



***Montgomery County Public Works Association  
General Membership Meeting  
Thursday, January 25, 2018***

Upper Gwynedd Fire Station  
660 Garfield Avenue, West Point, PA 19486  
(215) 699-5454

***Meeting Sponsor – ACF Environmental – [www.acfenvironmental.com](http://www.acfenvironmental.com)***

9:00 AM	to	9:30 AM	Registration, Continental Breakfast
9:30 AM	to	10:30 AM	<i>ACF Environmental Representative</i> <ul style="list-style-type: none"><li>• Construction Phase Sediment Control &amp; Post Construction Stormwater Management (Green Infrastructure, Low Impact Development and Traditional PCSM) for MS4 compliance.</li></ul>
10:30 AM	to	10:45 AM	Break
10:45 AM	to	11:45 AM	<i>ACF Environmental Representative</i> <ul style="list-style-type: none"><li>• Post Construction Erosion Control, Stream Restoration &amp; Stabilization and Open Channel Stabilization for MS4 compliance.</li></ul>
11:45 AM	to	12:00 Noon	General Membership Meeting
12:00 Noon	to	1:00 PM	Lunch

LUNCH RSVP to Warren Cohn *by end of business* on Monday, January 22, 2018  
E-mail: [wcohn@acfenv.com](mailto:wcohn@acfenv.com) or Phone: (888) 856-4505



# ACF's Stormwater Suite

## Innovative Solutions for PCSM, Green Infrastructure & Low Impact Development

### MECHANICAL TREATMENT & SCREENING

- Screens and Insert Bags
- Cartridge Filter Inlets;  
PADEP WQ Approved

### VEGETATED/ BIOLOGICAL TREATMENT SYSTEMS

- High-Flow BioFiltration,  
Scalable & Cost Effective,
- Reduced Maintenance

### RUNOFF REDUCTION TECHNIQUES

- Reinforcing Systems for  
Grass and Stone
- Open Joint Pavers



### SPACE EFFICIENT SUBSURFACE STORAGE

### High Efficiency Modular Storage

- 95% Void Space
- Adapts to Irregular Footprints
- Versatility in Depth  
2" to 84"
- Infiltration, Detention or  
Harvesting

Terraced implementation pictured above, ACF's Stormwater Suite provides unparalleled versatility for a wide variety of SWM applications.

*Design Assistance, Material Supply, Jobsite Support*

**COSTARS™** ★★★★★

Pennsylvania Department of General Services

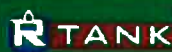
PA DGS COSTARS Participant



**Warren Cohn CPESC, CPSWQ - Stormwater Specialist**

**888-856-4505 / [wcohn@acfenv.com](mailto:wcohn@acfenv.com) / [acfenvironmental.com](http://acfenvironmental.com)**





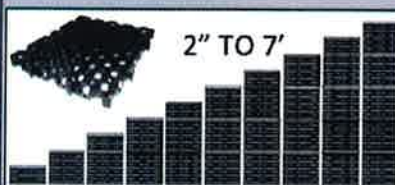
# Modular Storage Component

## High Capacity

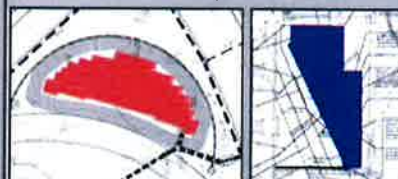


95% Internal Void Space for Maximum Storage Efficiency

## Modular Versatility: Depth



## Modular Versatility: Footprint



## Application Versatility



Harvest

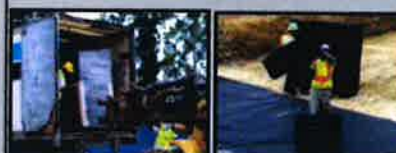
Detention

## High Strength



Supports H-20 and H25 Loads

## Lightweight



Cost Effective to Ship & Place

## Enhanced Underdrain for



Rain Gardens & BioCells

## Modular Versatility



ACF can provide the right system for your project

ACF Provides Support on all



Project Phases: Design to Install



# FocalPoint BioFiltration System

FocalPoint: A system of specific high flow rate engineered soils with a clog proof profile, high capacity profile to provided vegetated media treatment.



