

# JOSEPH BAZALGETTE

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## EDUCATION

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**University of Vermont**, College of Engineering and Mathematical Sciences  
B.S. Environmental Engineering

Expected: May 2026  
GPA: 3.8

## EXPERIENCE

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**Environmental Engineering Intern**, *Fenstermaker*, Burlington, VT May 2024 - Present

- Helped reduce equipment downtime by 35 percent by setting up a schedule for preventative checks and maintenance on more than 200 water-monitoring instruments at four treatment plants.
- Performed routine water testing and calibration using Hach equipment to ensure full compliance with EPA and state drinking water standards.
- Worked with plant operators to troubleshoot treatment issues in coagulation and filtration systems, solving most urgent issues within the same day.

**Research Assistant**, *Water Quality Lab*, *University of Vermont*, Burlington, VT Jan 2024 - Present

- Built and tested a small-scale biofilter using granular activated carbon to improve removal of contaminants from drinking water.
- Ran common water quality tests (BOD, COD, TSS, DO) and achieved strong removal rates for organic pollutants.
- Reviewed GC-MS and spectrophotometer data to measure contaminant levels and prepare results for presentation.

## PROJECTS

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**Riverbank Erosion Control Study**, Environmental Hydraulics Project Jan 2024 - Apr 2024

- Evaluated erosion risks along a 1.2-mile riverbank segment using field measurements, soil samples, and HEC-RAS water surface profiles.
- Modeled high-flow conditions to estimate erosion depth and identify sections most vulnerable to slope failure.
- Designed stabilization measures including vegetated buffers, rock riprap, and live staking, reducing predicted erosion by 65 percent under 10-year storm flows.

**Sustainable Stormwater Management System**, Senior Design Capstone Sep 2023 - Dec 2023

- Used EPA SWMM to model runoff for 10-year and 100-year storms and size detention and infiltration structures.
- Completed soil testing, field surveys, and water sampling to define site conditions and design needs.
- Completed engineering report with cost estimates, operations plan, and pollutant-reduction calculations showing compliance with state stormwater rules.

**Wastewater Treatment Plant Optimization**, Environmental Lab Jan 2023 - Apr 2023

- Designed an activated sludge treatment system for a town of 25,000 people and met EPA secondary treatment limits.
- Calculated key operating conditions for nutrient removal processes to meet plant discharge goals.

## SKILLS

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- **Modeling:** EPA SWMM, EPANET, HEC-RAS, AERMOD, MODFLOW, GPS Pathfinder Office
- **Design:** AutoCAD Civil 3D, AutoCAD, Microsoft Visio, BioWin