



Title: Integrated Pollution Source Inventory (IPSI) in Pond Creek Watershed

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Organization: Univ. of Tennessee Agricultural Extension Service

State: TN **Region:** Southern

Year of Funding:

Theme: Watershed Management

Situation: Pond Creek is an agricultural watershed; small dairy and beef cow-calf farms predominate. It is on the state 303(d) list because of silt, pathogens and nutrients from livestock operations. Pond Creek is a leading candidate for an agricultural TMDL, the first in the state.

Objectives: The goal is to implement phased, targeted improvement efforts to remove the watershed for the 303(d) list. Objectives are: 1. Inventory pollution sources. 2. Develop and implement nutrient management plans. 3. Monitor water quality. 4. Assess economic and environmental effectiveness of BMPs. 5. Educate stakeholders and others about BMPs and their benefits. This presentation will report on using aerial infrared photography to inventory the watershed (IPSI).

Methods: The Tennessee Valley Authority (TVA) obtained infrared photography in March 2002. TVA specialists interpreted the photos and created a GIS database. These data and pollutant load models are being used to target efforts. A coordinator has been hired to work with partners and meet project objectives. NMPs are being developed and implemented.

Partnerships: TVA-IPSI and coordinator. TN Dept. of Agriculture- IPSI development and outreach. EPA- financial support of coordinator and project implementation. TN Dept. of Environment and Conservation, NRCS and FSA- staff support

Research: Initial monitoring involved research. Research to (1) investigate sources and movement of bacteria from livestock operations to watercourses and (2) assess the farm-level economics of BMP implementation is on going. Data and results will be used in farm business management and other on-campus courses.

Resources: TVA funded photography and coordinator's salary. TDA funded IPSI interpretation and outreach. EPA funded initial monitoring, coordinator salary and implementation. TDEC, NRCS, and FSA- staff time and BMP implementation support.

Results: A stakeholder meeting to present monitoring results has been held. IPSI analysis is complete; outreach is on-going using a watershed newsletter, meetings and one-on-one contacts NMPs are being developed. Monitoring continues. A field day is planned.



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