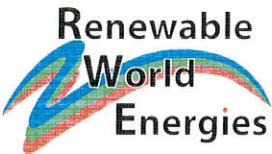
Monitoring was conducted on June 5, July 15, and August 11, 2014. No out of the ordinary issues were encountered. Ice-Out occurred later than normal this year. High flows and dangerous water conditions prevented the Ice-Out sampling from occurring until June, as documented in the correspondence sections of the report. No other issues were encountered during the 2014 monitoring season. The draft report was sent to the agencies by letter dated October 3, 2014 for review and comment. It was submitted electronically as an attachment to an e-mail as requested previously. No comments were received from WDNR, USFWS, or the USFS. Should the agencies have any comments to offer, the Licensee suggests they be sent directly to the Commission. The next scheduled monitoring event will be conducted in 2015.

If you have any questions concerning this submittal, please contact Mr. Gary Rast at the Renewable World Energies, LLC offices @ 855-994-9376 Ext 105. He can also be reached by e-mail at [grast@rwehydro.com](mailto:grast@rwehydro.com).

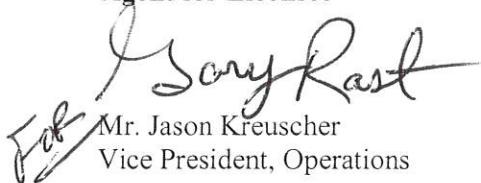
**Corporate Office**  
P.O. Box 264  
100 S. State Street  
Neshkoro, WI 54960  
Fax: 920-293-4100

Phone: 855-99HYDRO  
(855-994-9376)  
[www.renewableworldenergies.com](http://www.renewableworldenergies.com)

**Administrative Office**  
1001 Stephenson Street  
Norway, MI 49870  
Fax: 906-563-9344



Sincerely,  
**Renewable World Energies, LLC**  
Agent for Licensee



A handwritten signature in black ink, appearing to read "Jason Rast". Below the signature, there is a small, faint, handwritten mark that looks like "J.R." or "JR".

Mr. Jason Kreuscher  
Vice President, Operations

Attachment: Final Report 2014 Water Quality Monitoring Data – November 12, 2014

Cc: Mr. Paul Strong, USFS  
Mr. Dale Higgins, USFS  
Ms. Sue Reinecke, USFS  
Ms. Cheryl Laatsch, WDNR  
Mr. Nick Utrup, USFWS  
RWE, Corporate

# **Final Report**

2014 Water Quality Monitoring Data

for the

Winter Hydroelectric Project  
FERC Project #2064  
Flambeau Hydro, LLC

East Fork of the Chippewa River, Sawyer County, Wisconsin

Respectfully Submitted by:

Renewable World Energies, LLC  
100 State Street – P.O. Box 264  
Neshkoro, Wisconsin 54960

Final – November 12, 2014

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## Summary

2014 marked the eighth year of water quality sampling under the FERC License issued August 12, 2005 Per Article 401, Water Quality Certification Condition N, Appendix A for the Winter Hydroelectric Project – FERC Project # 2064 – Flambeau Hydro, LLC”.

In general, the weather (temperature and rainfall) during the 2014 monitoring season appeared cooler in April, slightly warmer in May, June, July, and August with higher than normal precipitation in the months of April, May, June, and August. Temperatures in May, June, July, and August were about .5 degrees warmer than normal but precipitation was slightly (11%) below normal for July. (**Refer to 2014 Monthly Temperature and Precipitation Table page 6**) No one test result stands out as out of the ordinary. Sampling and testing of the samples was coordinated with the sampling done at the Flambeau Projects (Upper, Lower, Pixley, Crowley). These projects are located on the North Fork of the Flambeau River, Price County, Wisconsin. Protocol, procedures, and sampling design followed that of the Flambeau Projects.

The definition for Ice-Out occurred on the East Fork of the Chippewa sometime during the week beginning April 20, 2014. The Licensee traveled to the region during the week of May 5, 2014 thru May 9, 2014 to conduct the monitoring. River flow, based on Winter Hydroelectric Project records was approximately 2500 cubic feet per second during this time. High flows and dangerous conditions prevented sampling from being accomplished. The Licensee contacted agencies with this information and proposed the Ice-Out sampling be abandoned for 2014. The WDNR responded they wished the sampling be performed even if it could not be done until June. The Licensee gave the agencies an update on the sampling progress on May 27, 2014. They were told that nothing had been collected to that point; flows had come down quite a bit, however the boat barriers had not been installed. Sampling is on hold until at least the week of June 2<sup>nd</sup> or June 9<sup>th</sup>. The Ice-Out sampling event occurred on June 5, 2014. River flow, based on the Winter Hydroelectric Project records, was approximately 556 cubic feet per second. Sampling occurred between 9:00 a.m. and 9:42 a.m. Samples were taken without incident. No unusual D.O. or Temperature readings were observed. Samples for laboratory analysis were delivered to Northern Lake Service, Inc. in Crandon, WI on June 6, 2014. Northern Lake Service, Inc. issued a laboratory report on June 19, 2014. No unusual levels of Chlorophyll a, True Color, or Total Phosphorus were noted in the laboratory reports.

The July sampling event occurred on July 15, 2014. River flow, based on Winter Hydroelectric Project records was approximately 225 cubic feet per second. Sampling occurred between 9:00 a.m. and 9:28 a.m. Samples were taken without incident. No unusual D.O. or Temperature readings were observed. Samples for laboratory analysis were delivered to Northern Lake Service, Inc. in Crandon, WI on July 16, 2014. Northern Lake Service, Inc. issued a laboratory report on July 22, 2014. No unusual levels of Chlorophyll a, True Color, or Total Phosphorus were noted in the laboratory reports.

The August sampling event occurred on August 11, 2014. River flow, based on Winter Hydroelectric Project records, was approximately 60 cubic feet per second. Sampling occurred between 1:15 p.m. and 1:35 p.m. Samples were taken without incident. No unusual

D.O. or Temperature readings were observed. Samples for laboratory analysis were delivered to Northern Lake Service, Inc. in Crandon, WI on August 12, 2014. Northern Lake Service, Inc issued a laboratory report on August 18, 2014. No unusual levels of Chlorophyll a, True Color, or Total Phosphorus were noted in the laboratory reports.

A summary of a comparison between the 2011 thru 2014 (**Refer to 2014 Winter Project Sampling Comparison Table 2011-2014 page 7**) sampling results are as follows:

1. Water Clarity – Increased Ice-Out – Normal July/August
2. Chlorophyll a – Increased Ice-Out – Decreased July/August
3. Color – Increased Ice-Out – Decreased July/August
4. Total Phosphorus – Increased Ice-Out – Decreased July/August
5. Overall D.O. – Increased July – Decreased Ice-Out/August
6. Water Temperatures – Increased Ice-Out/Slightly August – Decreased July

Correspondence from the agencies during 2010 indicated they would prefer that notifications of incidents be by e-mail only and that telephone contacts are not needed. All other correspondence can be found on page 12, **Appendix D**. The next Water Quality Monitoring at the Winter Hydroelectric Project is scheduled for 2015 beginning with the Ice-Out sampling event.

