POSITION DESCRIPTION

POSITION NAME: Water Quality Scientist

LOCATION: Belle W. Baruch Institute of Coastal Ecology & Forest Science
The Institute is located near Georgetown, SC, approximately 40 miles north of Charleston, SC near Pawleys Island and Litchfield Beach.

ORIGINATING DEPARTMENT: Agricultural & Biological Engineering
Clemson University, Clemson, SC

POSITION DESCRIPTION:

Position is a 12-month, tenure-track faculty appointment with Clemson University as a member of a team of water resources expertise at the Baruch Institute. A PhD is required in a natural sciences program with extensive background in water chemistry, nutrients, metals, field data collection, modeling of biological indicator species, toxicology, and soil physics/chemistry engineering. This position will conduct hydrodynamic assessments of stormwater best management practices, including removal efficiencies focusing on chemical and biological impacts of development. The person will assess sources and fate of stormwater pollutants including nutrients, pesticides, metals, turbidity, bacteria, and suspended solids. Strong training and background in hydrology, natural resources, geosciences, bioscience, hydraulics, soil physics, or related disciplines are preferred. An emerging research program of national prominence involving water quality modeling of near coastal watersheds with emphasis on developing areas is expected. The successful applicant will address quality characteristics of small watershed hydrology and design to mitigate, control, and/or convey flows resulting from storm events and function as a water quality specialist with interests in surface and groundwater hydrology at the local and regional scale.

The individual will study hydrological dynamics via modern process studies and/or modeling approaches in order to describe and predict physical, chemical, and biological effects of surface and subsurface flows from undeveloped, developing and developed sites. Research may include consideration of surface dynamics, surface water – groundwater interactions, and/or land surface – atmosphere interactions, and water quantity implications. Emphasis will be placed on improving currently used technologies as well as developing innovative methods such as low impact development (LID) methods. Experience with site investigation, groundwater flow and solute transport, design and implementation of innovative technologies, monitoring activities, and use of geospatial and computer-assisted software for design and modeling is preferred. Technical responsibilities will include conceptual site modeling and development; quantitative evaluations of groundwater hydraulics; assessing groundwater/surface water interactions; evaluating the fate and transport of groundwater contaminants; performing flow and transport modeling; assessing groundwater geochemistry and natural attenuation; evaluating the biological and chemical processes affecting groundwater contamination; performing statistical analysis; and preparing data presentations and reports.
Since design of stormwater structures requires considerable knowledge of federal, state and local requirements, this individual is expected to have experience with relevant regulations including NPDES requirements, Corps of Engineers regulations, and the S.C. Stormwater and Sediment Control Act. The person in this position should understand the uniqueness of South Carolina coastal areas, their sensitivity, wetland issues, coastal hazards, terrestrial and aquatic ecological systems, and possess a working knowledge of the ecology of southeastern coastal areas.

This candidate will be expected to:
- meet scholarly standards by developing a high-quality research program that meets the standards of periodic peer review, including regularly publishing research results in peer-reviewed literature,
- develop a strong extramural funded program,
- expect affiliation and cooperation with the South Carolina Water Resources Center of the Strom Thurmond Institute on the Clemson University campus,
- collaborate with on-campus, Extension, and stakeholder teams in order to develop outreach programs to disseminate new knowledge as quickly as possible, and
- direct and advise graduate students and eventually have the opportunity to teach at the graduate level.

RANK:   Assistant Professor preferred. A senior appointment at the Associate Professor level may be considered depending on qualifications.

COLLABORATIVE EXPECTATIONS/OPPORTUNITIES:
- Sea Grant
- Forestry & Natural Resources; Agriculture: Soils, Plant Science, Horticulture
- Biological Sciences
- Environmental Engineering and Science; Geology; Civil Engineering
- USDA-ARS, USDA-NRCS, NOAA, EPA
- SC DHEC, SC DNR; Local/County Municipalities
- Construction/Development Industries

APPOINTMENT: 75% Research and 25% Extension/Outreach

Clemson University is committed to affirmative action, equal opportunity, and the diversity of its workforce. "Clemson University does not discriminate against any person or group on the basis of age, color, disability, gender, national origin, race, religion, sexual orientation, or veteran's status." An offer of employment is contingent upon establishment of identity and verification of employment eligibility as required by the Immigration Reform and Control Act of 1986.