

Tongue River Watershed Management Plan

Septic System Improvements

September 2007

Project Spotlight—Fiedor Septic System Replacement

In the fall of 2004, the Sheridan County Conservation District (SCCD), in cooperation with USDA Natural Resources Conservation Service (NRCS) worked with Jack and Connie Fiedor on a septic system replacement on Wolf Creek. The previous system consisted of a cinder block tank of unknown size, installed sometime in the 1960's. Wastewater from the tank had the potential to enter Wolf Creek through two trenched lines located within the floodplain.

The SCCD/NRCS investigated soil and water table properties and performed percolation tests. Seasonally high groundwater is located about 5 feet deep in the area of the leachfield. The SCCD/NRCS assisted with the development of system designs/plans, the Sheridan County permit application, and installation inspection for the purpose of SCCD program requirements. As the authority on septic systems, Sheridan County was responsible for design/plan approval, issuing the permit, and final system inspection to ensure compliance with County regulations.

A new 1000 gallon septic tank was installed on the opposite side of the house. A self pumping toilet pumps wastewater from a basement toilet that receives little use directly to the septic tank. Wastewater from the septic tank gravity flows to a pipe and a gravel bed leachfield, which was slightly mounded (about 1') to allow adequate separation from seasonal high groundwater. After the new system was installed, the existing tank was pumped and backfilled, and all disturbed areas were reseeded to grass.



" . . . I strongly believe that these are very good projects* for Sheridan County, they help improve the watershed and environment. With the help, information, and funding made available, we were able to design the best septic system for us. NRCS and District people helped with the surveying and all of the other required information and were very helpful with the funding of the project. . ." —Jack Fiedor

* Note: Jack is also completing a corral relocation project.

If you are replacing or installing a new septic system. . .

- **Know the regulations regarding design and installation.** A permit is required to install or modify a septic system in ALL areas of Sheridan County. Permit applications require a soil exploration pit and percolation tests. Systems are designed based on the number of bedrooms (not the number of bathrooms) in a residence. A minimum 1000 gallon tank is required for ALL residences up to 4 bedrooms. For information regarding permitting and regulations contact the Sheridan County Engineer's Office (674-2920).
- **Investigate the soils and resource conditions.** A test hole provides information on the soil type as well as the seasonal water table. Percolation tests provide information on the soil's ability to filter wastewater. This is one of the most important but often the most overlooked step in designing a system.

The SCCD/NRCS Water Resources Improvements Program

The SCCD/NRCS offers technical and financial assistance for projects benefiting water quality in the Tongue River Watershed. Projects typically include septic system replacements, corral relocations, stockwater developments, riparian fencing/management, and stream restoration. Financial assistance comes from a combination of federal and state grants administered by the SCCD along with USDA program funds. The primary factor determining a project's eligibility is the potential benefit to water quality.



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SCCD is an equal opportunity employer and offers all programs, services, and assistance on a non-discriminatory basis.

The owner of a septic system is equivalent to a wastewater treatment plant operator. They have the same responsibility to protect the public health of their neighbors and community through proper installation, operation, and maintenance of the system.

Septic Systems and The Tongue River Watershed Management Plan

When properly designed, installed, and maintained, an on-site waste water treatment facility (or septic system) can provide adequate treatment of wastewater before it enters surface or groundwater resources. However, improper treatment may result in contamination of surface and ground water sources (including wells), odor problems, and health risks. The primary components of a septic system include a septic tank and an absorption field. The septic tank removes solids and provides initial treatment. The soil in the absorption field is the primary treatment mechanism. In some older systems, the emphasis was on disposal rather than treatment, with waste being discharged directly from the house or tank into a nearby water source or draw.

In the updated **Tongue River Watershed Management Plan (May 2007)**; improperly functioning septic systems are listed as a potential contributor of bacteria to streams in the Tongue River Watershed. The Plan includes action items to address this concern, including technical and financial assistance for septic system improvements and information and education activities.

We want to hear from you. . .

This is the first in a three-part brochure series highlighting improvement projects in the Tongue River Watershed. Please give us your feedback on whether the information was useful. You can contact us at 672-5820 x. 3 or sccdofwyo.org.

If you own or operate a septic system. . .

- **Conduct a self assessment** (available from sccdofwyo.org or SCCD) to evaluate your system's impact to water quality. Consider distance to surface and groundwater, age of the system, and whether or not there is a tank and/or leachfield. Tanks should NOT be metal and should have sufficient capacity (minimum 1000 gallon). If there is an impact, replace.
- **Be sure your system is permitted** by Sheridan County; keep permits with other important documents and records.
- **Know the location of your system**; keep a sketch or documentation for maintenance or future owners.
- **Maintain your system.** Have the system inspected and pumped regularly. Conserve water and repair leaky fixtures. Space laundry washing throughout the week. Avoid harmful chemicals and cleaners that may kill the bacteria in the tank and cannot be treated in the soil layers. Plant grass and DO NOT DRIVE OR PARK on the absorption field.

Estimated pumping frequency		
<u>Tank Size</u>	<u>3 member household</u>	<u>5 member household</u>
1000 gallon	3.7 years	2.0 years
1250 gallon	4.8 years	2.6 years
1500 gallon	5.9 years	3.3 years

From the Pennsylvania State University Cooperative Extension Service. Use of garbage disposals or other situations may require more frequent pumping.