

BayFilter® Stormwater Filtration System

The Washington Department of Ecology (DOE) approves the BayFilter based on flow rate per square foot of filter media. The General Use Level Designation (GULD) for suspended solids (TSS) and phosphorus removal provides design flexibility. Several filter sizes are available to meet the needs of professionals. Filters that meet the Washington DOE dissolved metal removal criteria are also available; their approval by the DOE is pending. The three models of BayFilter available are listed above, and can be purchased locally.

BayFilter filters offer the highest flow rate per square foot of filter media on the market. This increased flow rate has the advantage of reducing the number of cartridges required and the size of the filtration structure. BayFilter filters also offer greater sediment storage capacity than any cartridge filter on the market, reducing maintenance frequency and costs.

BayFilter filters are made from a blend of at least one of the following materials: silica sand, zeolite, perlite and activated alumina. These materials are rolled into the cartridge to form a spiral to maximize flow through the system. Vertical filtration allows backwashing, which dislodges pollutants in the filter and restores its porosity.

Cartridge	Designation DOE	Maximum Treatment	Hydraulic Load Required	Filter Area	Sediment Storage Capacity
BayFilter 522	20.4 l/min/m ² (0.5 gpm/ft ²)	1.42 L/s (22.5 gpm)	508 mm (20")	4,18 m ² (45 ft ²)	79 kg (175 lbs)
BayFilter 530	13.4 l/min/m ² (0.33 gpm/ft ²)	1.89 L/s (30 gpm)	813 mm (32")	8,36 m ² (90 ft ²)	159 kg (350 lbs)
BayFilter 545	20.4 l/min/m ² (0.5 gpm/ft ²)	2.84 L/s (45 gpm)	864 mm (34")	8,36 m ² (90 ft ²)	159 kg (350 lbs)



Features:

- Filtration allows for increased pollution prevention for cleaner runoff water
- The BayFilter system removes more than 80% of MES and reduces turbidity by 50%
- Easy to integrate, install and maintain
- Available in various configurations (circular chamber, rectangular chamber, cast-in-place chamber)
- Completely custom made
- Total phosphorus load removal capacity of 60%
- Recyclable cartridges

Benefits:

- Reduced life cycle costs
- Adaptable system that meets the specific needs of any project
- Reduction in maintenance costs

BayFilter Stormwater Filtration System Specifications

Products

- Internal components: All components, including concrete structures, PVC pipes of the collector and filter cartridges, must come from ADS.
- Manifold PVC pipes: All internal PVC pipes and fittings must meet the requirements of the ASTM D1785 standard. Manifold pipes must be pre-cut or pre-assembled. Slight modifications may be required on site.
- Cartridges: The shell of the cartridges must be made primarily of polyethylene or a material equivalent deemed acceptable by the manufacturer. The filtration material must form a spiral of layers in order to maximize the filtration surface area. A flow regulator (i.e. nutating disc) must be provided with each cartridge to limit the flow to the specified cartridge flow rate.
- Filter material: The filter material must be a mixture supplied by ADS and can be composed of the materials following: zeolite, perlite and activated alumina and other materials required to meet shrinkage requirements pollutants from the project.
- Precast concrete room: Concrete structures must meet ASTM standards C478, C858 and C913.
- The materials and structure of the devices must comply with ASTM C478 and ACI 318 standards. Concrete prefabricated must be supplied by ADS.

Installation

Installation of the BayFilter system must be done according to the manufacturer's installation instructions.