## **2014 Tabular Data**

Ice-Out (June 5), July 15, August 11

**Winter Hydroelectric Project - FERC Project # 2064**  
**2014 Water Quality Sampling Data**

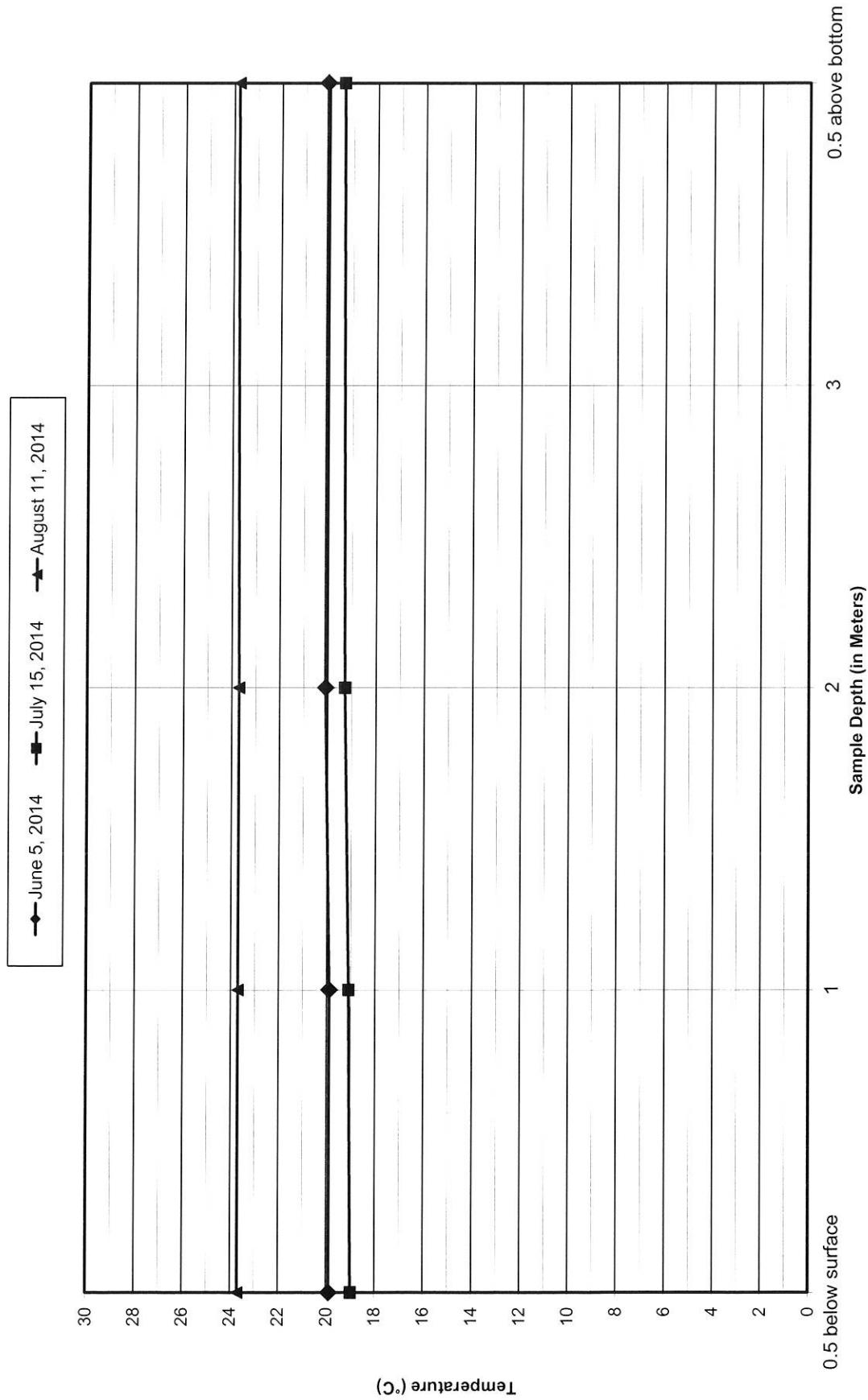
June 5, 2014			July 15, 2014			August 11, 2014			
Project Flow (c.f.s.)			225			60			
<b>Dissolved Oxygen</b>	Time	D.O. (mg/L)	Water Temp. (°C)	Time	D.O. (mg/L)	Water Temp. (°C)	Time	D.O. (mg/L)	
0.5 meter below surface	9:36 AM	7.07	19.9	9:25 AM	6.44	19.0	1:30 PM	6.68	
1 meter below surface	9:39 AM	7.04	19.9	9:26 AM	6.40	19.1	1:32 PM	6.65	
2 meter below surface	9:41 AM	7.00	20.1	9:27 AM	6.35	19.3	1:34 PM	6.61	
3 meter below surface	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
.5 meter above bottom	9:42 AM	6.98	20.1	9:28 AM	6.31	19.4	1:35 PM	6.54	
								23.8	
<b>Secchi Disk</b>	Time	Depth (mtr)	Depth (mtr)			Time	Depth (mtr)	Depth (mtr)	
Meters below surface	9:20 AM	1.50	0.60			9:10 AM	0.60	0.90	
<b>Chlorophyll a</b>	Time	ug/L	ug/L			Time	ug/L	ug/L	
1 meter below surface	9:22 AM	2.30	1.50			9:15 AM	1.50	1.80	
<b>Color (True)</b>	Time	C.P.U. Units	LOD	Time	C.P.U. Units	LOD	Time	C.P.U. Units	LOD
1 meter below surface	9:23 AM	300.00	25*	9:17 AM	250.0	25*	9:17 AM	150.0	25*
<b>Total Phosphorus</b>	Time	mg/L	LOD	Time	mg/L	LOD	Time	mg/L	LOD
1 meter below surface	9:24 AM	0.055	0.0070*	9:20 AM	0.050	0.0070*	1:27 PM	0.040	0.0070*
1 meter above bottom	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

\* Considered Reporting Limits

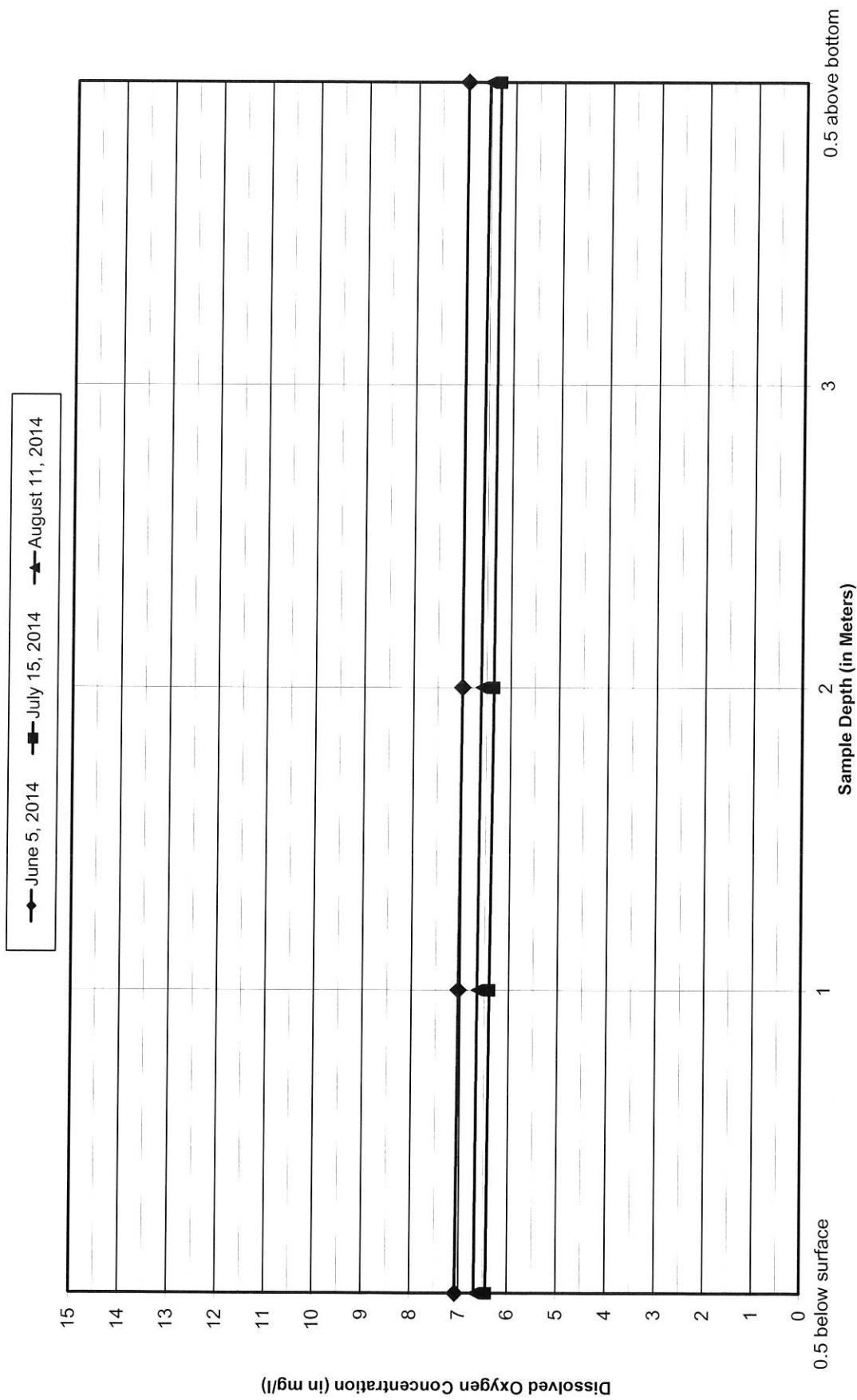
## **2014 Graphed Data**

Temperature and Dissolved Oxygen

**Winter Impoundment - FERC # 2064**  
**2014 Temperature Samples**



**Winter Impoundment - FERC # 2064**  
**2014 Dissolved Oxygen Samples**



**Monthly**  
**Temperature and Precipitation**  
**Table**

# 2014 Water Year Monthly Temperature and Precipitation for Winter, Wisconsin

Month	Highest Temp.	Lowest Temp.	Average Temp.	Departure From Normal	Heating Degree Days	Normal Degree Days	Total Precip.	Total Snowfall	Normal Precip.	% of Normal Precipitation
October-13	74	21	45.0	1.8	610	678	3.93	0.3	5.01	78%
November-13	50	-3	27.9	-0.9	1105	1088	0.82	4.7	2.09	39%
December-13	35	-21	4.6	-10.2	1866	1556	2.88	39.9	1.21	238%
January-14	34	-28	1.6	-8.6	1955	1699	0.73	9.4	0.96	76%
February-14	41	-22	5.3	-9.8	1663	1399	2.12	29.5	0.81	262%
March-14	52	-23	18.4	-7.5	1439	1210	1.91	20.9	1.49	128%
April-14	66	11	35.1	-4.5	886	762	3.30	26.3	2.43	136%
May-14	85	31	51.9	0.5	414	426	4.37	T	3.23	135%
June-14	82	42	60.3	0.2	162	179	4.47	T	4.23	106%
July-14	88	45	66.3	0.5	40	63	3.42	0.0	3.85	89%
August-14	83	48	64.7	0.4	37	86	4.63	0.0	3.70	125%
September-14	81	34	57.4	1.8	227	298	1.64	0.0	4.11	40%