Creates "FocalPoint" of WQ Treatment and Maintenance



Treatment & Maintenance Footprint

FocalPoint is WQ Quality Treatment Approved By:

- PA DEP
- Philadelphia Water Department

## SCALABILITY:

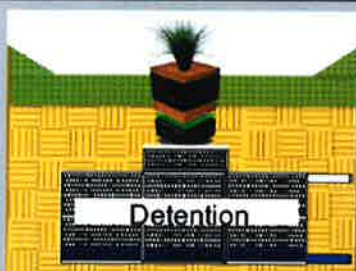
FocalPoint Treatment and surface storage footprint can both be manipulated to fit the site



Treat and Release



Infiltration



Detention



Harvest



- MODULAR DESIGN
- SCALABILITY
- FLEXIBILITY
- WATER QUALITY APPROVALS
- FACTORS OF SAFETY



## Drop Inlet Pre-Treatment / Treatment Component

### TrashGuard Plus:

a patented & cost effective stormwater pretreatment device that captures debris, sediment and floatables.

- Easy to Retrofit
- Adjustable
- 3 Sizes – Up to 24" Pipes



PWD Green Inlet Standard

### TrashGuard Plus/ Cut W/Rails:

a modified version to allow usage in limited access (manhole) catch basins.

- Easy to Retrofit
- Adjustable
- 3 Sizes – Up to 24" Pipes



PWD Green Inlet Standard

### CPS:

CONNECTOR PIPE SCREEN



- \* Stainless Steel Construction
- \* Easy to Retrofit Any Pipe

### Trash Guard Hood:

installs over the outlet pipe to reduce gross floatables, trash, debris and hydrocarbons.



### Gratemaster WQI

- Trash, Debris and TSS
- Internal Overflow
- Basic Adjustability



### StormSack – Heavy Duty WQI



Trash, Debris and TSS /

### FABCO StormBasin



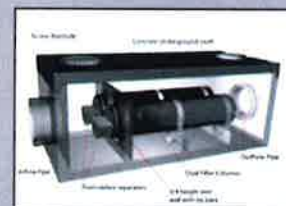
Cartridge Based WQI

### FABCO Cartridges PADEP Credits:

TSS: 80%  
TP: 60%  
NO: 40%



### Helix Filter Bacteria Reduction



HARCO

## PVC In-line Drains & Drain Basins

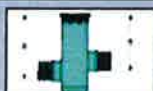
### HARCO Custom Drain Basins



### Internal Weirs Optional



### Inline Drains



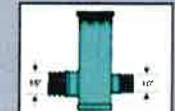
Change Elevation



Change Direction



Change Pipe



Change Diameter

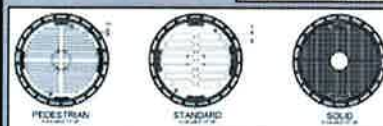
### Master .dwg Available



### Easy to use contractor order form



### Variety of Grates Available



### Beehive Filters



### Wide Variety Available







# Rain Garden & Biocell Pretreatment

**Debris  
Collection &  
Straining  
Energy  
Dissipation**

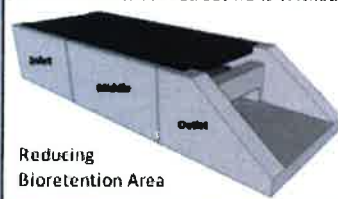


\* Rain Gardens \* Bioretention Cells \* Bumpouts \* Tree Boxes \* FocalPoint HPMBS



