CLOGGING-INDUCED FLOW AND CHEMICAL TRANSPORT SIMULATION IN RIVERBANK FILTRATION SYSTEMS

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Abstract: Riverbank filtration is a low cost treatment technology which is effective in removing various chemical, and biological contaminants from the surface water. In the United States, utilities that employ horizontal collector wells, have reported clogging of the riverbed in vicinity of the wells, particularly around the laterals that go toward the river. In this paper, we show the impact of clogging and associated reduction in leakage on flow and transport simulations.

Key words: clogging, riverbank filtration, transport, contaminant, atrazine, nitrate