



## USDA-CSREES 2005 National Water Quality Conference

### Hydrologically Sensitive Areas: Developing Education and Extension Resources

*Abstract: Surface runoff is an important factor in the transport of nutrients and contaminants from manure and other surface-applied wastes. Identifying areas most prone to generating runoff (hydrologically sensitive areas), and restricting or avoiding land application of wastes in these areas, may substantially reduce pollutant loadings to streams and lakes. The identification of runoff producing areas is not well understood and difficult to implement at the field and landscape scale.*

*Objectives: To prepare an array of educational and extension web-based resources to facilitate the identification of hydrologically sensitive areas.*

*Methods: Simulation variable source area hydrologic models will be used to generate topographic indices of high probability runoff generating areas. These will be developed in an interactive and GIS based web site for various end-user audiences. Stakeholders are involved in developing the most useful content and in evaluating the utility of the web site.*

*Partnerships: The project involves collaboration with several universities; and with federal, state, and local partnerships addressing problems of the New York City water supply reservoirs.*

*Resources: A USDA National Integrated Water Quality (406) grant*

*Integration of Research, Teaching, and Extension: Numerous students have been involved with the hydrologic research and model development and in developing and posting of resource materials for the web site. Other stakeholders have been involved to improve content. Workshops are being planned for extension and conservation educators, and for certified crop advisors and nutrient management planners.*

*Results: The general informational web site on variable source area hydrology is at: <<http://www.bee.cornell.edu/swlab/vsa/index.htm>>*

*An on-line GIS web-based tool for identifying hydrologically sensitive areas is currently available for planners, extension personnel, farmers, etc. in Delaware County, NY. The planning tool (still a work in progress) offers zoom features to get down to farm and field scale. See:*

*<<http://polarbear.css.cornell.edu/saturation/viewer.htm>>*

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