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May 1, 2012

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

Subject: Article 401 (Condition 11 of the 401 Water Quality Certification)
Article 406 – Water Quality Monitoring Plan
May 18, 2011, Order Issuing New License
Badger-Rapide Croche Hydroelectric Project
Lower Fox River; Outagamie County, Wisconsin
FERC Project No. 2677-019

Dear Secretary Bose:

On May 18, 2011, the Federal Energy Regulatory Commission (FERC) issued an “Order Issuing New License for the Badger-Rapide Croche Hydroelectric Project – FERC Project No. 2677-019” (New License). Article 401 (Condition 11 of the 401 Water Quality Certification) of the New License state:

11. Kaukauna Utilities shall meet the most current water quality standards adopted under s. 281.15, Wis. Stats. and 33 USC 1313, as well as any revised water quality standards that may be adopted over the term of the license. The licensee shall develop within 1 year issuance of the FERC license, a water quality monitoring plan that describes the methodology used to conduct periodic water quality monitoring in accordance with a schedule approved by WDNR. WDNR classifies all surface waters into one of five fish and aquatic life subcategories. The impounded and free-flowing reaches of the Fox River upstream and downstream of the Badger and Rapide Croche Hydroelectric Projects are classified as *warm water sport fish communities*. This subcategory includes surface waters capable of supporting a community of warm water sport fish or serving as a spawning area for warm water sport fish.

Except for natural conditions, all waters classified for fish and aquatic life, subcategory *warm water fish communities* shall meet the following criteria (Chapter NR 102.04, Wisconsin Administrative Code):

Dissolved oxygen - The dissolved oxygen content in surface waters may not be lowered to less than 5 milligrams per liter (mg/l) at any time.

Temperature - There shall be no temperature changes that may adversely affect aquatic life. Natural daily and seasonal temperature fluctuations shall be maintained. The temperature shall not exceed 89° F for warm water fish.

pH - The pH shall be within the range of 6.0 to 9.0, with no change greater than 0.5 units outside the estimated natural seasonal maximum and minimum.

Ms. Kimberly D. Bose, Secretary

May 1, 2012

Page 2

In addition, Article 406 of the New License states:

Article 406. Water Quality Monitoring Plan. Within 1 year of license issuance, the licensee shall file with the Commission for approval, a plan to conduct water quality monitoring for a period of 3 years, to begin upon completion of the proposed Badger powerhouse and implementation of minimum instream flows. The plan shall include a description of how the licensee will implement a 3-year water quality monitoring plan that would be used to evaluate the effects of year-round and walleye spawning flow releases on water temperature and dissolved oxygen immediately upstream of the Badger intake, at the downstream end of the Badger bypassed reach, and in the tailrace.

The water quality monitoring plan shall be developed after consultation with Wisconsin Department of Natural Resources and the U.S. Fish and Wildlife Service. The licensee shall include with the plan an implementation schedule, documentation of consultation, copies of recommendations on the completed plan after it has been prepared and provided to the entities above, and specific descriptions of how the entities' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the entities to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Water quality monitoring shall not begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval the licensee shall implement the plan, including any changes required by the Commission.

If the results of the monitoring indicate that changes in project structures or operations, including alternative flow releases, are necessary to protect fish resources, the Commission may direct the licensee to modify project structures or operations.

In accordance with the requirements of Article 401 (Condition 11 of the 401 Water Quality Certification) and Article 406, Mead & Hunt, Inc. (Mead & Hunt), on behalf of the City of Kaukauna (Kaukauna Utilities), is hereby filing the above-mentioned Plan.

Thank you for your time and consideration in this matter. If you have any questions, please contact me at (608) 273-6380 or arie.dewaal@meadhunt.com.

Respectfully submitted,

MEAD & HUNT, Inc.



Arie DeWaal

Senior Project Manager

Attachments

cc: Attached Distribution List

Certificate of Service

I hereby certify that I, on behalf of the City of Kaukauna, Wisconsin (Kaukauna Utilities), have this day served the foregoing documents upon each person designated on the attached distribution list.

Dated this 1st day of May, 2012



Arie DeWaal
Mead & Hunt, Inc.

Distribution List
Badger-Rapide Croche Hydroelectric Licensing
FERC Project No. 2677

Article 401 (Condition 11 of the 401 Water Quality Certification)
Article 406 – Water Quality Monitoring Plan

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Ms. Peggy Harding
Regional Engineer
Federal Energy Regulatory Commission
Chicago Regional Office
Federal Building
230 South Dearborn Street, Room 3130
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Water Quality Monitoring Plan

Badger-Rapide Croche Hydroelectric Project

FERC Project No. 2677

**Lower Fox River
Outagamie County, Wisconsin**



Kaukauna, Wisconsin

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Kaukauna Utilities
Water Quality Monitoring Plan

Badger-Rapide Croche Hydroelectric Project
FERC Project No. 2677

Lower Fox River
Outagamie County, Wisconsin



Kaukauna, Wisconsin

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Table of Contents

	Page
1. Project Background	1
2. Summary of Water Quality Certification Requirements	2
3. Water Quality Criteria for the Project	3
4. Elements of the Water Quality Monitoring Plan (including deliverables)	4
5. Schedule	6
6. Documentation of Consultation	7
7. Contact Information	8

Appendices

- A Details of Proposed Sampling Locations
- B Documentation of Consultation

1. Project Background

On May 18, 2011, City of Kaukauna, Wisconsin (Kaukauna Utilities), received a new License from the Federal Energy Regulatory Commission (FERC) for its Badger-Rapide Croche Hydroelectric Project (Project). The project consists of two separate developments, Badger and Rapide Croche both located on the Fox River. Badger is located within the City of Kaukauna and currently has two powerhouses. Rapide Croche is 4.5 miles downstream and consists of a single powerhouse integral with dam.

The two Badger Powerhouses are situated on the south side of the Fox River, 1,800 feet downstream of the 22-foot high U.S. Army Corp of Engineers (USACE) Kaukauna Dam. Water is bypassed from the main channel and diverted through a 2,100-foot-long power canal that bifurcates into two adjacent power houses known as Old Badger and New Badger. Combined installed capacity is 5.6 Megawatts (Mw). FERC approved the Kaukauna Utilities (KU)'s proposal to decommission these two facilities and replace them with a single modern powerhouse immediately upstream and increase Badger's installed capacity to 7 Mw. Expected completion date of the new Badger power house is February 2014.

Rapide Croche Hydroelectric development is located 4.5 miles downstream of the Badger development on the south bank of the Fox River. Unlike the Badger development, the 2.4 Mw Rapide Croche powerhouse is integral to the 20-foot-high USACE Rapide Croche Dam. With Badger, the combined capacity of the new project will be 9.4 Mw.

Article 406 of the new license requires KU to submit a Water Quality Monitoring Plan (WQMP) to the FERC within one year of license issuance. In addition, Condition 11 of the Water Quality Certification issued for the Project by the Wisconsin Department of Natural Resources (WDNR) also stipulates the requirement for KU to submit the WQMP to the FERC, WDNR, and U.S. Fish & Wildlife Service (FWS) within one year of license issuance. The WQMP includes monitoring temperature, dissolved oxygen and pH upstream and downstream of the Badger Development (Kaukauna Dam and Powerhouse) and Rapide Croche Dam and Powerhouse to protect warmwater fisheries.

Article 407 of the new license requires KU to submit an Operation Compliance Monitoring Plan (OCMP) within one year of license issuance. Article 407 stipulates that the OCMP must be consistent with Conditions 2, 3, 5, 7, and 12 of the Water Quality Certification issued by the WDNR. The OCMP has been developed and filed with the FERC and WDNR under separate cover.

