

# Becca Beutel

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University of British Columbia  
Department of Earth, Ocean and Atmospheric Sciences (EOAS)  
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**Citizenship:** Canada, USA

**Research interests** Coastal oceanography, biogeochemical-physical interactions, fluid dynamics, numerical modeling

**Education** **University of British Columbia (UBC)** Vancouver, BC  
MSc in Physical Oceanography (in progress) 2020–present  
Advisor: Dr. Susan Allen.

**University of Guelph** Guelph, ON  
BASc with Distinction in Environmental Engineering 2015-2020

## Graduate coursework

Advanced Geophysical Fluid Dynamics; Dynamic Oceanography; Methods in Oceanography, Data Analysis in Atmospheric, Earth and Ocean Sciences; Waves, Currents, and Ocean Mixing; Estuary Hydraulics; Numerical Techniques for Ocean, PRODIGY interdisciplinary training program Atmosphere and Earth Scientists (in progress)

**Awards and scholarships**

UBC Four Year Doctoral Fellowship (\$18,200 per year)	2022
R. Grant Ingram Memorial Scholarship in Oceanography (\$6,150)	2022
NSERC Alexander Graham Bell CGS M, Masters Program (\$17,500)	2021
WEAO and WEF Student Design Competition (\$5,000)	2020
Ontario/Baden-Württemberg Research Scholarship (\$3,500)	2019
NSERC Undergraduate Student Research Awards Program (\$4,500)	2017

**Publications** **Refereed Journal Articles**  
McBean, E; Farrow, C; Preston, T; Yang, A.L; Cheng, H.Y; Wu, Y.C; Liu, Z; Dai, Z.N; Fu, H.Y; Beauchamp, J; **Beutel, R**; Huang, G.H. (2019). Investigation of Maintenance Impacts on Flow Rates in Ceramic Disc Water Filters. *Journal of Environmental Informatics Letters*. 1(2)

**Research experience** **Mesoscale Ocean and Atmospheric Sciences**  
Mentor: Dr. Susan Allen (UBC, Oceanography) 2020-present  
Quantify the annual variability in sources and resultant biogeochemical composition of water entering the Salish Sea through the Juan De Fuca using Lagrangian simulations.

### **Past Ocean Dynamics**

Mentor: Dr. Jörg Lippold (University of Heidelberg, Geoscience) 2019  
Examined deep ocean sediment cores using x-ray diffraction in an attempt to explain the interesting proxy behaviour of a past climate event (Heinrich Stadial 2) by determining the sediment source.

### **Water Supply Security**

Mentor: Dr. Ed McBean (University of Guelph, Engineering) 2017-2019  
Conducted membrane filtration analyses on low-tech water filters for application in rural communities.

### **G360 Groundwater Institute**

Mentor: Dr. Jana Levison (University of Guelph, Engineering) 2017  
Assessed variations in water composition throughout a watershed in order to determine the locations of groundwater-surface water interaction

### Teaching experience

#### **University of British Columbia**

Teaching Assistant, ENVR 400: Research Project in Environmental Science 2020-2022

### Talks

#### Presentations

**Lagrangian analysis of seasonal and interannual trends in estuarine flow composition and path within Juan de Fuca Strait** Jun 2022  
Oral Presentation, CMOS-CGU-ESC Joint Congress

**Lagrangian analysis of seasonal and interannual trends in estuarine flow composition and path between Juan de Fuca Strait and the Strait of Georgia and Puget Sound** Apr 2022  
Poster Presentation, Salish Sea Ecosystem Conference

**Pacific Sources of Biologically Significant Constituents in the Salish Sea Using Lagrangian Particle Tracking** Oct 2021  
Poster Presentaion, Graduate Student Climate Conference

#### Interviews

Pacific Museum of Earth's "On Earth" podcast - episode 48 Apr 2022  
Beaumont Studios' "Rhythm Analysis" podcast - episode 3 Mar 2022

### Skills

#### **Programming**

Proficient in: Python, MATLAB.  
Familiar with: C++, R.

### **Languages**

English (native), French (advanced)

Service and outreach	Science World - Facilitator	Mar 2022-present
	EOAS Climate Emergency Committee - team-member	Sep 2021-present
	Physical Oceanography Seminar - coordinator and host	May 2021-Jun 2022