



June 17, 2011

Thomas J. Kipp, President
Wisconsin Valley Improvement Company
2301 North Third Street
Wausau WI 54403

Subject: Review of Plans and Reports for FERC Licensed Project 2113

Dear Mr. Kipp:

Thank you for a well-run meeting on April 19, 2011 with the agencies and interested parties. We were pleased to see that that meeting produced some changes as reflected in the May 2011 drafts that you sent to us. The purpose of this letter is to provide you with WDNR's comments on those May 2011 drafts within your requested 30 day comment period.

Article 401 Shoreland Erosion Control Plan Update

Feedback from WDNR property managers and regulatory staff is all very positive with respect to our working relationship with WVIC on erosion control issues. WVIC continues to be very active in mapping and restoration of critical shorelands. WDNR has no specific comments on this plan update.

Article 413/415 – A Five-Year Review of the Fish and Wildlife Management Plan Update and Bald Eagle Protection Update Reports

We are pleased with WVIC's efforts at following up on the items in these plans. A big change was the transfer of lands at Rainbow and adjoining Pickerel Reservoirs to WDNR management. The WDNR now more directly protects the natural resources associated with these lands.

The description of Section 2.4.4 Eau Pleine Reservoir Aeration and D.O. Monitoring efforts mentions testing and implementation several operational practices to react to low dissolved oxygen. Please refer to comments below about **Best Wintertime Operation Practices Documentation** under Article 412 operations.

This update includes the addition of an **Aquatic Invasive Species Plan of Action**. WVIC has been active in education, monitoring and control of aquatic invasive species (AIS). This proposed plan recognizes WVIC's past voluntary efforts. The additional funding provided by WVIC to WDNR for the AIS activities listed in the plan is very welcome and will avoid duplication of effort and increase coordination among the many agencies and organizations. A great deal of fiscal and human resources go towards AIS activities. AIS activities are generally funded with public money and volunteer hours. Giving money to public agencies for AIS activities is practicable now because they are the ones doing the work by default. Who pays for the AIS activities and who does the work will need to be discussed again in the future.

One WDNR Fisheries Biologist is seeing a walleye recruitment problem on Sevenmile Lake (Oneida and Forest Counties). It has been suggested to the WDNR that dam operations are to blame, but the data does not support that assertion. It appears that spring water levels within about 1.5 feet of summer pool supported good natural reproduction prior to 2000, but walleye recruitment was consistently low during 2000 to present regardless of water levels. For the purposes of this five-year FERC review, we do not have any specific changes to Sevenmile Lake Reservoir dam operations to recommend at this time. However, we did feel it was worth noting the recruitment issue.

Article 420 – Land Resource Management Plan Update Report

WDNR requests that WVIC take an active role in protecting the thirty-foot Rice Flowage buffer from inappropriately constructed retaining walls. These retaining walls and terraces were discussed during the April 19, 2011 agency/interested parties meeting. Granted, the LRMP describes how WVIC will need to sign-off on Oneida and Lincoln County Zoning Permits within the Rice Flowage Buffer Strip. However, it is unclear whether terracing and upland retaining walls within the buffer strip would require a county permit. If a county permit is not required, poorly designed or unnecessary land disturbance is possible. WVIC needs to clarify, with the two counties, the level of buffer disturbance that is acceptable without permitting oversight. This may be accomplished by requesting involvement in the Oneida County Zoning Committee and interpretations of their respective Shoreland Zoning Ordinances. Reviews of the need for the upland retaining walls should consider functional need as opposed to landscaping desire, appropriate design, bioengineering, and the impacts on shoreline aesthetics and habitat.

Article 421 – Operating Plan Status Report and Review

WDNR comments follow organized by the articles that make up the operating plan.

Article 403 (maximum and minimum water levels) – Minimum water level of 1131.00 feet NGVD (25% full) for the Big Eau Pleine reservoir - WDNR requests WVIC evaluate the impact of a year-round minimum water level of 1131.00 feet NGVD (25% full) for the Big Eau Pleine reservoir on flow goals and index levels. Five (5) fish kills have occurred since the installation of the aeration system in 1981. Three (3) of the fish kills occurred after WVIC began DO sag management in 1993. A 25% full minimum water level would increase the area of water habitat, fish refuge and expose less water, on a unit to unit basis, to bed sediment. Water level to sediment surface ratio is an important factor affecting sediment oxygen demand, especially in the upper areas of the flowage. Adjusting flows is a management technique for the problem of winter DO sag. The additional storage would provide increased ability to adjust for flows coming into the reservoir from the Big Eau Pleine River.