It should be noted that Condition 3 of the Water Quality Certification outlines minimum flow requirements including a stipulation that a flow of 1,500-1,550 cubic feet per second (cfs) be released into the natural bypass channel when water temperatures are between 38 and 50 degrees Fahrenheit. As such, this WQMP also included monitoring for temperature as mentioned above.

Section 2
Summary of Water Quality
Certification Requirements

2. Summary of Water Quality Certification Requirements

FERC included the State of Wisconsin Water Quality Certification (Appendix A) in the May 18, 2011 License Order. It requires Kaukauna Utilities to meet the most current water quality standards adopted under s. 281.15, Wisconsin Statutes and 33 USC 1313, as well as any revised water quality standards that may be adopted over the term of the new license. According to the WDNR, the proposed project if constructed in accordance with the provisions of this certification will not adversely affect water quality, will not increase water pollution in surface waters and will not cause environmental pollution as defined in s.283.01(6m), Wisconsin Statutes and will be in compliance with sections 301, 302, 303, 306, and 307 of the Federal Clean Water Act, P.L 92-500, as amended, and other appropriate requirements of state law.

Specifically, Condition 11 of the Water Quality Certification states:

Kaukauna Utilities shall meet the most current water quality standards adopted under s. 281.15, Wis. Stats. and 33 USC 1313, as well as any revised water quality standards that may be adopted over the term of the license. The licensee shall develop within 1 year issuance of the FERC license, a water quality monitoring plan that describes the methodology used to conduct periodic water quality monitoring in accordance with a schedule approved by WDNR. WDNR classifies all surface waters into one of five fish and aquatic life subcategories. The impounded and free-flowing reaches of the Fox River upstream and downstream of the Badger and Rapide Croche Hydroelectric Projects are classified as *warm water sport fish communities*. This subcategory includes surface waters capable of supporting a community of warm water sport fish or serving as a spawning area for warm water sport fish.

Section 3
Water Quality Criteria for the Project

3. Water Quality Criteria for the Project

Condition 11 of the Water Quality Certification stipulates that, except for natural conditions, all waters classified for fish and aquatic life, subcategory warmwater fish communities shall meet the following criteria (Chapter NR 102.04, Wisconsin Administrative Code):

- **Dissolved Oxygen** – The dissolved oxygen content in surface waters may not be lowered to less than 5 milligrams per liter (mg/l) at any time.
- **Temperature** – There shall be no temperature changes that may adversely affect aquatic life. Natural daily and seasonal temperature fluctuations shall be maintained. The temperature shall not exceed 89° F for warmwater fish.
- **pH** – The pH shall be within the range of 6.0 to 9.0, with no change greater than 0.5 units outside the estimated natural seasonal maximum and minimum.

4. Elements of the Water Quality Monitoring Plan (including deliverables)

KU proposes the following WQMP that is consistent with Articles 406 and 407 of the FERC License, FERC No. 2577-019 and Appendix A of that document, the WDNR Water Quality Certification Conditions issued February 17, 2011 as follows:

- a. Using continuous recording instruments, KU will record hourly, the temperature, dissolved oxygen and pH to compute a daily average for each of these variables at five locations: upstream of Kaukauna Dam; downstream of the Badger powerhouse; in the Badger bypass reach; and also upstream and downstream of Rapide Croche powerhouse (in Appendix A).
- b. Data collection will begin after the construction of the New Badger powerhouse (estimated for February 2014); KU will notify WDNR at least five days prior to the actual completion date of construction. The study will commence in February 2014 and conclude in February 2017 (three years) and include annual reports in the first two years and a final report with recommendation for future monitoring and management in the third year.
- c. Temperature data collection will begin annually on February 1 at Kaukauna Dam to identify the start of spawning bypass flows (Condition 3 of Water Quality Certification). Data collection for pH and dissolved oxygen will commence on June 15 at this location.
- d. Data collection at the other four locations for temperature, pH and dissolved oxygen will begin on June 15 and all data collection will conclude annually on September 30 at all five locations.
- e. Details of sample sites are as follows: (1) in addition to the float sensor and continuous temperature sensor in the forebay of Kaukauna dam, Kaukauna will install a Hach Sonde Model MS-5 or equivalent with pH probe and dissolved oxygen probe. The unit will also contain a backup temperature probe to the real time data probe. The data will be stored onboard the unit and downloaded at two-week intervals; calibration on the DO probe will be performed and battery life checked at each visit. Similar instrumentation and procedures will be included at four additional sites as follows: (2) approximately 300 yards downstream of the Badger powerhouse near the railway bridge and on Kaukauna Utilities Materials property (water from the power plant is well mixed at this location); (3) on the railroad bridge span adjacent to Thilmany Mill near the downstream section of the bypass reach; (4) upstream of Rapide Croche powerhouse at the trashbars near Unit 3; and (5) downstream of Rapide Croche powerhouse near the downstream end of the training wall on the south shore approximately 100 feet from the powerhouse discharge. Maps with latitude and longitude data for these locations will be provided.
- f. Calibration of the dissolved oxygen sensors will be performed every two weeks with a variance goal of less than 1 mg/l 70% of the time.

Section 4
Elements of Water Quality
Monitoring Plan

- g. Differences in upstream and downstream dissolved oxygen levels (daily averages) if greater than 2 mg/l for five consecutive days will be reported to WDNR during the sampling season. The report will be within 24 hours or one business day of discovery of the exceedence and a plan to address the problem will be developed in consultation with the agency. Likewise for any corroborated exceedences outside the State criteria for temperature, pH or instream flows identified above, Kaukauna will contact WDNR within one business day of discovery to discuss a plan to address the problem.
- h. An annual report will be prepared each year for three years and delivered to the agencies by December 31. The final 2017 report will review all three years of data collection with recommendations on whether sampling protocols should be continued or revised. The reports will contain summary statistics and graphics that compare and display hourly data including daily minimum and maximum readings; quality assurance analysis including calibration of instruments; description of problems encountered with data collection, instrumentation and missing or anomalous data. The discussion will summarize any out-of-bounds criteria encountered during the season and any communications that occurred with agency personnel and Kaukauna Utilities.
- i. Each annual report will be completed and submitted to the WDNR, FERC, and FWS by December 31 of the year in which the data were collected along with any recommendations for modifications of the sampling protocols for the following year and the basis for such recommendations. Per WDNR request, the annual report will also be sent to the Outagamie County Land Conversation Department.
- k. Copies of the downloaded data will be secured in two separate locations to reduce chances for data loss. Raw data will be available upon request and provided in electronic format. KU and its consultants will be available for agency comments after each report is submitted.
- k. Based on aerial photos and a site reconnaissance on September 20, 2011 by Kaukauna Utilities and their consultant, GEI Consultants, a set of proposed sampling locations were developed to meet the WQMP. Sites were selected based on the following criteria: (1) meets the intent of the Water Quality Certification and criteria; (2) is secure from vandalism; (3) would obtain a continuous flow of water representative of the inflow or discharge above and below the project features; (4) would present safe sampling conditions (5); would not likely encounter severe depth variations such that probes could not be accessed under variable discharges; (6) would be less susceptible to sediment/bedload movement and bio-fouling.

5. Schedule

The proposed schedule is:

- Request for WDNR to review/comment on the draft Plan October 28, 2011
- Agency meeting to discuss the draft Plan February 15, 2012
- Final Comments from WDNR received April 2, 2012
- Plan submitted to FERC with agency comments April 30, 2012
- FERC Approval of Plan July 30, 2012
- Preparation for Implementation Complete December 2013
- Initiate Sampling February 2014
- Sample and report annually for three years February 2014-2016
- Final Report and Recommendations February 2017

Section 6
Documentation of Consultation

6. Documentation of Consultation

Appendix B presents a summary of the agency consultation efforts related to the development of this WQMP. Comments on the draft WQMP were received from the WDNR and the U.S. Fish & Wildlife Service (FWS).

