

December 4, 2013

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 2013 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 2013 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 seventh year monitoring was conducted since the license was issued, but is the 2<sup>nd</sup> year of submittal by RWE on the behalf of the Licensee.

Monitoring was conducted on May 7, July 8, and August 5, 2013. The only issue encountered was some below standard D O measurements taken on the July 9<sup>th</sup> date. No other issues were encountered during the 2013 monitoring season. The draft report was sent to the agencies by letter dated October 23, 2013 for review and comment. Correspondence was received from WDNR on November 5, 2013 "Looks o.k." and USFWS on November 18, 2013 "*The Forest has no comments on the draft report*". No comments were received from the USFWS. The next scheduled monitoring event will be conducted in 2014.

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).

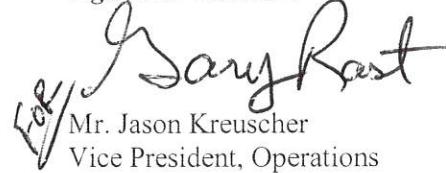
**Corporate Office**  
P.O. Box 264  
100 S. State Street  
Neshkoro, WI 54960  
Fax: 920-293-4100

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

  
Mr. Jason Kreuscher  
Vice President, Operations

Attachment: Final Report 2013 Water Quality Monitoring Data – December 4, 2013

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

## **Final Report**

2013 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 – December 4, 2013

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## Summary

2013 marked the seventh 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 2013 monitoring season appeared cooler in April/May with higher than normal precipitation in the months of April/May/June. Temperatures in June/July/August were about 1to5 degrees higher than normal but precipitation was about 50% below normal for July/August. (**Refer to 2013 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 during the week beginning April 28, 2013. The Ice-Out sampling event occurred on May 7, 2013. River flow, based on Winter Hydroelectric Project records, was approximately 3162 cubic feet per second. Sampling occurred between 9:30 a.m. and 9:56 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 May 8, 2013. Northern Lake Service, Inc. issued a laboratory report on May 23, 2013. No unusual levels of Chlorophyll a, true color, or total phosphorus were noted in the laboratory reports.

The July sampling event occurred on July 8, 2013. River flow, based on Winter Hydroelectric Project records was approximately 80 cubic feet per second. Sampling occurred between 2:00 pm. and 2:15 pm. Samples were taken without incident. No unusual D.O. or Temperature readings were observed. However DO was in the low 5's throughout the sample column. Samples for laboratory analysis were delivered to Northern Lake Service, Inc in Crandon, WI on July 9, 2013. Northern Lake Service, Inc. issued a laboratory report on July 15, 2013. No unusual levels of chlorophyll a, true color, or phosphorus were noted in the laboratory reports.

River flow, based on Winter Hydroelectric Project records, was 55 cubic feet per second during the August 5, 2013 sampling event. Sampling occurred between 12:30 p.m. and 12:57 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 6, 2013. Northern Lake Service, Inc issued a laboratory report on August 13, 2013. 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 2013 (**Refer to 2013 Winter Project Sampling Comparison Table 2011-2013 page 7**) sampling results are as follows:

1. Water Clarity – Increased May/July and Decreased in August
2. Chlorophyll a – Decreased in May/August and Increased in July

3. Color – Remained About The Same
4. Total Phosphorus – Decreased in May/July and Increased in August
5. Overall D.O. – Decreased in May/August and Increased in July
6. Water Temperatures – Decreased in May/August and Increased slightly in 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 2014 beginning with the Ice-Out sampling event.

