

ROAD SALT & PACIFIC SALMON SUCCESS PROJECT



THANK YOU!



We want to acknowledge the contributions of funders, collaborators, and especially the stream steward volunteers for their contributions in support of this project.

This project was born out of community concern for local salmon populations, and continues to be supported by innumerable volunteer hours contributed by passionate and dedicated community members.

This research project is carried out on the traditional, ancestral, and unceded territory of the *xʷməθkʷəy̅əm* (Musqueam), *səlilwətaʔt* (Tsleil-Waututh), *kʷikwəʔləm* (Kwikwetlem), and *Skwxwú7mesh Úxwumixw* (Squamish) Nations.



Illustrations by Rush Dhillon & Clare Kilgour

ABOUT THE PROJECT

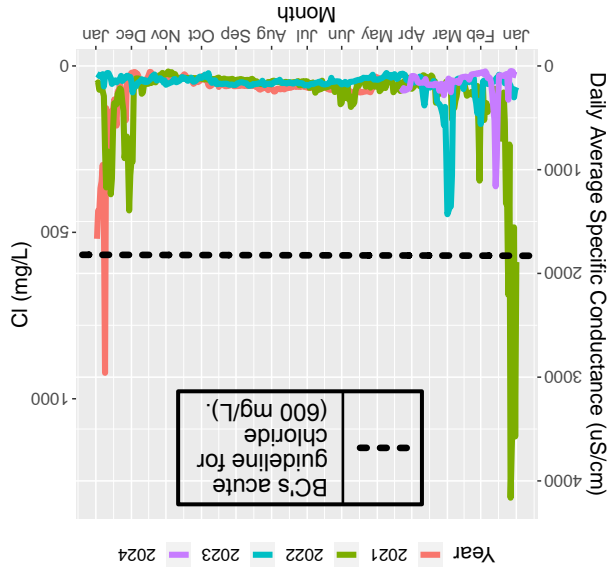
The *Road Salt and Pacific Salmon Success Project* is investigating the effects that road salt may have on streams across the Vancouver Lower Mainland. Collaboratively with 13 stream stewardship groups, the University of British Columbia (UBC), Simon Fraser University (SFU), the British Columbia Institute of Technology (BCIT), and Fisheries and Oceans Canada (DFO), researchers and volunteers are exploring the impact of road salt on the development and physiology of coho and chum salmon, and on the benthic invertebrates they eat.

OUR GOAL

Our goal is to **determine the impact** of road salt on aquatic ecosystems, with a particular focus on salmon, and the benthic invertebrate community that supports them. We strive to **raise public awareness** about the effects of road salt use, and **improve application practices**.

HOW BIG IS THE PROBLEM?

Nearly **6,000 tonnes** of road salt are dispensed onto Vancouver Lower Mainland streets each winter, and its use is increasing annually across Canada. Environmental data collected from nearly 30 loggers across the Lower Mainland suggests that road salt is making its way off of roads and into streams in phenomenal amounts throughout the winter. The winter season is an important period for salmon populations, as this is when adults migrate from the ocean, into freshwater streams to spawn. This means that freshly spawned salmon eggs may face pulses of road salt, sometimes as high as **10x** the province's acute guideline for chloride.



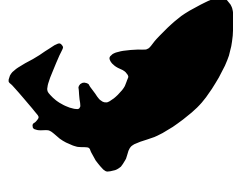
WHAT CAN YOU DO?

The primary contributor of road salt to local streams is large-scale road salting. However, salting by private companies and community members can contribute. Additionally, the consumer salts used for private salting are more likely to contain compounds and contaminants other than salt.

To help reduce the impacts of personal salting practices, you can:

- 1) Look for salt products that are **100% salt**.
- 2) If using rock salt (NaCl), only apply ~ **1 handful per square meter**.

3) If air temperatures are below -10°C , consider using **sand** or other **grip** products. Often these alternatives can be swept up in the spring and **reused** the next winter.



PRELIMINARY FINDINGS

Coho salmon and rainbow trout are most sensitive to the effects of road salt right after fertilization. Different families of coho respond differently to high salt exposures. Benthic invertebrates (food for baby salmon) are sensitive to salt concentrations regularly observed in streams.

STAY IN THE LOOP!

We have a website where we regularly upload results from our ongoing experiments. Scan the QR code or go to the link below for more info!



<https://theroadsaltproject.com>



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If you have any questions or comments about the project, please feel free to reach out to: roadsaltproject@gmail.com