



WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2003ME18B

Title: Nitrate Mobility in Shallow Groundwater Near Biosolids Stockpiles

Project Type: Research

Focus Categories: Agriculture, Nitrate Contamination

Keywords: Nitrogen, Sludge, Agriculture, Groundwater Quality

Start Date: 03/01/2003

End Date: 02/28/2004

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Matching Funds: \$59220.00

Congressional District:2

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Abstract: Nitrate loss from the stockpiling of biosolids directly on the ground poses a potential threat to groundwater quality. As of October 2002, the State of Maine limits stockpiling to soils with low C-horizon permeabilities. These soils are typically till-derived soils with perched water tables. We propose to quantify the movement of nitrate through this type of soil into groundwater at a site meeting the State of Maine field stockpiling soil criteria. In addition, this experiment will ascertain if the soil characteristics adequately protect groundwater quality. This work will be part of a larger study of stockpile leachate production under ambient conditions. This pre-existing project will provide mass loading data so that we will have a unique opportunity with good control of leachate composition, as well as vadose zone water and groundwater chemistry. This study will complement on-going and externally funded biosolids research being conducted at the University of Maine, as well as, complement field studies conducted by others in more permeable soils.

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