\*Routes Runoff  
Under Walkways,  
Bike Paths, etc

Provides Effective Pretreatment Without



Reducing  
Bioretention Area

Top securable lid supports light traffic

Side walls contain flow

Debris wall captures floatables

Grate intercepts large debris

Chamber collects solids

Filter prevents ponding in chamber

Splash pad reduces scour



Lightweight Lid & Grate for Easy Chamber Cleanout



## Runoff Reduction Products and Techniques



**Provides Paving  
and Drainage  
with Low  
Maintenance**



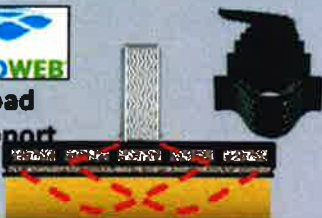
**Rigid  
Paver  
System  
w/Grass**



**Rigid Paver System w/Stone**



**Load  
Support**



w/Stone or Vegetation



**Slope  
Protection**



**Green Walls**



**Erosion  
Prevention**

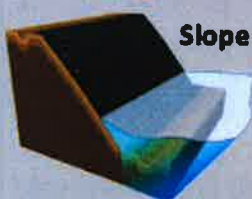


**Survivability**

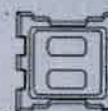


**ARMORMAX**

**Slope Stability**

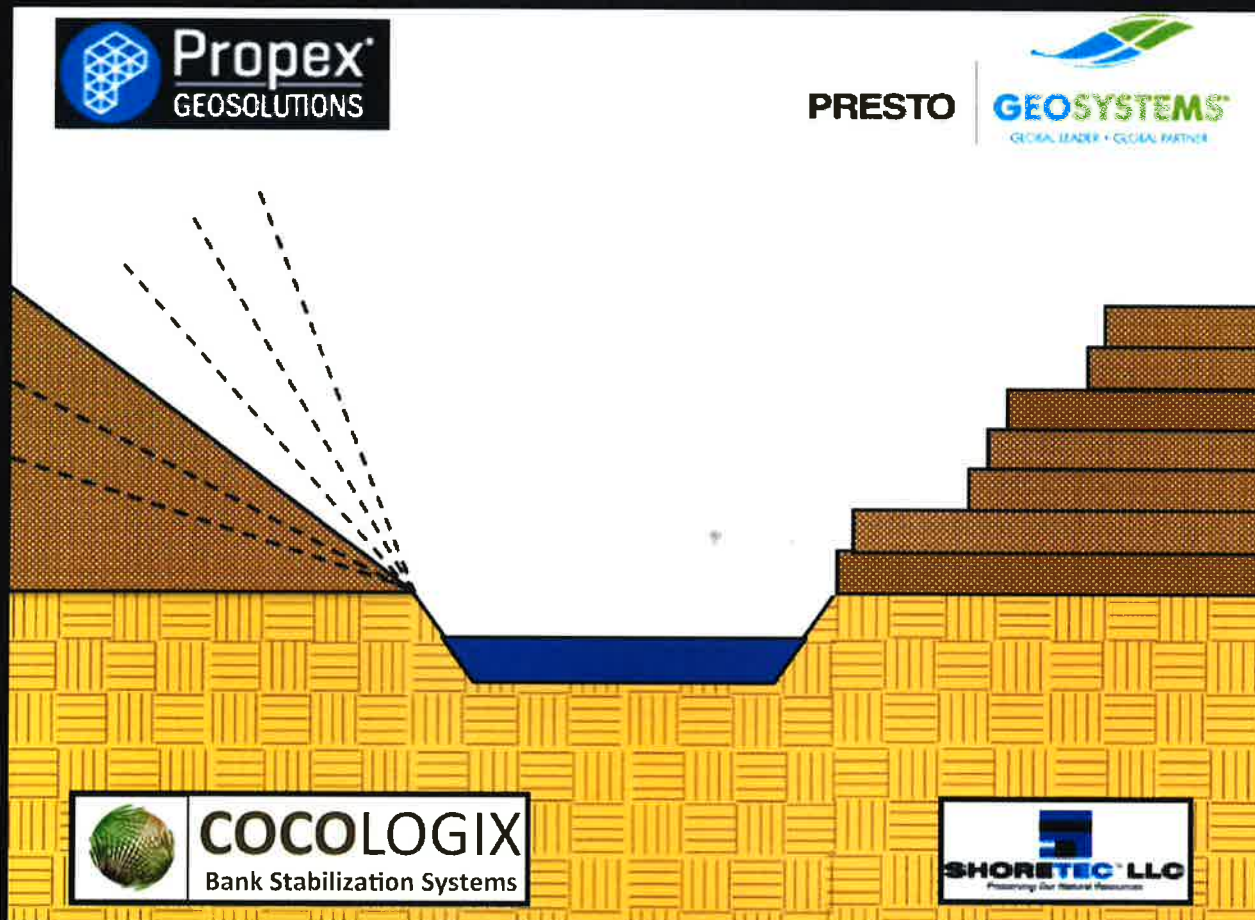


**ACBs**





# ACF's Stream Bank and Channel Stabilization Suite



*Innovative and Cost Effective Solutions for  
Stabilization for Banks, Slopes, Benches, Terraces  
Toes & Normal Pool to Ordinary High Water Level Zone  
Design Assistance, Material Supply, Jobsite Support*

**COSTARS™** ★★★★★

Pennsylvania Department of General Services

PA DGS COSTARS Participant



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# Stream Bank and Channel Toe Protection



