

Enlisting Landowners in Water Conservation

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Abstract

In an attempt to reach landowners using a more practical means of media, The University of Tennessee Agricultural Extension Service has developed two highly successful water quality publications. The first publication is a handbook entitled “Conservation Practices for the Farms and Forests of Tennessee.” It describes 51 best management practices (BMPs), with full-color pictures of each practice; description of the practice; water quality benefits; landowner benefits; considerations; complementing practices; maintenance; and costs.

The handbook is not a technical manual. Rather, it is an attractive, easy-to-understand book designed to introduce readers to BMPs; why they should be considered; and direction when they choose to implement practices. This is an excellent example of how to reach those who are uncertain about BMPs or why they should consider implementing them.

The second publication is a BMP calendar developed for the Pond Creek watershed in East Tennessee. It was developed as part of a pilot project, designed to introduce landowners in the watershed to BMPs and to inspire them to make any necessary changes. Each month features a BMP that addresses major sources of ag-related contaminants in the watershed with a picture of the practice, a description of what it is, what it can do for them, and water quality impacts. By combining a calendar with BMPs, landowners are exposed to the concepts each time they glance at the calendar, and in a positive, non-threatening way.

Handbook

Initial contacts with landowners about ways to protect and improve water quality can be handicapped by their lack of familiarity with best management practices (BMPs). To help overcome this barrier, The University of Tennessee Agricultural Extension Service

(UTAES) contracted with The Tennessee Department of Agriculture (TDA) to produce a handbook entitled “Conservation Practices for the Farms and Forests of Tennessee.”¹

A team of UTAES faculty, in consultation with TDA and the Natural Resources Conservation Service (NRCS), identified 51 key BMPs for Tennessee.² Each BMP is described with full-color pictures of the practice; a written description of the practice; a discussion of how the practice protects and improves water quality; an outline of key landowner benefits; a list of complementing practices; maintenance considerations; costs; and other considerations, such as cost-share eligibility.

The handbook is not designed to be a technical manual. The goal was to create an attractive, easy-to-understand publication to introduce readers to BMPs; why they should be considered; and how to incorporate them into a farm or forest operation. It provides a conversation starter to use with landowners who are not familiar with BMPs or unsure why they should consider implementing them.

A “further information” section lists each county Extension and soil conservation district office, including address and phone number. Contact information for state and federal natural resource agencies and organizations is also included in this section. Readers, thus, have a ready reference to sources of additional information and assistance.

Appropriate Extension faculty specialists developed the information in this handbook to ensure transfer of current, optimal instruction per practice. Photos to illustrate the practices were taken across the state specifically for the handbook. TDA and NRCS also reviewed the draft materials for technical accuracy and completeness. Finally, materials were edited by a communications specialist for consistency in presentation and ease of understanding.

Twenty thousand handbooks were printed at an approximate cost of \$5.60 each. An initial distribution of 100 was made to each of the 95 county Extension offices and Soil Conservation District offices in the state.

The handbooks were distributed in 2001, and have proven to be popular and useful according to reports from across the state. Few copies remain in inventory; funds for a second printing are being sought. Anecdotal reports from the counties indicate the handbook is an effective way to illustrate practices and launch discussions of incorporating BMPs with landowners and their families.

Pond Creek Watershed Calendar

In an extension of the handbook, a BMP calendar was developed as part of a pilot watershed project in Pond Creek (HUC: TN06010202013).

The major sources of ag-related contaminants in the watershed were identified by infrared aerial photography. Twelve BMPs that address these problems were then

identified. Each month includes a picture of a practice, and a description including landowner benefits and the effects on water quality.³

Two thousand full-color calendars were printed at a cost of approximately \$4.20 each. Calendars were hand-delivered to farm families in the watershed, providing an opportunity to introduce them to the project and discuss watershed issues one-on-one. Calendars were also distributed to agribusinesses, local agencies and organizations, and the general public in the watershed.

Community involvement also included several public meetings within the watershed to discuss the pilot project, impacts of agriculture on water quality, and BMPs. In addition, a manure management field day on a dairy just across the watershed divide involved many members of the Pond Creek community.

The full-color calendars are eye-catching and tended to be retained and used. Many were hung in dairy barns; employees as well as the farm families could then see how practices like stream crossings and heavy use areas can improve working conditions.

Currently, six of the twelve BMPs have been implemented on one or more farms in the watershed since distribution of the calendars according to reports of Extension and NRCS personnel working in Pond Creek. They credit the calendar with creating awareness and interest, which led to the implementation of these practices.

Currently, we are planning a 2005 Pond Creek Calendar. It will feature photos of BMPs implemented in the watershed, with the farm family's permission. A common question has been where the pictures were taken; they are interested in seeing the practices "on-the-ground."

Concluding Comments

The handbook and calendar have proven to be popular, in part because they are attractive, full-color products. They create awareness of BMPs and provide positive reinforcement of the concepts each time an individual thumbs through the handbook or glances at the calendar. They are worthy of consideration when one is looking for ways to create awareness and interest in water quality education.

Notes

1. The handbook is not an original idea. Georgia and South Carolina developed water conservation handbooks prior to this project. Other states and agencies also have created comparable products.
2. The practices in the handbook are:
 - Access Roads
 - Alternative Watering Systems
 - Micro-Irrigation
 - No-Till

- Buffer Strips
- Conservation Tillage
- Contour Farming
- Contour Stripcropping
- Cover Crops
- Critical Area Planting
- Crop Rotation
- Dead Animal Composting
- Diversions
- Farm Ponds
- Field Scouting
- Grade Control Structures
- Grassed Waterways
- Insect Traps
- Integrated Pest Management
- Irrigation Management
- Keeping Excellent Records
- Liquid Manure Storage
- Locating & Constructing Forest Roads
- Log Landings
- Manure and Litter Application
- Manure Composting
- Manure & Litter Testing
- Nutrient Management Plans
- Pasture Management
- Pesticide Application
- Pesticide Handling
- Pesticide Loading Facility
- Plant Tissue Testing
- Poultry Litter Storage
- Precision Farming
- Protected Heavy-Use Areas
- Protecting Streams and Wetlands
- Runoff Management
- Sediment Basins
- Setting Realistic Yield Goals
- Sinkhole Protection
- Skid Trails
- Soil Testing
- Sprayer Calibration
- Stream Crossings
- Stream Protection
- Terraces
- Weed Management
- Well Protection
- Wetlands
- Wildlife Habitat

3. Beef and dairy operations are the major sources of contaminants in the Pond Creek Watershed. The BMPs included in the calendar are:

- Stream Protection
- Stream Crossings
- Nutrient Management Planning
- Buffer Strips
- Manure Testing
- Manure Application
- Liquid Manure Storage
- Runoff Management
- Manure Composting
- Soil Testing
- Alternative Watering Systems
- Protected Heavy-Use Areas