The occasional draw down below 1131 NGVD could follow an agency consultation process. WVIC's concerns about sediment accumulation in the upper reservoir could be addressed through the agency consultation process.

If the evaluation of 1131 feet NGVD on flow goals and index levels demonstrates any practicability, WDNR requests the minimum water level on the Big Eau Pleine be raised to 1131.00 feet NGVD.

Spirit Reservoir Minimum. The four foot raise in the minimum allowable water level in the Spirit Reservoir is a welcome addition to this article.

Article 404 (minimum flow) – Agree with existing minimum release.

Article 405 (gaging) – Wisconsin Rapids flow data. The WDNR requests WVIC post Wisconsin Rapids calculated flows on the WVIC web page on a daily basis. The Wisconsin Rapids flow calculations are particularly important because they are used to calculate target flows and assure Q 7, 10 is maintained. Calculated flows from Wisconsin Rapids are not easily available to agencies or interested parties.

WDNR requests that WVIC evaluate the feasibility of installing an automatic flow gage or water level sensor to provide accurate real time flow at Wisconsin Rapids via a telemetry system. The installation of an accurate telemetry system would make real time flow information from Wisconsin Rapids available to both agencies and interested parties.

Article 406 (staff gages) – no additional comments

Article 407 (debris management) – no additional comments

Article 408 (communication plan) – no additional comments

Article 409 (drought plan) – Additional triggers. In addition to the new triggers suggested in the revised May 2011 Drought Contingency Plan, WDNR requests adding a trigger for agency consultation in May of any year in which a fish kill occurs the previous winter or in any year a reservoir does not fill by May 18th.

Article 410 (operating summaries) – no additional comments

Article 411 (water quality plan) - no additional comments

Article 412 (operating rules) – Model - WDNR requests WVIC evaluate options to modernize the computer model used for operations. Hydrologic models have made significant advancements since the development of WIRSOM. An updated model would allow for better evaluation of more complex operation scenarios in response to extreme drought conditions, periods of intense precipitation, or changes in microclimates from the historic record. WIRSOM has extremely limited ability to evaluate operational scenarios based on flow input. It can basically run one response for one operational input. It does not have the ability to evaluate optimal operations for the headwaters project based on flow input. WIRSOM is not able to predict or evaluate flood control capacity; which becomes more critical during periods of extreme precipitation or changing microclimates.

Big Eau Pleine Winter Storage Goal - BEPCO has proposed a 60% full pool level on December 1 and a 20% minimum winter pool level for the purpose of preventing winter fish kills. WDNR has reviewed their proposal.

The WDNR supports a higher minimum pool elevation for the Big Eau Pleine at 25% full (1131.00 NGVD) year round as recommended under Article 403 recommendations.

The WDNR supports a higher winter storage goal of 60% for the Big Eau Pleine, if the 60% storage is also protective of Wisconsin River flow goals and sediment oxygen demand management. WDNR suggests establishing a winter storage goal rather than a minimum storage elevation of 60%. The difference being the goal would follow operation criteria from July through November with the goal of achieving 60% storage by December 1, but would not require 60% storage if operation criteria were exceeded.

The Department recommends the following.

- Set a winter storage goal of 60% by December 1.
- Do not reduce flows below minimum flow goals established in 1996 license.
- Between July 1 and November 30 do not reduce target goals at Wisconsin Rapids below 5% of target goals established in the 1996 license.
- Evaluate 60% winter storage on an annual basis and initiate agency consultation if recommendations are to modify the goal.

Best Wintertime Operation Practices Documentation including Big Eau Pleine Winter DO Sag Management - WDNR requests that WVIC document the best wintertime operation practices in the form of

operational goals and strategies to reduce stress on the aquatic environment, and standard operating procedures to support those goals and strategies. WVIC has been managing winter DO sags coming into the reservoir from the Big Eau Pleine River since 1993. The management technique to either stall or advance the incoming DO sag has been very effective and likely prevented additional fish kills from occurring. The documentation of these practices will be important as personal change in WVIC and the agencies.

Article 422 (operational goals) – no additional comments

Thank you for the opportunity to comment on your revised plans. If you have any questions about these comments or requests, I will be glad to coordinate that conversation with the appropriate WDNR resource manager.



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