

EBS/CMOP Undergraduate Intern Mentoring Opportunity

Project Title: Transport of micrometer diameter NZVI through granular media

Context for Project: Specifically, this project relates to groundwater remediation, however, it has broad applicability to the general topic of filtration of particles during transport through porous media.

Brief Description. The project will involve a sequence of experiments in which a suite of particles are transported through a laboratory column filled with granular media. Classic filtration theory will be applied to the transport and deposition of the particles

Proposed Outcomes/Broader Impact: Particle transport through granular media is important not only in a groundwater remediation context, but has important implications for the ecology of sediments (streams, estuaries, rivers) and other areas including transport of pathogens to public drinking water supplies

Proposed timeline (within a 10 week span): Experimental work for this project can begin immediately, and will involve characterization of the fluids to be used in the experiments. Transport experiments can begin in the first week or two of the project. Each experiment will be 8 hours or less in duration, so it should be possible to complete a comprehensive set of experiments within 8 weeks.