## **2013 Tabular Data**

May 7, July 8, August 5

# Winter Hydroelectric Project - FERC Project # 2064

## 2013 Water Quality Sampling Data

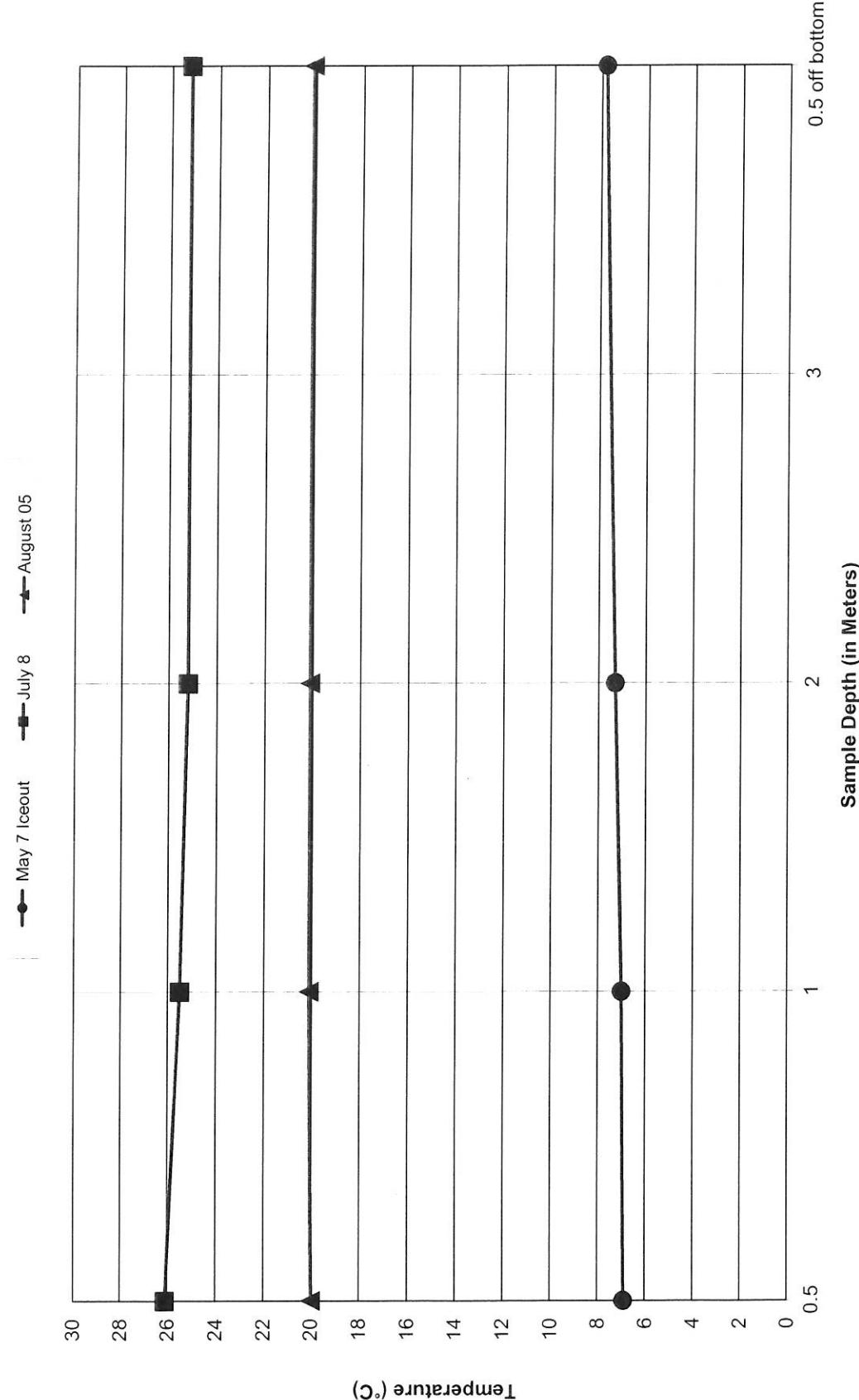
#### \* Considered Reporting Limits

## **2013 Graphed Data**

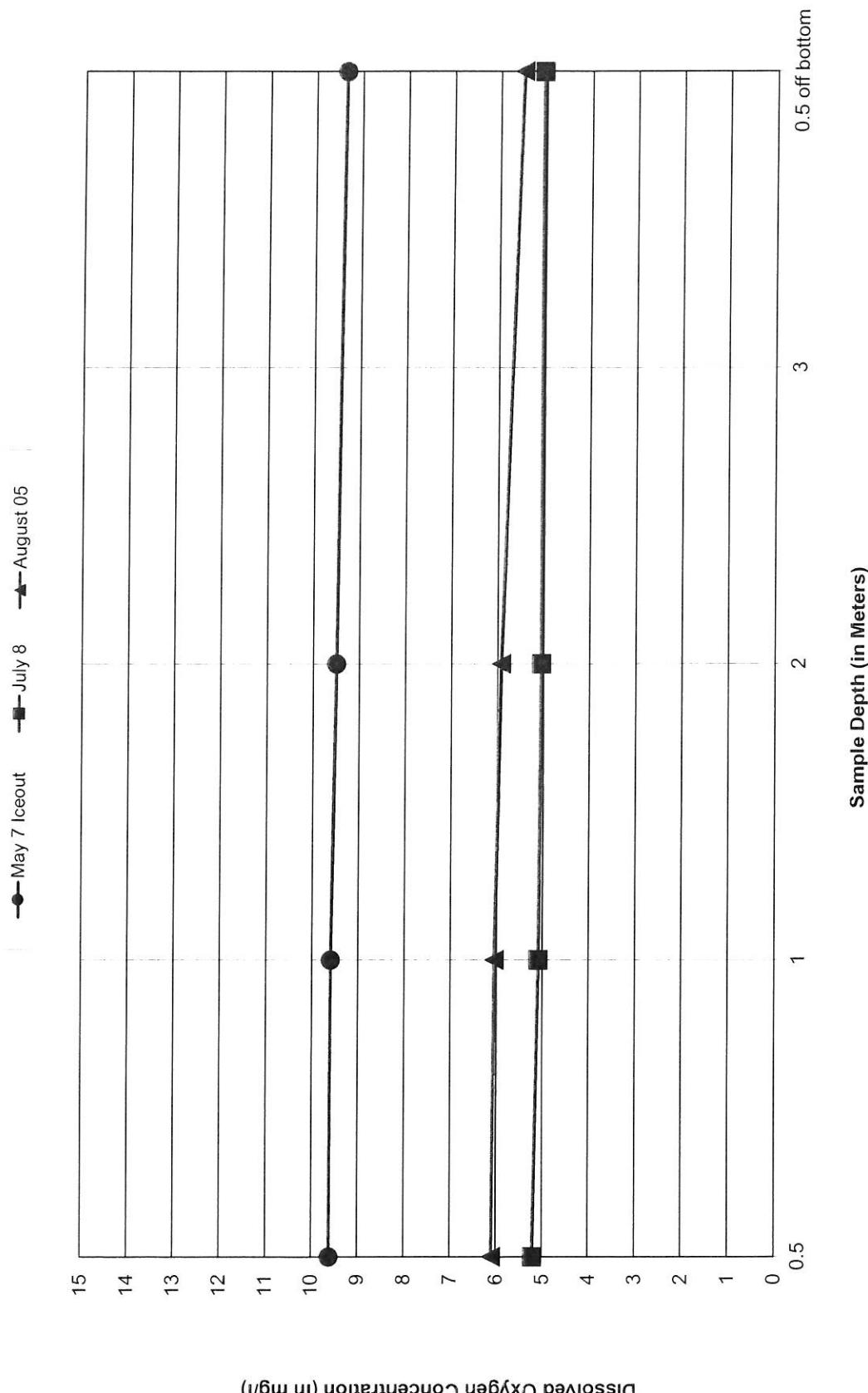
Temperature and Dissolved Oxygen

## Winter Impoundment - FERC # 2064

### 2013 Temperature Samples



**Winter Impoundment - FERC # 2064  
2013 Dissolved Oxygen Samples**



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

**2013 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-12	74	22	42.5	-0.7	691	678	1.34	1.1	2.85	47%
November-12	53	0	30.9	2.1	1015	1088	1.33	10.1	2.09	64%
December-12	48	-7	18.4	3.6	1438	1556	1.44	13.2	1.21	119%
January-13	42	-21	12.1	1.9	1631	1691	1.39	9.2	0.96	145%
February-13	38	-22	14.6	-0.5	1405	1399	1.16	19.1	0.81	70%
March-13	53	-13	21.8	-4.1	1333	1200	2.04	25.8	1.49	137%
April-13	68	8	34.4	-5.2	908	762	5.04	50.8	2.43	207%
May-13	80	27	49.5	-1.9	471	426	3.71	Trace	3.23	115%
June-13	87	37	61.6	1.5	146	179	4.54	0.0	4.23	107%
