

Postdoctoral Position in Watershed Modeling
Starting Spring 2020 at
The Institute for Sustainable Cities at Hunter College, City University of New York
APPLICATION DEADLINE March 7, 2020

The New York City Department of Environmental Protection (NYCDEP) manages a system of 19 interconnected reservoirs that supply drinking water to over 9 million consumers in New York City and surrounding areas. We seek to hire a postdoctoral researcher who will contribute to our efforts to develop and test models that simulate streamflow, and loading of nutrients, sediment, and organic carbon, to our water supply reservoirs. Such watershed models will be a component of NYCDEP's integrated suite of climate, watershed, reservoir, and system operations models. These models are used to investigate the effects of climate change, floods and droughts, land use change, watershed management, and reservoir operations on the NYC water supply.

Hiring will occur through the Institute for Sustainable Cities at Hunter College, City University of New York, which has a contract to support NYCDEP's efforts. Work will involve collaboration with an interdisciplinary team of scientists and engineers, and will also provide opportunities for leadership in specific aspects of the research. The candidate will be based in upstate New York and work with NYCDEP staff on a day to day basis.

Position details:

- Starting date: As soon as a suitable candidate is available.
- End date: The initial appointment will generally be 18 months, although a longer duration may be granted. If good progress is made, extension of the appointment for a period of not less than 12 months may be granted.
- Location: NYCDEP office in Kingston, NY, 100 miles north of NYC in the Hudson Valley region
- This is a full time position with employee benefits, and is open to eligible candidates of any nationality. If necessary, visas can be arranged through the City University of New York.

Key tasks include the following:

- Develop familiarity with NYCDEP's existing watershed models (GWLF and SWAT) that are used to simulate streamflow, nutrients, and sediment.
- Develop familiarity with data to support watershed modeling, including weather, GIS data (soils, land use, DEMs), streamflow and stream water quality.
- Participate in developing methods/models to simulate terrestrial sources and production of organic carbon, loading of organic carbon to downstream reservoirs, and in the application of this extended model to water supply watersheds.
- Application of watershed models to evaluate the impact of climate change, land use change, watershed protection and management programs, and reservoir operations.
- Present work at scientific meetings; publish in peer reviewed journals, and contribute to production of NYCDEP reports.

Preferred qualifications and experience:

- Ph.D. in hydrology, watershed science, geology, water resources, civil or environmental engineering, geography, or a related discipline. Candidates with a Master's degree and strong research achievement will also be considered.
- Experience with modeling of watershed hydrology and water quality is a requirement; specific experience with the Soil and Water Assessment Tool (SWAT) is preferred.
- Experience with modeling of nutrients, and organic carbon cycling and export in forested and agricultural watersheds is preferred.

- Programming experience in Fortran; Python, shell scripting, and/or R.
- Experience in statistical analysis of environmental data.
- Demonstrated ability to communicate research results to scientific community through peer-reviewed papers, conference presentations and reports.
- Ability to work in an interdisciplinary team environment.

Application Instructions:

To apply, send a letter of interest and curriculum vitae to:

Emmet M. Owens
New York City Department of Environmental Protection
71 Smith Avenue
Kingston, NY 12401
eowens@dep.nyc.gov
845-340-7796

Application deadline is MARCH 7, 2020.