

Strengthening Minnesota businesses by maximizing efficiency and lowering costs through energy, water and waste reduction

INTERNSHIP: Lead a project to optimize nutrient removal in wastewater. (Summer 2020)
COMPANY: Otsego Wastewater Treatment Plant

The Minnesota Technical Assistance Program (MnTAP) is seeking a junior or senior level college student to lead a project focused on implementing and optimizing biological nutrient removal at a Mechanical Wastewater Treatment Facility in Minnesota. The project will involve using wastewater modeling software to model the plant's current operations, and to estimate the nutrient reduction opportunity for modifying operational parameters such as recirculation rates, dissolved oxygen levels, basin sizes, and sludge age. This project will also have an energy efficiency component which will involve laying out opportunities to stagger equipment use to reduce demand, and calculating other energy efficiency opportunities.

The intern will report to MnTAP project staff and collaborate with project partners, including those at the: St. Cloud Nutrient, Energy and Water Recovery Facility; Metropolitan Council Environmental Services (MCES) Metro plant; and the Minnesota Pollution Control Agency (MPCA).

JOB DUTIES:

As part of this project, you will be asked to complete the following tasks:

1. Collect and organize plant initial condition information.
2. Research strategies to improve nutrient removal.
3. Use ASIM software to model plant operations and to identify strategies for improving nutrient removal.
4. Work with the plant staff to test and implement nutrient reduction strategies.
5. Identify and calculate energy and demand savings opportunities in the plant.
6. Manage project tasks, activities, and project documentation effectively.
7. Work professionally and safely.
8. Summarize findings in a detailed final report, including recommended procedures and vendor proposals along with an economic analysis and justification of changes.
9. Present project findings to staff at the Otsego Wastewater Treatment Facility, and at MnTAP hosted public presentation events.

As an intern, you will work at the wastewater facility and report back to MnTAP. The position is full time, 40 hours per week, for three months to start after the conclusion of spring semester or quarter. Pay is \$14/hour, with a lump sum stipend of \$1,000 upon completion of the project deliverables: a final report and presentations. Cumulatively, this equates to \$16.00/hour when averaged over the project. Candidates must have a valid driver license and pass a background check.

QUALIFICATIONS:

- Cumulative GPA of at least 3.0
- Good oral & written communication skills
- A technical academic background
- Troubleshooting skills
- Self-motivated
- Excel and other software skills
- Appropriate majors: *Engineering, environmental or physical sciences and others as applicable*

TO APPLY:

Apply online at:

www.mntap.umn.edu/intern/student_apply.htm

Remember to submit your application form, cover letter, resume, and unofficial transcript.

Cover letters can be addressed to:

Nathan Landwehr, Intern Program Administrator
200 Oak Street SE, Suite 350-1
Minneapolis, MN 55455 • landwehr@umn.edu

MNTAP IS THE HIRING BODY: DO NOT CONTACT THE COMPANY