July-13	94	47	67.8	2.0	47	63	1.73	0.0	3.85	45%
August-13	94	43	69.0	4.7	27	86	1.98	0.0	3.70	54%
September-13	88	37	59.9	4.3	168	298	1.26	0.0	4.11	31%

Source: NOAA/Duluth,  
MN

**2013  
Winter  
Sampling Comparison Table  
2011—2013**

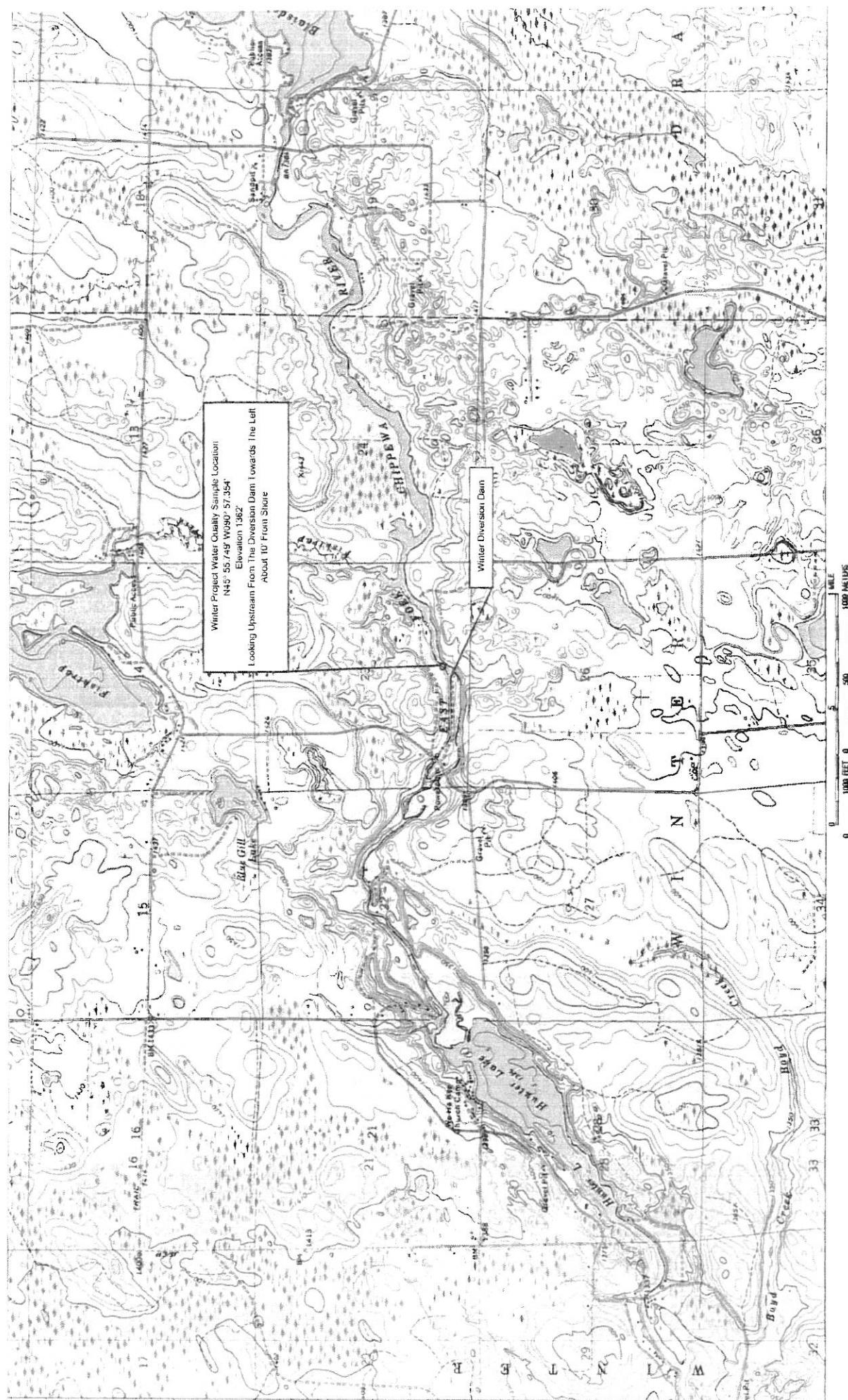
**Project Sampling Comparison Table**  
**2011 Thru Current Year**

<b>Winter</b>									
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
<b>Minimum</b>	April/May	0.50	0.00	150.00	0.028	9.34	9.61	6.90	7.80
<b>Maximum</b>	April/May	1.20	2.30	250.00	0.048	11.85	12.10	9.90	10.60
<b>Average</b>	April/May	0.90	1.40	216.67	0.037	10.58	10.81	8.30	9.00
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
<b>Minimum</b>	July	0.60	1.80	250.00	0.055	4.67	4.75	25.20	25.90
<b>Maximum</b>	July	0.80	4.30	400.00	0.082	5.84	6.44	26.10	27.70
<b>Average</b>	July	0.73	2.67	350.00	0.067	5.19	5.47	25.60	26.57
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
<b>Minimum</b>	August	0.70	2.00	200.00	0.047	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	2.90	216.67	0.074	6.67	6.97	22.70	23.43

