# **CULTEC Stormwater Systems 101 - The Basics**

The CULTEC Contactor® and Recharger® chambers replace conventional stormwater retention/detention systems such as ponds, swales, pipe and stone trenches or beds, or concrete structures. The chambers may be used for drywells. Infiltration contact area is maximized by the fully open bottoms and perforated sidewalls.

Water is collected in a catch basin or other collective device followed by a CULTEC Stormfilter® to be treated. The water is then directed into the Contactor® or Recharger® chambers and distributed via the side portal internal manifold.

Typical CULTEC stormwater systems are designed by using the largest chamber that meets the site's depth constraint and system requirements. By choosing the largest available chamber that meets the system's parameters, you reduce the number of chambers and land area required. The client is able to maximize storage volume at the given workable elevations.

#### **Applications**

- Retention Systems
- Detention Systems
- Reclamation
- Drywells
- Conveyance
- Manage residential roofdrain run-off
- · Contain swimming pool or water conditioner backwash

#### **Features**

- Patented Overlapping Rib Connection
- Unique in-line manifold available on most models
- Heavy Duty units meet AASHTO H-25 wheel load criteria when installed per manufacturer's recommendations
- · Repeating support panel adds to strength of installation
- · High infiltrative capability
- Lightweight
- Variety of sizes
- Chemically resistant
- Manufactured in ISO 9001: 2000 certified facilities

#### **System Benefits**

- Maximum use of land area
- Store larger volumes in a lower profile than comparably sized pipe
- · Ability to recharge water on-site
- · Single or multi-level systems
- Less heavy equipment required
- The units nest on pallets for convenient shipping and stockpiling of material
- · Allows for greater infiltration into the ground
- Permits further development
- Reduces insurance liabilities and potential breed grounds for infectious mosquitoes associated with open ponds
- · Free design assistance available





# **Typical CULTEC Stormwater System Components**

- 1. CULTEC Stormwater Chamber used for retention, detention, reclamation
- 2. CULTEC PAC™ 150 chamber with bottom used for water conveyance
- 3. CULTEC HVLV™ Feed Connector internal manifold component
- 4. CULTEC StormFilter™ 330 Water Quality Unit
- 5. CULTEC No. 410™ Filter Fabric prevents soil intrusion into system
- 6. CULTEC No. 20L<sup>™</sup> Polyethylene Liner placed under CULTEC manifold components, prevents scouring
- 7. CULTEC Warning Tape Marks off location of underground CULTEC Stormwater System during construction to prevent vehicular traffic
- 8. Multicade™ Pylon Marks location of underground CULTEC Stormwater System during construction phase



### **Stormwater Chambers**

#### Contactor® Series

The Contactor® Chamber series consists of lower profile chambers and are typically used for installations with depth restrictions or when a larger infiltrative area is required. The 12-inch high Contactor® 100HD is the most popular model within this series for stormwater design.

Other models available within the Contactor® series are: Contactor® EZ-24, Contactor® Field Drain C-4, and Contactor® 125. Design information for these models is available upon request.



## Recharger® Series

CULTEC's Recharger® series includes higher profile, larger capacity chambers. Sizes range from 18.5" - 32" (470 - 813 mm) high. Chamber capacities vary from 2.65 - 8.679 cu. ft./ft. (0.246 - 0.806 cu. m/m).

The most popular models within this series are the Recharger® 150HD, 280HD, 330XLHD and V8HD.

Alternate model available within the Recharger® series is: Recharger 180HD. Design information for this model is available upon request.



# CULTEC

# **Internal Manifold Components**

#### **HVLV™** Feed Connectors

Feed connectors are inserted into the side portals of the CULTEC Chambers or used with HVLV™ Header sections to act as feed lines within the bed of stormwater detention/retention chambers.

Models: HVLV™ SFCx2 Feed Connector, HVLV™ FC-24 Feed Connector and HVLV™ F-110x4 Feed Connector.

See page 50 for more information on Manifolding Options.



## **CULTEC No. 20L™ Polyethylene Liner**

Polyethylene liner is placed beneath CULTEC chambers utilizing the side portal internal manifold or external HVLV™ 180 Header System to prevent scouring and provide a smooth surface on which the stormwater can travel.



## **Water Conveyance**

#### PAC™ 150 Series

The PAC $^{\text{TM}}$  150 is a non-perforated chamber with a solid bottom plate that is used as a substitute for pipe for water conveyance. Side portals located on the unit allow for easy entry points for distribution along the system.



## **Water Quality**

#### CULTEC STORMFILTER™ 330

The CULTEC StormFilter® 330 is designed to be a secondary in-line filter system that effectively removes many of the smaller particles not eliminated by conventional structures during the pretreatment process.

CULTEC StormFilter® 330 is a passthrough filter system used in stormwater applications to filter rainwater run-off prior to entering the CULTEC Stormwater Management System. It has a solid bottom and sidewalls.



#### CULTEC STORM*FILTER*™ T-80

Residentially-sized StormFilter T-80 may be used as a stormwater filtration unit, holding tank or catchbasin. Use with or without corrugated riser, grate or optional filter (each sold separately) based on your needs. This compact unit is easy to install and simple for the homeowner to maintain. Perfect for controlling roof and driveway runoff for smaller applications.



## **System Accessories**

## **CULTEC No. 410™ Filter Fabric**

CULTEC No. 410™ Filter Fabric is a non-woven polypropylene filter fabric that may be used with CULTEC Contactor® and Recharger® stormwater installations. CULTEC Stormwater Systems are typically enveloped top, sides and bottom with filter fabric in order to provide a barrier that prevents soil intrusion into the stone.





# System Accessories - continued

## **Warning Tape**

CULTEC recommends taping off the installation location during construction to prevent any equipment or vehicles from traversing over the chambers until the system has been completely installed, backfilled and paved (where applicable) according to the manufacturer's recommendations.



#### Multicade™ Barricade

Multicade $^{\text{TM}}$  Barricade is available from CULTEC to assist in advising of restricted areas during the construction phase.

Collapsible Multicade™ pylons tri-fold to 3" thick or lay flat for easy storage and shipping. Unique triangular shape prevents rolling if knocked over. Join multiple units together to create larger Megacade. M.U.T.C.D. accepted. N.C.H.R.P. 350 approved. Multicade™ is manufactured by Advanced Construction Products, LLC.

