Impact of Onsite Sewage Disposal Systems on surface water quality in Hospelika Creek Watershed, Alabama. (A05-fleming142552-Poster)

Authors:

- S.G.Fleming - *Auburn University*
- J.N.Shaw - *Auburn University*
- C.W.Wood - *Auburn University*
- Y.Feng - *Auburn University*
- J.E.Hairston - *Auburn University*
- B.H.Wood - *Auburn University*

Abstract:

Leachate from onsite sewage disposal systems (OSDS) is commonly reported as a NPS source. The Hospelika Creek watershed (267 ha) in east-central Alabama is an impacted watershed possibly due to OSDS failure (and other terrestrial factors) induced by poor soils, improper construction and system installation practices, and high system density. Soils in this area have developed from fluvio-marine sediments and are predominately moderately well drained Ultisols with slowly permeable subsoils. Samples collected monthly for a year along Hospelika Creek were analyzed for metals, BOD, P, N, and fecal coliform. Land use cover was developed using remote sensing data (LANDSAT and digital ortho-photography), terrain attributes were derived from DEMs, and soils were digitized from the published soil survey report. Fecal coliform concentrations were observed to be over the EPA standard for some observations, while BOD ranged from 0.1 to 5.2 ppm. Nitrate and ammonium concentrations were typically less than 2 ppm. Total soluble P concentrations ranged from 0.01 to 0.12 ppm. Water quality parameters will be related to terrain attributes, soils, and land use within a GIS.

Corresponding Author Information:

Staci Fleming
Auburn University
240 Funchess Hall
Auburn, AL 36849

phone: 334-844-3940
fax: 334-844-3945
e-mail: flemisg@auburn.edu

Presentation Information:

Presentation Date: Monday, November 11, 2002
Presentation Time: 2:00-4:00 pm

Poster Board Number: 330

Keywords:
Onsite Sewage Disposal System, GIS, water quality