Source: NOAA/Duluth,  
MN

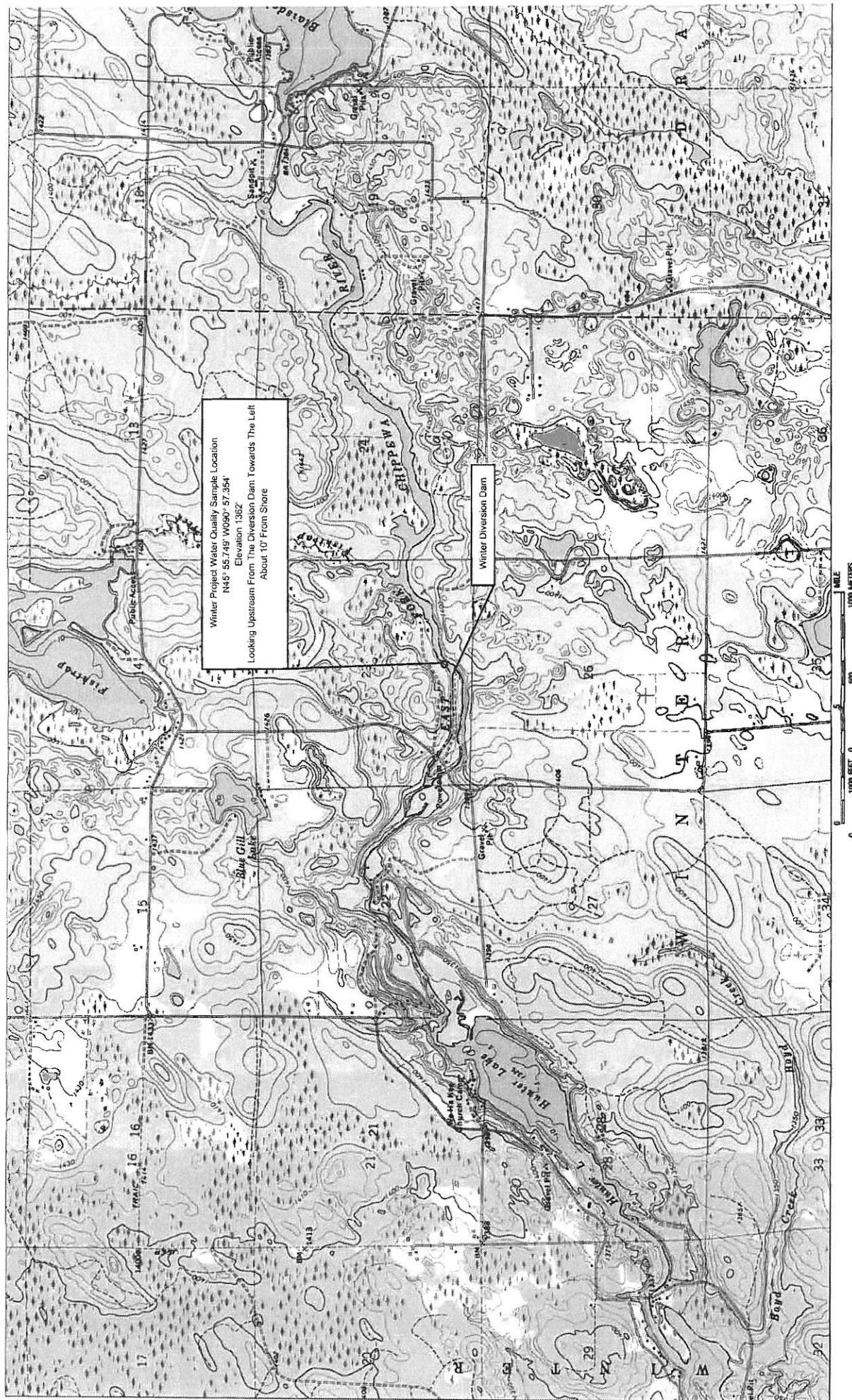
To calculate HDD or Heating Degree Days--If the departure from normal is a negative number (-) you add this to the total below the HDD column  
 If the departure from normal is a plus number (+) you subtract this from the total below the HDD column  
 Calculations for NDD or Normal Degree Days follow the same formula

**2014  
Winter  
Sampling Comparison Table  
2011—2014**

**Winter**  
**Project Sampling Comparison Table**  
**2011 Thru Current Year**

Year	Month	Secchi Depth (m)	Chlorophyll a ug/l	Color (True) C.P.U. Units	Total Phosphorus Below Surface mg/l	Low D.O. mg/l	High D.O. mg/l	Low Water Temp. °C	High Water Temp. °C
2011	April	1.00	0.00	150.00	0.028	11.85	12.10	8.10	8.60
2012	April	0.50	2.30	250.00	0.048	10.55	10.73	9.90	10.60
2013	May	1.20	1.90	250.00	0.036	9.34	9.61	6.90	7.80
2014	June	1.50	2.30	300.00	0.055	6.98	7.07	19.90	20.10
<b>Minimum</b>	April/June	0.50	0.00	150.00	0.028	6.98	7.07	6.90	7.80
<b>Maximum</b>	April/June	1.50	2.30	300.00	0.055	11.85	12.10	19.90	20.10
<b>Average</b>	April/June	1.05	1.63	237.50	0.042	9.68	9.88	11.20	11.78
2011	July	0.80	4.30	250.00	0.055	5.84	6.44	26.10	27.70
2012	July	0.60	1.80	400.00	0.082	4.67	4.75	25.50	25.90
2013	July	0.80	1.90	400.00	0.064	5.05	5.21	25.20	26.10
2014	July	0.60	1.50	250.00	0.050	6.31	6.44	19.00	19.40
<b>Minimum</b>	July	0.60	1.50	250.00	0.050	4.67	4.75	19.00	19.40
<b>Maximum</b>	July	0.80	4.30	400.00	0.082	6.31	6.44	26.10	27.70
<b>Average</b>	July	0.70	2.38	325.00	0.063	5.47	5.71	23.95	24.78
2011	August	0.70	3.70	250.00	0.055	7.25	7.27	24.70	25.10
2012	August	1.10	3.00	200.00	0.047	7.27	7.55	23.40	25.10
2013	August	0.90	2.00	200.00	0.120	5.49	6.10	20.00	20.10
2014	August	0.90	1.80	150.00	0.040	6.54	6.68	23.70	23.80
<b>Minimum</b>	August	0.70	1.80	150.00	0.040	5.49	6.10	20.00	20.10
<b>Maximum</b>	August	1.10	3.70	250.00	0.120	7.27	7.55	24.70	25.10
<b>Average</b>	August	0.90	2.63	200.00	0.066	6.64	6.90	22.95	23.53

**Winter Impoundment  
Sampling Location  
Map**



## Appendix A

June 5, 2014 Sampling Documents (Ice-Out)

# IMPOUNDMENT SAMPLING LOG

2014

Water Quality Study - Winter Hydroelectric Project - FERC #2064

Date: 6/05/14

Pre-Sampling Data: HWL-1370.43 TWL-1346.45 CFS-556

Time: 9:00 Barometer: 29.9 Air Temp: 22 °C Wind Speed: SE 5 m ph

Sky Conditions: SUNNY, TEMPS IN 70's

Precipitation within Last 24 Hours: LIGHT MIST/TRACE

D.O. Meter Calibration:      Instrument Model Used:      Hach HQ40d

Were The Batteries Changed?       Yes       No      If Yes, When Changed: \_\_\_\_\_

Battery Status: 75% Charge

Calibration Time: FEB. 2014      Method: \_\_\_\_\_ Factory

Sampling Depth Profile:      Measured Depth to Bottom of the Impoundment: 3.0 Meter

Secchi Disk Depth: (E0.1 Meter) 1.5 Meter      Time: 9:20

## Chlorophyll a (1 Meter Below Surface)

Lab Sample I.D.# : 06052014 A

Time	Quantity (ml)	Filtered
<u>9:22</u>	<u>1000</u>	<u>ND</u>

## True Color (1 Meter Below Surface)

Lab Sample I.D.# : 06052014 B

Time	Quantity (ml)
<u>9:23</u>	<u>250</u>

## D.O. Sample Data

Depth	Time	D.O. (mg/l)	°C
.5 Mtr Below Surface	<u>9:36</u>	<u>7.07</u>	<u>19.9</u>
1 Meter	<u>9:39</u>	<u>7.04</u>	<u>19.9</u>
2 Meter	<u>9:41</u>	<u>7.00</u>	<u>20.1</u>
3 Meter			
4 Meter			
5 Meter			
6 Meter			
7 Meter			
8 Meter			
.5 Mtr Above Bottom	<u>9:42</u>	<u>6.98</u>	<u>20.1</u>

## Phosphorus

Lab Sample I.D.# : 06052014 C

(1 Meter Below Surface)	
Time	Preserved?
<u>9:24</u>	<u>H2SO4</u>

Lab Sample I.D.# : 06052014 D

(1 Meter Above Bottom)	
Time	Preserved?
<u>9:30</u>	<u>H2SO4</u>

Sample Location: N45° 55.749' W90° 57.354'

Comments:

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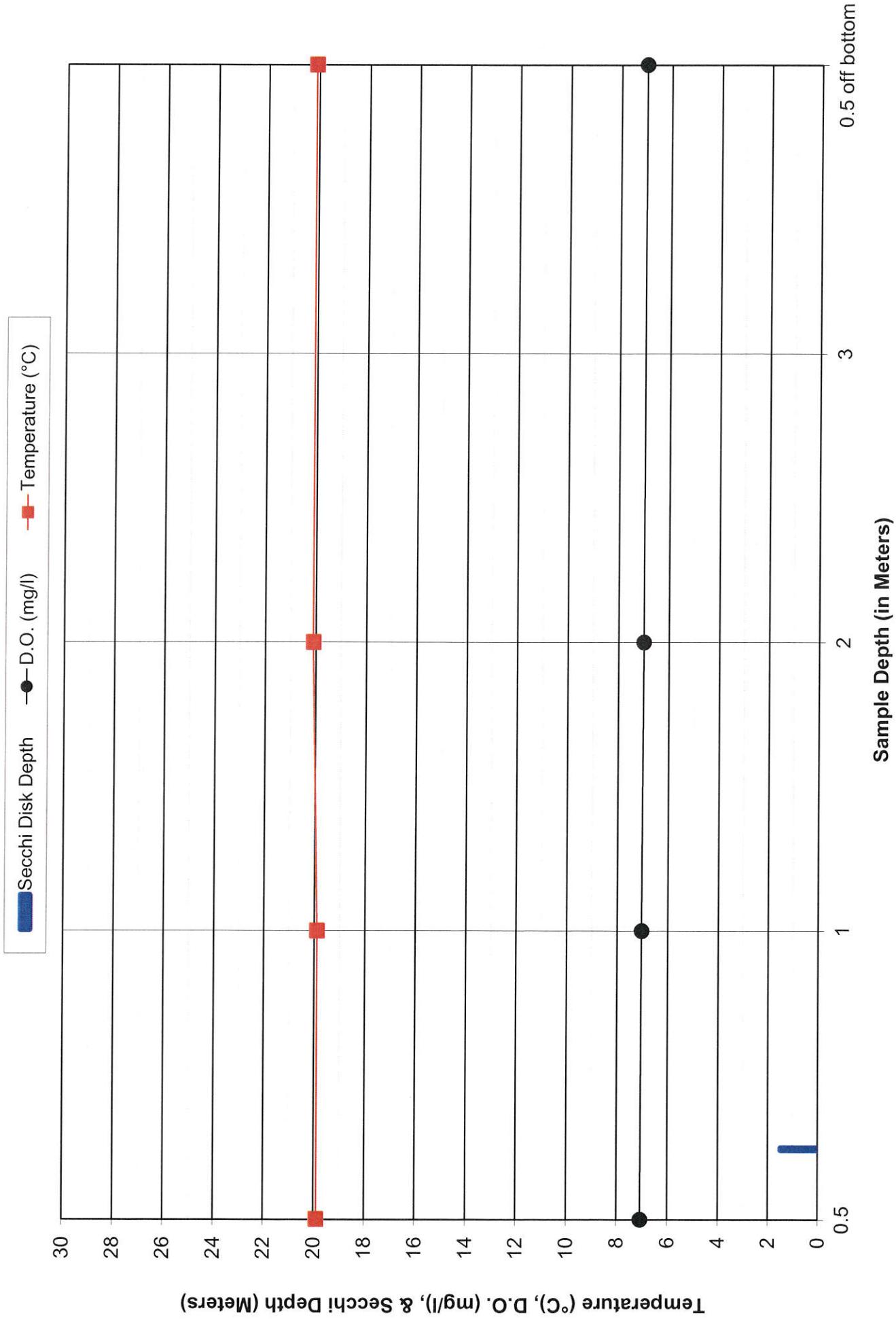
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Performed By:

ANETA RIETVELD

# Winter Impoundment - FERC # 2064

## June 5, 2014 Iceout Sampling Event



**NORTHERN LAKE SERVICE, INC.**  
Analytical Laboratory and Environmental Services  
400 North Lake Avenue - Crandon, WI 54520  
Ph: (715)-478-2777 Fax: (715)-478-3060

## ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460  
WDATCP Laboratory Certification No. 105-330  
EPA Laboratory ID No. WI00034  
Printed: 06/18/14 Code: NNNN-S Page 1 of 1  
**Project:** Winter Hydro  
**Client:** Renewable World Energies  
Attn: Gary Rast  
100 State Street  
P.O. Box 264  
Neshkoro, WI 54960  
**Phone:** 855 994 9376

**Project:** Winter Hydro

**062014 A NLS ID: 794856**

COC: 1740871 Matrix: SW

Collected: 06/05/14 09:22 Received: 06/06/14

**Parameter**

Chlorophyll, all species

Lab filtration for Chlorophyll

**062014 B NLS ID: 794857**

COC: 1740872 Matrix: SW

Collected: 06/05/14 09:23 Received: 06/06/14

**Parameter**

Phosphorus, tot. as P

**062014 C NLS ID: 794858**

COC: 1740873 Matrix: SW

Collected: 06/05/14 09:30 Received: 06/06/14

**Parameter**

Phosphorus, tot. as P

**062014 D NLS ID: 794859**

COC: 1740874 Matrix: SW

Collected: 06/05/14 09:23 Received: 06/06/14

**Parameter**

Color, APHA (true)

Lab filtration

	<b>Result</b>	<b>Units</b>	<b>Dilution</b>	<b>LOD</b>	<b>LOQ</b>	<b>Analyzed</b>	<b>Method</b>	<b>Lab</b>
Parameter	see attached							
Chlorophyll, all species	yes							
Lab filtration for Chlorophyll								
<b>062014 B NLS ID: 794857</b>								
Parameter	0.055	mg/L	1	0.0070*		06/12/14	SM 4500P-E 20ed	721026460
Phosphorus, tot. as P	0.055	mg/L	1	0.0070*		06/12/14	SM 4500P-E 20ed	721026460
<b>062014 C NLS ID: 794858</b>								
Parameter	0.050	mg/L	1	0.0070*		06/12/14	SM 4500P-E 20ed	721026460
Phosphorus, tot. as P	0.050	mg/L	1	0.0070*		06/12/14	SM 4500P-E 20ed	721026460
<b>062014 D NLS ID: 794859</b>								
Parameter	300	C.P.U.	5	25*		06/06/14	SM 2120-B 20ed	721026460
Color, APHA (true)	yes					06/06/14	NA	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". LOD and/or LOQ tagged with an asterisk(\*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution.  
LOQ = Limit of Quantitation  
ND = Not Detected (< LOD)  
LOD = Limit of Detection  
DWB = Dry Weight Basis  
NA = Not Applicable  
%DWB = (mg/kg DWB) / 10000  
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:  
  
R. T. Krueger  
President

**Northern Lake Service, Inc.**  
**Chlorophyll Results**

**Customer:** Renewable World Energies  
**Project:** 220333  
Winter Hydro

<u>Sample</u>	<u>Description</u>	<u>CC a</u> 1.5	<u>Pheo a</u> 1.3	<u>TC a</u> 2.3	<u>TC b</u> 0.12
794856	062014 A				

CC a = Corrected Chlorophyll a  
Pheo a = Pheophytin a  
TC a = Trichromatic Chlorophyll a  
TC b = Trichromatic Chlorophyll b  
TC c = Trichromatic Chlorophyll c  
Units = ug/L for Water, ug/cm<sup>2</sup> for periphyton samplers

\*: The complex calculations used to differentiate the various chlorophyll species magnify error at low concentrations and sometimes produce negative values, which are reported as 0.0 on this report.

# SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

# NORTHERN LAKE SERVICE, INC.

Wisconsin Lab Cert. No. 721026460  
WI DATCP 105-000330

400 North Lake Avenue • Crandon, WI 54520-1298  
Tel: (715) 478-2777 • Fax: (715) 478-3060

Analytical Laboratory and Environmental Services

CLIENT	Ruee Hydro
ADDRESS	100 State St.
CITY	Neshkoro
STATE	WI
ZIP	54960
PROJECT DESCRIPTION / NO.	Quotation No.
DNR FID #	
CONTACT	Gary Rast
PHONE	715-570-0695
FAX	
PURCHASE ORDER NO.	

ITEM NO.	SAMPLE ID	COLLECTION		MATRIX (See above)	COLLECTION REMARKS (i.e. DNR Well ID #)
		DATE	TIME		
1. 794059 062014 A	6-5-14	9:32	River		
2. 857 062014 B	6-5-14	9:23	River	X	
3. 858 062014 C	6-5-14	9:30	River	X	
4. 859 062014 D	6-5-14	9:23	River	X	
5.					
6.					
7.					
8.					
9.					
10.					

COLLECTED BY (signature) Ruee Hydro

RELINQUISHED BY (signature)

DISPATCHED BY (signature)

CUSTODY SEAL NO. (IF ANY)

RECEIVED BY (signature)

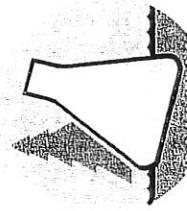
METHOD OF TRANSPORT

DATE/TIME  
06-05-14 1:30pm  
DATE/TIME

REPORT TO  
Garry Rast - Ruee  
100 State Street  
Neshkoro, WI  
54960

COOLER #	DATE/TIME 06-05-14 1:30pm	CONDITION On Us	TEMP
PRESERVATIVE: NP = no preservative S = sulfuric acid	OH = sodium hydroxide Z = zinc acetate M = methanol	WDNR FACILITY NUMBER	E-MAIL ADDRESS
IMPORTANT:	1. TO MEET REGULATORY REQUIREMENTS, THIS FORM MUST BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED. 2. PLEASE USE ONE LINE PER SAMPLE, NOT PER BOTTLE. 3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP PINK COPY. 4. PARTIES COLLECTING SAMPLE, LISTED AS REPORT TO AND LISTED AS INVOICE TO, AGREE TO STANDARD TERMS & CONDITIONS ON REVERSE.		

