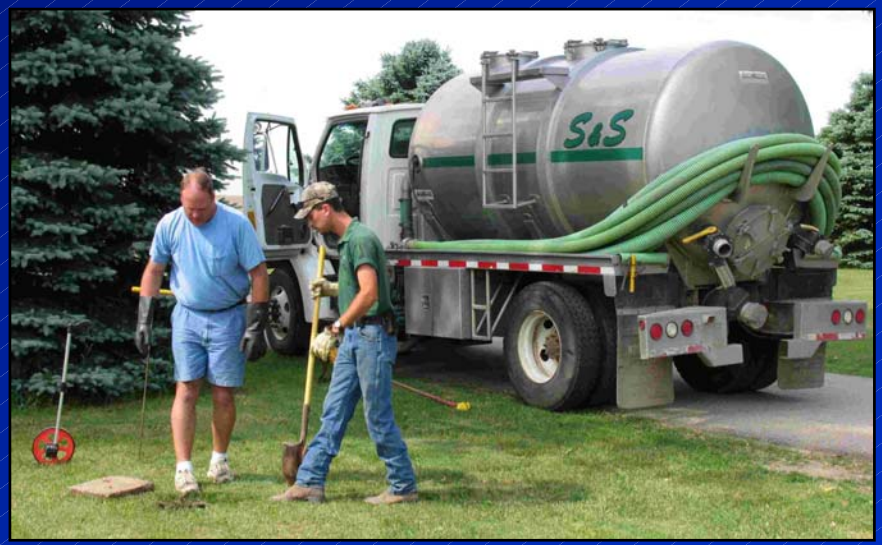
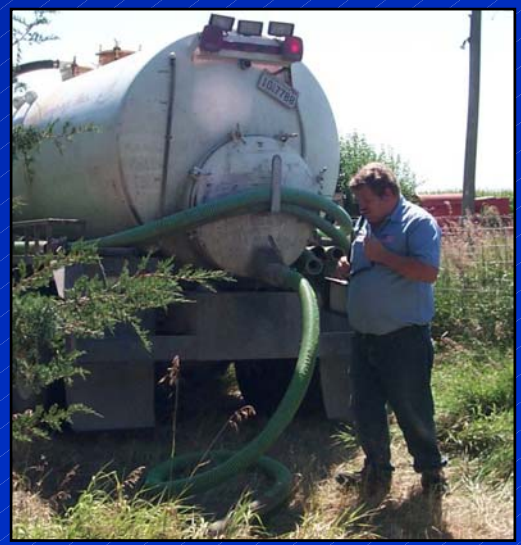
Demonstrating Septic System Management

Demonstrating Septic System Management

(or will they come to watch poop being pumped?)





David P. Shelton
Professor Biological Systems Engineering
and Extension Agricultural Engineer

Rodney A. Wilke
Extension Project Coordinator

Sharon O. Skipton
Extension Water Quality Educator

Janet R. Hyngstrom
Extension Project Manager

Wayne Woldt
Associate Professor Biological Systems Engineering
and Extension Environmental Engineer

Background

- Two projects funded in September 2004 by EPA Section 319 funds through Nebraska DEQ
  - Shell Creek
    - 3 sub-watersheds: ~ 31,000 acres
  - Duck Creek
    - 1 sub-watershed: ~ 14,000 acres

Watershed Issues

- Soil erosion
- Flooding
- Water quality
  - Surface
  - Ground

Project Partners

University of Nebraska Lincoln Extension

Nebraska DEQ

United States Environmental Protection Agency

The Nebraska Environmental Trust
preserving NATURAL NEBRASKA™ for future generations

PrairieLand RC & D
With A Vision For The Future

Lower Platte North Natural Resources District

Shell Creek Watershed Improvement Group

NRCS

Project Goal

- Protect and enhance water quality by increasing landowner adoption of conservation practices and other best management practices within the targeted sub-watersheds

Project Focus Areas

- Conservation buffers and other structural conservation practices
- No-till cropping systems
- Decommissioning out-of-service water wells
- Septic systems and domestic wastewater management

