



Waterloo Biofilter Systems Inc.
on-site wastewater treatment

Homeowner Manual

Minnesota

Waterloo Biofilter®
Wastewater Treatment System
Wire Mesh Baskets Configuration

(Note: This Owner Manual will be supplied with the Treatment System)

SERIAL #: _____	
CONFIG. <input type="text"/>	MODEL <input type="text"/>

Waterloo Biofilter Systems Inc.

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DANGER!



There are pipes and electrical wires buried near your Waterloo Biofilter® septic system. Please contact your installer before attempting any excavation in the area surrounding your installation. Failure to do so may result in damage to the system and may cause serious electrical shock!

DANGER!



DO NOT attempt to service any component of the Waterloo Biofilter® system yourself and DO NOT attempt to enter any of the tanks associated with your septic system! You risk serious injury or death by doing so!



Your systems dispersal method is designed for your unique site. Please contact your installer before carrying out any landscaping or re-grading in the area surrounding your septic system.



Please ensure that there is easy access at all times to the lids of your septic and treatment unit tanks. This will facilitate system inspection and maintenance.



Your Waterloo Biofilter® septic system is a biological treatment system and its performance is dependent on the characteristics of your wastewater. DO NOT pour anything down your drains/toilets/sinks that will not biodegrade or that will harm bacterial populations. Keep the following out of your septic system to ensure the best system performance:

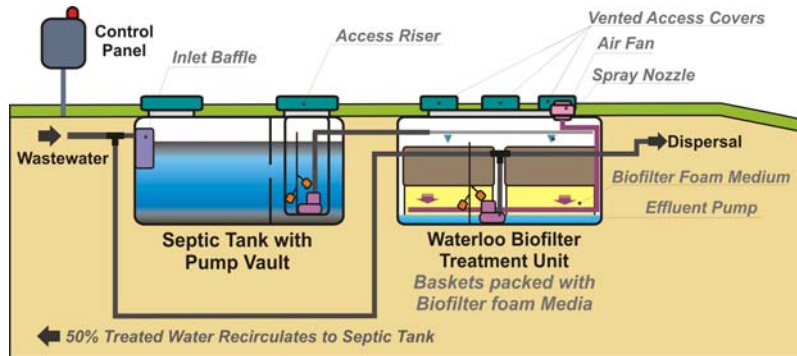
- water softener backwash
- sump pump discharge
- all paints; solvents
- strong acids & bases
- pesticides
- industrial cleaners
- toilet bleach pucks
- cigarette butts
- paper towels
- condoms
- garburator discharge
- coffee grounds
- bandages
- diapers

Keep the use of the following products to a minimum or divert them from your septic system:

- antibacterial products
- detergents with bleach
- disinfectants
- cooking oils; grease
- prescription drugs
- medicated shampoo

How Your Waterloo Biofilter® System Works

The Waterloo Biofilter is an attached growth biological trickling filter. Septic tank effluent is distributed over the patented Waterloo Biofilter filter medium. The septic tank effluent is absorbed into the filter medium where it is oxidized and degraded by naturally occurring bacteria. The treated Biofilter effluent is sent to dispersal. The method of dispersal is unique to your site.



Typical Wire Mesh Baskets Biofilter configuration

- **Control Panel(s)** - located in the yard or against the building. Operates the submersible effluent pump(s). *DO NOT attempt to access the control panel yourself.*
- **Septic Tank** - a septic tank to degrade solids. The septic tank must be periodically pumped of settled solids, typically every 3-5 years. *Keep tank risers accessible for pumping and maintenance.*
- **Pump Chamber** - houses an effluent pump and float controls. Doses septic tank effluent to the Biofilter treatment unit. *Keep pump chamber riser accessible for maintenance.*
- **Biofilter Treatment Unit** - houses the Biofilter filter medium and spray nozzles. The Biofilter tank also houses an effluent pump(s) and float controls. A portion of the Biofilter effluent is dosed to dispersal and the remaining portion is recirculated back to the inlet of the septic tank. *Keep Biofilter tank lid(s) accessible for maintenance.*

In the Event of an Alarm

Your control panel is equipped with audible and visual alarms. When the alarm goes off you will hear a loud buzzer sound and the red light on top of the control panel will turn on. It is unlikely for an alarm to go off when no one is home because the system only operates when water is being used.

Why is the Alarm Going Off?

The alarm indicates that the water level in either the pump chamber or Biofilter treatment unit is too high.

What Should You Do?

You should call your maintenance provider immediately. Limit water use until the problem has been corrected.

How Do I Silence the Alarm?

Flip the black switch labeled '*SILENCE/TEST*' located on the side of your control panel. Remember that this does NOT mean the problem has been solved.