NO. 174037  
4/9/07



## **Appendix B**

July 15, 2014 Sampling Documents

# IMPOUNDMENT SAMPLING LOG

2014 Water Quality Study - Winter Hydroelectric Project - FERC #2064

Date: 7/15/14

Pre-Sampling Data: HWL - 1370.41 TWL - 1345.58 CFS - 225

Time: 9:00 Barometer: 30.04 Air Temp: 13.33 °C Wind Speed: N 7 MPH

Sky Conditions: OVERCAST, Cloudy

Precipitation within Last 24 Hours: YES

D.O. Meter Calibration:      Instrument Model Used:      Hach HQ40d

Were The Batterys Changed?       Yes       No      If Yes, When Changed: \_\_\_\_\_

Battery Status: 70% Charge

Calibration Time: FEB. 2014      Method:      Factory

Sampling Depth Profile:      Measured Depth to Bottom of the Impoundment: 3.2 Meter

Secchi Disk Depth: (E0.1 Meter) .60 Meter      Time: 9:10

## Chlorophyll a (1 Meter Below Surface)

Lab Sample I.D.# : <u>07/15/2014-1A</u>		
Time	Quantity (ml)	Filtered
<u>9:15</u>	<u>1000</u>	<u>NO</u>

## True Color (1 Meter Below Surface)

Lab Sample I.D.# : <u>07/15/2014-1B</u>	
Time	Quantity (ml)
<u>9:17</u>	<u>250</u>

## D.O. Sample Data

Depth	Time	D.O. (mg/l)	°C
.5 Mtr Below Surface	<u>9:25</u>	<u>6.14</u>	<u>19.0</u>
1 Meter	<u>9:26</u>	<u>6.40</u>	<u>19.1</u>
2 Meter	<u>9:27</u>	<u>6.35</u>	<u>19.3</u>
3 Meter			
4 Meter			
5 Meter			
6 Meter			
7 Meter			
8 Meter			
.5 Mtr Above Bottom	<u>9:28</u>	<u>6.31</u>	<u>19.4</u>

## Phosphorus

Lab Sample I.D.# : <u>07/15/2014-1C</u>	
(1 Meter Below Surface)	
Time	Preserved?
<u>9:20</u>	<u>H2SO4</u>

Lab Sample I.D.# :

(1 Meter Above Bottom)

Time	Preserved?
------	------------

Sample Location: N45° 55.749' W90° 57.354'

Comments:

---



---



---



---



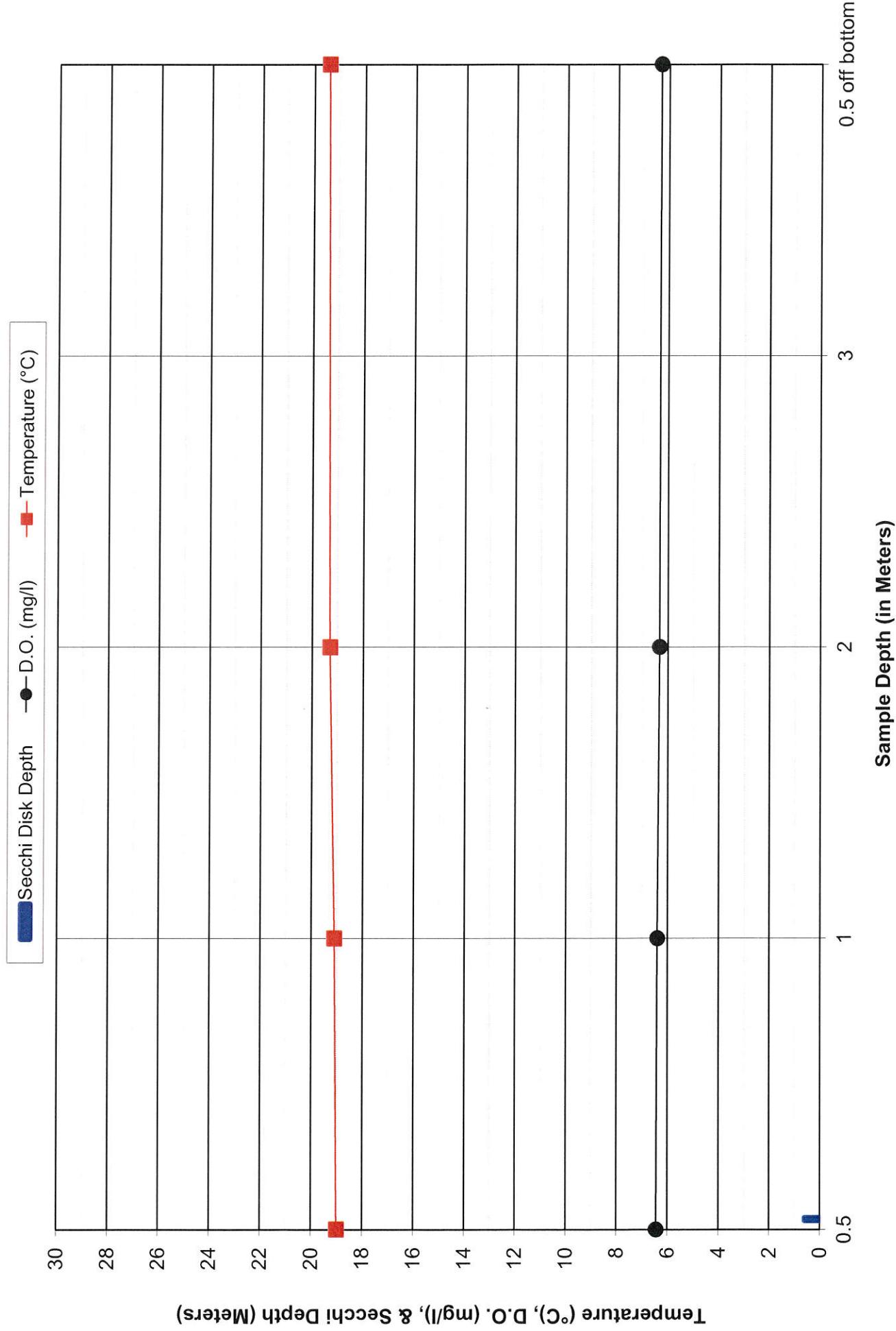
---

Performed By:

Gary Rast

# Winter Impoundment - FERC # 2064

## July 15, 2014 Sampling Event



**NORTHERN LAKE SERVICE, INC.**  
 Analytical Laboratory and Environmental Services  
 400 North Lake Avenue - Crandon, WI 54520  
 Ph: (715)-478-2777 Fax: (715)-478-3060

Client:  
 Renewable World Energies  
 Attn: Gary Rast  
 100 State Street  
 P.O. Box 264  
 Neshkoro, WI 54960

## ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460  
 WDATCP Laboratory Certification No. 105-330  
 EPA Laboratory ID No. WI00034  
 Printed: 07/22/14 Code: NNNN-S Page 1 of 1  
**Printed:** 222855  
**NLS Project:**  
**NLS Customer:** 102823  
**Phone:** 855 994 9376

Project: Winter

**07152014-1A NLS ID: 802935**

COC: 155001:1 Matrix: SW

Collected: 07/15/14 09:15 Received: 07/16/14

**Parameter**

Chlorophyll, all species

Lab filtration for Chlorophyll

**Result**

see attached  
yes

**Units**

mg/L

**Dilution**

.....

**LOD**

.....

**Analyzed**

07/21/14  
07/16/14

**Method**

10200-H  
NA

**Lab**

721026460  
721026460

**07152014-1B NLS ID: 802936**

COC: 155001:2 Matrix: SW

Collected: 07/15/14 09:17 Received: 07/16/14

**Parameter**

Phosphorus, tot. as P

**Result**

0.050

**Units**

mg/L

**Dilution**

1

**LOD**

0.0070\*

**Analyzed**

07/17/14

**Method**

SM 4500P-E 20ed

**Lab**

721026460

**07152014-1C NLS ID: 802937**

COC: 155001:3 Matrix: SW

Collected: 07/15/14 09:20 Received: 07/16/14

**Parameter**

Color, APHA (true)

Lab filtration

**Result**

250

**Units**

C.P.U.

**Dilution**

5

**LOD**

25\*

**Analyzed**

07/16/14  
07/16/14

**Method**

SM 2120-B 20ed

**Lab**

721026460  
721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(\*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution.

LOD = Limit of Detection  
 DWB = Dry Weight Basis  
 NA = Not Applicable  
 %DWB = (mg/kg DWB) / 10000  
 MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by: *R. T. Krueger*

Authorized by:  
 R. T. Krueger  
 President

Northern Lake Service, Inc.  
Chlorophyll Results

Customer: Renewable World Energies  
Project: 222855  
Winter

<u>Sample</u>	<u>Description</u>	<u>CC a</u> 1.1	<u>Pheo a</u> 0.62	<u>TC a</u> 1.5	<u>TC b</u> 0.029	<u>TC c</u> 0.46
802935	07152014 1A					

CC a = Corrected Chlorophyll a  
Pheo a = Pheophytin a  
TC a = Trichromatic Chlorophyll a  
TC b = Trichromatic Chlorophyll b  
TC c = Trichromatic Chlorophyll c  
Units = ug/L for Water, ug/cm<sup>2</sup> for periphyton samplers

\*: The complex calculations used to differentiate the various chlorophyll species magnify error at low concentrations and sometimes produce negative values, which are reported as 0.0 on this report.

# SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

Wisconsin Lab Cert. No. 721026460  
WI DATCP 105-000330

# NORTHERN LAKE SERVICE, INC.

Analytical Laboratory and Environmental Services

400 North Lake Avenue • Crandon, WI 54520-1298  
Tel: (715) 478-2777 • Fax: (715) 478-3060

CLIENT <i>Renewable World Energies</i>	ADDRESS 100 S. STATE STREET Post Box 204
CITY <i>Westboro</i>	STATE <i>WI</i>
PROJECT DESCRIPTION / NO. <i>water</i>	QUOTATION NO. <i>54960</i>
DNR FID # <i>—</i>	DNR LICENSE # <i>—</i>
CONTACT <i>Chris Rast</i>	PHONE <i>855-994-9370</i>
PURCHASE ORDER NO. <i>TERBAL</i>	FAX <i>900-93-4100</i>

ITEM NO.	SAMPLE ID	COLLECTION		MATRIX (See above)	REMARKS (i.e. DNR Well #)
		DATE	TIME		
1. 802935	07152014 1A	7/15/14	9:15	<i>RJER</i>	
2. 936	1 B	11	9:17	X	
3. 937	1 C	11	9:20	X	
4.					
5.					
6.					
7.					
8.					
9.					
10.					

COLLECTED BY (signature)  
*J. Schantz*

RELINQUISHED BY (signature)  
*J. Schantz*

RECEIVED BY (signature)  
*John*

METHOD OF TRANSPORT  
*UPS*

DATE/TIME  
*7/15/14 9:45*

DATE/TIME  
*7/15/14 9:45*

DATE/TIME  
*7/15/14 9:45*

CONDITION  
*On Ice*

REMARKS & OTHER INFORMATION  
*—*

E-MAIL ADDRESS  
*—*

COOLER # <i>—</i>	DATE/TIME <i>7/16/14</i>	CONDITION <i>On Ice</i>	TEMP. <i>—</i>
PRESERVATIVE: NP = no preservative NP = no preservative S = sulfuric acid	OH = sodium hydroxide HA = hydrochloric & ascorbic acid M = methanol H = hydrochloric acid	WDNR FACILITY NUMBER <i>—</i>	E-MAIL ADDRESS <i>—</i>

- IMPORTANT:**
1. TO MEET REGULATORY REQUIREMENTS, THIS FORM MUST BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED.
  2. PLEASE USE ONE LINE PER SAMPLE, NOT PER BOTTLE.
  3. RETURN THIS FORM WITH SAMPLES. CLIENT MAY KEEP PINK COPY.
  4. PARTIES COLLECTING SAMPLE, LISTED AS REPORT TO AND LISTED AS INVOICE TO AGREE TO STANDARD TERMS & CONDITIONS ON REVERSE.

## **Appendix C**

August 11, 2014 Sampling Documents

# IMPOUNDMENT SAMPLING LOG

2014

Water Quality Study - Winter Hydroelectric Project - FERC #2064

HWL - 1370.28

TWL - 1344.65

Pre-Sampling Data:

Date: 8/11/14

PROJECT Flow 60 CFS

Time: 1:15 Barometer: 30.03 Air Temp: 18.88 °C Wind Speed: N 8 MPH

Sky Conditions: Cloudy with periods of Sunshine

Precipitation within Last 24 Hours: YES

D.O. Meter Calibration: Instrument Model Used: Hach HQ40d

Were The Batterys Changed?  Yes  No If Yes, When Changed: \_\_\_\_\_

Battery Status: 60% Charge

Calibration Time: FEB. 2014 Method: Factory

Sampling Depth Profile: Measured Depth to Bottom of the Impoundment: 3.2 Meter

Secchi Disk Depth: (E0.1 Meter) .9 Meter Time: 1:20

## Chlorophyll a (1 Meter Below Surface)

Lab Sample I.D.#: <u>20140811-1A</u>		
Time	Quantity (ml)	Filtered
<u>1:25</u>	<u>1000</u>	<u>NO</u>

## True Color (1 Meter Below Surface)

Lab Sample I.D.#: <u>20140811-1B</u>	
Time	Quantity (ml)
<u>1:26</u>	<u>250</u>

## D.O. Sample Data

Depth	Time	D.O. (mg/l)	°C
.5 Mtr Below Surface	<u>1:30</u>	<u>6.68</u>	<u>23.7</u>
1 Meter	<u>1:32</u>	<u>6.65</u>	<u>23.7</u>
2 Meter	<u>1:34</u>	<u>6.61</u>	<u>23.7</u>
3 Meter			
4 Meter			
5 Meter			
6 Meter			
7 Meter			
8 Meter			
.5 Mtr Above Bottom	<u>1:35</u>	<u>6.54</u>	<u>23.8</u>

## Phosphorus

Lab Sample I.D.#: <u>20140811-1C</u>	
(1 Meter Below Surface)	
Time	Preserved?
<u>1:27</u>	<u>1/2504</u>

Lab Sample I.D.#:

(1 Meter Above Bottom)

Time Preserved?

Sample Location: N45° 55.749' W90° 57.354'

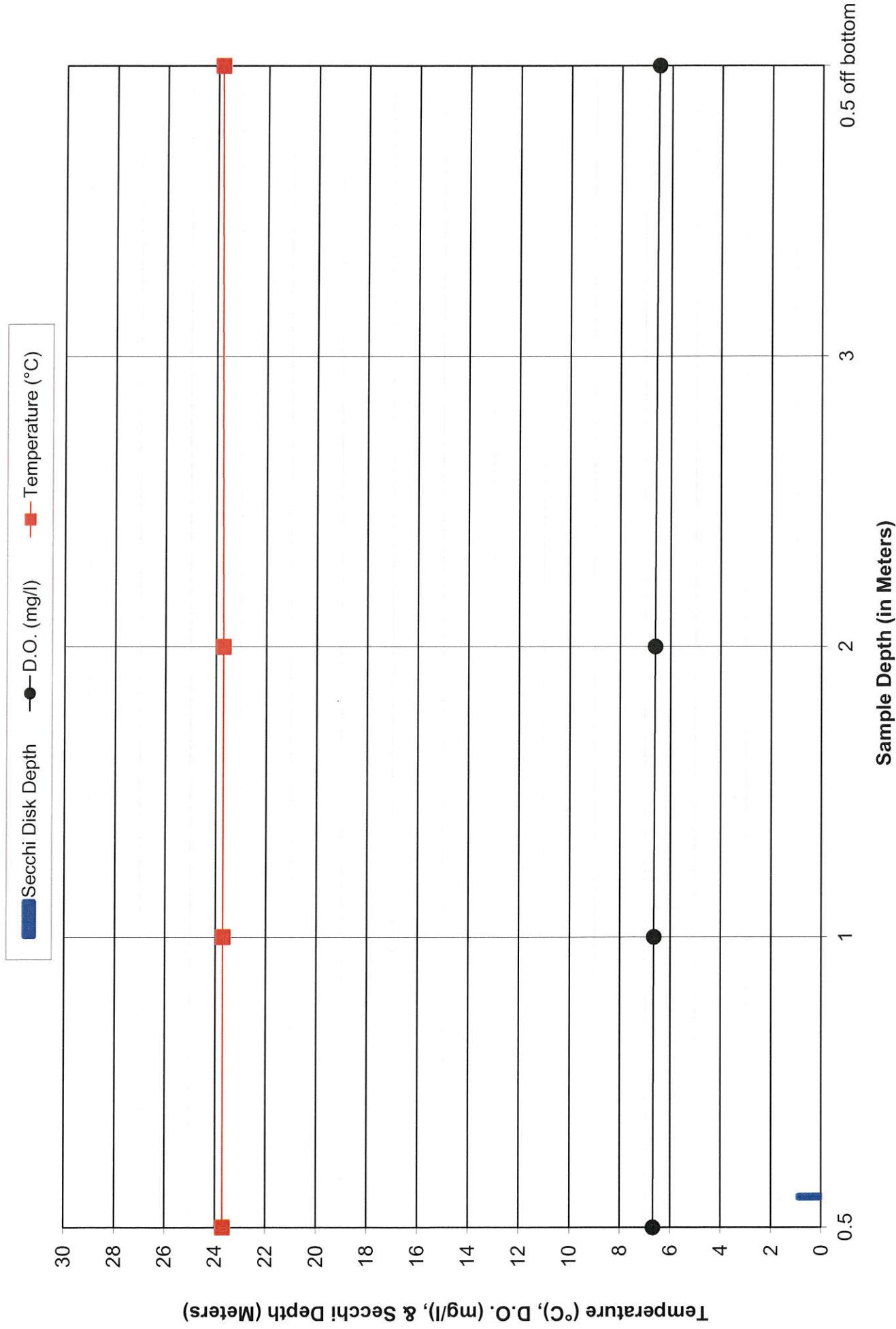
Comments:

Performed By:

GARY RAST + JIM TESCH

# Winter Impoundment - FERC # 2064

## August 11, 2014 Sampling Event



**NORTHERN LAKE SERVICE, INC.**  
Analytical Laboratory and Environmental Services  
400 North Lake Avenue • Crandon, WI 54520  
Ph: (715)-478-2777 Fax: (715)-478-3060

**ANALYTICAL REPORT**

WDNR Laboratory ID No. 721026460  
WDATCP Laboratory Certification No. 105-330  
EPA Laboratory ID No. W10034  
Printed: 08/18/14 Code: NNNN-S Page 1 of 1  
  
Client:  
Renewable World Energies  
Attn: Gary Rast  
100 State Street  
P.O. Box 264  
Neshkoro, WI 54960  
  
Phone: 855 994 9376

Project: Winter

**20140811-1A NLS ID: 809389**

COC: 160941:1 Matrix: SW

Collected: 08/11/14 13:25 Received: 08/12/14

Parameter

Chlorophyll, all species

Lab filtration for Chlorophyll

Result

see attached

Units

C.P.U.

