

Sand Filter Operation & Maintenance

Operation of Sand Filters

You should know the general layout of your sand filter; the control box, septic tank riser, and laterals cleanouts. This is important information so that you can prevent traffic over system components and be able to find them for maintenance. The Deschutes County Community Development Department has a copy of the certificate of completion and/or the as-built, which will have a drawing of where the components are on your property.

Respond immediately to alarms. Contact the installer or a certified maintenance service provider (list available at: <http://www.deq.state.or.us/wq/onsite/certification.htm>).

There are mechanical parts to distribute wastewater to the different components of the septic system, but the active treatment component of a sand filter is a biological system. A sand filter needs oxygen to efficiently clean up wastewater. If wastewater is not treated it will plug up the sand. The following is a list of rules to ensure the biological system remains efficient:

Do not compact or add soil over sand filter. These treatment systems require oxygen to function properly.

Do plant shallow rooted grasses or flowers to ensure that the topsoil structure is developed.

Do not plug the sand filter. The following items, if flushed into the septic tank, could plug the sand bed:

- Kitty litter
- Garbage disposal waste
- Grease or oils
- Glue and compounding agents
- RV wastes

Do conserve water. Using over 250 gallons of water per day on average is a cause for concern. Check your water records. Fix leaky fixtures immediately. Do not place irrigation components directly on top of the filter bed - it can flood the system.

Do protect your biological system. The following could kill microorganisms that treat wastewater in your septic tank and sand filter:

- Cleaners and solvents
- RV holding tank chemicals
- Antibiotics (long term usage)
- Water softener discharge

Maintenance of Sand Filters

Sand filters are more costly to install and more costly to repair than standard systems. Thus it is wise to have annual maintenance done by a certified maintenance provider (list available at: <http://www.deq.state.or.us/wq/onsite/certification.htm>). Early recognition of a problem can save you the cost of installing a new sand filter.

Check annually:

Sludge and scum levels in septic tank: Together they should not be more than 30% of the tank depth. If they are, the tank needs to be pumped.

Scum inside pump vault: If there is any scum or debris inside vault, something's wrong.

Float levels and timers: Make sure that no more than 45 gallons are being dosed to the sand filter per pump cycle .

Water level in the tank: Compare the off water level with the water level an hour after no water usage in the house. If the level changes, the tank could be leaking or siphoning into the sand filter or there could be leaky plumbing fixtures in the house.

Ponding: Remove valve cover boxes at the end of laterals and check to see if there is any ponding in the sand filter (there should not be any).

Distribution box on lined sand filters: The effluent should be clear and odorless. There should be no sediment in the bottom of the distribution box.

Do annually:

Clean pump vault screen or flush vault filter. Check for tears and holes.

Flush out each lateral separately. Then test residual head at far end to see if it matches the initial test. The initial test would have required a minimum 5-foot residual head and most likely would not have exceeded 8 feet. If the residual head is significantly higher, it probably means some of the orifices are blocked and the pipes need to be cleaned out. If the residual head is lower, several things could be wrong.

Keep your records:

The As-built, Certificate of Satisfactory completion, Inspection Sheet and some of the hydraulic information is available in the Community Development files. It is a good idea to ask for copies of these items and save them as they are useful for troubleshooting and maintenance.

It is also a good idea to keep a maintenance record. Oregon Administrative Rules require that regular maintenance is performed on sand filters and allows Deschutes County to charge a fee to review the maintenance work.