

South Dakota State University  
**Open PRAIRIE: Open Public Research Access Institutional  
Repository and Information Exchange**

---

Extension Extra

SDSU Extension

---

4-1-2002

# Periodic Maintenance for On-Site Wastewater Treatment Systems

Russell Derickson  
*South Dakota State University*

Follow this and additional works at: [http://openprairie.sdstate.edu/extension\\_extra](http://openprairie.sdstate.edu/extension_extra)

---

## Recommended Citation

Derickson, Russell, "Periodic Maintenance for On-Site Wastewater Treatment Systems" (2002). *Extension Extra*. Paper 27.  
[http://openprairie.sdstate.edu/extension\\_extra/27](http://openprairie.sdstate.edu/extension_extra/27)

This Other is brought to you for free and open access by the SDSU Extension at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in Extension Extra by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact [michael.biondo@sdstate.edu](mailto:michael.biondo@sdstate.edu).



# Extension Extra

ExEx 1033  
Updated April 2002  
Agriculture and  
Biosystems  
Engineering

COLLEGE OF AGRICULTURE & BIOLOGICAL SCIENCES / SOUTH DAKOTA STATE UNIVERSITY / USDA

## Periodic Maintenance for On-Site Wastewater Treatment Systems

*by Russell Derickson, Extension water and natural resources specialist,  
SDSU Ag Engineering Department*

The key to preventing on-site wastewater treatment system problems is to follow a regular septic tank pumping schedule — every three to five years

Septic tanks trap solids and floating materials and prevent them from entering the soil treatment field. After anaerobic bacterial action, these materials are converted into sludge and floating scum. Solids or scum that escape a septic tank plug soil pores and slow the soil's acceptance rates of septic tank effluent and cause on-site systems to backup. Pumping septic tanks after backup problems occur only provides a short-term remedy, usually 2-3 days, until the tank refills with wastewater.

An easy way to remember when to pump septic tanks is to link pumping to a reoccurring event like presidential elections (every 4 years), birthday, wedding anniversary, etc.

If your household has a garbage disposal, there will be a greater accumulation of solids, so consider pumping the septic tank every other year. Septic tanks also should be pumped whenever the thickness of the scum layer reaches 12 inches or when sludge fills 1/3 of the tank's capacity (Figure 1). Septic tank sludge and scum buildup can be measured by the homeowner or by a professional septic tank cleaner.

Pump septic tanks through the manhole, not the inspection ports. Inspection ports normally are centered over the inlet and outlet baffles. Pumping through the inspection ports may damage the baffles. These baffles prevent floating scum material from entering the soil treatment field.

While the manhole is open, check the condition and length of the baffles. Replace missing or badly corroded baffles before putting the system back into operation.

**CAUTION Dangerous gasses are generated by on-site systems and will be released when septic tanks are opened. Methane gas, which is explosive, and hydrogen sulfide are the two most prominent gasses produced. Do not enter, lean into, or smoke near septic tanks. Hire a professional to repair broken or damaged baffles.**

Extend the life and performance of your on-site system by following these simple guidelines:

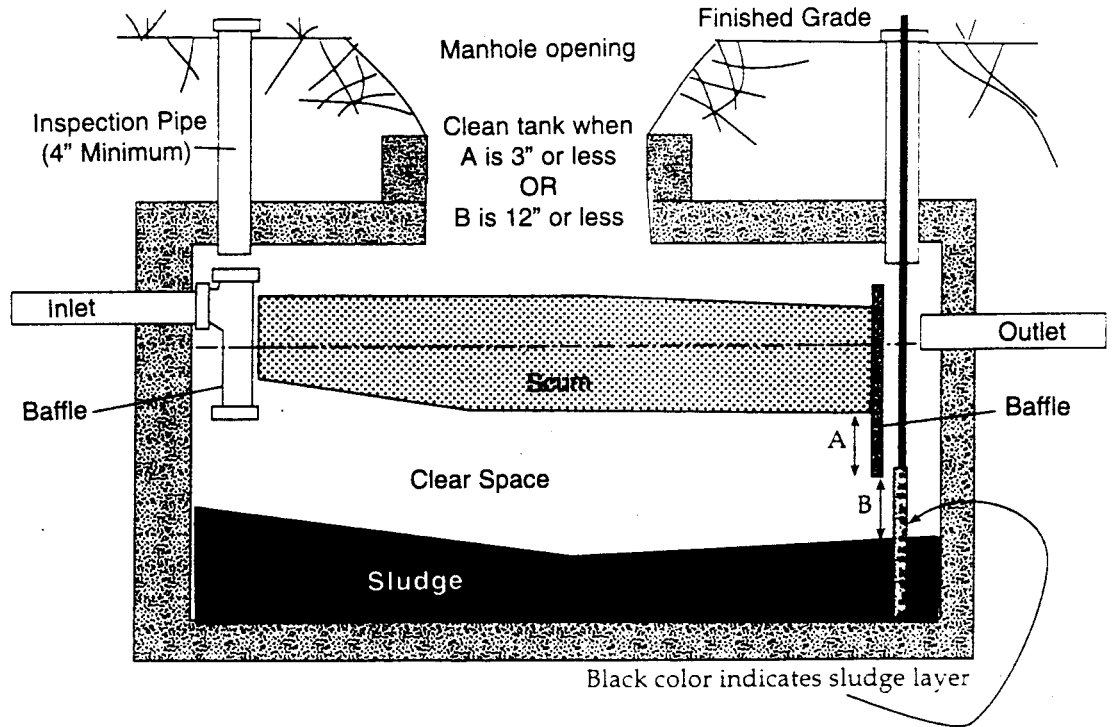
- Don't dispose of non-biodegradable materials in the on-site system. Examples: petroleum based products, latex paints, antifreeze, cloth, paper, plastics, sanitary napkins, disposable diapers, coffee grounds, or cigarettes.
- Don't use septic tank additives. No septic tank additives have been proven to be effective. They may cause ground water contamination. Save your money and pump the septic tank on a 3 to 5 year cycle.
- Limit garbage disposal use. Pump septic tank every other year if you have a garbage disposal.
- Use toilet paper approved for on-site systems.
- Reduce water use. Install low-flow water devices (flow restrictors, 1.5 gallon flush toilets, low-flow shower heads).
- Use liquid laundry detergents. Some inexpensive granular detergents contain inert filler material that can plug treatment trenches. Check the ingredient label for these additives.
- Eliminate sump pump discharge water from entering on-site systems.
- Divert roof runoff water and other surface water away from the soil treatment field.

To evaluate your on-site system's performance, obtain a copy of Farm•A•Syst Worksheet 6 or Home•A•Syst packet from your local county Extension office. These materials include a fact-sheet on proper on-site system management. Completing the worksheet will give you a good estimation of how well your on-site system is being maintained.

To learn more about on-site systems, contact your local county Extension agent, a certified on-site wastewater treatment contractor, or a septic tank pump. You also can purchase a copy of

Figure 1.

Clean the septic tank whenever the bottom of the scum layer is closer than 3 inches to the bottom of the outlet baffle ("A"), or whenever the top of the sludge layer is closer than 12 inches to the bottom of the outlet baffle ("B").



MWPS-24 "On-site Domestic Sewage Disposal Handbook" (\$6.00), available from the SDSU Agricultural Engineering Dept. Box 2120, Brookings, SD 57007, 605-688-5667.

Ask at your County Extension Office for these free publications about on-site wastewater treatment:

- EC 665 Rural Wastewater Treatment for Individual Homes
- ExEx 1018 Septic Tank Maintenance
- ExEx 1032 Wastewater Treatment Systems for Rural Homes and Cabins
- ExEx 1034 Solving On-site Wastewater System Backups
- ExEx 1035 Septic System Additives

**This publication and others can be accessed electronically from the SDSU College of Agriculture & Biological Sciences publications page, which is at <http://agbiopubs.sdstate.edu/articles/ExEx1033.pdf>**



Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the USDA. Larry Tidemann, Director of Extension, Associate Dean, College of Agriculture & Biological Sciences, South Dakota State University, Brookings. SDSU is an Affirmative Action/Equal Opportunity Employer (Male/Female) and offers all benefits, services, and educational and employment opportunities without regard for ancestry, age, race, citizenship, color, creed, religion, gender, disability, national origin, sexual preference, or Vietnam Era veteran status.

ExEx 1033- pdf by CES. May 1996; updated April 2002.