

Research Projects 1996-2006

1996

Effectiveness of a Constructed Buffer Strip in Capturing Nitrogen in the Midwestern Agricultural Landscape <http://water.usgs.gov/wri/96grants/ncr15ia.pdf>

1997

Enhancing Abiotic Degradation of Trichloroethylene with Bimetals
<http://water.usgs.gov/wri/97grants/ia97ncr2.pdf>

Watershed Level Approach to Siting Wetlands for Hydrologic and Water Quality Functions
<http://water.usgs.gov/wri/97grants/ia97ncr1.pdf>

1998

Treatment of Nitrate-Contaminated Groundwater Using FE(0) and Autotrophic Denitrification
<http://water.usgs.gov/wri/98grants/Iowa.pdf>

1999

Field Assessment of Groundwater Quality beneath Cracking Soil with Surface-Applied Hog Manure
<http://water.usgs.gov/wri/00grants/99pdfdocs/Iowa.pdf>

Pilot Study of Bio-markers for Evaluation of Water Quality in Iowa Streams
<http://water.usgs.gov/wri/99projects/state/Iowa2.html>

A prediction system for transport and fate of toxic substances in surface waters
<http://water.usgs.gov/wri/99projects/state/Iowa3.html>

2000

Field Assessment of Groundwater Quality beneath Cracking Soil with Surface- Applied Hog Manure
<http://water.usgs.gov/wri/00grants/IAhog.html>

Occurrence and Formation of Nitrosamines in Drinking Water Distribution Systems
<http://water.usgs.gov/wri/00grants/IANitrosamines.html>

Microcystin-LR: a potential contaminant of concern for Iowa surface waters
<http://water.usgs.gov/wri/00grants/IASurface.html>

A prediction system for transport and fate of toxic substances in surface waters
<http://water.usgs.gov/wri/00grants/IAtoxic.html>

Effect of Liquid Swine Manure Application to Water Quality from Soil Infiltration Areas and Wetlands
<http://water.usgs.gov/wri/00grants/IAwetlands.html>

2001

Complementary Investigations for Implementation of Remote, Non-Contact Measurements of Stream flow in Riverine Environment

<http://water.usgs.gov/wrri/01grants/national/IA1021.pdf>

Effects of Grazing Management on Sediment and Phosphorus Losses from Pastures

<http://water.usgs.gov/wrri/01grants/IA1221.html>

Effect of Swine Waste Effluent Field Application on Tn916 Content of Surface Waters

<http://water.usgs.gov/wrri/01grants/IA1241.html>

Predicting Sorption, Mobility, Accumulation, and Degradation Potential of Antibiotics in Iowa's Soil/Water Environment

<http://water.usgs.gov/wrri/01grants/IA1261.html>

Estimation of the Nutrient Load to Clear Lake from Groundwater Using Analytic Element and Parameter Estimation Models

<http://water.usgs.gov/wrri/01grants/IA1521.html>

Modeling, GIS, and Technology Transfer in Support of TMDL Development and Implementation in Iowa

<http://water.usgs.gov/wrri/01grants/IA1542.html>

Occurrence and Formation of Nitrosamines in Drinking Water Distribution Systems

<http://water.usgs.gov/wrri/01grants/IA1601.html>

Effect of Liquid Swine Manure Application on Water Quality from Soil Infiltration Areas and Wetlands

<http://water.usgs.gov/wrri/01grants/IA1641.html>

Evaluating the Effectiveness of Restored Wetlands for Reducing Nutrient Losses from Agricultural Watersheds

<http://water.usgs.gov/wrri/01grants/IA1681.html>

2002

Relationship of Nitroso Compound Formation Potential to Drinking Source Water Quality and Organic Nitrogen Precursor Source Characteristics

<http://water.usgs.gov/wrri/02grants/national/2002IA16G.html>

An Integrated Immunological-GIS Approach for Bio-monitoring of Ecological Impacts of Swine Manure Pollutants in Streams

