



Watching out for BC's Wild Salmon

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TO:

Shelley Murphy
Project Assessment Director
Environmental Assessment Office
PO Box 9426 Stn Prov Govt
Victoria BC V8W 9V1

RE: McLymont Creek Hydroelectric Project

Dear Ms. Murphy,

You will find Watershed Watch Salmon Society's comments on the Application for an Environmental Assessment Certificate for the McLymont Creek Hydroelectric Project below.

The McLymont Creek Hydroelectric Project is one of three under construction (Forrest Kerr), or proposed (McLymont Creek and Volcano Creek) projects that will have long-term and poorly understood ecosystem level effects on the lower Iskut and Stikine watersheds. These projects, combined with the Galore Creek Mine, the Eskay Creek Mine, the recently approved Northwest Transmission Line, and numerous other proposed and planned developments in the area, pose a substantive cumulative threat to the Iskut River and adjacent watersheds. The proponent's conclusions throughout the environmental assessment are that no significant impacts will remain after mitigation. The information presented does not support these conclusions, which are based on uncertain knowledge combined with unfounded surety of mitigation success. What is certain is that this river diversion hydro project will have multiple impacts for which the proponent does not have a scientifically defensible plan for mitigating.

Balancing instream flow requirements versus power production (profit) intrinsically represents a major conflict of interest. This is demonstrated in the proponents' desire to maximum power generation by setting an extremely low instream flow requirement.¹ The proponent proposes a **4-fold lower instream flow requirement (0.5 m³/s) than recommended using provincially developed and accepted guidelines for fishless streams (2.1 m³/s).**² The rationale for this seems to be based in part on operational limitations, as opposed to ecological considerations. The level of flow proposed is extremely low, and is very rarely present naturally in this system.

The proponent emphasizes the fact that McLymont Creek is fishless, and therefore less likely to be significantly impacted by this project. However, there is considerable evidence that reduced flows in diversion reaches do have impacts downstream ranging

from changes in sediment transport and contributions, invertebrate drift and changes in water quality as well as other ecological effects.^{3 4 5 6} Furthermore, the full impacts of river diversion projects on physical, chemical and biological conditions may take decades or centuries to become apparent.^{7 8} In their own testing, the proponent shows that benthic macro-invertebrate biomass is nearly 5-fold higher in the proposed diversion reach than in the Iskut River near the project.⁹ Drift of these invertebrates is important in supporting fish production in areas at and downstream of the confluence of the McLymont Creek and the Iskut River. This highlights the type of important contribution that McLymont Creek has to the Iskut River, even though the proponent has classified McLymont Creek as a non-effective river¹⁰. Since most of the water is being diverted through the penstock, the frequency, magnitude and timing of flushing and channel maintenance flows will be altered. For example, using the flow duration curves provided, channel maintenance flows (defined as > 400% of Mean Annual Discharge (MAD) – or roughly equivalent to a 2 year flood event) will be reduced dramatically, and the frequency of flushing flows (defined as > 200% MAD) will be reduced by 20-fold. The onset of peak flows will be delayed by more than a month in the highest flow years, and more than 2 months in low flow years. In minimum flow years, it appears that median flows from the synthetic flow data will not exceed the instream flow requirement all year long. While this data represent median annual flows, and some short high flow events will undoubtedly overtop the weir, this demonstrates the extreme nature of the proposed instream flow requirement. These reductions may have important implications to natural cycles present in downstream reaches and potential long-term effects on downstream spawning and rearing habitat for many species of fish, including anadromous Pacific salmon. The proponent has presented little evidence from scientific studies or results from monitoring activities in other river-diversion projects that demonstrate the efficacy of their proposed mitigation measures.

Cumulative Environmental Effects

The Forrest Kerr, McLymont Creek and Volcano Creek projects all share the same proponent. They share transmission line, junction station and road infrastructure, all divert water and are located close to each other within the same watershed (Iskut), and they are all located upstream of high value salmonid habitat, and in provincially significant grizzly bear habitat and high biodiversity value ecosystems associated with coastal valley bottoms.¹¹ Together, the capacity of these 3 projects could be as high as 281 MW. This is well over the 200 MW threshold trigger for a comprehensive review under 4(b), Part II, Section 3 Schedule of the *Canadian Environmental Assessment Act Comprehensive Study List Regulations*. The Forrest Kerr project was originally approved under Coast Mountain Hydro Corporation in 2003 as a 100 MW project. However, without additional further review, and through 4 amendments, the current project has been nearly doubled in capacity (195 MW). In order to properly assess the cumulative effects of these projects with the development of McLymont and Volcano Creeks, a comprehensive level review should be required.

Including the Forrest Kerr and Volcano Creek projects, the McLymont Creek project represents the second to be constructed river-diversion project on the Iskut and its tributaries. With a water licence being held on More Creek (upstream of the Forrest Kerr project) by Novagreen Power Inc. (the licensee on the Iskut River (Forrest Kerr), McLymont Creek and Volcano Creek from the provincial water licence database) as well, and given current energy policy in BC, it is probable that in the future there will actually

be 4 projects within a small region. Furthermore, according to Northern Hydro Ltd.'s website, they have proposed an additional 8 diversions with 7 powerhouses on tributaries of the Iskut River (Figure 1).