The FWS responded that it had no comments on the draft WQMP. A response to the WDNR comments is also presented in Appendix B.

7. Contact Information

The responsible organization is Kaukauna Utilities located at:

777 Island Street

PO Box 1777

Kaukauna, WI 54130-7077

Phone: 920-766-5721

Email: kumail@ku-wi.org

Michael Pedersen, Manager of Generation and Operations

Appendix A. Details of Proposed Sampling Locations



LEGEND:

- ◆ SAMPLE STATION - BADGER
- ◆ SAMPLE STATION - RAPIDE CROCHE

NOTES:

BASED ON A 2011 AERIAL PHOTOGRAPH.

Badger Hydroelectric Project

Kaukauna, Wisconsin

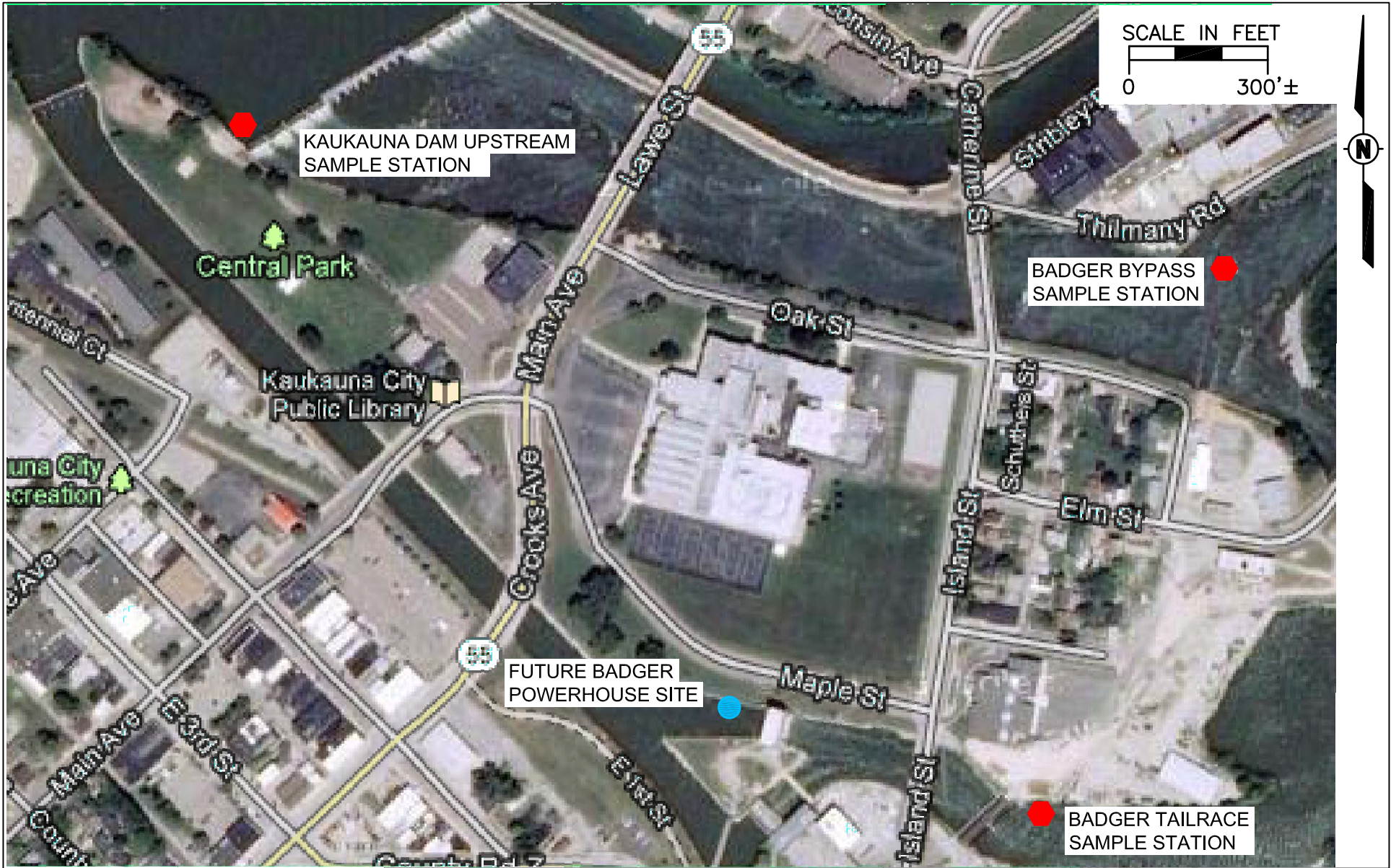


Project 115420

WATER QUALITY
SAMPLE LOCATION
OVERVIEW

January 2012

Fig. 1a



LEGEND:

 SAMPLE STATION - BADGER

Badger Development

NOTES:

BASED ON A 2011 AERIAL PHOTOGRAPH.

Kaukauna, Wisconsin



WATER QUALITY
SAMPLE LOCATIONS

Project 115420

January 2012

Fig. 1b



LEGEND:

 SAMPLE STATION - RAPIDE CROCHE

NOTES:

BASED ON A 2011 AERIAL PHOTOGRAPH.

Rapide Croche Development

Fox River, near Kaukauna, Wisconsin



Project 115420

WATER QUALITY
SAMPLE LOCATIONS

January 2012

Fig. 1c

Appendix B. Documentation of Consultation

October 28, 2011

Wisconsin Department of Natural Resources
Ms. Cheryl Laatsch, Water Management Specialist
101 S Webster Street
Madison, WI 53707-7921

Subject: Water Quality Monitoring Plan -- Request for Comments:
Badger- Rapid Croche Hydroelectric Project, FERC No. 2677-019

Dear Ms. Laatsch:

City of Kaukauna (Kaukauna Utilities) received a new Federal Energy Regulatory Commission (FERC) License on May 18, 2011. Part of the requirements of the License includes development of a Water Quality Monitoring Plan in consultation with your agency. This letter identifies our plans to comply with the FERC License and includes a draft for your review and comment.

Specifically, Article 406 requires the City to submit a plan to FERC within one-year of the award of License. The Plan includes monitoring temperature, dissolved oxygen and pH upstream and downstream of the Badger Development (Kaukauna Dam and Powerhouse) and Rapide Croche Dam and Powerhouse.

Article 407 requires the City to operate the project flows to deliver a minimum of 300 cfs via the spillway (natural channel) all year plus an additional "spawning bypass flow" of 1200-1250 cfs when temperatures are between 38-50° F. A minimum bypass flow management plan to comply with Article 407 is contained in a separate document; however the two plans will be consistent with and integrated with the other.

The City proposes the attached Water Quality Management Plan consistent with Articles 406 and 407:

1. Using continuous recording instruments, the City will record hourly, the temperature, dissolved oxygen and pH to compute a daily average for each of these variables at five locations: upstream of Kaukauna Dam, downstream of the Badger powerhouse; in the Badger bypass reach; and also upstream and downstream of Rapide Croche dam and powerhouse.
2. Data collection (Table 1) will begin after the construction of the New Badger powerhouse currently estimated for February 2013. The City will notify you at least five days prior to the actual completion date of construction. The study will commence in February 2013 and conclude in February 2016 (three years) and include a final report with recommendation for future monitoring and management.
3. Temperature data collection will begin annually on February 1 at Kaukauna Dam to identify the start of spawning bypass flows (Article 407).

