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September 16, 2008

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

Re: Badger Rapide Croche Hydroelectric Project, Project No. 2677
Comments and Study Request

Dear Secretary Bose:

Enclosed for filing in the above referenced proceeding is American Whitewater's COMMENTS AND STUDY REQUEST on the Badger Rapide Croche Hydroelectric Project Relicensing. Copies of this filing have been served on all parties of record to this proceeding.

Thank you for your assistance. Please call me at 425-417-9012 if you have any questions or need additional information.

Sincerely,

Thomas O'Keefe, PhD
Acting Midwest Stewardship Director

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

City of Kaukauna Utilities	)	Project No. 2677-019
	)	Badger Rapide Croche Hydroelectric
	)	Project
	)	
Application for New Major License	)	Comments of American Whitewater
_____	)	

AMERICAN WHITEWATER'S COMMENTS AND STUDY REQUEST IN THE BADGER RAPIDE CROCHE HYDROELECTRIC PROJECT LICENSING PROCEEDING

I. Introduction

By notice dated February 5, 2008, the Federal Energy Regulatory Commission (hereafter Commission) solicited Scoping Comments on the City of Kaukauna Utilities (hereafter Kaukauna) application for a new license to operate the Badger-Rapide Croche Project, FERC No. 2677-019. American Whitewater responded on March 6, 2008 with our scoping comments.[1] On August 5, 2008 Commission staff, Kaukauna, and stakeholders attended a site visit to view project facilities and discuss information gaps in the license application. American Whitewater wishes to provide additional comments and a proposed study plan to address whitewater recreation issues at this project. Although this project is following a Traditional Licensing Process we have prepared a study request in the format used in the Integrated Licensing Process. This format is designed to clearly spell out goals, public interest, and project nexus.

II. Comments

As stated in our previous comments.[2], American Whitewater has an interest in opportunities for river-based recreation in the reach of the natural river channel bypassed by this project. Our recreational interests include three primary elements: sufficient flows for whitewater recreation, access to the water, and publicly accessible information on flows and project operations. Information presented in Kaukauna's Application for a New Major License[3] is insufficient to fully evaluate project impacts and we request that the Commission direct the applicant to provide additional information for the purposes of developing a complete record on which to base decisions in this proceeding. Information from this study is necessary to build a more complete record, which is required for all

[1] eLibrary Accession Number 20080306-5041
[2] eLibrary Accession Number 20080306-5041
[3] License Application, eLibrary Accession Number 20070905-0128 and associated documents

parties to make informed decisions regarding necessary protection, mitigation, and enhancement measurements associated with a project that is proposed to divert additional flow from the river thereby impacting river-based recreation and aquatic habitat.

As observed in the Scoping Visit, this is a run-of-river project where the Army Corps of Engineers controls the flow upstream of the project. The lack of storage places some limitations on the range of flows the project can provide for river-based recreation. However, a number of run-of-river projects under Commission jurisdiction provide opportunities for river-based recreation. At these projects generation is curtailed during scheduled time periods that are advertised to the public allowing water to flow down the natural river channel. Projects of this type include Big Fork on the Swan River (P-2652), Rock Creek - Cresta on the Feather River (P-1962), North Georgia on the Tallulah River (P-2354), Prospect on the North Fork Rogue (P-2630), and the Clackamas on the Clackamas River (P-2195) to name a few examples. In all of these projects it was necessary to conduct a study of instream flow needs for recreation. We believe this project may be particularly well suited to a study design that utilizes opportunistic flows in the spring and we have attached our proposed study plan.

While we recognize that our request comes later than is generally expected, we note that we were not notified of this license application until earlier this year when one of our local members brought it to our attention. American Whitewater is on the Initial Consultation Contact List maintained by the Commission for Wisconsin.[4] however the applicant never consulted us on this project. It is standard practice for consultants to advise utilities to contact our organization regarding river-based recreation but that did not occur with this project. Because the current license does not expire until 2018 we were not otherwise tracking this project. As suggested in our previous comments, installation of a gauge that is readily accessible to paddlers will greatly assist in data collection. Taking this step immediately will prevent further delay in documenting instream flow needs for recreation.

Conclusion

In summary we request that the Commission direct the applicant to provide additional information and conduct a recreational flow study that will enable a more complete review of this project and its impacts. Specifically, information on existing river-based recreation needs to be provided, impacts of the project and proposed future operations on instream recreation must be quantified, a quantitative evaluation of instream flow needs for recreation must be provided, and recreational mitigation measures with a direct nexus to project impacts must be fully considered and evaluated. We look forward to working with the applicant and other stakeholders to address the information gaps in this proceeding.