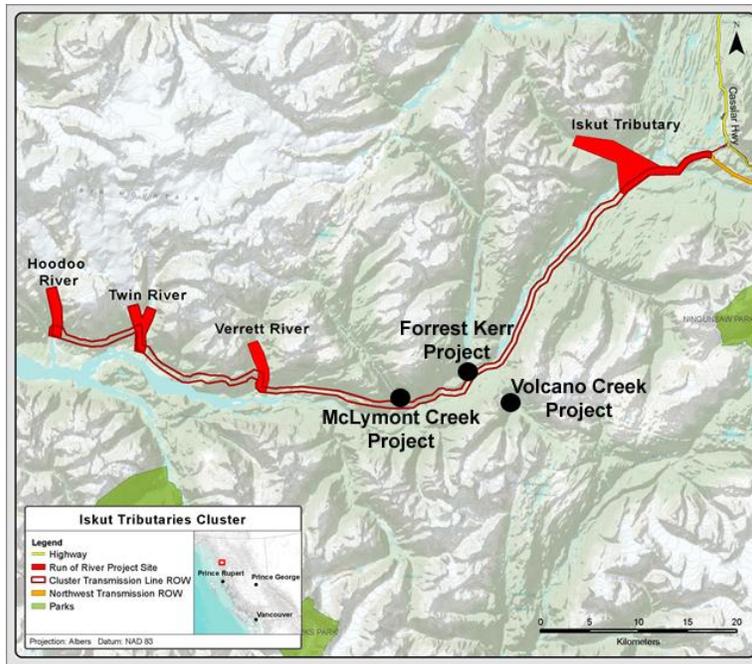


Figure 1: Location of proposed Northern Hydro Ltd. river diversion projects in relation to McLymont Creek. Adapted from Northern Hydro Ltd.'s website.¹²

These are not mentioned in the McLymont Creek project Environmental Assessment application. As some of these diversions would be located within a few kilometers of the McLymont Creek and Forrest Kerr projects, this represents a serious omission and fatally undermines the credibility of any assessment of cumulative effects presented in the proponent's submission. These additional projects would more than double the number of projects within the Iskut River watershed.

Furthermore, over 30 other projects or activities in the vicinity of the McLymont Creek project are included in the Cumulative Effects Assessment (section 17 of the application). It is therefore surprising that the proponents 3 hydroelectric facilities (the Forrest Kerr project on the Iskut River and the McLymont and Volcano Creek projects) were deemed as the only projects to have the potential for significant interaction. It has been well known for decades that fragmentation of habitat and human encroachment exert pervasive impacts to wilderness areas and wildlife, leading to declines in biological diversity.¹³ Any development is likely to have an interacting effect with nearby developments, and cumulative impacts should be assessed in total, not in a project versus project manner. Furthermore, the failure to evaluate potential cumulative effects on valued ecosystem components in relation to ecological thresholds or "tipping points" is a dangerous and potentially catastrophic with respect to maintenance of ecosystem structure and function.¹⁴

New Road Access

The main access road to the project will be constructed in an area that was previously road-less, as it extends the new road from the Forrest Kerr project by 9.5km. Although there is existing forestry activity and associated road infrastructure east of the project, there is none west of the project. Altagas concludes that there will be no increase of unauthorized users to the area since there will be no change in access conditions at the start of the Eskay Creek Mine Road (ie. gated radio-controlled). However, together with the Forrest Kerr project, this has extended access into the Iskut River valley by 17 km. There is bound to be an increase in unauthorized users on these roads during and after project construction, especially since the project will be operated as a satellite of the Forrest Kerr project, and as such will only see site visits once or twice per week. It has been well documented that roads are associated with negative effects on biological integrity to both terrestrial and aquatic ecosystems.¹⁵ It is well known that a gate will not keep out hunters, recreational users or other human influence, above and beyond what is predicted for project purposes. Taken separately, each project's roads have been determined as having non-significant impacts. Given that there are other proposed hydroelectric projects located further to the west in the lower Iskut Valley by Northern Hydro, the new main access road to the McLymont project will act as a stepping stone to future development. Justification for future projects may be based on the presence of this road and the associated intrusion into relatively pristine areas. This has not been adequately addressed in the application, including the cumulative effects assessment.

Summary

From the Executive Summary;

'The conclusion of the EA for the McLymont Creek Hydroelectric Project is that, with the implementation of proposed avoidance and mitigation measures, potential Project - related and cumulative effects to environmental, economic, social, heritage and health values can be mitigated to a level that is not significant.'

While impacts of the project on cultural, health and economic values may be predictable, there is considerable uncertainty regarding the long-term effects of river diversion projects on aquatic ecosystems. Most notably, this includes impacts related to extremely low flows for most of the year, for decades on end, to both the diversion reach and downstream regions. Based on the uncertainty underlying the long-term impacts and lack of monitoring data as yet collected from existing river diversion projects, the conclusion that there will be no significant impacts after mitigation is unjustified, especially given that there is a lack of certainty that proposed mitigations will be successful and the inherent difficulty in monitoring and measuring mitigation success.

The approval of this project will result in further deterioration of the lower Iskut River due to road construction and operation, transmission line construction and diverted flows from the McLymont Creek project.

Sincerely,

Andrew Rosenberger

Andrew Rosenberger

Aquatic Biologist
Watershed Watch Salmon Society
References

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