

Case Study: Log Creek Watershed Hydroelectric Facility

EPCOR Power Development is proposing to construct a hydroelectric facility on the Log Creek watershed, northwest of Boston Bar, B.C. The proposed configuration is a run-of-river plant, which entails the construction of a low, small intake structure, followed by a pipeline (penstock) to convey water to a downstream powerhouse. Water will be returned back to the mainstem of Log Creek via a tailrace structure.



system is known to support populations of rainbow trout and bull trout. In addition, Dolly Varden and steelhead have been observed near the mouth of the creek. Rearing and spawning habitat in the creek is restricted due to limited availability of instream cover and suitable gravels, respectively.

The watershed has been extensively logged and the residual vegetation consists of second growth conifer forest dominated by Douglas-fir, western red cedar, and western hemlock. There are no records of rare or endangered plants or plant communities occurring in the project area.

There are no records of red-listed wildlife species occurring in the Log Creek watershed. Grizzly bear, which are

ENKON Environmental Ltd. was asked to review existing studies completed for Log Creek, to complete a preliminary fish and wildlife survey to determine baseline conditions at the site, to discuss potential impacts to these resources associated with the proposed hydroelectric development and to provide strategies to minimize potential impacts, if any.

Log Creek is a moderately steep, confined watercourse, and is a tributary to the Nahatlatch River. The general morphology of Log Creek consists of cascade step-pool and the substrate is dominated by boulders and cobble. The



considered a blue-listed species are known to occur in the upper portion of the creek. Rare and endangered (red and blue-listed) species that have a potential of occurring in the watershed include the tailed frog and Trowbridge's shrew.

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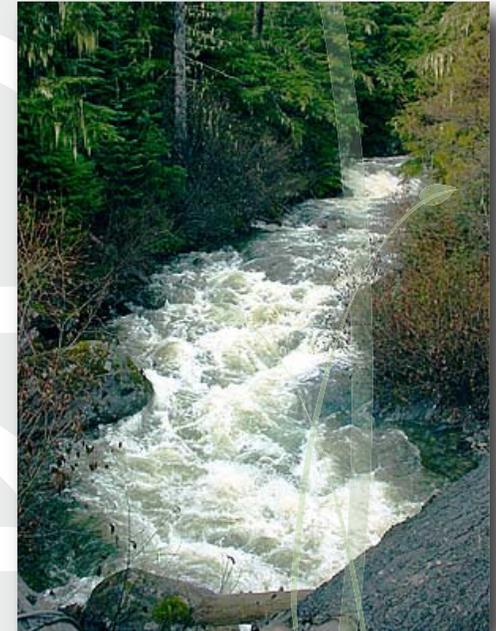
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The only seasonally vulnerable (yellow-listed) species that may occur in the watershed is the harlequin duck.



The proposed Log Creek Run-of-River Project will have minimal impacts on the surrounding environment due to the engineering design of the proposed structure, the preparation of construction and operational environmental management plans and the fact that most of the project area has been previously impacted by logging activities. Construction related impacts to the aquatic

resources of Log Creek will be short term and localized. Following construction, the Department of Fisheries and Oceans' "No Net Loss Guiding Principle" will be continually met throughout operation and only flows in excess of the minimum amount will be used for power generation. The penstock, which will have a length of approximately 4500 m, will be buried or contained within a tunnel its entire length. The penstock route will be revegetated and therefore, loss of wildlife habitat will be negligible. The proposed powerline route will be located adjacent to the existing forest road right-of-way and will consist of a single-pole configuration and so impacts to terrestrial resources will be minimal.



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