Project Components

- **Multi-faceted educational program**
  - meetings
  - tours
  - demonstrations
  - brochures
  - one-to-one contacts
  - other techniques

Project Components

- Multi-faceted educational program
- **Special cost-share incentives that supplement established programs**
  - No-till planting
    - $10/ac/year for 5 years
  - Certain conservation practices
    - $100/ac/year for 10 years (non-irrigated)
    - $150/ac/year for 10 years (irrigated)
  - Well decommissioning
    - 100% of normal costs

Project Components

- Multi-faceted educational program
- Special cost-share incentives (cont.)
  - Septic system inspection and tank pumping
    - 60% of costs (up to $300)
  - Septic system upgrades to current standards
    - 60% of costs (up to $3000)

Septic System Inspection and Tank Pumping Demonstrations

Demonstration Objectives

- Increase participant knowledge of:
  - Septic system basics
    - Design
    - Operation
    - Regulations
    - Water quality impact
  - Septic system management
    - “Do’s and don’t’s”
    - Inspection and tank pumping
  - Cost-share availability

Demonstration Components

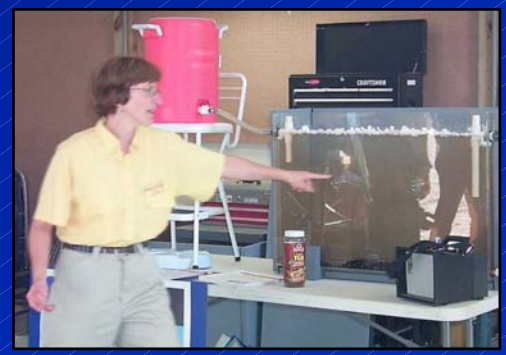
- Introductions and purpose
- Septic system basics
- Tank pumping procedures
- System inspection procedures
- Summary and wrap-up

Demonstration Components

- Introductions and purpose (inside)
  - Introduce speakers
  - General project overview
  - Demonstration objectives
  - Special cost-share availability

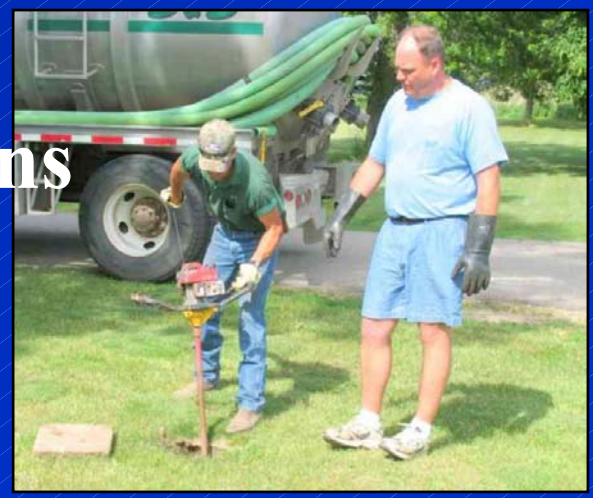
Demonstration Components

- Septic system basics (inside)
  - Design
  - Operation
  - Management
  - Regulations
  - Impact on water quality



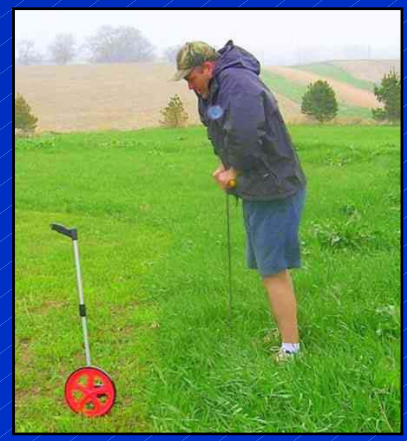
Demonstration Components

- Tank pumping procedures (outside)
  - Access
    - Manholes, ports, etc.
  - Contents
    - Scum, liquid, sludge layers
  - Agitation and pumping procedures
  - Tank capacity
  - Septage disposal regulations
  - Other considerations



Demonstration Components

- System inspection procedures (outside)
  - Component location
    - House line, tank, drainfield, etc.
  - Set-backs
    - Property lines, buildings, wells, etc.
  - Tank
    - Material, construction, condition, etc.
  - Drainfield
    - Size, condition, etc.
  - Other considerations



