



Sustainability Fellowship **Energy Efficiency in Wastewater Treatment - NH**

Treating municipal wastewater is an energy-intensive endeavor. New Hampshire's Department for Environmental Services (DES) is working on a project to help the state's wastewater treatment facilities (WWTFs) become more energy efficient. The first step in that project is to benchmark the current electricity usage of NH's WWTF's, and to analyze that data to identify trends and opportunities. DES seeks a UNH SI Sustainability Fellow to undertake this analysis.

The project will involve combining WWTF operational data with electricity use data for each of NH's 74 municipally-owned WWTFs, using Excel and, potentially, the EPA Portfolio Manager tool. The Fellow will analyze the electricity use relative to volume of wastewater treated and the organic loading, on a monthly basis, for each facility, going back 3-4 years. Additional data relative to plant performance may be included in the final analysis as well.

Once that data is compiled, the Fellow will develop benchmarking outputs and graphics to: compare the NH WWTFs to each other, as well to available national benchmarks; to select NH WWTFs that would benefit from additional assistance on energy efficiency; and to identify NH WWTFs that might provide assistance to others through a peer-to-peer learning program. The peer-to-peer learning program will be developed during the course of the Fellow's summer project.

This is an opportunity to gain hands-on experience working with a variety of stakeholders in reducing the electric energy consumption of wastewater treatment facilities across New Hampshire—and, because the final product/model will be shared with the US Department of Energy, across the U.S. The Fellow will gain data management experience and familiarity with the EPA Portfolio Manager tool; practice effective communication of data; and work directly with representatives from the EPA, NH Core utilities and municipal wastewater treatment operators.

Location: Concord, NH

Time commitment: 40 hours per week, June 6-August 19, 2016

Compensation: \$6000 stipend

Desired Qualifications:

- Enrollment in an undergraduate or graduate degree program: engineering, energy management, hydrology or related field.
- Strong working knowledge of Microsoft Excel.
- Ability to think creatively, work independently, be organized and self-motivated.
- Strong analytical and communication skills.
- Attention to detail.
- Experience working with wastewater or electric utilities preferred, but not required.

UNHSI Sustainability program eligibility:

Graduate students, exceptional undergraduate students, and recent graduates are eligible. We will encourage, but not require, an academic sponsor or reference for each fellow, and where possible we will ask that course credits are awarded.

Supervision, Training, Mentoring and Evaluation

This fellow will receive day-to-day supervision from Sharon Rivard of the NH Department of Environmental Services, and mentoring and professional development offerings from UNHSI.

Fellows will be expected to participate in three MANDATORY events:

- A three-day, two-night orientation in Durham, NH, June 1-3rd. Lodging and food are provided; Fellows are responsible for any associated travel costs.
- Midterm project presentations to UNHSI staff, faculty and relevant project partners (can be done remotely).
- A summative evaluation and feedback session at the end of their placement.

Apply by February 23rd at <https://www.sustainableunh.unh.edu/sustainability-fellows>