**COCOLOGIX**  
Bank Stabilization Systems

## COCOLOGIX Pre-Vegetated Coir Logs



Coir Log w/established Root System



Coir Log Shipment



Install: August 2007



May 2013

**COCOLOGIX Pre-Vegetated Coir Logs are the best option to stabilize the "Normal Pool Level to Ordinary High Water Mark" zone, eliminating the costly maintenance, repair or replacement of unvegetated Coir Logs.**

**COCOLOGIX Pre-Vegetated Coir Logs:** \*Provide unparalleled engineering design guidance\* \*Protect plants from flow and wave attack\* \*Store food reserves on the established roots\* \*Allow for successful plantings any time of the year\* \*Minimize invasive species threats\*



**SCOURLOK™**

## Shoreline Defense System (SDS)



Metal frame basket Internally lined w/ geotextile. External PYRAMAT Pocket filled with mulch or other media for vegetation.



## Duckbill and Manta Ray Earth Anchors



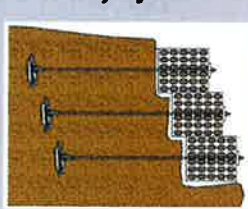
*DuckBill and Manta Ray Anchors can enhance a variety of the solutions in ACF's Stream / Channel Stabilization Suite*



Tree or Coir Log  
Revetment



Sea Wall



Gabions



ACB Revetments



Pipe Tie Downs

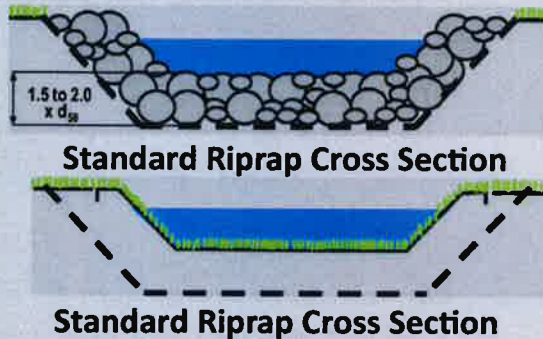


# Channels / Apron / Banks and Slope Stabilization



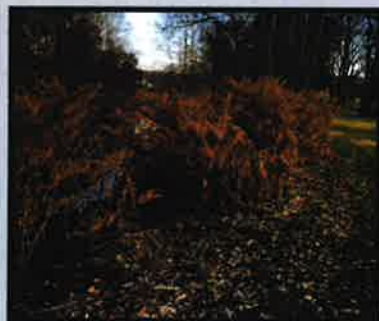
Landlok TRMs and Pyramat 3-Dimensional Woven HPTRMs Provide alternatives to traditional riprap channels for conveyance to the stream /channel corridor.

