

UTC Project Information	
Project Title	Cost-Effective Use of Sustainable Cementitious Materials as Reactive Filter Media (Phase I)
University	Washington State University
Principal Investigator	Xianming Shi
PI Contact Information	P. O. Box 642910, Washington State University Pullman, WA 99164-2910 Phone: (509) 335-7088; Fax: (509) 335-7632 email: xianming.shi@wsu.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	\$50,000 by CESTiCC; \$25,000 by Washington State University
Total Project Cost	\$75,000
Agency ID or Contract Number	
Start and End Dates	Nov. 1, 2015 – Oct. 31, 2016
Brief Description of Research Project	The primary objectives of this project are to: (1) evaluate the effectiveness of crushed fines from recycled concrete (CFRCs) followed by nanoclay-modified cement paste powder (NMCPP) as reactive filter media to treat synthetic wastewater with high levels of chlorides and typical levels of total phosphorus, total nitrogen and metals; and (2) unravel the mechanisms underlying contaminant removal by these engineered sorbents.
Describe Implementation of Research Outcomes (or why not implemented)  Place Any Photos Here	This project will produce at least one paper for presentation at TRB annual meeting and publication in a peer-reviewed journal. One patent application may be filed out of this project. Building on the success of this research, field operational tests will be conducted as part of a follow-up study. The team will work closely with local communities/agencies to field test the new “greener” and recyclable filter media. <i>Prospective users of the research product</i> include: highway agencies, engineers, and other stakeholders related to the management of chloride-laden stormwater runoff.
Impacts/Benefit of Implementation (actual, not anticipated)	N/A
Web Links <ul style="list-style-type: none"> <li>• Reports</li> <li>• Project website</li> </ul>	