Indicators of Problems

The key to high treatment levels and problem-free operation is a healthy bacterial population in your septic tank. Remember that what you put into the septic tank affects what comes out. Anything that degrades slowly or is harmful to bacteria should not be put into your septic tank.

The following symptoms indicate a problem with your septic system. If any of these occur you should call your maintenance provider immediately.

- Strong sewage odor around your septic system; however, odor coming from the vent pipe on your roof is normal and may down-draft into windows etc.
- Standing water around your dispersal area
- Subsiding or very wet soil in the dispersal area
- Very slow draining or backstopped toilets or fixtures

Maintenance Contracts

Homeowners with advanced septic systems must maintain a current maintenance contract with an authorized maintenance provider. It is the responsibility of the homeowner to keep this contract up to date. Failure to maintain a current maintenance contract with an authorized service provider will void the *Limited Warranty* offered by Waterloo Biofilter Systems Inc.

Preventative Maintenance Saves Money

Regular maintenance ensures that the system functions properly and remains operational for a long time. Regular maintenance helps to prevent and solve problems before they become larger issues that may require costly excavation or replacements.

Authorized Maintenance Providers

Generally your maintenance contract is negotiated with your authorized system installer. If your installer is no longer in business or otherwise unable to perform maintenance duties, please contact Waterloo Biofilter Systems Inc. at 519-856-0757 and we will provide you with a list of authorized maintenance providers in your area.

Maintenance Records

As part of the *Limited Warranty* offered by Waterloo Biofilter Systems Inc. you may be requested for records of regular maintenance performed on your septic system. Make sure to get a copy of the *Maintenance Report* your maintenance provider completes every time the system is serviced and keep these for your records. If this is not possible have the maintenance provider sign the *Maintenance Record Chart* found on the next page every visit.

Importance of Warranty Registration Card

Please take the time to fully complete and send in the *Warranty Registration Card* as soon as it is received. This allows us to keep track of our systems and readily provide you with product and troubleshooting support if required. The *Warranty Registration Card* must be received within 90 days of the date of invoice by Waterloo Biofilter Systems Inc. in order to make any claim against the *Limited Warranty* offered on your system.

My Maintenance Provider Is

Company: _____

Phone: _____

Address: _____

Maintenance Records Chart

Date	Notes	Signature

FAQ

What is the protocol for vacations or seasonal homes?

You do not need to do anything to the system when you leave it unattended for a long period of time. The pumps will remain inactive so long as no wastewater is being generated at the site.

What do I do if the power goes out?

The pumps will be unable to function and the pump chamber and septic tank will start to fill up. Limit water use until the power returns.

Solutions to Common Problems

Problem	Consequence	Solutions
Disinfectants <ul style="list-style-type: none">• bleach• chlorine	Kills the bacteria in septic tank preventing proper treatment	Limit use of anti-bacterial products and disinfectants; use chlorine-free cleaning products
Chemicals <ul style="list-style-type: none">• pesticides• prescription drugs	Kills bacteria; may contaminate ground water or wells	Don't pour chemicals down the drain; direct water softener backwash away from septic system
Paints <ul style="list-style-type: none">• paints• solvents	Kills bacteria; clogs pipes and dispersal field	Don't pour paints or solvents down the drain
Hydraulic Over-load <ul style="list-style-type: none">• too much water flowing into system at one time	Flushes solids out of septic tank without a chance to be broken down	Wash only full loads of clothes or dishes; fix leaky toilets; don't connect sump pumps or RV waste to septic system
Food /Grease <ul style="list-style-type: none">• Garbage grinder discharge• fats, oils & grease	Difficult for bacteria to breakdown; clogs pipes and dispersal field	Don't use an in-sink garbage disposal; don't pour fats down the drain; scrape food off dishes before washing
Landscaping <ul style="list-style-type: none">• heavy objects• re-grading• paving	May damage system; may cause water to pond; prevents necessary evaporation	Don't drive heavy equipment over system; consult installer before re-grading; don't pave dispersal field

LIMITED WARRANTY

Residential Models: 11 to 100 inclusive

This Limited Warranty is applicable to the above noted models of wastewater treatment units invoiced by Waterloo Biofilter Systems Inc. (Waterloo Biofilter) after March 1, 2009. This Limited Warranty shall only become effective upon receipt by Waterloo Biofilter of the Warranty Registration Card within 90 days of the date of product invoice issued by Waterloo Biofilter. Failure to send in the Warranty Registration Card to Waterloo Biofilter within this time frame means that Waterloo Biofilter may not be required to fulfill any of the obligations contained in this Limited Warranty.

1. Limited Warranty Coverage

Components manufactured by Waterloo Biofilter are warranted to be free from defects in materials and workmanship for the Warranty Period described below from the date of product shipment from our dock:

- Wire Mesh Baskets – three (3) year limited warranty

Under this Limited Warranty, Waterloo Biofilter will, at its sole discretion, repair or furnish a replacement for such defective parts at no charge to the owner. Repaired or replacement parts will be warranted for the remaining portion of the original Warranty Period from the date of original product shipment.

