



Credit: Julian Gah.



Credit: Salmon Watersheds Lab.



Credit: Jonathan Moore.

## MASTERS RESEARCH—RESILIENCE OF ESTUARIES AS SALMON NURSERY HABITAT AMID SEA-LEVEL RISE

### THE LAB

The [Salmon Watersheds Lab](#) (SWL) at Simon Fraser University (SFU) studies aquatic ecology in collaboration with diverse partners to inform management and conservation, with a focus on salmon and their watersheds. Our group is a part of the [Earth to Ocean Research Group](#). SFU is located on the outskirts of Vancouver in British Columbia, Canada, which has great access to the city, mountains, ocean, and rivers.

### THE PROJECT

The Salmon Watersheds Lab at SFU is seeking a Masters student to continue a research project investigating how the nursery function of estuaries may change for Pacific salmon in BC, in light of sea-level rise scenarios. Our lab's research to date has shown that young salmon use estuaries as critical nursery habitat on their migration from freshwater out to the ocean. Yet, estuaries may be “squeezed” between coastal developments and rising sea levels. Through a combination of field work in around a dozen estuaries along BC's coastline, as well as mapping and modeling analyses, this project will build upon current SWL research examining the linkages between juvenile salmon and estuary habitats by assessing the resilience of juvenile salmon estuary habitats to sea-level rise. Therefore, the ideal candidate will have strong field work and analytical skills.

This project is a part of a larger collaborative [Estuary Resilience project](#) led by the Nature Trust of British Columbia, in collaboration with several coastal First Nations, the Province of BC, the Federal government, eNGOs such as Ducks Unlimited Canada, and other groups. You can read more about our lab's research contributions to this project via [this blog](#). The outputs from this project will be used to inform estuary conservation and restoration efforts undertaken by these partner groups.

### EXPERIENCE AND QUALIFICATIONS

- A Bachelors degree (or equivalent) in a natural sciences discipline;
- Experience with spatial analyses or modeling;
- Experience leading field work in challenging environmental conditions in remote settings; Ability to take initiative to solve complex logistical problems in the field and the maturity to ensure the physical and mental well-being of the field team;
- Comfort and experience with nearshore fish sampling (pole and beach seine) and boat operation (the project requires operation of a 16 ft Lund);
- Experience managing and analyzing large datasets;
- Being part of a collaborative team and working with diverse peoples.



# SALMON WATERSHEDS LAB

Ecology & Conservation of Aquatic Systems  
Jonathan Moore and Team



Credit: Brandon Nam.



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## FUNDING AND TIMELINE

Ideally, the **start date** for this Masters position would be **Jan 2022 or May 2022**. This project has funding for a student stipend to November 30, 2024. For fieldwork activities, funds are available to cover the full costs of research and travel expenses.

In light of the COVID-19 pandemic, part-time remote work is an option however, some activities require in-person work. Therefore, the successful candidate will be either already living in the Lower Mainland of BC or willing to relocate for this graduate position.

Please indicate your ideal start date and work arrangement in your application.

## TO APPLY

Applicants should email a CV and a brief cover letter to [adminjwm@sfu.ca](mailto:adminjwm@sfu.ca) with the subject: "Grad Student Application—Estuary Resilience" and your name, to apply.

**Applications will close 5 pm PDT on Friday, October 1, 2021.** Please note that only applicants proceeding to the next round will be contacted regarding the outcome of their application.

In addition, please note:

- Your CV (PDF) should reference relevant work and educational experience and contact information for three (3) references;
- Your cover letter (PDF) should be two (2) pages or less and should address:
  - Relevant scientific experience and skills;
  - Why you are interested in the project.