

# On-site Wastewater Treatment for Commercial and Communal Applications



Waterloo Biofilter Systems Inc.



*The Waterloo Biofilter System is an ideal option for large systems.*

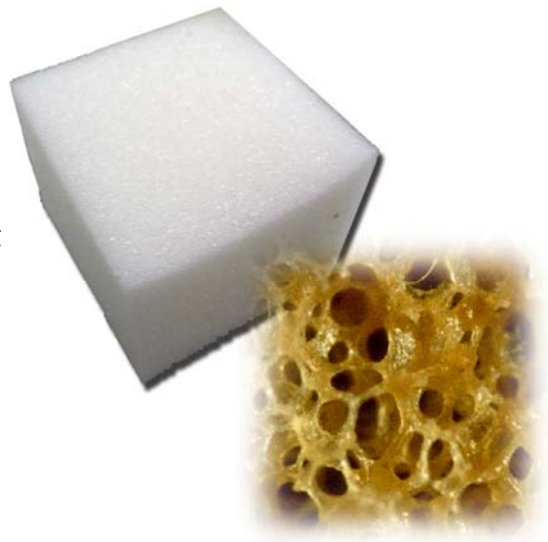
*Various custom options available for treatment and disposal...*



U.S. EPA's Environmental  
Technology Verification Program  
[www.epa.gov/etv](http://www.epa.gov/etv)

# The Technology

The Waterloo Biofilter® is an aerobic trickle filter designed for the biological treatment of wastewater. The patented process utilizes a non-biodegradable, light-weight synthetic filter medium optimized for a high loading rate and a compact size. Wastewater is sprayed intermittently over the filter medium and as it drains through by gravity, beneficial microbes degrade the organic pollutants, coliform bacteria, ammonium and other contaminants in the septic tank effluent.



## Advantages

**Excellent Treatment** The following table summarizes the expected effluent quality for Biofilter treatment.

**High Hydraulic Loading** The Biofilter® has high hydraulic abilities — not likely to plug or flood by infiltration caused by groundwater or leaky toilets.

**Seasonal or Year-Round Use** The bacteria in the foam will not die during the winter if the Biofilter is not in use, only become dormant, allowing a quick start-up in the spring.

**Recoverable** Easy to recover if the septic tank fails or dies. Stop poisoning, and within 1-2 weeks, septic tank fermentation is back, and optimum Biofilter treatment starts again. A complete recovery will occur within 2-3 months.

**No Aerobic Sludge Production** Our unique aerobic-anoxic trickle filter process produces no aerobic sludge to pump out, just like natural soils.

**Low Energy** Uses only small intermittent pumps.

**Easy Maintenance** The non-biodegradable filter medium normally does not require cleaning or changing (expected life span is 20 years).

**Wastewater Re-Use** Several Waterloo Biofilter systems in Ontario are currently re-using their wastewater. The effluent from the Biofilter systems can be disposed of in irrigation ponds for later use and some Biofilter systems even use the treated effluent to flush toilets.

Pollutant	% Removal
BOD, cBOD	90 – 99
TSS	90 – 99
Fecal Coliform	99
TN	20 – 40*
	50 – 65**

\* *Single Pass*

\*\* *50% Recirculation*

# Configuration Options



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## Above Ground PE Treatment Units



- Foam filter medium contained in polyethylene tanks
- For small to medium sized applications
- Modular and ideal for multiple phase projects
- Good for seasonal use
- Housed in a heated building as shown

## Above Ground SC Treatment Units

- Foam filter medium contained in a modified shipping container
- For medium to large sized applications
- Modular and ideal for multiple phase projects
- Easy transportation and installation
- Control room and lockable roof hatches allow for easy maintenance



## Below Ground Treatment Units



- Foam filter medium is contained in mesh baskets inside the buried concrete tanks
- For small to medium sized applications
- Buried and out of sight
- Access risers allow for easy maintenance

# Applications

- Subdivisions and Housing Developments
- Campgrounds
- Golf Courses
- Truck Stops
- Restaurants
- Schools
- Nursing Homes
- Hotels
- Churches
- Parks



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on-site wastewater treatment

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