

ORIGINAL



May 31, 2014

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

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SECRETARY OF THE  
COMMISSION  
2014 JUN -9 P 1:02  
FEDERAL ENERGY  
REGULATORY COMMISSION

**RE: Addendum (May 2014) to the Water Quality Monitoring Plan  
Per License Article 405 for the Oconto Falls (Upper) Hydroelectric Project –  
FERC Project #2523 NEW Hydro, LLC**

Dear Ms. Bose,

Enclosed is 1 original and 8 copies of the Addendum (May 2014) to the Water Quality Monitoring Plan Per License Article 405 for the Oconto Falls (Upper) Hydroelectric Project – FERC Project #2523, NEW Hydro, LLC.

The Addendum identifies the monitoring equipment that will be used, report formats furnished with written submissions to agencies, and the designated contact person for each agency involved. Monitoring will begin on July 1, 2014 and continue through September 30, 2014 for the monitoring year.

Should you have any questions, please do not hesitate to contact Mr. Jereme Klassy at the Eagle Creek Renewable Energy Midwest Operations office at 920-293-4628, ext. 322 or by e-mail at [Jereme.klassy@eaglecreekre.com](mailto:Jereme.klassy@eaglecreekre.com).

Sincerely,  
Eagle Creek Renewable Energy  
Agent for Licensee

Scott Klabunde  
Senior VP of Operations

Midwest Operations  
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North East Operations  
613 Plank Road  
Forestburgh, NY 12777 USA  
Tel: (845) 856-3920



**Attachment: Addendum (May 2014) to the Water Quality Monitoring Plan  
Per License Article 405  
Oconto Falls (Upper) Hydroelectric Project (P-2523)**

**Cc: Mr. John Zygai, P.E, CRO  
Mr. Nick Utrup - USFWS  
Ms. Cheryl Laatsch - WDNR  
Midwest Operation: File  
14-05-31\_LC\_OFUP\_submittal DHAC WQMP 2014 Addendum**

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**ADDENDUM**

**(May 2014)**

**Water Quality Monitoring Plan  
Per License Article 405**

**For**

**Oconto Falls (Upper) Hydroelectric Project  
FERC Project #2523  
NEW Hydro, LLC**

**Oconto River, Oconto County, State of Wisconsin**

**Submitted By:  
Eagle Creek Renewable Energy  
Midwest Operations  
116 North State Street, P.O. Box 167  
Neshkoro, WI 54960**

## **Introduction**

**This Water Quality Monitoring Plan for the Oconto Falls (Upper) Hydroelectric Project, FERC Project # 2523, City of Oconto Falls, Oconto County, Wisconsin has been written in generic terms in order to encompass technological advancements and potential agency personnel changes during the 30-year term of license. Therefore, current equipment manufacturers, equipment model specifications and reference to specific Wisconsin Department of Natural Resources (WDNR), United States Department of the Interior - Fish and Wildlife Service (USFWS) and Federal Energy Regulatory Commission (FERC) agency personnel have purposely been excluded from this plan.**

**Prior to the execution of a Water Quality Study, the licensee will refine the Water Quality Monitoring Plan in consultation with the WDNR and the USFWS. The plan refinement will specify the sampling equipment to be used during the study period and the specific agency personnel to whom data and report submissions will be sent. It will be submitted in the form of an addendum to the Water Quality Monitoring Plan and will be sent to all designated agency personnel on or before May 31 of the sampling year in order to provide timely notice of the sampling event and reporting requirements.**



## **Water Quality Monitoring Plan**

### **Per License Article 405**

**For the**

**Oconto Falls (Upper) Hydroelectric Project**

**FERC Project no. 2523**

**Oconto River, Oconto County, State of Wisconsin**

**Licensee**

**North East Wisconsin (NEW) Hydro, LLC**

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#### **Requirement for Studies and History:**

The Federal Energy Regulatory Commission (FERC), has stipulated as a requirement of the Oconto Falls (Upper) Hydroelectric Project License Article 405, issued November 20, 1997, that a Water Quality Study shall be performed beginning Five (5) years after license issuance and once every Five (5) years thereafter for the Thirty (30) year term of license. Article 405 also requires that a monitoring plan should be filed with the Commission within One (1) year of license issuance.