Respectfully submitted this 17th day of September 2008,

Thomas O'Keefe, PhD

[4] http://www.ferc.gov/industries/hydropower/enviro/consult-list.asp

Acting Midwest Stewardship Director
American Whitewater
3537 NE 87th Street
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cc:
Service List

Integrated Analysis of Recreational Flows and River Access
Badger Rapide Croche Hydroelectric Project 2677-019

1.1 Study Description and Objectives (§5.9(b)(1))

What is the issue (problem) to be examined? Describe the goals and objectives of the study proposal and the information to be obtained.

Whitewater boating is a flow-dependent activity that occurs on the Fox River. From information on the record in this proceeding, direct observation, and documentation on the American Whitewater website,[5] we know that this river is of considerable interest to the local whitewater boating community. As outlined in the license application, increasing generation capacity by diverting additional water will have a detrimental impact on existing opportunities for river-based recreation. This study is necessary to study the nature of those impacts and develop potential mitigation measures that can be evaluated in conjunction with power and other non-power uses.

The primary objective is to quantitatively define the range of flows for whitewater recreation (kayaking) and to determine the quality and type of experience that different flows provide. The data are necessary to balance recreation needs with needs for power generation. Specifically there is a need to design the study to provide *evaluative* information. The existing information regarding whitewater recreational opportunities is *descriptive*, which is insufficient to adequately evaluate the needs of river-based recreational opportunities in developing a new license for the project. The study outcome should be a report that provides quantitative data for minimum and optimum flows for whitewater kayaking.

1.2 Study Area

Define the proposed geographic area to be included in the investigation.

The study area encompasses the Fox River from the Kaukauna Dam downstream through the 1000 Islands where the river flows through the city of Kaukauna.[6] Recreational use of this segment has been documented and is directly impacted by current and proposed project operations.

1.3 Resource Management Goals (§5.9(b)(2))

If applicable, explain the relevant resource management goals of the agencies or Indian tribes with jurisdiction over the resource to be studied.

An integrated analysis that includes a recreational flow study is required to quantitatively describe flow-dependent recreational opportunities in the Project area. Quantitative information will help establish the role the Project plays in addressing instream flow needs and recreational management goals of the National Park Service, State of Wisconsin, and American Whitewater.

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[5] <http://www.americanwhitewater.org/content/River_detail_id_3685_>

[6] A map of this reach can be found at <http://www.americanwhitewater.org/content/River_detail_id_3685_>

1.4 Relevant Public Interest (§5.9(b)(3))

If the requester is a not resource agency, explain any relevant public interest considerations in regard to the proposed study.

There is considerable public interest in the opportunities for whitewater recreation on the Fox River. The river represents a significant existing whitewater resource that could be further negatively impacted by project that diverts additional flow from the river. Because of this a need exists to quantitatively define river-based recreational opportunities. Whitewater boating as a sport has grown substantially over the last few decades in the State of Wisconsin and nationally, and this trend is predicted to continue.[7]

1.5 Existing Information (§5.9(b)(4))

Describe existing information concerning the subject of the study proposal, and the need for additional information.

Several sources of information already exist that can be used to describe the recreation-related characteristics of the Fox River. These sources include topographic maps, habitat surveys, aerial photographs, streamflow records and web sites, along with documents and testimony on the record for this license proceeding.

A number of individuals in the community run the river on a regular basis although the lack of a flow gauge makes it difficult to determine what flows are being run. A resource professional experienced in designing recreational flow studies could conduct structured interviews to collect additional information from these individuals to further refine study plans and develop an efficient flow study. Despite the information that does exist, no quantitative information exists on flow ranges for different recreational opportunities on this river. More precise information on these flows is necessary to inform any proposed license articles or meaningful recreation plans.

1.6 Nexus to Project (§5.9(b)(5))

Explain any nexus between project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements.

The Badger Rapide Croche Hydroelectric Project to a large extent regulates the allocation, timing, levels and distribution of water flows within the Fox River in the natural river channel in the town of Kaukauna that is bypassed by the project. This regulation influences the spatial and temporal availability of water for recreation and aquatic biota. Documented use of the Fox River for recreation exists. Following reconstruction of the project and installation of increased generation capacity, these opportunities could be severely reduced.

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[7] *See* Kayaking participation statistics illustrating that participants increased from 8.7 Americans in 2001 to 12.6 million Americans in 2005 as reported in the Outdoor Industry Foundation's Outdoor Recreation Participation Study, 2005. <www.outdoorindustryfoundation.org>

1.7 Study Methodology (§5.9(b)(6))

Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate field season(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers relevant tribal values and knowledge.

