THE STORMCHAMBER SYSTEM AS A WATER QUALITY DEVICE

StormChamber™ systems, when combined with our patented SedimenTrap™, create the most cost effective storm water system that not only meets the requirements for storage, but also exceeds requirements for a water quality BMP. The SedimenTrap™ also makes the chore of sediment maintenance very easy and highly cost effective.

Our StormChamber™ systems are designed with a SedimenTrap™ in the first and last StormChamber™ of the row receiving the storm water inflow. Most of the sediment that enters the StormChamber™ system drops out into the SedimenTrap™ in the first chamber of the receiving row. Any sediment that bypasses this SedimenTrap™ eventually gets washed down to the one in the last chamber of that row. The SedimenTraps™ are easily and quickly cleaned with a vacuum truck. Additionally, as with a septic drain field, a biomat of micro-organisms forms on the stone and soil underlying the StormChambers™ which breaks down pollutants and nutrients to non-toxic byproducts. There has been significant documentation supporting and explaining the role of naturally occurring soil micro-organisms in pollution abatement. The EPA Technology Fact Sheet, "A Citizen's Guide to Natural Attenuation", provides an excellent explanation how this process works. (See the EPA Fact Sheet and an article on natural micro-organism elimination of soil contaminated hydrocarbons on a U.S. Navy facility on our web site, www.stormchambers.com, under the heading tab "Support Docs"). Studies have shown that infiltration type devices provide the highest level of storm water quality enhancement. (See comparison chart with data from Tom Schueler's non-profit Center For Watershed Protection on our web site, also under the heading tab, "Support Docs").

The first row of a StormChamber™ system can also be regarded as a highly effective pre-treatment device. In order for any sediment to get into the rest of the StormChamber™ system, water would have to back all the way up to the first chamber of the row receiving the inflow and rise to the invert of the pipe connecting the first chamber of adjoining rows. This would be highly unlikely. When the storm water enters through the storm drain pipe into the first chamber of a row, it initially spreads throughout the stone base and rises up into the entire chamber system about equally through their open bottoms. Any possible flow through the pipe connecting the first chambers of each row would therefore occur well past the first flush.

To further reduce sediment movement into the StormChamber™ system, we also recommend incorporation of 3'-4' deep sumps in all storm drain inlets. Research has shown that shallow sumps are very ineffective in sediment capture and retention. We also recommend installing a baffle at each storm drain inlet as an inexpensive and effective way keep oils and debris out of the StormChamber™ system.

Attached are a couple of schematic drawings to help describe how our StormChamber™ systems, with our SedimenTraps™, function as both a storage and water quality system.

Please call us at (877) 426-9128 with any questions.