Comments from Milwaukee Riverkeeper on Milwaukee County's *Draft Environmental Assessment for Estabrook Dam*, prepared by AECOM and dated July 2014.

September 17, 2014

Milwaukee Riverkeeper has reviewed Milwaukee County's Draft Environmental Assessment for the Estabrook Dam, as prepared by AECOM, and provides the following comments. The purpose of an Environmental Assessment (EA) for this project is to provide a thorough and complete analysis of the environmental and socioeconomic impacts associated with a variety of alternatives available to Milwaukee County for them to comply with an existing repair or abandon order issued in 2008 by WDNR. As part of complying with this order, WDNR as part of State Dam regulations (Chp 31) needs to issue an operation order for the dam, which requires Milwaukee County to undertake an EA under WEPA. In addition, the island that the Estabrook Dam rests on is federal property, and in order for the County to obtain an access easement, they are also required to do an EA under NEPA regulations. It should also be noted that Milwaukee County would likely need Army Corps of Engineers and FEMA approvals for any major project affecting wetlands or flow levels, which would also likely require an EA.

In an EA, a "preferred" alternative is identified that will comply with and promote the policies and goals expressed in NEPA and WEPA. These goals require that an alternative is identified that will attain the widest range of beneficial uses of the environment, cause the least damage to the biological and physical environment, and which best protects, preserves, and enhances natural resources without degradation, or risk of health or safety or other undesirable consequences. In choosing a "preferred alternative," the County must give consideration to environmental, economic, technical and other factors. Riverkeeper feels that the draft EA is a good step toward meeting these requirements but could benefit from more detail and better organization that follows the same format for each alternative. A lot of information in later sections of the document--regarding cummulative impacts and aquatic impacts of the various alternatives, etc.--should be incorporated into the descriptions of the scope and impacts of each alternative.

NEPA/WEPA require that in an EA, that each alternative contain a description as to the scope of work, timing of that work, and a detailed description of resource impacts from each alternative. While a lot of that information is listed in the report, it is often difficult to find and follow. For example, there is very little information regarding the Dam rehabilitation alternatives (1 and 1A) regarding what would exactly be built for fish passage under both proposed operational regimes. There would be very different fish passage required for a "fill and draw" operation versus a "full pool" operation. It seems that under the

former operation scenario, just opening the gates of the dam is seen as fish passage? During a full pool condition, it's unclear how the passage would be constructed, how fish would be attracted to that location, and the cost/maintenance requirements of that option. There should be more detail regarding the proposed operation of the dam. It's clear that the County does not want to entertain the option of the full pool due to concerns over ice loading and potential damage to the dam gates; however, there is no mention that essentially then, Alternative 1A is only viable if WDNR approves the "fill and draw" operation plan, which has historically been followed with the dam. The description in section 2 of the dam removal and rock ramp alternatives is very brief and one parses out more detail as one gets deeper into the document.

The document does describe the extensive work that has occurred upstream to address fish passage impediments by Ozaukee County and does mention mussel impacts from operational issues that have occurred in the past, but there is very little discussion of the direct, indirect, and cumulative impacts that each alternative presents to the ecosystem as a whole. For example, while sedimentation is mentioned under the cumulative impacts section, it is not addressed for each alternative. There is no analysis of how many years it's expected that the impoundment would still be operational or whether there could be anticipated dredging costs above operations and maintenance costs for the dam structure itself. All impoundments eventually fill up with sediment and require dredging--this is currently occurring at the Bridge Street Dam in Grafton.

While the socioeconomic section does a good job of addressing the changes in recreational use, aesthetic concerns, etc. provided by the alternatives, there could be more detail. For example, the EA mentions that the impoundment benefits 350 properties, but not all riparian landowners are in favor of the dam. Many are concerned about increased flood level elevations caused by the Dam, and alternatives 1 and 1A, and would like the dam removed to reduce flood insurance costs as well as to minimize risk. There is little mention of this issue nor of the liability posed to Milwaukee County due to the new hydraulic models by SEWRPC showing the dam increases flood levels by almost 1.5 feet (near the dam) during the 100 year storm. In addition, there should be discussion of whether alternatives 1 or 1A could meet Federal FEMA regulations or State dam regulations (Chapter 31), period. If this project is not permit-able, then that is a valid reason to discontinue it as an alternative going forward. In addition, not all 350 property owners on the impoundment have motor boats or would be impacted by removal of the impoundment. It would seem that WDNR would have actual numbers of registered boats upstream of Estabrook Dam that could be provided to give better context. Prior to the 2008 order, there were very few boats still on the impoundment due to natural sedimentation (as previously mentioned).

We appreciate that the EA looked at the costs and present net value costs of each alternative, and the EA also did a good job of parsing out water elevation changes caused by different alternatives. The EA could benefit from inclusion of some of the SEWRPC visuals from their hydraulic analysis and more side-by-side information describing each alternative's impact on flows (as was done for the costs). There was no discussion of the longevity of each alternative or maintenance requirements, nor information about the time to construct, and how the timing of construction would minimize impacts to terrestrial and aquatic resources, etc. (except for a note about sturgeon spawning concerns). There should be more

description about the useful lifetime of the dam and expectations about how much operations and maintenance would be required to meet that life expectancy.

Finally, although the EA states that rehabilitation of the dam is the preferred alternative, it doesn't really justify that alternative and in many places promotes dam removal as the most economically and environmentally sustainable option. Milwaukee Riverkeeper agrees that dam removal is the best option, and encourages Milwaukee County to select that as their "preferred" alternative in the final EA.