



Trinity Consultants Canada is a leading environmental consultancy that brings together trusted advisors, scientists and engineers to help clients solve their most complex challenges. With deep local roots and the strength of a global organization, Trinity Consultants Canada delivers innovative, scientifically sound and future-ready solutions that help industry, government and Indigenous communities navigate complex regulatory landscapes, secure project permits and approvals to achieve better environmental outcomes. They are internationally respected leaders with decades of proven expertise in Water & Ecology, Environmental Health and Safety (EHS), Built Environment and Life Sciences.

Our Water & Ecology teams are recognized leaders in environmental assessment, permitting and monitoring, offering key services to sectors including renewables, mining, ports and terminals, marine shipping, linear development, liquefied natural gas (LNG), ecological restoration, municipal wastewater, energy, and forestry.

Our Expertise

Trinity Consultants is a leader in the Canadian hydropower industry, with extensive experience guiding regulators to improve environmental assessment methods and compliance practices. We have authored landmark documents for the Canadian Electrical Association and the Department of Fisheries and Oceans Canada on instream flows and compliance monitoring, and have supported over 150 projects with strategic advice on permitting and technical services. Our environmental flows practice blends two decades of experience with in-house data and modeling capacity to assess, mitigate, and monitor flow-related effects on the aquatic environment, characterizing existing conditions through science-based assessments and collaborating with Indigenous peoples, regulators, and stakeholders to develop water management practices that minimize impacts on stream hydrology.

Our Services

- **Flow scenario assessment:** modelling the effects of operational flow regimes on fish habitat and other ecological indicators to support flow management decisions, including licensing and amendments
- **Flow requirements optimization:** revisiting minimum flow releases and diversion limits at operating facilities using monitoring data, unlocking added generation or operational flexibility without new capital works
- **Ramping and headpond management:** facility-specific ramping rates and headpond flushing schedules designed to limit fish stranding risk and sediment-related issues



- **Compliance monitoring and gauging:** practical, field-ready monitoring and gauging solutions for reliable long-term compliance
- **Entrainment and gas supersaturation (TDG) risk:** assessing fish entrainment risk from turbines and gas supersaturation risk from spillway operations
- **Fish passage and connectivity:** evaluating whether facility flows allow fish movement past natural channel features and infrastructure, and identifying opportunities for passage improvement where needed
- **Climate resilience:** assessing how climate change affects available flows to inform durable licence conditions
- **Engagement and decision support:** facilitating technical discussions among regulators, Indigenous communities, and other stakeholders, systematically exploring trade-offs between alternative flow regimes
- **Long-term monitoring:** field studies that build scientific understanding of how facility operations affect fish and habitat over time
- **Adaptive management:** designing decision frameworks and trigger points that treat flow regimes as testable experiments, guiding when and how operations should evolve

CONTACT OUR TEAM!

For more information about how we can help your organization, please contact us.

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