## Water Resources Engineering



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**

Industrial and land developments often have complex effects on stream and waterbody hydrology, hydraulics, water quality, and geomorphology. Through the latest scientific monitoring and modelling techniques, we can help you to characterize, manage, and mitigate these effects to balance the needs of the project, the environment, and other stakeholders.

Trinity Water & Ecology's success in water resource engineering lies in our highly qualified engineers, hydrologists, hydrogeologists, data analysts, and aquatic scientists, who also have specializations in wetlands, geomorphology, climate science, habitat restoration, and permitting. Our combined skill set allow us to effectively inform project design, identify environmental and permitting risks associated with water use or land development on waterbodies, support sustainable management of water resources, and guide habitat restoration.

## **Our Services**

- Numerical and statistical hydrological modelling
- Assessment of streams, groundwater, wetlands, and surface-ground water interactions
- Fish passage analysis and design
- Flow routing through reservoirs and water residency calculations
- Hydrometric and water quality data collection and analysis



- Dye tracer and plume delineation studies
- Assessment of ungauged flow, low flow, and flood frequency
- Hydraulic modelling of open channels and pipes
- Water quality modelling
- Water balance calculations
- Mixing zone modelling
- Modelling climate change impacts
- Floodplain and watershed mapping
- Geomorphic assessments
- Sediment transport modelling
- Watershed management decision support

## CONTACT OUR TEAM!

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

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