

## BACKGROUND

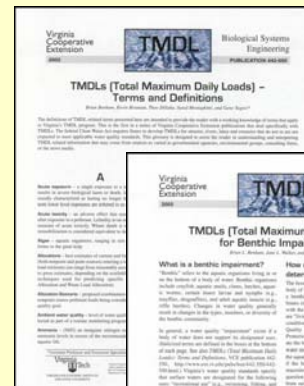
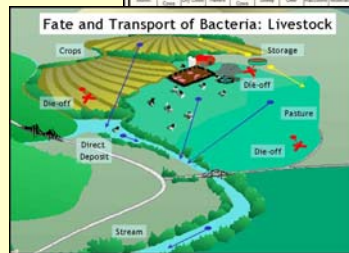
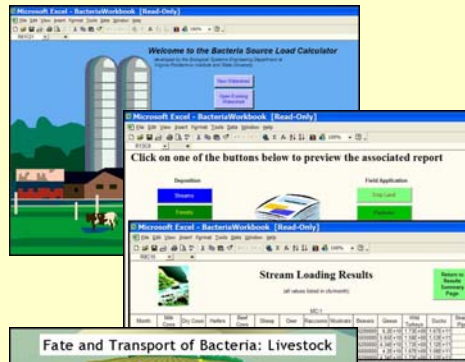
Water quality has gained attention since passage of the 1972 Clean Water Act. The persistence of water quality problems after issuance of point source regulations has directed attention to nonpoint sources of pollution. A watershed management approach to water quality improvement is needed to effectively mitigate these sources of pollution. The Total Maximum Daily Load (TMDL) program is a watershed management approach required by the Clean Water Act that integrates watershed planning with water quality assessment and protection. The Center for TMDL and Watershed Studies strives to be at the forefront of watershed management- and TMDL-related research, outreach, and education.

## OBJECTIVES

- ◆ Improve the science and procedures used to develop, evaluate, and implement TMDLs and similar watershed planning endeavors
- ◆ Provide training in the development and implementation of accurate, effective, achievable TMDLs
- ◆ Facilitate participation in the TMDL process by increasing awareness and understanding of NPS pollution and related water quality issues

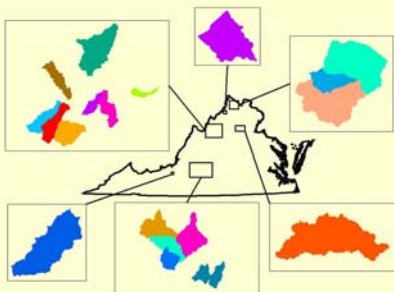
## OUTREACH AND EDUCATION

- ◆ Conducted Continuing Professional Development workshops for scientists and practicing engineers
- ◆ Conducted hands-on modeling workshops for state agency TMDL program managers
- ◆ Developed a graduate level TMDL course
- ◆ Developed software to facilitate data development for modeling studies
- ◆ Conducted more than 80 public meetings associated with TMDL development and implementation
- ◆ Developed two watershed management courses for summer high school scholar internship program
- ◆ Conducted TMDL development workshops for consultants, state and local government, stakeholders
- ◆ Mentored engineering consulting firms
- ◆ Developed TMDL-specific extension publications



## WATERSHED PLANNING EXPERTISE

- ◆ Developed 25 TMDLs, 16 more underway
- ◆ Actively developing TMDL Implementation Plans
- ◆ Active on state agency Advisory Boards
- ◆ Developed "Standards of Practice" for TMDL development that have been adopted by the state



Watershed Locations

## RESEARCH

- ◆ Investigating bacteria fate and transport
- ◆ Examining the relative strengths of different models
- ◆ Developing objective criteria that can be used to evaluate the quality of TMDL Implementation Plans
- ◆ Presented and published more than a dozen TMDL related papers



The Center, is committed to conduct interdisciplinary research, teaching, and outreach to improve the integrity of the Nation's waters and watersheds by advancing the science, tools, and expertise available for developing, evaluating, and implementing watershed planning and management processes.

[www.tmdl.net](http://www.tmdl.net)