SkimBoss™
Filtration System

Patent Pending

An Upflow Filter
with
Hydro-Variant Technology™

Special Features:

- Can accommodate many types of media.

- Hydrology varies depending of flow rate.

- Can be placed in line with existing pipes.

- Fluidized media bed resists clogging.

- Easy to remove sediments in settling chamber below media.

- Easy to replace or change media.

- Can be configured so that different media types can be arranged to form a treatment train.

- Can accommodate **Bold and Gold**™.

- Can be added to existing treatment systems to improve removal efficiencies of baffle boxes, detention ponds, and spinner systems.

The SkimBoss™ Filtration System incorporates Hydro-Variant Technology™ which avoids typical head losses during high flow events. *This enables the placement of media inline with existing pipes without a significant impact on flow. The media bed is in an upflow fluidized configuration which enables the system to be resistant to clogging. Depending on the pollutants of concern, a wide variety of media types are available. Below the media bed is an easily accessible settling chamber for solids.*

Highly Resistant To Clogging

SkimBoss™ Filtration System Functional Description

No Flow State: *Between rain events the media bed is settled down along the bottom of the media vessels and the media remains in the water within the vault. Typically for nutrient specific granular media, biological activity on the surface of the media and water begin to consume contaminants captured by the media, and over time the denitrification process accelerates. The media vessels are filled with media to a level so that there is approximately a 2" space across the top of the media bed. This space above the media will enable the media to shift when water begins to flow. Every time the rain event begins and ends the media shifts and breaks apart any clogs that may have begun to form in the media.*
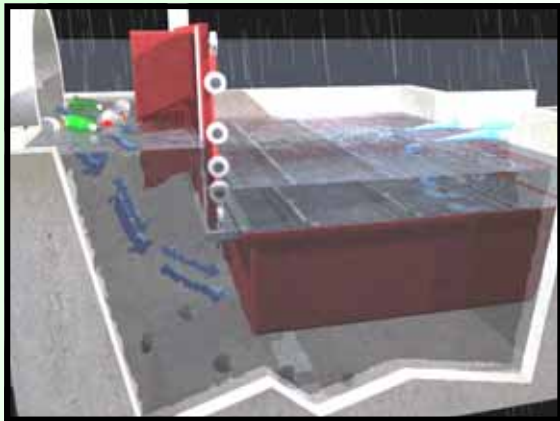

Low to Medium Flows: *During low to medium flows the SkimBoss™ remains at rest on a landing along the upflow end of the media vessels and all the water flow is directed under the upflow filter. The hydraulic grade line on the upstream side of the SkimBoss™ is higher the the hydraulic grade line on the down stream side. This creates hydraulic pressure for force water up through the fluidized media bed. Sediments and other solids will settle into the lower chamber below the media vessels.*
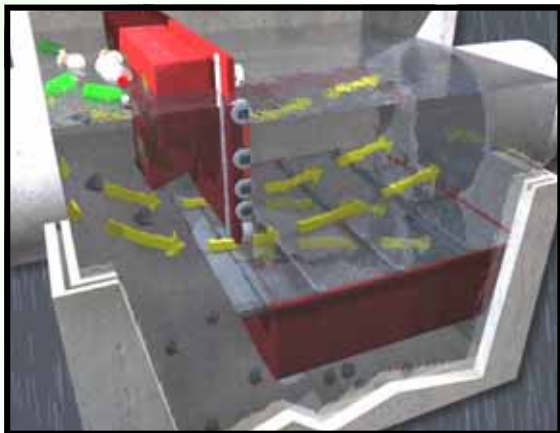
During High Flows: *The Buoyancy of the SkimBoss is based on the water level on the upstream side. Once the hydraulic grade line on the upstream side reaches a predetermined elevation the SkimBoss™ will begin to rise upward. This creates a gap between the SkimBoss™ and the media vessels at an elevation even with the outflow pipe. As the SkimBoss™ rises the hydraulic grade lines on the inflow side and the outflow side equalize. The headloss of the filtration system diminishes as the SkimBoss™ rises. During high flows louvers along the top of the media vessels serve to back flush the media. As the flow rate slows the SkimBoss™ settles back onto it's landing and once again all the water flow is directed up through the media vessels.*
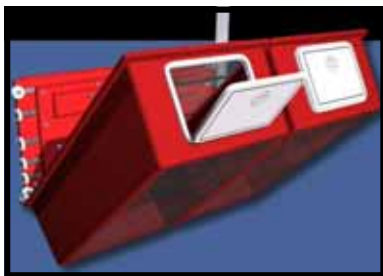
Servicing: *The media vessels are hinged so that lower chamber is easily accessible by a vacuum truck. To change the media, large hatches in the end of the media vessels allow for access by a vacuum truck. Simply vacuum out the old media and pour in the new media.*

Suntree Technologies Inc. ®