Dilution

yes

LOD

-

LOQ

-

Method

10200-H

Lab

721026460

NA

721026460

Printed:

08/18/14

Code:

NNNN-S

Page

1 of 1

**20140811-1B NLS ID: 809390**

COC: 160941:2 Matrix: SW

Collected: 08/11/14 13:26 Received: 08/12/14

Parameter

Color, APHA (true)

Lab filtration

Result

150

Units

C.P.U.

Dilution

5

LOD

25\*

LOQ

-

Method

SM 2120-B 20ed

Lab

721026460

NA

721026460

**20140811-1C NLS ID: 809391**

COC: 160941:3 Matrix: SW

Collected: 08/11/14 13:27 Received: 08/12/14

Parameter

Phosphorus, tot. as P

Result

0.040

Units

mg/L

Dilution

1

LOD

0.007\*

LOQ

-

Method

SM 4500-P-E 20ed

Lab

721026460

Printed:

08/14/14

Code:

NNNN-S

Page

1 of 1

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". LOD and/or LOQ tagged with an asterisk(\*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution.

LOD = Limit of Detection

LOQ = Limit of Quantitation

NIJ = Not Detected (< LOD)

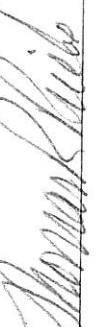
1000 ug/L = 1 mg/L

Reviewed by:

Authorized by:

R. T. Krueger

President





Northern Lake Service, Inc.  
Chlorophyll Results

Customer: Renewable World Energies

Project: 224724

Winter

<u>Sample</u>	<u>Description</u>	<u>CC a</u> 1.5	<u>Pheo a</u> 0.49	<u>TC a</u> 1.8	<u>TC b</u> 0.1	<u>TC c</u> 0.088
809389	20140811-1A					

CC a = Corrected Chlorophyll a  
Pheo a = Pheophytin a  
TC a = Trichromatic Chlorophyll a  
TC b = Trichromatic Chlorophyll b  
TC c = Trichromatic Chlorophyll c  
Units = ug/L for Water, ug/cm<sup>2</sup> for periphyton samplers

\*: The complex calculations used to differentiate the various chlorophyll species magnify error at low concentrations and sometimes produce negative values, which are reported as 0.0 on this report.

# SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

# NORTHERN LAKE SERVICE, INC.

Wisconsin Lab Cert. No. 721026460

Analytical Laboratory and Environmental Services

400 North Lake Avenue • Crandon, WI 54520-1298

Tel: (715) 478-2777 • Fax: (715) 478-3060

CLIENT ADDRESS CTP NAME	RENEWABLE WORLD ENERGYES 8800 Barkley / 105. STATE STREET NESTLE USA STATE ZIP CITY QUOTATION NO. DNR FID
PROJECT DESCRIPTION / NO.	ANALYZE PER ORDER OF ANALYSTS
CONTACT PURCHASE ORDER NO.	PHONE 355-994-9326 FAX 300-23-4100
DNR LICENSE #	

ITEM NO.	SAMPLE ID	COLLECTION DATE	TIME	MATRIX (See above)	COLLECTION REMARKS (i.e. DNR Well ID #)	
					COLLECTOR	DATE/TIME
1. 8091389	20140811-1A	8/11/14	1:25	RIVER	X	
2. 340	20140811-1B	8/11/14	1:26	WATER	X	
3. 311	20140811-1C	8/11/14	1:27	WATER	X	
4.						
5.						
6.						
7.						
8.						
9.						
10.						

CUSTODY SEAL NO. (IF ANY)

*8/11/14 1:25 - 1:27*

REPORT TO

*SAME AS  
ABOVE  
ATTN: Gary*

INVOICE TO

*RENEWABLE WORLD OPERATIONS  
1001 STATE PAVENSON STREET  
NORWAY, MT 49870*

DATE/TIME

*8/11/14 3:00*

DATE/TIME

*8/11/14 3:00*

DATE/TIME

*8/11/14 3:00*

TEMP.

*80°*

REMARKS & OTHER INFORMATION

*Oil well*

METHOD OF TRANSPORT

*UPS*

RECEIVED BY (signature)

*Jay Bent*

RELINQUISHED BY (signature)

*Jay Bent*

DISPATCHED BY (signature)

*Jay Bent*

DATE/TIME

*8/11/14 1:45*

CONDITION

*Oil well*

REMARKS & OTHER INFORMATION

*Oil well*

WDNR FACILITY NUMBER

*Oil well*

E-MAIL ADDRESS

*Oil well*

COOLER #

*Oil well*

PRESERVATIVE:

*Oil well*

N = nitric acid OH = sodium hydroxide

Z = zinc acetate HA = hydrochloric & ascorbic acid

S = sulfuric acid M = methanol H = hydrochloric acid

IMPORTANT:  
1. TO MEET REGULATORY REQUIREMENTS, THIS FORM MUST BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED.  
2. PLEASE USE ONE LINE PER SAMPLE, NOT PER BOTTLE.  
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP PINK COPY.  
4. PARTIES COLLECTING SAMPLE, LISTED AS REPORT TO AND LISTED AS INVOICE TO AGREE TO STANDARD TERMS & CONDITIONS ON REVERSE.

## Appendix D

### Agency Correspondence



October 3, 2014

Mr. Nick Utrup  
Fish and Wildlife Biologist  
U.S. Fish and Wildlife Service  
2661 Scott Tower Drive  
New Franken, WI 54229

Ms. Cheryl Laatsch  
Statewide FERC Coordinator  
Wisconsin Dept. of Natural Resources  
N7725 HWY 28  
Horicon, WI 53032

Mr. Paul Strong, Forest Supervisor  
USDA Forest Service Chequamegon, Nicolet NF  
Forest Headquarters Offices  
500 Hanson Lake R  
Rhineland, WI 54501

Re: Winter Hydroelectric Project  
FERC Project Number P-2064  
Flambeau Hydro LLC  
Draft Report 2014 Water Quality Monitoring Data

Dear Agency:

Purpose

On behalf of Flambeau Hydro LLC "Flambeau" (Licensee), Renewable World Energies, LLC is submitting a copy of the Draft Report 2014 Water Quality Monitoring Data for the Winter Hydroelectric Project for review and comment. Nothing out of the ordinary was experienced during the 2014 monitoring season except as noted in the report.

Background

The Federal Energy Regulatory Commission "FERC" issued a License to Flambeau on August 12, 2005. Portions of the original Certification were contested by the Licensee. The Wisconsin Department of Natural Resources (WDNR) submitted a revised Water Quality Certification, Dated at Park Falls, WI: August 19, 2008 that replaced the original certification of June 21, 2005. Only conditions E, F, and J were modified and a footnote was added to condition D according to the Final Settlement Agreement. The submitted report is a requirement of the License pursuant to Article 401 Condition N, Appendix A. 2014 marked the eighth year of water quality sampling under the FERC License issued August 12, 2005.

**Corporate Office**  
P.O. Box 264  
100 S. State Street  
Neshkoro, WI 54960  
Fax: 920-293-4100

Phone: 855-99HYDRO  
(855-994-9376)  
[www.renewableworldenergies.com](http://www.renewableworldenergies.com)

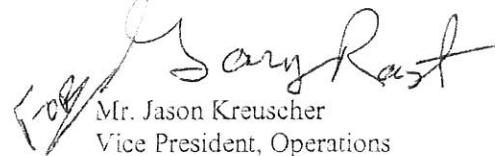
**Administrative Office**  
1001 Stephenson Street  
Norway, MI 49870  
Fax: 906-563-9344



Conclusion

The Federal Energy Regulatory Commission's regulations allow for a 30 day formal review and comment period. Thank you in advance for providing your responses in a timely manner so we can include your comments and recommendations, as appropriate, into our report. If you have any questions concerning the report, please contact Mr. Gary Rast at the Renewable World Energies, LLC offices @ 855-994-9376 ext. 105, or by email at: [grast@rwehydro.com](mailto:grast@rwehydro.com).

Sincerely,  
Renewable World Energies, LLC  
Agent for Licensee

  
Mr. Jason Kreuscher  
Vice President, Operations

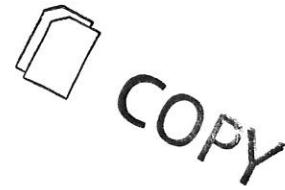
Attachment: Draft Report 2014 Water Quality Monitoring Data – October 3, 2014

Cc: RWE, Corporate  
Mr. Dale Higgins, FS  
Ms. Sue Reinecke, FS

## Gary Rast

---

**From:** Gary Rast  
**Sent:** Tuesday, May 27, 2014 8:58 AM  
**To:** 'Laatsch, Cheryl - DNR'; Utrup, Nick  
**Subject:** RE: water quality data collection

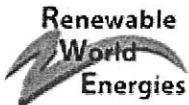


Everyone,

Just sending an update on water sample collections (Ice-Out) at Winter and Flambeau projects. Nothing collected to this point. Flows have come down quite a bit in the last two weeks. However, the boat barriers are not in at Winter, Flambeau Upper or Flambeau Lower. Two of the three sites have access just slightly above the dams and sample points near the dams at most a couple hundred feet (Winter & Flambeau Lower). I will not attempt any sampling unless they are installed. A side note is that the 4 Flambeau projects must be done in sequence and on the same day. Sampling is on hold until at least the week of June 2<sup>nd</sup> or June 9<sup>th</sup> if you still want it done. I need to schedule Turtle/Eagle/Erosion and KBB surveys from now on as well.