# **Winter Impoundment**

## **Sampling Location**

### **Map**



## Appendix A

May 7, 2013 Sampling Documents (Ice-Out)

## IMPOUNDMENT SAMPLING LOG

2013 Water Quality Study - Winter Hydroelectric Project - FERC #2064

HWL-1370.40 TWL-1347.84 Date: 5/7/13

Pre-Sampling Data:

TOTAL PROJECT Flow 3162CR

Time: 9:30 Barometer: 29.98 Air Temp: 21.66°C Wind Speed: E/SE 5 MPHSky Conditions: BRIGHT SUN, BREEZYPrecipitation within Last 24 Hours: NO

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

Were The Batterys Changed?  Yes  No If Yes, When Changed: APRIL 2013Battery Status: 100% ChargeCalibration Time: APRIL 2013 Method: FactorySampling Depth Profile: Measured Depth to Bottom of the Impoundment: 3.2 MeterSecchi Disk Depth: (E0.1 Meter) 1.2 Meter Time: 9:50

## Chlorophyll a (1 Meter Below Surface)

Lab Sample I.D.#: <u>201305071A</u>		
Time	Quantity (ml)	Filtered
<u>9:45</u>	<u>1000</u>	<u>No</u>

## True Color (1 Meter Below Surface)

Lab Sample I.D.#: <u>201305071B</u>	
Time	Quantity (ml)
<u>9:47</u>	<u>250</u>

## D.O. Sample Data

Depth	Time	D.O. (mg/l)	Temp °C
.5 Mtr Below Surface	<u>9:52</u>	<u>9.61</u>	<u>6.9</u>
1 Meter	<u>9:53</u>	<u>9.59</u>	<u>7.0</u>
2 Meter	<u>9:54</u>	<u>9.49</u>	<u>7.3</u>
3 Meter			
4 Meter			
5 Meter			
6 Meter			
7 Meter			
8 Meter			
.5 Mtr Above Bottom	<u>9:56</u>	<u>9.34</u>	<u>7.8</u>

## Phosphorus

Lab Sample I.D.#: <u>201305071C</u>	
(1 Meter Below Surface)	
Time	Preserved?
<u>9:49</u>	<u>H2SO4</u>

Lab Sample I.D.#: _____	
(1 Meter Above Bottom)	
Time	Preserved?
—	—

Sample Location: N45° 55.749' W90° 57.354'

Comments:

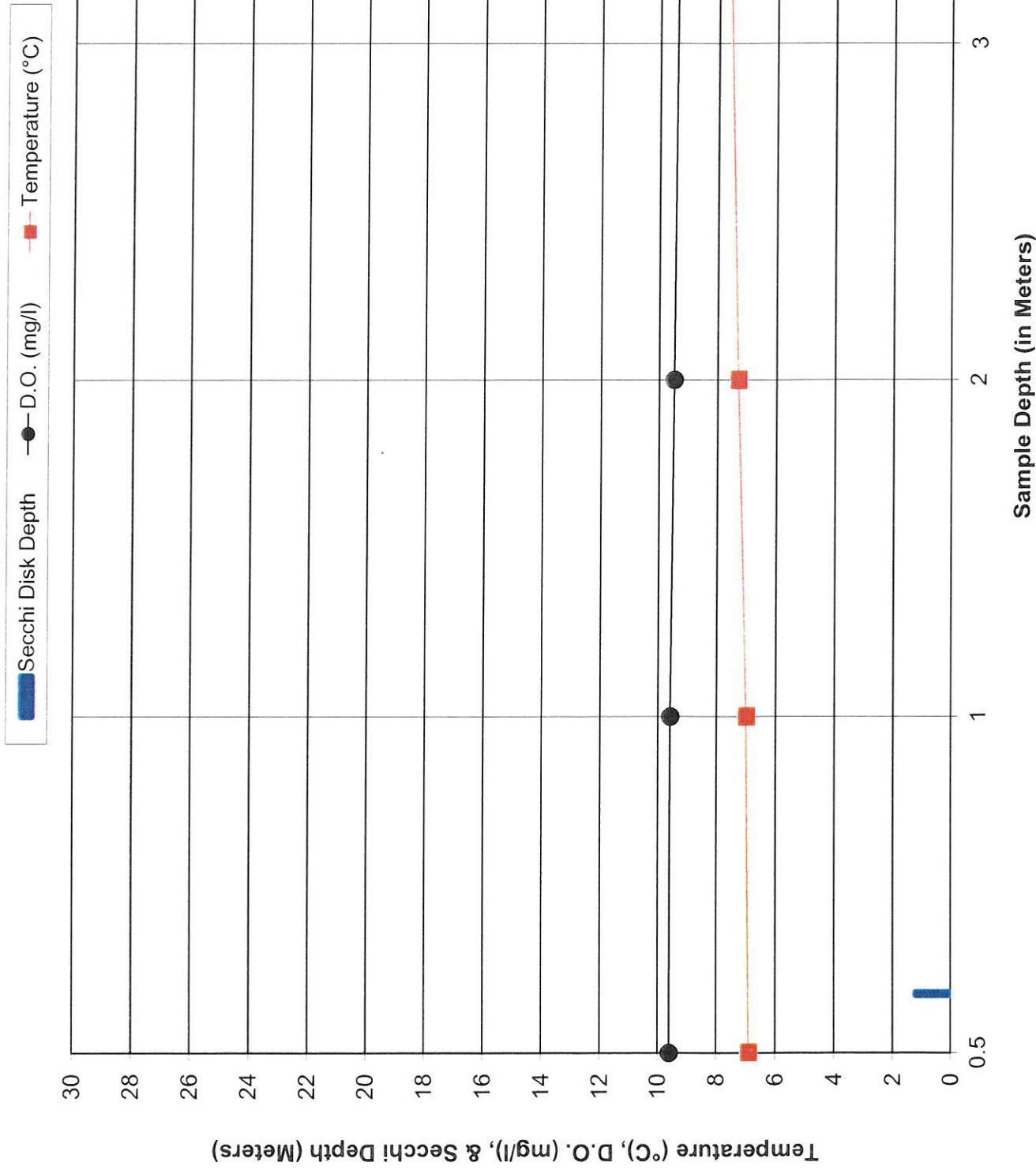
GEN #1 @ 1D GATE  
GEN #2 @ 9.5 GATE

Performed By:

GARY DAST9-27-13

# Winter Impoundment - FERC # 2064

## May 7, 2013 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

**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: 05/23/13 Code: NNNNS Page 1 of 1  
**NLS Project:** 196566  
**NLS Customer:** 102823  
 Phone: 855 994 9376

**Project:** Winter

<b>20130705 1A NLS ID: 717969</b>	
COC: 153590:1 Matrix: SW	Received: 05/08/13
Collected: 05/07/13 09:45	
<b>Parameter</b>	
Chlorophyll, all species	
Lab filtration for Chlorophyll	

<b>20130705 1B NLS ID: 717970</b>	
COC: 153590:2 Matrix: SW	
Collected: 05/07/13 09:47	Received: 05/08/13
<b>Parameter</b>	
Color APHA (true)	

<b>20130705 1C NLS ID: 717971</b>	
COC: 153590:3 Matrix: SW	
Collected: 05/07/13 09:49	Received: 05/08/13
<b>Parameter</b>	
Phosphorus, tot as P	

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
ND = Not Detected (< LOD)
DWB = (mg/kg DWB) / 10000
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

R. T. Krueger  
 President



**RECEIVED**  
 MAY 28 2013

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

**Customer:** Renewable World Energies  
**Project:** 196566  
 Winter

<u>Sample</u>	<u>Description</u>	<u>CC a</u> 1.7	<u>Pheo a</u> 0.28	<u>TC a</u> 1.9	<u>TC b</u> 0.28	<u>TC c</u> 0.44
717969	20130705 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.

## **Appendix B**

July 8, 2013 Sampling Documents

## IMPOUNDMENT SAMPLING LOG

2013 Water Quality Study - Winter Hydroelectric Project - FERC #2064

HWL - 1370.18

Date: 7-8-13

Pre-Sampling Data: TWL - 1344.7 80 CFS

Time: 2:00 Barometer: 29.99 Air Temp: 27 °C Wind Speed: calm

Sky Conditions: Partly cloudy, hazy

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: 75% Charge

Calibration Time: APRIL 2013 Method: Factory

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

Secchi Disk Depth: (E0.1 Meter) .8 Meter Time: 2:15

## Chlorophyll a (1 Meter Below Surface)

Lab Sample I.D.#: 070820131A		
Time	Quantity (ml)	Filtered
2:10	1000	NO

## True Color (1 Meter Below Surface)

Lab Sample I.D.#: 070820131B	
Time	Quantity (ml)
2:12	250

## D.O. Sample Data

Depth	Time	D.O. (mg/l)	°C
.5 Mtr Below Surface	2:05	5.21	26.1
1 Meter	2:06	5.09	25.5
2 Meter	2:07	5.05	25.2
3 Meter			
4 Meter			
5 Meter			
6 Meter			
7 Meter			
8 Meter			
.5 Mtr Above Bottom	2:08	5.05	25.2

## Phosphorus

Lab Sample I.D.#: 070820131C	
(1 Meter Below Surface)	
Time	Preserved?
2:13	H2SO4

Lab Sample I.D.#: N/A	
(1 Meter Above Bottom)	
Time	Preserved?
N/A	N/A

Sample Location: N45° 55.749' W90° 57.354'

Comments:

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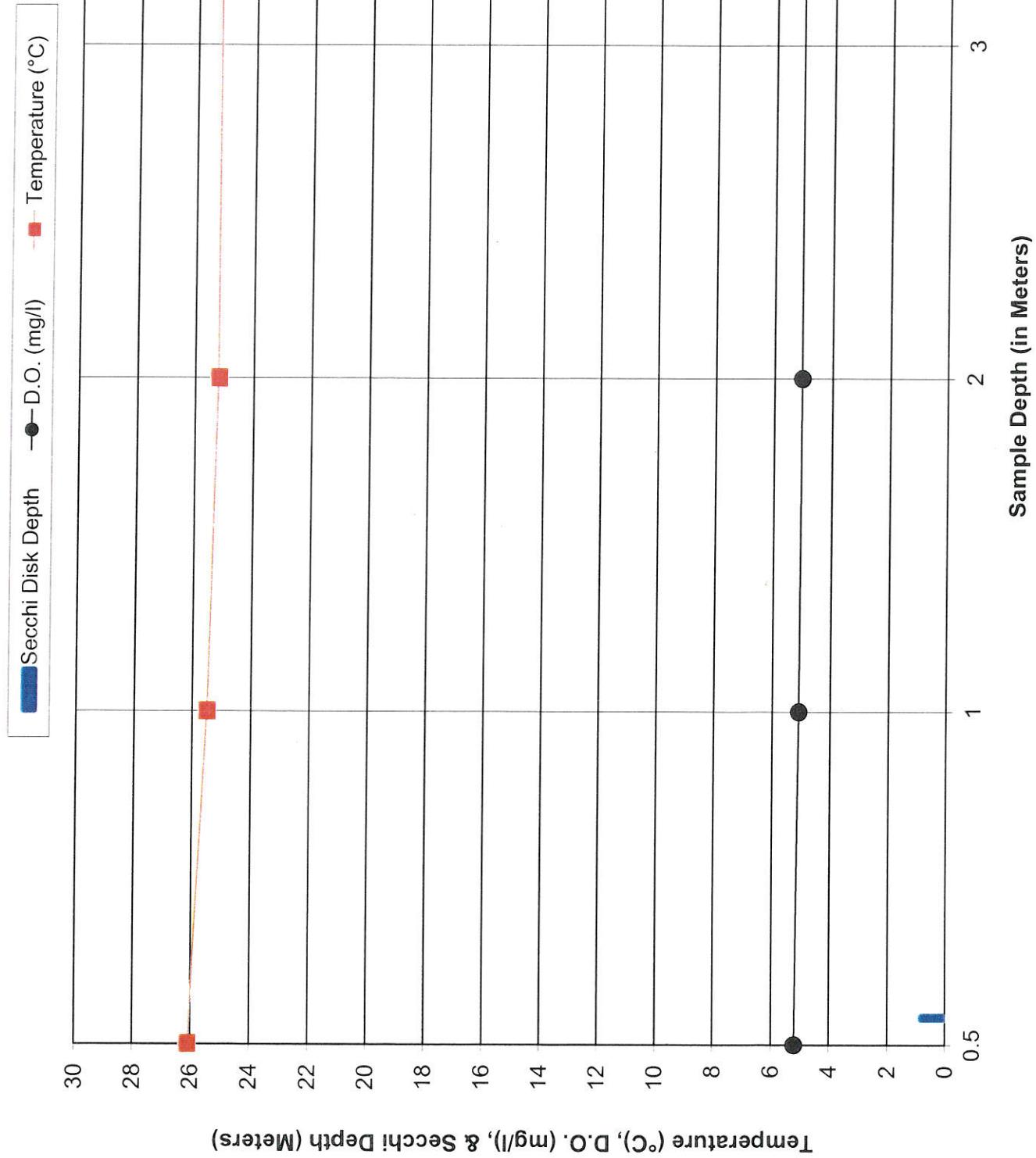
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Performed By:

Anita R &amp; Gdy R

# Winter Impoundment - FERC # 2064

## July 8, 2013 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



**JUL 16 2013**

WDNR Laboratory ID No. 721026460  
 WDATCP Laboratory Certification No. 105-330  
 EPA Laboratory ID No. W100034

Printed: 07/15/13 Code: NNNNS Page 1 of 1  
**NLS Project:** 200168  
**NLS Customer:** 102823  
 Phone: 855 994 9376

Project: Winter

**07082013 1A NLS ID: 729503**

COC: 162643:1 Matrix: SW  
 Collected: 07/08/13 14:10 Received: 07/09/13

**Parameter**

Chlorophyll, all species

Lab filtration for Chlorophyll

**07082013 1B NLS ID: 729504**

COC: 162643:2 Matrix: SW  
 Collected: 07/08/13 14:12 Received: 07/09/13

**Parameter**

Color, APHA (true)

**07082013 1C NLS ID: 729505**

COC: 162643:3 Matrix: SW  
 Collected: 07/08/13 14:13 Received: 07/09/13

**Parameter**

Phosphorus, tot. as P

	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
<b>07082013 1A NLS ID: 729503</b>	see attached yes	Units C.P.U.	Dilution 10	LOD 50*	LOQ	Analyzed 07/09/13	Method SM 2120-B 20ed	Lab 721026460
<b>07082013 1B NLS ID: 729504</b>		Units C.P.U.	Dilution 10	LOD 50*	LOQ	Analyzed 07/09/13	Method SM 2120-B 20ed	Lab 721026460
<b>07082013 1C NLS ID: 729505</b>	0.064	Units mg/L	Dilution 1	LOD 0.0070*	LOQ	Analyzed 07/11/13	Method SM 4500P-E-20ed	Lab 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	LOQ = Limit of Quantitation	ND = Not Detected (< LOD)	1000 ug/L = 1 mg/L	Reviewed by:	R. T. Krueger	President		
DWB = Dry Weight Basis	NA = Not Applicable	%DWB = (mg/kg DWB) / 10000						
MCL = Maximum Contaminant Levels for Drinking Water Samples.	Shaded results indicate >MCL							

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

**Customer:** Renewable World Energies  
**Project:** 200168  
 Winter

<u>Sample</u>	<u>Description</u>	<u>CC a</u>	<u>Pheo a</u>	<u>TC a</u>	<u>TC b</u>
729503	07082013 1A	1.5	0.51	1.9	0.092

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.

TC c  
 0.22

## Appendix C

August 5, 2013 Sampling Documents

# IMPOUNDMENT SAMPLING LOG

2013 Water Quality Study - Winter Hydroelectric Project - FERC #2064

Pre-Sampling Data: HWL - 1370.28 Date: 8/5/13  
 TWL - 1344.40 CFS - 55

Time: 12:30 Barometer: 29.89 Air Temp: 17 °C Wind Speed: 0 MPH

Sky Conditions: OVERCAST - LIGHT RAIN OR MIST

Precipitation within Last 24 Hours: YES

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

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

Battery Status: 100% Charge

Calibration Time: APRIL 2013 Method: Factory

Sampling Depth Profile: Measured Depth to Bottom of the Impoundment: 3.3 Meter

Secchi Disk Depth: (E0.1 Meter) .9 Meter Time: 12:45

### Chlorophyll a (1 Meter Below Surface)

Lab Sample I.D.#: 08052013-1A		
Time	Quantity (ml)	Filtered
12:35	1000	NO

### True Color (1 Meter Below Surface)

Lab Sample I.D.#: 08052013-1B	
Time	Quantity (ml)
12:40	250

### D.O. Sample Data

Depth	Time	D.O. (mg/l)	°C
.5 Mtr Below Surface	12:49	16.10	20.0
1 Meter	12:50	16.05	20.1
2 Meter	12:52	5.92	20.1
3 Meter			
4 Meter			
5 Meter			
6 Meter			
7 Meter			
8 Meter			
.5 Mtr Above Bottom	12:57	5.49	20.1

### Phosphorus

Lab Sample I.D.#: 08052013-1C	
(1 Meter Below Surface)	
Time	Preserved?
12:42	NO

Lab Sample I.D.#:	
(1 Meter Above Bottom)	
Time	Preserved?

