

# BayFilter<sup>®</sup> Stormwater Filtration System

BayFilter is the most efficient, effective and economical stormwater treatment filters on the market. A BayFilter system may be a single cartridge or multiple cartridges to satisfy any treatment flow requirement.

BayFilter removes fine sediments, nutrients, heavy metals and other pollutants at a maximum flow of 45 gpm (2.8 L/sec) per cartridge. The vertically spiralled layered design maximizes surface loading rate and filter media area for the most effective stormwater treatment, while up-flow filtration allows for BayFilter's unique hydrodynamic backwash cleansing process. This process dislodges pollutants and restores the porosity of the mixed media filter.

## Features

- Most effective filtration offers enhanced pollution prevention
- System removes greater than 80% Total Suspended Solids (TSS) and 65% of turbidity
- Available in different configurations (manhole filter, precast vault filter and cast-in-place vault filter)
- With enhanced media is capable of removing 65% of total phosphorous load
- Optional drain-down cartridge feature is built into the filters, minimizing stand water even after siphon has broken and cartridges are not engaged

## Benefits

- Easy to specify, install and maintain
- Systems are fully customizable to meet the needs of each specific project
- Cartridges may be recycled
- Reduced life cycle cost
- Low maintenance costs
- Prevents system from becoming anaerobic during dry periods
- Excellent abrasion and corrosion resistance



# BayFilter Stormwater Filtration System Specification

## Products

- All internal components, including concrete structure(s), PVC manifold piping and filter cartridges, shall be provided by Advanced Drainage Systems, Inc.
- All internal PVC manifold pipe and fittings shall meet ASTM D1785. Manifold piping shall be provided to the contractor partially pre-cut.
- External shell of the filter cartridges shall be substantially constructed of polyethylene or equivalent material acceptable to the manufacturer. Filtration media shall be arranged in a spiral layered fashion to maximize available filtration area. An orifice plate shall be supplied with each cartridge to restrict the flow rate to a maximum of 45 gpm (2.8 L/sec).
- Filter media shall be blend of one or more of the following: silica sand, zeolite, perlite, activated alumina and granulay activated carbon.
- Precast concrete vault structures shall be provided according to ASTM C. The materials and structural design of the devices shall be per ASTM C478, C857 and C858. Precast concrete shall be provided by BaySaver Technologies LLC.

## Performance

- The stormwater filter system is capable of treating 100% of the required treatment flow at full sediment load conditions.
- The stormwater filter system’s cartridge units shall have no moving parts.
- The stormwater treatment unit shall be designed to remove a minimum of 80% of Total Suspended Solids (TSS), 60% of total phosphorous, 50% of turbidity, 40% of total copper and 40% of total zinc. All filter designs shall comply with local regulations.
- The stormwater filtration system shall reduce incoming turbidity (measured as NTUs) by 65% or more and shall not have any components that leach nitrates or phosphates.
- The stormwater filtration cartridge shall be equipped with a hydrodynamic backwash mechanism to extend the filter’s life and optimize its performance.
- The stormwater filtration system shall be designed to remove a minimum of 65% of the incoming Total Phosphorous (TP) load.
- The stormwater filtration system’s cartridge units shall have a treated sediment capacity for 80% TSS removal between 150-350 pounds.

Filter Cartridge	Treatment Flow Rate gpm (L/sec)	Treatment Volume ft <sup>3</sup> (m <sup>3</sup> )	Filter Surface Area ft <sup>2</sup> (m <sup>2</sup> )
BayFilter 522	22.5 (1.42)	1250 (35.4)	45 (4.2)
BayFilter 530	30 (1.89)	2500 (70.8)	90 (8.4)
BayFilter 545	45 (2.84)	2500 (70.8)	90 (8.4)
BayFilter 622	22.5 (1.42)	1250 (35.4)	45 (4.2)
BayFilter 630	30 (1.89)	2500 (70.8)	90 (8.4)
BayFilter 645	45 (2.84)	2500 (70.8)	90 (8.4)

## Installation

Installation of the BayFilter System(s) shall be performed per manufacturer’s installation instructions.

