

CDC - LAIDLAW POWER CORPORATION

Lower Wahleach Hydro Project Development Plan for the Ministry of Forests, Lands and Natural Resource Operations May 2016

Executive Summary

Project Summary

CDC-Laidlaw Power Corporation is proposing to construct the 10.5 MW Lower Wahleach Hydroelectric Project; a run of river hydroelectric facility located about 25 km southwest of Hope, British Columbia. The Project proposes to divert a maximum of 3.2 m³/s of water to produce between 25-30 GWh of electricity annually. It is anticipated that the electricity will be sold to BC Hydro.

The operational footprint of the Project is expected to be approximately 7.3 ha over Crown land and 4.5 ha over fee simple land held by the Proponent through a parent company.

The components of the Project are envisioned as follows:

Power Intake: The power intake structure on Wahleach Creek will include an inflatable rubber weir, diversion structure with fish screen and fish passage structure, control building, and adjacent service parking stalls along an existing access road.

2.4 Mile Diversion: The diversion intake structure on 2.4 Mile Creek will include a concrete weir, intake screen of 0.5 m diameter diversion pipe that will connect to the penstock or headpond.

Water Conveyance: The penstock will consist of 4,000 m of approximately 1 m diameter pipe featuring sections of high-density polyethylene, ductile iron and steel. The proposed penstock parallels the existing Jones Lake FSR over the majority of its length.

Powerhouse, Tailrace, and Switchyard: An approximately 15 m by 15 m steel powerhouse building is required to house the generating equipment. In addition to the powerhouse building, a fenced service yard and tailrace will be required to convey flows back to Wahleach Creek. One 10.5 MW Pelton turbine/generator is proposed to be housed in the powerhouse. An outdoor switchyard with a 6.9 kV to 69 kV step-up transformer will also be required. The powerhouse and associated infrastructure will be located on the Proponent's property.

Power Line: The Project will require a short 69 kV power line to interconnect into the BC Hydro 60L95 transmission line.

Access Roads: Though the majority of the Project is along the Jones Lake FSR or other permitted roads, approximately 1,000 m of penstock access road will be required. Most of the new access roads will be built on private land held by CDC-Laidlaw.

Table E0-1 details Projects components, their footprints and area anticipated to be on Crown and private land.

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Table E0-1: Project Footprint

Component	Length (m) or Area (ha)	Area over Crown Land (ha)	Area-over Private Land ¹ (ha)
Construction			
Potential Temporary Laydown, Spoil and Material Areas	1.2 ha	0,95	0.25
Operation			
New Access Roads	1,000 m	0.04	2.0
Power Intake	0.2 ha	0.2	0.2
Penstock	4,100 m	6.5	1.7
2.4 Mile Diversion Intake	0.05 ha	0.05	Ö
2.4 Mile Low Pressure Conduit	200 m	0.4	Ó
Powerhouse	0.25 ha	0	0.25
Tailrace	15 m	0	0.03
Switchyard	0.02 ha	0	0.02
Power Line	120 m	0.06	0.3
Total Operation Area ²		7.3 ha	4.5 ha

Notes:

Key Impacts Identified

It is the opinion of CDC – Laidlaw Power Corp. that the Project is not likely to cause significant adverse environmental, socio economic/community, or other effects, taking into account the implementation of appropriate impact management measures, as identified in the Development Plan. To date no adverse effects to aboriginal interests have been identified.

Professional Certification

Qualified professionals involved in the environmental assessment of Clean Energy Projects must belong to a recognized professional association/college and are governed by their association/college with a particular code of ethics. These codes of ethics provide guiding principles and detailed interpretations of these principles, explaining how and why qualified professionals must conduct themselves with competence, independence, and integrity.

Assessments are to be completed and supported by an appropriate qualified professional. Assessment information is to be collected using consistent, repeatable sampling methods following provincial standards or referenced guidelines. This will ensure that assessment information is suitable for use as baseline data in monitoring program(s) and Project reviews or audits.

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^{1.} Privately held land owned by CDC-Laidlaw Power Corporation

^{2.} Does not include temporary laydown, spoil or borrow areas, as these will be reclaimed after construction.

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Table E0-2: Qualified Professionals Involved in DP Production

Gompany	Name	Accreditation and Professional Association	Area of Expertise	Signature	Section(s) of Dev. Plan Responsible
KWL	Stephen Mills	P.Eng.	Hydroelectric Specialist	Mille	Sections 2, 4.2, 4.3.1 (BCH input stage and flow change only), 4.3.2, 4.3.2.3, 5, 6 and 7
KVVL	Erica Ellis	P.Geo	Hydrology, Geomorphology	Tima The	Section 4.3.1 (except BCH inputs, flow and stage change) and 4.3.3 (except 4.3.2.3)
	Lara Taylor	P.Eng.	Aquatic effects of hydropower projects	~~~	Section 3 and 8
Hemmera	Caroline Astley	R.P.Bio #1822	Terrestrial ecosystem mapping	CETA	Section 4.4.1
пеншега	Kathy Chambers	R.P.Bio #2143	Freshwater fisheries biologist	Not	Section 4.1
	Elizabeth Vincer	A.Ag #2821	Terrestrial wildlife, Coastal Tailed Frog	32	Section 4.4,2

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