

CLAIRE M REMINGTON

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PROFESSIONAL PROFILE

I am an interdisciplinary researcher and analyst with a decade of experience focused on improving communities' sustainability and resilience. My strengths include project management, stakeholder consultation, and technical communication. I have also taught university-level civil engineering courses with a focus on sustainable natural resource management and public health engineering in low-resource contexts. I live, play, and work on traditional Lkwungen and WSÁNEĆ territories.

EDUCATION

MASc Civil Engineering

University of Victoria

Public Health & Environmental Engineering Lab

Relevant coursework: Industrial Metabolism and Global Environmental Change; Urban Metabolism and Sustainable Cities; Water and Sanitation Engineering for Developing Countries; and Design and Analysis of Experiments.

Victoria, BC, Canada

Dec 2019

BA Chemistry

Reed College

Relevant coursework: Environmental Chemistry; International Environmental Politics; Ecological Literature; and Natural Resource Economics.

Portland, OR, USA

May 2011

IB Bilingual (French) Diploma

International School of Kenya

Nairobi, Kenya

June 2007

PROFESSIONAL & RESEARCH EXPERIENCE

Compost Education Centre (CEC)

Executive Director

- Provide overall financial management of the organization including the preparation of annual budget in consultation with the Board.
- Lead organization's fundraising efforts via proposal writing, identification of new funding opportunities, and development of new fundraising initiatives.
- Develop and enhance relationships and partnerships with stakeholders across the region.
- Conduct strategic planning, identify opportunities for professional development, assist in Centre's program delivery as needed, and operationalize strategic plan.
- Supervise, support, and evaluate the CEC's team of six staff.

Victoria, BC

Feb 2022-Present

Ultimate Spirit

Ultimate Frisbee Coach

- Coach Ultimate Frisbee to youths aged 6-18 years old in Indigenous communities and schools on Vancouver Island in collaboration with the Indigenous Sport, Physical Activity, and Recreation Council (ISPARC).
- Co-develop a curriculum guideline for the delivery of Ultimate Frisbee-related outreach programs to

Vancouver Island, BC, Canada

April 2019-Present

Indigenous communities.

- Co-wrote a successful application for CAD 180,000 from Sport for Social Development in Indigenous Communities (SSDIC) funded by the Government of Canada.
- Completed the National Coaching Certification Program and Aboriginal Coaching Module.

Sustainable Organic Integrated Livelihoods (SOIL)

Director of Research and Innovation

Remote (Victoria, BC)

Aug 2020-Feb 2022

- Identify, plan, and oversee new research and innovation projects based on team feedback, personal observation, and technological advancements.
- Supervise SOIL's research team members.
- Serve as the point of contact for all research-related partners and consultants.
- Develop financial projections and a term of reference for a results-based financing contract funded by the Inter-American Development Bank (IDB) and arranged between DINEPA (the Haitian ministry for water and sanitation) and SOIL as the sanitation service provider.

First Nations Health Authority

Co-op Student, Climate Change & Health

Victoria, BC, Canada

Jan 2020-May 2020

- Developed CCHAP (Climate Change & Health Adaptation Program) funding application materials including a program overview document, an application and budget template, and a process to evaluate CCHAP applications.
- Supported the development of a project evaluation process.

University of Victoria

Sessional Instructor

Victoria, BC, Canada

Jan 2020-June 2020

- Created and delivered technical content for two 4th year civil engineering courses: 1) Water and Sanitation for Developing Countries, and 2) Solid Waste, Air, and Water Pollution.
- Supervised, trained, and mentored 3 teaching assistants so that they had the methods and confidence to fulfill their responsibilities; this included working with them to self-assess performance, collaborating on content development, and sharing constructive feedback.

University of Victoria

Master's Thesis

Victoria, BC, Canada

Jan 2018-Dec 2019

- Evaluated the design of sustainable sanitation systems from different but complementary perspectives: 1) an examination of impact of sanitation on the global nitrogen cycle via material flow analysis; 2) a derivation of fundamental drying characteristics of fresh faeces via lab-based environmental engineering research; and 3) a qualitative assessment of the readiness of the regulatory environment, technology, and adopters for an alternative (composting toilet) sanitation system.
- Demonstrated that the design of sustainable sanitation systems is an urgent issue that is both local and global in scale.
- Established that there is work that needs to be done to innovate the technology available, promote an enabling environment, and challenge society regarding its assumptions around what is acceptable when it comes to the choice and accessibility of sanitation systems.

University of Victoria

Laboratory Instructor & Teaching Assistant

Victoria, BC, Canada

Jan 2018-Dec 2019

- Served as Lab Instructor or Teaching Assistant for the following undergraduate civil engineering courses: Environmental Engineering Lab Instructor (Spring 2018), Geomatics Engineering Lab Instructor (Fall 2018 and Fall 2019), Water and Sanitation Engineering for Developing Countries Teaching Assistant (Spring 2019), and Drinking Water Contaminants Teaching Assistant (Summer 2019).