1.7.1 Overall Approach

Methods listed below are based on the integrated approach summarized by Whittaker, Shelby and Gangemi (2005).[8] The report outlines three 'levels' of studies: (1) Level 1 - desktop analysis, (2) Level 2- limited reconnaissance, and (3) Level 3- intensive studies. Since the existence of flow-based recreational opportunities has been documented, those opportunities are flow dependent and impacted by current and proposed future project operations, and because potential protection, mitigation, and enhancement measures designed to address whitewater recreation could be proposed and ultimately implemented, all stakeholders have an interest in generating knowledge consistent with a Level 3 analysis.

For the river reach of interest, the level of public interest and information already on the record renders a Desktop Analysis inadequate to quantify flow dependent recreational opportunities. An intensive study or Level 3 is needed and we recommend conducting an opportunistic internet-based flow study with focus groups.

Current and proposed project operations are known to affect whitewater boating in this reach, and there is a strong recreational demand for using this reach. The objective of this study would be to quantify flow ranges for whitewater boating using a variety of flows. A quantitative optimal flow range is needed to help refine and inform the development of protection, mitigation, and enhancement measures. An accurate quantitative evaluation of flow could also help save costs due to generation loss in the future by preventing a higher flow than needed from being released during post-licensing implementation.

The controlled flow study will include an evaluation of multiple flows and the development of a flow preference curve. Structured interviews with boaters that have used this reach will be used to determine the flows to be evaluated. A survey will be distributed through the internet to quantify responses. A focus group discussion will be facilitated after boaters have run a number of different flows.

1.7.2 Comparison of Regulated and Unimpaired Opportunity for Whitewater Boating

The applicant will estimate for each existing or potential Whitewater Boating Study Reach the annual number of usable days that occur based on regulated and unimpaired

[8] This publication can be requested through the National Park Service at <http://www.nps.gov/hydro/flowrec.htm>

flows. For the purpose of this study, a usable day is defined as a day when a recreationist would have reasonable access to the river and the mean daily flow in the Whitewater Boating Study Reach is within the "acceptable flow range" as determined through the flow study and using the hydrology data.

1.7.3 Opportunistic Flow Studies

In median and better water years and under current operating procedures the Fox River has acceptable flows for a significant period in the spring from natural runoff. Hydrologic analysis will further quantify the extent and annual variation in these periods. In the spring of 2009 we expect that a range of flows will be available for evaluation. Through the use of an internet-based flow study, it is possible to collect quantitative data on flow preferences. This approach has been used in other proceedings including Mystic Lake on West Rosebud (P-2301)[9], Howard Hanson on the Green River (an Army Corps of Engineers Project), Prospect on the North Fork Rogue (P-2630), and the Drum Spalding Project on the Yuba and Bear Rivers (P-2310). In all cases an internet-based flow survey was developed, paddlers reported their runs, and the licensee retained a consultant who facilitated focus group discussions among participants following the data collection effort. In the case of this Project sufficient opportunistic flows are available for an internet-based study and a lack of storage capacity likely limits opportunities for a controlled flow study.

Other key elements to this study method include:

- Conduct structured interviews to determine target flows and secure a commitment from a group of paddlers to serve as study participants. These individuals would run the reach at the different target flows and report their runs on the internet survey.
- Licensees providing real-time flow information to American Whitewater for dissemination to the boating community through existing websites. This will allow study participants and boaters in the general public to monitor the flows and to boat targeted flows when they are available. Boaters may also choose to boat other flow levels. Installation of such a gauge should take place immediately. Had this been done in spring 2008 as suggested in our previous comments, data could have been collected this spring.
- If during a weekend period, the licensee is able to augment natural, run-off flows by limiting generation diversion to achieve target study flows, licensees will provide this information to American Whitewater at least 3 days prior to the augmentation and American Whitewater will notify paddlers of the flow augmentation.
- Publication of study description on existing websites, including American Whitewater.
- Establishing an on-line questionnaire survey for volunteer boating team members, linked from the American Whitewater web site. Information to be collected on

[9] See Mystic Project Effects on Whitewater Flows, Project Study 13, FERC eLibrary 20050301-4017

the on-line questionnaire survey will likely include: 1) boatability, 2) quality of the reach, 3) suitability of the run for different crafts and boater skill levels, 3) quality of the put-in/take-out locations, 4) boater's opinion of the class of difficulty of the run, 5) comparison of each run at its different flows, 6) quality and length of the shuttle, 7) any safety concerns or hazards, 8) scenic quality, 9) number and difficulty of portages, 10) availability of play areas, and 11) boater's opinion of the flows that would represent the general paddling public preference. The National Park Service has established methodology for these surveys and many consultants are experienced in their implementation.

After the completion of each run, the boating public will have the opportunity to complete an on-line survey accessible from the American Whitewater website. Licensees and Relicensing participants will select from the group of boaters who have completed this on-line survey to participate in Whitewater Study Reach Focus Groups. This step occurs once the appropriate number of surveys or mix of boaters for each target flow are completed.

