

Water treatment for humanitarian emergencies

Master's opportunity

Public Health and Environmental Engineering Lab

The project

Batch water treatment is a common approach in humanitarian emergency water treatment. This is a useful centralised “bulk” approach that can cater to large populations. Bulk water treatment relies on chemically-assisted sedimentation (typically achieved with aluminium sulfate). The popularity of this water treatment strategy is in part due to its simplicity. However, it is thought that such simplicity may at times compromise treated water quality. This project aims to identify and develop modifications to batch water treatment. The validation of the modifications will be initially tested in lab- and pilot-scale and screened for potential field evaluation in a humanitarian setting in collaboration with a relief agency and an industrial partner.



Intended start date: September 2020 or January 2021. For these entry points the deadline for applications is 28/February/2020.

The ideal candidate (any nationality):

- GPA of 3.5 (out of 4.0 scale) or higher;
- Undergraduate degree in a relevant field: civil/chemical/environmental engineering, microbiology, biology, environmental science, chemistry or biochemistry;
- Previous laboratory/research experience;
- Relevant field experience in low resource contexts;
- Motivation, independence, resourcefulness, scientific curiosity and passion to make a difference;
- A clean driving license;
- Availability for a May (preferable) or September start.

Funding

As per our Departmental policy, a minimum funding of \$17,500 CAD per year is guaranteed for the two year MAsc or three year PhD programme (TBD based on candidate's experience and performance). Graduate funding support from the Department of Civil Engineering is granted through a variety of mechanisms including but not limited to: research grant support, teaching assistantships, awards and fellowships, and research contracts. Top-ups are available to students that receive independent research scholarships.

Note for Canadian applicants: Eligible candidates are reminded of upcoming NSERC funding deadlines for MAsc (Dec), PhD (Oct) and PDF (Oct). Québec residents are reminded that they are eligible to apply for a FRQNT scholarship (deadline: Oct) and use the training award outside Québec.

Highly qualified and motivated students will be invited to submit an application (CV, academic records and cover letter stating your motivations and interests) to caetanodorea@uvic.ca. Please cite “HWT2020” on the subject line of your email.