

From: Gustafson, Dan
Subject: Postdoctoral Fellowship in Stream Restoration Studies

POSTDOCTORAL OPPORTUNITY IN STREAM RESTORATION STUDIES (review begins 1 December 2016, open until filled)

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. We are currently monitoring three restorations using Regenerative Stormwater Conveyances (RSCs). The RSC approach 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. We are particularly interested in 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. We use a combination of in-stream sensors and automated sampling to measure flow of stream water, suspended sediments, nitrogen, phosphorus, and organic matter through the RSCs. We are also monitoring groundwater chemistry and hydrology at one RSC on SERC property. We have data extending before the restorations at two sites and are monitoring 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.

The fellow will investigate the effects of the RSCs by assisting with the ongoing research and synthesizing data on nitrogen and phosphorus fluxes through the RSCs. 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. The position is initially funded for 1 year with possibility of extension. The stipend is \$48,000/year plus 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.

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) by November 30, 2016 to Dr. Thomas Jordan (jordanth@si.edu), SERC, 647 Contees Wharf Road, Edgewater, MD 21037-0028. For more information on SERC visit <http://www.serc.si.edu>. EOE.