4. Data collection at the other four locations will begin on June 15 and will conclude annually on September 30 at all five locations (Table 1; Article 406).
5. Proposed sample sites are as follows: (1) forebay of Kaukauna dam at the existing reservoir elevation station; (2) approximately 300 yards downstream of the Badger powerhouse near the railway bridge and on Kaukauna Utilities Materials property; (3) in the bypass reach at a location to be determined during spring time discharge in the bypass reach; (4) upstream of Rapide Croche powerhouse at the trashbars near Unit 3; and (5) downstream of Rapide Croche powerhouse near the downstream end of the training wall on the south shore. Note that temperature at station (1) Kaukauna dam will be provided in real time to the Kaukauna Utilities Operations Center to enable real time response to managing spawning bypass flow (Article 407).
6. Calibration of the Dissolved Oxygen sensor will be performed every two weeks with a variance goal of less than 1 mg./l. 70% of the time.
7. Differences in upstream and downstream dissolved oxygen levels (daily averages) if greater than 2 mg./l. for five consecutive days will be reported to Wisconsin Department of Natural Resources (WDNR). Kaukauna will collaborate with WDNR to address the problem.
8. An annual report will be prepared each year and delivered to the agencies by December 15. The 2015 report will review all three years of data collection with recommendations on whether sampling protocols should be continued or revised.

Please contact the undersigned, Mike Pedersen at 920-462-0220 if you have questions. In order to meet FERC schedules, we request your comments by November 28, 2011 per FERC requirements and we will incorporate these into our submittal to FERC. In summary, our proposed schedule is:

- Request for agency comments October 28, 2011
- Agency responses by November 28, 2011
- Draft Plan submitted to FERC with agency comments by December 28, 2011
- FERC Approval of Plan by June 2012
- Preparation for implementation by December 2012
- Initiate Sampling February 2013
- Sample and report annually for three years (see Table 1)
- Final report and recommendations December 2015

Thank you for assisting the City of Kaukauna and your timely response.

Michael Pedersen

Manager of Generation and Operations
Kaukauna Utilities

Attachment: Water Quality Management Plan, Badger – Rapide Croche Hydroelectric Project
Distribution List: (attached)

Table 1: Data Collection Locations and Schedules

Site Number	Description	Start Date	Stop Date	Off Season	Data Interval	Download Calibration
1	Kaukauna Dam	February 2013	September 30 2015	October 1 – January 31	Hourly: Daily Average ¹	2 Week Intervals
2	Badger Tailrace	June 15 2013	September 30 2015	October 1 – June 14	Hourly: Daily Average ¹	2 Week Intervals
3	Badger Bypass Reach	June 15 2013	September 30 2015	October 1 – June 14	Hourly: Daily Average ¹	2 Week Intervals
4	Rapide Croche Forebay	June 15 2013	September 30 2015	October 1 – June 14	Hourly: Daily Average ¹	2 Week Intervals
5	Rapid Croche Tailrace	June 15 2013	September 30 2015	October 1 – June 14	Hourly: Daily Average ¹	2 Week Intervals

Footnote 1: Temperature will be collected continuously in real time at Kaukauna Dam and monitored in Kaukauna Operations Center. Hourly data for all three variables (temperature, pH, and dissolved oxygen) will be reported in daily averages for comparisons among stations.

Distribution List:

Ms. Cheryl Laatsch
Water Management Specialist
WDNR, Office of Energy, GEF2, 7th Floor
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Madison WI 53707-7921
Phone: 608-219-0541
Email: Cheryl.laatsch@wisconsin.gov

Mr. Nick Utrup
U.S. Fish and Wildlife Service
2661 Scott Tower Drive
Green Bay, WI 54229-9565
Phone: 920-866-1717 or 920-866-1736
e-mail: NickUtrup@fws.gov

Ms. Peggy A. Harding, Regional Engineer
Federal Energy Regulatory Commission
Division of Dam Safety and Inspections
230 S. Dearborn Street, Suite 3130
Chicago, IL 60604-1695
Telephone: 312-596-4438
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Email: peggy.harding@ferc.gov

October 28, 2011

Federal Energy Regulatory Office
Ms. Peggy A. Harding
230 S. Dearborn Street, Suite 3130
Chicago, IL 60604-1695

Subject: Water Quality Monitoring Plan -- Request for Comments:
Badger- Rapid Croche Hydroelectric Project, FERC No. 2677-019

Dear Ms. Harding:

City of Kaukauna (Kaukauna Utilities) received a new Federal Energy Regulatory Commission (FERC) License on May 18, 2011. Part of the requirements of the License includes development of a Water Quality Monitoring Plan in consultation with your agency. This letter identifies our plans to comply with the FERC License and includes a draft for your review and comment.

Specifically, Article 406 requires the City to submit a plan to FERC within one-year of the award of License. The Plan includes monitoring temperature, dissolved oxygen and pH upstream and downstream of the Badger Development (Kaukauna Dam and Powerhouse) and Rapide Croche Dam and Powerhouse.

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Thank you for assisting the City of Kaukauna and your timely response.

Michael Pedersen

Manager of Generation and Operations
Kaukauna Utilities

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5	Rapid Croche Tailrace	June 15 2013	September 30 2015	October 1 – June 14	Hourly: Daily Average ¹	2 Week Intervals

Footnote 1: Temperature will be collected continuously in real time at Kaukauna Dam and monitored in Kaukauna Operations Center. Hourly data for all three variables (temperature, pH, and dissolved oxygen) will be reported in daily averages for comparisons among stations.

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Water Management Specialist
WDNR, Office of Energy, GEF2, 7th Floor
101 S Webster Street
Madison WI 53707-7921
Phone: 608-219-0541
Email: Cheryl.laatsch@wisconsin.gov

Mr. Nick Utrup
U.S. Fish and Wildlife Service
2661 Scott Tower Drive
Green Bay, WI 54229-9565
Phone: 920-866-1717 or 920-866-1736
e-mail: NickUtrup@fws.gov

Ms. Peggy A. Harding, Regional Engineer
Federal Energy Regulatory Commission
Division of Dam Safety and Inspections
230 S. Dearborn Street, Suite 3130
Chicago, IL 60604-1695
Telephone: 312-596-4438
Fax: 312-596-4460
Email: peggy.harding@ferc.gov

October 28, 2011

Mr. Nick Utrup
U.S. Fish and Wildlife Service
2661 Scott Tower Drive
Green Bay, WI 54229-9565

Subject: Water Quality Monitoring Plan -- Request for Comments:
Badger- Rapid Croche Hydroelectric Project, FERC No. 2677-019

Dear Mr. Utrup:

City of Kaukauna (Kaukauna Utilities) received a new Federal Energy Regulatory Commission (FERC) License on May 18, 2011. Part of the requirements of the License includes development of a Water Quality Monitoring Plan in consultation with your agency. This letter identifies our plans to comply with the FERC License and includes a draft for your review and comment.

Specifically, Article 406 requires the City to submit a plan to FERC within one-year of the award of License. The Plan includes monitoring temperature, dissolved oxygen and pH upstream and downstream of the Badger Development (Kaukauna Dam and Powerhouse) and Rapide Croche Dam and Powerhouse.

Article 407 requires the City to operate the project flows to deliver a minimum of 300 cfs via the spillway (natural channel) all year plus an additional "spawning bypass flow" of 1200-1250 cfs when temperatures are between 38-50° F. A minimum bypass flow management plan to comply with Article 407 is contained in a separate document; however the two plans will be consistent with and integrated with the other.

The City proposes the attached Water Quality Management Plan consistent with Articles 406 and 407:

1. Using continuous recording instruments, the City will record hourly, the temperature, dissolved oxygen and pH to compute a daily average for each of these variables at five locations: upstream of Kaukauna Dam, downstream of the Badger powerhouse; in the Badger bypass reach; and also upstream and downstream of Rapide Croche dam and powerhouse.
2. Data collection (Table 1) will begin after the construction of the New Badger powerhouse currently estimated for February 2013. The City will notify you at least five days prior to the actual completion date of construction. The study will commence in February 2013 and conclude in February 2016 (three years) and include a final report with recommendation for future monitoring and management.
3. Temperature data collection will begin annually on February 1 at Kaukauna Dam to identify the start of spawning bypass flows (Article 407).