Filter Medium

Waterloo Biofilter warrants that the foam filter medium will not biodegrade, under normal and expected operating conditions, to a point where it can no longer absorb wastewater, for a period of twenty (20) years from the date of shipment from our dock.

Under this Limited Warranty, Waterloo Biofilter will replace at no charge to the owner the portion of foam filter medium that is determined by Waterloo Biofilter to be defective. Replacement filter medium will be warranted for the remaining portion of the original Warranty Period from the date of original product shipment.

Other Components

All other components supplied by Waterloo Biofilter carry the original manufacturer's warranty and are not covered under this Limited Warranty offered by Waterloo Biofilter. The original manufacturer's applicable Warranty Periods are outlined below. Full copies of the original manufacturer's product warranties are available upon request.

- Effluent pumps – two (2) year limited warranty
- Control panels – three (3) year limited warranty
- Float switches – three (3) year limited warranty

2. Shipping and Labor Costs

Under this Limited Warranty, Waterloo Biofilter will not pay labor costs for installation or removal of product for repairs or replacements covered by this Limited Warranty which are performed by a Waterloo Biofilter designated service provider or others during the Warranty Period. This Limited Warranty does not cover any travel time or other labor costs. This Limited Warranty does not cover any shipping costs to or from Waterloo Biofilter's dock, to or from the designated service provider, and to or from the installation site.

3. Warranty Exclusions

This Limited Warranty does **NOT** apply;

1. if any portion of the product invoice issued by Waterloo Biofilter is outstanding, even if the product owner has paid in full their purchaser, installer, or agent for said product
2. to any component not supplied by Waterloo Biofilter including, but not limited to, septic tank(s), screened filter vault, balance tank(s), dispersal tank(s) other concrete tanks(s), electrical wiring, plumbing, drainage or effluent dispersal system
3. to any damage caused by improper transportation, handling, installation or maintenance of the product
4. to any damage or problem caused by act of God
5. to any damage or problem caused by the fault or act of a third party
6. to any damage or problem arising from any installation, modification, correction or addition carried out, or attempted to be carried out, on the product by a person not authorized by Waterloo Biofilter
7. to any damage or problem caused by the fault or action of the owner, or the owner's successors, including but not limited to refusing system access for maintenance, tampering with the system, altering control panel settings, or any other attempt to repair, maintain, access or inspect the Waterloo Biofilter system
8. to any damage or problem if it is demonstrated that the Waterloo Biofilter treatment unit was used outside of its designed use or rated flow capacity, or was not used and maintained in compliance with the terms and conditions outlined in the Owner's Manual
9. to any damage or problems resulting from heavy machinery or vehicles parked on or driven over the prod-

10. to any damage or problem caused by excavation, demolition, landscaping, snow removal, re-grading or construction to the product installation area

11. to any damage or problem resulting from errors in design specifications provided by the purchaser or its agents

12. to cosmetic damage such as scratches, scrapes, minor dents, or fading of stains, sealants or colorings.

4. Particular Exclusions

Maintenance Requirements

Failure by the system owner to maintain a current maintenance agreement with a maintenance provider authorized by Waterloo Biofilter will void this Limited Warranty, and Waterloo Biofilter shall be considered completely discharged from all obligations under this Limited Warranty. Annual and complete maintenance records must be presented to Waterloo Biofilter upon request. Failure to present annual maintenance records will void this Limited Warranty.

Failure by the system owner to take preventative and corrective maintenance actions recommended by the maintenance provider in a timely fashion, including but not limited to periodic pumping of the septic tank, will void this Limited Warranty.

Filter Medium Biodegradation

For the purposes of this Limited Warranty, biodegradation is defined as the decomposition of the filter medium by the action of microorganisms such as bacteria that are naturally present in sewage. Damage to the foam filter media caused by means other than biodegradation as defined above is excluded from this Limited Warranty. Causes of damage excluded under this Limited Warranty include but are not limited to: paints, harsh cleaners or

insects, animals, excessive flow rates and ultraviolet light.

5. Transfer of Ownership

If there is a change in ownership of the property where the product is installed, this Limited Warranty may be transferred once under the terms and conditions of this Limited Warranty to the new property owner, provided that:

- Waterloo Biofilter is notified of the transfer of ownership in writing within 90 days of the closing of the property sale, AND
- the new owner's complete name, mailing address and valid phone number is provided in said notification, AND
- the new owner accepts the terms and conditions set out in this Limited Warranty

The effective date of warranty coverage will remain the date of shipment of the original purchase by the original property owner or their agent. If the new property owner fails to provide Waterloo Biofilter with a written notification as stated above this Limited Warranty shall be considered null and void. This Limited Warranty cannot be transferred again.

