



Eawag, the Swiss Federal Institute of Aquatic Science and Technology, is an internationally networked aquatic research institute within the ETH Domain (Swiss Federal Institutes of Technology). Eawag conducts research, education and expert consulting to achieve the dual goals of meeting direct human needs for water and maintaining the function and integrity of aquatic ecosystems.

The ETH Board has recently funded a research program on [Blue-Green Biodiversity](#) (BGB) with the goal to strengthen interdisciplinary biodiversity research between WSL, Federal Institute for Forest, Snow and Landscape Research (Birmensdorf, Switzerland) and Eawag, the Swiss Federal Institute of Aquatic Science and Technology (Dübendorf, Switzerland). Both institutes are renowned worldwide for their advancements in the fields of ecology and environmental sciences. They offer excellent technical support, data-sets, and infrastructure to conduct interdisciplinary research in the laboratory, field, and using computer models. They share common goals towards education, research, and technology transfer at the highest international level.

The Cook “Blue-Green Infrastructure” lab at Eawag and Moretti lab at WSL have a vacancy for a shared

## PhD Position in Urban Ecology

### ***Studying Blue-Green infrastructure and biodiversity using eDNA***

As biodiversity loss continues to accelerate worldwide, cities will need to be redesigned to conserve it, while still protecting growing populations from threats such as flooding and climate change. Blue-green stormwater infrastructure (BGI), a spatially distributed system of BGI elements such as urban streams, constructed wetlands, or green roofs, could jointly address these multiple challenges; however, more work is needed to prioritize and collect data for improved model predictions of BGI effectiveness for multiple objectives (e.g., ecological, engineering, and social).

**In this doctoral research project**, you will design and conduct a targeted sampling campaign of different organismal groups and then use this data within a previously developed species distribution and uncertainty model created for urban BGI assessments. Specifically, you will use different sampling techniques, such as pitfall traps or entomological nets for target taxa, and also apply environmental DNA (eDNA) approaches for a broader biodiversity assessment. The goal is to identify the factors and types of data that should be prioritized for modeling approaches used to harmonize BGI implementation for water management, biodiversity conservation, and social aspects.

**The position is to be filled** with a motivated candidate, capable advancing the emerging research field of urban ecology, specifically focusing on eDNA-based assessments using high throughput sequencing (HTS) in urban ecosystems and trait-based approaches for biodiversity assessment.

**The selected candidate** will be part of an interdisciplinary consortium of researchers in the fields of ecology, urban water management, planning and land use, and social science. The candidate will have the opportunity to exchange with and be mentored by senior researchers, including the postdoctoral researcher also working on this project.

**To apply**, you must have completed a Master’s degree in Molecular Ecology, Ecology, Microbiology or a closely related science field. Applicants must have previous laboratory and bioinformatics experience in eDNA or HTS approaches, as well as, good knowledge of spatial data usage, statistical analysis, and natural sciences. Experience in field work and/or programming is an asset. An excellent standard of written and spoken English is required and knowledge of German is an advantage. The successful applicant will be based in Zurich in the [groups of Dr Lauren Cook](#) and of [Dr Marco Moretti](#). You will be administratively located in the Urban Water Management Department at Eawag; however, you will also have access to facilities at WSL and other research departments at Eawag. You will be enrolled at University of Zurich, supervised by Prof. Dr. Florian Altermatt ([www.altermattlab.ch](http://www.altermattlab.ch)). The position will be for a period of four years, and should start in Summer or Fall 2021. The project is financed by the Blue-Green Biodiversity (BGB) research program of the ETH Board.

**We are looking for** a highly motivated, enthusiastic and independent person with a passion for interdisciplinary research to join our team. The Cook lab is based at Eawag and the Moretti lab at WSL in Birmensdorf. You should be comfortable working at and occasionally commuting between both institutions (travel time <1 hour). Zurich hosts many other research groups in ecology, biodiversity, and engineering research, and is among the world's leading cities in terms of science, culture and quality of life. Applications from women and minority groups are especially welcome.

Eawag is a modern employer and offers an excellent working environment where staff can contribute their strengths, experience and ways of thinking. We promote gender equality and are committed to staff diversity and inclusion. The compatibility of career and family is of central importance to us. For more information about Eawag and our work conditions please consult [www.eawag.ch](http://www.eawag.ch) and [www.eawag.ch/en/aboutus/working/employment/](http://www.eawag.ch/en/aboutus/working/employment/).

**Applications must be submitted by 31 May 2021** and should include a cover letter and a complete CV, as well as the names and contact information for three references.

**For further information** about the position please contact [Dr Lauren M. Cook](#).

**We look forward to receiving your application.** Please send it through this webpage, any other way of applying will not be considered. A click on the link below will take you directly to the application form.

Applications from employment agencies/personnel consultants are not welcome and will not be considered.

<https://apply.refline.ch/673277/0849/pub/1/index.html>