



## Onsite Wastewater Treatment Systems: Accessorizing Your Septic System

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### Introduction

Continual care and maintenance is necessary to ensure that septic systems do not fail and threaten water quality. A failing system will quickly depreciate property values, and system replacement is usually a tremendous financial burden. Typically, the soil absorption field is the component of the septic system that fails first, with an approximate replacement cost of \$25,000. It is imperative that the septic system be inspected and pumped out regularly to avoid excessive build-up of solids and grease.

There are several low cost accessories that can help to extend the life of a septic system and ensure optimal performance.

### Baffles

A properly designed septic tank has baffles installed near the inlet and outlet tees (Figure 1). Baffles are important because they direct the solids downward, which promotes settling, while blocking grease and floatables from exiting the septic tank. Over time the baffles may corrode, fall off, or be rendered ineffective. Regular septic tank inspections should include an examination of the baffles. If the baffles need to be replaced, contact your local health department for a list of approved or registered contractors.

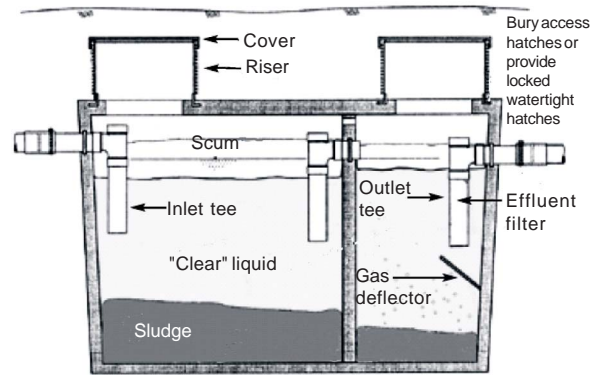


Figure 1. Septic Tank with Baffles (NESC, 2003).

### Gas Deflection Baffles

Anaerobic bacteria release gas from the sludge layer during the treatment process. The production of gas can disturb the settling solids, re-suspending them and causing them to exit the septic tank. A gas deflection baffle is a simple element that attaches to the end of the outlet device to ensure that gas bubbles carrying solids do not exit the septic tank (Figure 1).

### Effluent Filters

Effluent filters come in many designs and are produced by several companies. One popular design is a filter that attaches to the septic tank outlet tee (Figure 2). The cost of one of these systems is approximately \$250. Removing the filter, spraying off the solids with a garden hose, letting the solids



wash back into the septic tank, and then putting the filter back is an effective way to remove suspended solids that are harmful to the absorption field. It is important to regularly clean the filter. A clogged filter will cause the effluent to back-up into the house. How often the filter needs to be cleaned is a function of septic tank use and the surface area. A filter with a larger flow area will not need to be cleaned as often.

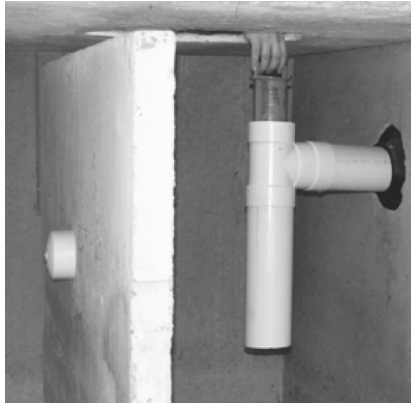


Figure 2. Effluent Filter in a Septic Tank (NESC, 2003)

## Biological Additives

There is no impartial scientific evidence that indicates that biological additives (e.g., yeast, bacteria, enzymes) have any effect on the performance of a septic system. It is recommended that such additives not be used, particularly as a substitute for pumping out and inspection.

## Conclusion

Homeowners can enjoy a long-lived and functioning septic system with proper care and maintenance.

Baffles, gas deflection baffles, and effluent filters are low-cost accessories that improve the efficiency of a septic system. Though regular inspection and cleaning may seem laborious and inconvenient, the small amount of time and money invested in these practices more than makes up for the large costs and inconvenience of replacing a failing septic system.

## For More Information

- Rutgers Cooperative Research & Extension.  
[www.rcre.rutgers.edu](http://www.rcre.rutgers.edu).
- Local Health Departments.  
[www.state.nj.us/health/lh/lhdirectory.pdf](http://www.state.nj.us/health/lh/lhdirectory.pdf).
- New Jersey Department of Environmental Protection Homeowners Manual.  
[www.state.nj.us/dep/dwq/septicmn.htm](http://www.state.nj.us/dep/dwq/septicmn.htm).
- EPA OWTS Manual.  
[www.epa.gov/ORD/NRMRL/Pubs/625R00008/html/625R00008.htm](http://www.epa.gov/ORD/NRMRL/Pubs/625R00008/html/625R00008.htm).
- National Environmental Service Center.  
[www.nesc.wvu.edu/](http://www.nesc.wvu.edu/).
- Association of NJ Environmental Commissions (ANJEC) has a publication entitled *Septic System Management for Good Water*.  
[www.anjec.org/pdfs/RP\\_Septic.pdf](http://www.anjec.org/pdfs/RP_Septic.pdf).

## References

National Environmental Service Center (NESC). 2003.  
[www.nesc.wvu.edu/nsfc/pdf/pipline/PL\\_f03.pdf](http://www.nesc.wvu.edu/nsfc/pdf/pipline/PL_f03.pdf).

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