



WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2004NY51B

Title: Assessing nitrate-nitrogen in surface and groundwater in eastern Wyoming County, NY

Project Type: Research

Focus Categories: Non Point Pollution, Groundwater, Nitrate Contamination

Keywords: Nonpoint pollution; Groundwater; Drinking water; Nitrate-nitrogen; Agriculture; Nutrient management

Start Date: 03/01/2004

End Date: 02/28/2005

Federal Funds Requested: \$0

Non-Federal Matching Funds Requested: \$25,709

Congressional District: 26

Principal Investigators:

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Abstract

High nitrate-nitrogen concentrations in groundwater supplying private drinking water supplies have been a concern to Wyoming County, NY, residents for over a decade. A county-wide sampling of private drinking water supplies carried out in 1988-1989 to establish baseline data found concentrations ranging from <0.1 to 40 mg/l with 23 of 206 samples exceeding the 10 mg/l maximum contaminant level (MCL) established by the Safe Drinking Water Act. The majority of samples exceeding the MCL occurred at farm sites in Eastern Wyoming County where intensive agriculture (dairy farming) is the major land use. Farmers and other rural residents in the area remain concerned about nitrates and are interested in determining whether the implementation of nutrient management plans (NMP) is having an effect on reducing or curtailing nitrate levels in their water supplies or whether additional management measures are needed. This work will determine the current nitrate-nitrogen concentrations in surface and groundwater supplies in an area of Eastern Wyoming County, and will compare the groundwater results to the 1988-1989 data. The goal is to determine the trend in nitrate-nitrogen concentrations in

groundwater and to utilize the information in state/regional nutrient management/water quality educational programs. Approximately twenty-five sites where groundwater is used for drinking water will be monitored where a significant number of sites exceeded the MCL for nitrate-nitrogen in previous testing. The specific objectives are to: 1) monitor surface and groundwater supplies for nitrate-nitrogen concentrations; 2) collate and compare new sample data with previous sampling results; 3) conduct detailed site evaluations and well pump tests; and 4) develop and carry-out educational sessions to disseminate the information.