On March 19, 1998 the Wisconsin Department of Natural Resources (WDNR), in a letter to North American Hydro, Inc. commenting on the proposed Water Quality Monitoring Plan (WQMP) for the Oconto Falls Lower Hydroelectric Project (P-2689), recommended coordination for concurrent water quality studies with the Oconto Falls Upper Hydroelectric Project, located approximately 2000 feet upstream.

On May 18, 1998 the FERC granted a request by NEW Hydro Inc., submitted on March 25, 1998, for a one year extension of all license article stipulated deadlines, extending the deadline for submission to November 19, 1999.

On November 19, 1998 the FERC approved the WQMP for the Oconto Falls Lower Hydroelectric Project to commence in 1999 and once every Five (5) years thereafter for the 30 year term of the license. The FERC additionally commented that the Licensee may propose to begin water quality monitoring at the Oconto Falls Upper Hydroelectric Project in the year 2004 in order to run concurrently with the Oconto Falls Lower Hydroelectric Project water qualities studies.

It is the intent of this plan to initiate water quality monitoring in the year 2004 and once every Five (5) years thereafter for the term of the current license in order to execute water quality studies concurrently with the Oconto Falls Lower Hydroelectric Project WQMP timeline.

### **Purpose of Studies:**

Article 405 of the Licensee state that "the purpose of the monitoring plan is to ensure that releases from the Oconto Falls Project maintain the following state standards, except when natural conditions prohibit attainment of the standards:

- (1) The DO shall not be lowered to less than 5 milligrams per liter at any time.*
- (2) The temperature shall not exceed 89 °Fahrenheit at any time.*
- (3) The pH shall be within the range of 6.0 and 9.0*

### **Study Sampling Periods:**

Study sampling will be conducted July 1, 2004 through September 30, 2004 and every 5<sup>th</sup> year interval thereafter for the term of the license. Study sampling will coincide with sampling at the Oconto Falls Lower Hydroelectric Project (P-2689). The July through September sampling period represents the typical annual period of minimum dissolved oxygen levels in the Oconto River resulting from a combination of high ambient temperature, low river flow, and aerobic oxygen consumptive processes.

## **Study Design:**

### **Sampling Protocol:**

Sampling protocol will be consistent with the "Water Quality Monitoring Plan (WQMP) Per License Article 404 for the Oconto Falls Lower Hydroelectric Project (P-2689) NEW Hydro, Inc." as approved by the FERC on November 19, 1998.

### **Monitoring Parameters (Reservoir):**

- 1: Dissolved Oxygen Concentration
- 2: Water Temperature
- 3: Stream Flow
- 4: Time of Day

### **Monitoring Parameters (Tailwater):**

- 1: Dissolved Oxygen Concentration
- 2: Water Temperature
- 3: pH
- 4: Stream Flow
- 5: Time of Day

### **Reservoir Sampling:**

One (1) reservoir sampling event per week will be conducted for dissolved oxygen concentration and water temperature in a surface to bottom profile at one (1) meter intervals at one (1) pre-determined location representing the maximum depth in the reservoir.

Sampling will be performed manually from a boat at a location determined using two (2) measured lines attached to the boat restraining barrier to provide location repeatability for each of the weekly samplings. Reservoir surface to bottom depth will be recorded during each sampling period at the pre-determined sampling location. Dissolved oxygen concentration and water temperature will be sampled with an approved and properly calibrated electronic sampling device at one (1) meter depth profile intervals including a reading at 100mm below the surface and 100mm above the bottom of the reservoir. Power production log data for the sampling day will be obtained from the Oconto Falls Upper Hydroelectric Project (P-2523) and Oconto Falls Lower Hydroelectric Project (P-2689) in order to calculate river flow volume during the sample day. Sampling will also be conducted above the reservoir at or upstream of the State Highway 22 Bridge.

**Tailwatering Sampling:**

Continuous Thirty (30) Minute interval sampling of dissolved oxygen concentration, pH, and water temperature will be taken in the river immediately below the project tailrace.