1.7.4 Focus Group Process

Focus groups and interviews will be semi-structured, with specific topic areas and questions developed for each type of user (e.g., boaters, anglers). Initial questions will focus on how people use the river. The goal is to describe the character of recreation opportunities and identify flow-dependent attributes. A second series of questions will focus on the effects of flows on those attributes and whether interviewees can identify specific flows that affect the quality of opportunities. A final series of questions will focus on prioritizing opportunities and identifying recreation users' need for flow information. Interviews with agency staff will include questions about river access and use information, as well as relevant hydrology information. The Licensees will develop the focus group/interview questionnaires with the Relicensing Participants.

Focus groups will ideally range in size from six to twelve study participants, and one or two facilitators. The researcher/discussion-leader will pose open-ended questions to guide discussion, but will draw out participants with follow-up questions as needed. The focus groups would ideally be scheduled after researchers have conducted fieldwork to increase opportunities for shared understanding about the places and issues under discussion.

As with any research methodology, interviews/focus groups have strengths and weaknesses. They are most useful for describing consensus opinion of homogenous groups, and they allow participants to "brainstorm" collectively to improve the number or accuracy of ideas. However, generalizing from small groups is more challenging, particularly if there is diversity within a group. The extent of agreement within groups is one input into decisions about whether additional flow evaluation studies would prove useful.

An initial list of participants for interviews and focus groups will be developed with Relicensing Participants and will be supplemented by asking interviewees to provide contact information of additional persons that may have boating experience on the Whitewater Boating Study Reaches. Researchers will make a good faith effort to reach identified individuals to conduct interviews.

1.7.5 Consistency of Methodology with Generally Accepted Scientific Practices

The proposed methods for this study are consistent with professional practices. The overall approach to whitewater flow studies is commonly used in relicensing proceedings (Shelby Whittaker & Gangemi, 2005), and is consistent with Commission study requirements under the newly developed Integrated Licensing Process (FERC 2004).

Interview and focus groups should be conducted by researchers with social science training and follow standard qualitative research protocols (Patton, 1990). We recommend researchers who have experience with interview and focus group efforts from previous studies. Logistics and schedule will be developed in collaboration with local recreation users or consultants with knowledge of the area. Documentation may include still photos and notes.

1.8 Final Product

State what type of final product will be produced from this study (report, data tables, map, etc).

The study objectives and issues will be addressed through analysis of the responses to interviews, focus groups, and professional evaluations. The applicant will synthesize the data collected and analyzed into a study report, and will include summary data in tables, attachments and/or appendices. The applicant will provide raw data in the form of SPSS and/or Excel upon request by the stakeholders.

A Draft Report will be provided to Licensing Participants for review and input prior to publication of the Final Report. At the conclusion of the study, the Final Report will be produced and filed with the Commission. Assuming a commitment by all stakeholders to work in good faith to obtain the data necessary, we believe a final report could be filed by December of 2009. The report will include a quantitative assessment of current hydrology and modifications that will occur with the proposed new project. A flow preference curve will be developed to quantify the impacts to river-based recreation.

1.9 Level of Effort and Cost (§5.9(b)(7)

Describe considerations of level of effort and cost, as applicable, and why any proposed alternative studies would not be sufficient to meet the stated information needs.

A complete whitewater flow study typically costs $80,000 to $100,000. This cost estimate is based on recent studies completed as part of relicensing on the Clackamas River (P-2195), McKenzie River (Carmen-Smith P-2422), Kern River (Borel P-382), and

Sultan River (P-2157). The study would include a review of operational constraints and opportunities to providing flows for recreation, design of appropriate survey instruments and administration of surveys, coordination and management of the flow study, data collection during the flow study, data analysis, project report development including images, and presentation of results to the stakeholders.

There are a number of factors affecting cost, but one of the most effective ways to reduce cost is to work with stakeholders through a collaborative process. PPL Montana was able to do this on the Mystic Lake on West Rosebud (P-2301) where estimated study costs were considerably less than those in the projects above. American Whitewater has worked with utilities to provide in-kind services and is willing to develop a collaborative proposal with agencies and the utility that is as efficient as possible. In addition staff with the National Park Service Rivers and Trails Conservation Assistance Program based in the Milwaukee office have more than a decade of experience working with utilities to help design and implement whitewater flow studies.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

City of Kaukauna Utilities	)	**Project No. 2677-019**
	)	**Badger Rapide Croche Hydroelectric Project,**
	)	
_____	)	

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated this 16th day of September 2008

_____
Carla Miner
American Whitewater
Stewardship Assistant

Service List for P-2677-000 City of Kaukauna, Wisconsin

Contacts marked ** must be postal served

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