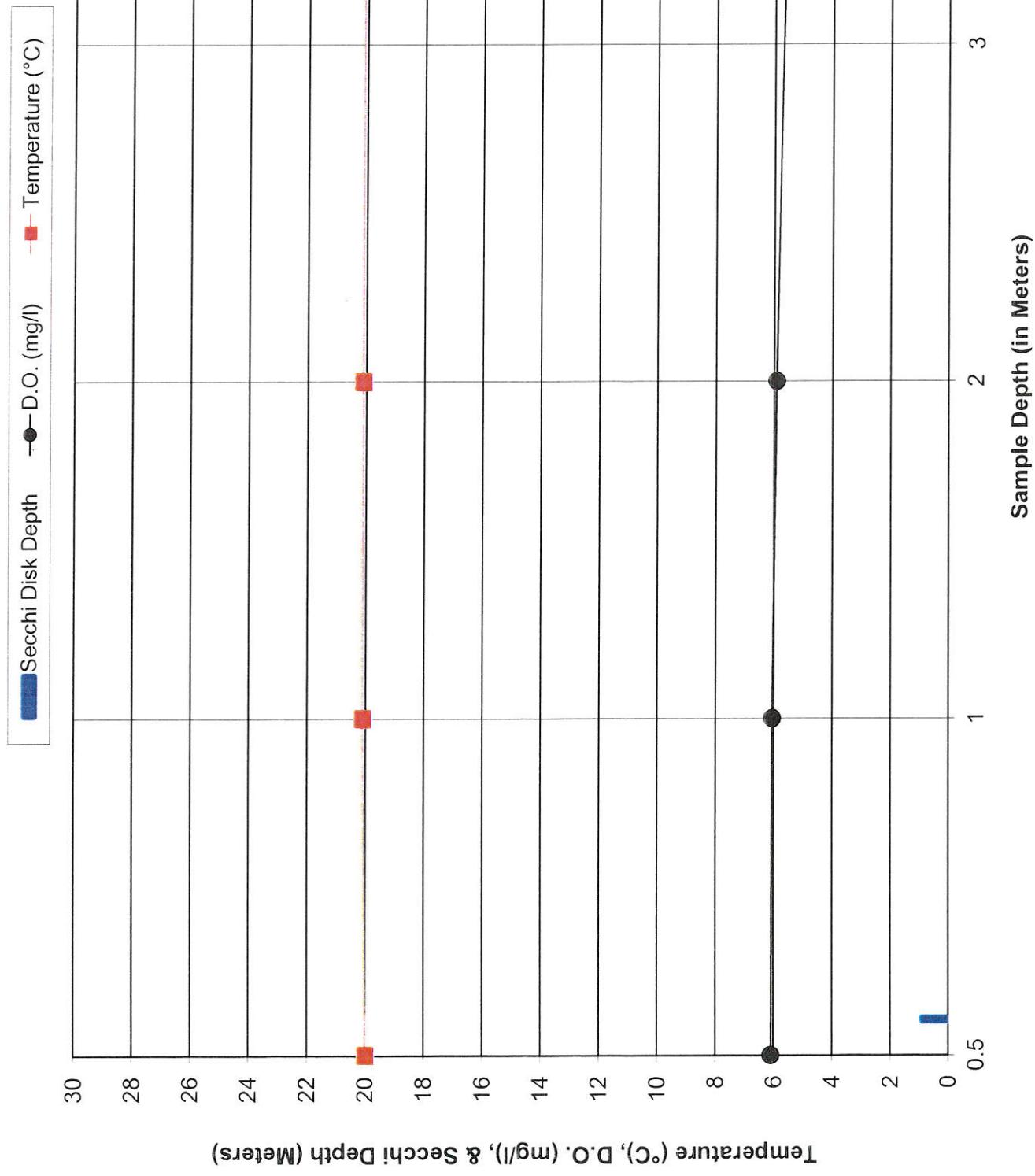
Sample Location: N45° 55.749' W90° 57.354'  
 Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Performed By:

CARLY RAST + JIM TESCH R. Rast

# Winter Impoundment - FERC # 2064

## August 05, 2013 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: 08/13/13 Code: NNNN-S Page 1 of 1

NLS Project: 201977

NLS Customer: 1028223

Phone: 855 994 9376

Project: Winter

<b>08052013-1A NLS ID: 735188</b>	
COC: 151381:1 Matrix: SW	Received: 08/06/13
Collected: 08/05/13 12:35	Parameter
Chlorophyll, all species	Lab filtration for Chlorophyll
<b>08052013-1B NLS ID: 735189</b>	
COC: 151381:2 Matrix: SW	Received: 08/06/13
Collected: 08/05/13 12:40	Parameter
Color, APHA (true)	Color, APHA (true)
<b>08052013-1C NLS ID: 735190</b>	
COC: 151381:3 Matrix: SW	Received: 08/06/13
Collected: 08/05/13 12:42	Parameter
Phosphorus, tot as P	Phosphorus, tot as P
0.12	Units mg/L
1	Dilution
0.0070*	LOD
	LOQ
08/07/13	Analyzed
SM 4500P-E 20ed	Method
721026460	Lab
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	ND = Not Detected (< LOD)
DWB = Dry Weight Basis	%DWB = (mg/kg DWB) / 10000
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL	Reviewed by:

Authorized by:  
R. T. Krueger  
President

*R. T. Krueger*  
RECEIVED  
AUG 19 2013

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

**Customer:** Renewable World Energies  
**Project:** 201977  
 Winter

<u>Sample</u>	<u>Description</u>	<u>CC a</u> 1.8	<u>Pheo a</u> 0.26	<u>TC a</u> 2	<u>TC b</u> 0.0*	<u>TC c</u> 0.082
735188	08052013-1A					

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.