<http://water.usgs.gov/wrri/02grants/national/2002IA25G.html>

Modeling, GIS, and Technology Transfer in Support of TMDL Development and Implementation in Iowa

<http://water.usgs.gov/wrri/02grants/2002IA1B.html>

Predicting sorption, mobility, accumulation, and degradation potential of antibiotics in Iowa's soil/water environment

<http://water.usgs.gov/wrri/02grants/2002IA4B.html>

Effects of grazing management on sediment and phosphorus losses from pastures

<http://water.usgs.gov/wrri/02grants/2002IA7B.html>

Evaluating the effectiveness of restored wetlands for reducing nutrient losses for agricultural watersheds

<http://water.usgs.gov/wrri/02grants/2002IA9B.html>

Fate and transfer of antibiotic-resistance genes excreted by farm animals

<http://water.usgs.gov/wrri/02grants/2002IA10B.html>

2003

Tracing Sediment Sources in Eastern Iowa by Using Stable Carbon and Nitrogen Isotopes: An Exploratory Research

http://water.usgs.gov/wrri/02-03grants_new/2003IA35B.html

Veterinary antibiotics: Transport to and degradation in surface water

http://water.usgs.gov/wrri/02-03grants_new/2003IA36B.html

Fate of Veterinary Antibiotics in Manure Lagoons

http://water.usgs.gov/wrri/02-03grants_new/2003IA37B.html

Effects of Grazing Management on Sediment and Phosphorus Losses from Pastures

http://water.usgs.gov/wrri/02-03grants_new/2003IA38B.html

Sequestration of phosphorus with iron mine tailings

http://water.usgs.gov/wrri/02-03grants_new/2003IA39B.html

Water Quality, Nutrient Loading and Mosquito Production in Northeastern Iowa

http://water.usgs.gov/wrri/02-03grants_new/2003IA40B.html

Fate and Transfer of Antibiotic-Resistance Genes Excreted by Farm Animals

http://water.usgs.gov/wrri/02-03grants_new/2003IA49B.html

Spatial and temporal patterns in precipitation and dry-fall deposition of Nitrogen and Phosphorus in Iowa: implications for nutrient transport and water quality

http://water.usgs.gov/wrri/02-03grants_new/2003IA59B.html

2004

Fate of Veterinary Antibiotics in Manure Lagoons

<http://water.usgs.gov/wrri/04grants/2003IA37B.html>

Sequestration of phosphorus with iron mine tailings

<http://water.usgs.gov/wrri/04grants/2003IA39B.html>

Identification of Relationships between Soil Phosphorus and Phosphorus Loss Through Tile Drainage to Improve the Subsurface Drainage Component of the Iowa Phosphorus Index

<http://water.usgs.gov/wri/04grants/2004IA62B.html>

Vegetative Filter Education and Assessment in the State of Iowa

<http://water.usgs.gov/wri/04grants/2004IA63B.html>

Hydrologic Modeling of Subsurface Drainage for Predicting Drainage Outflow

<http://water.usgs.gov/wri/04grants/2004IA64B.html>

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Improving water quality in Iowa rivers: cost-benefit analysis of adopting new conservation practices and changing agricultural land use

<http://water.usgs.gov/wri/05grants/2005IA79B.html>

Sensors for CyberEngineering: Monitoring and Modeling the Iowa River for Nutrients and Sediments

<http://water.usgs.gov/wri/05grants/2005IA81B.html>

2006 (links n/a)

Impact of Swine Manure Application on Phosphorus, NO₃-N, Bacteria, and Antibiotics Concentrations in Surface Runoff and Subsurface Drainage Water

Improving water quality in Iowa rivers: cost-benefit analysis of adopting new conservation practices and changing agricultural land use

Sensors for CyberEngineering: Monitoring and Modeling the Iowa River for Nutrients and Sediments