



KIAP-TU-WISH CHAPTER TROUT UNLIMITED

Conserving, protecting, and restoring cold water fisheries and their watersheds in Polk, Pierce, and St. Croix Counties, Wisconsin.

January 8, 2018

Kinni Corridor Project Committee
City of River Falls
222 Lewis St
River Falls WI 54022

Dear Committee Members,

As the time draws near for your Committee's recommendation on the future of the two Kinnickinnic River dams, the Kiap-TU-Wish Chapter of Trout Unlimited would like to offer our thoughts and position on the matter. Many of our members attended and listened to the technical presentations (tech talks) provided by the committee and participated in the design charrette held at the end of October. As we understand it, the committee is considering three alternatives or scenarios related to the dams, which are: Alternative 1) Relicense both dams; Alternative 2) Remove both dams; and Alternative 3) Relicense Junction Falls Dam and remove Powell Dam.

As you may know, Trout Unlimited's mission is to conserve, protect and restore cold-water fisheries and their watersheds. We would like to offer the committee the following points as to why removal of both dams (Alternative 2) is the preferred option for the Kinnickinnic River and the City of River Falls.

From our perspective, the corridor planning process has revealed an overwhelming majority of support for removal of both dams, river restoration, a continuous corridor of public access, improved recreational opportunities, a downtown 'Central Park', and restored riparian habitat. Besides the potential for these improved amenities, dam removal has numerous ecological benefits for the river, as detailed in the Appendix that follows.

It has been amazing to see the public interest and participation in this project. The people of River Falls, surrounding communities, and visitors truly cherish this outstanding resource. It is exciting to envision the opportunities for improved amenities and ecological outcomes that removal of both dams would provide. The amenities resulting from the design charrette, a restored river in the heart of the City, and the unique geological feature of restored waterfalls represent a rare opportunity for River Falls. Therefore, we the Board of Directors, Officers, and members of the Kiap-TU-Wish Chapter of Trout Unlimited, strongly urge you to recommend removal of both dams to the City Council.



Sincerely,

Tom Schnadt, President

Gary Horvath, Vice President

Scott Wagner, Treasurer

Allison Jacobs, Secretary

Randy Arnold, Board Member

John Carlson, Board Member

Loren Haas, Board Member

John Kaplan, Board Member

Maria Manion, Board Member

Greg Olson, Board Member

Perry Palin, Board Member

Appendix: Ecological Benefits of Removing the Kinnickinnic River Dams

Temperature and Related Coldwater Ecosystem Benefits

Temperature monitoring by Kiap-TU-Wish shows that Lakes George and Louise warm the downstream Kinnickinnic River by 4-5°F during the summer. Furthermore, the lakes themselves are too warm in the summer to provide coldwater fish habitat. By removing the negative thermal impacts to the river caused by the Lakes George and Louise, a coldwater ecosystem and trout fishery would be restored throughout the entire length of the River Falls corridor. The free-flowing river with rapids and cascades would provide better oxygenation and habitat for macroinvertebrates and coldwater fish, including trout. A good example of what is possible can be seen in the river reach downstream of County Road MM, which was formerly impounded by the Prairie Mill Dam (Figure 1). The river reach currently occupied by the reservoirs would be free flowing, similar to that pictured. Downstream from the reservoirs, the river would be much cooler and less susceptible to future warming.



Figure 1. The Kinnickinnic River looking downstream from the County Road MM Bridge. The Prairie Mill Dam at Division Street formerly impounded this reach of river.



Relicensing both dams and maintaining the reservoirs (Alternative 1) would continue to heat the river by 4-5°F during the summer, threatening the coldwater ecosystem downstream, especially with future warming. The impoundments themselves are too warm in the summer to provide coldwater fish habitat, unlike the remainder of the Kinni.

Retaining the Junction Falls Dam and removing the Powell Falls Dam (Alternative 3) would also continue to heat the river during the summer, due to the warming impacts of Lake George. The extent of warming is unknown, but any net gain in heat due to Lake George could threaten the coldwater ecosystem downstream, especially with future warming. Furthermore, Lake George is too warm in the summer to provide coldwater fish habitat, unlike the remainder of the Kinni.

Hydrologic Benefits

Currently, the hydrologic regime of the Kinnickinnic River is compromised by the two reservoirs, which continuously inundate the river and its floodplain. The natural hydrologic regime in the river downstream of the reservoirs is compromised by flow interruptions caused by dam cleaning operations. The United States Geological Survey (USGS) flow data for the river indicate that the hydropower facilities are unable to consistently maintain run-of-river conditions, as required by their FERC license. Removal of both dams would restore the natural flow of the Kinnickinnic River and create a healthy floodplain and riparian corridor in areas currently inundated by Lakes George and Louise. Riparian habitat, including native trees, shrubs and forbs, could be rapidly restored along the river following dam removal. This would provide a more continuous habitat corridor for wildlife, including pollinators, birds, reptiles, amphibians and mammals, as well as an aesthetically pleasing park for public use. Removal of both dams would also significantly reduce the floodwater surface profile of the river through the City, thereby reducing the risk of flood damage to public infrastructure.

