



Section 7

Module 4

Protecting Source Water through Wastewater Management

Session: Protecting Source Water through Wastewater Management
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TRAINING GOAL:

Ensure that training participants gain a thorough understanding of the need to protect drinking water sources from wastewater contamination, and strategies for doing so.

TRAINING OUTCOME:

The trainer/assistance provider's presentation should:

- increase the target audiences' knowledge about how to conduct planning and obtain community support
- increase target audiences' understanding of the connection between source water protection and wastewater treatment
- increase awareness of information resources available to them
- increase calls for technical assistance received by NESC and RCAP.

BACKGROUND INFORMATION:

Be familiar with the local wastewater issues, facts, and figures, before presenting wastewater information to the community. Understand the ways in which untreated wastewater can find its way into surface and ground water drinking water supplies. In many small and rural towns, addressing multi-jurisdictional issues will be a primary challenge to creating and implementing a management plan. Know who has regulatory jurisdiction over individual and community water and wastewater systems. Identify any local jurisdiction with additional regulatory authority (e.g. watershed, inter-municipal agreements, private systems)

LEARNING OBJECTIVES:

As a result of the training, participants will be able to:

- Understand why and how to identify potential threats to source water from wastewater, especially onsite septic systems
- Review and describe how untreated wastewater can enter drinking water supplies
- Understand the mechanics of wastewater treatment and how septic systems can threaten ground and surface water supplies
- Gain familiarity with a range of technical and management options for addressing threats from wastewater contamination
- Gain familiarity with primary funding options such as State Revolving Fund and USDA Rural Development, and with local and technical resources, including RCAP
- Understand the major categories of project planning activities
- Appreciate the importance of viewing water supply protection and water resource management from a watershed, regional or multijurisdictional perspective
- Understand the importance of recording data in a retrievable, useable and shareable format
- Gain familiarity with techniques for identifying and attracting stakeholders to the planning process, specifically through the application of social marketing concepts.

LEARNING ACTIVITIES

Activity #1: Steering Committee Makeup

Length: 20 minutes

Handout: List of 8 – 10 possible stakeholders representing different groups. Each stakeholder should have at least one strong pro and one strong con for including them in a steering committee

Materials Needed: Paper, pens for groups; flipchart and markers for trainer

Process: Break participants into groups of three-five people. Ask participants to choose which 5-7 stakeholders should be on the steering committee. After 10 minutes discuss choices.

Key Messages

This component of the Lesson Plan reminds the trainer to: stress the importance of being inclusive, even when and especially when opposing views are represented.

Activity #2: Roles and Responsibilities

Length: 20 minutes

Handout: List of 8 – 10 possible stakeholders representing different groups.

Materials Needed: Paper, pens for groups; flipchart and markers for trainer

Process: Break participants into groups of three-five people. Assign one stakeholder category to each group. Ask each group to make suggestions about what contributions that stakeholder could make to the project and what might entice them to get involved. After 10 minutes discuss choices.

Key Messages

This component of the Lesson Plan reminds the trainer to: help the group identify tasks that will need to be accomplished and how to identify and include folks who can help get the work done.

Activity #3: Overcoming Obstacles

Length: 20 minutes

Handout: List of 8 – 10 possible stakeholders representing different groups. Each stakeholder should have at least one strong pro and one strong con for including them in a steering committee.

Materials Needed: Paper, pens for groups; flipchart and markers for trainer

Process: In Community A there are septic tanks in a new development that will eventually pollute nearby wells. These wells supply water to nearby community B. Community B tried to get community A to pass an ordinance specifying set-back distances, community A wouldn't do it. The towns won't work together.

Have participants identify incentives or other ideas for dealing with these jurisdiction issues. Lead into a discussion of: what are the challenges and barriers a community will face in developing this wastewater part of the SWPP? How to solve these challenges/barriers? After 10 minutes discuss.

Key Messages:

This component of the Lesson Plan reminds the trainer to: consider potential obstacles to planning and suggest strategies for overcoming them

Activity #4: Data Collection

Length: 20 minutes

Handout: Sample Residential Wastewater Survey and Summary of Results

Materials Needed: Paper, pens for groups; flipchart and markers for trainer

Process: Break participants into groups of three-five people. Ask each group to identify additional information needed on non-residential systems, and how they would modify the survey appropriately. After 10 minutes discuss.

Key Messages:

This component of the Lesson Plan reminds the trainer to: help the group focus on some of the mechanics of data collection.

Activity #5: Creating Value

Length: 20 minutes

Handout describing the following problem: Drinking water systems need to market their product to establish value; bottled water gaining in sales largely due to marketing as “pristine” or better-quality than municipal or private supplies; establishing value is about documenting and protecting high quality water supplies; and all activities that protect against contamination should be advertised and promoted

Materials Needed: Paper, pens for groups; flipchart and markers for trainer

Process: Break participants into groups of three-five people. Ask each group to brainstorm ideas for improving consumer confidence in drinking water supplies and reclaiming some of the market from bottled water purveyors. After 10 minutes discuss choices.

Key Messages:

This component of the Lesson Plan reminds the trainer to: focus on the needs of the drinking water system operators and managers. Use social marketing techniques to identify strategies for improving consumption of drinking water from the system.

Activity #6: Moving to Action (low hanging fruit)

Length: 20 minutes

Materials Needed: Paper, pens for groups; flipchart and markers for trainer

Process: Break participants into groups of three-five people. Each group will brainstorm: 1. ideas for simple, easy things that might help protect water quality, generate enthusiasm for source water protection and planning, and address potential malfunctioning onsite wastewater systems; and 2. a list of organizations and groups or individuals that might be able to share resources, and what specifically they might bring to the table. After 10 minutes discuss.

Key Messages:

This component of the Lesson Plan reminds the trainer to: help the group identify tasks that can be accomplished with very little money and what kinds of other groups’ activities can be leveraged to accomplish shared goals.

POSSIBLE AGENDA

Protecting Source Water through Strategic Wastewater Management

Approximate Time to Deliver Session: 4 hours/ 25 minutes

1.	Introduction	20 minutes
2.	Complete Registration Form	5 minutes
3.	Complete Pre-assessment Form	10
4.	Protecting Drinking Water from Wastewater Contamination	15
5.	Introduction to Wastewater Treatment	20
6.	Onsite Wastewater Treatment Overview	30
7.	Advanced Treatment	15
8.	Problem Characterization / Moving to Action	45
9.	Maintenance and Management	30
10.	Exercises (20 minutes apiece? Choose two)	40
11.	Complete Post-assessment	10
12.	Summary and Feedback	5

POWERPOINT AND CONTENT:

Eight discrete PowerPoint Presentations have been developed for this topic. The PowerPoints can be used as they are or adapted to meet your local needs. Detailed content to be taught is listed in the “Notes” sections of the PowerPoints. Electronic copies are provided on the accompanying SMART PowerPoint CD-ROM.

“Please see the “SMART PowerPoint CD-ROM” for electronic copies of the PowerPoint Presentations. Note that some of the modules include two sets of PowerPoints. In addition, “Module 4: Source Water Protection through Strategic Wastewater Management,” includes eight sets of PowerPoints, along with additional files that provide background information for the trainer.”