



## **Waterloo Biofilter Septic System Best Practices**

### **Owner Responsibilities**

The Owner must understand that the Waterloo Biofilter septic system is a biological treatment system that relies on naturally occurring bacteria to degrade contaminants found in wastewater. Anything added to the system that can kill bacteria may have negative effects on the treatment levels attained by the system. It is imperative that the Owner read, understand, and abide by the following Best Management Practices. Any questions about Best Management Practices should be forwarded to *Waterloo Biofilter Systems Inc.*

### **Best Management Practices**

#### *Tank Pump-Outs*

Visual inspections conducted by the maintenance provider will indicate when the sludge in the anaerobic digester tank is approaching the 1/3 full level. This indicator identifies the need for the sludge to be removed in order to prevent suspended solids from leaving the tank and potentially causing problems further down in the treatment process. Please arrange to have your anaerobic digester tank promptly pumped out if recommended to do so by the maintenance provider.

#### *Water Usage*

Keep water use reasonable. Use full laundry and dishwasher loads in order to reduce quantity of use. Ice machines that use a continual flow of water should be identified at the time of design, as they will increase the required size of the septic system. Ensure that all showerheads, toilets, sinks, and any other fixtures are not leaking and fix promptly if found to be so. Extreme water conservation should also be avoided as it increases the concentration of contaminants including nitrogen in your sewage.

Do not discharge spas, hot tubs, and water softeners into the septic system as they contain large volumes of water that may flush solids out of the anaerobic digester tank.

#### *Chemicals*

Antiseptics, as their name states, kill bacteria and especially nitrifying bacteria. If surfaces need to be disinfected, wash with soap and water, and spray on or wipe a residual disinfectant like alcohol. This way it stays out of the sewage, keeping it healthy.

Quaternary ammonium cleaners are especially taboo as they kill very effectively and also add large quantities of nitrogen which can overwhelm the microbial colony's ability to nitrify. Use laundry bleach sparingly -- we recommend a little on the whites only, and please use simple detergent, and not 'detergent with bleach'. Do not use ammonium cleaners.

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Toilet pucks and disinfectant soaps, even 'natural' disinfectants like peppermint oil, tea tree oil, etc., are not to be used as they seriously impede nitrification. The food preservative MSG is also detrimental to microbial health.

Liquid or powder fabric softeners inhibit nitrification, so use softening cloths in the dryer, rather than the washing machine softeners.

Medications inhibit nitrifiers, so dispose of them in the trash and not down the drain.

Alkalinity of the source water is important, with hard water being good for thorough nitrification and soft water more difficult.

Hair conditioners and hair gels should be used in moderation, as these are difficult for microbes to digest, being oil-rich, and can accumulate enough to cause hydraulic short-circuiting in the Biofilter. Anti-dandruff shampoos should not be used (or used very sparingly) as they seriously kill microbes.

### *Solids*

Food waste disposals (garburators) are not recommended for septic systems as larger solids are deposited into the anaerobic digester tank and do not decompose into sludge. Divert food waste to the garbage.

Moderate use of toilet paper, etc., is not an issue as it degrades in the Digester, but the plumbing should not be used as a garbage can. Basically, whatever has been eaten is not an issue, and if not edible, use in moderation.

### *Quick Reference*

Keep the following items out of the septic system:

- water softener backwash; hot tub discharge
- paints- all kinds
- solvents, volatile organics
- grease - commercial and industrial
- coffee grounds
- bones
- cooking fats and oils
- cigarette butts
- disposable diapers
- paper towels
- eaves trough runoff
- pumped foundation drainage
- cosmetic products
- large volumes of olive oil
- excessive use of hair gels, conditioners, etc.
- facial tissue
- sanitary pads and tampons
- condoms
- disposable gloves
- toilet bleach pucks
- antibacterial and antiseptic products
- detergent with dry bleach crystals
- peppermint, palm and tea tree oils
- pesticides or herbicides
- sump pump discharge
- industrial cleansers, ex. Lye
- film developing chemicals
- floor drains -residential or industrial
- anti-dandruff or medicated shampoo
- dead pets

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- carpet or upholstery cleansers
- disinfectants, germicides
- bandages, cotton swabs
- concentrated detergent pods
- expired or unused medications
- personal and baby wipes
- MSG food preservative

Please note that occupants undergoing any form of medical radiation treatments, or possessing any form of irregular immune system response or bulimia will affect the health of a septic system. These conditions should be identified in advance.

Any further questions or concerns regarding the health of your septic system can be directed to *Waterloo Biofilter Systems Inc.*