6. Making a Claim

If the product is defective you should immediately notify the system installer or maintenance provider. If it is found that the problem is caused by a manufacturing defect notify Waterloo Biofilter immediately and an inspection in regards to the warranty claim will be performed by us or our authorized representative.

Access to the property and all system components must be granted for inspection purposes. If it is found through this inspection that the product is performing in accordance to the specifications herein, or that the

problem is not a result of manufacturer's defect, a charge of \$100 plus direct expenses will be invoiced to the owner. If it is found that the product is not performing as specified herein no charge will be applied.

7. Limitation of Liability

This Limited Warranty is the only warranty given by Waterloo Biofilter. No one is authorized to make other warranties on Waterloo Biofilter's behalf. IN NO EVENT WILL WATERLOO BIOFILTER, OR ITS DIRECTORS, OFFICERS, OR AGENTS, BE LIABLE TO THE PURCHASER OR ANY THIRD PARTY, WHETHER IN CONTRACT, IN TORT, OR ON ANY OTHER BASIS, FOR ANY INDIRECT, SPECIAL, PUNITIVE, EXEMPLARY, CONSEQUENTIAL, OR INCIDENTAL LOSS, COST, OR DAMAGE ARISING OUT OF OR IN CONNECTION WITH THE SALE, MAINTENANCE, USE, OR INABILITY TO USE THE PRODUCT, EVEN IF WATERLOO BIOFILTER, OR ITS DIRECTORS, OFFICERS, OR AGENTS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH LOSSES, COSTS OR DAMAGES, OR IF SUCH LOSSES, COSTS, OR DAMAGES ARE FORESEEABLE. IN NO EVENT WILL WATERLOO BIOFILTER, OR ITS OFFICERS, DIRECTORS, OR AGENTS BE LIABLE FOR ANY DIRECT LOSSES, COSTS, OR DAMAGES THAT EXCEED THE PURCHASE PRICE OF THE PRODUCT. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO THE PURCHASER.

8. Governing Law and Attornment

This Limited Warranty is governed by and will be construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein. Waterloo Biofilter and the owner hereby attorns to the jurisdiction of the courts of Wellington County in the Province of Ontario with respect to any dispute arising under this Limited Warranty.

This Limited Warranty gives you certain specific legal rights, and you may also have other rights which vary from state to state or province to province.

For Additional Information, Please Contact:



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Best Management Practices

This location uses an on-site system to treat all of its wastewater. This means it is not connected to a municipal sewer so extra care needs to be taken to ensure the system operates properly. Following the advice below will protect the health of the occupants and the septic system.

Problems	Consequences	Solutions
Disinfectants		
<ul style="list-style-type: none"> ■ Bleach ■ Chlorine 	Kills the bacteria in the septic tanks preventing proper and complete treatment of sewage.	Limit the use of anti-bacterial products and disinfectants. Use chlorine-free cleaning products such as vinegar, baking soda and peroxide.
Chemicals		
<ul style="list-style-type: none"> ■ Pesticides ■ Prescription drugs ■ Antifreeze 	Chemicals kill the bacteria and may contaminate the groundwater and well water.	Don't pour chemicals down the drain. Direct water softener backwash away from septic system. Don't flush fabrics or disinfectant wipes down the toilet.
Hydraulic Overload		
<ul style="list-style-type: none"> ■ Too much water flowing into the septic tanks at once 	Too much water pushes solids out of septic tanks without a chance to be broken down.	Wash only full loads of clothes or dishes. Spread laundry washing over several days. Don't dump RV waste into septic tanks. Don't connect sump pumps, foundation drains to septic tanks. Fix leaky toilets.
Paints		
<ul style="list-style-type: none"> ■ Paints ■ Solvents 	Kills living bacteria, covers and clogs pipes and dispersal field.	Don't pour paints or solvents down the drain.
Food Scraps and Grease		
<ul style="list-style-type: none"> ■ Food scraps ■ Fats, oils and greases 	Difficult for bacteria to break down. Septic tanks may require more pump outs. Grease can clog the system.	Don't use in-sink garbage disposal. Don't pour fats down the drains. Scrape food off dishes before washing.
Landscaping		
<ul style="list-style-type: none"> ■ Heavy objects on top of system 	May damage pipes, components or compact the soil.	Don't drive automobiles or equipment heavier than a riding lawn mower over the system. Don't place any structures on it.
<ul style="list-style-type: none"> ■ Impermeable dispersal bed cover 	Prevents necessary evaporation of groundwater.	Don't cover dispersal field with concrete or asphalt. Do cover the field with grass.
<ul style="list-style-type: none"> ■ Re-grading the dispersal bed 	May cause water to pond on top or be directed in undesirable directions	Don't re-grade your property without consulting your installer.

