

# INTRODUCING **MWS-LINEAR** STORMWATER FILTRATION SYSTEM

NATURE AND TECHNOLOGY WORKING TOGETHER IN PERFECT HARMONY.

The need for a new stormwater treatment system is evident. Federal and state requirements on cities and industry to reduce stormwater runoff increase every year as our population explodes. The EPA is now reporting that stormwater runoff represents the nation's number one water quality problem, and is the reason why nearly half of our rivers and lakes are not even clean enough to support fishing or swimming. *Nearly half.*



To combat this catastrophe, we turned to the expert in this field: *Nature*. By developing technology that imitates the processes found in nature, we've created the most advanced stormwater filtration system available. Years ahead of current EPA requirements, our clients understand that when they invest in our new technology, they are investing in the future. For all of us.



CONFIGURATION 1: GRATE TYPE



CONFIGURATION 2: CURB TYPE

## MWS-LINEAR TESTED REMOVAL EFFICIENCIES\*

TSS "Sil-Co-Sil 106"	Dissolved Cadmium	Dissolved Copper	Dissolved Lead	Dissolved Zinc	Dissolved Mercury	Bacteria E. Coli
98%	74%	93%	81%	80%	89%	60%

\*Laboratory Testing of Quarter Scale Model- Average Removal Efficiencies. Tested at Scaled Flow Rate Equal To 120 GPM For Full Size System.

## BioMediaGREEN TESTED REMOVAL EFFICIENCIES\*

TSS "Sil-Co-Sil 106"	Total Phosphorus	Dissolved Copper	Dissolved Lead	Dissolved Zinc	TPH	Turbidity
85%	69%	79%	98%	78%	99%	99%

\*Laboratory Testing - Average Removal Efficiencies. Tested at Flow Rate of 3 GPM Per Square Foot Media Surface Area & Minimum Head.

### CURB & GRATE TYPE FLOW BASED DESIGN

- Primary Treatment Peak Flow Rate = 120 GPM or .27 CFS
- Internal Bypass Peak Flow Rate = 4.28 CFS "Grate Type"
- Internal Bypass Peak Flow Rate = 2.01 CFS "Curb Type"
- O.D Dimensions = 22' x 5' x 4.8'
- Curb Type Minimum Fall Required = 3.57' "Flow Line to Invert Out"
- Grate Type Minimum Fall Required = 4.13' "Top of Grate to Invert Out"
- Storage Capacity = 1000 LBS "Settling Chamber Storage"

### VAULT TYPE VOLUME BASED DESIGN (Configuration not shown)

- Peak Treatment Volume = 4000 Cubic Feet "10 GPM Discharge Rate & 48 Hour Drain Down Time" "Pre-Storage Required"
- Install External Bypass Prior To Pre-Storage
- O.D Dimensions (at grade) = 22' x 5' x 4.8'
- O.D Dimensions (below grade) = 22' x 5' x 5.6'
- Vault Type Minimum Fall Required = 4.13' "Finish Grade to Invert Out"
- Storage Capacity = 1000 LBS "Settling Chamber Storage"

# SYSTEM OPERATIONS

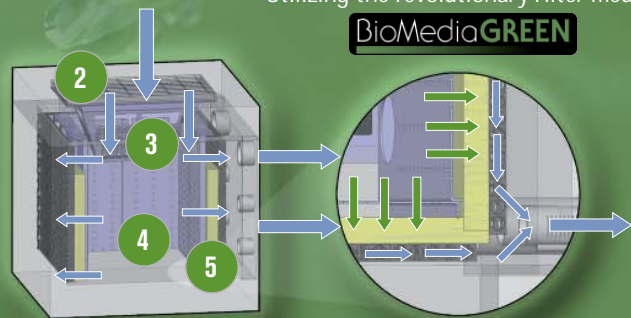


**MWS-LINEAR** IS DESIGNED TO MEET THE MOST STRINGENT STORMWATER REGULATIONS.

The system utilizes multi-stage treatment processes including the revolutionary filter media (BioMediaGreen) for primary filtration followed by a 4th generation sub-surface flow wetland for biological remediation.

Utilizing the revolutionary filter media:

**BioMediaGREEN**



THIS SYSTEM PROVIDES THE MOST EFFECTIVE TREATMENT IN THE INDUSTRY.

## FEATURES

- 1 **CATCH BASIN CHAMBER - Capture, Screen, Separate, Filter**  
Directs Incoming Stormwater Through The First Three Stages of Treatment.
- 2 **GRATE TYPE CATCH BASIN INLET**  
A standard 41" x 24" grate type traffic rated catch basin opening directs stormwater into the system.
- 3 **CATCH BASIN INSERT FILTER UTILIZING **BIO CLEAN** ENVIRONMENTAL SERVICES, INC. - CATCH BASIN FILTERS**  
Provides the first stage of treatment by capturing trash & litter, gross solids, and sediment.
- 4 **SETTLING CHAMBER**  
Provides the second stage of treatment by separating out larger suspended solids.
- 5 **PERIMETER FILTER UTILIZING **BioMediaGREEN** SEE TESTED REMOVAL EFFICIENCIES**  
Provides the third stage of treatment by physically and chemically capturing fine TSS, metals, nutrients, and bacteria.
- 6 **HIGH FLOW INTERNAL BYPASS**  
Flow rates greater than the systems treatment capacity are bypassed directly to the discharge chamber.
- 7 **WETLAND CHAMBER SUB-SURFACE FLOW - Biological Remediation**  
Provides the final stage of treatment through a combination of physical, chemical, and biological processes.
- 8 **DISCHARGE CHAMBER - Flow Control, Drain Down, Discharge**  
Controls flow rates with adjustable valves and contains a drain down filter that eliminates any standing water.
- 9 **MULTI-LEVEL FLOW CONTROL VALVES**  
Two 4" adjustable ball valves allows various flow rates to be set for primary and secondary treatment levels.



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