UBC Sustainability Scholars Program 2019

The UBC Sustainability Initiative (USI) is pleased to offer current UBC graduate students the opportunity to work on funded sustainability internship projects. Successful candidates work under the mentorship of a partner organization, and are immersed in real world learning where they can apply their research skills and contribute to advancing organizational sustainability goals.

For more information about the Sustainability Scholars Program and to apply to work on this project, please visit the Student Opportunities page.

Please review the application guide (PDF) before applying.

Applications close **midnight Monday February 25, 2019**.

Title of Research Project: Mapping Compost Markets for BC

1. **The purpose of the project is:**
   - To develop location-specific data on current and future compost product markets and demand in BC
   - To provide data as a basis for (a) planning the most efficient public and private organics management infrastructure, and (b) eventually feeding into a broader integrated organic materials management plan that would include not just compost-related products, but also agricultural-related nutrient sources (e.g. manures, stover/chaff, etc.) and biosolids.

2. **How will this project make a contribution to regional sustainability?**
   Metro Vancouver's Integrated Solid Waste and Resource Management Plan (ISWRMP) has a goal of diverting 80% of solid waste generated away from disposal. Currently we divert 63%, and compostable organics are the largest single component of municipal solid waste going to disposal. Organics were banned from disposal in 2015, and there has been significant increases in services (such as curbside collection of food scraps from homes and businesses) and infrastructure (such as new and expanded facilities that compost, digest, and/or produce animal feed products from unwanted food and other organic materials.

   In recent years, challenges have arisen in the composting industry, including odour problems, rising costs, and limited end markets for compost products. To manage these challenges, we must have the necessary data with which to evaluate future organics management options – e.g. choosing the best locations for organic waste transfer sites and composting facilities. Developing such data helps balance the sometimes conflicting desires to (a) minimize distances between organic waste producers and compost processors, (b) maximize the distance between potential odour sources and population centres, and (c) minimize distances between compost processors and end users of compost products.

3. **Outline the scope of project including how the scholar's work will be used by Metro Vancouver:**
   Surprisingly little information is available regarding the geographic location of compost end users, and the actual/potential quantities of compost products they consume in this province. Metro Vancouver believes that such information could be derived by combining:

- Existing maps and data of soil classifications and soil conditions across the province
- Existing provincial maps and data on the types, location and amounts of different agricultural crops grown, and each crop's specific needs for compost/nutrients
- Existing provincial data on non-agricultural (e.g. landscaping) usage of compost across the province
- Current location-specific climate data, and climate change projections
- Supplemental statistics and interviews from the organics management industry

Combining such information to produce a current map of the location of and volumes of current and potential new compost product usage would be invaluable in planning for cost-effective and environmentally sound management of organics in BC. Longer term, this could be an input into development of an integrated organic materials management plan (encompassing food and yard-waste, agricultural manures, etc.) for the province.

4. **Project Deliverables:**
   - Final report and presentation to Metro Vancouver staff outlining key findings and recommendations:
     - Literature review and key findings of available relevant data sources
     - Estimates of current compost usage across BC, broken down by geographic location, and amounts and types of compost products
     - Projections of future compost usage across BC, broken down by geographic location, and amounts and types of compost products
     - List of recommended next steps for future supplemental research, testing or pilot projects.
   - Final report/executive summary for the UBC Sustainability Scholars project library.

5. **Identify the required/preferred skill set and knowledge base for the ideal Scholar.**

☒ Excellent research and writing skills
☒ Strong analytical skills
☒ Ability to work independently
☒ Demonstrated experience in in-person/telephone interviewing/surveys
☒ Experience with financial modelling and analysis
☒ Demonstrated interest in sustainability
☒ Familiarity with research methodologies and survey techniques
☒Statistical analysis
☒ A good understanding of mapping, GIS data, agricultural and biochemical sciences

6. **Should the potential Scholar submit a writing sample?**

☒ Yes
☐ No

7. **Identify specific requirements required for completing this project *(if any)***
   - Must be able to travel to Metro Vancouver's head office in Burnaby occasionally to meet with staff
   - Access to a vehicle may be an asset, if in-person interviews with industry representatives are needed
   - Access to their own laptop and standard MS-Office software

Applications close **midnight Monday February 25**.
Apply here:
https://sustain.ubc.ca/student-opportunities

To learn more about the program here:
https://sustain.ubc.ca/ubc-sustainability-scholars-program

Read the application guidelines to confirm your eligibility to participate in the program here:
https://sustain.ubc.ca/student-opportunities

Contact Karen Taylor at sustainability.scholars@ubc.ca if you have questions.