

# SUSTAINABILITY SCHOLARS PROGRAM

## Summer 2024 Sustainability Scholars Program Internship Opportunity

The UBC Sustainability Hub is pleased to offer current UBC graduate students the opportunity to work on sustainability internship projects. Successful candidates work under the guidance of a mentor from the partner organization, and are immersed in real world learning where they can apply their research skills and contribute to advancing sustainability across the region. These opportunities are paid. The pay rate for the summer 2024 program is \$27.50/hour or \$6,875 for a 250-hour project.

- Visit the [Sustainability Scholars Program website](#) to learn [how the program works](#) and to [apply](#).
- Be sure to review the application guide on the Apply page to confirm your eligibility before applying.

**Applications close at midnight on Sunday January 28, 2024.**

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## **Project title: Best practices for visualizing and communicating air quality data**

### **Project Background & Overview:**

Metro Vancouver's [AirMap.ca](#) webpage displays real-time air quality and weather data from the Lower Fraser Valley air quality monitoring network. It is the most viewed page on Metro Vancouver's website, especially when regional air quality is impacted by wildfire smoke. AirMap also displays the Air Quality Health Index (AQHI), which provides guidance on how residents could modify their activities to protect their health when the region experiences poor air quality, and the residential indoor wood burning status to inform residents when they can use their indoor wood burning appliance.

Regional climate projections indicate that Metro Vancouver will experience hotter, longer, and drier summers, which can lead to more wildfires and degraded air quality due to smoke impacts and extreme heat events. As our climate changes, the ability to quickly access reliable, timely, and accurate air quality and weather data will become even more essential to protect the health of the region's residents.

AirMap is an important tool to communicate air quality and weather conditions to Metro Vancouver residents. However, it was developed over 10 years ago, and since then, data visualization tools, air monitoring technology, and online communication strategies have evolved. To ensure AirMap continues to meet the needs of the region's residents, Metro Vancouver is exploring how to modernize and enhance how we communicate and visualize air quality and weather data to the public.

This project aligns with the following Metro Vancouver management plans:

- In the *Clean Air Plan*, action 6.1.12 is "Public Communication," with a direction to "improve online air quality and climate change communication tools". AirMap is one of Metro Vancouver's key online air quality communication tools, and improving its usability will support this action.
- The *Board Strategic Plan (2022-2026)* includes a priority action to "Protect public and environmental health and fight climate change by continuing to provide world-class air quality and greenhouse gas management services, including monitoring, emissions

inventories, and air quality advisories.” AirMap supports our air monitoring network by making the data publicly available, and helps to inform the public of air quality conditions and advisories.

## Project description

The project aims to identify how Metro Vancouver’s AirMap webpage can be updated and made more user-friendly to allow the region’s residents to view data from Metro Vancouver’s air quality monitoring network. As our climate changes, it is important that residents are able to quickly access reliable, timely, and accurate air quality and weather data so they can take action to protect their health during periods of poor air quality.

The scholar will conduct research into best practices for visualizing or communicating air quality data and recommend improvements to AirMap to enhance its usability. Metro Vancouver staff make regular updates to AirMap, and will consider integrating the scholar’s recommendations into future updates.

## Project scope

Key tasks include:

- Scan of websites and apps from public (e.g., government agencies) and private (e.g., air sensor manufacturers) organizations to identify how air quality and weather data is communicated to the public. Websites may include, but are not limited to:
  - Province of British Columbia’s Air Quality Health Index map: [Air Quality Health Index - Latest air monitoring data map - BC Air Quality - Province of British Columbia \(gov.bc.ca\)](#)
  - University of Northern British Columbia and Environment and Climate Change Canada’s AQmap: [AQmap \(EN\) \(unbc.ca\)](#)
  - AirNow Fire and Smoke Map: [Fire and Smoke Map \(airnow.gov\)](#)
  - South Coast Air Quality Management District: [Current Air Quality Data \(aqmd.gov\)](#)
  - The Breathe London network: [Breathe London](#)
- Literature review to identify best practices for visualizing or communicating:
  - air quality and weather data, including current / historical data, and forecast information
  - health advice associated with common air contaminants in Metro Vancouver such as fine particulate matter (PM<sub>2.5</sub>) and ground-level ozone
- Identify areas on AirMap that are not user-friendly or that need improvements in usability
- Based on the above, make recommendations for improvements on Metro Vancouver’s display and reporting of air quality and weather data, air quality advisory notices, and related health messaging. If applicable, this may include creating mock-ups to show example layouts, data displays, or other visualizations.

## Deliverables

- A final report containing a summary of the work completed, including mock-ups if applicable
- A final report for the online public-facing [Scholars Project Library](#).

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- Optional: a 5-minute presentation to Metro Vancouver's Corporate Planning Committee (consists of senior managers from across the departments at Metro Vancouver)

## Time Commitment

- This project will take 250 hours to complete
- This project must be completed between May 1 to August 15, 2024
- The Scholar is to complete their hours between 9 am and 5 pm, Monday to Friday, approximately 17 to 20 hours per week.

## Required/preferred Skills and Background

- Excellent research and writing skills
- Demonstrated interest in sustainability
- Ability to work independently
- Demonstrated experience in communications and visual communications
- GIS training or experience, an asset
- Design and layout skills
- Familiarity with air quality and weather data
- Familiarity with web reporting software/technology

Applications close **midnight Sunday January 28, 2024**

Apply here: [Click here to apply](#)

Contact Karen Taylor at [sustainability.scholars@ubc.ca](mailto:sustainability.scholars@ubc.ca) if you have questions

## Useful Resources

We are holding a special **resume preparation workshop for prospective Scholars** on January 23, 2024.

[Click here for details and to register.](#)

Below are some links to useful resources to help you with your resume and cover letter (there are many more online). Some of these resources also provide information on preparing for your interview.

<https://students.ubc.ca/career/career-resources/resumes-cover-letters-curricula-vitae>

<https://www.grad.ubc.ca/current-students/graduate-pathways-success>

<https://www.grad.ubc.ca/cover-letter-cv-resume-templates-ubc-career-services>