The TRMs and HPTRMs can be paired with PrestoGeo's Georunner Scour Prevention Transition Mats to replace Riprap Aprons.



High Performance TRM Reinforced Vegetative Surficial Erosion Prevention

*PYRAMAT's 3-dimensional woven construction provides higher design thresholds and survivability*



East Stroudsburg, PA 2004 and 2017

Spooner's Gulch, NY 1999 and 2017



Anchor Reinforced Vegetated System (ARVS)

*PYRAMAT is paired with specialized anchors to create the ARMORMAX (ARVS) system*



Higher hydraulic thresholds and survivability for erosion control.



Provides additional global stability to prevent slumps.

2013



2015

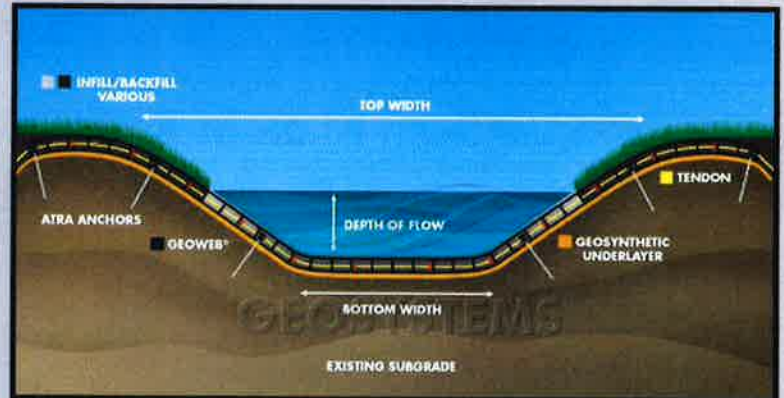




# Bank, Slope, and Bench / Terrace Stabilization



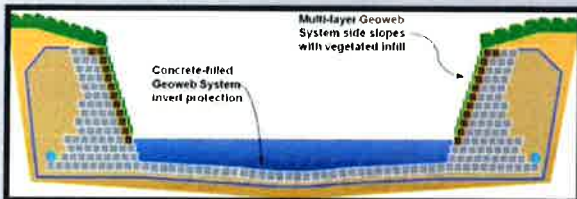
## GeoWeb Engineered Vegetated Channel Lining: Single Layer



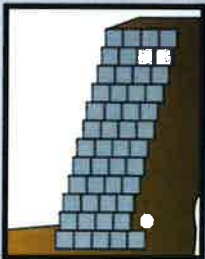
**GEOWEB Vegetated Channels offer Protection in Continuous Flow Channels and Streams and can be used on one bank or as a full channel width protective stabilization layer**



## GeoWeb Cellular Confinement Channels: Multi-Layer



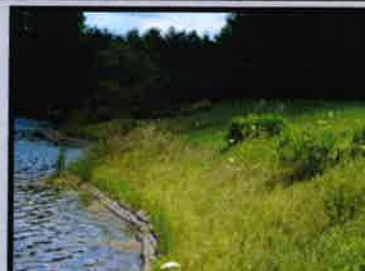
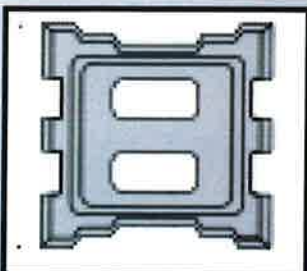
**GeoWeb Multi-Layer Vegetated Structures Provide a Green Engineered Alternative to Hard Armor**



**GeoWeb Multi-Layer can be built as a Fascia or Gravity Structure / Vegetated or Unvegetated**



## ACBs - Articulating Concrete Blocks



**ACBs provide a hard armor surface that can be vegetated as an alternative to rip rap**



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