Sustainability Fellowship
Measuring Municipal Carbon & Nitrogen Footprints
City of Dover, NH – Planning & Community Development Department
Dover, NH

Summary:
The City of Dover, NH seeks a Sustainability Fellow to complete its first carbon and nitrogen “footprint” reports, using the new Sustainability Indicator Management and Analysis Platform (SIMAP) tool. SIMAP was developed by the UNH Sustainability Institute to provide campus-based organizations (e.g., colleges and universities) one integrated tool for measuring—and ultimately reducing—both their carbon and nitrogen pollution. This initiative with the City of Dover will serve as a pilot project to inform an adaptation of SIMAP to be tailored for use by communities and municipal governments.

Though there are many similarities between the institutions and municipalities, a city like Dover (population 31,153) offers opportunities for a fellow to develop new measurement and analysis methodology for municipal systems, including public school campuses, energy use and nitrogen inputs associated with large-scale wastewater treatment, large commercial and industrial sources; municipal facilities and infrastructure requiring energy and maintenance, and a large fleet of municipal vehicles. A municipality also differs from a college or university in that its decisions regarding sustainability are influenced by the political will and financial capacity of its elected and appointed leadership and constituents. A fellow will have the opportunity to learn about past decisions and how they have influenced the City’s consumption and impacts, and to propose future changes that are not only most effective at reducing the City’s carbon and nitrogen footprints, but also most likely to be embraced by its decision-makers. Of particular interest to the City are the nitrogen footprints of its wastewater treatment and school food programs. Dover is also currently planning for the installation of solar photovoltaic systems on multiple City properties—particularly the roof of the new Dover High School, where its anticipated impact on carbon and nitrogen emissions would be highly valuable.

Deliverables:
- Baseline carbon and nitrogen footprint calculations for the City of Dover’s municipal operations
- Reports, including recommended goals, to be presented to City leaders, staff, and the general public
- Recommendations for adaptations to the SIMAP methodology and user interface to allow for creation of a version that can support municipal calculations and be aligned with existing “best practices” Greenhouse Gas Protocol’s guidance for municipal and community inventories.
Impact:
This project will provide the City of Dover with the ability to evaluate the impact of potential systemic changes on the city’s overall environmental impact. Working with the City of Dover, through the Planning and Community Development Department, will provide a fellow with valuable insight into the organization and functioning of municipal governments, especially at a time when the City is growing quickly under intense development pressure and its associated demands on City facilities and services.

More broadly, this is an opportunity for a fellow to help adapt SIMAP to a municipal government, creating a tool for integrated carbon and nitrogen pollution management that will become available to municipalities throughout North America, and support municipal decision-making for sustainability outcomes.

Location: City of Dover Planning & Community Development Department, Dover, NH
Time commitment: 40 hours per week, June 4-August 17, 2018
Compensation: $6000 stipend

Desired Qualifications:
- Academic Background: Climate Science, Environmental Sciences, Biology, Chemistry, Mathematics, Engineering, or related fields of study.
- Experience: Familiarity with basic GHG accounting concepts and, ideally, previous experience in calculating carbon and/or nitrogen footprints
- General Skills: Excellent written and oral communication; organized, self-directed worker
- Technical / Specialized Skills: Advanced Excel skills required for use and further development of SIMAP; experience working with other community greenhouse gas calculation tools (e.g. ICLEI’s ClearPath software, the CIRRUS tool, or EPA Local GHG Inventory Tool) a definite plus
- Interests: Public administration and local government, urban planning, community development, energy efficiency and renewable energy sources, food systems, ecology

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 supervision primarily from Elena Piekut, Assistant City Planner, City of Dover Planning & Community Development Department, along with four other planners in the Department, as well as mentoring and extensive professional development offerings from UNHSI.

Fellows will be expected to participate in the following MANDATORY events:
- A three-day, two-night orientation in Durham, NH, May 29-31. Lodging and meals will be provided. A limited number of travel scholarships will be available
to assist with transportation to Durham.

- Weekly webinars during the course of the 10-week fellowship.
- Midterm project presentations to UNHSI staff, faculty and relevant project partners in Durham, NH, July 12. Travel support provided.
- Final project presentations to UNHSI staff, faculty and relevant project partners in Durham, NH, August 10. Travel support provided.

**Apply by February 14** at [www.sustainableunh.unh.edu/sustainability-fellows](http://www.sustainableunh.unh.edu/sustainability-fellows).