



## **Servicing, Maintenance and Disposal**

The StormBasin and StormPod like other storm water remediation devices require regular maintenance to remain efficient as storm water filters. By their nature, filters are meant to retain materials whether its coarse debris, dissolved pollutants or even bacteria and eventually this collection of “stuff” must be removed and the spent filtering media exchanged. This fact was quickly recognized as we evaluated competitive insert filters during the design phase of the StormBasin and StormPod. To minimize servicing requirements and extend maintenance intervals both units have benefited from a number of simple but effective features:

### **Large Collection Basin:**

The StormBasin and StormPod feature extra large, HD plastic collection basins. In standard filtering mode, the basin collects and focuses the runoff water to the cartridges while providing storage volume for the collection of sediments, trash and debris. A large basin will be able to operate longer and retain more debris while still maintaining the flow of water to the cartridges.

### **Sealed, High-flow, Filter Cartridge System:**

Both the StormBasin and StormPod use Fabco’s patented Filter Cartridge system. New Cartridges are quickly installed through a hole in the bottom of the basin. A simple twist locks the filter securely in place even during back flow conditions.

During maintenance the cartridge remains in place for Vac-truck operations. With the debris removed, the one piece cartridge can be removed and easily transported for disposal. The unique Fabco Filter Cartridge fits all StormBasin and StormPod designs!

### **Unique, Cartridge Pre-filter extends filter life:**

Each Fabco Filter Cartridge features a large, coarse, polyurethane foam pre-filter at the top of the cartridge body that extends upwards into the plastic basin. Unlike some competitive designs that actually collect sediments and debris in a recessed box above the filter media resulting in reduced treatment and by-pass, the Fabco pre-filter offers more surface area and is designed to shed debris and keep it in the basin. Up to 6 inches or as much as 4 to 5 cubic feet of debris can be collected before the pre-filter is covered. The flexible foam is easily brushed off during maintenance activities and is ready for more use.

### **Suggested Servicing and Maintenance activities:**

Prior to installation of either the StormBasin or StormPod Fabco Industries recommends thoroughly cleaning the selected catch basin vault of any accumulated sediments and debris.

Once installed the StormBasin and StormPod require periodic cleaning which is wholly dependent upon local conditions. In general Fabco Industries recommends cleaning the StormBasin/StormPod unit 2 to 3 times per annum by removing the debris, sand and silt.

A cleaning schedule should consider, road grades, surrounding vegetation, size of the filtering unit and seasonal changes. A large parking lot with limited trees and bushes would have a different schedule than a tree lined housing development.

### **Maintenance schedule example:**

1) Customer located in the northeast 2) Unit installed in the month of June 3) Site is a relatively flat parking field with some trees and bushes.

- 1) First Cleanout October/November
- 2) Second cleanout March
- 3) Third Cleanout May with Filter change

By examining the quantity of debris removed changes can be made to the schedule.

### **Filter Cartridge Exchange:**

The Fabco Industries filter cartridges used in the StormBasin product are designed primarily to capture floating and emulsified hydrocarbon compounds, dissolved heavy metals nutrients and pathogens (bacteria).

5-types of filtering media can be used together or independently in our cartridge body:

- FABGUARD: treated open cell foam product restricts build up (scum) and movement of bacteria through the cartridge
- FABMAX: treated filter media for treating hydrocarbon based compounds
- FABSORB: Fibrous filter material for absorbing hydrocarbon based compounds
- FABLITE: Natural ION exchange compound for heavy metals
- FABPHOS proprietary filter media for treating the soluble Phosphates and Nitrogen compounds

Based on typical pollutant concentrations as published in numerous State Stormwater management Design manuals, Fabco recommends changing the cartridge(s) on an annual basis. Users with suspected higher than normal levels of Hydrocarbons and Heavy metals should consider more frequent changes. Fabco can supply specially modified StormBasins and StormPods to enable field testing.

### **Disposal:**

There are two disposal aspects to consider with the Fabco Industries StormBasin and StormPod units

1. Disposal of the captured sediments, debris and trash
2. Disposal of the spent filter cartridge

Fabco Industries is recommending a minimum 2-3 basin clean outs per year. Under typical local and state regulations, the collected material is considered equivalent to material collected during street sweeping operations. This material is normally considered contaminated non-hazardous solid waste. However as with all waste products intended for disposal, it is up to the generator to properly characterize the waste prior to disposal. After proper characterization the generator can proceed with disposal under the guidance of local, state and federal regulations.

The Fabco Industries Filter Cartridges are manufactured from some or all of the following listed items

1. Polypropylene: Body, grills, and color rings
2. Polypropylene open cell foam
3. FABGUARD treated antimicrobial treated foam pad
4. FABMAX treated hydrocarbon filter media
5. FABSORB polypropylene, fibrous absorbent pad

6. FABPHOS synthetic pad treated for nutrients
7. FABLITE, natural Zeolite compound

The MSDS sheets for each of these materials (accessible on the website) shows that each of the virgin materials is non-toxic and safe for the environment.

Based on the pollutant concentrations listed in the New York State Storm water design manual, spent filter cartridges typically will be considered non-hazardous solid waste and can be disposed of in a landfill.

- The FABGUARD treated foam pre-filter has no absorbent properties and will certainly contain captured solids and trace levels of hydrocarbons.
- The FABSORB oil absorbent pads will be considered similar to oily rags.
- The FABMAX treated foam pads permanently bond with hydrocarbon compounds. Testing under Federal RCRA disposal guidelines confirms that in most cases spent pads pass TCLP testing protocols for non-hazardous disposal.
- The FABLITE should capture and retain the majority of heavy metals. Extensive testing of the FABLITE material confirms that it is capable of capturing and permanently retaining these ionic species, allowing non-hazardous disposal.
- FABPHOS treated pads when used for nutrient treatment should be safe for disposal. The pads are a treated, synthetic material that is non-hazardous, non-toxic and non-biodegradable. Fabco recommends that the pads be characterized by the generator prior to disposal.

Based on discussions with State DEC officials and local disposal companies while landfill is a possibility, the high BTU value of the spent cartridge suggests incineration as the preferred method of disposal. Laboratory analysis of spent cartridges by COVANTA Secure Services confirms that it would be acceptable by them for disposal.

Fabco Industries would like to conclude by reaffirming that it is up to the generator to properly characterize all waste products and to arrange for proper disposal, under local, state and federal regulations.