

Internship: Lead a project focused on optimizing wastewater treatment processes

Company: City of New Prague Wastewater Treatment Facility

The Minnesota Technical Assistance Program (MnTAP) is seeking a junior or senior college student to lead a project focused on improving process-related energy efficiency at the City of New Prague Wastewater Treatment Facility. This position will offer the student: a hands-on experience optimizing wastewater treatment processes, an environment to utilize and expand on knowledge and skills learned during undergraduate education, and the opportunity to interface with wastewater operators, city administrators, equipment vendors, and environmental consulting engineers. Past experience or interest in water and/or wastewater processes is desired. Prior experience in energy use or conservation is preferred, but not required. The intern will primarily work to identify means to optimize and implement energy efficiency strategies for the air scrubbing systems and their associated heating, ventilating, and air conditioning (HVAC) systems. The intern will also work to identify energy savings opportunities through blowers and biologically aerated filter treatment systems, as well as for the biosolids storage blower.

JOB DUTIES:

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

- Perform an overall facility energy footprint (accounting) of major energy uses.
- Understand the facility's current use and operating methods for the air scrubbers and HVAC systems; and the BAF and biosolids blowers, or other energy-intensive applications.
- Quantify savings achievable through optimizing air scrubbing rates and seasonal energy use savings.
- Test means for optimizing airflow through scrubbers that will prove feasibility of reduced air changes and control while ensuring indoor air quality requirements are met.
- Develop a plan for implementing reduced airflow at air scrubbers and HVAC systems.
- Quantify savings achievable through methods identified to optimize BAF and biosolids storage aeration control, facility ventilation, and/or other energy-intensive systems, and
- Evaluate feasibility of methods developed to optimize these systems, and
- Implement energy conservation strategies on these systems.
- Summarize findings in a detailed report, including recommended procedures and/or system changes along with an economic analysis and justification of any changes.
- Present findings to the City and at MnTAP-hosted public presentation events.

As an intern, you will work at the City 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 \$13/hour, with a lump sum stipend of \$1,000 upon completion of the project deliverables: a final report and presentations. Cumulatively, this equates to \$15.00/hour when averaged over the project. Candidates will need to 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.

Applications can be addressed to:

Nathan Landwehr, Intern Program Administrator
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MNTAP IS THE HIRING BODY: DO NOT CONTACT THE COMPANY.