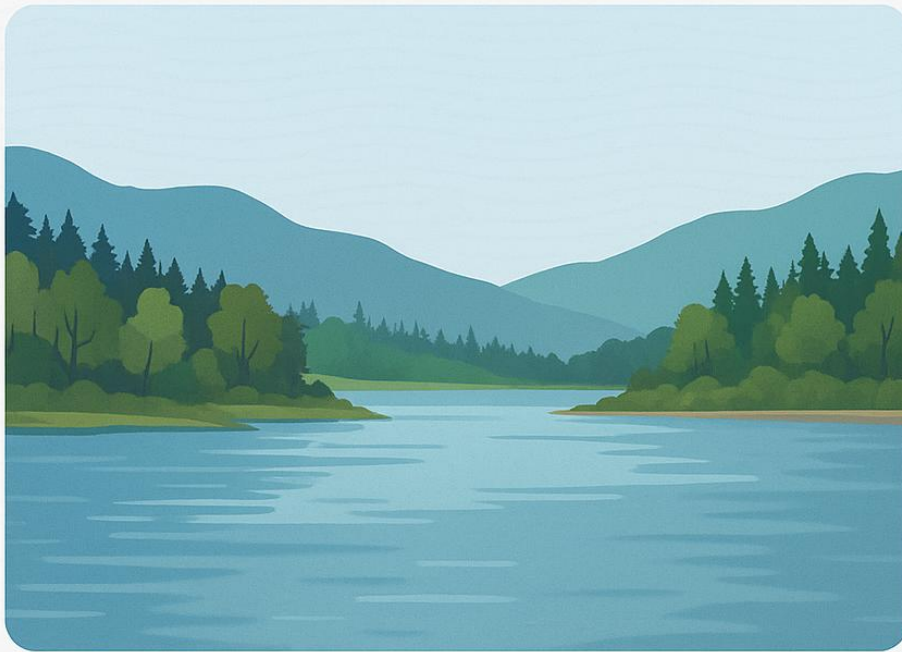


# COMMUNITY HIGHLIGHTS CHERRY CREEK GREEN ENERGY FEASIBILITY STUDY

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Exploring Clean Energy from Cherry Creek



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## **Executive Highlights**

Cherry Creek Waterworks District is exploring renewable energy generation from its existing water system between Lacy Lake and the Cherry Creek Water Treatment Plant. This project demonstrates how a community water supply can also serve as a clean energy source. The study confirms that small-scale hydropower can reduce operating costs, enhance sustainability, and strengthen energy independence.

Key highlights include:

- Feasibility confirmed for micro-hydro generation at multiple sites within the system.
- Estimated production of 60–120 MWh/year, potentially offsetting the Water Treatment Plant’s annual electricity demand.
- Grid-tied operation recommended for best reliability and economic return.
- Strong potential for provincial and federal funding support through CleanBC and FCM Green Municipal Fund programs.
- The project aligns with Cherry Creek’s environmental stewardship and long-term sustainability goals.

## **Project Overview**

The Cherry Creek Green Energy Feasibility Study evaluated the potential to generate renewable electricity using water flow from Lacy Lake through Cold Creek to the Cherry Creek Water Treatment Plant. The system is gravity-fed and provides both a consistent potable water supply and an opportunity for small-scale hydro generation.

Three siting options were analyzed:

1. Upper Cold Creek (Lacy Lake to Diversion Dam)
2. Lower Cold Creek (Diversion Dam to Valley Floor)
3. Potable Distribution System (Within existing WTP network)

Each option varies in cost, accessibility, environmental considerations, and energy potential.

### **Key Findings**

- **Hydrology and Head:** Approximately 40–80 m of usable elevation head exists between the diversion dam and treatment plant.
- **Energy Output:** 40 m head yields roughly 60 MWh/year; 80 m head could exceed 120 MWh/year.
- **Technology:** Turgo and Pelton turbines are the best fit for Cherry Creek's flow and head conditions.
- **Economics:** Capital cost range of \$250,000–\$500,000; grant funding can reduce payback to under 15 years.
- **Environmental Compliance:** Achievable with conservative design and early First Nations engagement.
- **Operational Mode:** Grid-tied system recommended for reliability and energy value.

### **Community Benefits and Next Steps**

The Cherry Creek Green Energy initiative reflects a forward-thinking commitment to sustainability. By utilizing existing water infrastructure, the community can reduce electricity costs, demonstrate environmental leadership, and inspire similar projects across Vancouver Island.

Next recommended actions include:

- Conducting detailed hydrological and LiDAR surveys
- Securing permits and right-of-way agreements
- Engaging with Tseshaht and Hupacasath First Nations
- Developing a funding strategy with CleanBC and federal partners
- Proceeding with detailed engineering design for the preferred site