

# MIKE DU BOSE, EIT

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## Education

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Portland State University – Portland, OR

Graduated June 2021

B.S. Civil Engineering with Departmental Honors, Minor in Mathematics | GPA: 3.97

**Societies/Activities:** Civil and Environmental Engineering Department Honors Program, American Society of Civil Engineers, Engineers Without Borders, Engineering & Calculus Teaching Assistant, PCC Cascade Math Club President.

**Relevant Courses:** Numerical Methods for Water Resources Engineering, GIS for Environmental & Engineering Applications, CE-QUAL-W2 Workshop, Ecohydrology, Unit Operations, Water Resource Engineering, Fluid Mechanics, Hydraulics, Spatial Analysis (CAD), Applied Statistics for Scientists & Engineers.

## Relevant Work and Academic Experience

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Research Assistant/Honors Thesis

Dec. 2020 – June 2021

- Modeled a potential fuel spill in the Lower Willamette and Columbia Rivers using CE-QUAL-W2.
- Determined impacts on drinking water using EPA water quality guidelines.
- Compared multiple scenarios, e.g., low flow rate and long spill duration.
- Calculated the constituent decay and volatilization rates assuming a well-mixed batch reactor.

Capstone – Natural Treatment Wetland Denitrification Design

Jan. – June 2021

- Produced an alternatives analysis to mitigate harmful algal blooms in a wastewater treatment wetland.
- Applied engineering principles to design a biochar filter bed and achieve 50% denitrification.
- Prepared an engineer's construction cost estimate.

ASCE PSU Environmental Design Team – 2021 ASCE Regional Competition Winners  
*Team Captain*

Jan. 2020 – June 2021

- Coordinated weekly meetings and delegated action items to team members.
- Calculated layer depth of filtration media using equations from hydraulics, and soil mechanics.
- Constructed models of the water filter design and flow diagrams using AutoCAD.

EPA Campus RainWorks Challenge – Bioswale and Green Wall Design  
*Lead Project Coordinator*

Sept. 2020 – Dec. 2020

- Assembled a multi-disciplinary team to design a green infrastructure demonstration project on campus.
- Optimized workflow using a multi-phase timeline and drafted weekly meeting agendas.
- Calculated the required bioswale volume using relevant design codes.

### Certification:

Civil Engineering EIT – Registered in Oregon #96983EI

## Skills

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- AutoCAD, ArcGIS Pro, CE-QUAL-W2, HEC-RAS, MATLAB, R, EPANET, Leica Total Station operation, Microsoft Office (Word, Excel, PowerPoint).
- Technical writing, communication, problem solving, hydraulic modeling, teamwork, adaptability,

**Interests:** Hiking, camping, traveling, playing music with my band, record collecting, developing vegan recipes building on over a decade of restaurant experience, and homebrewing.