Hydrologist

Location: Boulder, Colorado

Overview
The National Ecological Observatory Network (NEON, Inc.) is a nonprofit science corporation dedicated to understanding how changes in climate, land use and invasive species impact ecology. For the next three decades NEON will collect a comprehensive range of ecological data on a continental scale across 20 eco-climatic domains representing US ecosystems. NEON will use cutting edge technology including an airborne observation that will capture images of regional landscapes and vegetation; mobile, relocatable, and fixed data collection sites with automated ground sensors to monitor soil and atmosphere; and trained field crews who will observe and sample populations of diverse organisms and collect soil and water data. A leading edge cyberinfrastructure will calibrate, store and publish this information. The Observatory will be the first of its kind designed to detect and enable forecasting of ecological change at continental scales.

Summary:
The Hydrologist/Geomorphologist will be part of an Aquatic Team that is responsible for developing a national program to assess physical, chemical, and biological changes in streams and lakes over 30 years. The Team will define measurements, document field and lab methods, train personnel, and perform QA/QC in order to produce high quality data products for the research, education, and decision making community. The Hydrologist/Geomorphologist is expected to produce reports and publications of NEON procedures and protocols and is encouraged to collaborate with the research community to investigate continental scale ecology.

Essential Duties and Responsibilities:
- Develop and document data collection procedures for hydrologic data products in freshwater streams and lakes and in groundwater wells.
- Develop and document data collection procedures for stream geomorphology and lake bathymetry mapping.
- Co-develop and document site-specific installation designs and maintenance procedures for in-situ sensors.
- Co-develop subsurface well designs; collaborate with contractors to construct groundwater wells.
- Co-develop detailed sampling designs for stream reaeration and groundwater chemistry.
- Development and implementation of data QA/QC plan.
- Develop training program for field crews.
- Document the scientific rationale for hydrologic and geomorphologic measurements and methods.
- Collaborate with NEON engineers and scientists to define audit sampling procedures.
- Participate in the larger NEON science community, including participating in independent research and collaborations and attending meetings/conferences.

Education:
- PhD in hydrology, geomorphology or related field. Specialization in hydrology and geomorphology of freshwater streams and lakes, or related field with emphasis on biological-chemical-physical linkages of stream and lake ecosystems.

Required Experience:
- 5+ years research experience in hydrology and geomorphology, with emphasis on the impact of the physical environment on biological community structure and diversity.
• Significant field experience working in streams and lakes of North America.
• 2+ years experience installing and maintaining in-situ water chemistry sensors in field conditions.
• Demonstrated experience working in a collaborative scientific and engineering enterprise.
• Demonstrated ability to write technical and scientific documents.

Preferred Experience:
• Working knowledge of stream ecology preferred.
• Knowledge of freshwater chemistry dynamics of streams and lakes preferred.
• Experience designing and installing subsurface wells for research purposes.
• Experience communicating in oral and written formats in a professional environment.
• Experience working with federal and state agencies and NGO’s.

Skills and Abilities:
• Scientific writing and review
• Strong knowledge of statistical design and analyses
• Proficiency in analyses that correlate biological data with abiotic variables and ability to perform such analyses within a geospatial framework
• Travel to domains at least 4x/year

Physical Abilities:
• The candidate may be exposed to conditions in the field, and therefore must be able to traverse uneven ground such as dirt banks, stream beds, and shallow ponds carrying equipment and materials up to 40 lbs.

Apply to www.neoninc.org

NEON Inc. is an Equal Opportunity Employer. Women, Minorities, Veterans and Disabled Persons are encouraged to apply.