4. Data collection at the other four locations will begin on June 15 and will conclude annually on September 30 at all five locations (Table 1; Article 406).
5. Proposed sample sites are as follows: (1) forebay of Kaukauna dam at the existing reservoir elevation station; (2) approximately 300 yards downstream of the Badger powerhouse near the railway bridge and on Kaukauna Utilities Materials property; (3) in the bypass reach at a location to be determined during spring time discharge in the bypass reach; (4) upstream of Rapide Croche powerhouse at the trashbars near Unit 3; and (5) downstream of Rapide Croche powerhouse near the downstream end of the training wall on the south shore. Note that temperature at station (1) Kaukauna dam will be provided in real time to the Kaukauna Utilities Operations Center to enable real time response to managing spawning bypass flow (Article 407).
6. Calibration of the Dissolved Oxygen sensor will be performed every two weeks with a variance goal of less than 1 mg./l. 70% of the time.
7. Differences in upstream and downstream dissolved oxygen levels (daily averages) if greater than 2 mg./l. for five consecutive days will be reported to Wisconsin Department of Natural Resources (WDNR). Kaukauna will collaborate with WDNR to address the problem.
8. An annual report will be prepared each year and delivered to the agencies by December 15. The 2015 report will review all three years of data collection with recommendations on whether sampling protocols should be continued or revised.

Please contact the undersigned, Mike Pedersen at 920-462-0220 if you have questions. In order to meet FERC schedules, we request your comments by November 28, 2011 per FERC requirements and we will incorporate these into our submittal to FERC. In summary, our proposed schedule is:

- Request for agency comments October 28, 2011
- Agency responses by November 28, 2011
- Draft Plan submitted to FERC with agency comments by December 28, 2011
- FERC Approval of Plan by June 2012
- Preparation for implementation by December 2012
- Initiate Sampling February 2013
- Sample and report annually for three years (see Table 1)
- Final report and recommendations December 2015

Thank you for assisting the City of Kaukauna and your timely response.

Michael Pedersen

Manager of Generation and Operations
Kaukauna Utilities

Attachment: Water Quality Management Plan, Badger – Rapide Croche Hydroelectric Project
Distribution List: (attached)

Table 1: Data Collection Locations and Schedules

Site Number	Description	Start Date	Stop Date	Off Season	Data Interval	Download Calibration
1	Kaukauna Dam	February 2013	September 30 2015	October 1 – January 31	Hourly: Daily Average ¹	2 Week Intervals
2	Badger Tailrace	June 15 2013	September 30 2015	October 1 – June 14	Hourly: Daily Average ¹	2 Week Intervals
3	Badger Bypass Reach	June 15 2013	September 30 2015	October 1 – June 14	Hourly: Daily Average ¹	2 Week Intervals
4	Rapide Croche Forebay	June 15 2013	September 30 2015	October 1 – June 14	Hourly: Daily Average ¹	2 Week Intervals
5	Rapid Croche Tailrace	June 15 2013	September 30 2015	October 1 – June 14	Hourly: Daily Average ¹	2 Week Intervals

Footnote 1: Temperature will be collected continuously in real time at Kaukauna Dam and monitored in Kaukauna Operations Center. Hourly data for all three variables (temperature, pH, and dissolved oxygen) will be reported in daily averages for comparisons among stations.

Distribution List:

Ms. Cheryl Laatsch
Water Management Specialist
WDNR, Office of Energy, GEF2, 7th Floor
101 S Webster Street
Madison WI 53707-7921
Phone: 608-219-0541
Email: Cheryl.laatsch@wisconsin.gov

Mr. Nick Utrup
U.S. Fish and Wildlife Service
2661 Scott Tower Drive
Green Bay, WI 54229-9565
Phone: 920-866-1717 or 920-866-1736
e-mail: NickUtrup@fws.gov

Ms. Peggy A. Harding, Regional Engineer
Federal Energy Regulatory Commission
Division of Dam Safety and Inspections
230 S. Dearborn Street, Suite 3130
Chicago, IL 60604-1695
Telephone: 312-596-4438
Fax: 312-596-4460
Email: peggy.harding@ferc.gov

Arie DeWaal

From: Arie DeWaal
Sent: Thursday, December 15, 2011 10:13 AM
To: Laatsch, Cheryl - DNR (Cheryl.Laatsch@Wisconsin.gov); nick_utrup@fws.gov
Cc: Mike Pedersen (mpedersen@ku-wi.org)
Subject: Badger-Rapide Croche License Article 405 (Water quality Monitoring Plan)

Categories: Filed by Newforma

Good Morning Cheryl and Nick,

On October 28, 2011, Kaukauna Utilities(KU) sent you a draft of the Article 405 (Water Quality Monitoring Plan) for review and comment. As of this date KU has not received any comments from you. Because KU is dealing with the need to provide FERC (and the agencies) a number of plans related to various license conditions, KU would like to get as many in as soon as practical in order to avoid waiting until the deadline to file all the plans. As such, please let KU know if you plan on making any comments, so that the plan can be finalized and submitted to FERC.

Thanks for your help,

Arie

Arie DeWaal | Senior Project Manager

Mead & Hunt, Inc | M & H Architecture, Inc | 6501 Watts Road | Madison, WI 53719

Main: 608-273-6380 | Mobile: 608-957-6365

arie.dewaal@meadhunt.com | www.meadhunt.com

Arie DeWaal

From: Nick_Utrup@fws.gov
Sent: Friday, December 16, 2011 11:05 AM
To: Arie DeWaal
Cc: Laatsch, Cheryl - DNR (Cheryl.Laatsch@Wisconsin.gov); Mike Pedersen (mpedersen@ku-wi.org)
Subject: Re: Badger-Rapide Croche License Article 405 (Water quality Monitoring Plan)

Hi Arie,

I have reviewed the Water Quality Monitoring Plan and have no comments.

Nick

Nicholas J. Utrup
Hydropower Coordinator
U.S. Fish and Wildlife Service
Green Bay Ecological Services Field Office
2661 Scott Tower Drive
New Franken, WI 54229

Office: (920) 866-1736
Cell: (920) 530-9937
FAX: (920) 866-1710
Email: Nick_Utrup@fws.gov

Arie DeWaal
<arie.dewaal@mead
hunt.com> To
"Laatsch, Cheryl - DNR
12/15/2011 10:12 (Cheryl.Laatsch@Wisconsin.gov)"
AM <Cheryl.Laatsch@Wisconsin.gov>,
"nick_utrump@fws.gov"
<nick_utrump@fws.gov>
cc
"Mike Pedersen
(mpedersen@ku-wi.org)"
<mpedersen@ku-wi.org>
Subject
Badger-Rapide Croche License
Article 405 (Water quality
Monitoring Plan)

Good Morning Cheryl and Nick,

On October 28, 2011, Kaukauna Utilities(KU) sent you a draft of the Article 405 (Water Quality Monitoring Plan) for review and comment. As of this date KU has not received any comments from you. Because KU is dealing with the need to provide FERC (and the agencies) a number of plans related to various license conditions, KU would like to get as many in as soon as practical in order to avoid waiting until the deadline to file all the plans. As such, please let KU know if you plan on making any comments, so that the plan can be finalized and submitted to FERC.

Thanks for your help,

Arie

Arie DeWaal | Senior Project Manager

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Thank You.

Arie DeWaal

From: Laatsch, Cheryl - DNR <Cheryl.Laatsch@Wisconsin.gov>
Sent: Tuesday, December 20, 2011 8:57 AM
To: Arie DeWaal
Cc: Mike Pedersen
Subject: KU water quality report

Hi guys....

