USGS

WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2002CA1B

Title: Fate of viruses, endocrine disrupters, and nitrogen in non-conventional onsite wastewater treatment processes: a technical and economic analysis

Project Type: Research

Focus Categories: Waste Water, Treatment, Nitrate Contamination

Keywords: decentralized wastewater management, viruses, nitrate, endocrine disrupters, membrane & depth filtration, economic analysis

Start Date: 03/01/2002

End Date: 02/28/2003

Federal Funds: $29,347

Non-Federal Matching Funds: $29,504

Congressional District: 43

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Abstract

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This project is one of four to be submitted by the California Center to receive a portion of the allocation.

California recently passed a bill requiring that by January 1, 2004, statewide regulations for onsite wastewater systems must be adopted. The conventional design of onsite systems is no longer adequate for key water contaminants including nitrogen, viruses, and endocrine disrupters. The biological removal of readily oxidizable contaminants by intermittent packed bed filtration and the exclusion of longer chained or biorefractory organic molecules by ultrafiltration integrated in a single treatment system may provide a reliable means of effective onsite wastewater management. This research will study the fate of viruses, endocrine disrupters and provide a technical and economic analysis of a decentralized wastewater treatment system. The results obtained will have potential ramifications in the areas of onsite wastewater treatment, onsite wastewater reuse/recycling, and decentralized wastewater management at a critical time in regulation and policy making in California.