

CEAP RELEVANT RESEARCH WATERSHED STUDY

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| Name of Project Use of a Multi-Isotope Approach for Tracing Sources of Contaminants to Animal Feeding Operations | Location (State, River, HUC) Farms in southeastern U.S. (U.S. Environmental Protection Agency, Region 4) |
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| Principal Investigator (Name, contact info) Carol Kendall, U.S. Geological Survey (650) 329-3576, ckendall@usgs.gov | Website project is ongoing |
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| Purpose of Project (Goals and Objectives) Demonstrate the use of multiple isotopes to distinguish sources of nitrate from different types of animal waste using samples from the southeastern United States. |
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| Description of Project (Landscape, Models, Practices) This project is in collaboration with Steve Hutchins (EPA-GWERD) and Lee Thomas (EPA Region 4). EPA will collect samples and ship them to USGS for analysis. USGS will analyze samples, and provide data and interpretation of results in site reports. EPA Region 4 will prepare a further reports and, contingent on funding, and final report and guidance document will be prepared. Strict quality assurance practices will be followed. Various isotopic tracers will be analyzed and used to supplement chemical and hydrologic information about: 1) carbon, nitrogen, phosphorus, and sulfur in animal feeds and fertilizers; 2) the types and amounts of feed additives and detergents; 3) solids in barns and lagoons; 4) types and sources of organic matter and degradation; and 5) sources and amounts of ammonia volatilization. |
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