

## Go Biological®

### High Rate Biofilters Eliminate Surcharges and Get Control of Your Wastewater Costs Today.

Whether It's BOD or COD reduction, nitrification or denitrification, we offer a cost effective solution.

### Biofilm Filter Technology

BioProcessH2O® Technologies has developed and patented a fixed film system that provides a large surface area for entrapment and holding of wastewater digesting microbes. Our systems are designed to maximize treatment capacity in a small footprint using our Engineered Composite Media (ECM). Manufactured columns of ECM, which consist of specially treated, chemically resistant filaments, are built on FRP cartridges that are either submerged or suspended above the wastewater being treated. Either installation option ensures maximum exposure of activated sludge to the waste stream. The activated sludge adheres to the media while digesting waste from plant production effluent streams. The result is a resident population of biomass that removes BOD and COD from the wastewater or in nutrient applications will nitrify ammonia or remove total nitrogen.

### HRBF BioFilm Towers

High Rate BioFilm Towers (HRBF) from BioProcess Technologies are high rate filter systems that are designed to maximize the amount of media in a compact design and at the same time provide "open" flow of wastewater, thus avoiding the development of unproductive sectors common with other media.

These units are skid mounted and modular, allowing for efficient system sizing in the available space, as well

as easy upgrade or expansion. High Rate Biofilm Towers can be installed indoors or outdoors. They can be easily integrated as an upgrade into an existing treatment system.



High Rate BioFilm Towers

### Low Cost Operation & Maintenance

BioProcess Technologies has engineered a system that is compact and consumes only a few horsepower per High Rate BioFilm Tower. With a minimum number of moving parts, this system offers continuous trouble-free operation. Air is introduced into the holding tank and in some cases to the HRBF biotower. The robust Engineered Composite Filter Media (ECM) does not require any maintenance, replacement, or back-flushing.

## Flexibility

### New or Retrofit Construction

BioFilm Filters can be installed in series, in parallel, or a combination. Engineers at BioProcess Technologies will work with you to select the most efficient and cost effective arrangement. Once installed, the system is plumbed such that a sequence change can be made should your wastewater treatment needs change. Future High Rate BioFilm Filters can easily be added without a major disruption to your wastewater treatment process. Installation does not require a shutdown of your existing treatment process.



Submerged BioFilm Filters

**100% DEVELOPED AND BUILT IN THE USA**

## BioProcessH2O®Filters Features & Benefits:

- High Rate BioFilm Filters (HRBFF) with suspended design
- BioFilm filters reduce installation to hours instead of days
- Fork lift installation for smaller systems
- Treatment of flows from 3,000 – 500,000 gallons per day
- Retrofit ease takes advantage of existing WTP Infrastructure
- Biofilm grows on patented Engineered Composite Media
- BioProcessH2O manufactures and builds its filters in USA.
- Compact modular design for expansion capabilities
- High/Low strength BOD/COD stream treatment with greater than 95% removal
- BioFilters in use for nitrification & denitrification
- Fixed stable biomass
- 30% less sludge production compared to MBBR reduces sludge treatment and hauling costs by 25 – 50%
- Robust media handles a wide range of influent conditions warranted for 20 years
- No replacement or backwashing of filters media required
- Lowest capital cost
- Lowest operating cost
- Lowest maintenance
- Treatment plant upgrades without disruption to production



BioFilm Filter In service over 5 years at Blount Seafood

## Successful Market Sectors

- Food
- Beverage
- Agricultural
- Municipal

## Design & Build

Engineers at BioProcess Technologies will consult with you to design the most cost effective solution to meet your wastewater treatment needs. From Biofilters followed by MBR for water reuse, our engineers have installed some of the largest water reuse systems. We can supply the equipment package or manage the design, build, and installation of your system.

## Installation Options

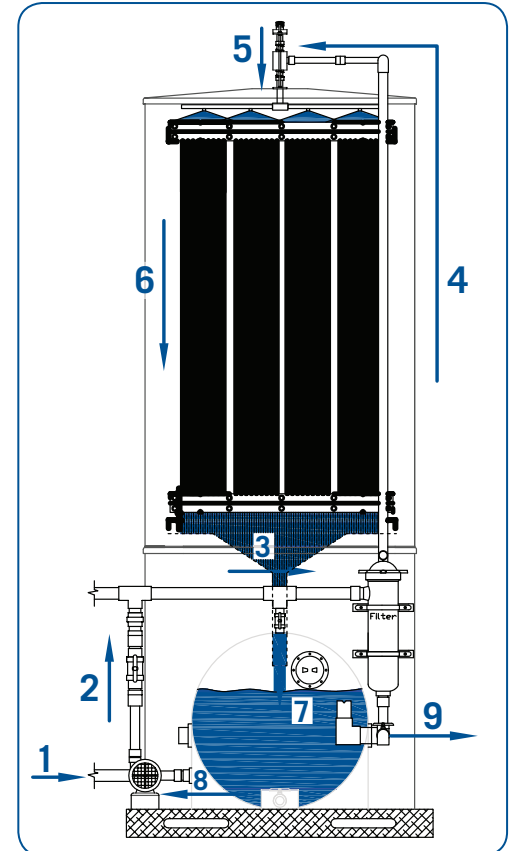
- Retrofits or Greenfield
- Surcharge elimination with < 3 year ROI guaranteed
- Flow segregation & equalization
- pH Control
- Solids removal
- Data acquisition & remote monitoring
- Organic monitoring for treatment assurances



150,000 GPD Retrofit < 3 yr. ROI

## Treatability Studies

BioProcess Technologies offers treatability studies at our laboratory in Portsmouth, RI or at your facility. Ship a sample to our lab for treatability testing with our patented Engineered Composite media (ECM). We will profile your wastewater and design a treatment system to handle your plant's organic loading. Our fully equipped mobile pilot trailer is also available for long term pilots.



Process Schematic: Influent wastewater enters at point 1, effluent wastewater exits to sewer or to membrane polishing system for reuse-quality water.

## For More Information

See us on the web  
[www.bioprocessh2o.com](http://www.bioprocessh2o.com)  
 Or call us toll free at  
 866.882.5400

BioProcessH2O®  
 207 HighPoint Avenue  
 Portsmouth Technology Park  
 Portsmouth, RI 02871