Stakeholder Meeting regarding Draft Sediment Sampling Plan
River Falls Hydroelectric Project | P-10489
October 7, 2015

Attendees: Jeff Bjork, resident
Cecil Bjork, resident
Wickham Allen, resident
Francis Ogden, resident
Peter Dahm, resident
Michael Page, Friends of the Kinni
Jay Matchett, River Dam Falls
Patricia La Rue, Resident/Park & Recreation Advisory Board
Jim Fossum, Wisconsin River Alliance
Dan Wilcox, Trout Unlimited
Randy Thoreson, National Park Service
Marty Melchior, Inter-Fluve (phone)
Ben Lee, Inter-Fluve (phone)
Cheryl Laatsch, WiDNR (phone)
Diane Odeen, River Falls City Council
Scott Morrissette, River Falls City Council
Crystal Raleigh, City of River Falls
Reid Wronski, City of River Falls
Ray French, City of River Falls

Introduction
Ray welcomed everyone to the meeting and began with introductions of all attendees in person and on the phone. Ray also reviewed the agenda of the meeting, which consisted of a review of the field survey and preparation of the draft sediment sampling plan by Inter-Fluve and then to open it up to questions and comments. He also reviewed that the purpose of the sediment analysis is to identify the costs and methods for sediment management if the City were to pursue dam removal in the future at one or both of the hydroelectric facilities. The analysis will result in a report providing cost estimates for management in the case of dam removal or future licensing.

Review of Field Survey/Draft Sampling Plan
Ben Lee presented a summary of the field survey completed by Inter-Fluve. He reviewed the transect locations map and noted additional inquiries. First, they probed into the floodplain and discovered likely a relic channel north of Lake Louise. They also probed upstream of Lake George up to E. Division St and noted small amounts of accumulated sediment.

The total estimated volume of sediment in Lake George is 166,800 cubic yards. This is a measure of total volume and not just what has accumulated since the dam was put in. The estimated mobile sediment is about 74,000 cubic yards. For Lake Louise the total estimated sediment is 163,800 cubic yards and the estimated mobile sediment is about 45,100 cubic yards.

The sediment analysis map in the packet shows the maximum depth of the sediments. It is the difference between the surface of the sediment and the refusal layer. The map also shows a rough

channel outline that was derived from refusal data. The deepest layer is most likely where the location of the channel is. The conservative estimate of the river channel is 55 feet, based on the upper and lower river measurements. Ben also explained that there will be spectrum of management strategies that can deal with the mobilized sediment differently. The mobilized sediment estimate is how much if we just took the dams out and let is flow down the river.

Marty Melchior then discussed the development of the draft sampling plan and the sampling locations. In addition to the field survey, they also completed a due diligence review of industries and land use upstream. The area is largely classified by agricultural watershed. They searched the federal database, which largely turned up small gas station-related spills, chemical contaminants, etc. that had all been contained.

In the sampling plan they chose the typical suite of contaminants to test for. This will help in determining where there are opportunities for reuse or for planting vegetation. Nitrogen and phosphorus, nutrients, and grain size were included. The sampling locations reflect the anticipated plan contained in the initial proposal. The costs per sample are estimated at $500-$2,000. The draft plan is up for review and comment, and they expect input from the DNR.

Questions and Discussion

Jim Fossum asked about testing for PCBs, which are associated with silt and often show up in reservoirs. Marty replied that their due diligence didn't turn up evidence of them and that PCBs aren't typical in his experience in Wisconsin. Jim reiterated that the River Alliance and his professional opinion would be to test for PCBs.

Jeff Bjork asked how far back the research went. Did it cover Vollrath, the railroad, and other past uses? Marty clarified that the hits in the research would have been reported after the Clean Water Act in 1972. Cheryl Laatsch asked if they checked the remediation sources on the DNR website. Marty said they had not.

Randy Thoreson asked where the mobilized sediment would go. Marty said the next step would be to determine grain size, so they don't know yet where it would deposit. Transport is largely event-based so they will set parameters and scenarios to determine where it will likely go. There are many different models you can use, but they can be expensive. Ben offered that it may be useful to look at sediment mobilization in comparison to annual sediment transport. Sand may be getting trapped in the impoundments and could replenish where there is a deficit downstream.

Reid Wronski clarified that this first phase is for information gathering and that we can continue to explore the options. Marty added that there is a spectrum of strategies and they are usually implemented in combination. Crystal Raleigh discussed the potential need for limiting phosphorus due to the TMDL project on the St. Croix River.

Jay Matchett was concerned about the number of samples. Information from the International Atomic Energy Agency recommends samples be taken 10-20 meters apart if it is fine sediment. Marty clarified that there are few guidelines for samples per volume in cases like this. This plan is based on their experience in Massachusetts, which is progressive when it comes to sampling. They can also pool testing samples at each location. Marty also provided an example on another

project where one sample was high in lead, but further testing showed that it was isolated and the small section was excavated.

Francis Ogden recounted his experience in the early 1970s as City Engineer when they evaluated conditions at the Falls Street Bridge site just upstream of Junction Falls. They took the lake down and discussed how they might remove the sediments. The DNR at the time told them to leave the sediments alone because they were full of pollutants. He believes that the sediment is a costly problem that merits additional research into historic businesses from the area.

Dan Wilcox provided input from Trout Unlimited. Their team reviewed the plan and found it to be a good depth and bathymetric survey. They provided the following questions, among others that will be provided in a letter:

- Was there a review of discharges of the Waste Water Treatment Plan and any pretreatment from businesses?
- The 204J Stormwater Management Plan noted some metals in the area but is lower than the national average.
- They would like more detail on how the sampling will be done.
- There was some confusion on the sites and that maybe they should color code for purpose.
- Would cores align with the depth/refusal?
- Would sampling be stratified by grain size or depth?
- What's in the surficial sediment? Would be important to note for if the dams remain.
- There was other discussion of understanding the weight of the sediment, % water, TOC, and bulk density.
- Mobilization can be managed by the management strategy.
- ICPMS – costs are likely the same for the suite vs the ones listed.
- We should also test for PCBs.

There was additional discussion of the actual locations of the sediment samples. Inter-Fluve tried to balance the costs of sampling and to evenly distribute them for exposure.

Wickham Allen commended Inter-Fluve for their work so far and for developing a good sampling plan. He also commented on the turtles he and his wife observe spending winter in the sediment. In his work, they believed that turtles being present meant that the sediment would be clean and easy to clean. He lives by the Swinging Bridge and frequently surveys both rivers.

Francis suggested that there were problems prior to the Clean Water Act that need to be researched. Dan in his work with the Army Corps of Engineers has found that it's rare to find hot sediment and would be surprised to find some here. Inter-Fluve has done a good job laying this out. Reid asked for DNR comments, to which Cheryl responded that the DNR technical team is still reviewing the plan.

Reid added that he expected to see more samples in Lake George for possible contaminants. Marty said they are looking forward to the DNR comments. Peter Dahm asked about the possibility of more than 13 samples, which Marty clarified was more of a budgetary limitation.

There was also some discussion on having stratified samples, and how the samples will be collected (manual or barge-mounted).

Closing

Ray thanked everyone for coming and welcomed written comments to be due by October 21, 2015. The comments will be incorporated into the Final Sediment Sampling Plan and published on the hydro website.