Gary

Gary Rast  
Regulatory/Compliance Manager



Renewable World Energies, LLC  
100 S. State Street  
P.O. Box 264  
Neshkoro, WI 54960  
Phone: 855-994-9376 Ext. 105  
Fax: 920-293-4100  
Cell: 920-570-0995  
E-mail: [grast@rwehydro.com](mailto:grast@rwehydro.com)

---

**From:** Laatsch, Cheryl - DNR [<mailto:Cheryl.Laatsch@wisconsin.gov>]  
**Sent:** Tuesday, May 13, 2014 11:38 AM  
**To:** Gary Rast  
**Subject:** FW: water quality data collection

I have asked for clarification from Craig. Here is his response.

Thanks, Cheryl

---

**From:** Roesler, Craig P - DNR  
**Sent:** Tuesday, May 13, 2014 11:12 AM  
**To:** Laatsch, Cheryl - DNR; Hansen, James P - DNR  
**Cc:** Aartila, Tom P - DNR  
**Subject:** RE: water quality data collection

I would have them collect the samples as soon as conditions become safe. If it isn't possible in May, try for early June.

## Gary Rast

---

**From:** Laatsch, Cheryl - DNR <Cheryl.Laatsch@wisconsin.gov>  
**Sent:** Tuesday, May 13, 2014 11:38 AM  
**To:** Gary Rast  
**Subject:** FW: water quality data collection



COPY

I have asked for clarification from Craig. Here is his response.

Thanks, Cheryl

---

**From:** Roesler, Craig P - DNR  
**Sent:** Tuesday, May 13, 2014 11:12 AM  
**To:** Laatsch, Cheryl - DNR; Hansen, James P - DNR  
**Cc:** Aartila, Tom P - DNR  
**Subject:** RE: water quality data collection

I would have them collect the samples as soon as conditions become safe. If it isn't possible in May, try for early June.

## Gary Rast

---

**From:** Gary Rast  
**Sent:** Tuesday, May 13, 2014 9:52 AM  
**To:** 'Laatsch, Cheryl - DNR'  
**Cc:** 'Jason Kreuscher'; Cindy Skowronski; Aneta Rietveld  
**Subject:** RE: water quality data collection

 COPY

Cheryl,

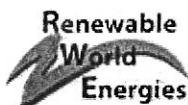
Thanks for the response. However, last year a similar situation occurred at the Flambeau projects and we abandoned the sampling with agency consult. Why the inconsistency from year to year? Below is exact content of an e-mail sent to the agencies on May 22, 2013 addressing same type of issue and agencies agreed. Just asking where is the difference. FYI - As of this morning ,the flows at the Winter project are now 3,000 CFS as opposed to 2,000 CFS last week and the flows at the (4) Flambeau projects are at 6,500 CFS as opposed to 3,500 - 4,000 CFS last week. We can try to check back together but next week is the last full week of May because Memorial Day is the following Monday. Gary

Everyone,

About 1 to 1.5 weeks ago I notified you that because of water conditions and no boat barriers being installed at the Flambeau projects the Ice-Out WQ monitoring would or could not be performed during the 2 week time period following Ice-Out. On Monday 5/20 I was notified that the barriers were installed and river conditions were approaching more normal conditions. Because weather looked favorable for Thursday 5/23 I made plans for that day. I was not aware that the area had received so much rain in the past couple of days and that runoff from surrounding areas were contributing so much. River conditions today 5/22 are horrible to say the least, about 1000 CFS more than when you were originally notified. I believe they are slightly one side or the other of 4000 CFS. I have been informed that another 500 CFS is to be released from the flowage later today, so conditions will worsen. I spoke to Jeff less than an hour ago and discussed doing some sort of modified monitoring while I am here. We agreed that was not a good thing because comparison to other years Ice-Out results would be very hard to make and the effort would not be worth much. Jeff and I agreed to skip the Ice-Out sampling all together because the effort would not yield good results and the safety concerns involving the monitoring. RWE asks for your understanding and agreement. Thanks

Gary

Gary Rast  
Regulatory/Compliance Manager



Renewable World Energies, LLC  
100 S. State Street  
P.O. Box 264  
Neshkoro, WI 54960  
Phone: 855-994-9376 Ext. 105  
Fax: 920-293-4100  
Cell: 920-570-0995  
E-mail: [grast@rwehydro.com](mailto:grast@rwehydro.com)

---

**From:** Laatsch, Cheryl - DNR [<mailto:Cheryl.Laatsch@wisconsin.gov>]

**Sent:** Tuesday, May 13, 2014 8:28 AM

**To:** Gary Rast

**Subject:** water quality data collection

Staff agree that the sampling should be postponed. They have requested that you try to collect samples before the end of May. Lets check back with each other at the end of May to see how things are going. Thanks

Cheryl Laatsch

Statewide FERC Coordinator

Wisconsin Dept of Natural Resources

N7725 Hwy 28

Horicon WI 53032

(T) 920-387-7869 (Fax) 920-387-7888

[Cheryl.laatsch@wisconsin.gov](mailto:Cheryl.laatsch@wisconsin.gov)

**Gary Rast**

---

**From:** Laatsch, Cheryl - DNR <Cheryl.Laatsch@wisconsin.gov>  
**Sent:** Tuesday, May 13, 2014 8:28 AM  
**To:** Gary Rast  
**Subject:** water quality data collection

 COPY

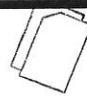
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Cheryl Laatsch  
Statewide FERC Coordinator  
Wisconsin Dept of Natural Resources  
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Horicon WI 53032  
(T) 920-387-7869 (Fax) 920-387-7888  
[Cheryl.laatsch@wisconsin.gov](mailto:Cheryl.laatsch@wisconsin.gov)

## Gary Rast

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**From:** Reinecke, Sue -FS <[sreinecke@fs.fed.us](mailto:sreinecke@fs.fed.us)>  
**Sent:** Thursday, May 08, 2014 12:00 PM  
**To:** Gary Rast  
**Cc:** Higgins, Dale -FS  
**Subject:** RE: Winter Ice Out WQ

 COPY

Hi Gary, FS concurs with your decision to not sample for safety reason due to high flows.

thanks  
sue

\*\*\*\*\*

Sue Reinecke, Forest Fisheries Biologist  
Chequamegon-Nicolet NF  
1170 4<sup>th</sup> Ave South  
Park Falls, WI 54552  
715-762-5185  
[sreinecke@fs.fed.us](mailto:sreinecke@fs.fed.us)

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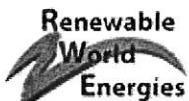
**From:** Gary Rast [<mailto:grast@rwehydro.com>]  
**Sent:** Thursday, May 08, 2014 10:42 AM  
**To:** Laatsch, Cheryl - DNR; Utrup, Nick; Higgins, Dale -FS; Reinecke, Sue -FS  
**Cc:** Jason Kreuscher; Cindy Skowronski; Aneta Rietveld; David Anderson  
**Subject:** Winter Ice Out WQ

Everyone,

I traveled up to the Winter Hydro this week to perform the Ice Out WQ sampling. The photos were taken May 7, 2014. The 1<sup>st</sup> photo shows the discharge (2004) CFS and 2<sup>nd</sup> photo is looking upstream from the dam. As you can see it is wild and no buoys are installed yet because of dangerous conditions. Sample site is just upstream of the buoys and just to the right of the large evergreen on left side of photo. The power canal is not shown but is on left side of the photo. According to WQ plan, the sampling can be done within 3 weeks of Ice Out. This week was the 2<sup>nd</sup> week since Ice Out. We do not expect conditions to improve in the near future which would put the Ice Out sampling outside of the 3 week window. **The licensee proposes to abandon the Ice Out sampling for 2014 because of these conditions and asks for your agreement.** If you require sampling to be performed, we can do it outside the timeframe when conditions improve but not until then. As a side note sampling was accomplished at the Clam River and Danbury projects this week. Please respond as soon as possible.

Gary

Gary Rast  
Regulatory/Compliance Manager



Renewable World Energies, LLC

## Gary Rast



COPY

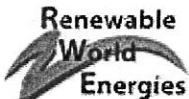
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**Sent:** Thursday, May 08, 2014 10:42 AM  
**To:** 'Laatsch, Cheryl - DNR'; Utrup, Nick; Higgins, Dale -FS (dhiggins@fs.fed.us); 'Reinecke, Sue -FS'  
**Cc:** 'Jason Kreuscher'; Cindy Skowronski; Aneta Rietveld; David Anderson  
**Subject:** Winter Ice Out WQ  
**Attachments:** WNTR Discharge May 7 (1).JPG; WNTR Upstream May 7.JPG

Everyone,

I traveled up to the Winter Hydro this week to perform the Ice Out WQ sampling. The photos were taken May 7, 2014. The 1<sup>st</sup> photo shows the discharge (2004) CFS and 2<sup>nd</sup> photo is looking upstream from the dam. As you can see it is wild and no buoys are installed yet because of dangerous conditions. Sample site is just upstream of the buoys and just to the right of the large evergreen on left side of photo. The power canal is not shown but is on left side of the photo. According to WQ plan, the sampling can be done within 3 weeks of Ice Out. This week was the 2<sup>nd</sup> week since Ice Out. We do not expect conditions to improve in the near future which would put the Ice Out sampling outside of the 3 week window. **The licensee proposes to abandon the Ice Out sampling for 2014 because of these conditions and asks for your agreement.** If you require sampling to be performed, we can do it outside the timeframe when conditions improve but not until then. As a side note sampling was accomplished at the Clam River and Danbury projects this week. Please respond as soon as possible.

Gary

Gary Rast  
Regulatory/Compliance Manager



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