Sorry for not getting back to you sooner. There are several vacancies in the water quality section for NER. I am working with the regional supervisor to have someone assigned to help us review your documents. Thanks for your patience.

Cheryl Laatsch, Water Mgt Specialist,
WDNR, Office of Energy, GEF2, 7th Floor
101 S Webster St Madison WI 53707-7921
Madison office phone: (608) 264-8943
e-mail: Cheryl.laatsch@wisconsin.gov
Website: dnr.wi.gov
www.facebook.com/WIDNR

Arie DeWaal

From: Arie DeWaal
Sent: Wednesday, December 21, 2011 7:30 AM
To: 'Laatsch, Cheryl - DNR'
Subject: RE: Ftp of water quality data
Attachments: DOC715.PDF

Categories: Filed by Newforma

Good Morning Cheryl,

I have attached a copy of the Water quality Monitoring Plan. The plan was developed for KU by GEI out of their Green Bay office. They are also doing the work on KU's Little Chute monitoring. It's nice to see Mary will be getting involved. She and I have worked together in the past. I will be in this morning then I will be out until December 29.

Happy Holidays!

Arie

Arie DeWaal | Senior Project Manager

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arie.dewaal@meadhunt.com | www.meadhunt.com

From: Laatsch, Cheryl - DNR [mailto:Cheryl.Laatsch@Wisconsin.gov]
Sent: Tuesday, December 20, 2011 2:01 PM
To: Arie DeWaal
Subject: Ftp of water quality data

Hi Arie - Mary Gansburg will be assisting us from Green Bay. Do you have an electronic version of the report or can you put it on an ftp site? thanks

Also, are you around tomorrow, in case we have any questions?

Cheryl Laatsch, Water Mgt Specialist,
WDNR, Office of Energy, GEF2, 7th Floor
101 S Webster St Madison WI 53707-7921
Madison office phone: (608) 264-8943
e-mail: Cheryl.laatsch@wisconsin.gov
Website: dnr.wi.gov
www.facebook.com/WIDNR

Arie DeWaal

From: Angie_Tornes@nps.gov
Sent: Monday, January 23, 2012 5:25 PM
To: Arie DeWaal
Cc: Mike Pedersen (mpedersen@ku-wi.org); planning@kaukauna-wi.org; btungate@ci.menasha.wi.us
Subject: Re: Draft Text For Access Sign
Attachments: Badger sign text draft AMT Jan 2012.docx; AH_large_shaded_4C_pc.tif

Hi Arie -

I'm attaching the marked-up version of the draft text for the sign with the recommendations made at our December 14th meeting. If you like how it looks you can accept the changes in "track changes" so it can be sent out in the draft rec plan. It currently covers more than one page but will condense down after edits are accepted.

I'm also attaching an NPS logo....I can't recall if I was going to collect the others (AW, ACOE) or if you were going to?

(See attached file: Badger sign text draft AMT Jan 2012.docx) (See attached file: AH_large_shaded_4C_pc.tif)

Thanks.

- Angie

Angie Tornes
National Park Service
Rivers & Trails Program
Hydropower Assistance Program

Wisconsin Field Office
626 E. Wisconsin Ave., Suite 400
Milwaukee, WI 53202
Voice 414.297.3605/ FAX: 414.944.3660

<http://www.nps.gov/rtca>
<http://www.nps.gov/ncrc/programs/hydro>
...><(((p>'...'...'><(((p>'...'...'>

Arie DeWaal
<arie.dewaal@mead
hunt.com> To
"Angie_Tornes@nps.gov"
01/23/2012 01:08 <Angie_Tornes@nps.gov>
PM cc
"Mike Pedersen
(mpedersen@ku-wi.org)"

<mpedersen@ku-wi.org>,
"planning@kaukauna-wi.org"
<planning@kaukauna-wi.org>
Subject
Draft Text For Access Sign

Hi Angie,

During our access related meeting last month you offered to prepare a revised version of the "Draft Text For Access Sign". I believe that there was some sentiment towards putting the NPS, AWA, and city logos on the sign as well. I thought I would touch base with you to see how you are coming along with the revisions. It would be helpful if you could provide the wording so that it can be included in the draft recreation plan to be sent out for review.

Thanks,
Arie

Arie DeWaal | Senior Project Manager
Mead & Hunt, Inc | M & H Architecture, Inc | 6501 Watts Road | Madison, WI
53719
Main: 608-273-6380 | Mobile: 608-957-6365 arie.dewaal@meadhunt.com | www.meadhunt.com

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Thank You.

Arie DeWaal

From: Gansberg, Mary K - DNR <Mary.Gansberg@Wisconsin.gov>
Sent: Thursday, January 05, 2012 12:27 PM
To: Arie DeWaal
Cc: Hudak, Andrew J - DNR; Laatsch, Cheryl - DNR
Subject: RE: Ftp of water quality data
Attachments: FW: Ftp of water quality data

Categories: Filed by Newforma

Hi Arie,

I provided comments to Cheryl just before Christmas. See the attached e-mail string for all the details, but to summarize, my specific comments are copied below.

Now, I have one more thing to let you know. The DNR Water Resources Management program has had a change in assigned work areas recently. Andy Hudak will be taking over the Water Resources (my previous involvement) for these FERC projects. Andy can be reached at 920-662-5117. I'll still be here to assist in any way I can, just Andy will take the lead now.

Take care,
Mary

From: Gansberg, Mary K - DNR
Sent: Wednesday, December 21, 2011 05:00 PM
To: Laatsch, Cheryl - DNR
Subject: RE: Ftp of water quality data

Hi Cheryl,

I have a call in to Mike Donofrio asking if the DNR has a list of required monitoring for projects like this. Hopefully, he can get back to me tomorrow. But in the meantime, I reviewed the draft monitoring plan and have the following comments:

1. From the maps provided (which 1a and 1b are very hard to read), I do not know if I concur with the monitoring sites selected. Page 6 said they did a site reconnaissance on September 20, 2011 to determine monitoring locations. Maybe the DNR should look at the proposed monitoring sites with them so we can all agree that the proposed sites are representative locations. Especially the site at the lower bypass reach which has not yet been determined.
2. Page 9, #7 says if daily average DO > 2 mg/l for 5 consecutive days, they report it to the DNR within the monitoring season. I suggest they report it to the DNR within say, 10 days or something like that. I would hate to get a report of water quality problems from June in September or something like that. It needs to be reported in a timely manner.
3. When I hear from Mike, I'd like to know if daily average DO values are the standard reporting method. Seems to me we would want min and max values as those are the critical values.
4. Just some inconsistencies I would like to point out: Cover letter and page 9, #8 says reports due Dec 15, #9 says Dec 31. Cover letter says FERC license issued May 2011, plan says May 2009.
5. I like the strategy of monitoring at 5 different locations, real time temperature data to know when to bypass more water for walleye spawning, DO meter calibration schedule, timing of all the monitoring, and parameters that will be monitored.

I will let you know if I have any additional comments after speaking with Mike.

Hope this helps,
Mary

One more thing. This plan says they will monitor for 3 years then make recommendations for future monitoring. Is this adequate? Would we want them to at least describe some sort of future monitoring for the life of the permit?

Mary

From: Arie DeWaal [mailto:arie.dewaal@meadhunt.com]
Sent: Wednesday, January 04, 2012 03:52 PM
To: Gansberg, Mary K - DNR
Subject: FW: Ftp of water quality data

Hi Mary,

Please see below.

Thanks,
Arie

Arie DeWaal | Senior Project Manager

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arie.dewaal@meadhunt.com | www.meadhunt.com

From: Arie DeWaal
Sent: Wednesday, January 04, 2012 3:50 PM
To: Laatsch, Cheryl - DNR (Cheryl.Laatsch@Wisconsin.gov)
Cc: 'mary.gansber@wisconsin.gov'; Mike Pedersen (mpedersen@ku-wi.org)
Subject: FW: Ftp of water quality data

Hi Cheryl,

I thought I would touch base with you to see if you and Mary have had a chance to review the Badger-Rapide Croche Water quality Monitoring Plan.