- Significant contributions included the development of course curriculum and material for teaching ArcGIS and fundamental concepts of geospatial analysis in weekly sessions in Geomatics Engineering; mentoring students in the proper performance of laboratory techniques in Environmental Engineering; and designed, developed, and delivered lecture content for Water and Sanitation Engineering for Developing Countries.

Sustainable Organic Integrated Livelihoods (SOIL)

Sanitation Technical Advisor

Cap-Haïtien, Haiti

Jan 2015-Dec 2017

- Developed performance indicators, evaluated program success, and provided recommendations for improvement for SOIL's household and commercial sanitation services.
- Assisted in the design and development of SOIL's data management system including data collection tools and database.
- Developed operational team's M&E capacity; this included ongoing workshops on data collection tools and database, monthly and annual reporting, and tools like geographic information system (GIS).
- Performed spatial analyses using GIS software (QGIS), researched and analyzed socioeconomic and environmental data, and collaborated on presentations and publications.
- Supervised consultant teams and research initiatives focused on improving the occupational health and safety, process economics, and public health risk associated with SOIL's household and commercial sanitation services.
- Co-created annual strategy development and budgeting for SOIL's USD 500,000 household sanitation program and the USD 100,000 commercial sanitation program.
- Facilitated stakeholder consultations and workshops; stakeholders included representatives from the Haitian government ministries of the environment, agriculture, and public health.
- Led the Sanitation Safety Planning working group and liaised with non-governmental organizations, community associations, residents, and representatives from the Haitian government ministries of the environment, agriculture, and public health.

Worldwatch Institute

Climate & Energy Researcher

Washington, DC, USA

Feb 2013-May 2013

- Conducted research and analysis on climate and energy data (with a specific focus on the development of portable solar lamp business models) in East Africa.
- Contributed to Worldwatch publications including reports and blogs.

Blue Hill Partners

Project Development Analyst

Philadelphia, PA, USA

Jun 2013-Dec 2015

- Collaborated with the Pennsylvania Treasury Department to lead the investment of over USD 45 million in energy efficiency, climate change mitigation, and sustainability projects at Pennsylvania colleges and universities.
- Conducted cost-benefit analyses and developed financial models to analyze investment risks and potential emissions savings associated with clean technology retrofits.
- Managed the process of certifying the firm as a B Corp.
- Supervised 2 research assistants.

Let Us Compost

Pick-Up Expert

Athens, GA, USA

Sept 2012-Jan 2013

- Played an integral role in the operations and start-up of a curbside food scrap pickup and composting service to sustainably manage organic waste streams.
- Collected and transported organic waste streams for composting.

Reed College*Bachelor's Thesis***Portland, OR, USA***Aug 2010-May 2011*

- Analyzed the impact of sound wall placement on the dispersion of atmospheric benzene with the use of a self-designed field sampling kit, an external calibration method, and thermal desorption-gas chromatography-mass spectrometry (TD-GD-MS).
- Compared the empirical data to both a Lagrangian model and a Gaussian dispersion model.
- Found that 1) concentration of benzene increases at short distances away from the source, 2) sound walls create recirculation cavities, pockets of increased turbulence, that decrease concentrations directly behind them, and 3) adsorption and deposition processes have a greater impact on concentrations than the direct gas-phase degradation mechanism.
- Concluded that sound walls have an impact on microscale meteorology that could be used to improve ambient air quality proximal to freeways.

Reed College*Tutor and Laboratory Assistant***Portland, OR, USA***Aug 2009-May 2011*

- Served as a tutor for Biology 101/102: Topics in Biology and a lab assistant for Chemistry 101: Molecular Structure and Properties and Chemistry 102: Chemical Reactivity.

CONSULTING EXPERIENCE**Public Health & Environmental Engineering Services Contractor** July 2019-Present*Key Project: Community Composting Toilet*

Fundraised for and designed a composting toilet for installation at the University of Victoria Campus Community Garden. Collaborated with stakeholders from the University of Victoria (including the Office of Campus Planning and Sustainability as well as Facilities Management), Lintott Architecture, and the lead author and editors of the BC Ministry of Health's Manual of Composting Toilets and Greywater Practice.

Grant Application: Biosolids Engineering Research

Managed grant application for research funding to perform an options analysis for the long-term use of biosolids in Capital Regional District. Led proposal development meetings and collaborated with stakeholders from the WSÁNEĆ Leadership Council, Gwaii Engineering, and the Public Health & Environmental Engineering Lab at the University of Victoria.

