

Title: Groundwater Survey of Bacterial Contamination Near Rapid Infiltration Wastewater Treatment System (Study No. 24)

Investigators: Principal Investigator

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Objectives: To develop a methodology for sampling monitoring wells for bacterial contaminants and to determine whether rapid infiltration wastewater municipal land disposal systems are causing bacterial contamination of groundwater.

Background/Need: A previous investigation identified numerous cases of bacterial contamination of groundwater near rapid infiltration systems. This study was initiated to verify the contamination and identify the source of the problem.

Methods: Samples were collected from monitoring wells at rapid infiltration wastewater treatment facilities located throughout Wisconsin. Monitoring wells were disinfected with chlorine and bailed until free of chlorine to insure that the bacterial population tested was representative of that in the actual groundwater. Samples were then tested for the presence of bacterial indicators of sewage pollution.

Results: All samples tested negative for bacterial contamination, except one site which was considered insignificant due to an artificial wetland in part of the dispersal area.

Conclusions: Investigators concluded that properly designed land disposal wastewater systems in Wisconsin are causing no measurable impact on the bacterial quality of groundwater. The disinfection bailing method technique for bacteriological examination of monitoring wells appears to be a valid environmental evaluation tool.

Recommendations/Implications: Investigators suggest occasional monitoring of land disposal systems to insure continued proper operation.

Availability of Report: This report is available for viewing and loan at:

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