## Appendix D

### Agency Correspondence

**Gary Rast**



**COPY**

**From:** Reinecke, Sue -FS <[sreinecke@fs.fed.us](mailto:sreinecke@fs.fed.us)>  
**Sent:** Monday, November 18, 2013 7:59 AM  
**To:** Gary Rast  
**Subject:** RE: WNTR 2064 Draft 13 WQ

Hi Gary, the Forest has no comments on the draft report.

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)

\*\*\*\*\*

---

**From:** Gary Rast [mailto:[grast@rwehydro.com](mailto:grast@rwehydro.com)]  
**Sent:** Wednesday, October 23, 2013 9:25 AM  
**To:** Laatsch, Cheryl - DNR ([Cheryl.Laatsch@Wisconsin.gov](mailto:Cheryl.Laatsch@Wisconsin.gov)); Nick Utrup ([nick\\_utrup@fws.gov](mailto:nick_utrup@fws.gov)); Strong, Paul -FS  
**Cc:** Reinecke, Sue -FS; Higgins, Dale -FS; Aneta Rietveld  
**Subject:** WNTR 2064 Draft 13 WQ

Cheryl, Nick, & Paul

Attached is your copy of the 2013 Draft WQ Report including submittal letter for the Winter Hydroelectric Project in electronic form as requested.

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

Gary Rast

 COPY

**From:** Laatsch, Cheryl - DNR <Cheryl.Laatsch@wisconsin.gov>  
**Sent:** Tuesday, November 05, 2013 11:34 AM  
**To:** Gary Rast; Aneta Rietveld  
**Subject:** FW: WNTR 2064 Draft 13 WQ

See comments below. 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)

---

**From:** Roesler, Craig P - DNR  
**Sent:** Monday, November 04, 2013 10:44 AM  
**To:** Laatsch, Cheryl - DNR  
**Subject:** RE: WNTR 2064 Draft 13 WQ

Looks o.k.

---

**From:** Laatsch, Cheryl - DNR  
**Sent:** Thursday, October 24, 2013 9:06 AM  
**To:** Scheirer, Jeffrey W - DNR; Roesler, Craig P - DNR  
**Cc:** Hagen, Cherie L - DNR; Aartila, Tom P - DNR  
**Subject:** FW: WNTR 2064 Draft 13 WQ

Hi guys – Here is the draft report for Winter. Please review and provide me with comments by Nov 5<sup>th</sup>. 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)

---

**From:** Gary Rast [mailto:[grast@rwehydro.com](mailto:grast@rwehydro.com)]  
**Sent:** Wednesday, October 23, 2013 9:25 AM  
**To:** Laatsch, Cheryl - DNR; Nick Utrup ([nick\\_utrup@fws.gov](mailto:nick_utrup@fws.gov)); [pstrong@fs.fed.us](mailto:pstrong@fs.fed.us)

**Cc:** Reinecke, Sue -FS; Higgins, Dale -FS ([dhiggins@fs.fed.us](mailto:dhiggins@fs.fed.us)); Aneta Rietveld  
**Subject:** WNTR 2064 Draft 13 WQ

Cheryl, Nick, & Paul

Attached is your copy of the 2013 Draft WQ Report including submittal letter for the Winter Hydroelectric Project in electronic form as requested.

Gary

Gary Rast  
Regulatory/Compliance Manager



Renewable World Energies, LLC  
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Cell: 920-570-0995  
E-mail: [grast@rwehydro.com](mailto:grast@rwehydro.com)

 COPY

**Gary Rast**

**From:** Gary Rast  
**Sent:** Wednesday, October 23, 2013 9:24 AM  
**To:** Laatsch, Cheryl - DNR (Cheryl.Laatsch@Wisconsin.gov); Nick Utrup (nick\_utrup@fws.gov); 'pstrong@fs.fed.us'  
**Cc:** 'Reinecke, Sue -FS'; Higgins, Dale -FS (dhiggins@fs.fed.us); Aneta Rietveld  
**Subject:** WNTR 2064 Draft 13 WQ  
**Attachments:** 13-10-23 GGR WNTR INVITE AG COM 13 WQ.pdf

Cheryl, Nick, & Paul

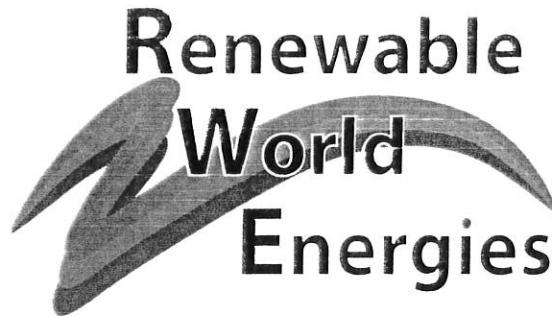
Attached is your copy of the 2013 Draft WQ Report including submittal letter for the Winter Hydroelectric Project in electronic form as requested.

Gary

Gary Rast  
Regulatory/Compliance Manager



Renewable World Energies, LLC  
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E-mail: [grast@rwehydro.com](mailto:grast@rwehydro.com)



COPY

October 23, 2013

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 2013 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 2013 Water Quality Monitoring Data for the Winter Hydroelectric Project for review and comment. Nothing out of the ordinary was experienced during the 2013 monitoring season except as noted in the report.

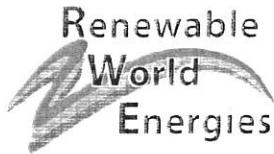
Background

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. 2013 marked the seventh 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

A handwritten signature in black ink that reads "Gary Rast". To the left of the signature is a small, stylized initials "JK".

Mr. Jason Kreuscher  
Vice President, Operations

Attachment: Draft Report 2013 Water Quality Monitoring Data – October 23, 2013

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

Document Content(s)

13-12-04 GGR WNTR 2013 WQ DATA TO FERC.PDF.....1-39