Comox Valley Regional District (CVRD)*Consultant***Vancouver Island, BC, Canada***Jul 2019-Dec 2019*

- Supported the CVRD-funded evaluation of the feasibility of installing a composting toilet residuals processing facility on Hornby Island.
- Provided technical and regulatory support for the technical analysis and business case for a residuals processing facility.
- Surveyed the Hornby Island community to gauge interest in a composting toilet residuals processing facility.
- Co-wrote articles and FAQs to promote interest in the community-wide survey and responded to public enquiries.

LEADERSHIP

Victoria Club Ultimate Captain

2019, 2021 & 2023

University of Victoria Women's Ultimate Frisbee Coach

Sept 2020-May 2022

Victoria Ultimate Player Society (VUPS) Board Member and Treasurer

June 2019-June 2022

PUBLICATIONS

Ferguson, C., Mallory, A., Hutchings, P., **Remington, C.**, Lloyd, E., Kiogora, D., Anciano, F., & Parker, A. (2021). An evaluation of different provision strategies for scaled-up container-based sanitation. *H2Open*.

Remington, C., Kennedy, C., Whittredge, P., & Dorea, C. (2020). The Potential Impact of Ecological Sanitation on the Nitrogen Cycle, (in preparation).

Remington, C., Bourgault, C., & Dorea, C. (2019). Measurement and modelling of moisture sorption isotherm and heat of sorption of fresh faeces, *Water*.

Bourgault, C., Lessard, P., **Remington, C.**, & Dorea, C. (2019). Experimental determination of moisture sorption isotherm of faecal sludge. *Water*.

Remington, C., Jean, L., Kramer, S., Boys, J., & Dorea, C. (2018). Process cost analysis for the optimization of a container-based sanitation service in Haiti. WEDC Conference 2018.

Remington, C., Cherrak, M., Preneta, N., & Kramer, S. (2016). A social business model for the provision of household ecological sanitation services in urban Haiti. WEDC 41st International Conference, 1–6.

Remington, C., Davis, C., and Krumenauer, M. (2012). Oregon's Thermal Energy Baseline, (August).

Remington, C. (2011) Some Concrete Chemistry: The Effect of Sound Walls on Benzene Concentration (Bachelor's Thesis, Reed College, Portland, Oregon).

N. Netusil, **C. Remington** et al. (2009) Valuing the Benefits of Ecosystem Services Generated by the Reed College Canyon Restoration Project: 1999-2009 (project paper for Econ 352, Reed College, Portland, Oregon).

PRESENTATIONS

Remington, C., Bourgault, C., & Dorea, C. (2019). "Measurement and modelling of moisture sorption isotherm and heat of sorption of fresh faeces." Accepted for poster presentation at UNC Water and Health Conference 2019, Chapel Hill, North Carolina.

Remington, C., Bourgault, C., & Dorea, C. (2019). Moisture sorption characteristics of fresh faeces. Accepted for oral presentation at West 2019 Conference, Vancouver, BC, Canada.

Remington, C. (2019). Implementing composting toilet systems in BC and worldwide. Accepted for oral presentation at BCWWA 2019, Victoria, BC, Canada.

Septien, S., Getahun, S., Mirara, S., Makununika, B.S., Mugauri, T.R., Naidoo, D., Singh, A., Pocock, J., Inambao, F., Onabanjo, T., Winrow, E., Mabbett, I., Sellgren, K.L., Bourgault, C., **Remington, C.**, Dorea, C., & Buckley, C.A. (2019). Investigation of faecal sludge drying from on-site sanitation facilities. Accepted for oral presentation at 10th Asia Pacific Drying Conference, Vadadora, India.

Remington, C., Bourgault, C., & Dorea, C. (2018). Improving understanding of faecal drying for application to a humanitarian emergency toilet design. Accepted for poster presentation at WEDC Conference 2018,

Nakuru, Kenya.

Remington, C., Dorea, C., & Bourgault, C. (2018). Improving understanding of faecal sludge drying for application to a humanitarian emergency toilet design. Accepted for oral presentation at WEST 2018 Conference, Vancouver, BC, Canada.

Kramer, S., Lloyd, E., **Remington, C.**, & Preneta, N. (2017). EkoLakay — Developing a Social Business for the Provision of Household Sanitation in Dense Urban Settings. Accepted for oral presentation at 4th International Fecal Sludge Management, Chennai, India.

Preneta, N., Mesa, B., Kramer, S., & **Remington, C.** (2017). Thermophilic composting as an effective waste treatment option in low-resource settings. Accepted for poster presentation at 4th International Fecal Sludge Management, Chennai, India.

Remington, C., Agarwal, R., Kramer S., Mesa B., Buluswar, S., & Preneta, N. (2017). Developing Process Cost Analysis Methodology for Faecal Sludge Management (FSM). Accepted for poster presentation at 4th International Fecal Sludge Management, Chennai, India.