Demonstration Components

- Summary and wrap-up (inside)
  - Questions and discussion
  - Evaluation

Some Accomplishments/Impacts

- 12 of 14 non-extension participants completed an evaluation at one demonstration

Some Accomplishments/Impacts

- 12 of 14 non-extension participants completed an evaluation at one demonstration
  - **12 agreed that their knowledge of septic systems and management increased**

Some Accomplishments/Impacts

- 12 of 14 non-extension participants completed an evaluation at one demonstration
  - 11 agreed that their knowledge of the special cost-share programs increased

Some Accomplishments/Impacts

- 12 of 14 non-extension participants completed an evaluation at one demonstration
  - **5 participants who owned a septic system agreed that the information would be useful in managing their system**

Some Accomplishments/Impacts

- 12 of 14 non-extension participants completed an evaluation at one demonstration
  - 3 septic system owners planned to make changes to their systems to reduce environmental and/or human health risks. Planned actions were:
    - "have my tank inspected and then proceed as needed"
    - "have someone look at my septic system and pump my septic tank"
    - "upgrade my septic system"

Some Accomplishments/Impacts

- 12 of 14 non-extension participants completed an evaluation at one demonstration
  - All 3 septic system owners who lived in the area eligible for special cost-sharing indicated that they would take advantage of the program

Some Accomplishments/Impacts

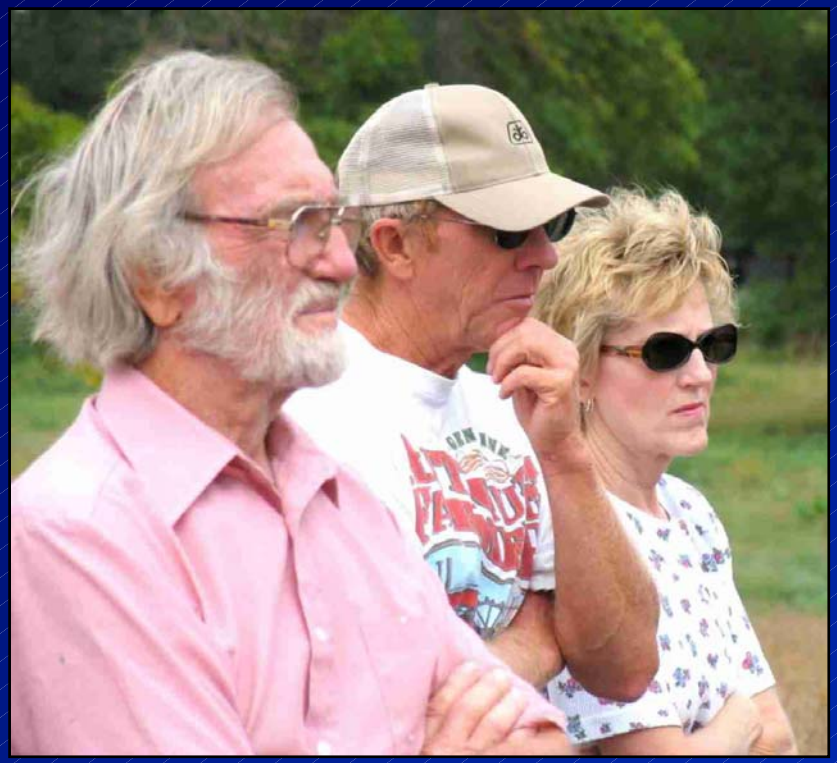
- An immediate outcome was that 2 participants from within the target area hired the pumping business owner to have their systems inspected and tanks pumped. The truck went directly from the demonstration to one of these sites.

Summary

- Yes, they will come.

Summary

- A few suggestions:
  - Conduct inspection prior to demonstration
    - Avoids possible surprises with illegal systems, etc.
  - Make sure the pumping contractor is:
    - Licensed (if required)
    - Knowledgeable of local regulations, etc.
    - Comfortable speaking to a group
  - Possibly combine with other topics



Thank You

Questions?