From: Gustafson, Dan
Subject: Postdoctoral Opportunity in Stream Restoration

The Smithsonian Environmental Research Center (SERC) has an immediate opening for a Postdoctoral Research Fellow to study the effects of stream restoration on removal of nutrients and suspended sediments from stream water. The restoration approach, Regenerative Stormwater Conveyance (RSC), involves filling deeply eroded stream channels with a mixture of sand and organic matter and placing rock weirs across the stream channel at intervals to create a series of pools. The Postdoctoral Fellow will investigate the effects of three RSCs by assisting with the ongoing research and with synthesizing data on nitrogen and phosphorus fluxes through the RSCs.

The goal of the research is to assess the ability of RSCs to modulate stream flow and remove nitrogen, phosphorus and suspended sediments from stream water under a wide range of flow conditions. The research uses a combination of in-stream sensors and automated sampling to measure flows of stream water, suspended sediments, nitrogen, phosphorus, and organic matter through the RSCs. Groundwater chemistry and hydrology are also measured at one RSC on SERC property. Existing data extend before the restorations at two sites and include measurements of control streams without RSCs for comparison. This presents an ideal opportunity to learn more about the benefits and design considerations of a restoration method that is widely accepted but not well studied. It also presents an opportunity increase basic knowledge about of how stream biogeochemistry responds to changes in geomorphology and organic matter inputs.

The Fellowship is initially funded for 1 year with possibility of extension. The stipend is $56,000/year including health insurance allowance. The Fellow will work closely with Dr. Thomas Jordan and will be based at the campus of the Smithsonian Environmental Research Center (www.serc.si.edu), which has 100+ full-time employees and is set in a 1,072 hectare field site within commuting distance of Annapolis, MD and Washington, DC.

Applicants should have a Ph.D. in environmental science or engineering, peer-reviewed publications, and professional presentations. Applicants should also have knowledge of hydrology and the biogeochemistry of N and P. Skills in data management, analysis and modeling, as well as analytical chemistry and the use of automated systems for *in situ* sensing and water sampling would also be desirable.

For best consideration, email a letter of application, full CV with publications list, graduate and undergraduate transcripts (unofficial copies are fine), and contact information for three references (with telephone numbers and e-mail addresses) to Dr. Thomas Jordan (jordanth@si.edu), SERC, 647 Contees Wharf Road, Edgewater, MD 21037. For more information on SERC visit http://www.serc.si.edu. EOE.