Thanks,
Arie

Arie DeWaal | Senior Project Manager

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Main: 608-273-6380 | Mobile: 608-957-6365
arie.dewaal@meadhunt.com | www.meadhunt.com

From: Arie DeWaal
Sent: Wednesday, December 21, 2011 10:53 AM
To: 'Laatsch, Cheryl - DNR'

Cc: Mike Pedersen (mpedersen@ku-wi.org)
Subject: RE: Ftp of water quality data

Hi Cheryl,

If the WDNR indicates that there is no water quality monitoring needed for the Badger-Rapide Croche Hydro Project, KU would file that recommendation with FERC and ask them to eliminate the Article 406 requirement from the license which would, in essence, be a request to amend the license. The 401 Certification would also need to be amended with the removal of that portion of Condition 11 which requires a Water Quality Monitoring Plan. Prior to that, I think it would be best to contact Nick Utrup and ask him if he would be on board with the WDNR recommendation. The filing to FERC would then include that consultation with WDNR and FWS.

Thanks,
Arie

Arie DeWaal | Senior Project Manager

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arie.dewaal@meadhunt.com | www.meadhunt.com

From: Laatsch, Cheryl - DNR [<mailto:Cheryl.Laatsch@Wisconsin.gov>]
Sent: Wednesday, December 21, 2011 10:34 AM
To: Arie DeWaal
Subject: RE: Ftp of water quality data

I noted that FWS had no comments. If DNR indicates that no additional monitoring is necessary, does FWS have to agree? Do you have to request an amendment from FERC?

Cheryl Laatsch, Water Mgt Specialist,
WDNR, Office of Energy, GEF2, 7th Floor
101 S Webster St Madison WI 53707-7921
Madison office phone: (608) 264-8943
e-mail: Cheryl.laatsch@wisconsin.gov
Website: dnr.wi.gov
www.facebook.com/WIDNR

From: Arie DeWaal [<mailto:arie.dewaal@meadhunt.com>]
Sent: Wednesday, December 21, 2011 07:30 AM
To: Laatsch, Cheryl - DNR
Subject: RE: Ftp of water quality data

Good Morning Cheryl,

I have attached a copy of the Water quality Monitoring Plan. The plan was developed for KU by GEI out of their Green Bay office. They are also doing the work on KU's Little Chute monitoring. It's nice to see Mary will be getting involved. She and I have worked together in the past. I will be in this morning then I will be out until December 29.

Happy Holidays!

Arie

Arie DeWaal | Senior Project Manager

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From: Laatsch, Cheryl - DNR [mailto:Cheryl.Laatsch@Wisconsin.gov]
Sent: Tuesday, December 20, 2011 2:01 PM
To: Arie DeWaal
Subject: Ftp of water quality data

Hi Arie - Mary Gansburg will be assisting us from Green Bay. Do you have an electronic version of the report or can you put it on an ftp site? thanks

Also, are you around tomorrow, in case we have any questions?

Cheryl Laatsch, Water Mgt Specialist,
WDNR, Office of Energy, GEF2, 7th Floor
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Madison office phone: (608) 264-8943
e-mail: Cheryl.laatsch@wisconsin.gov
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Thank You.

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Thank You.

Arie DeWaal

From: Arie DeWaal
Sent: Wednesday, March 28, 2012 9:31 AM
To: 'Laatsch, Cheryl - DNR'
Cc: Mike Pedersen (mpedersen@ku-wi.org)
Subject: RE: KU review

Categories: Filed by Newforma

Hi

Responses are below:

1. Ready to submit to FERC
2. Need comments from WDNR ASAP
3. Need WDNR comments ASAP
4. Need WDNR comments by April 4, 2012
5. Ready to submit to FERC (comments received by Andy H. and are incorporated into document)
6. Operations Plan – sent to you by Linda Mitchell – need WDNR comments by April 26, 2012
7. Badger-Rapide Croche Water Quality Monitoring Plan – need WDNR comments ASAP

Hope this helps,
Arie

Arie DeWaal | Senior Project Manager

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arie.dewaal@meadhunt.com | www.meadhunt.com

From: Laatsch, Cheryl - DNR [mailto:Cheryl.Laatsch@Wisconsin.gov]
Sent: Wednesday, March 28, 2012 9:16 AM
To: Arie DeWaal
Subject: KU review

Just going over my notes:

1. Draft Woody Debris Plan. - DNR submitted comments.
2. Wildlife Plan, I sent another request to Dick, requesting formal comments
3. Drawdown Plan - Sent again to staff, requesting quick turn around.
4. Rec Plan - Received a few comments from Mike D. I will format them, and send on. Was hoping to see what FWS and NPS had to say.
5. Invasive Plan - Are we done with this? Seems like I did not close out my comment info.

Cheryl Laatsch, Water Mgt Specialist,
WDNR, Office of Energy, GEF2, 7th Floor
101 S Webster St Madison WI 53707-7921
Madison office phone: (608) 264-8943

OR

Cheryl Laatsch, Horicon DNR
N7725 HIGHWAY 28
HORICON WI 53032

(920) 387-7869
(920) 485-3028 (Fax)

e-mail: Cheryl.laatsch@wisconsin.gov
Website: dnr.wi.gov
www.facebook.com/WIDNR

DATE: April 2, 2012

FILE REF: P-2677

TO: Kaukauna Utility

FROM: Cheryl Laatsch, WDNR Acting FERC Coordinator

SUBJECT: Final DNR Comments on Badger Rapids Croche - Draft Water Quality Monitoring Plan

WDNR Response:

1. Monitoring locations – DNR Water Resources staff approves of the proposed monitoring sites. Please provide a map with Lat Long locations.
2. Sampling parameters – Dissolved oxygen, temperature, nitrate series, pH, flow, water elevation, time of samples, date. The analysis for nitrate series needs to be sent to a certified lab. Nitrate series should be collected during spring spawning events, coordinated with the increase in flows. Collection should include two samples. Meters shall be calibrated and maintained according to manufactures instructions. Cleaning and maintenance records should be kept on site and provided in the annual report. A summary of NR102, state water quality standards should be provided, with a detailed discussion for any discrepancies. Daily min and max reporting values should be reported with daily averages, for temperature, dissolved oxygen, pH, flow, and water elevations.
3. We request annual sampling and reporting for the first three years. Subsequent sampling and reporting will be determined after three years.
4. Staff gauges must be visible to the public, and be able to identify what the actual cfs and water level elevation are at any point in time. Staff gauges must be able to be used to calculate flow curves. Staff gauges should be installed at Kaukauna ACOE dam, and the Badger powerhouse, to help document that the minimum required flows are being met within the Fox River below the Kaukauna ACOE dam.
5. Communication Plan – If a violation of the state water quality standards occurs, the occurrence should be reported to the DNR within 24 hours of the event. Additionally, when a violation occurs, daily monitoring shall occur until the violation is resolved. A plan should be developed to identify any operational changes that could be employed if state water quality standards, or other sampling parameters are not met. Reporting should be addressed to the Water Quality Biologist for the river section, and copied to the FERC Coordinator.
6. 300cfs for fish license requirements. How would this be reported? When would it be reported? What happens where there is a deviation below 300cfs?
7. Please send a copy of the annual report to both the WDNR and Outagamie County Land Conversation Department.

Kaukauna Utilities (KU) Response to the Wisconsin Department of Natural Resources (WDNR)'s April 2, 2012, Memorandum

KU appreciates the input provided by the WDNR during the development of the Water Quality Monitoring Plan (WQMP). Consultation consisted of correspondence, phone calls, and meetings.