Sampling will be performed by an approved and properly calibrated self-contained submersible sampling and data-logging device placed in a location representative of the release of water in the tailrace. The monitoring device will be located approximately Twenty-Five (25) feet downstream from the land peninsula below the left concrete non-overflow section of the dam at a point approximately Ten (10) feet from the North embankment of the Oconto River. The sampling/logging device will include a sensor array containing standard dissolved oxygen, pH, and water temperature sampling probes. The logging device will be programmed to record dissolve oxygen concentration, pH, and water temperature measurements at Thirty (30) minute intervals for the continuous period from July 1 through September 30. A maintenance check will be performed on the sampling / logging device once per week. This check will include removal of any accumulated debris and aquaculture, verification of device placement, verification of operation and device calibration. Maintenance procedures are based on the use of presently available equipment. Future maintenance activities could differ due to changes in equipment development. Power production log data for the sampling period will be obtained from the Oconto Falls Upper Hydroelectric Project (P-2523) and Oconto Falls Lower Hydroelectric Project (P-2689) in order to calculate river flow volume during the sampling period. Accumulated sampling data will be downloaded from the sampling / logging device once per month (during the first week of the following month) for intermediate analysis.



## **Equipment Assignment:**

The following equipment has been acquired and is scheduled to be used for the July 1 thru September 30, 2014 water quality study at the Oconto Falls Lower Hydroelectric project – FERC Project #2689.

**Reservoir:** Hach HQ40d series portable meter with a detachable cable and Probe with One (1) Meter markers on the cable. The probe contains both Dissolved Oxygen and Temperature sensors. This equipment will be used to obtain weekly surface to bottom 1-meter profile data in the reservoir. The meter was calibrated in late May 2014 and retains calibration for 1 year per Hach/Hydrolab specifications.

**Tailrace:** Hach/Hydrolab MS5 Mini Sonde with the capability to measure and record Dissolved Oxygen, Temperature, Conductivity, and pH as well as Date, Time, and Battery Voltage. The Hach/Hydrolab Mini Sonde will obtain and store continuous 30 minute interval Tailrace sample data during the study. The Sonde will be checked over, cleaned, batteries changed as needed, and data downloaded every 2 weeks. The unit will be calibrated at least monthly for pH and Conductivity and approximately every 8 weeks for Dissolved Oxygen. The calibration guidelines were obtained from Hach/Hydrolab company representatives. The equipment was inspected and factory calibrated in May 2014.

## **Report Formats:**

In addition to the printed reports, data will be furnished on a CD in Microsoft Excel and Microsoft Word Formats.

**Agency Contact Personnel:**

All Water Quality Study correspondence, reports, and any notifications will be directed to the following agency personnel:

**U.S. Fish and Wildlife Service**

Mr. Nick Utrup  
U.S. Fish and Wildlife Service  
Twin Cities Field Office  
4101 American Boulevard East  
Bloomington, MN 55425  
Office: 612-725-3548 ext. 2204  
Fax: 612-725-3609  
Cell: 952-567-9616  
Email: [Nick.Utrup@fws.gov](mailto:Nick.Utrup@fws.gov)

**WI Department of Natural Resources**

Ms. Cheryl Laatsch  
Statewide FERC Coordinator  
WI Dept. of Natural Resources  
N7725 Hwy 28  
Horicon, WI 53032  
Office: 920-387-7869  
Fax: 920-387-7888  
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**Federal Energy Regulatory Commission:**

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

Mr. John Zygai, P.E., Regional Engineer  
Federal Energy Regulatory Commission  
Chicago Regional Office  
230 South Dearborn Street, Suite 3130  
Chicago, IL 60604



May 31, 2014

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Federal Energy Regulatory Commission  
Chicago Regional Office  
230 South Dearborn Street, Suite 3130  
Chicago, IL 60604

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Should you have any questions, please do not hesitate to contact Mr. Jereme Klassy at the Eagle Creek Renewable Energy Midwest Operations office at 920-293-4628, ext. 322 or by e-mail at [Jereme.klassy@eaglecreekre.com](mailto:Jereme.klassy@eaglecreekre.com).

Sincerely,  
Eagle Creek Renewable Energy  
Agent for Licensee



for Scott Klabunde  
Senior VP of Operations

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Mr. Nick Utrup  
Twin Cities Field Office  
U.S. Fish and Wildlife Service  
4101 American Blvd East  
Bloomington, MN 55425

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

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