Relicensing of one or both of the dams would continue to compromise the natural hydrologic regime in the lower river. As such, ongoing operation of one or both dams would require automated equipment for gate operation and trash rack cleaning, a costly improvement. Relicensing of one or both of the dams would also negate the full benefits of improving floodplain and riparian areas and reducing flood risks.

Water Quality Benefits

Water quality conditions in Lakes George and Louise are poor in the summer. Warm water temperatures, excess nutrients, and lake-like conditions create summer algae blooms that cause unsightly (green) conditions, reduced water clarity, odors, possible human health impacts, reduced oxygen concentrations, and poor recreational opportunities. Removal of both dams would result in an immediate improvement in water quality. The free-flowing river would be cooler and better oxygenated with rapids and cascades. Dense algae blooms would no longer occur.



If one or both dams were relicensed, water quality in Lake George and/or Lake Louise would remain poor during the summer. Nutrients (phosphorus and nitrogen) from the Kinnickinnic River watershed, River Falls stormwater, lake sediments, and waterfowl excrement would continue to make this problem worse over time. In-lake remediation of water quality problems in Lakes George and Louise is not possible, due to the ongoing impacts of the river's pollution sources.

Sediment Management Benefits

Throughout the Kinni Corridor planning process, much attention and concern have been focused on the impacts of sediment in Lakes George and Louise and options for sediment management. All three alternatives being considered will have issues requiring active sediment management. Currently, both reservoirs are nearly full of sediment and likely at equilibrium with inflowing sediment. Nearly all inflowing sediment passes through the lakes to the lower Kinnickinnic River. Both reservoirs contain fine sediment that contributes phosphorus to the lakes themselves, the lower Kinnickinnic River, and Lake St. Croix. Removal of both dams in tandem with active sediment management would minimize the downstream movement of reservoir sediment, as described in the InterFluve Feasibility Report. Most sediment from the channel areas could be relocated on-site using dry-land excavation methods. In the past, the lower Kinnickinnic River has had many episodic sediment events due to floods and previous dam failures/removals in River Falls and downstream, and has recovered to be a fine trout stream.

If one or both dams remain, costly dredging and material disposal would be needed for Lake George and/or Lake Louise, as both lakes are nearly full of sediment. Sediment containment and disposal areas for hydraulically dredged materials are not readily available, and water quality and regulatory problems would be difficult. If the reservoirs were drawn down to enable dry-land excavation of sediment, removal would be problematic and costly due to fluctuating water levels. Any efforts to improve recreational opportunities in Lakes George and/or Louise would also require costly dredging and material disposal.

Stormwater Management Benefits

Regardless of which Kinnickinnic River corridor alternative is selected, our chapter strongly feels that stormwater management needs to be addressed along the City's river corridor. However, removal of both dams improves opportunities and flexibility for stormwater management. Dam removal would enable dry-land excavation and relocation of sediment to construct stormwater management features along a much greater length of the river corridor, including the areas formerly occupied by Lakes George and Louise. This would be less costly and problematic than with the dams remaining in place.

If the dams remain, it should be noted that, as public waters of the State of Wisconsin, both Lakes George and Louise are protected against pollutant levels that do not meet water quality standards, by law. As such, these lakes cannot be used for stormwater management in their current conditions. In fact, both lakes experience water quality and sediment quality problems due to stormwater inputs. If the



Junction Falls Dam remains, Lake George would have to be drawn down to enable dry-land sediment excavation to create a new river channel and implement the Lake George Stormwater Management Plan. Implementation of this plan would be more costly with the Junction Falls Dam remaining in place, and this scenario would pose problems with fluctuating water levels during construction. Removal of Powell Dam would provide an opportunity for some stormwater management features to be constructed in the bed of Lake Louise following dam removal.

A Study to Assess the Water Resource Impacts of City of River Falls (WI) Hydropower Facilities on the Kinnickinnic River

In May 2014, the Kiap-TU-Wish Chapter of Trout Unlimited prepared and submitted to FERC and the City of River Falls “A Study to Assess the Water Resource Impacts of City of River Falls (WI) Hydropower Facilities on the Kinnickinnic River”. More information on the known ecological impacts of the two hydropower facilities and recommendations for studies to better understand and address these impacts can be found in this document.