The following presents responses to the seven items listed in WDNR's April 2, 2012, memorandum.

1. Request for maps with latitude and longitude coordinates: KU will comply with this request. The WQMP contains three maps showing sampling location (Figures 1a, 1b, and 1c in Appendix A). The latitude and longitude data of each sample point will be appended in all reports and maps.
2. Sampling parameters: KU and WDNR are in agreement about sampling parameters and methods with one exception. WDNR has requested a series of nitrate data be collected during spawning season. KU has no objection to allowing WDNR to collect these data, but these data were not included in the FERC requirements for new license. KU's primary concern is that these parameters are not caused or affected by the hydroelectric project; nor is KU aware of any mitigative actions that our hydro might make if these data do not meet state standards. The primary driver of nitrate series data are point and non-point inputs to the river, none of which come from the hydro. Again, KU has no objection to these data being collected by others, but until we understand how the run of river operation of our dams has any effects on these parameters, we respectfully have declined the WDNR request. A secondary concern about this request is the already significant cost for monitoring and mitigation the City has committed to this project.
3. Three year sampling plan: KU is committed to the criteria of annual sampling and reports for the term of three years as specified in the FERC license and requested by WDNR. At the end of that period, KU is hopeful that sampling can be eliminated or significantly reduced if no problems are identified. KU will base any requests at that time on reasonableness of maintaining water quality at our project based on the data we will have collected and make those recommendations in our final report.
4. As indicated earlier in the WQMP, Operational Compliance matters, such as number and location of gages, is being dealt with under Article 407 of the new license, as well as Conditions 2, 3, 5, 7, and 12 of the WDNR Water Quality Certification. Compliance with these requirements will be submitted under separate cover.
5. Communication Plan: KU will report violations of the state water quality standards within 24 hours of discovery of an event or the first business day possible as detailed in the Plan. Daily monitoring may be part of the plan to address any violations, but because the data are primarily collected on a two week rotation from difficult to access probes, it may be necessary to consider alternatives with WDNR. The plan will assess the effectiveness of operational changes that might help restore water quality to state standards. Reporting will be communicated to the appropriate WDNR staff requested.

6. As indicated earlier in the WQMP, Operational Compliance matters, such as the provision of minimum flows, is being dealt with under Article 407 of the new license, as well as Conditions 2, 3, 5, 7, and 12 of the WDNR Water Quality Certification. Compliance with these requirements will be submitted under separate cover.

7. Annual Reports: KU will simultaneously copy annual reports to WDNR, Outagamie County Land Conversation Department, and the U.S. Fish & Wildlife Service.

Arie DeWaal

From: Arie DeWaal
Sent: Tuesday, April 03, 2012 1:19 PM
To: nick_utrup@fws.gov
Subject: Badger-Rapide Croche Compliance Plans

Categories: Filed by Newforma

Hi Nick,

We are in the process of finalizing several of the plans as required in the FERC New License issued for Kaukauna Utilities' Badger-Rapide Croche Hydroelectric Project (FERC Project No. 2677). These include:

- Water Quality Monitoring Plan
- Erosion and Sediment control Plan
- Wildlife and Land Management Plan
- Recreation Plan.

Drafts of the plans had been sent out to you between October, 2011 and March 1, 2012. Please let me know if you have any comments on these plans so that we can finalize them and file them with FERC in a timely manner.

Thanks,
Arie

Arie DeWaal | Senior Project Manager

Mead & Hunt, Inc | M & H Architecture, Inc | 6501 Watts Road | Madison, WI 53719

Main: 608-273-6380 | Mobile: 608-957-6365

arie.dewaal@meadhunt.com | www.meadhunt.com

Arie DeWaal

From: Arie DeWaal
Sent: Thursday, April 05, 2012 2:12 PM
To: 'Nick_Utrup@fws.gov'
Cc: Mike Pedersen (mpedersen@ku-wi.org); Linda Mitchell; Laatsch, Cheryl - DNR (Cheryl.Laatsch@Wisconsin.gov)
Subject: RE: Badger-Rapide Croche Compliance Plans
Categories: Filed by Newforma

Hi Nick,

Thanks for getting back to me. We appreciate your input and will proceed accordingly.

Thanks Again,
Arie

Arie DeWaal | Senior Project Manager

Mead & Hunt, Inc | M & H Architecture, Inc | 6501 Watts Road | Madison, WI 53719
Main: 608-273-6380 | Mobile: 608-957-6365
arie.dewaal@meadhunt.com | www.meadhunt.com

From: Nick_Utrup@fws.gov [mailto:Nick_Utrup@fws.gov]
Sent: Thursday, April 05, 2012 2:08 PM
To: Arie DeWaal
Subject: Re: Badger-Rapide Croche Compliance Plans

Arie,

I have reviewed the Water Quality Monitoring Plan, Erosion Sediment Control Plan, and Wildlife and Land Management Plan and have no comments. The FWS has reviewed the Recreation Plan and concurs with comments made by the National Park Service.

I am still reviewing the Operations Compliance Monitoring Plan and will provide my comments by the end of April.

I appreciate having the opportunity to respond.

Thanks,

Nick

Nicholas J. Utrup
U.S. Fish and Wildlife Service
Wisconsin Ecological Services Office
2661 Scott Tower Drive
New Franken, WI 54229

Office: (920) 866-1736
Cell: (920) 530-9937
FAX: (920) 866-1710
Email: Nick_Utrup@fws.gov
▼ Arie DeWaal <arie.dewaal@meadhunt.com>

Arie DeWaal
<arie.dewaal@meadhunt.com>

To "nick_utrup@fws.gov" <nick_utrup@fws.gov>

04/03/2012 01:19 PM

cc

Subject: Badger-Rapide Croche Compliance Plans

Hi Nick,

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Arie

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Arie DeWaal

From: Laatsch, Cheryl - DNR <Cheryl.Laatsch@Wisconsin.gov>
Sent: Monday, April 30, 2012 12:51 PM
To: Arie DeWaal
Cc: Mike Pedersen (mpedersen@ku-wi.org)
Subject: RE: Badger-Rapide Croche Compliance Plans

I understand your timing constraints, and I have not heard back from Dick Nikoli on the wildlife plans. We do not have any additional comments on the rec plans. I think Angie will be able to address this area adequately. Please feel free to submit your plans to FERC.... Thanks :)

Cheryl Laatsch, Water Mgt Specialist,
WDNR, Office of Energy, GEF2, 7th Floor
101 S Webster St Madison WI 53707-7921
Madison office phone: (608) 264-8943

OR

Cheryl Laatsch, Horicon DNR
N7725 HIGHWAY 28
HORICON WI 53032
(920) 387-7869
(920) 485-3028 (Fax)

e-mail: Cheryl.laatsch@wisconsin.gov
Website: dnr.wi.gov
www.facebook.com/WIDNR

From: Arie DeWaal [mailto:arie.dewaal@meadhunt.com]
Sent: Friday, April 27, 2012 07:20 AM
To: Laatsch, Cheryl - DNR
Cc: Mike Pedersen (mpedersen@ku-wi.org)
Subject: Badger-Rapide Croche Compliance Plans

Good Morning Cheryl,

Just a short note to thank you for participating in our conference call related to the Operations Plan for Badger-Rapide Croche. I think we all agree that the call was informative and useful. As a follow up, we also briefly discussed the remaining compliance plans to be submitted to FERC:

- Water quality Monitoring Plan
- Recreation Plan
- Wildlife and Land Management Plan

As you know the plans were developed in consultation with the various stakeholders (including WDNR). With your concurrence, we will go ahead and file the plans with FERC.

Thanks for your help and have a good weekend,
Arie

Arie DeWaal | Senior Project Manager

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