WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: WY2021

Title: Field Evaluation of the Fate of Wastewater Components from Septic Systems

Focus Categories: Nitrate Contamination, None

Keywords: Wastewater treatment, Nitrogen, Groundwater quality

Start Date: 03/01/2001

End Date: 02/28/2002

Federal Funds: $5,500

Non-Federal Matching Funds: $13,145

Congressional District: 1

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Abstract

Community subdivisions and rural areas are often characterized by a single community or individual water wells and individual septic sanitary systems. The proximity of the water supply to the community's septic tank leach fields creates a concern that contaminants may be transported from the waste disposal system to the water supply aquifer. Of particular concern is the fate of nitrogen compounds, such as ammonia and nitrates, and the fate of microorganisms, particularly pathogens.

In recent years, septic system modifications have been proposed to include reactive zones to minimize nitrate contamination of ground waters. The proposed study is expected to furnish an evaluation of the effectiveness of septic system reactive zones in controlling bacterial and nutrient contamination (nitrogen compounds) from leach fields. This study is already being supported through federal 319 funds, and only supplemental funding is requested here to address development of an additional monitored field site representative of the rural ranchette area in the vicinity of either Cheyenne or Laramie.